



# **THE ELEVENTH NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT PLAN**

**(2012-2016)**

National Economic and Social Development Board  
Office of the Prime Minister  
Bangkok, Thailand

# Announcement of the Royal Command

Subject : The Eleventh National Economic and Social Development Plan

B.E. 2555 – 2559 (A.D. 2012 – 2016)

**(M.R.) Bhumibol Adulyadej R.**

*His Majesty King Bhumibol Adulyadej has commanded :*

The Cabinet, having considered the Eleventh National Economic and Social Development Plan B.E. 2555 – 2559 (A.D. 2012 – 2016), which was prepared with the involvement of Thai people from all walks of life, and was submitted to the National Economic and Social Advisory Council for the consideration along section 258 of the Constitution of the Kingdom of Thailand B.E. 2550, has decided that this Plan should be implemented as the national guidelines for economic and social development policies. A summary of the main elements of the Plan is annexed to this announcement. Be it proclaimed, therefore, that the Eleventh National Economic and Social Development Plan B.E. 2555 – 2559 (A.D. 2012 – 2016) shall come into force as of the 1<sup>st</sup> October, B.E. 2554 and shall remain in effect until 30<sup>th</sup> September, B.E. 2559.

Given on the 26<sup>th</sup> October, B.E. 2554, being the 66<sup>st</sup> year of the present reign.

Counter signed by :

Yingluck Shinawatra

Prime Minister

# Foreword

The Eleventh National Economic and Social Development Plan (2012-2016) was formulated during a period when Thailand encountered a rapidly changing environment that significantly affected the country. During the Eighth and Tenth Plans, the philosophy of Sufficiency Economy was adopted and applied to every segment of Thai society, from families and communities up to nationwide scope. As a consequence, the resilience of the country has been strengthened through a deepening of the nation's economic, social and environmental capital.

In formulating the Eleventh Plan, the Office of the National Economic and Social Development Board has continued to regard participation by a broad cross-section of society as a crucial element in drafting this Plan. As a result, ideas were incorporated from representatives of stakeholders in every segment of Thai society. Through a shared vision of "A happy society with equality, fairness and resilience," the Eleventh Plan will be implemented using the insights and involvement of all stakeholders. Thus the foundation essential for effective adaptation of the Plan will be constructed to ensure that all Thai people and all segments of society have equal opportunity and access to resources, and will share the benefits from development fairly.

Under the guiding principles of the Sufficiency Economy Philosophy, knowledge, science and technology, innovation and creative thinking will become crucial factors to achieve balanced and sustainable development.

*Office of the National Economic and Social Development Board*

*Office of the Prime Minister*

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# Prologue

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## Prologue

The Philosophy of “Sufficiency Economy” bestowed upon the Thai people by His Majesty King Bhumibol Adulyadej since 1974 is now firmly rooted in our society. The heart of this Philosophy is “human development” toward well-being based on sufficiency, moderation, reasonableness, and resilience. His Majesty the King advises us that the Thai people should be prudent, be aware of step-by-step development principles, and lead a moral life. The doctrine underlying the Philosophy is “to understand, to gain insight and access, and to engage in development.” In practice, this doctrine must be in harmony with a national “social landscape” that respects diversity within geo-ecology, economy, culture and tradition. Of primary importance, it must serve to benefit all Thai citizens, who must be included in the decision-making process. This aspect of development aims at “self-reliance.” It proceeds with caution, self-evaluation, and prudence, by taking a step-by-step approach, and is tested before being distributed to the public.

Since the Eighth Economic and Social Development Plan (1997-2001), which was implemented during a period when Thailand confronted an economic crisis, the Sufficiency Economy has made its mark on Thai society and has become the guiding principle of the country’s development strategy. The conventional development approach that narrowly focused on economic growth has generated many social problems and led to the deterioration of natural resources and the environment. Application of the Philosophy in Thailand can now be seen in various sectors. Not only have its Principles become important policy guidelines for the country’s strategy toward security and sustainability, they have also proven to be the guiding principles at every level of society from the individual to the family and the community. At the national level, the Philosophy reinforces our capacity for resilience and risk management, and allows the country to recover from economic crises better than in the past. Nevertheless, structural problems continue to be important sources of vulnerability and obstacles to the future development of the country, particularly in the form of social inequality and weaknesses in public administration. Thailand must constantly adapt in response to rapid and severe changes that face the nation. These can prove to be both opportunities and challenges. In response, by continually adapting the Philosophy, Thailand will become more resilient and capable of managing risks through the application of knowledge, technology, innovation, creativity, and good governance.

## Sufficiency Economy: A Principle of Development

Development from the First through the Seventh Plans resulted in notable improvements to the national economy, but led to unsustainable development and negative consequences for society. These problems brought about adjustments to the process by which the Eighth Plan was formulated so it would focus simultaneously on both economic development and human and social advancement. The concept of “people-centered development” was also launched, economic policies were considered tools to strengthen the quality of life, and the idea of progress shifted toward a holistic approach that aimed to incorporate economic, social and environmental dimensions. However, performance was hindered by the 1997 economic crisis and overtaken by short-term focus on crisis management. As a result, the Plan’s concepts and guidelines were no longer appropriate because of the changed context in which development would occur. In spite of the difficult circumstances, the Philosophy was introduced and widely accepted in Thai society during a time that the nation was facing one of the most critical periods in its history.

The Ninth Plan formally adopted the Sufficiency Economy as the guiding philosophy for the country’s development and administration. It emphasized a balanced approach toward issues of social, economic, natural resource and environmental development. The main goal was to improve the quality of life for Thai people and adhere to the principle of moderation. In addition, the Plan was also designed to support Thailand’s recovery from the crisis and secure long-term development for the country that is sustainable and of high quality. The planning process was shifted from “for the people, by the government” to “people’s participation” in setting the direction of progress. The emphasis was placed on moderation, reasonableness, and resilience based on knowledge, caution, diligence, and ethics.

The Tenth Plan reiterated the vision of the Sufficiency Economy as stated in the previous Plan, but placed more emphasis on social harmony and sustainable co-existence between Thai society and natural resources and the environment. Preparation of the Tenth Plan included analysis of the country’s endowment for development — its economic, social, and natural resource capital. Changes were also explored in the globalized context associated with major worldwide development issues. Included were issues that dealt with matters of economics, markets, finances, technology, an ageing society, natural resources, the environment, and energy shortage. The purpose of these analyses was to formulate strategies founded on accurate empirical knowledge. The Tenth Plan stressed enhancement and utilization of

the country's capital to achieve high quality of life and a peaceful society. Moreover, the Plan was aimed at reinforcing the structure, mechanisms, and processes of the administration based on good governance and democracy in order to create a resilient society.

## Application of the Sufficiency Economy Philosophy during the Tenth Plan

The concept of the Sufficiency Economy Philosophy was utilized during the 1997 economic crisis and continued to be important in coping with both external and internal crises that included economic, social and political dimensions. As a result, the country was strengthened and became more secure in many respects. Although some issues required more time for adjustment, in other areas recovery was rapid. Progress in applying the Philosophy to make the individual, the family and society more secure was observed in various situations.

In the **government sector**, the Philosophy was applied at various administrative levels and in different domains that encompassed macroeconomic management, sustainability policy, strategy formulation, and implementation. In the last decade, the government has been more vigilant in implementing macroeconomic policy. Discipline was enforced in various ways to create a sustainable fiscal framework for regulating government budgets, including: (1) maintaining the ratio of public sector debt to GDP under 50 percent; (2) setting the ratio of public expenditure on investment to at least 25 percent of the total budget; and (3) limiting central government debt to less than 25 percent of the budget.

At the same time, the process of planning and investing in government megaprojects was based on a thorough analysis of financial capacity, readiness for implementation, response to people's needs, balance between quantity and quality of investments, distribution of infrastructure investment between rural and urban areas, the potential of the country for growth, and risk management. Investment initiatives under the "Thai Khem-Kaeng" (Strong Thailand) scheme in 2012 was a program designed to allocate investments appropriately by considering economic, social and environmental dimensions, and it covered every sector. It focused on empowering communities, raising the quality of education in both urban and rural areas, bringing about changes in health-related behavior and improvements to the quality of services. Overall, the investments supported expansion of economic activities and short-term employment in parallel with laying foundations for sustainable development over the long term. Moreover, the scheme increased the efficiency and potential of the



economy along with improvements to infrastructure and social services that will ultimately enhance the quality of human capital. Results at the initial stage were that the economy recovered from the crisis and expanded sufficiently to stimulate hiring, which substantially reduced unemployment. In the long run, productivity will be increased through development of the logistic system, human capital, and distribution of prosperity among regions.

In addition, the Philosophy was extensively applied in government agencies to increase their efficiency and transparency in budgetary spending, careful auditing, and effective implementation of projects and schemes for public benefit. To upgrade governance, an effort was made to develop ethics that reflected the adaptation of the public sector to implement public policies for the benefit of the citizens, based on knowledge and probity.

In the **financial sector**, lessons learned from the 1997 financial crisis prompted restructuring of the entire financial system in two phases of a master plan that aimed to enhance the efficiency of the system. The intent was to make financial institutions more dynamic and competitive intermediaries that are able to provide services to clients in every segment of society while maintaining stability in changing circumstances. The goal was to help people and businesses reduce financing costs. In addition, the Bank of Thailand Act was amended to allow the Bank to perform in accordance with international standards on banking supervision. The intent was to ensure stability and efficiency as well as transparency and vigilant decision-making in the financial system, its institutions, and the payments system. As a consequence, the country's financial sector became stronger, risk management practices in financial institutions were more prudent, and investments in international financial markets were more modest and reasonable. During the recent global financial crisis, the entire holdings of foreign assets by Thai financial institutions accounted for only about 8 percent of their total assets. Therefore, the financial crisis in 2008-2009 had less impact on a Thai financial sector now made more secure. This enabled the economy to avoid liquidity constraints and recover rapidly from the crisis.

In the **business sector**, firms applied the Philosophy extensively in their practices after the 1997 financial crisis by changing their business ethics to place more emphasis on social responsibility. Lessons learned from the crisis encouraged large enterprises to adopt new business perspectives with respect to long-term profits and fairness to all stakeholders. These changes affected procedures in all aspects of business operations, including investment planning, production, human resource management, marketing, and risk management. By adopting the Sufficiency approach, businesses became

more cautious by diversifying risks. In capital management, instead of obtaining financial capital primarily through short-term debt, businesses turned to raising longer-term funds in the capital market. As a consequence, from 2003 to 2010, the credit-to-GDP ratio of the non-financial business sector decreased from 44.1 percent to 36.3 percent. At the same time, the issuance of bonds and shares increased. After the crisis, domestic capital was regarded as a primary source of finance, and this resulted in a noticeable reduction of foreign debt. Moreover, businesses gained greater awareness of the importance of using domestic materials, particularly from the agricultural sector, as well as local knowledge, to create value added products that would eventually benefit local citizens.

With regard to business practices in general, the Stock Exchange of Thailand reported that in the past four to five years many business organizations have become more active in social responsibility initiatives, particularly those associated with environmental conservation initiatives. This can be witnessed in various projects carried out in communities that emphasized environmental preservation activities such as reforestation and water conservation. These projects reflected improved corporate governance and responsibility by businesses.

Several small and medium firms and community enterprises became models for managing businesses through building strong group-based networks and clusters. These businesses examined the local community's potential for capital, raw materials, knowledge and local experience. They carried out a step-by-step approach for capital expenditure and business expansion based on their own capability. Their manufacturing processes were cost-effective and ecologically sound. They continually improved their products by investing in research and development, inventing unique products, and expanding, first in the domestic, then in the foreign markets. In addition, more and more firms were involved in social enterprises. There were different types of entities that could register as limited liability companies, cooperatives, or foundations. Profit sharing among members and the community was based on integrity and honesty. Social enterprises also benefited the disadvantaged in many ways and improved the society with respect to income distribution and quality of life. Social enterprises were businesses that created a fairer society that balanced profit, welfare, and environmental sustainability.

A survey conducted under the Sufficiency Economy Project called "Por-Sor-Por-Pieng" during 2007-2008 found that the general public and social sectors acknowledged and applied the Philosophy in everyday life. This led to a modest, economical, and frugal life style, and wider participation in the community. Since the Eighth plan, the Sufficiency Economy concept has continually been disseminated

extensively to increase public awareness. The survey also indicated that most respondents were informed about the Philosophy via various media and three-fourths of them were able to understand and apply the Sufficiency principles to everyday life.

A survey by the Thai University Chamber of Commerce conducted in 2007 in a range of communities found that 74 percent of them applied the Philosophy at a moderate level, and 13.6 percent at a high level. Different approaches were tried; for example, under the principle of moderation, they focused on long-term balanced growth; for self-reliance, they emphasized the use of local resources; decision-making on community development was based on the principle of reasonableness by ensuring that production systems conform to local tradition, culture, law, and knowledge, following a participatory approach; they built resilience by diversifying production systems and markets; they designed plans based on the utilization and conservation of community resources, strengthening local tradition and culture, and organizing social welfare systems, savings, and health insurance. At the same time, there were initiatives to promote the concept of lifelong learning through formal and informal education systems, establishment of learning centers, and regularly scheduled discussion forums. There were also efforts to encourage social harmony in the community by introducing activities that advocated a moral system, diligence, honesty, patience, sharing, and leadership that could ultimately create a model of persons of integrity.

**Agriculture** is an important sector where the Philosophy has been incorporated into every social unit from the individual farmer and farm family to the community and country. His Majesty's New Theory Agriculture is a practical example of the application of the Philosophy which is the guiding light to a sufficient way of life, food safety and security, reduced expenditure, self-reliance, and alleviation of poverty in households and communities. Farmers who adhered to the Philosophy found that they were able to leave their debt crises behind. This benefit had its origin in the practice of commercial agriculture, through integrated farming, organic farming, and agroforestry. Model farmers who received the best practice award of the Sufficiency Economy from the Office of The Royal Development Projects Board confirmed that the New Theory Agriculture allowed them to reduce expenditures and the use of chemicals, and also encouraged them to produce crops on a foundation of reasonableness and knowledge. As a consequence, they were able to save money, avoid excessive debt, secure their income, and lend a hand to neighbors and the community.

In the **education sector**, various foundations, research institutions and centers of instruction have developed a body of knowledge for the application of the Philosophy in various forms. These include the Research and Development Institute of

Sufficiency Economy Philosophy operating under the Office of the National Economic and Social Development Board (NESDB). There has been an effort to synthesize lessons learned from past practices and to establish a database system related to the Philosophy. The objective is to disseminate knowledge and understanding of the Philosophy more broadly to public and private institutions and organizations, and to local communities. To ensure that the Philosophy has its full impact, it has been integrated into teaching and training courses, and there has been continuous improvement of the curriculum at the primary through tertiary levels. At the university level, 26 courses have been provided in 19 institutions. Teaching networks have been established among these universities, and forums to share knowledge have been regularly organized so as to intensify the teaching of the Philosophy in these institutions.

## The Philosophy of Sufficiency Economy and the Eleventh Plan

Throughout the implementation of the Eleventh Plan, Thailand will inevitably confront internal and external changes that will affect the course of progress. These changes will be uncertain, complex, and unpredictable. Although Thai society has been secure and stable, its structure may be inadequate to withstand future challenges effectively. As a result, the country is exposed to risks of various sorts, including weak public administration, an economic framework unprepared for sustainable development, a loosening of Thai cultural values, a natural resource base and an environment that are being degraded, and national security that is vulnerable. To mitigate these risks, it is crucial to build on existing capacity and strengthen resilience, based on the country's social, economic, natural resource and environmental capital.

The Eleventh Plan will continue to implement the key elements of the "Philosophy of Sufficiency Economy." It will place "people at the center of development," and promote "balanced development" in all aspects. These elements will be increasingly emphasized in order to attain well-defined outcomes at all societal levels, and to position the country's development on the middle path, integrating all aspects of improvement from the level of the individual to society as a whole, and incorporate economic, environmental, and political dimensions. To achieve the outcomes that are envisioned, the Sufficiency Economy's principles will be further implemented. First, "**reasonableness**" will be applied in analytical work; "**moderation**" will be used to create a balance between material and spiritual dimensions, between societal self-dependence and global competitiveness, and between rural and urban societies; "**resilience**" will be achieved by strengthening risk-taking ability in order to withstand internal and external changes. Every stage of

development has to be driven by knowledge using a prudent, step-by-step approach, and correspond to the way of life desired in Thai society. The development process includes moral values, a sense of virtue, ethics in work, and perseverance in the way of life. These principles will prepare family, community, society, and the nation for changes.

Therefore, the formulation of the direction and strategy that governs development under the Eleventh Plan will focus more on accelerating the building of resilience to mitigate potential risks confronting the country, and to strengthen the country's foundation. In addition, by placing citizens and society at the center, the quality of development will be emphasized in order to increase the ability of Thai society to keep pace with internal and external changes, and to provide equal access to the resources and benefits from social and economic development. Economic opportunity will be created based on knowledge, technology, innovation, and creativity, while taking into account the requirement that production and consumption have to stand on eco-friendly foundations leading toward stable and sustainable development. Building the Thai society's resilience regarding important development issues under the Eleventh plan includes the following:

**1. Human and social development toward a quality society.** To build resilience at individual, family and community levels toward a quality society that can manage risks, adapt to changes, and participate in economic, social and political development efficiently will require the following:

**1.1 The promotion of social equality** will focus on strengthening economic and social security so that everyone in Thai society has access to quality services, resources, and basic infrastructure that are essential for starting a career and maintaining a stable income. This will include equal access to the judicial system, and the ability to enjoy life with dignity under a government that respects transparency, the common public interest, and opportunity for people from all sectors to be engaged in the development process.

**1.2 Human development toward a life-long learning society** will emphasize improving the capability of Thai citizens of all ages to be able to adapt to changes; to enjoy better physical health, as well as moral and ethical conscience; to be diligent; and to have the opportunity to learn throughout their lives. At the same time, an enabling social environment should be created and social institutions should be strengthened to support human growth.

**2. Restructuring the economy toward inclusive growth.** The domestic economy will be strengthened, with emphasis on reinforcing firms in the production

and service sectors, especially small and medium businesses, One Tambon One Product (OTOP) activities, and agricultural enterprises. Local experience, science, technology and creativity should be utilized to upgrade these sectors so they are knowledge-based and environmentally friendly. Interdependence and connectivity across countries in various regions, and adaptation to external changes will require the following:

**2.1 Strengthening of the agricultural sector to foster food and energy security** with emphasis on management of natural resources, which are the basis for agriculture. Resources must be utilized sustainably to guarantee that agriculture will provide a strong base for production of food and energy. Measures will consist of encouraging efficiency and productivity in agriculture while the career and income security of farmers will be assured. Priority will be given to make food and energy security at the family, community and national levels be self-reliant and able to confront challenges with confidence.

**2.2 Restructuring of the economy toward quality and sustainable growth** will be knowledge-based and concentrate on creative economic practices and local wisdom. Measures will be designed to generate favorable conditions and fair competition; restructure trade and investment to meet the needs of domestic and international markets; add value for potential products in the service sector; transform the industrial sector into knowledge-based and eco-friendly industries; and improve infrastructure and logistic systems. In addition, there will be an initiative to reform laws and regulations governing macroeconomic management so as to encourage a foundation for the economy and its growth that has strength and quality.

**2.3 Building interconnectivity across countries in the region toward socio-economic security** will focus on linking domestic economic expansion to international cooperation. The interconnectivity will be based on interdependence and adaptation to external changes. Cooperation and partnership will be emphasized for sustainable development and mutual benefits at the subregional and regional levels. Key initiatives will promote constructive and interactive cooperation to prepare the country for changes brought by the ASEAN Economic Community, and empower domestic development partners at every level to increase their ability to keep pace with changes.

**3. Management of natural resources and the environment toward sustainability.** In order to maintain balances within the ecosystem, emphasis will be aimed at managing natural resources and the environment through a shift of the development paradigm and participation by local communities. Under this approach,

various issues will be addressed, including creating a low-carbon society, preparing for climate change and natural disasters, and ensuring consistency between trade practices and environmental protection.

In conclusion, during the Eleventh Plan period, the country's development will emphasize building resilience at the family, community, society, and national levels under the sustainable development concept as outlined in the Philosophy. Compared to the Tenth Plan, it features specific development factors based on human, social, physical, financial, natural resource, environmental and cultural assets. The goal is to utilize these assets (1) to create a society of quality by building the intellectual basis for generating resilience in citizens and the society, (2) to achieve a green economy where knowledge and Thai identity will be used to restructure the economy based on innovation, (3) to connect effectively with the regional and global economies, (4) to foster sustainability in the agricultural sector and prosperity in the food and energy sectors, (5) to sustainably manage natural resources and the environment, and (6) to reinforce good governance and harmony in all sectors and at every level. The accomplishment of these objectives will lay the foundations for balanced and sustainable development and lead to a just and happy society.

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# Summary of the Eleventh National Economic and Social Development Plan (2012-2016)

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## 1. Introduction

From the First of Thailand's National Development Plans to the Tenth, the development paradigm has evolved in the context of both global and domestic changes. A significant shift in the country's development planning has taken place since the Eighth Plan (1997-2001), a shift from a growth-oriented approach to the new model of holistic "people-centered development." In order to ensure more balanced development, priority was given to broad-based participation that would actively engage civil society, the private sector and academia in formulating the national development plan. However, economic mismanagement, which led to the 1997 Asian Crisis, prompted the adoption of the Philosophy of Sufficiency Economy as the guiding principle in the Ninth Plan (2002-2006), while its practical applications became evident during the Tenth Plan (2006-2011). In order to achieve sustainable development with a people-centered approach, it is necessary to enhance the country's self-resilience by strengthening its economic and social capital and improving risk management in order to effectively handle internal and external uncertainties. This will lead the country toward sustainable development and a "Happy Society."

During the Tenth Plan, the Philosophy of Sufficiency Economy was applied extensively in Thailand's development, and this resulted in greater resilience in various aspects of Thai society and enabled the nation to cope effectively with the impacts of the 2008 global economic crisis. This was clearly reflected in the Green and Happiness Index (GHI) of 65-67 percent achieved through the contributions of strong economic performance, high employment, strong communities and family ties. However, major obstacles have remained, including political unrest, environmental and ecological degradation, low educational quality, and severe drug problems. The evaluation of the Tenth Plan nevertheless indicated an improved economic foundation for development and increasing quality of growth. Quality of life has been improved through better access to various economic and social security measures and gains in poverty reduction. It is, however, essential to place emphasis on the development of human capital and security, promotion of good governance and fair competition, and a more equitable distribution of development benefits in order to reduce social inequality.



During the Eleventh Plan (2012-2016), Thailand will encounter more complicated domestic and external changes, and fluctuations that will present both opportunities for and threats to national development. Thus, it is necessary to utilize the current resilience of Thai society and its economy, and prepare both individuals and society as a whole to cope with the effects of such changes and pave the way toward well-balanced development under the Philosophy of Sufficiency Economy.

## 2. Situation, Risks and Resilience

### 2.1 Significant changes

Thailand has continued to face major global and internal changes that may either pose threats or provide opportunities for the country's development.

#### 2.1.1 Major global changes

**1) Changes in global rules and regulations have influenced the direction of future development.** The 2008 world economic crisis has led to adjustments in global rules and regulations in trade, investment, finance, and environmental and social matters. These reforms in trade and investment have focused mostly on transparency, climate change, intellectual property rights and international cooperation. At the same time, the financial sector has been under close surveillance with tightened supervision. There is also growing concern about obligations and agreements involving climate change and trade measures regarding global warming issues. In addition, increasing emphasis is being placed on social issues, particularly human rights relating to human dignity. These new rules and regulations including international environmental agreements, human rights and good governance, however, are capable of being used as non-tariff barriers. Therefore, Thai firms must improve production processes and business practices in order to enhance their competitiveness. Corporate social responsibility (CSR) and fair competition must also be addressed.

**2) A multi-polar economy in the new world order is increasingly important in shaping development.** Adjustment to a multi-polar world economy, in which Asia has become an important engine of global growth, is imperative for Thailand. Meanwhile, the BRICs and ASEAN are becoming new economic centers of economic activity. In particular, the opened trade policies of China and Russia, the dynamic growth of Brazil and India, and the growing middle class in Asia will contribute to the expansion of global purchasing power. In addition, various economic cooperation initiatives in the region such as the ASEAN-China-Japan-India Free Trade

Agreement, the ASEAN Economic Community (AEC) in 2015, and the Asia-Pacific Economic Cooperation forum have affected various aspects of economic and social development in Thailand, such as the development of human resources.

**3) Many countries are moving toward an ageing society.** During the period of the Eleventh Plan, the number of older persons around the world is expected to increase by 81.9 million. The change in demographic structure toward an ageing society will affect international migration and diversification of cultures in many countries. Meanwhile, the structure of production will change drastically from being labor-intensive to knowledge and technology-intensive. Responses to this trend will focus on the development of appropriate expertise and skills to meet emerging challenges, together with the development of technologies needed to replace the shortage in the labor supply. In addition, expenditures on public health will increase at the expense of other investments.

**4) Global warming effects climate change throughout the world.** Global temperature has increased on average by 0.2 degrees Celsius per decade over the past 30 years, and has caused unpredictable alterations to climate as well as more frequent and severe natural disasters such as earthquakes, landslides, volcanic eruptions, floods, storms, droughts, and forest fires. Ecosystems in many areas have become vulnerable and this has resulted in the loss of flora and fauna. The earth's surface has undergone physical changes, including coastal erosion and rising sea levels that have resulted in forced migration of coastal communities and damages to infrastructure, tourist areas, and coastal industrial zones where heavy investment has occurred. In addition, disease epidemics and outbreaks of insect pests have caused harm to human life, damage to agricultural products and threats world food security. Moreover, poverty, migration and fights over resources have occurred.

**5) The worldwide security of food and energy is under intense threat.** Rising demand for food and energy is due to a significant increase in the world's population, whereas the supply of agricultural products has decreased due to limited arable lands, technology that has enabled crops to be used for energy rather than food, and climate change. This situation is likely to lead to increasing conflicts over food and energy in the future. Consequently, the supply of food in the world market could decline and bring about higher prices, especially in the poor countries. This would lead to a world food crisis.

**6) The vital role of advanced technologies in economic and social development, and human life.** Advanced technologies, including information and communication technology (ICT), biotechnology, nanotechnology, as well as cognitive science can be regarded both as tools to reduce inequality while enhancing Thailand's competitive edge, and as threats to the country's development. If the country relies primarily on imported technologies, it will be unable to compete in the world market and achieve sustainable development. Countries that are slow to make technological progress need to import technology. As a result, these countries will have low productivity and lose competitiveness over time. In addition, unequal access to technology by various groups within the society will exacerbate economic and social disparities. Thailand, as a net technology importer, needs to shift its position toward that of a technology producer.

**7) International terrorism has been a threat to the world community.** Transnational terrorism and crimes are widespread across the world and are increasingly violent. In addition, their patterns and networks are more complicated and have affected national security. It is imperative that Thailand brings the critical factors influencing terrorism under control, and cooperates with the international community to protect its national assets from acts of terrorism.

### **2.1.2 Major internal changes**

#### **1) The economic aspect**

Over the past decade, the Thai economy has experienced moderate growth with stability. While the industrial sector has played a major role in production, the agricultural sector remains a key source of income and a base for value added activities. Very recently, the service sector has emerged as an additional engine of growth as linkages between the domestic and international economies have resulted in many economic activities, especially in trade and investment. Foreign direct investment has remained a critical factor for economic expansion. However, the global economic recession and a decline in the Thailand's competitiveness have affected domestic investment. In addition, some enabling factors, in particular, science and technology, quality of infrastructure, and rules and regulations are weak and have become obstacles to economic restructuring.

#### **2) The social aspect**

Thailand is becoming an ageing society due to a change in population structure, characterized by an increase of older persons and a decrease in the younger population and workforce. Although potential development opportunities

are provided for all Thai people, educational quality, child intelligence, risk behaviors for health, and low labor productivity have remained major concerns. Various types of social protection and social welfare have been extended to increasing numbers of people. However, some disadvantaged groups have lacked access to social services. Income inequality and lack of access to resources are continuing challenges. Thai society is facing a crisis of declining ethical and moral values, and greater cultural diversity in society. Gambling and drug use are widely seen, particularly among young and adolescent groups. At the same time, the Thai populace is increasingly active in politics and is paying more attention to social responsibility and governance.

### **3) The aspect of natural resources and the environment**

Natural resources have been depleted and the environment has been degraded. Moreover, climate change has exacerbated problems involving natural resources and the environment, and has affected agricultural production and poverty. Management of natural resources and the environment has not been effective and the conflict between environmental conservation and economic development has been made manifest. Nonetheless, Thailand's food security has remained adequate despite challenges from climate change and from increasing demand for fuel crops.

### **4) The administrative aspect**

Thai people now are more active in politics and ready to express opinions. However, political conflicts and the unrest in the southernmost provinces have continued. These have affected the economy, daily life, confidence in Thailand by other countries and peace in Thai society. The overall performance of the government sector has improved but the ability to address corruption needs to be strengthened. Even though decentralization is in progress and local governments have more tax revenue, the allocation of responsibilities between the central governments and local units has remained unclear.

## **2.2 Risk assessment**

Thailand will encounter risks and must enhance the resilience of its society in order to effectively meet challenges in these six areas:

**2.2.1 Public administration is ineffective.** The government sector is often unable to carry out policies and missions effectively. Administrative authority is occasionally distorted while the gap between government agencies and the public has widened in some areas. Certain segments of the government sector are inefficient and

law enforcement is ineffective. Though public forums have displayed a high level of participation, people still have limited opportunity to participate in decision-making regarding policy. Government officials have not been held accountable, while law enforcement is not strict. This leads to inequality and unfairness in economic, social and political areas, thereby intensifying corruption. These undermine the trust and confidence of the country.

**2.2.2 The economic structure is too unstable to assure sustainable development.** The Thai economy is subject to the uncertainties of the world economy. In the past, the country's economy relied mainly on foreign investment and exports based on financial capital and low-wage labor that then became constraints for increasing competitiveness. The rate of return for employees in the agricultural sector is relatively low. Most farmers are poor and in debt. As demand for energy increases, the country has had to depend heavily on imported energy sources.

**2.2.3 The demographic structure has changed as the older population increases, and those younger and of working age decrease.** Thailand will be an ageing society in 2025. The proportion of young and working age citizens has continuously declined and this will affect the supply of labor in the future. The shortage of skilled labor is a critical concern. Moreover, health expenditures will increase and become a burden on public finances, household expenditures and social security.

**2.2.4 Social values and traditions have deteriorated.** Economic growth and globalization have led to increasing materialism and consumerism. This has weakened Thai values and traditional patterns of behavior. Public consciousness of tradition and hospitality have declined, causing problems of discipline, social cohesion, respect of the rights of others and civic mindedness.

**2.2.5 Natural resources have been depleted as the environment has deteriorated.** Severe problems have occurred from geographical alteration and over-utilization. Climate change has intensified both the current situation and future challenges, especially regarding water shortage. Further, the exploitation and inefficient use of natural resources, as well as increasing waste, have intensified the risk of loss of biodiversity and continuing coastal erosion. The trend of natural disasters is toward more frequent occurrence, threatening agricultural production, food and energy security, health and quality of life.

**2.2.6 National security remains critical.** Various problems of national security have increased at an alarming rate due to political unrest, terrorism, economic crisis and international competition. Moreover, severe natural and man-made disasters are likely to have greater impacts in the future. These are challenges to the country's risk management, emergency preparedness, and its capacity to strengthen competitiveness in the global arena.

### **2.3 Enhancement of resilience**

The country must absorb the impacts of changes effectively by strengthening and utilizing resilience:

**2.3.1 Thailand is a constitutional monarchy.** The Thai monarchy is considered the heart and soul of the nation. His Majesty the King Bhumibol Adulyadej is a role model for living under the Philosophy of Sufficiency Economy. His life reflects the middle path toward sufficiency. His work holds benefits for all Thais.

**2.3.2 Thailand must base its future development on knowledge, technology and innovation.** Research and the development of science and technology are major driving forces of the country's progress. They have redirected the production system from dependence on natural resources, capital and low productivity labor to knowledge, science and technology with high productivity.

**2.3.3 Thai society maintains high values and culture.** These factors contribute to social cohesion in Thai society and reduce the negative influences of modernization and conflicts. Thai people have applied the Philosophy to their daily lives, and their families have raised younger generations to recognize Thai values and identity.

**2.3.4 Agriculture is the main source of income and food security.** It generates a variety of benefits, for example, it is the source of job creation and food security, preserves the traditional way of life, alleviates poverty and reduces the effects of global warming.

**2.3.5 The local community is an effective mechanism for management and participation in developing a good quality of life and it links the society together for the welfare of all.** It is the main force for developing and preserving the country's foundation. Self-reliant communities would lessen local economic, social, natural resource and environmental problems.

### **3. Concept and Direction of Development**

#### **3.1 Main concepts**

The country's future will inevitably be affected by many significant internal and external changes so that effective development strategies are essential. However, past experiences have revealed structural problems in broad areas including the economy, society, environment and administration, thus hindering sustainable development. As a result, Thailand's resilience must be strengthened under the Philosophy in order to successfully adapt to changes.

The main concept of the Eleventh National Economic and Social Development Plan is derived from the guiding principles of the Eighth through the Tenth Plans. The Eleventh Plan has adhered to the Philosophy of Sufficiency Economy and it should be applied to all parties at all levels. Development of people, society, economy, environment and politics are integrated holistically to increase Thailand's capacity for resilience and adaptation, from the level of the family and the community up through the nation. People-centered progress and participation are applied throughout the national development process.

#### **3.2 Direction of development**

In order to establish the direction of Thailand's development, situations and risks arising from domestic and global changes must be analyzed. Rapid fluctuations and their impacts regarding the economic and energy sectors and climate change, in particular, have both positive and negative effects on the country's development. Thus the direction by which development is administered, which adheres to the Philosophy, is to optimize benefits from the country's strengths and their potential for long term sustainability. In order to strengthen and stabilize the domestic economy, the agricultural base and SMEs will play key roles in the process. In the meantime, the nation must increase its connectivity to regional and global economies. To be more proactive with respect to the ASEAN Economy Community (AEC) in 2015, Thailand needs to comply with its commitments under various cooperation frameworks and strengthen its resilience through development of its economic and social capital. In this context, infrastructure and logistic systems have to be further developed in tandem with the quality of human resources. In all aspects, the powerhouse of the country's future development will comprise knowledge, science, technology, innovation and creativity.

Development is intended to generate resilience in every dimension of Thailand's progress toward balance and sustainability by strengthening and utilizing its capital endowment. First, **empowerment of social capital** — human, social and cultural — concentrates on human and social development toward a quality society. Resilience must be created at individual, family and community levels. Individuals should be able to adapt themselves to changes and have the opportunity to access resources and gain a fair share of benefits from development. Second, **strengthening of economic capital**, in both physical and financial aspects, is concerned with establishing a strong domestic economy through the application of wisdom, science, technology and creativity. Production that is environmentally beneficial and cooperation in regions are emphasized. Lastly, **restoration of natural resource and environmental capital** is focused on community, natural resource and environmental security as well as a low-carbon economy that is environmentally friendly. National preparedness is designed to cope with effects from climate change and natural disasters. Thailand needs to play a greater role in global forums while resilience in trade, subject to environmental obligations, is enhanced.

Meanwhile, fairness within the national administration is promoted through good governance with emphasis on the improvement of the public sector and the quality of government officials. Decentralization should be pursued more effectively in order to strengthen local administration. Anti-corruption mechanisms and preventive systems with popular participation and input should be developed. People should have fair access to the judicial system and public resources while democratic values and good governance are to be promoted.

#### **4. Vision, Missions, Objectives and Targets of the Eleventh Plan (2012-2016)**

The Eleventh Plan is an interim medium-term strategic plan to pursue the vision for the year 2027 that was set by all parties in Thai society. It states that “Thai people are proud of their national identity, in particular their hospitality. They also follow the path of Sufficiency Economy with democratic values and good governance. Quality public services are provided throughout the country. Thai people live in a caring and sharing society in a safe and sound environment. Production processes are environmentally sound, and food and energy resources are secure. The economy is based on self-reliance, and on increasing links and competitiveness in the global



market. Thailand has actively contributed to the regional and world community with dignity.”

#### **4.1 Vision and missions**

The Eleventh Plan is the first step toward the long-term vision of 2027. For the next five years, the vision and missions are established as follows:

**4.1.1 Vision** “A happy society with equity, fairness and resilience.”

##### **4.1.2 Missions**

1) To promote a fair society of quality so as to provide social protection and security, to enjoy access to a fair judicial system and its resources, and to participate in the development process under good governance.

2) To develop people with integrity, knowledge and skills appropriate to the age of each, and to strengthen social institutions and local communities to ensure positive adaptation to changes.

3) To enhance the efficiency of production and services based on local wisdom, knowledge, innovation and creativity by developing food and energy security, while reforming the structure of economy so that consumption becomes more environmentally friendly, and strengthening relations with neighboring countries in the region for economic and social benefits.

4) To build secure natural resource and environmental bases through supporting community participation and improving resilience that will cushion impacts from climate change and disasters.

#### **4.2 Objectives and targets**

##### **4.2.1 Objectives**

1) To promote a fair and peaceful society.

2) To increase the potential of all Thais based on a holistic approach that enables physical, mental, intellectual, emotional, ethical and moral development through social institutions.

3) To develop an efficient and sustainable economy by upgrading production and services based on technology, innovation and creativity using effective regional links, by improving food and energy security, and by upgrading eco-friendly production and consumption toward a low-carbon society.

4) To preserve natural resources and the environment so they are sufficient to maintain ecological balance and a secure foundation for development.

#### **4.2.2 Main targets**

1) Thai society will become a better place, characterized by harmony and the well-being of its people, where inequality is decreased, the number of people beneath the poverty line is reduced, and the Transparency International (TI) Corruption Perception Index scores at least 5.0.

2) All citizens will acquire lifelong learning opportunities and better health, while social institutions are strengthened.

3) The Thai economy is expected to provide inclusive growth at a moderate pace based on its potential by upgrading total factor productivity (TFP) to at least 3 percent per annum, by improving Thailand's competitiveness rank, and by increasing the contribution of SME's to at least 40 percent of GDP.

4) Environmental quality will be improved to meet international standards, reduction of green house gas emissions will be more efficient, and forest areas will be expanded to restore balance to the ecology.

#### **4.2.3 Key indicators**

1) Overall national development: Main indicators are the Thai Green and Happiness Index, the Institute for Economics and Peace (IEP) Peace Index, the ratio between the highest 10 percent of the population by income and the lowest 10 percent, the poverty line, the ratio of workers in the informal sector having access to social protection, and the TI Corruption Perception Index.

2) Social Aspect: Many indicators are applied, including average years of schooling, the proportion of population with access to communication networks and high-speed internet, the number of R&D personnel per 10,000 persons, the rate of non-communicable diseases, and Thailand's Warm Family Index.

3) Economic Aspect: Important indicators are the GDP growth rate, the inflation rate, TFP, national competitiveness, and the proportion of production (output) of GDP by SME's.

4) Natural resource and environmental aspect: A variety of indicators include quality of water and air, the proportion of conservation forest area to total land area, and the ratio of greenhouse gas emissions per capita to GDP.

## 5. Development Strategies

Thailand will promote a peaceful society with quality growth and sustainability. In dealing with rapid changes and complicated and unpredictable environmental events, a set of development strategies will be formulated for better risk management and to create a firm foundation for development. In addition, the quality of human capital will be developed through better access to resources and fair distribution of development benefits. To create and utilize economic opportunities, knowledge, technology and creativity will be crucial factors for environmentally friendly production and consumption leading to sustainable development. Key development strategies are:

### 5.1 Creating the just society. Development guidelines include:

**5.1.1 Enhance socio-economic security for all citizens so they are capable of managing risks and creating opportunities in life.** The economy should be restructured toward more inclusive and sustainable development while a more diversified and robust grass-roots economy should emerge. Allocation of resources should be made more just by restructuring the tax system to improve income distribution and serve as a tool for fair allocation of resources and ownership of property. Information technology should be utilized in parallel with improving access to information for career development. The private sector should play a greater role in enhancing socio-economic security for all citizens, and social protection should be upgraded and cover all people.

**5.1.2 Provide social services for all as a matter of basic rights, place emphasis on the self-resilience of individuals, and encourage participatory decision-making in the country's development process.** The quality of public services should be improved, and access to such services should be increased, particularly housing and public utilities for low income groups. Social welfare should be upgraded to a standard of high quality and efficiency. At the community level, grass-roots finance and various types of saving should be improved so resources can be mobilized. Positive attitudes toward gender equality should be encouraged in order to increase participation in decision making. A database system should be developed to ensure the coverage and effectiveness of social protection in accordance with basic rights.

**5.1.3 Empower all sectors to be capable of having choices in living and participating in social, economic and political activities with dignity.** People should have freedom to think and act creatively. Communities should build their

capacity to manage their own problems efficiently. The formation of occupational groups should be promoted and based on the potentials of the various communities. The roles played by the private sector, civil society, and local government should be synergized in the development of society. Consumer protection should be improved to meet high standards. There should be increasing access to information and knowledge about rights and the protection of consumers. Women should be promoted to managerial and decision-making positions at both local and national levels to add a greater contribution to the country's development.

**5.1.4 Enhance social interaction among people within the society to bring about shared values and public benefits, and to reinforce effective, transparent, and accountable public administration.** Mutually recognized new values should be created and based on trust and social cohesion. Good governance in politics should be promoted so that it embraces genuine democracy. The entire political system should pioneer genuine democracy as its key reform. Efficient public administration must be enhanced through a thorough system of checks and balances while professionally capable, ethical, and responsible officials should be developed for government service. The judicial system should guarantee impartiality, provide more access for complaints to be submitted and allow for remedies for affected victims. In addition, the use of social media should be supported to reinforce development at both local and national levels.

**5.2 Developing a lifelong learning society.** Development guidelines include:

**5.2.1 Adjust the population structure and its distribution to be appropriate.** Fertility at the current rate should be maintained. The distribution of population should reflect the carrying capacity and opportunity of areas and natural resources in the region, and take housing and resettlement into account.

**5.2.2 Develop human resources aimed at increasing resilience to deal with changes.** The ability of Thais at all ages should be increased. Skills for lifelong learning should be developed by focusing on knowledge, innovation, and creativity, and based on the development of five types of mind — the disciplined mind, the synthesized mind, the creative mind, the respectful mind and the ethical mind — in order to be capable of working in various positions relevant to the changing labor market over a lifetime. Values should be instilled in people for social responsibility, and respect for laws and human rights, as well as for environmentally

friendly production and consumption. Citizens should learn to cope in appropriate ways with climate change and disasters.

**5.2.3 Encourage the reduction of risk factors in health.** Citizens should have physical and mental well-being. They should also possess knowledge and skills in health care at the individual, family and community levels. They should participate in formulating public policies regarding health care. Public health services should be improved through better quality and coverage, and promote the use of alternative medicines. The supply of health personnel should be redistributed more equitably and a national health database should be created. Monetary and fiscal measures for health care should be managed in an efficient and sustainable manner.

**5.2.4 Promote lifelong learning.** Learning habits should be instilled in all Thais from an early age. Development partners should be sources of creative teaching. The needs for alternative education should be addressed through the promotion of a society that wants to learn and through techniques conducive to lifelong learning.

**5.2.5 Reinforce the roles of social institutions.** Social institutions should be strengthened so as to develop human resources. National pride and acceptance of cultural heterogeneity should be encouraged to reduce ideological conflicts and increase cohesion within society. International cultural cooperation, especially in the ASEAN community, should be supported to create cultural exchanges by sharing knowledge that promotes mutual understanding of the history and culture of one another.

**5.3 Strengthening of the agricultural sector and security of food and energy.** Development guidelines include:

**5.3.1 Reinforce natural resources as the foundation of the agricultural production base.** Productive arable lands should be conserved and small farmers should be supported and assured of the right to own farmland. Land should be redistributed equitably, and tax policies should be used to increase the efficiency of land utilization. Further, land management mechanisms should be improved. Natural resources for agricultural production should be restored while good agricultural norms and practices should be promoted so as to support sustainable farming.

**5.3.2 Increase agricultural productivity.** Research and development should be emphasized while agricultural production should be modified according to socio-geographical conditions. Controls on imported chemical fertilizers and pesticides

should be considered and their use on farms should be inspected to assure that they meet standards. Agricultural practices that preserve biodiversity and are suitable for the climate and the environment should be encouraged, while basic services for agricultural production should be improved. Development of science and technology for agriculture is essential, including support for technologies for production whose utilization is friendly to the environment.

**5.3.3 Increase the value of agricultural commodities along supply chains.** Local products and services in agricultural products, food and energy should be supported to create added value. Local educational institutes and the private sector should collaborate on research and development while farmers and firms should apply knowledge, technologies and innovations that are environmentally sound. Food quality and standards for farm products relative to production systems should be upgraded to meet international standards. Present and future markets for agricultural commodities should be strengthened and the private sector, community organizations and agricultural institutes should participate in managing the food and commodity system. In addition, the efficiency of logistic management in the agricultural sector should be improved.

**5.3.4 Create job and income security for farmers.** An income insurance system, together with crop insurance, should be developed to cover all farmers. Fairness for farmers and stakeholders in the contract farming system should be encouraged. Farmers should have a better quality of life while the new generations and skilled labor should be induced to make their careers in agriculture. Agricultural institutes and community enterprises should be major mechanisms for supporting self-reliance. At the same time, small farmers adversely affected by free trade agreements should be strengthened in order to maintain their living conditions.

**5.3.5 Enhance food security and develop bio-energy at household and community levels.** Communities and their citizens should plant trees in around their homes and in public areas. Farmers should utilize sustainable agriculture following the Philosophy of Sufficiency Economy. Information regarding agriculture and food production should be widely and continuously disseminated. Appropriate consumption behavior at individual and community levels, and creation of production and consumption networks among nearby communities should be promoted. Application of the zero waste approach in agriculture should be encouraged by utilizing farm residues to produce renewable energy at the community level. Infrastructure

should be developed to systematically enhance food security for farmers and communities.

**5.3.6 Establish bio-energy security to strengthen the agricultural sector and support national development.** Management systems for food and energy crops should be established. Research and development to increase the productivity of bio-energy crop production should be promoted. Bio-energy production and utilization related to the manufacturing and service sectors should increase efficiency. A mechanism to regulate the price structure of bio-energy should be created. Raise public awareness of the benefits of efficient energy use.

**5.3.7 Improve public management to enhance food and energy security.** Farmers, local scholars, the private sector and local communities should participate in agricultural development planning. Actions by government agencies at the central and local levels should be streamlined and integrated. Food and energy databases should be developed that span production and marketing through consumption. Amendments to laws and regulations that affect agricultural development should be considered. International cooperation at bilateral and multilateral levels, particularly in the ASEAN community, should be encouraged in order to make food and energy secure.

**5.4 Restructuring the economy toward quality growth and sustainability.** Development guidelines include:

**5.4.1 Utilize science, technology, innovation and creativity as fundamental elements in economic restructuring.** This strategy should be achieved through adjustment of trends in trade and investment to respond effectively to emerging markets in Asia, the Middle East and Africa, as well as the domestic market. The service sector should be restructured to allow for higher value creation and to become more environmentally healthy based on innovation and creativity. An economy based on creativity should be promoted with its focus on creative businesses, cities and industries. In addition, it is necessary to improve productivity in the agricultural sector and to enhance value creation through innovation and green production processes. There is also a need to use science, technology and creativity to promote quality and sustainability in the industrial sector and to move Thailand's development increasingly toward industries that are knowledge-based and environmentally sound.

**5.4.2 Develop science and technology, research, and innovation as driving forces for sustained and inclusive growth.** Economic restructuring should be

emphasized in research and development, technology transfers and applications that lead to commercialization of innovation and improve the quality of life. Also, focus on the development of creative thinking and application of local knowledge. The public and private sectors should cooperate to create an improved environment that enables value creation by providing appropriate infrastructure and facilities, thus encouraging technological development and innovation.

**5.4.3 Enhance the country's competitiveness through a competitive environment that is more free and fair.** The country's competitive edge should be strengthened through development of financial and capital markets along with improvement in the workforce that will facilitate economic restructuring. It is essential that the development of science and technology, innovation and creativity should be foremost as key elements in economic restructuring. The effective employment of intellectual properties and development of an efficient system to manage them should enable further research and development, knowledge transfer and application to commercial purposes. This will generate benefits for communities and for society as a whole. In addition, the development of high quality infrastructure and logistic systems should enhance the efficiency of domestic and international connectivity that is consistent with international standards. The issue of energy security is vital, and requires that more clean energy be used and alternative energy sources be developed, leading to overall improvement in energy efficiency. Reform of the legal framework, rules and regulations that govern businesses is also essential in order to bring about healthy competition and enhance efficiency that is capable of meeting global changes and trends.

**5.4.4 Achieve stability through sound macroeconomic management.** Priority should be given to financial management following a monetary policy that is appropriate and timely. The role of the capital market should be promoted to be consistent with development in the global financial sector. A surveillance mechanism for economic fluctuations and a comprehensive warning system should be established. There is a need to improve efficiency in foreign capital management as well as fiscal management through an improved public revenue collection system. More effective budget allocation and management is also crucial to prevent fiscal risks and enhance the operational efficiency of state-owned enterprises. The private sector should display increased participation in infrastructure investment and providing public services. The fiscal capacity of local government should also be increased.



## 5.5 Creating regional connectivity for social and economic stability.

Development guidelines include:

**5.5.1 Develop connectivity in transport and logistic systems under regional cooperation frameworks.** This should be achieved through the development of efficient transport and logistic services that meet international standards. Improvement of rules and regulations governing the transportation of goods and people should also be accomplished. In addition, the capabilities of human resources in transport and logistic businesses should be enhanced. Economic connectivity along border areas and economic zones should be increased, ensuring connectivity with domestic production bases.

**5.5.2 Develop investment bases by improving competitiveness in the region.** This should be achieved through spatial development that improves connectivity with neighboring countries and South-East Asia, and is based on an integrated spatial development plan for mutual security and stability. It should lead to formation of the basis for development in industry, agriculture, tourism, border economic zones, and border towns.

**5.5.3 Prepare for the ASEAN Economic Community.** Preparations should be made through strengthening public-private cooperation to develop human resources in all economic sectors. There is also a need to enhance the capacity of public and private educational institutions to meet internationally recognized standards. In addition, labor skill development and minimum standards for goods and services are required in order to prevent the import of low-quality products into Thailand and neighboring countries.

**5.5.4 Constructively engage in regional and international cooperation frameworks to provide alternatives in foreign policies in the international arena.** This should be achieved by maintaining an active role for Thailand in developing strategies for relevant cooperation structures. It is important that the country seek a balance in relations with existing and emerging superpower economies.

**5.5.5 Create economic regional partnerships regarding human capital development and labor migration, and support provisions for Thai laborers in foreign countries.** This should be pursued by accelerating cooperation in international labor standards and by facilitating regional labor mobility. Support should be given to Thai firms that undertake investment abroad, especially in neighboring

countries. In addition, protection of the rights and interests of Thai citizens and laborers working abroad should be provided.

**5.5.6 Contribute to the international community's efforts to improve the quality of life by fighting against terrorism, international crimes, drug trafficking, natural disasters and epidemics.** Capacity and preparedness should be improved to curtail and prevent international terrorism, drug trafficking, and illegal migration. There is also a need for capacity improvement and enhanced regional cooperation in dealing with natural disasters and emergencies, and in collaborating in the prevention of infection and the spread of emerging and re-emerging diseases.

**5.5.7 Promote constructive international cooperation to support economic growth in ethical and sustainable ways, including cooperation with non-profit international organizations.** Agreements under regional environmental cooperation frameworks should adhere to the promotion of green production, consumption and services that lead to reduction of green house gas (GHG) emissions. The roles of non-profit international organizations should be promoted and the use of Thailand as an operational base for developmental cooperation in this region should be facilitated.

**5.5.8 Accelerate utilization of free trade agreements currently in effect.** The business sector, particularly those firms that are affected, should acquire knowledge of both positive and negative factors in order to enhance their capacities and seize opportunities to benefit from free trade agreements. In particular, the government should support and assist SMEs that are unable to adapt themselves and deal with the aforementioned aspects in a timely manner.

**5.5.9 Use Thailand as a business base for foreign investors in the Asian region, and support non-profit international organizations for regional development.** Benefits and assistance shall be provided for Regional Operating Headquarters (ROHs) and non-profit international organizations in order to increase Thailand's role as a business hub and base for cooperation in the region.

**5.5.10 Strengthen domestic development partners at the community level.** This should be pursued by empowering communities and local governments to prepare for international and domestic changes. The development mechanism for formulating strategies should be strengthened at the provincial and cluster levels, especially at border provinces, for cross border cooperation. Support should also be

provided to enhance technical capacity and networks among Thai academic institutes in order to create close collaboration with other countries in this region.

## **5.6 Managing natural resources and the environment toward sustainability.**

Development guidelines include:

### **5.6.1 Conserve and create security for natural resource and environmental bases by safeguarding and restoring forest and conservation areas.**

A database system to organize information should be developed to serve as a tool for planning and management. Meanwhile, the management system governing land ownership and marine and coastal resources should undergo reform. Integrated water resource management should be urgently pursued. In addition, efforts should be made to restore and improve water resources to increase the water supply. It is essential to promote more efficient use of water. This requires a master plan of water infrastructure to systematically manage water consumption. Encouragement should be given to conservation and to sustainable utilization of biodiversity.

**5.6.2 Shift the development paradigm and redirect the country to a low-carbon and environmentally friendly economy.** The country's production and consumption behavior should be restructured to prepare for a transition toward a low-carbon and environmentally healthy economy. To this end, energy efficiency in the transportation and logistic sectors should be enhanced in order to reduce greenhouse gas emissions. Eco-cities should be developed that emphasize urban planning and integration of cultural, social and ecological factors.

**5.6.3 Upgrade the ability to adapt to climate change.** This should be achieved by enhancing knowledge and management tools to handle and respond to challenges from climate change. Community capacity and preparedness to cope with climate changes should be improved.

**5.6.4 Ensure preparedness to respond to natural disasters.** Maps and priority lists of risk areas should be prepared at the national, regional and provincial levels. Disaster management efficiency should be improved while database systems and telecommunication networks should be developed. Support is also needed to provide for the development of science and technology in disaster management. The national volunteer work system should be improved to meet international standards. Moreover, the private sector, enterprises, schools and local authorities should be well prepared with action plans for disaster response.

**5.6.5 Foster resilience toward trade measures associated with environmental conditions and climate change impacts.** Efforts should be made for surveillance and monitoring measures that are related to environmental conservation and that may have effects on international trade and investment. Planning should be introduced to deal with the anticipated effects from trade measures and international agreements on environment and climate change. It is essential to conduct research on the effects of these threats and develop strategic plans together with alleviating measures for relevant products and businesses. Firms should consider the carbon footprint for export goods, together with provisions for incentives for new industries that will create an environment for sustainable development.

**5.6.6 Enhance the role of the country in international arenas as it relates to environmental framework agreements and international commitments.** There is a need to study these agreements in detail to ensure that they are thoroughly understood and to monitor the status of negotiations and the positions of other countries. It is also important that government officials be equipped with negotiation skills and techniques. Moreover, cooperation within ASEAN and with major trading partners should be enhanced. The implementation of international agreements and commitments on natural resources and environment should be supported.

**5.6.7 Control and reduce pollution.** It is necessary to reduce air pollutants. The efficiency of solid waste disposal and community waste water treatment should be improved. In addition, a management system for hazardous, electronic and infected wastes should be established. Development of warning systems and responses for toxic accidents are needed.

**5.6.8 Enhance the natural resource and environmental management system to be more efficient, transparent and equitable.** Support should be given to empower communities and to advocate their rights to gain access to and utilize natural resources. Amendments to legislation are needed to address inequality among communities regarding access to and utilization of natural resources. Changes in government investment policies to facilitate conservation and restoration are also needed. An environmental tax should be collected to provide incentives for efficient use of natural resources and pollution reduction. Ways and means to generate revenue from biodiversity should be explored. Databases, monitoring and evaluation systems should be developed. Research should be supported to establish an efficient management system for natural resources and the environment.

## 6. Translating strategies to implementation

In order to achieve the vision, mission and targets, the implementation of the Eleventh plan should be designed in accordance with national, regional and local agendas. In this connection, the approach of Area, Function and Participation (AFP) has been upheld since its inception in the Eighth Plan. In addition to ministries and departments at the central level, agencies at the provincial level are also key actors in driving the six strategies. At the regional level, the province plays a critical role, synchronizing the national agenda with area-based development and local issues. In this regard, the provincial plan is expected to tackle problems and capitalize on the potential at the area and local levels.

Action, knowledge, technology, innovation and creativity are major tools in driving development plans at all levels and in all segments of the society. Together with this, all development partners should collaborate through the cluster approach, and be responsive to problem solving and area development. Implementation guidelines are as follows:

**6.1 Promoting awareness among development partners of their roles in collaboration with the development process.** Communication should be emphasized to create common understanding and commitment among partners, including the political community. In this respect, a handbook for plan translation should be designed for implementation.

**6.2 Collaborating on the Eleventh Plan with government policies, the Government Administrative Plan and other plans.** Significant development issues in the Plan should be incorporated or integrated into government policies, the Government Administrative Plan, specific plans and operational plans. Along this line, the Eleventh Plan needs to be closely linked to the budget allocation strategy and the annual budget plan. Furthermore, it is necessary to link development issues and guidelines addressed in the Eleventh Plan with community plans, local administrative plans, provincial plans and provincial cluster plans. The provinces are also encouraged to take major development issues and guidelines into account, in particular in their investment plans.

**6.3 Providing an enabling environment to enhance stakeholders' capacity.** To increase overall productivity and improve the quality of life, research and development should be an important tool for driving the country's development. Implementation of appropriate rules and regulations should facilitate better

management of the Plan. In addition, information technology should be used to assist communication and develop database management in order to encourage public participation in the development process.

**6.4 Enhancing efficiency of development mechanisms to improve effective plan implementation at local, regional and national levels for better management.** National committees and agencies are encouraged to integrate the Plan's development issues and guidelines into their agendas. Provincial organizations should serve to link, coordinate and act as clearing houses for top-down and bottom-up development issues for the private sector and for other agencies that collaborate in the implementation process.

**6.5 Strengthening the stakeholders' capacity to contribute efficiently to the development agenda at every level.** The potential of all stakeholders should be developed so they may take part effectively in the development process. In this connection, communities and local authority should be empowered to strengthen their responsiveness and adaptability toward any changes. Academic institutions should play key roles in working with the community, local government, and provincial authorities and the role of the private sector should be enhanced for economic and social development. In all respects, government authorities need to adjust their mindset to play meaningful roles as agents of change for the country's development.

**6.6 Developing efficient, transparent and participatory systems of monitoring and evaluation at all levels.** To allow for the effective adjustment of the development process of the Plan, continuous monitoring and evaluation should focus on objectives and targets set in both the overall and individual development strategies of the Plan. Monitoring and evaluation systems should be developed to measure overall results of the Plan as well as area based development issues. Citizens should be encouraged to participate in the public agenda, with an emphasis on efficiency and transparency. Databases at provincial and local levels should be developed and linked with central databases and any others that are relevant.

# Chapter 1

## Current Situation

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### 1. National Development from the First to the Tenth Plans (1961-2011)

From the beginning, the paradigm of Thailand's national development plans has evolved within the context of global and domestic changes. A significant shift in the country's development planning has taken place since the Eighth Plan (1997-2001). It has changed from a growth-oriented approach to the new model of "people-centered development" in a holistic manner. In order to ensure more balance, priority has been given to broad-based participation by actively engaging civil society, the private sector and academia in the formulation of the national development plan. Furthermore, economic mismanagement, which led to the 1997 Asian crisis, prompted the adoption of the Philosophy of Sufficiency Economy as the main guiding principle of the Ninth Plan (2002-2006). During the Tenth Plan (2006-2011), it was necessary to enhance resilience in order to deal with internal and external uncertainties, and to promote a happy and harmonious society. This was accomplished through the people-centered development approach, with the Philosophy as the guiding principle for the Eighth and Ninth Plans.

During the Tenth Plan, the Philosophy was extensively applied to Thai society. The public sector used it as a guideline in policy formulation and project preparation. Investment in megaprojects used its rationale, together with effective risk management. The private sector, representing businesses of all sizes, as well as community enterprises, adjusted their investment strategies to manage risks more efficiently. Individuals and communities have also adapted so that their way of life is more self-reliant. Adhering to and applying the Sufficiency Economy Philosophy can strengthen the population, their communities and the nation, thereby fortifying Thailand's capacity to absorb the effects of global economic crises in many circumstances. This was reflected in the Green and Happiness Index (GHI), which during the Tenth Plan, was between 66–68 percent, comparable to 66 percent in 2006, the last year of the Ninth Plan. The main factors that had positive impacts on the GHI were employment, community strength and a happy family.

Monitoring and evaluation of development during the Tenth Plan has revealed satisfactory progress. The Thai economy gained strength and resilience so that it could

effectively cope with both the global financial crisis and the domestic political crisis. The economy began to grow at 7.8 percent in 2010 after a continuous decline from growth of 5.1 percent in 2006 to shrinkage of 2.3 percent in 2009. Similarly, productivity increased by 5.1 percent in 2010 after declining from 5.1 percent in 2003 to 2.4 percent in 2006, then shrinking by 4.3 percent in 2009. However, the indicator of economic self-reliance, the ratio of savings to GDP, started to decline from 32.8 percent in 2007 to 29.6 percent in 2009. This suggests that savings may not be able to meet the demand for future investments and Thailand will have to rely more on financing from the international market. The ratio of domestic demand to the external sector declined from 74.8 percent in 2009 to 67.5 percent in 2010. Public debt increased. These trends could undermine future economic stability.

The quality of life improved for Thais. Those living below the poverty line declined from 9.6 percent in 2006 to 7.8 percent in 2010, and income disparity between the rich and the poor narrowed. There was close to full employment, and the employment rate was higher than targeted. The improvement in quality of life was due in part to health promotion initiatives. This effort led to 99.4 percent of Thais being covered under the health security system. Furthermore, an increasing number of Thais, a majority, in fact, was able to get access to infrastructure and social services, including various economic and social security schemes. The overall potential of Thai people has been improving, however, at a lower rate than targeted in a number of aspects. Average length of schooling stood at 8.2 years, below the 10-year target. Employees with primary school education comprised 45.6 percent of the total, beneath the 60 percent target. Even though active efforts to solve the drug problem were underway, drug use was still on the rise, especially among youths under 10 years old, and this group was also increasingly involved in the sale of drugs. Some social problems need to be given continuous major effort. These include development of society and the populace, security in life and property, reduction of income disparity, strengthening of family institutions, and advancing good governance in the public sector.

Protection and restoration of natural resources and the environment have led to increased biodiversity. A campaign to expand mangrove areas and grow community, demonstration, and private forests, together with conservation efforts, increased forest area from 32.7 percent of the country in 2006 to 33.6 percent in 2010. Similarly, irrigation development projects of various sizes and Kaem-Ling reservoirs increased irrigated areas to 29.3 million rai in 2010. However, improvement of soil quality did not reach its target. Carbon dioxide emissions increased. Water resources deteriorated. Water quality in the principal rivers also declined. Water resources of fair quality or



higher decreased from 74 percent in 2006 to 61 percent in 2010. Furthermore, the control of toxic chemicals was inefficient. Sanitary handling of infected waste also failed to meet the target and resulted in higher pollution. Therefore, natural resources require better restoration and preservation efforts, along with more effective pollution control and improved environmental quality in order to create a stable foundation for the country's development and provide a sustainable daily life for the people.

## **2. Changing Situation and Impacts on Development**

During the Eleventh Plan (2012-2016), Thailand will continue to face changes, both external and internal, which may pose either threats or opportunities for the country's development. Major changes during the Eleventh Plan follow:

### **2.1 Major global changes**

**2.1.1 Rules and regulations.** The 2008 global economic and financial crisis has led to adjustments in worldwide regulations in various aspects of economic management. Reforms in rules for trade and investment have focused mainly on transparency. Meanwhile, environmental conditions, especially global warming, may be used to impose both tariff and non-tariff barriers. This would exacerbate difficulties developing countries face in exporting commodities to the developed world. Bilateral and regional free trade agreements, on the other hand, will open up trade, services, and some investment areas. However, member countries must not discriminate against investors from nations that are not parties to these agreements. Intellectual property rights and development of strict accounting standards are also matters of concern. Financial regulatory authorities in each country will increase their surveillance to provide an early warning system through international cooperation. Monetary policy, then, will be used mainly to stabilize financial conditions as well as price levels of goods and services. Changes in environmental regulations are likely to force developing countries to participate in greenhouse gas (GHG) emission reduction in the future. Developing countries would then be at a disadvantage when they encounter GHG emission reduction measures imposed by developed nations. These may come about through bilateral and unilateral agreements, either voluntary or compulsory, such as carbon off-shoring from developed countries to developing countries or other GHG reduction measures. Finally, social conditions will play a crucial role in international trade and cooperation. Human rights, in particular, are now being used by developed nations to demand that developing countries follow rules involving such matters as eliminating child labor in the production process, and regulating rights of access to resources for individuals or communities. The decision to invest in developing countries

by multinational corporations will be guided not only by the cost of production but also by standards on human rights.

These changes could become trade barriers forcing Thai producers to improve their productivity standards in order to compete in international markets. In addition, international environmental agreements, human rights and good governance will be driving forces that require producers to adjust their production processes to be more socially and environmentally accountable. The concepts of corporate social responsibility and competitive fairness will need to be incorporated into Thai firms' strategies and operations.

**2.1.2 Multi-polar world economy.** Asian economic integration will be more important in the future, especially between newly industrialized economies such as Hong Kong, South Korea, Singapore, and Taiwan on one hand, and ASEAN on the other. These countries are emerging as the world's manufacturing production hubs. Major supporting factors are regional manufacturing chains and the attendant low cost of production. In addition, middle-eastern countries, Russia and countries producing intermediate goods will benefit from increases in oil and commodity prices in the global markets. At the same time, the expansive economic policies of China and Russia, the momentum of economic growth in Brazil and India, and a growing Asian middle class will drive rising purchasing power in these economies. Developed nations have been affected more severely by the recent economic crisis in comparison with emerging economies. This, in turn, has increased the trend toward the emergence of a multi-polar world over the medium term. During the implementation of the Eleventh Plan, it is projected that average world economic expansion will be 4.0 percent per year while ASEAN economies will grow 8.9 percent<sup>1</sup>.

Regional economic integration will increase. The crucial development for Thailand during the Eleventh Plan is the emergence of a regional economic bloc in Asia resulting from free trade agreements between ASEAN and China, Japan and India. Furthermore, Thailand must be ready for the ASEAN Economic Community (AEC), which is scheduled to be completed in 2015. The first priority for Thailand is to develop its human resources, especially by upgrading education, linguistic and labor skills in order to cope with developments brought about by the emerging integration of Asian economies. Furthermore, development of mechanisms in other areas such as environmental management at the regional level will lead to a more sustainable use of natural resources in the region.

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International Monetary Fund, World Economic Outlook Database, April 2011.

**2.1.3 Societies are aging worldwide.** Most developed countries such as France, Sweden, the United States, Italy and Japan have experienced the impact of an aging population for the past 40 to 50 years. More recently, developing nations such as China, Indonesia, Brunei, Thailand and Vietnam have moved toward an older society. It is expected that during the period of the Eleventh Plan, the world population of older persons will rise to 81.9 million. This will have multiple effects. For example, there will be a problem of cultural diversity and brain drain as a result of a large number of skilled and unskilled migrant workers moving to the aging countries in order to fill the gap in the labor market. In countries where there are not enough migrant workers to meet the demand for labor, the crisis of an aging populace will alter the production structure, and move from labor intensive to knowledge and technology intensive production processes. This will redirect the development path of human capital to focus more on knowledge and skills. Furthermore, countries with a high proportion of older persons will have to devote more of their budget to support health care costs rather than on other development programs.

On the positive side, an increase in the older populace can create an opportunity for Thailand in the service and medical sectors. However, Thailand will also experience difficulties in arranging basic infrastructure and social welfare programs to support an aging society under tight budget constraints amid world economic volatility. In addition, plans and policies to cope with the declining labor force must be formulated since the decline would likely affect the entire economy in the long run.

**2.1.4 Global climate change and climate variation.** Climate change worldwide has affected ecosystems, leading to natural disasters, and has had a severe impact on the global production system. Earth's temperature has increased on average 0.2 degrees Celsius per decade over the past 30 years. This has caused seasonal changes and more frequent and severe natural disasters, including floods, earthquakes, landslides, storms, droughts and forest fires. Ecosystems in many areas have become vulnerable, leading to loss of biodiversity. The earth's surface has undergone physical change, including coastal erosion and a rise in sea level. This has resulted in forced migration of coastal communities and damages to infrastructure, tourist areas, and high-investment industrial zones. In addition, global warming has created water shortages and has increased epidemics of infectious diseases. Moreover, the greater concentration of carbon dioxide and higher temperatures, variations in precipitation, extreme natural disasters, and epidemics of plant diseases and insect pests will affect agriculture and decrease harvests and food production in many parts of the world. It is also predictable that social problems such as poverty, displacement and competition for resources will increase.

In the long run, worldwide climate change will become more and more extreme and aggravate food shortages. Similarly, damages to agricultural crops tend to have a stronger impact on the economy of countries such as Thailand where agriculture is a major source of income. Furthermore, frequent and severe natural disasters have the potential to hold back the country's development.

**2.1.5 Global food and energy security.** World energy demand is rising dramatically while fossil energy resources are limited. This requires a policy focused on promoting renewable energy sources such as cassava, sugar cane and oil palm for the production of ethanol. This policy affects food production and export capacity. Moreover, a significant increase in the world's population creates a rising demand for agricultural commodities and food, whereas arable lands and improvements in technology have been limited. Key factors include not only the impact of climate change and natural disasters, but also the tendency toward a monopoly market in genetically modified seeds. This greatly affects small-scale farmers who depend on the use of natural resources for food and herbal medicines for their living. This situation will have a negative impact on global food and energy security in the long run.

For Thailand, which is an important source of the world's food supply, a food crisis may provide an opportunity for export expansion of agricultural commodities. However, Thailand depends on high-priced imported fossil fuel so that a policy that significantly promotes bioenergy would lead to an imbalance between food and fuel crops and inappropriate use of agricultural land.

**2.1.6 The vital role of technological advancement in economic and social development.** The penetration of information and communication technologies (ICT) in business, as well as the application of modern fields such as nanotechnology and biotechnology to people's daily lives is significant. Such technological advancement can create opportunities for the country's development, as it can be an important means to promote a creative economy. This can be brought about through bio-energies and materials, and by new machines to replace human functions while improving the health and working performance of older persons. However, technological advancement can also be seen as a threat to the country's security through piracy of business and personal information, release of false information by the media, and by facilitating international terrorism. In addition, countries with retarded technological progress will need to import it, and as a result these countries will have low productivity and lose competitiveness over time. Unequal access to technology among various groups will exacerbate economic and social disparity in the country.

Thailand is not an active innovator in technology and so is greatly vulnerable to external factors. While ICT gives rise to cross border flows and exchanges of culture, the absence of guidelines to screen the flow of inappropriate information across borders may lead to a severe moral hazard and undesired social consequences in the country.

**2.1.7 International terrorism.** Terrorism threatens international communities. Transnational terrorism and crimes tend to spread widely across the globe and become more violent. In addition, the structure and networks of terrorism are becoming more complicated. Therefore, prevention of terrorism is a priority all over the world. The United Nations is playing a key role through conventions and protocols that address international terrorist threats. This enables member countries to follow uniform courses of action. Meanwhile, the United States has even stricter measures that have affected the management and export costs of Thai producers. Therefore, international cooperation in various forums must be instituted to control terrorism in order to protect national interests.

Terrorism in other countries may affect Thailand by stimulating acts motivated by religious ideologies and beliefs; sites of unrest still exist, especially in the southernmost provinces. At the same time, advances in science and technology can be expected to increase the capabilities of terrorists to cause severe damage widely.

## **2.2 Major internal changes**

### **2.2.1 Changes in economic conditions**

1) **The Thai economy has been able to maintain a good average growth rate and economic stability.** The economy grew at an average of 3.8 percent over the 1994–2010 period. At the same time, the production and service structure has changed. The agricultural sector, once the driver of growth has been replaced by the industrial sector, which now occupies the major role in the Thai economy. The ratio of income from the industrial sector to GDP increased rapidly from 36.0 percent in 1999 to 40.8 percent in 2010 as a part of Japanese industrial export industries were moved to Thailand. However, the total factor productivity of the industrial sector is low. Over the 2007–2010 period, the average total factor productivity was only 1.8 percent due to limitations on the development of innovation and the absorption of foreign technology.

The agricultural sector is important for the Thai economy, as it is the main source of income for most people, and a base for increasing value added in the industrial sector. This is the result of a strong natural resource base, suitable climate, and accumulated agricultural knowledge. The service sector has also played

an important role in generating value added to the economy, offsetting the trade deficit, enhancing the quality of life, and absorbing mobile labor surpluses from other sectors of the economy.

**2) Links between Thailand and the world economy will increase global economic activities.** This is especially true in international trade and investment that have been important for economic development. Thai exports have increased for the past decade (2000–2010) and have also maintained a 1.2 percent share of the world market from 2006 to 2010. Thus, dependence on external demand has increased from 84.9 percent of GDP during the Seventh Plan (1992–1996) to 137.5 percent of GDP during the Tenth Plan (2007–2010). Foreign direct investment has continued to play an important role in Thai economic expansion. Due to the recession in the global economy and a reduction of Thailand’s competitiveness, the role of foreign direct investment as a contributor to economic expansion declined markedly and total investment fell from 41.2 percent of GDP during the Seventh Plan to 25.7 percent during the first four years of the Tenth Plan.

**3) The Thai economy is still weak in supporting factors needed to promote fair market competition and respond to the challenges of a changing economy.** This is especially evident in the areas of science and technology, the quality of infrastructure services, and economic rules and regulations. These weaknesses are constraints for the Thai economy if it is to support sustained growth, while the economy will have to deal with greater external uncertainties. Moreover, the return on labor that decreased from 30.2 percent in the Eighth Plan to 29.4 in the Ninth Plan has continued to fall to 28.3 percent during the first three years of the Tenth Plan. Returns from other production factors such as entrepreneurship, land and return on investment tended to increase continually.

Future development needs to focus on restructuring the economy toward quality and sustainability by utilizing science, technology, innovation and creativity as the important drivers. It will be facilitated by an environment conducive to enabling these goals through fair competition, and by leveraging opportunities from externalities to benefit the country and expand its development base.

### 2.2.2 Changes in social conditions

**1) Thailand is moving toward an aging society through changes in demographic structure that indicate a higher proportion of the population are elderly and a lower proportion are children and working age adults.** Rural to urban migration will contribute to rapid urbanization. The proportions of young and working age population have steadily declined. The fertility rate had

decreased to 1.6 by 2008, leading to lower ratios of children and working age adults relative to the elderly from 20.5 : 67.6 : 11.9 in 2010 to 18.3 : 66.9 : 14.8 in 2016. This trend will ultimately result in a labor shortage that in turn will affect future productivity.

Rural to urban migration has accelerated the growth of the metropolitan population as a share of total population from 31.1 in 2000 to 45.7 in 2010, an increase of 46.9 percent. This rapid urbanization has an enormous impact on our way of life. People tend to live more as individuals rather than as a part of an extended family. In addition, weakening relationships among family members has also exacerbated social problems such as divorce rates that have increased from 4.5 couples per 1,000 households in 2002 to 5.5 couples per 1,000 households in 2010. Violence in the family, and sexual abuse of women and children are other serious implications.

**2) Although the capacity of the populations has been increased at all ages, the quality of education, children's cognitive abilities, health behaviors and labor productivity are still at risk.** Development has generated educational opportunities for both young children and juveniles as demonstrated by an upward trend in the national average education level. By 2009, the average years of schooling for those 15 years and older had reached 8.1 years. However, quality is a concern. The average of standard test scores has fallen from 39 percent in 2007 to 34.9 percent in 2010, significantly lower than the 55 percent target. Moreover, teenage pregnancy in the 15-19 age group has increased from 54.9 per 1,000 women in 2005 to 56.2 in 2010. Children have showed low performance in both intelligence quotient (IQ) and emotional intelligence quotient (EQ). The proportion of children aged 0-5 displaying proper development has fallen from 72 percent to 67 percent. Furthermore, the working age group has low productivity, which increased by only 1.8 percent on average during 2007-2008. In 2010, bilateral and tripartite economic agreements led to 1.3 million migrant workers entering Thailand, of whom 28.4 percent are legal and 71.6 percent illegal. More people have suffered from the top five preventable illnesses — diabetes, high blood pressure, stroke, heart disease and cancer — especially older persons. It was found that 31.7 percent of the elderly have high blood pressure, 13.3 percent have diabetes and another 7 percent suffer from heart diseases. This will be a huge burden on health care costs in the future.

**3) People have better social protection and social welfare but disadvantaged groups still have inadequate access to these programs.** There

are 63.1 million people or 99.4 percent of eligible citizens who are currently covered by universal health care. In addition, various social protection services have been implemented, such as the community welfare fund, labor rights protection and promotion and the national savings fund. However, some groups still have no access to social insurance; only 36.6 percent of the national labor force is protected. Several initiatives have been implemented, such as Section 40 of the Social Security Act of 2010 extending protection to informal labor. More effort is needed, since almost 70 percent of older persons or 5 million people have only old age benefits as a safety net and 94 percent of people in the bottom income decile are not educated beyond secondary school. In addition, education and health care disparities still exist, a reflection of regional differences in academic test scores and distribution of health resources.

**4) Income inequality and unequal access to resources have been critical barriers to national development.** Distribution of income between groups has reflected the fact that economic activities have favored the upper classes. The gap between the top and bottom income deciles had widened to 22.8 times in 2009. However, the number of poor people has been reduced dramatically from 42.2 percent of the population or 22.1 million people in 1988 to 8.1 percent or 5.3 million in 2009, the result of various programs such as village funds and other credit schemes. Income and opportunity inequalities are substantial and have led to conflicts and other problems such as corruption, lack of educational opportunity among the poor, lack of information, inequality of bargaining power, protests, violence, crime and drugs. This, in turn, has weakened the economy, the society and democracy. Furthermore, the distributions of income by regions and the returns to the factors of production have been skewed. Returns to labor have declined continuously, from 30.2 percent during the Eighth Plan to 28.9 percent during the first three years of the Tenth Plan, while returns to capital, entrepreneurship and land have increased.

**5) Thai society is confronting a deterioration in morals and ethics, along with a cultural transition.** Rapid globalization and advancement of technology encourage Thai citizens to create their identity through online social networks. This has generated a contemporary subculture among people who have mutual interests. As a consequence, traditional Thai culture is being overshadowed. Simultaneously, the society has deteriorated in both morality and ethics, including increased violence in the family, competition over resources and differences of political views. This is in part due to lack of caring and generosity, lack of reason, and less care in raising and nurturing children. At the same time, the inefficient judicial system also worsens the situation.



**6) Problems of drug abuse and gambling addiction have been exacerbated, especially among children and juveniles.** During the first four years of the Tenth Plan, the proportion of children and youth prosecuted by the Department of Juvenile Observation and Protection were 5.0-5.4 cases per 1,000 children, higher than the 3.3-5.1 cases during the Eighth and Ninth Plans. Drug cases have also increased considerably, from 8,803 cases in 2006 to 14,695 cases in 2010. Furthermore, public opinion surveys have revealed severe drug abuse in schools; this has grown from 19.2 percent of the school population in 2009 to 51.3 percent in 2010. Likewise, gambling among children's and juvenile groups has increased.

**7) Thai society has demonstrated increasing political awareness, and this has enhanced values in terms of social responsibility and good governance.** People do have a higher degree of political awareness, an increased level of voter participation and greater breadth of political scrutiny. Also, the private sector has become more involved in national improvement as reflected in the creation of corporate social responsibility networks among companies listed in the stock market as well as an increase in social enterprises aspiring to promote social prosperity rather than profit maximization. However, transparency and honesty are still problematic as reflected in the low scores on the Transparency International (TI) corruption perception index: from 3.2-3.8 out of 10 points (corruption free) during the Ninth Plan period to 3.2-3.5 during 2007 to 2010.

### **2.2.3 Changes in natural resources and the environment.**

**1) Natural resources are being depleted and degraded.** The deterioration is due to increasing population pressure, growth-oriented development, and competition in trade and investment. These factors have contributed to the over-exploitation of natural resources far beyond the carrying capacity of the ecosystem. Forest areas in Thailand have decreased continuously, from 53.3 percent of the total country in 1961 to 33.6 percent in 2009, which is well below the criterion for keeping the ecosystem in balance. The forest watershed areas of 14 million rai are critical and inadequate, resulting in floods, drought, and water shortages. The current water supply volume can serve only two-thirds of the total demand. Biodiversity loss is also increasing through several kinds of human activities. Coastal erosion in many areas is a crisis. In 2007, the shoreline of 155 areas countrywide had been eroded, a total of 600 kilometers. Loss of land is now at 113,042 rai and the cost of damage to the land is B10 billion. Moreover, shorelines along the inner Gulf of Thailand, classified as significant national wetland areas, have experienced severe erosion, greater than 5 meters annually. Soil and land resources, major factors of

production, have deteriorated while conflicts over land use have persisted. Degraded lands at the severe and critical levels covered 36.0 million rai or 11.2 percent of the country. Moreover, many problems regarding land use continue to exist, such as inappropriate uses, improper distribution of ownership, encroachment on conservation areas, and expansion of urban, industrial and commercial areas into agricultural zones.

**2) Natural resource and environmental problems are intensified by climate change.** Climate change has severely intensified problems of natural resources and the environment, affecting agricultural products and adding to poverty. Rapid global warming in the last 50 years has caused imbalances in natural resources as well as economic, social, and environmental impacts. Geographical change has become evident in the Central region of the Chao Phraya River and south of the Northeastern region where the temperatures have risen, forcing both plants and animals to adapt to the changing ecosystem. The marine ecosystem has been affected by global warming because rising temperatures and levels of seawater in some areas have caused the extinction of some species of flora and fauna. Continual coastal erosion has led to soil and land degradation, and this has affected residential, business, and tourist areas. If coastal areas are left unprotected, economic and social damages will ensue. Rainfall in the next two decades will decrease in some areas. Abrupt disasters, flash floods, inundations, long droughts, and landslides will occur in many areas, causing agricultural losses of around B4 billion per year. These will affect the economy and the way of life, particularly for farmers facing problems such as housing, cultivating the land and the high cost of production. Moreover, decreasing agricultural output and the loss of land ownership by small-scale farmers have led to more encroachment on forested lands and conflicts over land use.

**3) Management of natural resources and the environment is inefficient.** Such management is not efficient as policies are in conflict, which prevents the integration of environmental conservation and economic development. Lack of integration among responsible agencies has contributed to fragmented instruments and mechanisms. Environmental and resource management systems and databases have not reached the standards of economic and social databases and are not adequately linked. Existing regulations have focused only on management of each natural resource, resulting in a lack of efficient enforcement, fairness and transparency. Moreover, corruption and injustice in natural resource allocation have led to public distrust of government management. For example, pollution problems in Map Ta Phut and surrounding areas in Rayong have damaged both economic values and the well-being of the people.

**4) Thailand has had a secure food supply despite the impact of climate change and demand on crops as a source of energy.** Agricultural commodities are sufficient for domestic consumption and export markets even though there has been a change in land use for food and fuel crops, especially oil palm and cassava. Therefore, overall national food production remains satisfactory. However, the full magnitude of the impact of trends on crops will depend on the ability to improve agricultural productivity and policy to promote a balance between food and energy crop production.

#### **2.2.4 Changes in development administration circumstances.**

**1) The current constitution has given priority to public participation and has laid foundations for good governance, which has resulted in greater political participation.** The political crisis in 2006 resulted in an Economist Intelligence Unit (EIU) Democracy Index rating of 5.7 out of 10 points, ranking Thailand ninetieth. After the 2007 constitution took effect and led to a general election, the country's ranking under this index jumped to 6.8, first among neighboring countries and fifty-fourth in the world. This is a reflection that Thai people are now more actively participating in national administration than in the past. The right of political assembly and checks on public administration are important in the foundation of a democratic culture and good governance, together with more transparent and honest politics.

**2) Political conflicts and unrest in the South have negative impacts on the economy, people's daily life, international confidence, and a peaceful society.** Conflicts due to political gatherings and violence have direct effects on national security and unity. An unstable government cannot effectively administer the country, and national confidence will therefore decline. In addition, harsh measures used to solve conflicts between government officials and the public have caused injuries and death. Violence has also created more stress, depression, and panic. Unrest in the three southernmost provinces remains a problem bringing about deaths, injuries, and damage to property. Furthermore, the unrest has been a negative influence on the economy, employment, and the poor. Government officials are in danger and cannot carry on their normal activities, and citizens cannot get access to public services, even when health is at stake. Two instances of violence are the main factors that caused Thailand to be ranked as second lowest, just ahead of Myanmar, on the Peace Index compiled by Institute for Economics and Peace (IEP).

**3) Performance of the public sector was better at the beginning of the Tenth Plan, but the anti-corruption efforts have to be improved.** Thai competitiveness in public sector performance has significantly improved as

evaluated by the International Institute for Management Development (IMD), moving up 10 ranks from twenty-seventh in 2007 to eighteenth in 2010 due to restructuring that is more independent and flexible. Provinces may now formulate their development plans and make proposals directly to the Bureau of the Budget for allocation of funds. Decentralization is in progress. However, the ability to improve the Thai bureaucracy, measured by a sub component of the Transparency International (TI) anti-corruption index that compares 58 countries, has declined from 3.0 points in 2007 to 1.8 points in 2010. This underscores the need to improve the Thai bureaucratic system in ethical and moral dimensions, and make officers accountable under current rules and regulations.

**4) Decentralization has made progress in expanding the revenue base of Local Administrative Organizations (LAOs) but confusion over responsibilities between local and central governments causes mission transferal to be delayed.** Revision of the decentralization plan has increased LAO revenues. However, personnel transfers are not yet ready or are experiencing adaptation difficulties. In addition, there are duplications between central and local governments involving public services in local areas, and this creates unclear divisions of responsibilities in management and auditing, and forestalls integration. Because of these obstacles, LAOs cannot effectively perform their duties according to the law, especially in handling local needs, thereby constraining the public's living conditions.

**5) Corruption remains a critical problem.** Corruption is a concern even though the public sector has continuously introduced policies and campaigns to attack it. The Transparency International (TI) corruption index for Thailand between 2007 and 2010 was 3.2-3.5 out of 10 points (corruption free); this was worse than Singapore and Malaysia but better than Vietnam, the Philippines, and Indonesia. Subsequently, many groups have protested against corruption and demanded changes from various ruling elements. An attitude survey revealed that some groups of people accept corruption as long as quality of life and the national development is being improved. However, corruption is a major concern and an obstacle to development that leads to a sustainable democracy and good governance.

### **3. Risk Assessment**

Rapid internal and external changes will force the country to encounter risks during the period of the Eleventh Plan. Major risks are as follows:

**3.1 Public administration is ineffective.** The government is unable to effectively carry out policies and missions. Administrative authority is sometimes distorted

while the gap between the performance of government agencies and the public's expectations has been widened in some areas. Some segments of the government are inefficient and law enforcement is ineffective in some areas. Though popular participation is high in public forums, people have less opportunity at the policy-making level. Implementation is perceived, to some extent, to be opaque, permitting inequality and unfairness in economic, social and political dimensions. This undermines the trust and confidence of foreigners as well.

**3.2 The economic structure remains subtly vulnerable in terms of sustainability.** The Thai economy has mainly relied on the manufacturing sector, which has a few main industries and is subject to uncertainty in the world economy. In the past, it relied principally on foreign investment and exports based on financial capital inflows and low-wage labor that are now emerging as constraints against increasing competitiveness. SMEs are a main source of employment but make a relatively smaller contribution to GDP of only 37.8 percent. Economic development has depended heavily on exports and investment. Income for employees in the agricultural sector is relatively low. Most farmers are poor and in debt. Demand for energy is increasing, but the country must rely greatly on imported energy at present.

**3.3 The population structure has changed; there are more elderly while the proportions of the young and working age adults have decreased.** Older persons will increase from 11.9 percent of total population at present to 14.8 percent by the end of the Eleventh Plan and Thailand will become an aging society by 2025. The percentage of young people will decrease steadily from 20.5 percent at present to 18.3 percent in 2016 due to the fertility of Thai women being lower than the replacement level. The population ratios of young: working age : old age will change from 20.5 : 67.6 : 11.9 in 2010 to 18.3 : 66.9 : 14.8 in 2016. Although the working age population will decrease slightly during the Eleventh Plan, the need for labor is likely to increase. A shortage of labor, especially skilled labor, is a major concern for most countries. Aging society trends in many countries and free labor migration will intensify labor recruitment competition internationally and Thailand's inefficiency in foreign labor administration will be a constraint on economic development. In addition, public health and welfare expenditures for the elderly will increase and become a burden on households and public finance. Lacking appropriate preparation, it could hinder the country's development.

**3.4 Social values and traditions have deteriorated.** Materialism and consumerism from economic growth and globalization have weakened Thai values and behavior patterns. Public consciousness, hospitality, morality and culture have declined, causing problems of discipline, social cohesion, respect for the rights of

others and civic mindedness, and affected the way of life of family, community and country.

**3.5 Natural resources have been depleted and the environment degraded.** Severe degradation of the environment and natural resources has occurred through geographical changes and over-utilization. Climate change has intensified both present and future challenges, especially water shortage. Excessive consumption by individuals and the production sector causes exploitation, inefficient use of natural resources and increasing waste. This has led to the risk of loss of biodiversity in coastal resources, wetlands and forests as well as continual coastal erosion, with subsequent adverse effects on households, agricultural and tourist areas, people's way of life, migration and local culture. Further, natural disasters tend to occur more frequently. Risk areas from flood, storm and drought will increase, threatening agricultural production, food and energy security, health and quality of life.

**3.6 National security is threatened.** Various forms of security problems have increased at an alarming rate due to political unrest, terrorism, economic crisis and various international competitions. Moreover, severe natural and man-made disasters are likely to have greater impact in the future. These are challenges for the country's risk management, its immediate preparedness, its emergency response, and its capacity to strengthen competitiveness in the global arena.

## 4. Resilience Enhancement

Strong social institutions, deep-rooted culture and appropriate development strategies have led Thai society through economic and social changes. The Eleventh Plan will face severe challenges that will affect the country's development and its way of life. Therefore, strengths in Thai society should be utilized to create resilience for future development as follows:

### 4.1 Thailand is governed by a constitutional monarchy.

The Thai monarchy is the heart and soul of the nation. His Majesty King Bhumibol Adulyadej, in particular, is a role model for living consistently with the Philosophy of Sufficiency Economy. From past to present, Kings of Thailand have focused on practical strategies for conducting foreign relations. Therefore, Thailand has maintained its sovereignty with dignity, creating impartial international relations while participating in cooperation and alliances with other countries.

**4.2 Thailand will base its future development on knowledge, technology and innovation.** Research and development anchored in science and technology are

major driving forces of the country's future. They have led to a restructuring of the production system from using natural resources, capital and labor with low productivity to an emphasis on knowledge, science and technology with high productivity. A knowledge-based society is a driving force and a key to resilience for Thailand in the worldwide arena.

**4.3 Thai society maintains good values and culture.** The Thai identity is reflected in the country's unique culture. The social situation is connected to cultural change. Thai culture has contributed to social cohesion and reduced the negative influences of modernization and conflicts within Thai society. The public has applied the Philosophy of Sufficiency Economy to their daily lives. Families are raising new generations of youth to recognize Thai values and identity.

**4.4 Agriculture is the main source of income and food security.** Agriculture is a very important element in Thai society. It is a source of employment and food security. It has also preserved the traditional way of life, alleviated poverty, reduced effects of global warming, maintained the agricultural sector as the major food source of the country, created a back-to-nature trend, and strengthened the grassroots economy.

**4.5 The local community is an effective mechanism for management; it participates in developing the quality of life, and is linked to society's welfare.** Community is the most important unit of the country. Its way of life depends principally on nature. A strong sense of community and self-reliance by the individual, the family and the community are the main forces for strengthening the nation's foundations. Self-reliant communities have efficiently alleviated problems of economic, social, natural resource and environmental types. Community-based mechanisms promote local prosperity.

## 5. Development Issues

Evaluation of changes that have affected the country's development during the Eleventh Plan, an analysis of weaknesses and constraints that are risks to the country and the resilience needed to strengthen Thai society, has identified nine development issues as follows:

**5.1 Development of human resources to enhance wisdom.** Thais should be equipped with the capability to analyze and synthesize, and should possess creativity, curiosity, moral behavior, ethics, good values and an understanding of their rights and duties and those of others. Infrastructures for sources of wisdom and learning for the community should be provided.

**5.2 Enhance socio-economic security for all citizens.** The economy should be restructured to achieve quality and sustainability on an inclusive basis. Trade and investment policies should be revised to serve economic expansion in Asia, the Middle East, Africa and the domestic economy. Industry should be redirected to focus on technology, innovation, creativity and environmentally sound production. Value added in the service sector should be increased through creativity and innovation. Imaginative businesses and inventive cities should be developed. The agricultural sector should be invigorated and food security strengthened. The grassroots economy should be enlarged; it should be resourceful and diversified. Wages and the welfare system should be fair, and labor protection should be adequate to ensure quality living. Skill and knowledge in production and management as well as access to resources and infrastructure should be promoted. Grassroots finance and saving systems should be reinforced to increase opportunity for secure and dignified work for citizens. A high quality social protection system that covers the entire populace should be encouraged.

**5.3 Empower communities and synergize the roles of civil society and the private sector in social development.** The ability and potential of communities to develop various ways to enhance the quality of life and manage knowledge should be reinforced. The private sector should be encouraged to undertake socially responsible and environmentally friendly businesses. Civil society should be energized to monitor the performance of public agencies and officials. Communities should be able to integrate their development within the context of economic developments in the Southeast Asian subregion, ASEAN, and worldwide.

**5.4 Develop mechanisms for economic restructuring in order to increase competitiveness and fair competition.** The focus should be on science, technology, innovation and creativity. A high performance workforce, logistics management, multimodal and rail transport, high speed Internet, and energy security should be the new reality. Economic regulations should be updated to ensure that they are appropriate to requirements for development.

**5.5 Coordinate partnership to develop subregional and regional levels.** Efficient transportation and logistics networks should be promoted to support trade and investment. New economic links to South Asia should be created, and transit and cross border trade facilities and Border Trade Zones should be established.

**5.6 Prepare Thailand for the ASEAN Economic Community (AEC).** All Thais should realize the significance and potential impact of the AEC. The competitiveness of businesses should be enhanced and benefit from the AEC. Labor force skills that are in



great demand in the AEC market should be developed. Regulations and institutional management should be made to comply with ASEAN's rules.

**5.7 Strengthen water and land management to support food security and economic restructuring.** Water resources should be developed, improved or restored to increase the water supply. Fair water distribution networks and security should be ensured. Water use should be more efficient. Exhausted land should be restored and improved for agriculture. The problem of invasion of conservation areas should be stopped. The land management system should be improved through more equitable distribution. Small farmers should be protected against loss of their land.

**5.8 Enhance capacity to adapt to climate change and natural disasters.** Plans should be prepared to deal with problems caused by climate change. Research and development, innovation on greenhouse gas reduction, and preparation for greenhouse effects should be encouraged. Local communities should be better prepared for natural disasters and climate change. Resilience to meet the global warming crisis should be created.

**5.9 Promote fairness through good governance in the national administration.** The bureaucracy and its civil officials should focus on strengthening good governance. Decentralization should proceed and local administrations empowered to act on local concerns. Mechanisms should be put in place through public participation to eradicate corruption. Citizens should have equal access to the judicial system and its resources. The values of democracy and good governance should be strengthened, while the public consciousness of such values is raised.

**In conclusion,** analysis of past results and significant events that will affect the country's future development has indicated that Thailand will encounter changes from both internal and global sources that are likely to be volatile, complex and unpredictable. The country's resilience, which has been a focus of policies and initiatives, is not yet sufficient to cope adequately with emerging challenges. Thailand needs to strengthen its resilience in accordance with the Philosophy of Sufficiency Economy. Human resources should be expanded consistent with a green economy and society through knowledge and creativity. A just society, connected to international development, and maintaining balance in its natural resources and environment should be the goal. Resilience in these dimensions should create a solid base for development and adaptation to change.

# Chapter 2

## Vision and Development Strategies

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A review of the nation's situation has suggested that Thailand will face rapid, complex and unpredictable internal and external challenges. Although the results of past developments indicate that the country has evolved in many directions, it continues to face structural problems regarding administration, the economy, the society and the environment that are obstacles to progress toward sustainable development. Applying the Philosophy of Sufficiency Economy to the individual, the family, the community and society as a whole has strengthened Thai society. However, progress made is not yet adequate to manage all anticipated changes effectively. Thus, Thailand needs further development under the Philosophy in order to prepare for such changes.

### 1. Concepts and Development Directions

#### 1.1 Main concepts

The basic concepts of the Eleventh Plan are derived from guiding principles of the Eighth through Tenth Plans. The Eleventh Plan adheres to the Philosophy of Sufficiency Economy, and focuses on progress that is people-centered and balances the various dimensions of development. However, the application of the Plan's main concepts must address significant changes. It must direct the country's evolution to achieve well-being and sustainable development over the long term. Vision 2027, drafted by Thai people from all walks of life, states that "Thai people are proud of their national identity, in particular their hospitality. They have also followed the path of Sufficiency Economy using democratic values and good governance. Public services of high quality are provided throughout the country. Thai people live in a caring and sharing society and enjoy a safe and sound environment. Processes of production are environmentally sound, and food and energy are secure. The economy is based on self-reliance and is to stay competitive in the global marketplace. Thailand has actively contributed to the regional and global communities with dignity."

Therefore the Eleventh Plan, by upholding the Philosophy and its application as a guiding principle, is a strategic and indicative guide for the medium term and contains development guidelines to achieve its vision. The main concepts are these:

**1.1.1 Philosophy of Sufficiency Economy.** The Philosophy provides guidelines for Thai people to live by at all levels — the individual, the family, the community, society and the nation — and uses the middle path to direct the country’s evolution. Following this Philosophy, economic development will be balanced and able to respond to changes. **Rationality** must be used to analyze causes and effects, while **moderation** is needed to achieve balanced development between material and mental advancement, between self-reliance and competitive capability in the world community, and between rural and urban society. A **resilient system** must be achieved through the use of risk management to meet challenges from change. To drive the development process at all levels requires knowledge that is relevant to the Thai way of life. Ethics must be fostered within the nation so that Thai people work with moral integrity and live with perseverance. These qualities constitute a resilient character that prepares families, communities and the country for changes.

**1.1.2 A holistic approach with development centered on people.** This concept will aim to realize sufficiency through an approach focused on people rather than a program oriented toward growth. Priority will be given to developments that benefit the well-being of the populace while economic growth will be a tool to make people happy and enhance their quality of life. Methods to be used:

**1) Adjust habits of thinking to emphasize an integrated, rather than fragmented, approach.** People will be the central focus of development, which will coexist with the environment.

**2) Adjust the development process to integrate top-down and bottom-up approaches.** All partners will participate in strategies to make development effective at the local, community, area and national levels.

**3) Consider “socio-geographical conditions.”**Development processes should consider differences and diversity between rural and urban areas and among regions. They should compare these differences when taking account of natural resources, the culture, and ways of life.

**4) Utilize step-by-step development.** Development should begin with self-reliance, extend to groups, and then create social networks as a base for balanced and sustainable progress.

**1.1.3 Holistic development of the country toward balance and linkages between all dimensions.** This approach will integrate the populace with the social, economic, environmental and political aspects of the nation.

**1.1.4 Vision 2027 is a principal goal.** Through Vision 2027, Thailand will be able to achieve successful development, built on the foundations of Thai society, and following the path of the Sufficiency Economy under its constitutional monarchy. Thai families will be the base to nurture good citizens, while communities will be strengthened and play a greater role in development. The economy will be stable and competitive. The country will provide quality services, and enforce laws that ensure fairness. Thailand will maintain active links to other countries in the region and live peacefully with them by sharing mutual benefits from cooperation.

## **1.2 Development direction**

To establish the direction of development during the Eleventh Plan, situations arising from changes in global and national circumstances and their risks must be analyzed. Rapid fluctuations of the economy, energy needs and climate change all have positive and negative implications for development. Therefore, adhering to the Philosophy, the direction of the nation's means of handling these changes is to derive maximum benefits from the strengths and potentials of the country in order to create economic stability. Economic progress will focus on strengthening agricultural production and SMEs. At the same time, Thailand must connect with the regional and global economy, and observe its obligations under various international cooperation agreements. Opportunities will arise and be utilized, and Thai society will be enhanced by being a part of the ASEAN Economic Community that will be fully in place in 2015. Infrastructure and logistics will be developed to improve connections by land. The abilities of the populace, their knowledge, and their advances in science and technological innovation and creativity will reinforce economic and social development.

The direction of development will generate security and protection in each aspect and lead toward balanced and sustainable progress through strengthening the nation's capital endowment. First, in order to have a quality society we must enhance social capital in both its human and cultural aspects. Individuals, the family and the community will be able to adapt to change, manage risk, have access to resources, and fairly share in the benefits of development. Next, we must strengthen economic capital, both its physical and financial aspects, emphasizing reinforcement of the domestic economy through knowledge, science, technology and creativity. Environmentally sound production and mutual cooperation among all global regions should be promoted. Lastly, we must restore natural resources and environmental capital. The emphasis will be on food security and management of natural resources and the environment, leading to a low-carbon economy and environmentally healthy

society. The country should prepare to encounter climate change and natural disasters. Thailand will play a greater role in global forums and be able to manage international trade while observing environmental obligations.

Fairness in administration at the national level should be promoted through good governance, with emphasis on improvement in the public sector and its managers. Decentralization should be pursued more effectively in order to strengthen local administration. Systems to deal with and prevent corruption should be developed through public participation. People should have fair access to the criminal justice system and its resources, while democratic values and good governance are promoted.

## **2. Vision and Missions**

The Eleventh Plan is a medium-term strategy fostering the realization of the long term Vision of 2027. For the next five years, the vision and missions are defined as follows:

**2.1 Vision.** “A happy society with equity, fairness and resilience.”

### **2.2 Missions**

2.2.1 To promote qualities of a fair society that include increased social security and protection, provide fair access to resources and the judicial system, and, empower people so they may actively participate in the development process under good governance.

2.2.2 To create a population with enhanced integrity, with the capacity for lifelong learning, and with knowledge and skills appropriate to their ages, and to strengthen social institutions and local communities so they may effectively adapt to changes.

2.2.3 To enhance production and services through greater efficiency, through knowledge, innovation, creativity, and folk wisdom, and to develop food and energy security, restructure the economy and consumption practices to be environmentally healthy, and to strengthen international cooperation with neighboring countries for economic and social security.

2.2.4 To build a secure base of natural resources and a sound environment, support community participation, and safeguard people and the nation from the effects of climate change and disasters.

### 3. Objectives and Targets

#### 3.1 Objectives

3.1.1 To promote a fair and peaceful society.

3.1.2 To increase the potential of all Thais in a holistic manner by fostering a broader range of learning and by physical, mental, emotional, ethical and moral development imparted through social institutions.

3.1.3 To develop an efficient and sustainable economy, and form links to production and service networks in ASEAN, based on technology, innovation and creativity. To improve food and energy security, and upgrade eco-friendly production and consumption toward a low carbon society.

3.1.4 To preserve natural resources and the environment so they are able to maintain Thailand's ecology and biodiversity, and provide a secure foundation for development.

#### 3.2 Main targets

3.2.1 Thai society will become a better place, characterized by harmony and the well-being of its people, declining inequality, a reduction in the number of people living in poverty, and the Corruption Perception Index will not fall below 5.0.

3.2.2 All citizens will acquire lifelong learning and better health while social institutions will be strengthened.

3.2.3 The Thai economy will achieve inclusive growth at a moderate pace based on its potential; focus on upgrading total factor productivity (TFP) to be higher than 3 percent per annum; improve Thailand's competitiveness rank; and increase the contribution of SME's to at least 40 percent of GDP.

3.2.4 Environmental quality will be improved to meet international standards, reduction of greenhouse gas emissions will be efficiently achieved, and forest areas will be expanded for ecological balance.

#### 3.3 Key indicators

3.3.1 Overall national development: the principal indicators are the Green and Happiness Indices, the Institute for Economics and Peace (IEP) Peace Index, the ratio of income groups between the highest and the lowest 10 percent, the poverty line, the proportion of workers in the informal sector covered under the social

protection scheme, and the Transparency International (TI) Corruption Perception Index.

3.3.2 Social aspects: Indicators include the average years of schooling, the number of students achieving recognition for merit and integrity, the proportion of the population having access to communication networks and high-speed Internet, the ratio of R&D personnel per 10,000 persons, the rate of growth of non-communicable diseases, and the Warm Family Index.

3.3.3 Economic aspects: Important indicators are the growth rate, inflation rate, total factor productivity (TFP), national competitiveness, and share of SME products in the GDP.

3.3.4 Natural resource and environmental aspects: Indicators include quality of water and air, proportion of protected forest in conservation areas to total land area, and the ratio of greenhouse gas emissions per capita to GDP.

## 4. Development Strategies

Thailand has to confront internal and external changes that are more complicated and unpredictable than ever before. Thus the formulation of strategies to direct development is geared toward enhancing resilience to risk factors and strengthening the foundations of the country's evolution. Simultaneously, human resources must be improved to be able to adapt to changes, and to increase access to resources and to foster equitable benefits from economic and social development. Economic opportunities should be provided that are based on knowledge and innovation in environmentally healthy production and consumption. This will lead to more secure and sustainable development. Major strategies in the Eleventh Plan are as follows:

**4.1 Strategy to promote a just society.** This strategy aims to strengthen people at all levels — to give the individual, family, and community the capability to adjust to internal and external changes, cope with volatilities, and manage risks efficiently. This strategy also places great emphasis on economic and social stability, equitable access to social services and social protection, adequate access to resources and infrastructure, unbiased and transparent access to the criminal justice system consistent with the public interest, and greater popular participation in the development process.

**4.2 Strategy to develop human qualities toward a sustainable knowledge-based society that continues to learn.** Particular attention should be

given to enable people to handle changes that focus on the quality of life in order to prepare for a society that never ceases to learn. The Philosophy should be applied to enhance peoples' capabilities in all aspects — physical strength, intellect, moral consciousness, perseverance and appreciation of Thai culture. The population should have opportunities for life-long learning while social institutions should facilitate human and community development as a strong foundation for national prosperity.

**4.3 Strategy for strengthening the agricultural sector, as well as food and energy security.** Emphasis should be placed on managing natural resources to support sustainable agriculture while increasing productivity. Give high priority to agricultural research and development on flora, fauna and marine species. Encourage environmentally sound agricultural technology. Value creation should be given support in agricultural and food products and in energy, and be based on local knowledge and creativity. Farmers should be secure in employment and income through pursuit of the Philosophy. In addition, the establishment of secure food and biomass energy should be emphasized at the household, community and country levels. This will be an important driver toward enhancing self-reliance in the agricultural sector so that it is able to respond to risks.

**4.4 Strategy to restructure the economy toward quality and sustainability.** This requires the use of science, technology, innovation, creativity and local knowledge as the driving forces conducive to maintaining the quality and sustainability of the environment and to a fair competitive system that can create resilience in the Thai economy. To achieve these goals, Thailand needs to restructure the trade and investment sectors that are relevant to domestic and foreign markets. Value should be added in the service sector based on creativity and innovation. Creative businesses and cities should be developed. In agricultural, increasing productivity and adding value through technology and environmentally sound production processes are the main goals. Science, technology and innovation should be employed to transform production in the manufacturing sector so that it is knowledge-based, creativity-oriented and environmentally healthy. Infrastructure and logistical systems should be developed further and secure energy sources established. Reform of laws and regulatory rules is necessary. The macroeconomy should be managed efficiently.

**4.5 Strategy to create regional connectivity for social and economic stability.** This strategy is designed to create a connection between economic development and international cooperation in the region on the basis of mutual reliance in order to enhance resilience against external events. Priority should be given



to the development of production and investment bases that have links to neighboring countries and to the Southeast Asia Region and include connectivity with domestic production bases. The importance of sustainable partnerships in developmental cooperation for mutual benefit at subregional and regional levels should be emphasized. Constructive engagement in international cooperation is also important. Moreover, it is crucial that Thailand prepare for the launching of the ASEAN Community, giving priority to human resource development in order to equip the population with the essential skills that will be in demand. Transport and logistics systems should be developed through subregional cooperation and supported by reforming laws and regulations regarding transportation of passengers and goods. This is necessary in order to reduce business costs and enhance the capacity of development partners in Thailand from the community level on up.

**4.6 Strategy for managing natural resources and the environment toward sustainability.** This will place the emphasis on maintaining balance within the ecosystem through public participation in protection, conservation and utilization. Preparedness to cope with climate change and natural disasters is also essential for the society if it is to support economic development and a higher quality of life. Natural resources and the environmental base should be conserved, restored and secured. The development paradigm should be shifted toward an environmentally safe low-carbon economy and society. Adaptive capacity should be upgraded to handle climate change and disasters. Pollution reduction should be achieved by improving management of controls. Natural resource and environmental management systems should become more efficient, transparent and equitable. International trade should be protected from crises that result from environmental conditions and climate change. The role of the country in international arenas should be strengthened and related to environmental framework agreements and commitments.

# Chapter 3

## Strategy for Promoting a Just Society

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### 1. Current Situation

National development during the past five decades has increased the quality of life for Thai people. They have been employed and earned higher average incomes along with job security. The incidence of poverty has also decreased; access to social services and basic infrastructure has been broadened. However, inequality of opportunity among groups, disparity in social services between rural and urban areas, and inequitable access to the judicial system have been significant. This reflects deep structural inequalities in Thai society as follows:

**1.1 Manufacturing and export sectors have occupied a large portion of the economic structure, but they have absorbed only a small share of the labor force compared to agriculture.** Agricultural productivity is lower than that of the industry, leading to wage inequality among production sectors. In 2009, the industrial sector's share of GDP was 34 percent and accounted for only 15 percent of employment, while the agricultural sector's share of GDP fell to 9 percent during the same year it provided 38 percent of the jobs. This situation has created a huge gap in returns to labor in these sectors. In addition, low agricultural wages, which account for only 4 percent of the country's total wage bill, have meant relatively low income for agricultural households. These households also suffered from lack of education, job security and eligibility for social security. The condition is even worse in an extended family with more dependent children and older persons. This dramatically low wage is the reason why the agricultural sector is the poorest sector relative to others. This can also be seen from the poverty head count that is 13.8 percent in the agricultural sector compared with only 2.6 percent in non-agricultural employment.

**1.2 There is a huge income gap between groups, reflecting a disparity in economic and social opportunity, access to resources, fundamental rights and bargaining power.** In 2009, people in the top income decile accounted for 38.4 percent of national income while the bottom received only 1.7 percent, a difference of over twentyfold. Although several alleviation programs have reduced those below the poverty line from 9.6 percent in 2006 to 8.1 percent, or to five million people in 2009, another five million are still living on the margin where they can easily fall into poverty in times of crisis. Moreover, income inequality among regions and areas is also

significant. In 2009, the workforce in the Northeast had the lowest average income relative to other regions. People living in cities had higher incomes than their rural counterparts. Bangkok residents had higher income than in other parts of the country. Furthermore, holdings of financial assets in the form of monetary deposits are uneven among groups. Although the number of monetary deposit accounts higher than B10 million represent only 0.1 percent of all fixed and saving accounts (whose term is more than three months), their aggregate value is almost 40 percent of total deposits. Similarly, land holding is concentrated among few owners. There are approximately 4,000 people owning land area over 480,000 square meters, and only 100 people who own more than 1,600,000 square meters of land. At the same time, about 660,000 poor farmers have no land even for farming. These examples indicate the lack of economic and social opportunity, access to resources, bargaining power, and fairness with respect to rights among groups of people that affects both income and accumulation of wealth.

**1.3 People are better protected by several social welfare services but their quality differs between rural and urban areas.** Disadvantaged groups do not have access to social services, and informal labor has not been covered in the social security schemes. Regarding health care, people have better protection, treatment and rehabilitation, as reflected in the increasing proportion of recipients that has gone from 93.4 percent of the population in 2004 to 99.5 percent in 2010. Nevertheless, health care quality and distribution of health-related resources are uneven among regions. Social protection has been extended, especially for underprivileged groups. In fiscal year 2010, 70 percent of older persons or 5.6 million people were eligible for old age benefit schemes, which help provide them the minimum income for subsistence. Nonetheless, their quality of life has lagged far behind the privileged classes. Merely 36.6 percent of the total labor force is covered under the social security plans, and informal labor, or 62.1 percent, is not included at all, even though section 40 of the Social Security Act 2010 was implemented to extend coverage to them on a voluntary basis. Furthermore, 94 percent of the lowest income decile has little education while 38 percent of those in the highest income decile have completed studies beyond the bachelor's degree. In addition, the academic achievement scores and school evaluations have also reflected the quality gap in education among regions.

**1.4 Gender equality has improved but opportunities for women to be at executive and decision-making levels are rare.** Boys and girls have equal opportunity to access basic and higher education, and the sex ratio in enrollment is rather balanced. However, the opportunity for women to be promoted to management or decision making positions is limited as compared to men. Although the proportion of women in the general civil service system is higher than men, 61.7

percent compared to 38.3 percent, the number of women reaching management levels is low. In 2007, the proportion of women in top management was only 22.2 percent, a gradual increase from 17.8 percent five years earlier. Similarly, the number of women at the managerial level in stock exchange listed public companies was only 22 percent and those in the House of Representatives and the Senate were only 11.7 and 16 percent, respectively. In local government, women at the managerial level and among the village leaders were only 9.4 percent.

**1.5 Political awareness and access to information have increased but good governance must be enhanced.** Political rights and participation have improved as shown by a higher level of political awareness and voter turnout. This, in general, has been a democratic development and reduced inequality of opportunity. In addition, people now have wider access to data and other information and have engaged in more political scrutiny and monitoring. However, performance of public management in the first three years of the Tenth Plan revealed chronic corruption in the public sector. The Transparency International (TI) Corruption Perception Index during 2007 – 2009 rose for the sector to the 3.3-3.5 range, higher than the figure of 3.2-3.8 during the Ninth Plan. By contrast, the image of public companies improved during the same period, especially regarding the roles of management committees, management reputation, social responsibility and customer orientation.

**1.6 Lack of transparency and fairness in political and economic institutions has decreased the trust and confidence of the populace.** This has led to the creation of various Internet social networks, each of which has its own norms and values, and this has affected the overall social relationship among all Thais. According to the Institute for Economics and Peace (IEP) Global Peace Index, Thailand was ranked 105<sup>th</sup> out of 121 countries in 2007 and 118<sup>th</sup> out of 153 countries in 2008 and 2009, which was extraordinarily low. This finding was consistent with a public survey of national harmony that indicated Thai society has become divided and lacks unity.

**1.7 Communities and local government have played crucial roles in economic and social development.** The Determining Plans and Process of Decentralization to Local Government Organization Act (1999) has strengthened the roles of communities and local government, especially in the area of improvement in the quality of life, expansion of the local tax base, improvement of social services, and promotion of democratic culture and good governance. Moreover, community participation in the development process has been encouraged, yielding benefits, for example, such as formulation of community plans, which values group discussion to

create ideas, find means of solving problems and set development goals. This concept was a source for the promulgation and implementation of the Community Council Act (2008), which aims to promote development relevant to a community's way of life, its culture, and its local wisdom.

These considerations indicate developmental imbalances and inequalities in Thai society. Although many initiatives to solve these issues have been implemented, the current situation and trends indicate future risks that require analysis in order to attain the society that has better quality, equality and harmony.

## 2. Risk Assessment

Development has strengthened the national economy, society and politics. However, it has also distorted the structure of some institutions in ways not conducive to sustainable growth. Moreover, problems arising from past approaches have aggravated economic and social disparities, and hinder reaching the objectives and goals of the Eleventh Plan. Structural problems and risks to promote a just society and reduce inequality are as follows:

**2.1 The economic structure has not contributed to sustainable development and has also been a risk factor in terms of widening the inequality gap.** The manufacturing sector has generally had higher production value and productivity than agriculture, and has been the main source of exports. The domestic economy has accounted for a relatively low proportion of demand-driven growth. At the same time, small and medium enterprises (SMEs), which have been the primary sources of employment and income, remain weak. The economic structure has favored large businesses relative to smaller enterprises, and owners of capital compared to labor. In addition, the pattern of development has worsened the distribution of wealth, economic benefits, and financial and fixed assets, particularly land, and this has led to present and future inequality of opportunity and deep disparities.

**2.1.1 Economic structure has favored capital rather than labor, which in turn has hindered the growth of SMEs.** Export-oriented policies, which aim to accelerate economic growth provided by globalization, have pushed the manufacturing sector ahead of agriculture as shown by higher production value and productivity. Owners of capital thus have had great influence on policy decision-making and enjoy dominant bargaining power, which results in unequal returns. The share of labor income, including fringe benefits, has been only 40 percent, on average, of the national income. This leads to gaps among income classes and conflicts between owners of capital and workers.

**Economic development depends primarily on the export of goods and services, while foreign direct investment will make the country sensitive to volatile global changes.** During times of economic advance, most benefits from growth and globalization have been in the hands of those who own capital but impacts from crises and volatility have brought about a rise in unemployment. This is due to attempts to reduce cost by decreasing wages. In particular, unskilled workers in labor-intensive industries have borne great risks, especially in those industries unable to keep pace with changes in market demand and new technology. Hence, in the absence of policies and means to equip these workers with greater knowledge and skills, structural unemployment and the size of the informal sector are likely to increase.

At the same time, trade monopolies have been a great barrier to business opportunities, especially for SMEs. About 2.2 million out of 2.8 million medium enterprises are informal, have poor productivity, low bargaining power and limited access to information, technology, credit markets and tax benefits. Further, the promotion of community enterprises has progressed slowly and thus they cannot be a major source of employment and income.

**2.1.2 The inequitable tax structure precludes improvement in the distribution of development benefits.** If reform cannot be implemented, inequality will be exacerbated. Dependence on indirect rather than direct taxes substantially allocates the tax burden. At present, the tax structure benefits non-wage income and income from property rather than wage earners. People working under the salary system have been subject to rigorous tax measures while income from property and capital gains enjoy a lower tax burden and have greater opportunities for evasion. At the same time, tax exemptions and benefits have also favored upper income classes, and medium private enterprises bear a higher tax burden than small firms. Therefore, the tax structure has been a factor in exacerbating income inequality instead of being a catalyst to promote income distribution.

**2.1.3 Development has been concentrated primarily in Bangkok, its vicinity and in other major cities.** The centralized management of the public sector has contributed to the divergence of economic progress among regions, and this has created conflicts in the society. Economic progress, employment opportunity, higher income and better social services that are available in the large cities have created disparities and induced rural-to-urban migration. This has pushed uneducated and unskilled laborers to work in the informal sector with long working hours and poor living conditions, resulting in urban poverty, crimes and conflict.

**2.2 The social structure reflects discrepancies in knowledge, access to information and quality of social services, and gender inequality.** Many disadvantaged citizens still cannot get access to social services. Informal labor has not been protected by social security. The quality of social services has not been equal among regions. These overall situations are factors that push unskilled and low-wage workers to migrate to urban areas. This results in inequality between the low-income classes, and the middle to high-income classes, especially in access to public services and income security. Inequality in income and among social classes, and disparities in access to knowledge are likely to worsen the already unequal access to information technology. Moreover, the deep roots of inequality are a great barrier to the implementation of economic and social policies. In order to deal with these complex issues, micro-policies aimed at specifically targeted groups should be emphasized.

In addition, opportunity between males and females is unequal, especially at the executive and decision-making levels. Women still have limited educational opportunities in some fields and occupations. Moreover, their opportunities in national and local politics as well as their likelihood of promotion to the executive level in the public and private sectors has been very limited. This situation is consistent with patterns in the global community, where women have been more adversely affected by the impacts of globalization, science and technology, labor mobility, an aging society, the prevalence of HIV, drugs, natural disasters, and efforts to lessen the husband's workload by earning income. These development issues are challenges for women so that their role at the decision making level is very important.

**2.3 Corruption and misbehavior have been critical barriers to proper public administration, while access of some groups to the judicial system has been inequitable.** Corruption, neglect of duties, and discrimination have compromised the efficiency and effectiveness of public policies and provision of services. The budget has been used inefficiently; in some cases, it has been allocated to solve problems or target groups that are low in priority. Unequal treatment in the judicial system has been exacerbated by malfeasance. Simultaneously, urbanization has not only degraded social interaction and hospitality, but has also led to distrust, segregation and conflict. This has reflected the growing ineffectiveness of social institutions, including the family, the community, the educational system and religion. Religious institutes and schools no longer play their traditional strong role of binding the nation, uniting the people and creating harmony in the society.

**2.4 Lack of access to natural resources has made communities lose their ability to be self-reliant.** Economic development that focused on quantitative

growth has resulted in excessive exploitation of resources by privileged groups, while local communities, especially the poor living in and relying on the forests, have far less access. They lost the ability to rely on themselves and must now depend on external assistance. Climate change has also played a part in aggravating problems in rural areas. In addition, manufacturing development that has encroached on agricultural areas has caused pollution and harm to residents. Moreover, the influence of privileged groups on the policy making process has narrowed employment opportunities in communities and decreased their ability to protect and conserve natural resources and the environment.

### 3. Resilience Enhancement

An analysis of current and anticipated risk factors calls for the need to strengthen the capabilities of the society. Economic and social security, together with equality of opportunity and participation will promote a society where people can keep pace with changes and manage risks successfully. Crucial factors include the following:

**3.1 All people must have social and economic security.** There must be equal employment opportunity, protection and access to social services and resources in order to keep citizens safe from the poverty trap and allow them to improve their quality of life.

**3.2 Disadvantaged groups must have equal opportunities and possibilities for development in order to achieve greater ability.** As a consequence, such groups will get fair and equal access to high quality public services, resources and the basic infrastructure so that human dignity is respected and opportunities to close social discrepancies are established.

**3.3 The citizenry is strengthened to be a source of power in Thai society.** It will have the ability for self-development, active participation in national development, and will adjust to rapid changes in the economy and society.

**3.4 The community and society must have shared values and adhere to the principle of societal benefit.** Shared values will lead to a happy and peaceful life among groups, regions, and ages with harmonious and complimentary interdependence, and cultural diversity.



## 4. Objectives and Targets

### 4.1 Objectives

4.1.1 To provide access to sources of capital, infrastructure, skills and knowledge in order to build more secure jobs. Business opportunities at all levels will also be promoted in order to enhance the quality of life for all people in the society.

4.1.2 To promote equal access to high quality social services leading to a dignified and better quality of life.

4.1.3 To protect people's fundamental rights and to have access to the judicial system. Transparency in public administration and decision-making will be enhanced in accordance with the principles of legitimacy, ethics, morals and societal benefits.

4.1.4 To encourage the participation of all stakeholders in alleviating inequality and conflicts so as to reach the unity and harmony of society as a whole.

### 4.2 Development Targets

4.2.1 The income gap among groups and geographic areas will be reduced, the grass roots economy strengthened, and opportunities for communities and small enterprises enhanced.

4.2.2 Citizens will be covered by a high quality social protection system. Women will have a better likelihood of attaining a higher income and promotion to executive and decision-making levels leading to greater gender equality.

4.2.3 The population will realize its civic rights and duties, and have access to the judicial system rapidly and easily. All parties will also participate in the judicial system. Law enforcement will be equal and fair.

4.2.4 The poor and the disadvantaged will have a better quality of life and be better able to adapt to changes.

4.2.5 Management and administration systems will be transparent, and stakeholders will participate more in national development.

### 4.3 Indicators

4.3.1 The proportion of wealth enjoyed by various groups and among geographic areas.

4.3.2 The share of the gross product value of SMEs to GDP.

4.3.3 The participation rate of women, older persons and the disabled in the labor force.

4.3.4 The proportion of people eligible for social protection programs by sex, age and occupation, and the proportion of informal workers eligible for social welfare.

4.3.5 The proportion of women in executive and decision-making levels in the public sector, private businesses, and politics at both national and local levels. The income gap between male and female workers.

4.3.6 The TI Corruption Perception Index.

4.3.7 The IEP Peace Index.

4.3.8 The Community Empowerment Index.

## 5. Development Guidelines

Global and regional changes, and in particular the emergence of growing competitive pressures in the ASEAN Economic Community, have pointed to the risks of growing inequality and lack of fairness in Thai society. In order to reduce such risks, it is essential to focus on the quality of development as it affects individuals and society. Economic restructuring has been geared toward inclusive growth with quality employment opportunities for everyone in the society. Social protection is designed to prevent risks in daily life. People are encouraged to participate in economic and social activities, and to gain fair benefits. Supportive conditions to achieve potential have been strengthened in order to ensure economic and social security. People want to live in a united and caring community where they are accepted equally. Development guidelines are as follows:

### **5.1 Enhancing economic and social security and creating opportunities while strengthening risk management.**

**5.1.1 Restructure the economy toward inclusive and sustainable development and promote diversity and efficiency at the grassroots level.** This can be achieved by creating opportunities for new entrepreneurs, assisting SMEs and community enterprises, and providing equal access to markets at all levels. Emphasis should also be placed on job creation in the manufacturing and service sectors together with improvement in labor productivity and creativity in order to generate secure incomes for farmers. Measures should be undertaken to enhance

occupational efficiency, increase off-season income, provide access to capital and resources, expand basic infrastructure, and develop management and production skills.

**5.1.2 Improve the fairness of property rights management.** Land ownership rights should be distributed to landless and poor farmers. Laws and regulations should be amended to make resources available and accessible to local communities. A registration system should be developed to assure the legal status and right to own properties such as housing and land.

**5.1.3 Utilize a wide variety of information technology to support access to employment information.** Ways to rapidly access diverse information, production technologies and marketing information suitable for promoting skills and jobs should be increased to create more opportunities for earning income.

**5.1.4 Encourage labor rights in business enterprises.** In particular, ensure safety and sanitation conditions, regulation of working hours, and non-discrimination in wages and welfare, educational opportunities and training and re-training. To enhance productivity, regulations and enforcement should be improved to effectively protect workers under the principle of fundamental rights. Job opportunities should be provided for older persons, women, and people with disabilities in order to utilize their potential. Regional cooperation with ASEAN to encourage participation of these groups in economic activities should be promoted in areas of skill development.

**5.1.5 Promote the role of private enterprise in social security and the economy.** A public relations campaign and tax incentives should be provided for those having corporate social responsibility activities in order to promote fair wages, safety and quality of life. In addition, opportunities and capacity building for women, older persons, and the disabled should be supported; this would include raising awareness of the responsibilities of consumers, communities and society toward them.

**5.1.6 Reform the tax system to support a fair distribution of income and use it as a tool for enhancing resource allocation and property holdings.** This can be achieved by increasing direct taxes, especially those on property and non-wage income. Pay special attention to improving income levels and tax rates as they relate to the tax structure. The criteria for gaining benefits and tax exemptions should be improved to be effective for the underprivileged and for SMEs. Enforcement of environmental taxes should be accelerated to reflect the real costs of production. Use databases to develop methods to bring informal workers and micro-enterprises into the tax system. The budget allocation process should be adjusted to reflect the special needs of geographic areas and target groups.

**5.1.7 Develop methods to assist people and firms harmed by free trade agreements and investment liberalization.** The workforce should be equipped with greater knowledge and skills needed for employment. Occupational and business opportunities should be created through cooperation with the private sector, with supporting funds available during a period of transition. Technology should be upgraded to increase competitiveness of SMEs in the new global marketplace.

**5.1.8 Enhance social protection to cover people at all levels consistent with their needs.** Social security should be provided with equality and fairness for workers in both the formal and informal sectors. Labor welfare should be given support to strengthen the quality of life. Databases should be connected efficiently to ensure higher quality social protection.

**5.2 Provide social services for all in accordance with fundamental rights, emphasize building self-reliance of individuals, and encourage participatory decision-making in the country's development process.**

**5.2.1 Improve the quality of public services and broaden access to them.** Give special attention to basic education, healthcare and social welfare systems. Also reform the judicial system to provide equal and universal access for disadvantaged groups, and minimize disparities in the quality of service among regions and population groups. Key measures should include promoting decentralization of authority. Local administrations, according to the constitutional framework, should have responsibility for various services such as education, healthcare, social welfare, and the judicial system. It is also essential to develop national healthcare and educational database systems, distribute educational and healthcare resources, and introduce an incentive system to assign personnel and provide appropriate, sustainable pay and performance incentives.

**5.2.2 Provide access to low-income housing and public amenities.** Draft a national habitat and livable city policy, develop housing projects, and solve the problem of urban slums through cooperation with the private sector. Also, the private sector role in providing social assistance should be enhanced. Assure safe housing for workers; provide residential areas devoid of social conflict for migrant laborers from nearby countries; and develop housing projects for low-income groups that are widely distributed to reduce urban congestion

**5.2.3 Improve social welfare systems from birth to death by linking the national and community levels.** Quality and sustainability of welfare should be emphasized for all participating sectors and social institutions, particularly the family and community, non-profit organizations, social enterprises, and socially responsible businesses.

**5.2.4 Improve and diversify grassroots finance and savings institutions.** This is necessary to expand financial services and mobilize community resources. To achieve this, the public and private sectors, working together with the local community, should collaborate to promote savings within the community, especially for old age security.

**5.2.5 Enhance attitudes toward gender equality in children, youth, and the populace.** Cooperation is needed among institutions, particularly the family, educational and religious institutions and the media, to foster values and attitudes of gender equality. Violence against women should be eradicated. More opportunities should be given to women for career advancement toward managerial and decision-making positions at both local and national levels in the public and private sectors. This can be accomplished by strengthening the potential of women and expanding the perceptions of the populace in various areas, for example, knowledge, understanding, awareness, ideology, values, ethics, democratic culture, and good governance. Development of these attributes should better enable the participation of women at the decision making level to increase.

**5.2.6 Develop a database to ensure coverage and effectiveness of social protection.** This will be in accordance with basic rights, and will link various types of protection to their target groups. In addition, improvement of analytical and synthesizing skills is required to develop needed programs that assist target groups in gaining access to efficient services.

**5.3 Empower all sectors with the ability to make choices and offer valuable contributions in social, economic and political activities, with dignity.**

**5.3.1 Invite social forces to express creative ideas.** Key measures will seek to provide knowledge and understanding, promote the values of responsible citizenship, and reject wrongdoing and corruption. Events should be arranged to share creative ideas and allow participation in various development organizations. People should be encouraged to participate in the country's development processes, ranging from initiating ideas, making decisions, setting guidelines, driving implementation, and overseeing government and development partner activities. Moreover, children, youth, women, the disabled, older persons, the disadvantaged, the impoverished, and people in remote areas should be given opportunities to participate in all these activities.

**5.3.2 Strengthen the capacity of local communities to manage their own problems efficiently.** This should be implemented through emphasis on decentralizing authority in favor of the local administration, encouraging community participation in local administration management, and utilizing local educational institutions to strengthen communities. Community plans should be integrated with associated plans at the regional and national levels. Local communities should be encouraged to link their development initiatives to the changing global situation and to ASEAN and the Greater Mekong Subregion, and to build social and cultural relations and interactions with countries in the ASEAN subregion.

**5.3.3 Promote the formation of occupational groups to utilize local resources in geographic areas based on their potential.** Local knowledge and culture should be integrated into community enterprises. Development of occupational groups through production value chains should receive support. Production and service standards should be upgraded and adopted at the domestic and international levels through support from large business enterprises. Farmers should get assistance to increase productivity and gain access to markets. Corresponding risk management systems should be provided.

**5.3.4 Increase people's access to information regarding government implementation of megaprojects and their oversight of resource allocation plans through budget expenditures.** Information sources should be developed to disclose data on government procurement, budgets, and projects. The general public should monitor and scrutinize government and local administrative organizations. The government sector should provide accurate data and other information, and acknowledge the citizen's right to access this information.

**5.3.5 Support the role of the private sector, civil society, and local government in social development.** Campaigns should be designed to create awareness of responsible and eco-friendly business activities. Community empowerment should be supported. Social as well as financial returns should be fully taken into account when considering projects to alleviate poverty and reduce inequality. Local administrative bodies should be developed to translate development strategies into action that is transparent and efficient at the local level. Meanwhile, the private sector and civil society should be encouraged to identify and suppress corruption at all levels.

**5.3.6 Increase the standards of consumer rights protection to accommodate the free flow of goods, services, and information in the ASEAN community.** Key actions include increasing effective enforcement of regulations in

quality and safety standards of goods and services, and also amending regulations that relate to the quality of services in government agencies. Access to information about consumer rights and protection should be increased while surveillance of complaints should be improved. Awareness of and popular participation in consumer's rights protection should be supported, and the health and environmental impacts from using goods and services should be assessed and regulated as needed. Rules and regulations should be amended to correspond to changes in the nature of goods and services and corporate social responsibility should be promoted.

**5.3.7 Increase the role of women in management and decision making positions at both local and national levels to support the country's development.** More attention should be given to improving understanding and attitudes toward the role of women within organizations and society. Methods should be developed to promote gender equality. Laws and regulations need to be developed to prevent all forms of discrimination against women and some laws need to be amended in order to allow appointment of more women to local and national committees. A Chief Gender Equality Office (CGEO) in public agencies should be encouraged as an important means to increase the number of female executives to an appropriate level, and it should be extended to public enterprises and organizations. In this regard, best practices in the ASEAN community should be shared.

**5.4 Enhance social interactions that recognize shared values and common interests, and reinforce effective, transparent, and accountable public administration.**

**5.4.1 Create new values based on trust, caring and sharing.** The main measures should be to enhance social capital and the relationships among people in society while an attitude of respect for the rights of others should be nurtured. Measures also stress that we live among diverse beliefs and cultures so we should accept differences among people's identities in each area and respect human dignity. Present social values should be reaffirmed, while new values should be created based on trust, cooperation, sharing and caring throughout society.

**5.4.2 Promote good governance in politics that embraces genuine democracy.** Progress can be made by strengthening the democratic conscience and culture of the populace and politicians. Knowledge and understanding with respect to legal and constitutional rights should be embedded. The Thai people should be encouraged to adopt ideas, beliefs, and values consistent with democratic culture at the individual, family, community, and national levels.

**5.4.3 Develop public sector personnel that are qualified, ethical, and highly responsible.** Incentives should be introduced to stimulate effective performance and prevent corruption. To achieve this goal, participation from all sectors should be strongly encouraged.

**5.4.4 Strengthen the public administration system and enhance its efficiency with comprehensive checks and balances.** Operation of the public sector should be adjusted and be based on efficiency and transparency for public benefits.

The main focus should be to integrate area-based development and the roles of development partners from all sectors, including the political and public sectors, the community, and civil society. Their contributions should be reinforced through more united and coordinated efforts to generate social benefits. Emphasis should be on increasing transparency and efficiency in spending the national budget, improving the performance appraisal system of government officials based on balance of power, and creating monitoring networks of independent organizations, civil society, academia, and the media.

**5.4.5 Reform and enhance the capacity of independent monitoring bodies as partners in scrutinizing the government to end corruption.** Integrate implementation in order to link in-depth information and scrutiny. Related rules and regulations should be amended to encourage effectiveness, fairness, transparency, and sustainability in the solution of corruption and social conflicts.

**5.4.6 Encourage fairness in the judicial system, create a strong legal assistance program, and expand legal services.** Mainstream and alternative judicial systems should be supported to create opportunities and expand access for people through a comprehensive, step-by-step transparent approach. Intensify efforts to strengthen community justice networks where conflicts can be managed within the community. In addition, people should be encouraged to broaden their knowledge regarding their rights and duties, and have easier access to the judicial system. Legal status and registration systems should be improved. Know-the-law campaigns that focus on the poor should be made.

**5.4.7 Ensure impartiality in the judicial system by making it easier for those adversely affected by the system to submit complaints and obtain remedies.** To complement this effort, people should have the assistance of services such as prosecution, legal proceedings and execution of judgments. Those affected, treated unfairly, or mistakenly affected by the judicial system should have their rights



and freedoms protected. To ensure implementation, methods should be created to follow the progress of remedies.

**5.4.8 Reform the entire political system to bring about genuine democracy.** To achieve this ambition, it is necessary to create knowledge and awareness concerning political rights and duties at the community, local and national levels. A means to monitor the exercise of authority at every level needs to be developed. Popular participation should be encouraged in public policy discussions and budget decisions. Leadership, ethics, integrity, sacrifice, and the public interest should be embedded in the minds of politicians. Strong measures should be created to punish political parties and politicians who seek solely to fulfill their own interests by direct and indirect means.

**5.4.9 Support the use of social media at local and national levels to reinforce development.** Social media can play an important role in providing fair and constructive access to accurate knowledge and information for every sector of society. It can also be used as a way to promote new social values by verifying the reliability of information. It can encourage media to be more ethical for the benefit of society, As a social enterprise it can develop responsible and creative media and provide opportunities for consumers to participate in producing and disseminating information and its benefits to the public.

# Chapter 4

## Strategy for Human Development toward a Sustainable Lifelong Learning Society

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### 1. Current Situation

National capital should be enhanced in order to move toward balanced and sustainable development. Of particular importance is strengthening human capital formation to cope with changes in the 21<sup>st</sup> century, and to build the social environment to promote human progress in terms of institutional, organizational, and structural advances. A number of considerations drawn from past development are as follows:

**1.1 The demographic structure has been trending toward an aging society with a decreasing proportion of children and workforce aged adults, as well as increased urbanization due to migration from rural areas.** It is expected that Thailand will continue to move toward an aging society during the Eleventh Plan and will become a society whose majority will be elderly citizens by 2025. One-third of them will live in the Northeast while those residing in Bangkok will rapidly increase. The declining fertility rate accounts for the decreasing proportion of children and the shrinking work force. In 2008, the fertility rate remained low at 1.6, causing the population ratios of children, working age adults, and the elderly to change from 20.5 : 67.6 : 11.9 in 2008 to 18.3 : 66.9 : 14.8 in 2010. Ignorance of reproductive health has further exacerbated the unbalanced composition and quality of the population. Migration from rural areas has also increased the rate of urbanization so that metropolitan areas have grown from 31.1 percent in 2000 to 45.7 in 2010.

**1.2 Human development in all age groups is continuing, but there are persistent problems of inadequate intellectual growth and increasingly risky health behavior.** Data show that in the younger age group the intelligence quotient (IQ) on average declined from 91 to 88 during the period 1997-2009 while the WHO standard is at 90-110. The proportion of children age 5 or younger who met child development standards dropped from 72 to 67 percent. Over-consumption and obesity from behavioral choices has also become a concern for this group. Survey data indicate that 10.6 percent of them had problems from excessive consumption in 2006 and it is estimated that in the next decade, one in five children will be obese. School-age children, on average, had academic achievement scores lower than 50 percent of the possible total and display unsatisfactory performance in analytical and

synthesizing abilities as well as in critical and creative thinking. Risky sexual behavior accounted for a higher rate of teenage pregnancy among the group 15-19 years of age with the pregnancy rate increasing from 54.9 per 1,000 females in 2005 to 56.2 in 2010. In the group of workforce adults, educational attainment improved. In 2008, 43.1 percent of this group had completed primary education or higher. The proportion of students in vocational education compared to those in general education was 40 : 60, but much of what they were learning was not relevant to labor market demand. Labor productivity during 2007-2008 increased slowly at 1.8 percent and presented a major barrier to expansion of the industrial sector and total productivity. Older persons had longer life expectancy but a greater proportion suffered from chronic diseases. It was reported that high blood pressure, diabetes, and heart disease, afflicted 31.7, 13.3, and 7 percent of them respectively. This is likely to cause a significant financial burden in the future.

**1.3 Security in life and property, the incidence of illicit drug use, and gambling have become major concerns affecting the quality of life.** The trend in crime rates rose during 2005-2009. The incidence of major crimes, including life-threatening physical attacks, sexual abuse, robbery, and drug trafficking steadily increased from 355.9 cases per 100,000 population in 2005 to 516.7 in 2009. Most of these crimes were drug trafficking. This rose from 160.4 cases per 100,000 population in 2005 to 371.6 cases in 2009. The prevalence of drugs has now become a major threat, especially to children and juveniles. Drug use in schools (through universities) increased from 19.2 percent of students in 2009 to 51.3 percent in 2010. The impact of the 2008/2009 economic crisis has resulted in an increasing number of people involved in gambling, such as football betting and underground lotteries. In 2010, a total of 163,553 persons were arrested for gambling. In addition, it was found that more children and juveniles are also involved in gambling.

**1.4 Thai society has encountered problems of degradation of morals and integrity, has experienced cultural changes, and has become an increasingly individualistic society.** The influence of globalization and cyberspace has resulted in increasing hedonism often reflected in the creation of self-identity via social networks. The Transparency International (TI) Corruption Perception Index also revealed severe corruption in the country and a large imbalance in the ethics of administrative governance. In 2009, Thailand scored 3.40 points out of 10 for transparency, honesty, and tolerance toward corruption, ranking 84<sup>th</sup> out of 180 countries in the world and 11<sup>th</sup> out of 33 countries in Asia. While participation in various public activities has been widespread, few of these were designed to benefit the public. In 2006-2009, the ratio

of value added by non-profit and volunteer organizations to total GDP was only 1.6 percent compared to the level in developed countries of 4-7 percent. Results from the Basic Minimum Needs Survey, however, showed an increase in the number of households who participated in public activities rising from 7.7 million households in 2008 to 8.2 million in 2009, and accounting for 96.0 and 98.7 percent of total households, respectively.

Relationships among kin slackened and new family structures are emerging such as single member households, households that include non-relatives, one-generation families, two-generation families, families skipping a generation in which grandparents reside with their grandchildren, and same-sex households. Many families have become more individualistic and fragile and display less bonding among members and increasing social problems. The divorce rate, for example, increased from 4.5 couples per 1,000 households in 2000 to 5.3 couples in 2009. Incidences of abuse toward women and children also increased within the family.

**1.5 Media have a significant influence in shaping public behavior but a limited role in human resource development.** Social media have now become a major influence in shaping public behavior, yet their role is rather limited in promoting learning and social values. In an hour, television broadcast shows had, on average, five scenes with violence, 1.3 scenes with a negative perception of others, 0.3 scenes with uses of offensive language, and 0.13 scenes with inappropriate sexual content. Most online news contained considerable sexually explicit content and improper use of language, and some websites also contained obscenities. In 2007, 42.2 percent of children were addicted to online games, which were mostly violent and sexually explicit, and used inappropriate language.

**1.6 The changing global situation has resulted in economic cooperation at the bilateral and multilateral levels, and inter-regional cooperation within the ASEAN community.** Cooperation between nations will affect the flow of legal and illegal labor migrants to Thailand. As of 2010, there were 378,078 legal workers and 955,595 illegal workers. In 2015, under agreed standards set for the ASEAN Economic Community, there will be a free flow of skilled labor in seven professions, with Mutual Recognition Arrangements (MRAs) for medical and dental practitioners and an MRA framework for accountants, engineers, nurses, architects, and surveyors. Future plans will also incorporate other positions, such as semi-skilled labor, and there needs to be a skill assessment standard for labor migrants within the region.

## 2. Risk Assessment

There have been many economic and social challenges facing human and social development in the past. These have caused various risks within the social structure and social institutions, and to the individual as follows:

**2.1 Imbalance in the dimensions and quality of the demographic structure will have a significant effect on the economic growth and competitiveness of the country.** Not only is the country encountering the problem of lower birth rates, but newborns and children are less fit than before. This may result in a future shortage of skilled labor. The proportion of the labor force, especially in the agricultural sector, has been continuously declining, from 41 percent in 2002 to 37.7 percent in 2009, and the average age of workers has also increased. In 2009, the average was 43 years, with those over 50 accounting for 20.5 percent and those over 60 for 12 percent of the total labor force. This has resulted in labor shortages, particularly in the agricultural sector and is creating pressures to import foreign labor. Skills and productivity of the current labor force have remained low; consequently, this reduces total productivity and economic growth. While older persons increased in number, only 38.2 percent were employed, mostly in the agricultural sector.

**2.2 Threats to security of life and property, and rampant drug use have major effects on the quality of life.** An increase in criminal cases, especially drug arrests, is partly the result of the economic crisis and materialism as more people seek an easy way to earn money, such as by drug trafficking, gambling, and prostitution.

**2.3 Moral degradation, lower trust and less public participation are weakening social institutions.** The moral crisis is likely to jeopardize peaceful coexistence among different social groups within society. Violence has prevailed when conflicts arose within the family or among political ideologies. The ineffective judicial system has also lowered mutual trust among members in the society. Recently, popular forms of virtual reality have introduced a number of online networks that could significantly influence Thai culture in the future. There is a particular risk that children with limited mental and social maturity may adopt negative cultural traits. The rise in use of virtual culture has also been destructive rather than creative. The relationship between children and their parents and with people around them has been weakened, and this, in effect, leads to more family conflicts and less social participation.

**2.4 Labor is increasingly mobile and will significantly affect employment and quality of life.** This is the result of intensifying market competition, capital flows from multinational corporations, and labor mobility within the ASEAN

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

### 3. Resilience Enhancement

The ever-changing environment and its anticipated risks require adherence to the Philosophy of Sufficiency Economy as a guiding principle for living based on particularly important principles that include acquisition of knowledge, eagerness to learn, cautiousness in decision making, moral virtues, perseverance, endurance, consciousness, and wisdom. These will bring about the virtues of moderation, equanimity, and resilience. The individual and society must be nurtured in three facets as follows:

**3.1 Lifelong learning** that involves a process of continuous study, skill development, and living to enhance resilience in life and adaptation to global changes in the 21<sup>st</sup> century.

**3.2 Cultural awareness** with shared values and virtues, and peaceful coexistence that emphasizes love, integrity, and unity despite cultural heterogeneity. This will form the basis for the caring and sharing society, and the development of innovation and cultural products that support a creative economy.

**3.3 Strong social institutions** that perform their roles to the fullest capacity in spite of a continuously changing environment, so that the family, religious institutions, academic institutions, and the community serve as key development partners in instilling knowledge, moral values, and virtues.

### 4. Objectives and Targets

#### 4.1 Objectives

4.1.1 To develop the physical and mental qualities of Thais at all ages so that they possess respect for order and discipline, cultural awareness, national pride, the opportunity and ability to engage in lifelong learning, resilience to changes, and so they become a societal force for economic and social development.

4.1.2 To improve the quality of education to meet international standards and to increase educational opportunities and alternative means of learning.

4.1.3 To promote a stable family, community, and social environment that is conducive to the development of human resources and is consistent with future economic and social circumstances.

## **4.2 Targets**

4.2.1 The development of all Thais both physically and mentally to ensure appropriate reproductive health for all age groups.

4.2.2 The upgrading of educational quality to meet international standards, support innovation, and increase educational opportunities and alternative learning methods.

4.2.3 Better access to a high quality health care system and reduce health risk factors in a holistic manner.

4.2.4 To ensure that family, religious institutions, and academic institutions play important roles by instilling moral values and public virtues in children and all Thais.

## **4.3 Indicators**

4.3.1 Population quality:

- 1) Total fertility rate of at least 1.6.
- 2) The IQ score of children to reach at least the international median level of 100.

4.3.2 Overall quality of life:

- 1) Average schooling increased to 12 years.
- 2) Students at every level of education possess moral values, virtues, and citizenship.
- 3) A greater proportion of the population has access to communication networks and high speed Internet with a target of 80 percent of the total populace.
- 4) The number of personnel in research and development increases to 15 per 10,000 of population.
- 5) Labor productivity increases to at least 3 percent per annum.
- 6) The prevalence of heart and cerebrovascular diseases, diabetes, high blood pressure, and cancer decreases.

7) Alcohol and tobacco consumption and other health risk behaviors decrease.

#### 4.3.3 Strong social institutions:

1) The Warm Family Index improves while the incidence of violence in the household is curtailed.

2) Lifelong learning throughout communities increases.

3) There are a greater number of household members participating in public activities in villages and communities.

## 5. Development Guidelines

Current and future prospects in the developmental situation indicate many risks at structural, institutional, and individual levels. Guidelines on human resources in light of global and intra-regional changes, especially those envisioned in the ASEAN Economic Community, should therefore focus on human resource development at all ages within a sustainable lifelong learning social environment. Emphasis should be on the adoption of the Philosophy of Sufficiency Economy to reinforce human capacity in all its diverse dimensions, including physical health, knowledge, morality, perseverance, and resilience. Social institutions should also be strengthened to introduce an environment conducive to the development of human resources. Key measures include:

### **5.1 Improve the demographic structure and population distribution.**

Promote fertility choices that focus on quality of life for children and demographic distribution in accord with opportunities and the carrying capacity of geographic areas.

#### **5.1.1 Encourage more childbearing by couples capable of creating or expanding a family and maintain fertility rates at least at the current rate.**

1) Promote quality reproductive health for all ages and establish appropriate tax and child care assistance measures that encourage couples to have children and give them a quality childhood.

2) Promote knowledge in family studies, nutritional education, behavioral reproductive health, sexual health, and the preparation of parents at the pre-pregnancy, pregnancy, delivery, and post-delivery stages.

#### **5.1.2 Promote demographic distribution and population settlement that is relevant to carrying capacity, opportunity, and natural resources in the region.**



1) Increase regional employment opportunities to reduce outward migration and provide incentives for reverse migration.

2) Develop basic regional infrastructure and economic and social services to narrow the urban-rural development gap and reduce migration.

**5.2 Build resilience, encourage practical learning and knowledge management, utilize outcomes from research and development to ensure career growth and capacity building, and promote suitable life styles.**

**5.2.1 Promote the development of children at the pre-primary level in all aspects, including intelligence, emotion, morality, and integrity.**

1) Prepare parents and guardians to take care of children in a way that is appropriate to their mental, intellectual, and physical development. A happy learning environment should be created by encouraging critical thinking, experimentation, and adaptation of knowledge acquired in class to real life situations. Parents should be encouraged to serve as role models for children in ethics, morality, and integrity.

2) Improve the quality of childcare centers in the community, in firms and in government agencies to meet the standards that are relevant to each social landscape. Emphasis must be on the quality of child caregivers and the involvement of older persons in the child development process so as to establish a sound relationship among three generations.

**5.2.2 Strengthen the academic, mental, and knowledge management ability of school-age children.**

1) Improve the curriculum and promote an educational system that is conducive to student development and is closely linked to societal needs and norms. Integrate knowledge from all sources and viewpoints in academics, daily life, and recreation, including art, music, sport, culture, democracy, religion, national identity, and ASEAN studies. The educational process should be improved both inside and outside the classrooms to produce an atmosphere conducive to learning for students, and to encourage group projects and teamwork habits. It is also important to promote critical thinking, the ability to synthesize and solve problems, respect for the opinions of others, knowledge development leading to innovation, and volunteer activities, especially boy scouts and care of older persons.

2) Identify children with talent in sciences, mathematics, arts, crafts, sport, and music, and provide full support to enable them to reach their full potential.

3) Promote the use and preservation of local dialects and proper Thai language usage, together with English as a second language, as well as other languages, especially those used in the ASEAN countries. Cultural knowledge and awareness in preparation for participation in the ASEAN Economic Community should be emphasized.

4) Encourage teachers to have education certificates relevant to the subjects they teach. A program to produce high quality teachers should be supported. A teacher training system should be undertaken to attract individuals who possess intellectual ability, morality, and a teaching spirit. Sector partnerships should be promoted to honor excellence in teaching and dedicated teachers as role models. Incentives should be offered to teachers for self-improvement, while the current assessment process should be improved to better achieve efficiency in education management and student development. The private sector should be motivated to promote education that is focused on quality.

5) Reinforce skills used in everyday living and promote healthy behavior among children, especially the development of sound human relations, management of emotions, knowledge of nutrition, and attention to exercise and healthy recreational activities. At school, sanitation should be improved to be more hygienic so the school environment will be better for student health.

### **5.2.3 Improve skills and capacity in the workforce so it is better aligned with that needed for production of goods and services and is well-trained and creative to build a better economy.**

1) Build workforce capacity in the agricultural sector by increasing the number of new generation farmers, those who efficiently utilize modern knowledge and technology. Accomplish this by providing land, finance, and knowledge of business and marketing. Incentives should be offered to younger people to pursue careers in agriculture with pride.

2) Support the expansion of researchers and innovators, and create networks among them at the domestic and international levels. Advanced innovative techniques should be developed to link modern knowledge with Thai wisdom and culture. Use these links to move toward a creative economy that generates value-added commercial and social goods and services. Emphasis should be placed on knowledge and education in science and technology at the primary through tertiary education levels, and in arts and culture to bring about a creative economy.

3) Develop semi-skilled labor by promoting learning of skills, by creating incentives, enhancing the values of learning at the vocational

level and being self-employed. Vocational qualification standards should be upgraded in order to develop competencies in workers that are relevant to targeted industries while expanding the needed specialties taught at vocational educational institutions. Networks that produce and develop the labor force should be created among various partners, particularly firms and special institutions, in parallel with international learning networks.

4) Initiate a National Qualification Framework to ensure that education and competency qualifications are linked to demand to produce employees for specific career paths. Preparation for the free flow of labor within the ASEAN Economic Community should be undertaken.

5) Take appropriate actions to maximize benefits and mitigate the costs of the freer movement of labor that is anticipated in the future. Thai workers should have the opportunity to develop their capacity for working abroad by learning professional and language skills.

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

7) Promote systematic human resource planning and development, and define the precise roles and job descriptions of officials, employees, and temporary officials in the public sector to increase efficiency and improve human resource administration to achieve greater morality, integrity, and good governance.

**5.2.4 Improve the socioeconomic security, quality, and value of older persons so they become a more productive force in social development.** Key measures are as follows:

1) Promote measures to generate income and employment opportunities for older persons by identifying jobs and wage rates appropriate to their situation. They should be provided with academic skills and the capacity for work and self-improvement. Modern communication technology should be utilized to help them learn.

2) Utilize more fully the particular knowledge and wisdom of those individuals registered in the National Brain Bank (2000), and seek to use local wisdom in rural areas, communities, and in the country at large for development.

3) Increase the ability of the elderly to be self-reliant. Their physical environment should be modified to better serve their age group. A variety of health care and social welfare systems should be developed in a holistic manner with the participation of every sector. Successful community models for the care of older persons should be extended to other communities.

**5.2.5 Develop human resources through a learning process that leads toward a culture of caring and sharing.** The populace should learn continuously and be able to think creatively. Citizens should be open-minded, with a sense of morality, integrity and discipline. A broad range of knowledge should be acquired for greater latitude in employment and integration into the ASEAN Economic Community.

**5.2.6 Instill the value of social responsibility in the population.** They should respect laws and human rights. Consumption behavior that is environmentally responsible should be emphasized. Knowledge and awareness should be created about energy conservation and adaptation to climate change and disasters.

**5.3 Reduce health risk factors in a holistic manner.** Accomplish this by strengthening the well being of all Thais, and by improving the quality of public health services.

**5.3.1 Strengthen the physical and mental well-being of all Thais.** Knowledge and skills for health care should be provided at the individual, family, and community levels. Health risks at work and in the environment should be reduced. Warning systems to spot incipient problems should be set to ensure better health. A participatory approach should be promoted to formulate public health policies. Use of herbal medicines for disease prevention and knowledge of first aid should be encouraged. Modern communication technology should be used to actively promote health care.

**5.3.2 Improve public health services to provide better quality and coverage.** Emphasis should be placed on the development of primary care services, alternative medicines, geriatric medicines, and health information systems. Health personnel should be increased and distributed to best utilize their services. Incentives such as good compensation and fringe benefits should be provided. Financial measures involving health care should be utilized efficiently.

**5.4 Promote lifelong learning.** Create learning opportunities for all so they may gain access to bodies of information on culture, wisdom, and new knowledge.

**5.4.1 Promote the value of learning as a characteristic of all Thai people.** The habit of learning should be developed from an early stage in life. A learning process that links people from various generations should be utilized. Various organizations, groups, the community, the public, and the media should be encouraged to assume a role as a source of creative learning.

**5.4.2 Encourage advanced alternative education consistent with the individual's desires.**

1) Arrange learning and its educational processes to have high quality, flexibility, variety, and accessibility. Ensure that it is relevant to the culture, lifestyle and means of livelihood in each area. Emphasis should be on student-centered development that enables both self-learning and group studies.

2) Develop a system to transfer knowledge and experience. Educational evaluation and further education systems should be adjusted to support alternative education for all groups.

3) Promote online learning. Tax incentives should be used to produce educational and learning media as a way to express creative ideas.

**5.4.3 Support a learning society and success factors for lifelong learning.**

1) Develop intellectual infrastructures at the local, community, and national levels. Communication networks and high speed Internet should be available throughout the country. Learning sources that are consistent with the social landscape should be developed. Centers of excellence should be expanded to serve regions and local communities. Tax measures, laws and regulations should be used to facilitate continuous learning.

2) Increase opportunities for the public and communities to fully utilize available learning sources such as educational institutions, libraries, museums, learning centers, and sport centers. Public forums should be provided for sharing ideas, expressing creativity, and having the opportunity to combine local wisdom and modern knowledge for commercial benefit.

3) Utilize traditional knowledge and conduct empirical research to foster knowledge management in the community. Skills in language and educational technology should be developed to provide greater access to those learning sources that contain appropriate content and enable development through self-learning.

4) Create opportunities to learn and develop continuously that are relevant to abilities and environment, especially for children and others outside the formal education system such as student dropouts, children with disabilities, and the underprivileged, as well as people who seek to learn new skills. Close cooperation among stakeholders should be formed at the provincial and community levels to target those in the informal education system and to develop an efficient knowledge management system.

**5.5 Reinforce social institutions.** Encourage the adoption of values and Thai culture in human and social development.

**5.5.1 Strengthen the role of the family to instill morality and integrity.**

1) Enhance family capacity for securing employment and income to ensure self-sufficiency. An appropriate learning process should be supported relevant to the family's potential. Knowledge and experiences should be passed between generations to create sound relationships among family members and link with family networks. Rewards should be given to families with good relationships. Parents and guardians should be equipped with knowledge of communications technology, and provided with access to efficient use of it to enhance family relationships.

2) Revive positive cultural and family values such as generosity and kinship. Instill morality and integrity among family members and utilize these in the proper ways. Awareness through cultural surveillance that affects cultural bias should be created.

3) Support community and local administrative organizations to provide public spaces for recreational activities for the family and community. The business sector should organize activities of benefit to the public that include family participation.

**5.5.2 Strengthen the local community to create resilience.**

1) Seek and shape community identity and strengthen its learning processes. Local wisdom should be preserved and, when necessary, revived. Community institutions should participate to create understanding about living together peacefully in a multi-cultural society.

2) Support a participatory approach to developing the community, based on the principle of self-reliance according to its potential, natural resources, wisdom, lifestyle, culture, and environment. Emphasis should be on

managing community learning, knowledge transfer, self-management, and passing on wisdom for skill development.

3) Extend successes and promote capacity building among three generations in order to create mutual understanding toward a better quality of life in the family and community. Creation of cooperation networks among communities, civil society networks and other sectors is essential to develop social and cultural monitoring and a surveillance system, especially of children and youths.

**5.5.3 Promote cooperation among civil society, businesses, and government agencies.** Values of social responsibility should be instilled. Social enterprises should be encouraged to strike a balance between organizational and societal benefits. The involvement of the private sector in learning management and living arrangements for workers is essential. Praise and rewards via media should be incentives for socially responsible private enterprises and philanthropists.

**5.5.4 Revive the roles of religious institutions in instilling morality and serving as spiritual sanctuaries.** Set out accurate religious principles and provide space for religious practices. Innovations and learning activities should be developed to promote morality and integrity in children.

**5.5.5 Develop the roles of social institutions to produce an environment conducive to human development.**

1) Encourage the roles of regional and provincial educational institutions to develop the individual, community, and society in a holistic manner.

2) Promote mutual cooperation among family, educational institutions, and religious institutions to develop thinking based on morality, acceptance of diverse cultures, consciousness of citizenship, and democratic culture. Social capital should be utilized to create values and revive positive cultural traits.

3) Strengthen the role of social networks in reflecting public demands and expressing creative opinions. Online space should be provided for learning, utilizing Internet media, and sustaining effective administrative management systems.

**5.5.6 Create and value pride in Thai culture and acceptance of cultural heterogeneity.** Reduce ideological conflicts and create unity. International cultural networks, especially among members of the ASEAN community, should be created to enable the free flow of cultural information and ideas for mutual understanding involving history, culture, and sharing of knowledge.

# Chapter 5

## Strategy to Strengthen Food and Energy Security and the Agricultural Sector

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### 1. The Current Situation

The agricultural sector has played a major role in enhancing the production base and securing the domestic food supply. It has also provided income for agricultural households, supported value creation for trade and services, and produced renewable energy. Thailand has geographical advantages, abundant natural resources, and the knowledge to apply to create value. In addition, the nation has strong food production and is a significant exporter. The current situation in the agricultural sector is as follows:

**1.1 The agricultural sector still has an important role to play in the country's production output.** At present, land used for agriculture is approximately 40 percent of the total, with 6.9 million agricultural households, and includes self-reliant small farms, and farms for commercial purposes and for value added production. In 2010, Thailand produced agricultural commodities and food valued at B381.6 billion or 8.3 percent of GDP compared with 9 percent in 2006. Agricultural production serves not only domestic needs, but also overseas demands. Today the key exports that include rice, tapioca, sugar cane and oil palm are experiencing severe competition in the world market. Thailand has to be competitive to maintain its export share.

**1.2 The agricultural sector is weakened by low productivity and unsustainable farming practices.** Average productivity in some commodities is quite low compared to our neighbors. Thus the sector has failed to increase productivity to fully match gains in world markets, which are very competitive. Most farmers who have engaged in primary production are poor and in debt. In 2007, Thailand had 5.4 million people living under the poverty level, 56.9 percent of whom were farmers. Weaknesses in the agricultural sector are mainly from such factors as drought, infertile land — particularly in Northeastern and Northern regions — and water shortage. Most farmers continue to use chemical fertilizers and pesticides, which results in rising production costs. Moreover, traditional commodities are facing low and volatile prices in the world market and experience more frequent natural disasters. In addition, most



farmers must rent land for cultivation due to loss of their own property. However, income in this sector on average increased from B52,933 per household during 2005–06 to B58,632 in the period 2009–10 while debt also rose from B52,897 to B54,409.

**1.3 Climate change and the exploitation of genetic resources could have a significant impact on the agricultural sector.** Changes in precipitation and in average temperature and season duration could affect agricultural productivity significantly and impinge on national food and energy security over the long run. Meanwhile, a near commercial monopoly over the exploitation of genetic resources and agricultural seeds could hurt the viability of small and medium-scale farmers who generally utilize resources from forests for food and herbal medicines.

**1.4 Labor shortages are rising in the agricultural sector, as Thailand becomes an aging society.** The number of farmers who are over 50 is increasing while working on the farm appears to be less attractive to the younger generation. As a consequence, during 1998–2007, the number of farm workers decreased by 1.9 percent per year, which resulted in labor shortages and low productivity. On the other hand, national and international demand for food is likely to increase significantly due to rapid population growth, which, in turn, will affect food security in the future.

**1.5 The demand for bioenergy continues to increase.** Climate change and high energy demand have led most countries, including Thailand, to launch national policies and plans to promote bioenergy as one of the key renewable energy resources. Therefore, agricultural commodities such as tapioca, sugar cane and oil palm will experience increased demand and their prices will rise. This situation is changing land use from food to energy crops. It has created vulnerabilities for national food security and export competitiveness.

## 2. Risk Assessment

Domestic and external changes coupled with future trends suggest that agricultural development will face important risk factors: depletion of natural resources, environmental damage, changes in livelihoods, and threats to competitiveness and to national food and energy security. Risk factors that need to be faced are as follows:

**2.1 The natural resource base for agriculture has deteriorated significantly.** Previous development has enormously exploited natural resources without considering their restoration. In particular, the extent of soil deterioration has reached 190 million rais or 60 percent of the entire country. Deterioration is now increasing by 1 million rais annually through improper land use, thereby thwarting

government programs to achieve soil improvement of approximately 2 million rais per year. Moreover, most farmers still use chemical fertilizers and pesticides, much of which is imported and totals 6 million tons at a cost of over B80 billion per year. Similarly, water shortage, natural disasters and loss of biodiversity are major problems in the agricultural sector and damage its competitiveness.

**2.2 Climate change is more severe.** It has directly affected agricultural production through environmental impacts from flood, drought, and pest outbreaks. The forecast of Analytical Research Network and Climate Change Training in South East Asia Continent (2004) showed that an increase in precipitation in the Central region could cause more frequent flooding and hurt rice production along the Chaopraya River basin. Similarly, an outbreak of pests can have significant impact; for example, an epidemic of pink mealy bugs in tapioca crops spread to 1 million rais in 2009 and an outbreak of grassy and ragged stunt diseases in paddy fields affected about 2.4 million rais.

**2.3 The agricultural sector has many weaknesses, especially in small-scale farming.** The agricultural sector is in a vulnerable position as a result of the agricultural life style becoming more individualistic, with fewer cooperative activities in the communities. At the same time, productivity has declined mainly due to inadequate infrastructure, particularly in irrigation, which covers only 28 million rais or 22 percent of the total agricultural area. Moreover, the cost of production has gradually risen due to an increase in the costs of logistics and inputs. Two trends — an aging society and a shift of workers to the industrial and service sectors have led to labor shortages in the agriculture sector. There is increasing dependence on foreign markets for imported technology as well as for chemical fertilizers and pesticides that totaled B80 billion in 2007. Health risks that harm farmers have also increased considerably during the last decade. For example, toxic chemicals cause many diseases including cancers, diabetes, and gland infections. The proportion of farmers at high risk from agricultural chemicals was 38.5 percent of all farmers in 2007, a significant increase from 16 percent in 1997.

In addition, free trade agreements with foreign countries have affected small-scale farmers who cannot produce commodities at low cost compared to production in neighboring countries. They are also encountering an imbalance of natural resource allocation compared to other sectors. The encroachment of housing developments into arable areas is rapid, especially from growth of suburbs.

**2.4 Thailand has utilized more crops for bioenergy production.** Demand for these crops, such as sugar cane, tapioca and oil palm, has significantly increased. Therefore, farmers have tended to convert their farms from food to energy crops.

Governmental policy has also promoted ethanol and biodiesel production in order to reduce imports of fossil fuels. The Renewable Energy Development Plan also aims to increase the level of ethanol in benzene by at least 9 million liters per day by 2022, and by at least 4.5 million liters per day in biodiesel. Compare this to the current ethanol and biodiesel consumption of approximately 1.2 and 1.7 million liters per day. Therefore, the trend is for food supply production to decrease.

### 3. Resilience Enhancement

Various types of risk factors have been identified that influence the agricultural sector; these also suggest ways to build up resilience in order to protect against and reduce their impact. Factors that can enhance resilience in the agriculture sector include:

**3.1 Thailand has an advantageous geographical location and is rich in natural resources.** The utilization of natural resources, however, needs to be managed in ways that reduce their loss and increase efficiency in agricultural production consistent with sustainable development.

**3.2 The agricultural sector is a strong production base.** This sector can offer jobs and income as well as food and energy security for the nation. It can also be a driver to conserve natural resources by enhancing the traditional life-style and culture in agrarian communities and can provide raw materials for the industrial and service sectors.

**3.3 Knowledge and useful technology have been accumulated for agriculture.** Knowledge and technology to increase efficiency and enhance competitiveness are available to formulate plans for agricultural production for food and energy. Effective adaptation to dynamic events such as climate change, price fluctuations and economic crises have been studied and the necessary knowledge and technology is available as well.

**3.4 Production efficiency needs to increase.** Strengthening of productivity can significantly address food and bioenergy production without creating an adverse impact on food supply. Plans should be considered to utilize solid waste and agricultural by products such as paddy husks, corn cover, timber and animal manure to produce bioenergy and biogas and thereby reduce pollution in communities.

**3.5 The agricultural sector's administrative mechanisms should have good governance.** Robust administrative mechanisms are needed to support agricultural sector development regarding production, market access, value creation,

equitable distribution of benefits and efficient access to natural resources without harm to the environment. Such governance will also improve social equity and enhance national food and bioenergy management.

## **4. Objectives and Targets**

### **4.1 Objectives**

4.1.1 Empower the agricultural sector so that it becomes an efficient production base that can produce food and energy with value, quality, high standards and remain environmentally sound. Production of the food supply should respond to market demands that incorporate fair trade and affordable prices. Food security should be the first priority.

4.1.2 Improve the quality of life, job security and income in the agricultural sector. Agricultural households and organizations will be strengthened and be self-reliant while practicing sustainable agriculture.

4.1.3 Promote the participation of farmers and local communities to support food and energy security and be self-reliant.

### **4.2 Targets**

4.2.1 Increase the share of agricultural commodities and agro-industrial products to at least 16 percent of the gross domestic product.

4.2.2 Ensure that agricultural products and food will meet market demands. Continually develop the quality and standards of commodities and food by expanding sustainable agricultural areas by at least 5 percent per year, and provide consumers access to safe and healthy food at fair prices.

4.2.3 Secure employment and income for farmers so that they will be able to pay their debts and attract the younger generation to engage in agriculture.

4.2.4 Increase the share of agricultural households that are self-sufficient to 50 percent by 2016, while ensuring a satisfying quality of life and access to safe food for them.

4.2.5 Increase ethanol and biodiesel production by at least 6.2 and 3.6 million liters per day, respectively. Increase electric power and heat from biomass, biogas and solid wastes from household waste and agricultural and agro-industrial byproducts. The goal is at least 3,440 megawatts of electricity and 5,564,000 ktoe (kilotonnes of oil equivalent) of heat by 2016. Promote energy efficiency widely.

### 4.3 Indicators

4.3.1 The proportion of value added in agricultural and agro-industrial products to gross domestic product.

4.3.2 The change in production costs per unit of agricultural commodities.

4.3.3 The increase in the number of agricultural farms with accreditation per year and the increase in the area practicing sustainable farming.

4.3.4 The proportion of net cash farm income to net cash household income.

4.3.5 The proportion of people entering farming to the overall farm population.

4.3.6 The increase in the number of farmers who rely on their own products and the decrease of farmers who are at risk and threatened by agricultural chemical use in farm activities.

4.3.7 The number of farmers that utilize the crop insurance system, which provides wide support to farmers.

4.3.8 The quantities of heat and electricity from bioenergy processes using biomass and biogas, whether produced from energy crops or from waste from households and the byproducts of the agricultural and industrial sectors.

## 5. Development Guidelines

The agricultural sector has played a major role in enhancing Thailand's production base. It has provided a secure domestic food supply and income for the nation while supporting value creation for trade and services. Competitiveness in the agricultural sector is tending to decrease because of the deterioration of natural resources, the impact of climate change, and from free trade agreements affecting the ability of small-scale farmers to compete.

In addition, an increase in production of renewable energy requires robust management in order to ensure adequate food and fuel crop supplies in the future. Therefore, the direction of growth over the coming years is focused on the conservation of natural resources and utilizing them to promote sustainable development. The Philosophy should be applied as the main concept covering three kinds of farming: self-reliant farms, production of commercial commodities, and agro-industrial enterprises, with the following purposes:

**5.1 Develop the natural resource base to strengthen the agricultural sector.** The focus is to:

**5.1.1 Conserve and protect productive agricultural land and support means for small-scale farmers to own land for cultivation or to have rights to arable land.** Laws and regulations should be amended to encourage agricultural land utilization. Legislation concerning the use, conservation and control of productive agricultural land should be accelerated while investment is made in infrastructure such as irrigation and transportation. Laws related to land management, particularly the Town Planning Act, should be an enforcement priority in order to preserve green areas and agricultural lands.

**5.1.2 Accelerate the process of expropriating private land for agricultural land reform.** Tax measures should be enacted to encourage land utilization and land holdings so they are equitably distributed.

**5.1.3 Establish an organization and system for land management.** This should be a mechanism to distribute land holdings. Government-owned lands should be productively utilized by farmers and communities. The means of providing land title documents for landless farmers should be accelerated.

**5.1.4 Develop the natural resource base to strengthen the agricultural sector.** Restoring fertile land, developing integrated water resource management and increasing efficiency in the use of water resources will support productivity in this sector.

**5.1.5 Regain and encourage good agricultural practices and norms.** Especially preserve the way of life related to sustainable farming in order to create a stable balance in natural resource usage in the future.

**5.2 Priorities to increase agricultural productivity:**

**5.2.1 Emphasize agricultural research and development, especially involving flora and fauna species that are adaptive and able to respond to the impact of climate change.** Development of improved flora and fauna should be promoted by using the resources of agricultural institutions, small and micro-community enterprises, community organizations and scholars of local knowledge and farming practices. Fossil fuel use should be reduced by applying agricultural technology. Sustainable agricultural practices and fairness in commodity markets should be enhanced in order to increase competitiveness and self-reliance. The development and management of innovation throughout supply chains should be

supported so that it can contribute to national food and energy security, and maintain Thailand's status as a world leader in food production.

**5.2.2 Support private research and development.** Provide a grace period for loans and tax incentives for farmers and agricultural firms that apply technology effectively to enhance efficiency and competitiveness in the world market.

**5.2.3 Promote agricultural production that is in harmony with geography.** This will include soils, markets, and infrastructure such as irrigation, and a logistics system that is based on farmers' participation to utilize natural resources efficiently. The scope of sound land usage should be identified and incentives should be provided to encourage agricultural activities on land suitable for farming. Access to data and information should be supported to help make decisions effectively. Farm registration should be used as a tool in agricultural production planning.

**5.2.4 Control standards governing the import and use of chemicals and pesticides in farming.** The pesticide registration system should be improved to ensure that registered hazardous substances in other countries are not allowed to be used in Thailand. Advertising and market promotion should be controlled so they are in accord with principles of the Food and Agriculture Organization of the United Nations (FAO). The use of organic material should be increased to reduce production costs. Food safety for both producers and consumers should be assured. In addition, farmers should have thorough knowledge about the proper use of pesticides.

**5.2.5 Improve fundamental services that support agricultural production widely.** For example, create a center for farming tools and equipment and learning centers for technology development in order to increase production efficiency and the capability to respond to climate change.

**5.2.6 Encourage production that supports basic biodiversity in accordance with climate and environmental conditions.** It is essential to constantly emphasize that research and development include growth in technology, for example, biotechnology and genetic engineering to enhance competitiveness regarding future scientific advances.

**5.2.7 Develop and enhance knowledge, science and technology that is appropriate to agriculture.** Ensure the use of environmentally sound methods through technology distribution, learning centers and local networks of scholars. Farming knowledge should be developed and access to information for farmers should be widely expanded. Media interest in agriculture should be widespread to disseminate technology and innovation to farmers and the public.

**5.3 Create value added for agricultural products throughout the supply chain:**

**5.3.1 Support communities who want to increase value in food and energy production.** Economic progress based on biodiversity and local knowledge should be promoted to create unique marketable assets such as herbal and food products, health and medical services and Halal foods and products. Non-food products such as rubber goods, parawood, biomaterials, medicine and food supplements might also be produced. Research and development should be supported to increase market opportunities and enhance competitiveness. New higher value products that serve niche markets should be encouraged.

**5.3.2 Promote local academic institutions to establish joint ventures with the private sector in conducting research.** Relaxed credit terms and tax incentives should be provided for farmers and firms that apply eco-friendly innovations and technology.

**5.3.3 Increase the quality of agricultural products and food to meet international standards.** Accreditation procedures should be strictly controlled. A traceback system should be put in place. Opportunities derived from free trade agreements should be exploited.

**5.3.4 Strengthen and develop profitable aquacultures, and apply technology to reduce production costs.** Species that qualify for reproduction should be improved. Fishery resources should be restored and their activities should be managed consistent with the carrying capacity of their natural resource base. Adaptations by producers should be enhanced to cope with climate change. Domestic and international legislation should be enforced in order to prevent and eliminate illegal fishing and promote the sustainable use of maritime resources.

**5.3.5 Create more value in livestock production.** Breeding and growing processes should be more efficient, standardized and safe. Disease control and prevention should be increased by standardizing animal husbandry methods and practices. Animal and veterinarian foods and medicines should be certified in order to produce food for consumers that is of high quality and safe. Value added in livestock products could be increased by supporting the funding of technology, research and development.

**5.3.6 Provide incentives for farmers and agro-businesses to produce goods and services that meet specific standards.** Examples are food safety standards, the Halal standard, and organic practices. Information about standards



should be disseminated and certification fees should be reduced in order to increase the quality and control the safety of food production. Further, consumers should be assured that the quality and safety of products in both domestic and international markets meet standards.

**5.3.7 Strengthen the existing central trading markets and agricultural futures exchange market.** Accomplish this through incentives such as easy credit, especially for firms in central markets in order to create fair market mechanisms. Agricultural enterprises should be encouraged to use futures markets.

**5.3.8 Encourage communities and the private sector to play expanded roles in agricultural production and food management.** They should cooperate with agricultural institutions to enhance fair trade with farmers. Eco-friendly methods should be promoted that increase and extend agro-industrial production.

**5.3.9 Promote management of logistics to improve productivity in the agricultural sector.** Enable it to connect the entire supply chain and track product flow to reduce costs and eliminate losses from product decay due to inadequate storage procedures and transportation. The food transport system should be equipped with temperature controls, tracking and traceability. Firms and business associations, together with the government, should be involved in managing agricultural logistic systems.

#### **5.4 Establish agricultural employment and income security:**

**5.4.1 Develop an income insurance system that covers all farmers.** This would foster restructuring agriculture toward sustainable production and increasing productivity to ensure adequate incomes. The Philosophy should be applied to strengthen competitiveness over the long run.

**5.4.2 Accelerate the development of a crop insurance system.** This will prevent losses due to natural disasters. The cost of crop insurance should be allocated according to the risks in each area.

**5.4.3 Promote fairness in the contract farming system.** This will assure guaranteed incomes and ensure that raw materials are supplied to the manufacturing sector. Companies and other agricultural organizations should collaborate on the development of knowledge and information sharing systems in order to and participate in building fairness, transparency and equity.

**5.4.4 Improve farmers' social welfare.** Develop a robust social welfare system and support the process for resolving their debts in order to develop self-reliance.

#### **5.4.5 Attract young farmers and skilled labor to engage in farming.**

Create the appropriate mindset and enhance sharing knowledge. Arable land ready for cultivation should be provided while sources of funds should be readily accessible. A good public image for a career as a farmer should be projected. Successful farmers should participate in setting agricultural development plans and actions.

**5.4.6 Develop agricultural institutes, cooperatives, and small- and micro-community enterprises as mechanisms to enhance self-reliance and sustainability for farmers.** Develop knowledge of marketing and management, and the best farming practices. Relaxed requirements for credit granted by these institutions should be supported by a careful monitoring system to ensure proper credit control. Links between agricultural institutes and the National Farmers Council should be created to facilitate collaboration on development planning, and ensure consistent participation by farmers.

**5.4.7 Promote Thailand as a center for food processing within the forthcoming ASEAN Economic Community.** Procedures for handling imported materials should be improved. Small-scale farmers adversely affected by free trade agreements should be given assistance. The capability of farmers to adapt should be enhanced so they can produce basic commodities and food. In addition, a control system for food standards should be prominently featured to protect consumers from substandard imported goods.

**5.5 To establish food security and develop bioenergy at the household and community levels:**

**5.5.1 Encourage farmers to plant trees on their own land as well as in community forests.** This will create benefits when appropriately exploited, and conserve ecosystem services essential for agriculture and carbon sinks.

**5.5.2 Promote sustainable agriculture following the Philosophy.** Examples are organic farming, integrated farming and new theory agriculture. This is especially useful for small-scale farmers so they may establish food security and maintain biodiversity. Networks of local scholars should be formed so they may share their experiences and knowledge to support widespread sustainable practices.

**5.5.3 Encourage dissemination of knowledge and research about food.** Wise choices for consumers should be encouraged at individual and community levels. Collaboration among stakeholders should be created to support research and development in food study in order to strengthen consumer awareness about purchasing safe and nutritious food.

**5.5.4 Link local production and consumption networks.** Establish a direct relationship between consumers and producers. This will enable the development of enterprises that lead to stronger communities. They should have the ability both to produce and to have access to quality and nutritious food as well as the knowledge of the role played by food in a healthy life.

**5.5.5 Promote the application of zero waste principles in agricultural activities.** Promote utilization of farm wastes and by-products to produce forms of bio-energy like biodiesel and biogas for local community consumption.

**5.5.6 Support local community efforts to produce bio-energy from refuse such as municipal solid waste and agricultural by-products through existing technology.** Use of advanced knowledge for power plant maintenance should be provided for communities or local authorities in order to reduce the cost of generating power and alleviating pollution. Non-food crops for fuel such as jatropha should be planted.

**5.5.7 Develop infrastructure and mechanisms to systematically enhance food security in the community.** Support the role of the community to manage infrastructure, such as local rice seed centers, organic fertilizer plants, and paddy mills in order to increase efficiency in production.

**5.6 To secure bioenergy production to support the country's development and strengthen the agricultural sector:**

**5.6.1 Promote research and apply technology to increase energy crop productivity.** Undertake research on other non-food crops as alternative sources of renewable energy such as algae in order to reduce food shortages.

**5.6.2 Establish an agricultural product management system for food and energy.** Focus on food security regarding such crops as oil palm, cassava and sugar cane.

**5.6.3 Enhance efficiency in bioenergy production.** Utilize the manufacturing and service sectors in order to reduce dependence on imported fossil fuels and to stabilize commodity prices.

**5.6.4 Provide mechanisms to monitor bioenergy prices.** The aim is to achieve price stabilization and fairness to both consumers and producers without affecting national food production.

**5.6.5 Raise awareness of efficient bioenergy usage.** Disseminate knowledge to create better understanding of the usefulness and impact of bioenergy consumption.

**5.7 To reform governmental management to strengthen food and energy security, the emphasis should be to:**

**5.7.1 Encourage farmers, networks of local scholars, the private sector, and local communities to participate in establishing guidelines and plans for agricultural production that will enhance food and energy security at the community and national levels.** Government mechanisms should be connected with local and central agricultural organizations such as the National Farmers Council. Their participation in monitoring implementation by government agencies should be encouraged to improve a sense of social responsibility.

**5.7.2 Adjust the implementation procedures of government agencies.** They should proactively cooperate and integrate development guidelines for food and energy security. They should also facilitate agricultural development that meets the needs of local communities and the nation. Implementation mechanisms should be established among government agencies, the private sector and farmers. The government's implementation should be monitored through community participation.

**5.7.3 Develop a database of food and energy information and a system to ensure accuracy.** Provide easy access and assure that it is user-friendly so it will support development planning, problem solving, and early warnings. A system of information dissemination should be established on the Internet. Indicators of self-sufficiency in food should be developed as tools to ensure national food security and assist in future agricultural policy formulation.

**5.7.4 Enact laws related to agricultural development that will foster sustainable development.** The formulation of regulations in accordance with the Protection of Plant Varieties Act should be accelerated to protect native species and community rights so that local people and the nation will share equitably in benefits from access to natural resources. The Agricultural Land Leasing Act should be amended, including provisions involving leasing agricultural land to foreigners that includes levying higher taxes in order to encourage efficient land utilization. Legislation that advances sustainable agricultural development should be supported while economic development based on biodiversity should be encouraged.

**5.7.5 Encourage international cooperation at the multilateral and bilateral levels.** Cooperation with the ASEAN Economic Community is especially

important to support research and development, cooperation in production, market access, emergency rice reserves, legislative reforms, and to strengthen existing mechanisms to enhance food and energy security.

# Chapter 6

## Strategy for Restructuring the Economy toward Quality Growth and Sustainability

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### 1. Current Situation

Since the announcement of the Seventh Plan (1992-1996), Thailand has managed to grow 3.9 percent annually on average, and has been able to maintain overall economic stability, as reflected in its strong fiscal position, its steadily increasing international reserves and employment and its strong current account balance. At the same time, the structure of production and services has changed from being driven by agriculture to industry. The GDP proportion of agriculture, manufacturing, and service sectors shifted from 1:3:6 in the Seventh Plan to 1:4:5 in the first three years of the Tenth Plan (2007-2011). Results of development in significant areas can be summarized as follows:

**1.1 The manufacturing sector plays a leading role in the Thai economy but overall productivity in this sector has not developed greatly.** The proportion of manufacturing to Gross Domestic Product (GDP) increased from 38.1 percent in 1999 to 40.8 percent in 2009. This is due to Japanese companies moving part of their production base to Thailand and to expansion of four newly established industries, specifically petroleum, electronics, automobiles and electrical appliances. These industries in all accounted for 41.8 percent of total production in the manufacturing sector. In addition, manufactured products have been the country's main exports. They accounted for more than 75 percent of total exports during the first three years of the Tenth Plan. However, productivity in this sector is still low. It grew 1.1 percent on average over this period.

**1.2 The agriculture sector is crucial to the overall economy of the country as the main source of income for most Thai people and as a base for creating value added.** The nation has an abundance of natural resources, suitable climate, and accumulated agricultural knowledge. Use of agricultural raw materials for food, energy and biomaterials has thus risen rapidly. However, the agricultural sector grew less rapidly than other sectors. This is evident from the ratio of agriculture to GDP, which dropped from 10.4 percent in the Seventh Plan to 8.9 percent in the first three years of the Tenth Plan. In addition, agricultural productivity did not improve enough

to compete effectively in the global market. As a result, the Thai economy still relies on exports of agricultural primary products, as the level of production and processing remained relatively unchanged.

**1.3 The service sector continues to play an important role in creating value-added in the economy, reducing the trade deficit while enhancing the quality of life.** Although the ratio of services to GDP continued to decline after the economic crisis of 1997 from 56.3 percent in the Seventh Plan to 49.4 percent in the first three years of the Tenth Plan, services have remained the largest employer in the country. The sector accounted for 45.3 percent of the total labor force during the first three years of the Tenth Plan, an increase from 35.5 percent in the Seventh Plan. A larger number of workers in the service sector corresponds to declining laborers in agriculture. Therefore, most workers in the service sector are low skilled. This depressed the return from labor in this sector and lowered productivity by one percent.

**1.4 Restructuring the economy toward industrialization is aimed at establishing strong linkages between the Thai and global economies, especially via international trade and investment.** Thai exports continued to grow satisfactorily during 1998-2008, although they fell off in 2009 due to the US economic crisis and deterioration of the country's competitiveness. Thailand, however, maintained its export share in the world market at around 1.1 percent during 2006-2008, leading to an increase in total trade from 84.8 percent of GDP in the Seventh Plan to 138.4 percent in the first three years of the Tenth Plan. During this period, manufactured products were the country's main exports and ASEAN, the European Union and the United States were Thailand's major markets.

**1.5 Thailand has relied to a greater extent on imports.** The ratio of imports to domestic production increased from 2:1 at the end of the Seventh Plan to 4:1 in the first three years of the Tenth Plan while the dependence on imported raw materials and semi-finished products rose to 40 percent of total imports. The role of investment in Thailand was less pronounced as reflected by its ratio to GDP, which was down from 41.2 percent in the Seventh Plan to 25.6 percent in the first three years of the Tenth Plan, due mainly to the US economic crisis and the country's deteriorating competitiveness. In this context, foreign direct investment (FDI), which used to play a vital role in the Thai economy, declined critically as reflected in the ratio of FDI to GDP, which fell from 22.2 percent in 1998 to 8.0 percent in 2009.

**1.6 Distribution of returns to production factors worsened as the country developed.** Analysis of return on inputs showed that rewards of labor had

decreased continuously from 30.2 percent of national income in the Eighth Plan to 29.4 and 28.9 percent in the Ninth Plan and the first three years of the Tenth Plan, respectively. Returns to other factors, such as capital, entrepreneurship and land, had increased steadily. In addition, the gap between GDP and Gross National Product (GNP) widened from 45.9 billion baht or 1.5 percent of GDP in 2003 to 436 billion baht or 4.3 percent of GDP in 2007. This reflects the fact that growing profits from operations of multinational companies in Thailand were returned to their headquarters abroad.

**1.7 World competitiveness ranking organizations, specifically the International Institute of Management Development (IMD) and the World Economic Forum (WEF) indicated that Thailand had weaknesses in science and technology.** These have proved to be major constraints on the country's competitiveness in the areas of (a) investment in research and development, (b) science and technology infrastructure, (c) research and development personnel, (d) patent registrations, and (e) protection of intellectual property rights. Moreover, utilization of research for commercial purposes is less effective because of (a) lack of collaboration among research-related agencies, (b) ineffective mechanisms for linking research units among the government, the private sector and communities, (c) inadequate risk management and (d) inequitable allocation of benefits arising from researches.

**1.8 Infrastructure development has been successful when measured by the increase in quantity.** Road, sea and air infrastructures have grown. The proportion of domestic passengers travelling by road, rail, and air stands at 74, 21 and 5 percent, respectively. For transport of goods, road, water and railway shares have accounted for 82, 15 and 3 percent, respectively. However, the next step in infrastructure development should focus on strengthening quality and participation in every sector. Moreover, fiscal constraints, plus unnecessary rules and regulations, could delay infrastructure progress and hinder economic growth in the long run. The energy situation is also critical. Thailand's energy demands are increasing and rely significantly on imports, with demand reaching as high as one billion baht per annum, equivalent to 11 percent of GDP. The country's energy production cannot meet this growing demand. At present, energy production can meet only 50 percent of total consumption.

## **2. Risk Assessment**

Thailand has encountered numerous risk factors that are detrimental to the country's development. Therefore, the nation needs to enhance its capability to aim



economic restructuring toward higher quality and sustainable development. Major risk factors include:

**2.1 The global economy has recovered at a slow pace due to imbalances within economic and financial systems in major developed countries.** Causes include various financial problems in Europe and inflation in Asia. Consequently, developed countries have amended their rules and regulations, damaging the free and fair trade environment and resulting in discriminatory trade policies and severe competition. Hence, developing countries, including Thailand, need to strengthen their competitiveness and stimulate domestic demand to build resilience against those risks.

**2.2 Rapid capital flows have induced higher exchange rate volatility which in turn has increased difficulties in implementing monetary policy.** Major factors contributing to rapid capital movements have included the development of a world stock market, new financial instruments, interconnected economies, and free trade and finance. These factors have pushed up the cost of managing exchange rate risks for both the public and private sectors. Meanwhile, development of Thailand's stock market is inadequate to compete in the world economy.

**2.3 Risks at financial institutions that became evident in the 2008 world economic crisis were not properly managed.** Thus, Thailand will need to reform financial rules and regulations to meet the international accords of Basel III. This involves more stringent measures regarding the capital requirements and liquidity of financial institutions and may lead to higher costs for financial institutions.

**2.4 Fiscal management is increasingly becoming a constraint.** Despite setting a balanced budget as the target by the end of the Eleventh Plan, annual budget expenditures in education and health costs under the 2007 Constitution, as well as subsidies to local governments, have continued to increase progressively. Moreover, fiscal risks have arisen from expenditures in off-budget and quasi-fiscal activity through businesses and financial institutions. This may create a fiscal burden in the future, and lead to the collapse of the economy, as has occurred in many countries.

**2.5 Low productivity has become a constraint on the country's competitiveness and its sustainable development.** Thailand's competitiveness, as ranked by IMD and WEF in 2010, was 26<sup>th</sup> and 38<sup>th</sup>, respectively, with little improvement during the course of the Tenth Plan. Major obstacles were weaknesses in science and technology and the quality of infrastructure services, as well as rules, laws and regulations that are not conducive to the establishment of a fair and adaptive

market economy. Moreover, high dependence on exports, and the import of capital goods, energy, and foreign direct investment make Thailand vulnerable to external shocks.

**2.6 Worldwide changes such as global warming, an ageing society and more restrictive rules and regulations on macroeconomic management and international trade and investment force Thai firms to adjust their production processes toward a low-carbon society.** The industrial sector has to be environmentally responsible. Production standards and awareness of corporate social obligations should be upgraded. Business capacity needs to be reinforced to withstand severe competition in the future.

### 3. Resilience Enhancement

Results from past advancement show that every sector has applied the Philosophy to the development process. Diversified and robust ways of life in Thailand, its cultures and its local insights, have also ensured that the nation can meet changes. However, risks have become increasingly severe and dynamic. Thus, the country needs to intensify its strength, especially in the manufacturing and service sectors, and develop the ability to cope with potential risks. Opportunities should be sought to assist in this growth. The following strengths should be enhanced:

**3.1 A stable economy has been attained. It has grown at a rate appropriate to its potential. Price levels and employment rates have been maintained in line with economic growth.** However, the domestic economy must be strengthened through equal and fair distribution of income and wealth in every sector.

**3.2 Fiscal stability has been maintained and efficiency in implementing fiscal policy has been increased.** Thailand must retain a strong fiscal position and use effective means of tax collection and budget allocation to support implementation of government policy and assist private economic activities.

**3.3 The financial system has to be developed further to support economic growth.** Thailand has to maintain stable and efficient financial and capital markets, and must accelerate the implementation of the Financial System Master Plan Phase II and Capital Market Master Plan so that these markets can act as major sources of capital and provide financial services equitably to all sectors. At the same time, a strong financial foundation must be established to facilitate sustainable growth and to manage risks and limitations that may arise both internally and externally.

**3.4 The economy needs to be restructured toward intensive use of knowledge, local wisdom and science and technology.** In addition it must foster

innovation and creativity, environmental responsibility, better utilization of the nation's advantages, particularly in the agriculture, service and creative sectors, and finally, promotion of efficient and clean energy. To achieve these goals requires a legal regulatory framework and a financial environment conducive to restructuring the economy in this direction as well as a fair and equitable competition system to ensure economic growth that possesses quality and sustainability.

**3.5 Favorable opportunities that arise from changes in the economic environment or from external factors have to be utilized appropriately.** Such events, including changing demand in major and emerging markets, adjusting rules, regulations and international agreements, and advancing technology can affect production processes and lifestyles. Therefore, the country should take advantage of such changes to support economic restructuring, strive for tangible results and stand ready to mitigate negative impacts and create resilience for external events.

## 4. Objectives and Targets

### 4.1 Objectives

4.1.1 Reform the economic structure to achieve inclusive growth.

4.1.2 Maintain economic stability and build fair and free competition.

4.1.3 Link Thailand with production and service networks in ASEAN, based on knowledge, innovation, and environmental responsibility.

### 4.2 Targets

4.2.1 Achieve an economy with inclusive growth.

1) Expand the suitable and stable economic activities, and maintain an average annual inflation rate that does not exceed 3.5 percent.

2) Increase total factor productivity to reach an average growth rate of at least 3 percent per year.

3) Increase the proportion of agriculture and agro-industry sectors in the GDP so they do not go lower than 16 percent, the proportion of the service sectors no lower than 50 percent, and upgrade the manufacturing industry to be more community and environmentally responsible while maintaining high value.

4) Diversify creative products and services by at least 5 percent per year.

4.2.2 Raise Thailand's economic competitiveness rank to 16 in the IMD assessment, and be among the world's top ten countries for ease of doing business.

4.2.3 Increase funding of research and development to at least 1 percent of GDP and up to 2 percent in the future. The ratio of private to public sector investments should be 70:30.

4.2.4 Reduce logistics costs to less than 15 percent of GDP, and increase the share of rail transport to 5 percent.

4.2.5 Increase the ratio of renewable and alternative energy consumption to total energy consumption to at least 19 percent, reduce energy imports by at least 3 percent, and reduce the rate of energy consumption by 2 percent.

### **4.3 Indicators**

4.3.1 Gross domestic product.

4.3.2 The inflation rate.

4.3.3 Total factor productivity.

4.3.4 The proportions of agricultural, industrial, and service sectors to GDP.

4.3.5 The growth rate of creative products and services.

4.3.6 The rank of the nation's competitiveness as charted by the IMD, and ease of doing business as ranked by the World Bank.

4.3.7 The proportion of research and development investment to GDP, and the ratio of investment in research and development between the private and public sectors.

4.3.8 The ratio of logistic costs to GDP, and the proportion of rail transport.

4.3.9 The proportion of renewable and alternative energy consumption to total energy consumption, the ratio of imported energy to total energy consumption, and the rate of increase of energy consumption.

## **5. Development Guidelines**

Results from past development suggest that growth and the structure of the Thai economy did not advance in ways that could maintain quality and sustainability. The Thai economy is subject to external and internal factors including science and technology, the quality of infrastructure services, laws and regulations that are not conducive to establishing fair competition and adaptability to economic changes.

Although the Thai economy has strong resilience, this may not be sufficient to ensure sound performance in the face of emerging uncertainties. Therefore, guidelines for development must focus on restructuring the economy toward quality and sustainability by utilizing insight, knowledge, and science and technology. Creativity should also be a driving force within an environment conducive to a fair competitive atmosphere, and will help grasp favorable opportunities arising from external factors to benefit the country. This is a way to strengthen the nation's resilience by reinforcing the domestic economy so that adverse external events do not harm it.

**5.1 Restructure the economy toward inclusive growth.** Strengthen the capacity of Thai firms, especially small and medium enterprises, and leverage the potentials of the domestic economy. Key measures include:

**5.1.1 Restructure the trade and investment sectors in accordance with the opportunities from the expansion of Asian, African, and the Thai domestic economies.**

1) Improve the efficiency of the market and the distribution of production to Asian and African markets. Private firms should be encouraged to distribute to new markets in Asia, Africa and other economically integrated regions through bilateral and multi-lateral agreements. Market opportunities should be created and price stability of agricultural products should be maintained. Links between producers and consumers should be established. Delivery services should be developed, including warehouses, silos and cold storage. Products having their own brand name should be promoted by emphasizing their quality and standards. Sales and distribution systems through the cooperation of government agencies should also be promoted.

2) Develop goods and services to meet the demands of new markets. Base these on in-depth studies of consumer behavior and on marketing research, with emphasis on middle and high-income consumers in China and India. Laws, domestic regulations and non-tariff measures affecting exports to these markets require analysis. It is also important to encourage firms to meet international standards in their production processes. Create value added and differentiated products that promote innovative industries and services.

3) Accelerate activation of free trade agreements (FTAs) and be prepared for their impact. Encourage enterprises to gain benefits from these agreements. Do this by providing comprehensive information on economic integration and free trade agreements as well as on laws that regulate product development in

accordance with changes in market demand. At the same time, measures to safeguard and support businesses should be set in place to mitigate adverse impacts.

4) Promote sustainable enterprises and achieve balanced development in economic, social, and environmental dimensions by focusing on ecologically sound and community-friendly investment. The emphasis should be to induce investment in industries that utilize advanced knowledge, high technology, and low carbon production.

5) Promote and develop Thai businesses in ways to achieve quality and sustainable growth. Emphasis should be on the development of SMEs by providing support for building human resource skills that are relevant to business requirements. Improve the knowledge and skills of firms in production, marketing and IT, and promote the application of science and technology, local insight, innovation and good governance. Further, measures should be established to assist SMEs in gaining access to sources of finance.

**5.1.2 Restructure the service sector.** Create value added, particularly in businesses with high potential, and promote environmentally responsible production based on creativity and innovation.

1) Build the competitive advantage of businesses to be more creative by supporting research and development. Promote the application of knowledge and new technologies, and invest in high potential businesses. Comparative advantages should be sought in geographical locations, biodiversity, culture and what is uniquely Thai. Moreover, competitive advantages should be fully exploited in international markets such as tourism, healthcare services, logistic services, the film industry, and the meeting, incentive, convention, and exhibition (MICE) industry.

2) Expand production and marketing of high-potential businesses to overseas buyers by developing the competitive advantages of Thai firms throughout the supply chain. Provide financial support and tax measures that competitors in other countries enjoy. New markets should be explored and networks of business partnerships should be strengthened in order to expand overseas business in services. The skills and talents of personnel should be expanded, and businesses and professionals should meet international standards.

3) Develop enabling factors to induce investment in the service sector from both internal and external sources. The efficiency of services should be improved. Create databases that focus on high potential businesses. Laws and regulations should be revised and incentives to facilitate investment should be

improved. Research and development as well as knowledge transfer should be supported. The application of information technology by businesses should be encouraged. Environmentally responsible operations should be promoted in service businesses and human resource development should reflect current needs.

4) Rehabilitate and increase the quality of tourist attractions to improve market demand. Major attractions that have deteriorated should be revived. Tourism clusters in high potential areas should be created. Activities for tourists should be promoted that fit the potential of each area. Trends in global demand such as health tourism, ecotourism, and historical and cultural tourism can provide opportunities. Fresh marketing strategies should attract new customers in new markets.

5) Manage tourism to achieve balanced and sustainable growth by focusing on activities that are creative and environmentally friendly. Take into account the carrying capacity of tourist attractions so as to elevate the standards of service businesses. The quality and sufficiency of infrastructure should be increased. Tourism should be a reflection of Thai lifestyle, culture and natural resources.

6) Strengthen local communities, small enterprises and public personnel so they can link the production and service sectors at the area level via the cluster development approach. Develop the skills and knowledge of human resources in the public sector, local governments, and communities, and also in small and medium enterprises so they can cope with impacts that arise from changing world economic conditions.

### **5.1.3 Develop the creative economy:**

1) Support the development of innovative businesses through cluster development by strengthening links and cooperation among businesses along the supply chain. In addition, sharing of knowledge, the uses of creativity, and merging of resources among related industries should be reinforced in production, distribution and commercialization. The promotion of fair competition should also be emphasized as an important tool to upgrade quality and standards of production. The roles of appropriate institutions and agencies should be redefined to support creative clusters.

2) Promote development of creative cities by establishing ecological principles that are applied to physical infrastructure, human resources, regulations and management. These factors will facilitate the cluster development of innovative businesses in utilizing local insight and products and services that are

identified with the area, and will attract investment into targeted cities. Also, infrastructures that emphasize knowledge and support the learning process should be set up. These will provide a creative environment with learning centers, imaginative spaces, and exhibitions and trade fairs that feature innovation in products and services. They should be highlighted to widen opportunities for imaginative thinkers and their ideas.

3) Support businesses and personnel that apply new methods to increase the value of their products and services by upgrading the skills and knowledge within firms, especially SMEs. Give similar support to key creative personnel along the supply chain of innovative industries, that is, those involved in design, research and development, fresh methods, business administration, technology and marketing. Exploit local culture and contemporary arts by integrating them with modern technology in order to differentiate products and services and satisfy market demands. In addition, imaginative businesses should be strengthened so they can adjust to rapid changes in the internal and external environment. Support research regarding development of the creative economy and compile a comprehensive database on businesses with fresh ideas.

4) Put in place a financial system that will support investment in the development of creative industries by helping these businesses gain access to financial sources. An example is the Creative Economy Fund, and there should be other funds and financial institutions to help establish, operate, and develop such businesses.

5) Encourage registration, protection and commercialization of intellectual property to drive creative business growth by making the public aware of the importance of intellectual property and of concerns related to creating value added, enhancing business growth, and upgrading standards of goods and services in every sector. Moreover, reduce red tape in the bureaucratic process of the acquisition of intellectual property rights and strictly enforce laws related to intellectual property.

**5.1.4 Improve the productivity of the agricultural sector.** Increase value added through adapting technology and using environmentally responsible production processes to drive the agro-industry and food businesses so they will be one of the country's main sources of income and a major contributor to the world market. Soil quality should be restored and water use should be made more efficient. Agricultural plantations should be supported when local conditions are favorable. The quality of processed agricultural products should be improved. These products should provide more value added. Enabling factors should be designed such as an improved logistic system for agriculture.



**5.1.5 Develop manufacturing by implementing structural reforms with inclusive growth.** Employ science, technology and imagination as keys to transform this sector into a knowledge-based economy that is creatively oriented and environmental responsible.

1) Develop eco-industrial towns and restore the environment in major industrial regions by creating awareness of the need for coexistence between industries and communities. Stakeholders should collaborate in the development and include the public and private sectors, communities, and academic institutions. The process of developing eco-industrial towns should start by setting the development framework and providing the components necessary to implement the eco-industrial town concept and strengthen standards for environmental and natural resource quality. Health impact management and establishment of environmental surveillance centers in risk areas are important. Measures should be put in place to encourage the private sector to invest in environmental rehabilitation. This will take the form of corporate social responsibility along with cooperation of communities and the public sector. Along this line, measures should be implemented to develop major new economic areas consistent with population size and carrying capacity. A database should be developed to keep track of pollution so as to ensure the community's balanced development.

2) Develop agro-industries and new businesses based on information, creativity, local insight and innovation to increase value-added, upgrade product quality, accommodate environmental concerns, meet international safety standards, and build market opportunities from the growth in demand for food that is forecast as world population increases. This could be accomplished by encouraging industrial clusters to form enterprise networks and cooperate among businesses and related agencies. This would facilitate promoting research and development in production and processing.

3) Develop industrial infrastructure in the manufacturing sector to promote production efficiency and higher standards. Science, technology and innovation should be applied to create value in manufactured products and decrease the import of goods. Effective cooperation among the public and private sectors and academic institutions should be enhanced to improve skills, creativity and knowledge in the workforce.

4) Support links between large enterprises and local ones, and induce industries to locate regional facilities. Link small and medium enterprises (SMEs) and One Tambon One Product (OTOP) firms with large industrial companies throughout the supply chain; the focus on small and medium enterprises that adopt

technology and innovation should be encouraged. Businesses should be matched in order to develop their strength, based on technology and innovation.

**5.2 Develop science, technology, research and innovation as driving forces for inclusive growth.** Emphasize creative thinking, intellectual property, and research and development for the benefit of society, communities and businesses. This can be achieved as follows:

**5.2.1 Create an environment that enables development and application of science, technology, research and innovation to promote creativity and added value in the production sector.**

1) Increase monetary, financial and other incentives to encourage joint ventures and set up a public-private partnership research fund. Laws and regulations that are obstacles should be revised so they do not hinder the application of research and development. Government procurement mechanisms should be used to support research and development. Demand for technology-based products should be created.

2) Design measures to support national research and development projects and technology transfer through foreign direct investment. The use of animals in scientific studies should meet international standards. An intellectual property protocol should be encouraged through establishment of a mechanism to facilitate patent and copyright registration abroad, while building an efficient intellectual property system that protects rights in those patents registered abroad.

3) Improve the efficiency of science, technology, research and innovation management by establishing a coordinating system among relevant agencies at the policy and implementation levels as well as providing for an effective and transparent evaluation and follow-up system.

**5.2.2 Develop infrastructure that facilitates science, technology, research and innovation in both quality and quantity through public and private partnership as follows:**

1) Accelerate development of science parks, intelligence centers, incubation centers, research and development institutes, specialized science research institutes and testing centers to satisfy existing demand, especially at the regional level. In addition, the private sector and foreign investors should support the establishment of research centers in Thailand. Also, geographical data should figure in the country's development planning.

2) Encourage investment in research and innovation through collaborative networks among academic institutes, research institutes, the production sector, communities, clusters, and associations within and outside the

country to conduct joint research programs and transfer and share knowledge in order to generate benefits and manage risks. A systematic program of research should be developed through greater integration among core agencies, academic institutes, specialized institutes, the private sector and communities. This approach should begin at the initial stages of preparing and developing research programs, and involve researchers, sources of funds, knowledge management and a database with well-defined key performance indicators to evaluate policy and monitor progress.

3) Develop scientists through on-the-job training. Scholarships should be available to students, talented individuals and science instructors, and they should have up-to-date learning materials. Thai people should be encouraged to think and act based on facts and scientific evidence. Access to knowledge and data from science and technology should be widened so they can be applied in daily life.

**5.3 Develop efficient, equal and fair competitiveness for the country through the following:**

**5.3.1 Develop financial and capital markets that facilitate the restructuring of the production and service sectors, and serve as alternative mechanisms for saving.**

1) Develop stable and efficient financial institutions by building infrastructure and safeguards that facilitate service delivery and human resource development in the financial sector. Financial services through electronic channels should be promoted. Implementation of the Financial Market Master Plan Phase II and the Specialized Financial Institution Master Plan should be accelerated. The risk management system of financial institutions should be reformed and strictly enforced.

2) Encourage equal access to financial resources at reasonable cost. Regulate commercial bank operations to assist individuals and businesses under good risk management systems in order to benefit small and medium enterprise operations, entrepreneurs and low-income groups. Specialized financial institutions should provide services in parallel with private institutions. Joint ventures, factoring and leasing activities should be increased.

3) Increase the capability, resources and coverage of grass-roots financial services. The operational capabilities of community financial organizations and cooperatives at all levels should be developed to meet standards of responsibility. Mechanisms should be put in place to link funds among microfinance groups, and between microfinance groups and financial institutions in order to foster money saving habits and sound financial management at the household level.

4) Provide knowledge and information about finance by imposing economic discipline on the business and household sectors as well as SMEs. Household saving, especially among low and middle-income groups, should be encouraged. Increased access to saving and investment by developing instruments specifically for each household class should be promoted. Employers and financial institutions should be responsible for providing financial knowledge and information about savings, investment, risk management, personal financial planning, preparation of income and expenditure accounts, and the risks of borrowing money outside the banking system so that problems of over-indebtedness could be prevented and resolved.

### **5.3.2 Build a workforce and labor market to support the production sector.**

1) Increase capabilities of graduates at all levels, especially in science and technology, in order to meet the needs of the agricultural, industrial and service sectors to assimilate changes in the labor market and technological advancement.

2) Improve the quality of the labor force by encouraging cooperation between public and private academic institutions in training and building specialized expertise in order to increase the productivity of the workforce and enhance the competitiveness of the country. In addition, the system of vocational qualifications and coherent skilled labor standards should be linked to remuneration and based on ability and performance.

3) Create a national labor database covering both supply and demand and classified by economic sectors, educational attainments and vocational qualifications. Include data on foreign labor. This database can be used as a managerial tool to balance labor supply and demand. It will support labor policy decisions that help workers reach their full potential and capabilities so as to increase the efficiency and flexibility of the labor force.

### **5.3.3 Develop an intellectual property management system.**

Promote registration, utilization and protection of intellectual property rights in order to encourage research, innovation, creativity and local insight that benefit commercial applications to help drive the economy.

1) Create awareness in all sectors, particularly in businesses, of the importance of intellectual property such as patents, trademarks and

copyrights. This is vital to create value added, support business growth and raise the standard of living.

2) Improve legal measures, protection mechanisms and law enforcement governing intellectual property to eliminate intellectual property violations and support fair sharing of profits. A system of patent and copyright registration should be developed.

3) Streamline and accelerate the process of registration in order to facilitate owners of research work, innovations, local wisdom and creativity to acquire intellectual property rights and be able to respond to market demand in a timely manner.

#### **5.3.4 Develop the country's infrastructure and logistics systems:**

1) Encourage development of multimodal transportation by advancing energy efficient forms of transportation. Infrastructure and multimodal transportation management systems should be developed that integrate roads, railways, and water and air transport for both domestic and international uses. This will improve efficiency and meet international standards for speed, safety, and punctuality, and it will support regional economic cooperation. Effective distribution systems for goods should be built to reduce the overall cost of logistics.

2) Increase the efficiency of logistics management by developing professional human resources. Business networks for transport and logistics should be created throughout the supply chain. Laws and regulations should be amended to foster innovative research and development in the logistics field. To make trade more efficient and facilitate it, upgrade the National Single Window system, distribution centers, and cross-border trade. The efficiency of transport management systems should be improved. The strategic role played by major airports and seaports should be defined in order to reduce transportation costs and increase the nation's competitiveness in the long run.

3) Improve railway transport by upgrading the present railway system and the links between road and railway networks to increase safety. Dual-track rail lines along major routes should be added. Locomotives and rolling stock should be provided and railway-signaling systems should be upgraded to increase efficiency for transportation of passengers and goods. A high speed railway should be developed to link major regional cities and ASEAN countries. The management structure of the State Railway of Thailand should be changed to improve efficiency and promote better services and operation in the future.

4) Modernize the public transportation network so that it covers more areas and responds to the expansion of urban areas and land use. An electric train network should be built for public transportation. The efficiency of current public transportation in Bangkok and other municipal areas should be increased. Facilities to support commuting patterns should be developed that serve both private cars and public transportation. Regional public transportation services should be improved. The management structure of the overall public transportation system should be changed to improve the quality, standards, and equity of services.

5) Modernize the information and communication technology (IT) infrastructure so it provides high-speed data transmission and internet connection covering all areas in the country. This requires free and fair competition in order to increase access to service equitably. E-government services should be created through high-speed communication networks for education, public health, and agriculture. Both citizens and small and medium businesses should be encouraged to use high speed telecommunication and information technology to enhance the quality of life and generate income. Human resource development plans for IT should be formulated for the country's long-term growth. Applications and content associated with the expansion of a creative economy should be developed.

6) Enlarge the capability to provide water for consumption, while assuring quality and quantity that meet international standards, and cover both urban and rural areas. Regulatory bodies should be established to set reasonable prices and fees for the water supply. Research and technology should be fostered to manage the nation's consumption of water.

### **5.3.5 Create energy security:**

1) Promote the use of alternative clean sources of energy. Effective incentives should be established to encourage greater use of renewable energy for both electricity and transport needs. In particular, stimulate the use of biofuel such as gasohol and biodiesel from biomass and solid waste. Pertinent information should be provided to build a greater understanding of the potential of alternative energy.

2) Provide secure energy and expand its sources of supply by supporting a diversified variety of energy investments and by encouraging the private sector to play a greater role by investing in the energy industry. Popular participation at every stage of implementing energy projects should be achieved through transparency.

3) Monitor energy organizations to ensure stable fair prices for both users and energy providers. Fuel prices should be set appropriately to reflect their production costs and their impacts on the environment should be considered. The price structure for renewable energy should be based on production capacity as well as its cost in order to promote renewable energy sustainably and provide a fair return to producers and a fair price to consumers.

4) Promote research and development to replace fossil fuels by producing renewable energy through wind, solar, and water resources. Meanwhile, distribute financing and infrastructure for research and support that leads to the production of renewable energy that can be commercialized.

5) Increase energy efficiency at all levels. Measures to conserve energy should be implemented at all levels. Incentives should be created to reduce energy use. Urban planning measures, especially for large and industrial cities, should be used to promote energy conservation and increase efficiency in energy usage. Technology and innovation advances in the manufacturing sector should be fostered to reduce energy utilization and promote its optimal use. Household appliances should be developed to lower overall energy demand.

#### **5.3.6 Amend economic laws, rules and regulations:**

1) Amend laws, rules and regulations on business, trade and investment. Obstacles to conducting business and investment that are within the bureaucratic process should be reduced. Facilitate investment in information and for research and development in science and technology. New legislation should be enacted to support free trade and economic integration at the subregional and regional levels. Laws, regulations and rules on trade should be revised to prevent market monopolies.

2) Adjust laws, rules, regulations and incentives in the production and service sectors. The development of ecotowns, ecozones and eco-industrial estates should be promoted. SMEs and local enterprises should have access to loans. Ensure against risks in trade and investment, and in markets, through research and development based on knowledge and creativity. Investment from transnational corporations and foreign investors should be induced so they can establish joint ventures with the private sector, especially SMEs that have the potential to develop creative products and services. Skilled foreign workers should also be encouraged to immigrate to Thailand.

3) Revise rules and regulations in the communication and telecommunication sectors. Regulations pertinent to international agreements should be revised to conform with them. These include international agreements about establishment of organizations and technical regulations relating to telecommunications, international communication regulations and trade in telecommunication services and equipment.

4) Reform monetary and fiscal laws regarding the growth of capital markets. Competition among financial service providers should be encouraged. Financial institutions should be supervised and investors should be protected. Laws and regulations under Phase 2 of the Financial Sector Master Plan, Thai Capital Market Development Master Plan, and the State Finance Act should be enforced.

5) Strengthen law enforcement to be transparent and accountable through a publicly accepted process in order to respond to demands for social responsibility and conformity to international standards.

6) Apply a code of conduct for law enforcement that is equitable and unified and provides efficient protection and prevention of piracy in accordance with economic and social conditions, as well as international agreements.

7) Accelerate the development of legal experts and those involved in law enforcement in response to global changes.

#### **5.4 Manage the macro-economy to ensure economic stability through the following guidelines:**

##### **5.4.1 Monetary management includes:**

1) Implement appropriate monetary policies to respond to economic circumstances in a timely manner to maintain price stability and a sound financial system, and stimulate economic growth. The goals and rationale for such policies should be disseminated in order to assure transparency, credibility and discipline in implementing monetary policy.

2) Increase the role of capital markets in the economy in keeping with the direction of global financial development and upgrade their role so it will be relevant to other countries in the region. Pursue this by expanding investor coverage, providing information about investing in capital markets, and offering diverse financial products. The training of human resources should be improved and the use of computer technology should be promoted. Commercial banks and specialized financial institutions should serve as additional channels for savings and investment.



3) Improve the nation's financial foundation by reforming laws and regulations, the tax system, the management system, and accounting standards so they are responsive to the competitive environment. Consumers must be protected. Good governance should be encouraged: for example, implement a fair tax system, develop capital markets, and reform the regulatory system so it is clear, transparent, and serves as a hedge against any risk factors to monetary policy and the macro-economy and is relevant to international standards. It should be a matter of concern to take into account the readiness of domestic financial institutions and the monetary system.

4) Develop surveillance mechanisms to spot economic fluctuations and develop a holistic warning system that covers all risks, such as the exposure of financial institutions, the fiscal system, and the functioning of the manufacturing and service sectors, that are crucial to the country. In order to develop such a warning system, it is vital to develop linked database systems that can provide in-depth analysis.

5) Increase the effectiveness of capital flow management by revising regulations that limit the use of capital inflows and overseas investments, and utilize international reserves. A feasibility study on establishing a sovereign wealth fund should be undertaken and capable state enterprises should be supported when establishing infrastructure funds. However, strict controls on short-term inflows and the development of financial instruments to manage exchange rate risks are still necessary when revising regulations to encourage the private sector to utilize available foreign resources.

6) Asian currencies should be enhanced in international markets by expanding the volume and liquidity of the Asian bond market and by using Asian hard currencies for exchange settlements in order to select one currency in the region for settling most cross border economic transactions.

7) Manage national savings and investment so it is responsive to economic growth and offers protection against any future crises. Long-term savings should be encouraged. Overall investment should be regulated and prioritized in each investment sector. Incentive measures should encourage investment in areas with high potential.

#### **5.4.2 Fiscal Management includes:**

1) Improvement of the system of national revenue collection by restructuring and reviewing the income and corporate tax rates. Give

special attention to small and medium enterprises and entrepreneurs. The tax base and excise taxes must also be adjusted in line with economic conditions, and allowances and tax exemptions should be revised. The tax base should be expanded to cover people currently outside the system. Greater efficiency in collecting revenue is essential. Further, non-tax revenue such as income from state property and revenue from state-owned enterprises must be increased. Introduction of new tax schemes that can be used to create social equity should be accelerated; such schemes would include land and building taxes, property taxes and environmental taxes.

2) Enhance the effectiveness of budget allocation and management by prioritizing allocation in accordance with development issues that have high priority in the Eleventh Plan. These include enhancement of the quality of life, economic development that is environmentally responsible, the use of creative thinking, infrastructure development to support private investment and economic stimulation and research and development to increase productivity and support restructuring of the production sector. In addition to measuring the effectiveness of government expenditures, the efficiency of budget disbursement must also be evaluated.

3) Prevent fiscal risks by taking all risk factors of public finance into account. The government's fiscal data, including also non-budgetary money and funds, local administrations, state enterprises and specialized financial institutions must be taken into account, as well as the potential fiscal burden, to determine the real fiscal position of the government.

4) Improve the operational efficiency of state enterprises by developing systems of supervision and risk management that enhance transparency. The structure of monitoring operations and investment in public companies should be adjusted to adapt to a competitive business environment.

5) Encourage the private sector to participate strongly in investment in infrastructure and basic public services such as education and public health by adjusting laws and regulations, and developing mechanisms and models. Operations must follow the principle of transparency and ensure a clear and fair distribution of risks between the public and private sectors.

6) Strengthen the finances of local administrations by enhancing the efficiency and development of their sources of revenues in order to encourage them to rely on their own means rather than on subsidies from the government. This could be done by improving both tax and non-tax revenue bases, and by clearly separating central government tax collection from that of the local

administration. Moreover, an environment tax must be levied while the capacity of local administration personnel concerning fiscal management must also be expanded. Further, local budget procedure must be up-to-date and relevant to the government's budget system by using results-based budgeting and by encouraging public participation in the local administration budgeting process so it is transparent. Public participation starts at the process of making the budget, then management, expenditure evaluation, and proceeding to decentralizing authority for debt creation and debt management to local administration under certain restrictions.

# Chapter 7

## Strategy for Creation of Regional Connectivity for Social and Economic Stability

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### 1. Current Situation

Thailand finds itself in a situation where there is a need for economic reform through restructuring toward growth that represents quality and is sustainable. Such economic restructuring requires that the opportunities provided by regional and global changes be optimally utilized. For example, the formulation of the ASEAN Economic Community, and the expansion of emerging economic superpowers in Asia, and particularly the policies of these emerging superpowers toward Thailand's neighboring countries must be considered. Changes in the global market will also have to be taken into account. Meanwhile, production factors will have to be interconnected to improve competitiveness. Cooperation for mutual benefit with ASEAN countries and other neighbors will have to be strengthened with respect to labor, energy, natural resources, production bases, supply chains, goods processing, and logistics systems. With the advent of future economic growth, especially in ASEAN and the Asia-Pacific region, it will be necessary for Thailand to expand its economy by realizing the potential offered from financial and capital markets in this region.

This situation follows from and relates to the Thai economic situation during the Tenth Plan, which was characterized by rapid changes brought about through globalization and increasing connectivity among countries. This has led to major social and economic changes, especially movement toward a multi-polar world, that have resulted from the economic expansion of emerging powers, namely Brazil, Russia, India and China (the BRICs). These developments have a broad effect on economic systems and on the position of each country in the world. As a result, economic integration at the bilateral, multilateral and regional levels is of great significance as a means to enhance negotiating power and competitiveness of one's group relative to others. For this reason, during the Eleventh Plan, Thailand will have to put forth efforts to create and strengthen connectivity with countries in various regions in order to prepare for changes and maintain the country's economic and social security. Moreover, links connecting the domestic and regional economies will be essential and take into

account relations with neighboring countries by cooperating with subregional, ASEAN, and other nearby regional groups.

## **1.1 The situation of subregional cooperation frameworks**

### **1.1.1 The policy on relationships with neighboring countries in the subregion has been the most important element in Thailand's foreign policy.**

This is due to several economic factors that require close coordination. In the past, Thailand has focused on forming developmental partnerships with neighboring countries to ensure the overall economic growth of the nation through key subregional cooperation frameworks. These include the Greater Mekong Subregion (GMS) Economic Cooperation Program, the Ayeyawaddy-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS), and the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT). These frameworks are important mechanisms and serve as foundations for cooperation within ASEAN. They enable greater connectivity among ASEAN countries and higher investment. Cooperation objectives will be achieved through the utilization of economic corridors that have the potential to connect GMS countries with one another as well as with the countries in subregional cooperation frameworks beyond ASEAN, such as the Bay of Bengal Initiative on Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). BIMSTEC is the product of India's "look east" policy, and is manifest in the development of seaports and industrial bases along the Bay of Bengal. These create logistical connections with East Asia as well as infrastructure development to strengthen connectivity with Myanmar.

### **1.1.2 The superpowers currently give high priority and greatest effort toward a strategy that creates connectivity with GMS and ACMECS.**

China, in particular, in implementing its Twelfth Plan is establishing economic links with GMS countries through Yunnan and Guangxi provinces. These are in the form of railroads for high-speed trains, roads, and river passage through the Mekong. Substantial support has been given in the form of assistance for infrastructure development. There are also investments in various special economic zones in Laos, Myanmar and Viet Nam. The approach undertaken by Japan and the USA to connect with this subregion are the Mekong-Japan Cooperation Framework and the US-Lower Mekong Initiative (US-LMI), respectively. Also, Myanmar's policy of opening the country has attracted the attention of the superpowers, in particular the Dawei deep seaport infrastructure megaproject. Therefore, it is clear that the economic superpowers are making efforts to participate in the strategy formulation process in this subregion. They are looking to ensure economic benefits, especially in logistics and transport strategies, and this will have significant influence on the overall strategy of trade and investment in the region.

## 1.2 The situation in the ASEAN Framework

**1.2.1 The formation of an ASEAN Community will lead to greater close cooperation in economic, social, cultural and security matters.** The ASEAN Community, to be implemented in 2015, has three pillars, the ASEAN Security Community (ASC), the ASEAN Socio-Cultural Community (ASCC) and the ASEAN Economic Community (AEC). Through these pillars, social, cultural, and especially economic cooperation will bring about progress in value creation in the region. The expansion of the ASEAN market, with a population of around 600 million, will lead to strengthening the competitiveness and negotiating power of ASEAN.

**1.2.2 Implementation of the Master Plan on ASEAN Connectivity will have a vital role in creating links within ASEAN in terms of infrastructure, laws and regulations, and person-to-person contact. It will contribute to the realization of the commitment to form the ASEAN Community by 2015.** In October 2009, the Thai government offered a proposal to create connections within ASEAN at the 15<sup>th</sup> ASEAN Summit held at Cha-am, Hua Hin, Thailand. Subsequently, in October 2010, the Master Plan on ASEAN Connectivity was approved at the 17<sup>th</sup> ASEAN Summit in Hanoi, Viet Nam. It has clear targets, directions and a timetable for implementation, and includes a fund-raising mechanism for infrastructure projects. Implementation will lead to economic integration, which in turn will reduce the development gap, distribute benefits to rural areas, and promote equality in advancement. It will also support the roles of citizens as the center of ASEAN and provide a sense of shared history and culture among member countries.

**1.2.3 Close economic and social cooperation in the ASEAN Community will create greater trade and investment opportunities for Thailand. It will also create potential for Thailand to become a vital hub of logistics and transport in ASEAN.** This will facilitate the movement of goods, services, investment, capital, and skilled labor among member countries. Thailand could also serve as a major route for trade with East Asia, Europe, the Middle East, South Asia and Africa. To achieve this goal, Thailand will have to accelerate its preparations for free competition within the ASEAN community. This will involve enhancing firms, capability, public relations, and knowledge about markets, languages, and the social and cultural aspects of ASEAN member countries. There is also a need to develop border areas and to strengthen the capacity of enterprises, especially small and medium businesses, to prepare for the ASEAN Economic Community.

**1.2.4 ASEAN integration is an important development that supports comprehensive social and economic cooperation in the region, especially in the prevention of disasters with a direct impact on populations.**

Exa\*mples of problems that this integration will treat are SARs, bird flu, human trafficking, terrorism, natural disasters, drug trafficking, climate change and poverty.

### 1.3 The situation in the Asia-Pacific Framework

**1.3.1 Connections between ASEAN and the present superpowers and the emerging economic superpowers who want to play greater roles in East and Southeast Asia are clearly evident.** For instance, an alliance has been formed with three East Asian countries, China, Japan, and the Republic of Korea, to create the ASEAN+3 framework. ASEAN+6 adds Australia, New Zealand and India to the group. In addition, there is an ASEAN-US framework that puts emphasis on the security and stability of the region. ASEAN also relies on the East Asia Summit as a strategic forum to strengthen the positions of member countries by establishing appropriate relationships with the world's superpowers.

**1.3.2 Thailand has a proactive policy to implement its strategy to become one of the leaders in ASEAN and the Asia-Pacific region. The long-established APEC framework would also continue to be utilized.**

1) Thailand and ASEAN member countries have jointly implemented a common policy that aims to promote interest in potential markets in the Asia-Pacific region. This policy of promoting the relationship of Thailand with these countries is being pursued in order to ensure that Thailand is a key actor in the economic development of the Asia-Pacific region. Efforts are also underway to develop capacity and security in finance and investment in order to facilitate modern, high quality economic development of the country in the long run.

2) Thailand can still maintain its ability to utilize long-established cooperation frameworks, such as the Asia-Pacific Economic Cooperation (APEC). Here the focus is on new forms of growth that emphasize achieving balanced, equitable, sustainable growth on the basis of innovation and regional security. Free trade and investment are given importance through support of the Doha-round multilateral trade negotiations.

**1.3.3 Thailand remains open toward the formation of new cooperation frameworks in the Asia-Pacific region.** The Asia-Middle East Dialogue (AMED) is a multilateral cooperation framework that Thailand has recently joined that has high potential. AMED is a cooperation structure between Asia, the Middle East, and North Africa, and consists of 50 countries. This presents an opportunity for Thailand in the area of food and energy security. Another framework to which Thailand will have to give high priority is the Trans-Pacific Partnership (TPP) framework in which the USA plays an active role. At present, the TPP comprises nine members that have joined,

namely New Zealand, Chile, Singapore, Brunei, Australia, Malaysia, Peru, USA and Viet Nam, the latest. This structure has the potential to generate an Asia-Pacific free trade agreement, and this would have an effect on the significance of free trade agreements in AFTA, ASEAN+3, and ASEAN+6.

## 2. Risk Assessment

As can be seen from development achievements, Thailand has implemented a proactive policy in creating cooperation in all aspects. This has allowed the nation to have stronger links to other countries at the subregional and regional levels in terms of closer economic and social relations. Nevertheless, in order to allow all parties that have the potential and are ready to utilize these relationships, it will be necessary to address the following risks that may present obstacles to creation of regional connectivity:

**2.1 Thai firms lack the capacity to invest abroad, even in neighboring countries, and are unprepared for freer domestic competition.** This is because Thai firms lack skills in conducting business in nearby countries. There is also a dearth of effective groups to form business councils. Effective consultation between the public and private sectors to establish priorities for joint investment with neighboring countries or to receive investment proposals is likewise limited. This results in loss of investment opportunities in businesses that could generate value added. At the same time, local public agencies continue to lack capacity to serve as coordinators for enterprises that could benefit from utilizing cooperation frameworks with neighboring countries. There is also no overall strategic approach to proactive investment promotion of Thai firms in neighboring countries, nor to promote Thai interests in a socially responsible manner that can ensure trust and sustainable cooperation. Moreover, there is no holistic strategy nor an in-depth action plan to assist domestic firms, including farmers, to mitigate the negative impacts of free competition within ASEAN.

**2.2 Thai labor standards have not been recognized in the region. The language barrier and a lack of understanding of the traditions and cultures of other countries in this region are important concerns. Moreover, there is no joint planning among the Thai government and countries that are potential destinations for the Thai workforce.** As a result, Thailand is at a disadvantage in labor mobility and in attracting foreign investment. The country lacks skilled labor in key sectors. Although the ASEAN Mutual Recognition Arrangement has been ratified for seven professions — doctor, dentist, nurse, architect, engineer, surveyor, and accountant — and there is an ongoing process of recognizing professions in the service



sector, a need still remains for further work to allow full implementation of the Agreement. Meanwhile, Thailand still must rely on foreign workers. However, a specific policy on foreign workers, their welfare and the mobility of labor is lacking. Establishment of border economic zones and a plan for labor have been delayed, resulting in social problems that have affected the security and way of life of Thai people along border areas. The rights and welfare of foreign workers and stateless children are also problems.

**2.3 Important parties have not perceived how to fully utilize logistical and transport linkages under the Master Plan on ASEAN Connectivity nor do they fully realize the benefits of the superpowers' strategy for creating logistical links to this region.** The lack of a central mechanism to integrate plans and projects at the local level results in failure to utilize opportunities to link up with economic corridors in this region. These include the North-South Economic Corridor, the East-West Economic Corridor, the Southern Economic Corridor and others within the GMS framework. Opportunities have also been lost to connect with neighboring countries through key border towns and cities in GMS, IMT-GT and ASEAN frameworks. These frameworks have provided both intra-subregional and inter-subregional market connections within ASEAN and beyond. For example, the Chinese development plan for a high-speed railway network in the Southeast Asian region, development of strategic seaports along the Gulf of Bengal in Myanmar (by China) and in India and the development of some intra-regional connectivity projects are suffering delays. Moreover, some projects in the Plan are delayed because they have not covered all of the important issues due to lack of understanding about the development process via cooperation between the public and private sectors.

**2.4 Trade barriers that have resulted from global changes are increasingly applied in every region, but Thailand still has a passive attitude regarding these problems.** For instance, global warming and acute drought in various areas have brought about new trade-related criteria, such as carbon footprints and water-usage indicators. Such issues have become trade barriers in some regions. Thailand still fails to understand or prepare for the effects on the business and industrial sectors, nor is it a focal point to provide information for neighboring countries to ensure that this subregion is prepared for new trade barriers that may be severe in the future.

**2.5 Readiness is lacking in the development of border towns and commercial zones in Thailand along economic corridors.** Thailand has lacked a plan for economic development in a holistic manner along borders and in areas that

are connected with neighboring countries. The preparation for joint ventures is inadequate and so cannot utilize border economic zones before entry into the ASEAN Economic Community. In addition, the development of human resources and skilled labor to facilitate future economic development is not well prepared.

**2.6 The inefficiency in cross-border transport has hindered the effectiveness of the Cross-Border Transport Agreement.** As a result, the infrastructure put in place along economic corridors, which provides a link with neighboring countries, has not been effectively utilized. Therefore, Thailand has lost economic opportunities and is in an unfavorable situation to compete with foreign companies that have advantages in capital, technology, and specific expertise, especially in the logistics business.

**2.7 Political instability and insecurity in neighboring countries are obstacles.** Several neighboring countries are in a transition period toward better social and economic progress and improved political stability and security, and it will take some time for them to adjust to globalization. Therefore, it is essential to closely monitor their economic and social situations.

### **3. Resilience Enhancement**

From the evaluation of risks, it is evident that all sectors in Thailand must be prepared to ensure that they have the ability to adapt and have the necessary knowledge and understanding required to utilize economic and social cooperation frameworks within the region. Forms of resilience that are necessary for the nation can be created as follows:

**3.1 Determine the development direction of the country and its international role in order to stimulate growth and connectivity in specific economic sectors.** Utilize international transport infrastructure and the logistics networks among countries that have plans and projects that currently exist, and prepare for those in the future. Opportunities for investment should be provided for public and private partnerships at home and abroad to fully develop economic corridors as trade and investment routes to the subregion and beyond. Such development shall also be pursued under the Master Plan on ASEAN Connectivity, and especially among ASEAN and East Asia, South Asia, the Middle East and Europe. The strategic advantage of ASEAN, which arises from its location in the middle of trade routes between the eastern and western areas of the region, shall be fully utilized in this effort.

**3.2 Utilize potential economic advantages from geographical location and the ability of areas in various regions of Thailand to create a competitive domestic base of production.** In particular, promote food processing, tourism, health services, and information technology. This development will require planning that will ensure that the opportunity and capacity of each region is consistent, as well as coordination among various cooperative frameworks. It is also necessary to develop border towns that are linked to cities and communities in the regions of Thailand that are part of the economic corridors. This will facilitate growth and income distribution in regional and rural areas.

**3.3 Strengthen and enhance the capacity of Thai firms.** They must adapt to competition regarding rapid regional connectivity in order to create economic opportunities and increase their competitiveness in international markets, especially in high potential sectors. Emphasis should be given to the roles of chambers of commerce and public-private collaboration in areas where cooperation structures exist. The government shall provide support for Thai enterprises and those of neighboring countries in areas under joint development.

**3.4 Develop economic zones and towns along the border according to the level of mutual benefit and trust with neighboring countries.** Economic activities should be integrated with neighboring countries. This is consistent with comparative advantages in such factors as strategic location, type of production, proximity to raw materials, labor and port facilities for exports. Such arrangements will facilitate and ensure that roles among regional economic zones will be appropriately delegated. Port infrastructure for exports will be developed in accordance with present needs and future requirements. Thailand will provide support for neighboring countries in the form of equitable development partnerships.

## **4. Objectives and Targets**

### **4.1 Objectives**

4.1.1 To strengthen the capability to utilize the advantageous strategic location of Thailand as the key connecting point in ASEAN and the Asia-Pacific region.

4.1.2 To enhance the interests of Thailand in international trade, investment, finance, and market opportunities through ASEAN membership, and through trade and investment that connects with the new economic superpowers in Asia and groups of emerging economies in the Asia-Pacific region.

4.1.3 To promote Thailand as a key actor in cooperation under various frameworks that include subregional areas, ASEAN, the ASEAN Plus alliances and the Asia-Pacific region.

## **4.2 Targets**

4.2.1 Regional supply chains will be interconnected for economic development.

4.2.2 Thailand will have an important role in regional trade and investment based on mutual benefits and security.

4.2.3 The ratio of the use of free trade agreements to export volume will increase to 50 percent by 2016 under the negotiated agreements. There will be an increase in opportunities and choices that reflect Thai benefits and limitations regarding access to new markets within the free trade areas.

4.2.4 The cost of doing business will be reduced at national and subregional levels to meet international standards.

4.2.5 Thailand's cross-border trade with nearby countries will reach 15 percent and direct investment will reach 10 percent per annum.

## **4.3 Indicators**

4.3.1 The Enabling Trade Index, including the sub-index on the border management capacity of the country's infrastructure.

4.3.2 The ranking on the Ease of Doing Business Index in the five main aspects — starting a business, getting credit, trading across borders, enforcing contracts, and dealing with construction permits.

4.3.3 The growth rate of the volume of border trade between Thailand and the countries in the subregion.

4.3.4 The growth of investment by Thai firms in the Mekong subregion and ASEAN.

## **5. Development Guidelines**

In order to achieve the objective of creating links with other countries for social and economic security in the five-year period under the Eleventh Plan, the formation of the ASEAN Community in 2015 will have to be fully realized through implementation of the Master Plan on ASEAN Connectivity. Subregional cooperation will serve as the means to accelerate implementation within ASEAN in all aspects.

This will lead to an expansion in trade and investment within and between subregions and ASEAN. The potential benefits of connecting with nearby subregions and the expansion in cooperation with other frameworks in the Asia-Pacific region will also have to be exploited.

**5.1 Developing connectivity in transport and logistics systems under regional cooperation frameworks.** This is intended to facilitate logistics and reduce their cost. Emphasis shall be on the Greater Mekong Subregion Economic Cooperation Program (GMS), the Ayeyawady-ChaoPhraya-Mekong Economic Cooperation Strategy (ACMECS), the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), and the Thailand-Malaysia Joint Development Strategy for Border Areas (JDS).

5.1.1 Develop efficient transport and logistics services that meet international standards, especially roads, railways, including double track and high-speed trains, and maritime transport. Customs checkpoints, border economic centers, and border crossing facilitation should be improved that would result in more efficient energy consumption, greater development of border areas and improved management of business networks by fostering development of regional supply chains. This would enable joint use of resources and knowledge transfer. It would lead to reduced business costs, and improve efficiency and ease of operation in transport, travel, trade, and cross-border activity. These objectives can be achieved by full use of the infrastructure networks in all economic corridors. Integrated strategies should create connectivity throughout the country and in economic corridors in each subregion of ASEAN. This connectivity should be developed under the Master Plan on ASEAN Connectivity and other related plans. The government will invest in strategic projects in each economic corridor, including through public-private partnerships.

5.1.2 Improve rules and regulations related to the movement of goods and people by reducing the volume of documents, operation costs, and period of time needed for cross-border transport.

5.1.3 Enhance human resource capabilities in transport and logistics businesses to improve the potential of the private sector by emphasizing foreign language training and logistics management. This will allow Thai firms to create links in the transport and logistics businesses throughout the supply chain at both national and international levels. The capacity of SMEs should be enhanced by providing information on joint business development with neighboring countries and by utilizing infrastructure along economic corridors and export gateways in the subregion. The ability of firms to meet international standards for facilitating business ventures

abroad should be improved. Thailand will play a role as a development partner by providing technical assistance to neighboring countries to increase human resources in the transport and logistics businesses.

5.1.4 Link economic development along border economic zones to the domestic economy. Transport networks that integrate production factors and systems, intercountry value chains, and export gateways should be more efficient. Networks of economic connections should be created among large economic areas in neighboring countries, border areas, and the nation's inland economic zones. Coordinating centers among Thailand and neighboring countries should be established in major border cities and towns.

**5.2 Developing investment bases by improving competitiveness in the Mekong subregion and ASEAN.** Focus should be placed on cooperation with neighboring countries to create production bases along economic corridors.

5.2.1 Utilize areas developed to link to neighboring countries and Southeast Asia in order to advance industry, agriculture, agricultural processing, and tourism in the region. Proactive plans should be drafted to handle the investment policies of superpowers in neighboring countries, especially development along the East-West, North-South, and Southern economic corridors under the GMS Program. Emphasis should be placed on connecting with economic corridors under IMT-GT as alternative options for Thailand. Moreover, appropriate public agencies should consult with the private sector in drawing up investment plans with public-private participation in neighboring countries. Economic, social and environmental problems should be considered and preventative measures should be established for every country. Each country will then be able to preserve its identity for purposes of competitiveness, social and cultural development, and internal security. The Philosophy of the Sufficiency Economy should be applied. Further, cooperation with neighboring countries should be promoted in the creative areas of the economy, research and development.

5.2.2 Develop economic zones in cities and villages along the border as economic gateways to neighboring countries. Emphasis should be on the development of transport and logistics systems, standards for services, and ease at border crossing points. The capacity of human resources and local firms to promote trade, investment and tourism should be enhanced. At the same time, it will be essential to put measures in place to cope with the impact of migrant workers, drug trafficking, and smuggling. Moreover, development in these areas should take into account physical, economic, social and cultural factors. An integrated plan for labor

management should be formulated for cooperation between Thailand and neighboring countries.

5.2.3 Integrate spatial development plans with those of neighboring countries that aim at achieving security and stability in these areas. Development of production clusters with the cooperation of neighboring countries should be considered when these countries are capable of doing so. Also, product development in cross-border supply chains should take into consideration subregional and other export markets.

**5.3 Preparing for the ASEAN Economic Community by promoting a constructive leading role for Thailand through the following ways:**

5.3.1 Strengthen public-private participation to develop human resources in all economic sectors. Knowledge of all aspects of ASEAN should be disseminated. This will include rules and regulations, agreements, and languages and cultures, in order to ensure understanding and the ability to compete in a free system. The business sector should make better use of the openness in trade, investment, and services, awareness of intellectual property, and trends toward market expansion and future agreements. Measures should be put in place to deal with fluctuations in price for agricultural products and to cope with shortages in energy and agricultural products due to the free flow of goods. This should involve cooperation between the public sector and major private producers.

5.3.2 Enhance the capacity of public and private educational institutions to meet international standards. This ability includes labor skills, as well as language and cultural knowledge to prepare Thai workers to enter the ASEAN labor market, where Thailand will have a leading role.

5.3.3 Set minimum standards for goods and services in order to prevent the import of low quality products into Thailand and its neighbors that may cause loss of life, damage to property, and pollution. A joint management system should be created to set qualifications for the labor skills of imported workers in order to ensure quality labor matched to needs.

**5.4 Constructively engage in frameworks for regional and international cooperation to provide alternatives in foreign policy in the international arena that maintain benefits for the nation.**

5.4.1 Assume an active role in formulating strategies that involve appropriate structures of cooperation such as APEC and the East Asia Summit. Closely

monitor and evaluate the advantages of joining emerging cooperation frameworks such as the Asia-Middle East Dialogue (AMED) and Trans-Pacific Partnership (TPP).

5.4.2 Seek balance relating to existing and emerging superpower economies to ensure economic stability, access to innovation, and opportunities for open economic policy.

**5.5 Create regional economic partnerships on human capital development and labor mobility, and provide support for Thai labor working abroad via a linkage of supply chains and free labor mobility.**

5.5.1 Accelerate cooperation in the establishment of international labor standards to facilitate regional labor mobility and increase the competitiveness of Thailand and neighboring countries. An integrated plan with neighboring countries should be drafted on the development of human resources, education, and labor skills to enable economic restructuring of the country and the subregion and to prepare the workforce to cope with the transition toward an aging society in Thailand.

5.5.2 Provide support for Thai firms that undertake investment abroad, especially in neighboring countries, in order to solve problems of labor and raw material shortages. This objective should be achieved through creating brands and business networks, seeking representatives and partnerships abroad, supporting finance, providing information on establishing businesses, and gaining access to foreign markets. Thai Chambers of Commerce and business associations should be established in foreign countries, while business councils of subregional cooperation structures and local coordination centers at the border areas should be created. Coordinating systems linking the public and private sector should be provided. Thai firms and exporters should be encouraged to use special rights under current trade agreements.

5.5.3 Protect the rights and interests of Thai people and labor abroad, and strengthen Thai communities in foreign countries by providing information about local laws, supporting activities for Thai people, and enhancing the ability of Thai communities to live abroad with dignity and a good quality of life. Efforts should also be made to improve vocational and linguistic skills, provide insurance and protect Thais working abroad, monitor and assist those in trouble, and guard their rights.

**5.6 Contribute to the international community's efforts in the fight against terrorism, international crimes, drug trafficking, natural disasters and epidemics.** These have long-term economic effects that affect the security of life, the economy and people's livelihood. This effort is necessary to ensure sustainable development in the region.



5.6.1 Improve the ability to prevent and be prepared to respond to international terrorism, drug trafficking, illegal migration and human trafficking. This will reduce their negative effects on free trade and will create economic stability. Attention should also be paid to improving the system for entering the country, organizing border areas, and resolving problems of the status and rights of foreign workers through cooperation with neighboring countries and the international community. The country's interests on land and sea should also be protected.

5.6.2 Prepare for natural disasters and emergencies through improvements in capacity and through regional cooperation in disaster management using business contingency plans. A public-private relationship should be created to protect business, trade, and human life, while sustaining economic growth and a high quality of life through effective information and communication technology.

5.6.3 Collaborate to prevent infection and the spread of emerging diseases through capacity building in health care preparations, and control reemerging and recurring diseases.

**5.7 Promote constructive international cooperation to support economic growth in ethical, sustainable ways:**

5.7.1 Adhere to subregional agreements involving environmental cooperation frameworks such as the Core Environment Program and the Biodiversity Conservation Corridors Initiative under the GMS program and the Agreement on Cooperation for the Sustainable Development of the Mekong River Basin.

5.7.2 Promote green production, consumption and services that lead to reduction of GHG emissions, pollution, inefficient use of natural resources, and environmental impacts. Support expansion of green industries, greater use of renewable energies, increases in low-carbon production, and efficient water management. This objective will be achieved through disseminating knowledge on effective technologies that can be appropriately applied at low cost. Provide incentives for the private sector to do this, and create partnerships between the public and private sectors.

**5.8 Accelerate the use of currently effective free trade agreements.** Expand economic cooperation through free trade agreements and measures that provide assistance to those affected. Information will be provided to the business sector on both positive and negative aspects of free trade agreements in order to enhance the ability to take advantage of them. In particular, support and assistance should be provided by the government to SMEs that are unable to adapt and handle the effects from free trade by themselves.

**5.9 Support foreign investors' use of Thailand as a business base in Asia and promote the role of non-profit international organizations:**

5.9.1 Assist foreign investors to establish regional operations offices so as to enhance the country's capacity to become an investment hub for the region and bring in foreign currencies.

5.9.2 Promote and assist non-profit international organizations to assume greater roles in using Thailand as an operational base for development in this region.

**5.10 Strengthen domestic development partners at the community level to prepare to join global development initiatives.** In the Asia-Pacific, ASEAN, and subregional areas accomplish the following:

5.10.1 Enhance the capacity of local communities and local government to prepare for international and domestic changes by developing networks that offer knowledge and learning. Also provide support to promote close relationships and understanding at the individual level through community and cultural networks.

5.10.2 Support local development, especially through committees for integrated management and joint public-private consultative committees at the provincial and regional cluster levels. Involve local security agencies in drawing up development strategies, especially for the border provinces. The objective is to have a unified vision and be able to develop in a coordinated manner with neighboring countries through cross-border cooperation.

5.10.3 Provide support for enhancing technical capacity and for networks of Thai academic institutions in order to create close collaboration with other countries in this region.

# Chapter 8

## Strategy for Managing Natural Resources and the Environment to Achieve Sustainability

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### 1. Current Situation

Natural resources and the environment in Thailand have been affected by worldwide events including both climate change and domestic factors such as increasing population. Growth-oriented development and competition in trade and investment have contributed to the exploitation of natural resources beyond the carrying capacity of the ecosystem. At the same time, management capability and policy tools such as databases, regulations, law enforcement, and economic instruments have not been utilized efficiently. This has led to depletion of natural resources and deterioration of the environment, thereby affecting the overall balance of the ecosystem.

**1.1 Forest areas have been damaged or destroyed, disrupting the balance of the ecosystem and endangering biodiversity.** Forest areas in Thailand show a steady declining trend; they have decreased from 171 million rai in 1961 (53.3 percent of total area) to 107.6 million rai in 2009 (33.6 percent). Deforestation has damaged the ecosystem and threatened biodiversity on which community livelihood relies and that is the foundation for future economic development. Conservation management has discovered many new species in Thailand, but numbers of endangered flora and fauna have continued to increase.

**1.2 Marine and coastal resources are deteriorating continually.** At present, mangrove forests cover 1.5 million rai or 0.5 percent of the country. In addition, marine and coastal resources are under pressure from infrastructure construction, tourism, unregulated fishing, and damage from erosion. By 2007, about 115 coastal zones had eroded along approximately 600 kilometers, causing land loss of 113,042 rai, the equivalent of 100,000 million baht in damage. Moreover, shorelines along the inner Gulf of Thailand, classified as significant national wetland areas, have experienced severe erosion in excess of five meters per year.

**1.3 Soil has deteriorated while conflicts over land use continue.** Soil resources, a major production element, have been compromised through inappropriate use and improper distribution. Land areas degraded to a severe and critical level cover

36 million rai, 11.2 percent of the country. Encroachment on conservation areas continues to occur. Moreover, the expansion of urban, industrial and commercial areas has systematically replaced agricultural lands.

**1.4 Natural disasters such as flood and drought are more frequent and severe.** The capacity for water storage for summer use is 74,000 million cubic meters but only about 55,000 million cubic meters may be used annually in irrigated areas because the required minimum storage level is 19,000 cubic meters. Water demand will increase from 57,452 million cubic meters in 2008 to 65,452 million in 2016. The Central region requires the most water, followed by the North and then the South. Therefore, the likelihood that severe water shortages will lead to conflicts over competing uses of intra- and inter-river basins will definitely increase among production sectors. Moreover, 34 percent of all villages are prone to droughts. Villages in the Northeastern river basin, in particular, are at highest risk. In addition, 2,370 villages are threatened with inundation and landslides; of these, 398 are at high risk. The Northern region is most susceptible due to degraded forests in the watershed areas.

**1.5 Demand for minerals and energy has escalated steadily, causing environmental impacts.** As the demand for minerals in industrial production expands, both domestic extraction and foreign imports increase. The negative consequences are felt in the health and way of life of communities and by the environment. Domestic demand for energy has surged during the past three decades. During the last five years, this demand has increased on average 2.1 percent annually, causing a need to import some energy from abroad. Specifically, crude oil accounts for 70 percent of total commercial energy imports. An effort is underway to develop alternative energies as a substitute for imports by supporting R&D in renewable, environmentally friendly forms. However, energy development and use to date have resulted in considerable environmental degradation. An additional concern is that rising energy demands and costs may lead to encroachment into forest areas to exploit biofuel crops.

**1.6 Many environmental problems such as air pollution, wastewater and solid waste are prone to further deterioration due to economic growth, community expansion and wasteful consumption behavior.**

**1.6.1 Air and noise pollution in large cities and important economic areas have exceeded safe standards for health.** In 2008, carbon dioxide emissions reached 193.8 million tons or 98 percent of total air pollutants, mainly from power generation, transport, and industrial production. PM<sub>10</sub> (very small particulate matter) has become a problem for air quality in many provinces, such as Saraburi, Mae Hongson, Chiang Rai, Chiang Mai, Lampang, Ayudhaya, Samutprakarn, Rayong, Chonburi

and Bangkok. Major sources of PM<sub>10</sub> are urban traffic, industry, smoke from outdoor burning and forest fires. Because of the traffic, noise levels near roadsides in Bangkok and its vicinity have also surpassed acceptable standards. Similarly, noise at Suvarnabhumi Airport remains a challenge for management.

**1.6.2 Greenhouse gas emissions have risen unremittingly.** In 2004, Thailand's greenhouse gases totaled 265.9 million tons, including emissions from land uses and forests. These emissions have increased 5.6 percent since 2003. Industry and energy generating sectors accounted for the highest amount, 63 percent. Agricultural, industrial and waste sectors respectively contributed 17, 7 and 4 percent of the total greenhouse gases.

**1.6.3 Water pollution has increased in severity because of rising population and industrial usage, together with economic expansion.** In 2010, only 61 percent of major rivers and other water sources were in good or fair condition. This situation illustrates a worsening trend: in 2008 the share of water quality in good or fair condition was as high as 76 percent, and in 2009, 66 percent. In many areas, hazardous chemicals have contaminated groundwater.

**1.6.4 Solid waste from both community and industrial sources has soared but proper management still lags behind.** Community solid waste is currently 15.2 million tons; of this, only 38 percent is disposed of in a sanitary fashion, while recycling is merely 26 percent. In 2010, hazardous waste was roughly 3.1 million tons, of which 77 percent originated in the industrial sector. There are 311 hazardous waste management facilities with a capacity of 10.7 million tons per year. Most of these are located in the Central and Eastern regions, which adds to transportation costs. To avoid high disposal expenses, plant owners often keep hazardous wastes in their factories or mix them with community wastes illegally.

**1.6.5 The use of chemicals in the agricultural and industrial sectors is growing while control mechanisms are ineffective making Thailand rank first in the world in the use of registered chemicals in agriculture.** In 2010, total chemicals, both produced domestically and imported, amounted to 40.5 million tons. Foreign imports accounted for 15.5 million tons while domestic production was 25 million. This represents a sharp increase of over one-third from 2008 when production and imports totaled 29.5 million tons. Accordingly, risks associated with leakage from transport, unsafe storage and misuse have increased the likelihood of chemical accidents.

**1.7 Current management of natural resources and the environment is inefficient.** Lack of integration among responsible agencies has contributed to the

fragmented mechanisms of natural resource and environmental management. To date, regulations have focused only on managing each resource individually, resulting in inadequate enforcement, unfairness and a lack of transparency. Moreover, corruption and inequalities in natural resource allocation have led to public distrust of government management. There are policy gaps in integrating environmental conservation with economic development. Environmental management mechanisms and law enforcement are weak. In particular, ineffective regulatory tools needed to mitigate the environmental impacts of mega-projects have led to unexpected consequences involving large economic development projects in both the government and private sectors. Although these projects could provide economic benefits and additional employment, they also create numerous social and environmental by-products.

**1.8 International agreements in trade, investment, and natural resources and the environment, especially climate change, have intensified and become complicated.** It is likely that climate change-related commitments, following the end of the first implementation phase of the Kyoto Protocol in 2012, will place greater demands for participation on developing countries in greenhouse gas mitigation. Trade barriers related to climate change mitigation measures will involve both tariff and non-tariff forms. Hence, it will be a serious challenge for the country to develop strategies to manage natural resources and the environment in the future within this evolving global context.

## **2. Risk Assessment**

Because of both domestic and international developments during the Eleventh Economic and Social Development Plan, Thailand will confront various risks that have affected natural resources and the environment:

**2.1 Climate change will intensify the deterioration of natural resources.** Thailand is vulnerable to climate change in these instances:

**2.1.1 Loss of coastal areas.** These areas are at high risk from the severe effects of future climate changes. Coastal erosion and rising sea levels will have a direct impact on marine and coastal resources. Both commercial and residential areas will be affected, potentially resulting in forced migration.

**2.1.2 Water shortage.** Because of the fluctuation of rainfall resulting from climate change in several areas, the runoff and groundwater volume will be more limited as time passes, even as the country's water demands continue to rise. Insufficient water supplies will affect livelihoods and the environment.

**2.1.3 Food and energy insecurity.** Climate change has reduced production of major agricultural crops, including rice, sugar and cassava. In addition, the production of renewable energy from biofuel crops may ultimately affect food prices and security as well as natural resources and the environment. For example, biofuel crops may create an incentive to expand agricultural areas by encroachment on forest areas, and increase inappropriate use of fertilizers and other agricultural chemicals.

**2.1.4 Natural disasters.** Disasters are more likely to occur and be intensified because natural resources have been destroyed. In many areas, climate change will increase the frequency and severity of forest fires, droughts, floods, landslides, and storms. These will harm human security, particularly among people whose ability to adapt is low.

**2.2 Production and wasteful consumption patterns have led to exploitation of natural resources without regard for their sustainability.** Many factors are involved:

**2.2.1 Most people are unaware of the principles of sustainable consumption.** This is probably due to lack of understanding. Moreover, people may not have access to information that is adequate to enable wise decision-making. Consequently, materialism has become the norm, people have spent lavishly, and more and more water and air pollution have been the result. In urban areas, in particular, solid and hazardous wastes have increased.

**2.2.2 Most industries, particularly of small and medium size, have been using outmoded technology in production and waste management.** This is harmful to the environment, and involves wasteful, inefficient and ineffective use of natural resources, as well as increased greenhouse gas emissions that are the cause of climate change. Moreover, under the influence of consumerism, product design has focused on goods with a short lifespan, so that natural resources are depleted more rapidly.

**2.2.3 The agricultural sector has accelerated its productivity in response to market demand, thus affecting natural resources and the environment.** Moreover, monocrop farming has led to encroachment on forest areas and overuse of chemicals — both fertilizers and herbicides — and has destroyed soil fertility and biodiversity.

**2.3 Government management is weak and contains policy conflicts.**

**2.3.1 In practice, policies for conservation of natural resources and environmental protection are in conflict with policies for economic development.**

In particular, promotion of industrial policies that welcomes offshore industries that pollute heavily, have resulted in natural resource depletion and environmental degradation. By contrast, the Constitution of Thailand, B.E. 2550 section 67 clause 2, has created obstacles to the development of mega-infrastructure projects and large-scale investments. Despite their benefit to natural resources, such constitutional requirements have brought about constraints on projects such as power generation and large-scale water development.

**2.3.2 Management mechanisms are inefficient.** Their inadequacies include lack of integration, unity, and transparency, and absence of local and community participation in water and forest management. The focus is on command and control. Furthermore, unrestrained, inequitable and ambiguous law enforcement has caused disparities that have brought about natural resource destruction. In addition, plans have been implemented inconsistently.

**2.3.3 Knowledge and the information system are not up to date.** For example, inadequacies in databases of land ownership, deforestation, and forest degradation have caused ineffective government management. Moreover, scientific awareness is lacking concerning the dynamics of changes in ecosystems.

**2.3.4 Communities distrust government management.** Conflicts between communities and the private sector, and between communities and the government have emerged when development projects have produced pollution and harmed community life. Confrontations have originated from policy conflicts, weakness in environmental management mechanisms, ineffective tools for regulating environmental impacts and law enforcement. As a result, civil society and the general population are not confident in the ability of government to manage industrial development and solve environmental problems.

**2.4 Environmental measures dealing with climate change will become much more complex and intense. Worldwide pressure from the international community will extend to international trade.** As a consequence, Thailand must be prepared to take responsibility for greenhouse gas mitigation in the future. All production sectors, including agriculture, industry and services will have to adjust their processes to be less environmentally harmful in response to international requirements and bilateral agreements with the country's trade partners.

### 3. Resilience Enhancement

Analysis regarding risks to the environment and natural resources reflects potential impacts on the foundations of the country's development. Therefore, it is



critical to create resilience so that the country can reduce and manage risks. To preserve natural resources and the environment as the foundation of the country's sustainable development, key methods of resilience should include:

**3.1 Database systems that incorporate information, technology, and local wisdom in response to impacts from climate change.** They should be easy to use in the event of natural disasters, epidemics, and changes in production factors. Moreover, investments should be made in physical infrastructure and in rehabilitation of the ecosystem — forest restoration, coastal protection, a remedy for saline soil, water supply development, flood and drought alleviation and restoration of the balance of nature.

**3.2 A lifestyle that follows the Philosophy of Economic Sufficiency, the Thai way of life, and awareness of the benefits and values of natural resources and the environment.** These will point the country toward a green society and economy where production and consumption patterns are sustainable and treat the environmentally kindly. Technology alone as a solution to environmental problems cannot keep pace with the cumulative effects of pollution as long as the public remains uninformed. The population must be taught to care for natural resources and the environment and refrain from over-consumption. Government policies have not yet put an emphasis on sustainable agriculture; to do so would provide the basis for behavioral changes toward sensible, appreciative and sustainable production and consumption.

**3.3 Instruments and management mechanisms to deal with climate change and governance of natural resources and the environment.** These will assist in formulating policies that facilitate efficient conservation and utilization efforts. The application of information, effective monitoring and evaluation would establish a transparent and equitable management system to access natural resources.

**3.4 Community empowerment is a key factor for success when managing natural resources and the environment.** When communities can deal with problems collectively, develop their economy, resolve social concerns, and manage local natural resources properly, the restoration and conservation of biodiversity will be achieved. In addition, changes in the development process that focus on public participation and the Philosophy can enable the community to develop along a path relevant to its geosocial context and make the transition to self-reliance and sustainability.

**3.5 Effective management will alleviate risks to natural resources and the environment.** Emphasis should be placed on an integrated area-based approach that aims to improve management mechanisms. Databases should be developed to support

policy planning and management at all levels. It is essential that law enforcement effectiveness be strengthened. Corruption must be eliminated. Resource allocation should be thorough, equitable and transparent. The capacity of government agencies at regional and local levels should be reinforced.

## **4. Objectives and Targets**

### **4.1 Objectives**

4.1.1 To conserve and, when necessary, restore natural resources and the environment so they are sufficient to stabilize the ecosystem and provide a firm foundation for the country's development.

4.1.2 To promote production and consumption that is environmentally sound in order to redirect the country toward a low carbon emission society.

4.1.3 To create resilience so as to be prepared to deal with impacts from climate change and worldwide environmental issues.

4.1.4 To create fairness in access to and utilization of natural resources, and to protect benefits that the country receives from international agreements and commitments.

### **4.2 Targets**

4.2.1 Enrich the abundance of natural resources and biodiversity so that conservation lands occupy at least 19 percent of total area, expand forest reserves up to 40 percent, and attain at least 5,000 rai per year of mangrove coastal reforestation.

4.2.2 Improve efficiency of the entire water management system to alleviate water shortages, prevent floods, and expand irrigation areas by 200,000 rai per year to increase food security.

4.2.3 Create a more pleasant environment by reducing the pollution and threats to health from development. Regulate water quality in at least 80 percent of the main water sources and major rivers, restore coastal water quality in the inner Gulf of Thailand, bring air quality in urban and industrial areas up to health standards and maintain this level, aim to dispose of 50 percent of total solid waste in a sanitary fashion, and recycle at least 30 percent of trash.

4.2.4 Enhance the adaptive capacity to meet climate change challenges and disasters at all levels — community, regional, and countrywide.

4.2.5 Improve efficiency of greenhouse gas mitigation.

4.2.6 Increase efficiency in the management of natural resources and the environment such that communities can coexist in harmony with the forests.

### **4.3 Indicators**

4.3.1 The proportion of forest and conservation areas to total land area.

4.3.2 The proportion of villages that face water shortages and those that suffer from flood; the area that is irrigated and the volume of water storage per person.

4.3.3 The quality of the water in the main sources and major rivers; coastal water quality; the air quality in both urban and industrial areas; and the percentage of community waste either recycled or disposed of under sanitary conditions.

4.3.4 The proportion of greenhouse gas emissions per capita compared to per capita gross domestic product (GDP) as an indication of the level of development.

4.3.5 Mechanisms to manage climate change; databases showing areas at risk from climate change at national, regional, and provincial levels; surveillance and early warning systems in the areas most likely to experience natural disasters.

4.3.6 Magnitude of natural disasters, and the losses they cause, both human and economic.

4.3.7 Number of organizations that can serve as environmental councils in local communities, and legislation to protect benefits for the country during the transition to the ASEAN Community and other organizations.

## **5. Development guidelines**

Degradation of natural resources and the environment indicates that the country's development in the past has been unbalanced and unsustainable whenever Thailand has encountered critical challenges from climate change. Hence, the development strategies during the Eleventh National Economic and Social Development Plan should emphasize (1) restoration and conservation of natural resources and the environment: utilize them, but recognize not only their inherent value, but also the importance of proper management, fairness, reduction in disparities and conflicts over access, all the while taking into account environmental costs; (2) a shift in the development paradigm and a transition to a green economy and a society that is environmentally friendly; (3) an increase in the capacity to adapt to climate change by enhancing resilience in the society; (4) preparations to respond to natural disasters; (5) pollution reduction to ensure better health for the population;

(6) development of the natural resource and environment management system so that it is efficient, transparent and equitable; (7) creation of resilience in trade in order to respond to conditions created by environmental and climate change; and (8) enhancing the role of Thailand in international forums as they relate to commitments on the environment.

## **5.1 Restore, conserve and create security for the natural resource base and the environment:**

**5.1.1 Restore forest and conservation areas.** Curb encroachment on forest areas: register land owners in all conservation areas, define their rights as land owners, and clearly demarcate conservation areas. The uses of the land and chemicals applied to it should be strictly controlled, especially in water resource areas. Civil and community networks for forest conservation and protection should be supported through principles of coexistence between villages and their forests. All types of woodlands should be reforested to secure and preserve their benefits. Management of community forests should be encouraged, while agroforestry should be restored in the watersheds and along the borderlines of conservation zones.

**5.1.2 Develop databases and geographical information systems.** These can serve as tools for effective planning and management. Maps demarcating government-owned land should be drafted and there should be precise definitions of acceptable land use in conservation areas. Databases for woodlands, biodiversity, coastal resources, mangrove forests, sources of water, and land and mineral resources should be disseminated annually via all available media. In addition, the database system of forest areas and land use in conservation areas should be upgraded by using satellite images to monitor changes.

**5.1.3 Reform the overall system of land ownership and distribution to be more equitable.** A national information system incorporating land registration and maps illustrating ownership and use by government should be established to prevent encroachment into preserved areas. Measures to redistribute land, such as a progressive land tax, should be equitable. Use of abandoned areas should be accelerated to reduce loss of lands suitable for agriculture and conserve natural resources and the environment. To protect the security and livelihood of poor farmers, it is essential to enact measures to keep small-scale farmers from losing their land.

**5.1.4 Accelerate restoration of soil quality to increase agricultural productivity and food security.** A system of sustainable agriculture should be promoted. Technology and innovative approaches should be utilized to solve problems of saline soil, infertile land, and surface erosion. Research to deal with

problems of acidic and saline soil should be undertaken; the work of the Volunteer Soil Doctor program should be encouraged. Government, academia, and the private sector should collaborate to develop technology and transfer information. Learning centers for farmers should be set up to help them apply soil conservation technology and restore their lands.

**5.1.5 Establish a management system for marine and coastal resources.** This will support the strategy of national marine security. The government should alleviate the impact of major natural disasters and coastal erosion by promoting mangrove reforestation, coral reef rehabilitation, and sea grass and seaweed conservation. Communities should participate in the management of local coastal zones for sustainable fisheries. Standards of construction in both communities and industrial areas, as well as coastal infrastructure, should be improved by addressing the effects of oceanographic changes and coastal erosion. Planning long-term responses to rising sea levels is necessary to reduce damage to coastal urban areas.

**5.1.6 Stimulate integrated water management to support sustainable food and energy security and alleviate floods and droughts.** Water management legislation should be amended so that watershed communities and local administrative organizations (LAOs) are empowered to manage river basins. The government should formulate management plans for each river basin using an integrated approach. It should manage critical areas at risk for drought and flood, implement the water grid system, develop a database for water security and forecast equitable water allocation. It should seek to prevent disasters from flood and drought through city plan enforcement, infrastructure improvements, and adaptation of the lifestyle of local people. Local administrations, communities, and academia should participate to monitor water quality to meet standards for disease-free drinking water, industrial usage, and ecosystem preservation.

**5.1.7 Improve resources to increase the supply in potential water storage areas.** This must be compatible with the local ecosystem, social geography, the economy, and the common needs of communities and stakeholders. Water sources should be developed in accordance with the Royal Initiatives. Domestic and international interbasin water should be distributed taking into account balance and equitable allocation versus the existing water supply and readiness of local people to utilize it.

**5.1.8 Promote efficient, cost-effective, and environmentally sound water use.** A water allocation system should be established for agriculture, industry and domestic consumption. The principles of reduced usage and recycling should be

utilized as water footprint information is gathered. In agriculture, water utilization has become more efficient since farmers were encouraged to grow drought tolerant plants during summer to alleviate water shortages.

**5.1.9 Formulate a systematic water resource infrastructure master plan for domestic consumption.** Surface water and groundwater should both be managed according to the potential of each source.

**5.1.10 Encourage conservation and share the benefits of biodiversity equitably.** Conservation areas and vulnerable ecosystems should be protected to preserve biodiversity. Community organizations should be encouraged to conserve local species. Regulations should be amended to facilitate access to biological resources for food security in the community. Value added innovations should be generated from biological resources.

**5.2 Shift the development paradigm and steer the country toward an environmentally sustainable, low-carbon economy and society; embrace the following guidelines:**

**5.2.1 Restructure production sectors toward an environmentally sound low-carbon economy:**

1) Upgrade industries that have emitted high levels of greenhouse gases toward environmentally safe technology by providing low-interest loans and tax incentives to retrofit machinery, increase efficiency, and switch from fossil fuels to renewable energy.

2) Revise industrial promotion policies to provide more benefits for low-carbon industries and those that are reducing carbon, and halt investments by transnational industries that create harmful environmental effects.

3) Accelerate domestic mitigation mechanisms that foster sustainable development and respond to international standards. Economic criteria should be developed to transform the country into an environmentally responsible society, for example, through a carbon labeling system and by calculating carbon footprints. Specific measures should be enacted and the system of life cycle assessment (LCA) to encourage low-carbon products that mitigate greenhouse gas emissions should be encouraged, as should research and innovation.

4) Encourage coexistence of industries with communities through eco-industrial towns where most wastes can be recycled and raw materials managed systematically. Communicate with all parties to create understanding of the benefits of eco-industrial area development in order to change community attitudes prior to the

establishment of these areas. Incentives should be provided to encourage the private sector to accept social responsibility and to facilitate joint investments between them and the local communities. At the same time, the concept of social enterprise should be disseminated among development partners.

5) Encourage sustainable agriculture to support the ecosystem. Organic farming, integrated agriculture, agroforestry, and innovative practices should be promoted in parallel with campaigns to reduce the use of chemicals in agriculture. The development of agricultural technology to adjust land use toward high yield species that use little water and are resistant to climate change is essential. Markets for organic products should be promoted. Livestock should be fed silage that reduces methane gas; fishing methods should consider the balance between marine animal resources and the eco-system. Management of fisheries should observe international standards and include elimination of illegal, unreported and unregulated fishing.

6) Enhance the service sector's role in economic development. Businesses with high potential and services with low environmental impact should be expanded; these include health care and tourism, including ecotourism. Development of these services should be designed so they do not harm farmers and communities, for example, support various measures for qualitative tourism in the national park and best practice in communities. Use of local knowledge should be supported to generate creative products and services for transition to a low carbon society.

7) Create market opportunities for environmentally beneficial products and services. Government procurement programs for local government should be expanded to motivate such production and crops. Firms should be afforded tax benefits when their products are environmentally friendly to create better competition. Criteria for giving awards to environmentally progressive government agencies should be established. Private enterprises should be asked to support environmentally beneficial procurement throughout the supply chain.

#### **5.2.2 Increase energy efficiency in the transport sector to reduce greenhouse gas emissions:**

1) Encourage people to alter their traveling patterns and freight shipments by using transportation systems that use less energy per unit than road transport — the main method at present. Public transportation networks should be developed to reduce energy use in order to attain greater efficiency throughout the country.

2) Support the use of vehicles that use clean or renewable energy such as natural gas and biofuel. Automobile technology that saves energy together with productivity enhancement should be developed. Fuel consumption standards should be set to compel reduced use; this will be the main mechanism to control greenhouse gas emissions in the long term.

3) Poor driving behavior and excessive speed should be curtailed to reduce fuel consumption. Engines should be well tuned to control pollution emissions and meet the standards set by law.

### **5.2.3 Develop environmentally friendly cities with emphasis on integrated urban planning having cultural, social and ecological aspects:**

1) Develop compact urban designs where areas are used creatively, with emphasis on the expansion of green spaces and increased energy efficiency. Infrastructure design technology, improved transport systems and energy saving residential buildings should be promoted. In addition, an ecologically sound urban model should be developed and specific green areas set aside for agriculture and urban farms.

2) Utilize tax support and other incentives to redirect technology and materials toward renewable energy. Regulations should be updated to increase efficiency in energy management.

3) Supervise intensive land use both inside and beyond cities and establish measures to curb urban sprawl. Plan to incorporate public art and designate cultural heritage sites. Communities and LAOs should develop areas at the sub-district, district and provincial levels, and these should be relevant to the means and lifestyle of the inhabitants as well as to the sustainable capacity of these areas.

4) Manage an integrated urban environment by using innovative technology for wastewater and solid waste management, using the 3R principles (reduce, reuse, and recycle). LAOs should build capacity to manage the environment efficiently with participation by all stakeholders.

### **5.2.4 Modify consumption behavior to facilitate the transition to a low carbon and environmentally stable society:**

1) Encourage people from all sectors to be responsible for their ecosystems by applying the Philosophy to their way of life in order that Thailand becomes a model of an environmentally sustainable society. Educate the public to be aware of the concept that natural resources and the environment are vital to survival and the progress of human society. The exploitation of natural resources to maximize



short run economic benefits should be curtailed, and use of these resources should aim toward sustainability and benefits for all.

2) Undertake a campaign to change attitudes to create an understanding of the value of sustainable consumption as the norm in the society. Religious principles, culture, and Thai tradition should be used as tools to cultivate values of sustainable consumption, based on local wisdom disseminated through both formal education and informal means.

3) Publicize information and transfer knowledge to people about the environment and sustainable consumption so as to enhance their ability to choose environmentally desirable products and services.

4) Strengthen consumer protection mechanisms and support networks, media, advertising and public relations to redirect society toward sustainable consumption. Consumer protection mechanisms should be reinforced. Laws governing media should be amended so they disseminate information to consumers in a responsible manner. Networks to share knowledge and experience should be created to encourage media and advertising to change guidelines toward sustainable consumption.

**5.3 Enhancement of adaptive capacity to handle climate change will embrace these guidelines:**

**5.3.1 Develop knowledge about the impact of climate change and adaptation to it:**

1) Conduct research for better precision about the causes, forecasting, risk assessment, vulnerability, and impacts from climate change on each sector of the economy and society. These will include forest ecosystems, biodiversity, coastal zones, water shortage, natural disaster, and key production sectors of the country in order to plan appropriate responses and management.

2) Support scientific and technological research and innovation regarding adaptation to greenhouse gas emissions and their reduction. Measures should be proposed for sectors at risk, by taking into account potential efficiency and effectiveness. In addition, studies should be undertaken about the preparation of the domestic carbon market; mitigation in the energy and agriculture sectors; new mechanisms such as the National Appropriation Mitigation Action (NAMA); Reducing Emission from Deforestation and Degradation and the Role of Forest Carbon Stocks in Developing Countries (REDD-Plus); and Clean Development Mechanisms (CDMs).

3) Develop a curriculum on climate change to train researchers and create and participate in information networks.

4) Establish mechanisms to evaluate data and disseminate climate change information to all sectors in order to raise public awareness and alleviate its impacts.

### **5.3.2 Develop management tools to deal with climate change:**

1) Support formulation of long-term plans to cope with climate change and emphasize its economic and social impacts. For example, create plans specifically to protect urban and coastal areas, prevent floods, and reduce greenhouse gas emissions.

2) Develop databases and reporting systems to measure greenhouse gas emissions. An up-to-date standardized database of impacts from climate change should also be established and include effects caused by international commitments. Other important data that should be collected include risk areas, carbon labeling and the footprint from industrial processes, clean technology projects, carbon credit trading on regulatory markets, and carbon offsets in voluntary markets. Financial and technological support available through programs of international assistance should be identified.

3) Use fiscal measures as tools in environmental management; examples might include pollution taxes, product fees, risk insurance, and emission quotas. Likewise, the use of marketing and social measures should be applied to various sectors when possible. Development of innovative technology is also essential.

4) Set targets for greenhouse gas reduction and formulate medium- and long-term action plans for voluntary mitigation of greenhouse gases by promoting its benefits. Systems should be established to evaluate mitigation efforts by measuring, reporting and verifying (MRV) at the project and country levels. Incentives should be provided to systematically record domestic voluntary mitigation.

5) Conduct market research to identify revenue opportunities through selling carbon credits, including standards that link to international markets on both a voluntary and a regulated basis. In addition, studies should be made of the emission quota system, the efficiency of greenhouse gas reduction, a break-even analysis comparing management costs of mitigation vs. carbon taxes.

6) Establish a National Registry System to bolster domestic greenhouse gas reduction including reports on NAMA activities. Regulations should be amended to gain international support relative to finance, technology, capacity building and establishment of a Thai carbon market in the future.

7) Establish a carbon fund as a domestic buying source for carbon credits and offsets. A feasibility study should be supported on establishing a carbon market for the ASEAN Economic Community (AEC).

### **5.3.3 Strengthen community readiness to respond to climate change:**

1) Upgrade the adaptive capacity of vulnerable groups by allocating adequate resources and communicate information concerning risks and risk management from various agencies to communities and their learning networks. For areas that have been harmed, recovery assistance should be provided, including restoration of natural resources and ensuring employment for those at risk of losing their livelihoods.

2) Provide short- and long-term measures to deal with damages to the community and society. Communities should have a variety of means available for risk management such as climate change insurance on property and crops.

3) Support long-term community planning. Local scholars, social and political leaders, and LAOs should occupy key roles in handling changes.

## **5.4 Respond to natural disasters:**

### **5.4.1 Map risk areas at the national, regional and provincial levels.**

Set priorities to determine guidelines for surveillance and damage prevention using physical measurements and infrastructures. Control both economic activities and settlements in risk zones. Safety standards for utilities and other key infrastructures should be defined to handle future disasters.

**5.4.2 Upgrade the efficiency of disaster management.** There should be measures to cover all aspects of disaster management: preparedness, prevention, mitigation, warning, emergency management, rescue and relief, and rehabilitation. Focus on integrating efforts and unified management.

**5.4.3 Develop databases and a telecommunication system.** Science and technology should be utilized in disaster management. A regional network should be created to link data, transfer technology, encourage academic collaboration, and in general create knowledge about warning systems and emergency management.

**5.4.4 Establish disaster relief planning for the entire population.** A national volunteer corps should be created to meet international standards. Capacity development for communities and local leaders should be supported both through training and by disseminating information about disaster management. Collaboration

among sectors, both government and private, should be a high priority, and include academia, mass media, the military, and civil society to efficiently mobilize resources and integrate disaster management throughout the country.

**5.4.5 Ensure that the private sector, public enterprises, schools and local authorities are well-prepared.** Disaster response plans should be made to carry out actions such as evacuation. There should be a back-up system of operation at the organization level to ensure business continuity. Conduct regular emergency drills to alert the public and guarantee safety of life and property.

**5.5 Protect trade subject to environmental conditions and climate change:**

**5.5.1 Monitor indices of environmental preservation, so as not to impinge on international trade and investment.** Include unilateral measures with major trade partners and measures that involve bilateral and multilateral frameworks. Collaboration by all parties, especially the private sector, should be encouraged to prepare prevention or management measures.

**5.5.2 Create measures to cope with the anticipated effects on trade measures and international agreements from environmental protection and climate change,** particularly a border carbon tax, as defined by the General Agreement on Tariffs and Trade (GATT). A carbon tax might be imposed at border crossings; other measures that could be used are compulsory purchase of greenhouse gas emission permits, a carbon tax on imported goods, and non-tariff measures such as carbon labeling and the water footprint.

**5.5.3 Conduct research into the effects of international agreements on trade, and develop strategic plans to alleviate impacts on affected products and businesses.** At the same time, environmentally sound goods and services and their industries should be promoted. Thailand should have strategic investment alliances with countries that are advanced in environmentally friendly technology.

**5.5.4 Encourage exporters to include carbon footprint information.** Financial support, information and facilities should be provided to certify small-scale exporters. Carbon accounting should be promoted at the source of raw materials, especially as it concerns agriculture and fisheries. A system of product verification and certification should be developed.

**5.5.5 Generate incentives to create innovative industries that practice sustainable development.** Research and development should be supported to expand trade and investment in businesses that deal in carbon credit trading.

**5.6 Enhance the country's role in international arenas where environmental agreements and commitments are involved:**

**5.6.1 Analyze details of agreements, and monitor the status of negotiations with other nations.** This is to properly define the country's position and be proactive in negotiating. It is crucial to create understanding and encourage cooperation among all parties, including the political, governmental, and private sectors and the general populace.

**5.6.2 Strengthen government officials' negotiating skills.** Expert knowledgeable and skillful teams should be created. Information networks, collaboration, and experienced personnel should be provided to carry on operations continuously.

**5.6.3 Develop cooperation within ASEAN and with major trading partners.** This will yield mutual benefits, especially in science and technology development for greenhouse gas mitigation and sustainable use of natural resources. Thailand should have alliances to negotiate in international arenas of trade, investment and the environment. Plan to contend with the effects of the ASEAN Economic Community as they are relevant to the country's natural resources and environment.

**5.6.4 Support implementation of international agreements on natural resources and the environment.** To implement the Convention on Biodiversity and its related protocols, there are several important policies to consider. Among these are allowing communities to use natural resources sustainably, prescribing biosafety measures, and providing mechanisms to equitably share benefits from commercial endeavors. Similar policies should be put in place for other international agreements, including commitments on sustainable development, the UN Framework Convention on Climate Change (UN FCCC), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Stockholm Convention on Persistent Organic Pollutants.

**5.7 Reduce and control pollution.** The goal is to create a healthful, quality environmental for the population, which embraces these guidelines:

**5.7.1 Reduce air pollutants, especially particulate matter (PM<sub>10</sub>).** In the big cities, public transit should be provided and people encouraged to avoid using personal vehicles. Congestion fees should be enacted and use of personal and commercial vehicles should be given an expiration date. Urban planning measures should be strongly applied to reduce traffic, air and noise pollution. The public should participate in designing measures to prevent harmful effects from development. When necessary, compensation for damages should be made. Use of clean technology

and fuel in industrial production should be encouraged and open burning should be controlled by law.

**5.7.2 Increase efficiency in solid waste disposal and community wastewater treatment.** The private sector should be encouraged to invest jointly to realize this goal. Waste reduction at the origin should be supported by sorting refuse for maximum recycling. There should be economic incentives to decrease solid waste and wastewater, and focus on critical areas. Production of renewable energy from waste should be supported through incentives, and there should be fees collected for services involving wastewater treatment and solid waste disposal.

**5.7.3 Establish a management system for hazardous, electronic and infected wastes.** A disposal center for communitywide hazardous waste should be provided. In the industrial sector, firms should be held responsible for managing their hazardous wastes and chemicals. There should be an agency to guard against illegal dumping of hazardous chemicals and industrial and infected wastes, and to prevent smuggling of hazardous chemicals for illicit uses. A database of waste fingerprints from all industries that generate refuse should be developed. Factories using chemicals or producing hazardous industrial wastes should provide safety guarantees and be required to obtain permission when starting or expanding operations. Regulations should be modernized to increase efficiency in the management, transport, and recycling of hazardous wastes. Research should be conducted to develop simple and cost effective technologies for hazardous waste disposal.

**5.7.4 Reduce risks of chemical leakages and accidents.** Integrated management of chemicals should be inaugurated and the import of high-risk agricultural chemicals restricted or terminated. Chemical databases should be developed by each agency and linked to cover sources — upstream to downstream — involving import, production, operation, and disposal. Information about the risks of hazardous chemicals in production processes should be disseminated to industries while consumers should be protected by establishment of a social network and system of surveillance to monitor the safety of chemicals and products.

**5.7.5 Create a warning system together with a management system to address pollution accidents at both national and local levels.** Personnel should have the means and ability to respond to emergencies. Measures should be ready to remedy, rehabilitate and restore the environment and compensate and make whole the victims of pollution accidents. A fund should be established comprised of revenue from industries and factories that have been polluters. Fiscal measures should follow the “polluter pays principle.”

**5.8 Enhance natural resource and environmental management systems so they are more efficient, transparent and equitable, following these guidelines:**

**5.8.1 Empower communities and support local rights to utilize natural resources in a balanced and sustainable manner.** Utilization of natural resources and biodiversity-based economic developments should be fostered and take into account local lifestyle, knowledge, and traditional culture. Local experts and political leaders should be advocates for community rights to achieve self-reliance in natural resource management. Information about the ecosystem should be provided to communities. LAOs and their communities should survey their natural resources, biodiversity and local knowledge to develop databases.

**5.8.2 Support popular participation and develop community abilities.** Land management mechanisms should be established and comprised of the government and private sectors, academia, the local administration and its populace. Local community environmental councils should be established to hold public hearings concerning government development projects. Mass media should be used to raise public awareness about protecting natural resources and the environment. The LAOs should have authority to manage natural resources and the environment. Specifically, they should administer wastewater, solid and hazardous waste and natural disasters.

**5.8.3 Amend legislation relevant to economic and social changes and enforce laws equitably.** The goal of laws and regulations should be to reduce conflicts and disparities involving access to community natural resources. Regulations should support conservation, sustainable use, and equitable sharing of benefits. A progressive land tax should be used to accelerate redistribution of land ownership. Laws defining public participation in policy planning and implementation should be enacted. Urban planning standards should be amended and enforced strictly and equitably. Criteria for allocating profits from mineral use should be revised. There should be heavy penalties for those who destroy natural resources and damage the environment, engage in illegal wildlife trafficking, and dump toxic substances illegally.

**5.8.4 Change government investment policy to promote conservation and restoration of natural resources and the environment.** Industries that have harmed natural resources and the environment should lose support. Measures to control land use and conform to economic crop promotion policies should be established to prevent encroachment into conservation areas and destruction of vulnerable ecosystems. Research should evaluate the current and future value of natural resources in terms of the ecological services they provide. Criteria should be improved to better assess impacts.

**5.8.5 Accelerate collection of environmental taxes and reform the national budget to create incentives for efficient use of natural resources and reduction of pollution.** For example, impose a pollution fee or a tax on products and chemicals that have caused environmental damage. The revenue should be used to support restoration of the environment, improve the health of those affected by pollutants, and promote sustainable production.

**5.8.6 Generate income from natural resources and biodiversity conservation.** Economic development based on biodiversity and its genetic basis should be promoted. Research on local flora and fauna should be conducted to add value in goods and services. New instruments should be used to generate income, such as payments for greenhouse gas mitigation from initiatives such as Reducing Emissions from Deforestation and Degradation (REDD), sustainable forest management, incremental carbon sequestration in developing countries, Payment for Ecosystem Services (PES), and the Clean Development Mechanism (CDM).

**5.8.7 Develop databases, evaluate systems, and support research.** Establish an efficient management system for natural resources and the environment. Databases should be used to support decision-making. Research to link local tradition with modern knowledge should be encouraged. Mechanisms should monitor and evaluate the implementation of government policies and investigate all influences on natural resources and the environment. These findings should be used to adjust policies toward sustainable development and to reduce conflicting policies between development and conservation.



# Chapter 9

## Translating Strategies into Action

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### 1. Introduction

It is crucial to translate strategies into action if the direction and process of development are to be driven as planned. To achieve the Plan's objectives, appropriate development partners and processes must be identified. The Eleventh Plan is becoming increasingly complicated and presents diverse challenges. The combined efforts of all parties will be needed to create a happy society, one based on fairness, transparency and resilience in keeping with the national vision to realize the Plan.

During the realization of the Eleventh Plan, many issues will appear as either opportunities for accomplishment or threats to them. Therefore it is wise to review previous results, including an analysis of current government policies, to assess risks and evaluate capability. This will provide lessons about performance, and contribute to the design of models and management by which the Plan will be translated into actions at both national and local levels under complex circumstances.

### 2. Evaluation of Situations

#### 2.1 Review of implementation from the First through Tenth Plans

Thailand's national economic and social development plans have evolved and their concepts have shifted over time. There have been three periods during which the basic concepts, main objectives, methodologies, techniques and processes of formulation have varied, together with the guidelines to achieve them:

**During the first period, which spans the First through Fourth Plans, the public sector was the key mechanism for implementation.** These Plans were designed by scholars and foreign experts. Their main objectives were to expand the economy and invest in infrastructure such as transportation, communication, and dams for irrigation and to generate electricity in order to create foundations essential for private investment. In the subsequent period, economic growth continued to be a main objective under the assumption that it would create fairness in society.

Accomplishment relied on approval by the Cabinet and on government agencies to carry out the tasks using the budget allocated for the ministry's operational

plans. At this time, the public sector, using a top-down approach, was the main instrument, while other stakeholders had limited participation in the process.

**During the second period, the Fifth through Seventh Plans, the private sector began to participate in implementation.** The nation enjoyed political stability, but experienced a high level of poverty in this period, especially in rural areas. Therefore, the twin objectives of development were to generate stable economic growth and to reduce poverty. In particular, the Seventh Plan gave priority to sustainable progress, with emphasis on balanced economic growth, income distribution, quality of life, and environmental values. This was to be achieved through cooperation among development partners to protect the environment and solve ecosystem problems. At the same time, Thailand began to be more closely connected to the world economy. Planning methodology shifted from a sectoral approach toward a proactive strategy as seen, for example, in the Eastern Seaboard Project and the rural development plan. The formulation of development planning also began to be delegated to regional and local authorities in order to provide for greater participation by community leaders and the private sector.

The execution of these Plans was more inclusive, so that many stakeholders could participate as committee members in, for example, the National Rural Development Committee, the Eastern Seaboard Committee, and the Joint Public-Private Committee. Such groups were responsible for outlining policies and formulating and implementing plans. They were also charged to monitor and evaluate by coordinating with appropriate stakeholders as development partners. Budget proposals were initiated by each agency in accordance with its work plan, and agencies established action plans that were more responsive to the national one.

**During the third period, the Eighth through Tenth Plans, development partnerships were expanded to cover civil society and communities.** Implementation encompassed various forms of popular participation. The planning pattern was shifted to a strategic approach that aimed at cooperation in order to prepare for changes. Public participation by all elements of society was given prominence, with a focus on people-centered growth. Increasingly, the planning process was carried out at the rural level. The Eighth Plan was translated into action by adhering to the Area-Function-Participation (AFP) approach. In addition, community improvement planning was promoted. Unfortunately, Thailand faced an economic crisis in 1997, and the need to solve this altered the sequence of priorities.

The Ninth Plan was driven by the public sector through the Government Administrative Plan. This plan was designed to integrate the state's foundation policy

under the 1997 Constitution with government policies. By taking political stability into account, the public sector put an emphasis on government policies as guidelines for outlining projects through the Government Plan rather than the National Plan. However, political change in 2006 and the revoking of the 1997 Constitution resulted in disruption of use of the Government Administrative Plan, and the annual budget allocation had to be based on the National Plan.

During the Tenth Plan, many development issues were widely covered but lacked concrete guidelines and mechanisms. The public sector found that implementation was difficult and the budget allocation did not support strategic development. Some guidelines involved many ministries but integration of the budget allocation stalled. Meanwhile, Regional Development Strategies provided a framework for local and provincial levels and for provincial cluster plans. Furthermore, there were master plans covering specific issues along with national committees appointed to oversee their operation. However, high priority development issues in the National Plan were not effectively translated into action so they were unable to produce specific results.

**In conclusion**, plan preparations and their activation in terms of context and process were adapted to cope with internal and external changes from the First through the Tenth Plans. The two main issues that now need to be considered in plan formulation are as follows:

1. To date, the top-down and bottom-up approaches to planning under the Area-Function-Participation concept have been developed. Now there needs to be a local connecting point so integration can proceed to the planning and implementation stages. Support is also needed in the form of technical knowledge, creative innovation and use of resources in ways that are relevant to the Area-Function-Participation concept.

2. The supply-oriented approach that was used from the outset has changed to reflect the importance of demand both through mechanisms and public participation at various levels. Among these are the Joint Public-Private Committee and local and community planning methods, especially application of the Sufficiency Economy Philosophy as it applies to the socio-geographical conditions in each area. Therefore, in the planning process, emphasis must be on links between supply and demand at all levels so as to create balance and sustainability in the long run

## 2.2 Changes and their impact on the Eleventh Plan

**2.2.1 Translating the Plan into action has constraints caused by unstable policies, economic crises, and conflicts within society.** This reflects the fact that accomplishments in the future will rely more on cooperation among stakeholders in the form of “development partnerships” under the integration process. Each development partnership has constraints:

1) The public sector still plays an important and centralized role. Reform of public administration through popular participation has created “development partnership networks.” Mechanisms and tools are available at all levels, from national and provincial settings to those that are local and community-based. But integrated development schemes in the provinces and provincial clusters have relied on authority delegated to regional personnel more than to local administrations. Public agencies at the regional level have been unable to adapt and catch up with new paradigms for progress. Moreover, provinces and communities, due to limited linkages and integration in plan formulation, cannot be synchronized with regional and national plans. Local Administrative Organizations (LAOs) cannot carry out their duties effectively because of the delay in transferring some responsibilities as well as the overlapping that exists in providing public services. This results in limited participation by local people and access to their resources. In addition, the regional government cannot adjust to changes and local differences. In addition, the performance of duties that are regulated throughout the country has caused inflexibility and created obstacles in working with other development partners.

2) Communities are unable to formulate plans linked to other strategies, especially to local and provincial plans. Even though the budget has been allocated directly to provinces and local communities, and there have been public hearings to link those plans between the community and the province, many communities have confronted difficulties such as inadequate time frames. Some community plans have been linked to provincial strategies without any analysis. In addition, communities still lack power and have limited roles in monitoring performance. Further, they do not carry out systematic monitoring and evaluation of local organization plans.

3) The private sector plays additional roles, but with some limitations. It has participated in development only on business-related issues while cooperating less with local authorities and communities as traders and service providers. The roles of the private sector in the provincial development committees and the joint public-private committees have been limited and they cannot manage

progress by themselves. They have to rely on support from the public sector because of laws and regulations that do not allow them to participate fully in advances.

4) Academic institutions and research agencies, especially universities in the Bangkok Metropolitan Area, play substantial roles in knowledge-based systems but participate less in rural development. Innovation and research to acquire new information is directed mainly at the private and government sectors so they have received more support than their local counterparts. It is therefore as important to encourage educational institutions and research agencies to cooperate with communities on matters relevant to each particular area, as it is to encourage local organizations to choose and propel their own growth issues. In addition, institutions at the regional level should be encouraged to strongly incorporate research efforts directed toward local progress.

### **2.2.2 Risk factors and constraints on implementation of the Eleventh Plan.**

Risk factors and constraints that impinge on successful performance:

1) Effective utilization of the Plan is limited by the political sector, which tends to adhere to its own policies, while government organizations mainly follow the Government Administrative Plan. This detracts from attention to the National Development Plan. Furthermore, many government agencies believe that the National Development Plan covers a wide range of advancement issues that are difficult to translate into action because indicators and means lack clear definition.

2) The budget allocation period is not consistent with implementation of the Plan. It, in effect, started October 2011, but the government agencies had already proposed their budgets for fiscal year 2012, provincial authorities had adopted their four-year strategic plans, and LAOs had completed their three-year development plans. Thus, it is obvious that the substance of the provincial strategic plans and the LAO's development plans cannot be integrated into the Eleventh Plan's first year.

3) Even though a substantial amount of the budget has been allocated to local areas, its administration is so ineffective that its utilization is wasteful. There are many channels of budget allocation that must go through ministries before they reach the provinces and local organizations. To be managed effectively, budget allocations need transparency and must respond to local situations to maximize benefits to the populace.

4) Overall management to translate the Plan into action is lacking. In the past, the public sector drove the National Plans through ministries and specific structures such as the National Tourism Policy Committee, the SMEs Committee, the Science Technology and Innovation Committee, and the National Water Resources Committee. They had no overall coordination methods that would ensure that implementation met the objectives of the Plan.

5) Corruption has hindered effectiveness and long-term confidence in achievement. It has led to delays within the national administration by creating mechanisms that cannot function effectively. The disparity in shared benefits has led to conflicts among groups in society. It is necessary to have long-term guidelines to solve this problem, established through participation by all stakeholders, because corruption patterns are very complicated, particularly when they are insinuated into policy. To date, auditing methods have been ineffective.

**2.2.3 Supporting factors for the Plan to succeed.** Analysis of strengths and opportunities within each sector reveals the following:

1) The public sector has new tools and techniques of decentralization. These support regional authorities and local administrations and increase their effectiveness in development matters. During the Tenth Plan, the structure, means and criteria for resource allocation was revised. This was accomplished through the Determining Plans and Process of Decentralization to Local Government Organization Act (Second Edition, B.E. 2549). It was intended to solve problems of duty-manpower-budget transfers and the precise roles of ministries, departments, provinces, and LAOs. The LAOs are now able to manage their duties properly and support provincial advances. Moreover, the Government Administrative Act (Seventh Edition, B.E. 2550) and the Royal Decree on Integrated Provincial and Clustering Development B.E. 2551 have provided opportunities for provinces and provincial clusters to submit their development budgets directly to the Bureau of the Budget.

2) Citizens at the local level have been empowered with more opportunities to participate in the national administration. They have recognized the importance of participation as a way to protect their individual rights and their communities. In addition, they can now participate with the public sector and other development partners in advances, for example, by participating in the Community Council and the Provincial Governance Committee. Moreover, they are represented in the Regional Inspector's advisory network, together with senior members of the Prime Minister's office and various ministries, to inspect performance at the regional level.

This is an important channel for the populace to be able to join the improvement process and examine a broad range of government performance.

3) The private sector has recognized the importance of participation in national development and in corporate social responsibility. It has established social enterprises such as improvement of production sectors, tourism, and community projects, and it has worked to suppress corruption. It has strategic plans with important driving mechanisms at both national and provincial levels, such as the Joint-Public-Private Committee, the Trade Federation of Thailand, the Industrial Federation of Thailand, and the Tourism Industry Federation of Thailand.

4) The academic sector is becoming more active and earning recognition as a core engine for future progress. Research and development agencies now have greater roles in applying innovation to local areas. Technical knowledge is supplied through a learning process. Community coordination should be encouraged to collect data, to undertake mutual analyses to support decision-making and to draft community development plans. An added benefit is that they can create development networks with the public and private sectors, scholars and LAOs to solve social problems and address disparities.

### **3. Principles and Objectives of Translating Strategies into Action**

Successful translation of a National Plan into action relies mainly on the clarity of the Plan and a managerial system. Awareness and understanding of their missions and responsibilities by all development partners are critical factors to make the plan a reality. The principles and objectives of the present Plan are as follows:

#### **3.1 Principles**

The fundamental principle to translate the Eleventh Plan into action is to proceed step-by-step while creating universal understanding and nationwide public participation. This will facilitate integration of the Plan with government policies and other actions. The Thai people, communities and organizations throughout society will be encouraged to take part in the development process by using knowledge that relates to their socio-geographic conditions. Implementation will be done fairly and justly. This will create resilience in the populace so that it can respond to changes and act as follows:

3.1.1 Impel national achievement by pursuing the Eleventh Plan as the main thrust for translating the plan into action at all levels, as they relate to socio-geographic conditions.

3.1.2 Distribute the benefits of progress to the area level by using the AFP approach. In this case, provinces will have to be the main arenas for development and the focal points for links between local and national levels.

3.1.3 Utilize knowledge, technology, innovation and creativity as tools to drive growth at all levels.

3.1.4 Employ methods of expansion and tools from all stakeholders in a holistic manner to drive the plans effectively. Networks and clusters should be created to respond to local needs.

### **3.2 Objectives**

3.2.1 To implement the Eleventh Plan through popular participation.

3.2.2 To integrate action plans from the central to the local government in order to generate achievement.

3.2.3 To monitor and systematically evaluate progress at all levels — national, regional and local.

## **4. Guidelines for the Plan Implementation\***

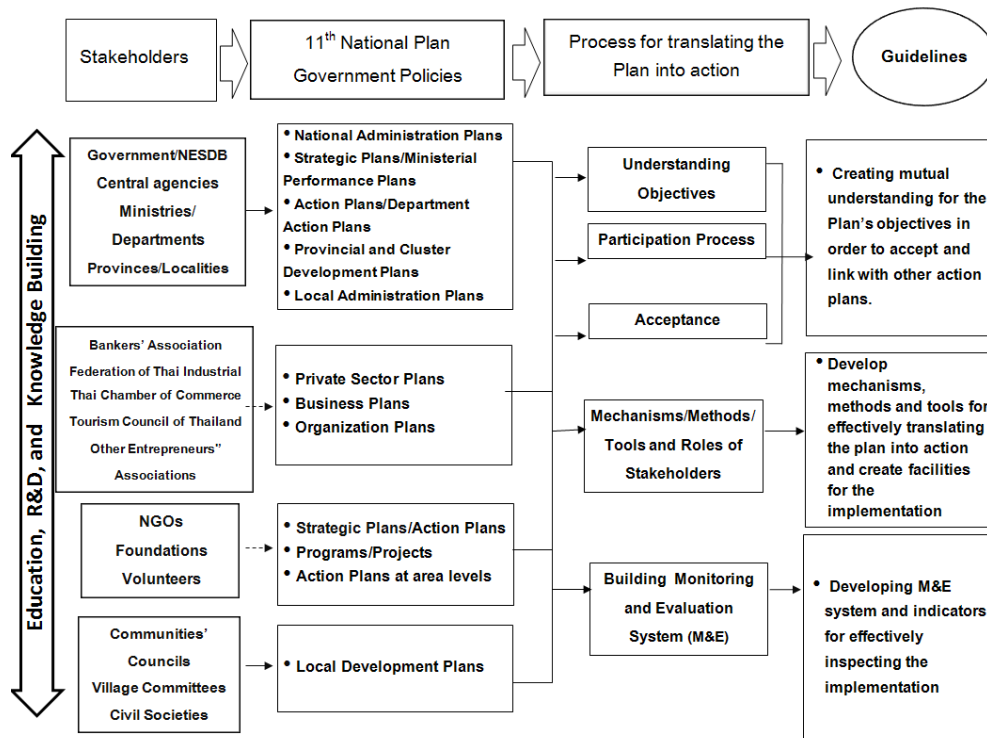
Implementation will be undertaken systematically following these guidelines:

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\* The efficient management of the Eleventh Plan will apply the concept of Plan-Do-Check-Act (P-D-C-A). It will involve goals and guidelines to their implementation, including processes, methods and tools to produce action on the plan and monitor it. All development partners must carry out their responsibilities and follow the specified system. Monitoring and evaluation will reflect the impact of improvements, the degree of satisfaction with them, and lead to adjustment of processes and means to achieve the objectives.



## Translating the Eleventh Plan into action



**4.1 Create a common understanding among all development partners to accept the Plan and participate in making it work.** The Office of the National Economic and Social Development Board (NESDB) will create mutual understanding of the Plan's goals with all development partners through these processes and methods:

**4.1.1 Establish a line of communication to create awareness of the Plan and acceptance that it is an effective tool for integrated development that can be applied by all development partners.** Appropriate communication and public relations efforts via media and through activities at the national and local levels will be mobilized to reach target groups. In addition, information networks will extensively distribute the Eleventh Plan. The ability of personnel to disseminate significant elements of the Plan efficiently will be enhanced.

**4.1.2 Create understanding of the Plan's goals and guidelines for the political sector.** Politicians will be encouraged to integrate major advancement issues into the policies of their political parties and the government.

**4.1.3 Prepare an implementation handbook for citizens in order to stimulate participation.** The handbook will explain coordination and ways to integrate action plans among all development partners. Means of advancing plans and activities are to be collected, especially best practices. Investment guidelines involving significant development plans and projects must be provided to appropriate agencies

so they can formulate specific actions. Execution by the government sector should be conducted in parallel with other stakeholders.

#### **4.2 Link the Eleventh Plan with government policies, Government Administrative Plans and other Plans:**

**4.2.1 Designate significant strategic issues and propose them to the public.** These will lead to effective formulation of plans and projects, well-allocated resources, and efficiently integrated guidelines among all development partners. These issues are 1) to provide lifelong learning for all Thais; 2) to enhance economic and social security in the society; 3) to empower communities and enhance participatory roles of citizens and the private sector; 4) to upgrade facilities for economic restructuring to increase competitiveness and fairness; 5) to encourage cooperation of development partners at subregional and regional levels; 6) to prepare Thailand to become a part of the ASEAN Economic Community; 7) to manage water resources and land uses to support food security and economic restructuring; 8) to develop disaster management to cope with climate changes; and 9) to enhance good governance to promote a just society.

**4.2.2 Integrate development issues to formulate specific strategic investment plans.** These will encompass issues of growth and the roles of stakeholders. Operational plans should be precise and should cover programs, projects, budgets, partners, processes, timing and the key personnel who will be responsible for implementing the Plan effectively. Priority should be given to recruitment of personnel for project management, and science and technology should be emphasized. These elements should be accomplished as follows:

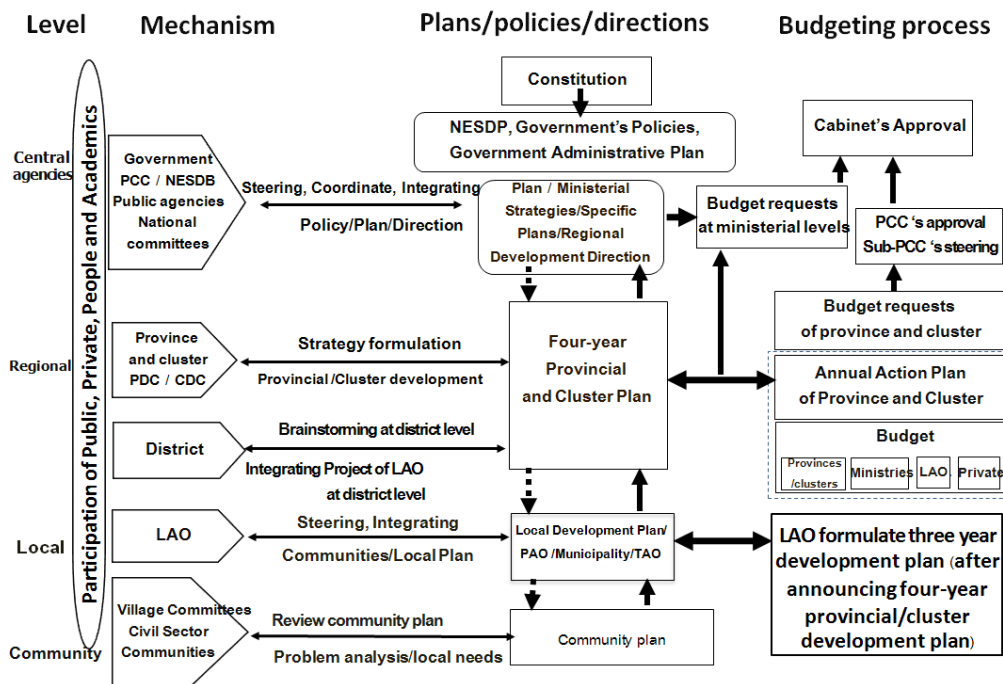
1) Formulate investment plans for growth by considering priorities in the Eleventh Plan's strategy that reflect proper budget allocation for overall achievement.

2) Encourage Public-Private Partnerships (PPP) in mega-projects such as infrastructure development and logistics systems. Proposals should encourage the private sector to expand investment in such projects, respond to public needs and create value for money.

3) Translate development issues into action through Ministerial Plans by integrating main tasks that have concrete targets and key indicators into the Plans. NESDB and relevant agencies would jointly monitor and evaluate outputs and outcomes. Integration of programs and projects both within and outside ministries should be encouraged.

4.2.3 Link the Eleventh Plan’s concepts, strategies, development issues and specific proposals with government policies, the Government Administrative Plan and other plans. To enact the Plan, carry out actions using government policies, the Government Administrative Plan, and plans of central and local agencies, LAOs, and the communities and stakeholders. These should be executed step-by-step and synchronized as shown:

Links between methods and processes of improvement plans at all levels



Notes : PCC : Policy Committee for Integrative Provincial and Clustering of Province Administration; PDC : Provincial Development Committee; CDC :Clustering Development Committee; LAO : Local Administrative Organization; PAO : Provincial Administrative Organization; and TAO : Tambon Administration Organization

1) The government will integrate high priority development issues and specific items under the Eleventh Plan with their own policies and present these to the Parliament. The Government Administrative Plan will be formulated and will include the estimated budget, resources, working period, monitoring, and evaluation. Central government agencies have integrated the Eleventh Plan into budget allocation strategies in order to provide the framework for ministries who request a budget to support their four-year and annual action plans.

2) After formulating the regional development proposals related to the Eleventh Plan, the NESDB had used them as tools for effective implementation, and as a framework to design provincial and cluster plans. They will

present these plans for budget allocation. Stakeholders will utilize the Regional Plan for their own agendas as well.

3) The regional offices of many ministries have incorporated programs and projects, and a budget for them, into provincial and cluster development plans using the main ideas of the integrated provincial administration guidelines under the Royal Decree on Integrated-Provincial and Clustering Development B.E. 2551. To comply with the principle of the Decree, agencies that are involved must plan their developments in accordance with the provincial and cluster improvement plans that are approved by the Cabinet.

4) Provinces and clusters will formulate development plans that comply with government policies, the Eleventh Plan and Regional Development Guidelines. In addition, they will analyze problems and needs in order to identify development issues in provincial and cluster development plans.

5) LAOs have proposed programs and projects that respond to local needs, following action at the provincial level. Municipalities with high growth potential have applied an “urban planning” concept that seeks to upgrade the quality of urban life, enhance facilities for economic and social development within cities and surrounding areas, and promotes balanced development between human and natural resources toward environmental sustainability. Tambon Administration Organizations (TAOs) have surveyed and analyzed local problems and needs, identified development issues, and then accomplished their tasks under local administration laws. Meanwhile, Provincial Administrative Organizations (PAOs) would coordinate preparations for local developments and identify significant projects that are beyond the capacity of LAO’s to operate using Provincial Plans.

**4.2.4 Create a budget allocation strategy that utilizes participation.** Annual budget allocation is a major tool to establish priorities for government agency tasks that relate to the Eleventh Plan. To effectively achieve the objectives of the Plan through popular participation, these actions should be undertaken:

1) The Bureau of the Budget and NESDB should advocate the significant issues of the Eleventh Plan as they relate to budget allocation. In particular, focus on the priorities that have been set in the Government Administrative Plan and Budget Allocation Strategy. In addition, guidelines to realize programs and projects and to monitor and evaluate national development at all levels should be approved by the Cabinet and the Parliament.

2) The Bureau of the Budget, NESDB and all involved agencies should work closely on guidelines for budget allocation to support local, provincial and cluster development plans. The process of creating understanding has to be carried out by all government agencies so that the links between development plans and the budget system, from the national to local levels can be comprehended. In addition, representatives of all development partners should participate in the budgeting process from management through evaluation in order to respond to local demands.

**4.2.5 Encourage the private sector to integrate important development issues when they formulate their business investment plans.** This will create development partnerships while also promoting the Joint Public-Private Consultative Committee on Economic Problems (JPPCC) as a key mechanism to link the public and private sectors. The JPPCC will have to delegate more responsibilities to provincial and cluster joint committees, and consider national strategies as they link to local needs.

**4.3 Enhance stakeholders' ability by providing an enabling environment.** The main factors will be adjusted so they become development tools as follows:

**4.3.1 Use research and development as essential tools to propel the nation's development in all dimensions.** Government agencies that make policy should integrate their work and utilize research and development (R&D) resources, which they will apply as tools for progress. Cooperation by research agencies will be advocated, especially networks of (a) the National Research Council of Thailand (NRCT), (b) the Thailand Research Fund (TRF), (c) the National Science and Technology Development Agency (NSTDA), (e) the National Science Technology and Innovation Policy Office (STI), (f) the Health Systems Research Institute (HSRI), and (g) the Agricultural Research Development Agency (ARDA). Also, academic institutions such as the Regional Science Park should coordinate R&D at the local level, especially when high-priority development is undertaken.

**4.3.2 Amend regulations to enable efficient execution of the Plan at every level.** Laws will be amended to reduce redundancy, increase efficiency in existing systems, and overcome obstacles to progress. Examples are (a) the draft Public Finance Act B.E.... to support efficiency and transparency in monetary policy, (b) the First National Policy and Plan for Science, Technology and Innovation (2012-2021) as a framework for efficient development, (c) the formulation of the Decentralization to Local Government Organization Plan (Third Edition), (d) the Determining Process of Decentralization to Local Administrative Organizations Action Plan (Third Edition) under

the Determining Plans and Process of Decentralization Act B.E. 2542, and (e) the draft Local Official Service Regulation Act B.E..... to replace the Local Personnel Administration Regulation Act B.E. 2542.

**4.3.3 Apply information technology as a tool to assist communication and create links among development partners.** Common understanding will be created and information will be updated so that the strategies for progress in each area or province will be in line with people's needs.

**4.3.4 Create development databases that are easy to use for popular participation in development.** Economic, social, natural resource and environmental databases will be developed and kept up to date. They will contain data specific to each area, be suitable for analysis and relate to the Plan. This will lead to the evolution of effective development plans that are relevant to problem solving and bring about progress. The strengths, knowledge and experience of each area will be integrated as the plans evolve.

**4.3.5 Introduce channels for public participation in the development process that cover both policy and performance.** Public spaces will be available so development partners can organize forums such as the Civil Society Forum and Dialogue. Online networks will share information and participate in development activities.

**4.4 Enhance the efficiency of development methods to improve performance at local, regional and national levels.** The NESDB is charged with creating understanding and coordinating development partners with the plan implementation committees at all levels so that they can apply the Plan properly as follows:

**4.4.1 Link national committees to use development issues as guidelines for implementation.** Development agencies will coordinate their work through national committees responsible for high-priority missions that involve many dimensions of progress, for example, (a) the National Creative Economy Policy Committee, (b) the Joint Public-Private Consultative Committee on Economic Problems, (c) the National Water Resources Committee, and (d) the Thailand National Logistics Committee. These national committees will be required to adopt the content, targets and indicators of the Eleventh Plan as their framework for application.

**4.4.2 Improve the efficiency of the methods and processes of public administration to be more efficient.** The mechanisms that are needed to execute development issues, including committees, agencies, and public organizations,

will be revised and evaluated to increase their flexibility and reduce redundancy. The government and central agencies are in charge of overall policies and means to achieve them. Ministries coordinate programs, the budget and human resources, while government agencies at the regional level execute strategies relevant to problem solving and potential improvement.

**4.4.3 Use the province as a focal point to translate the Eleventh Plan into action, and evaluate it.** By law, the province is responsible for creating Provincial Development Plans, which should be linked to other plans in both top-down and bottom-up directions. The former are the National Development Plan, the Government Administrative Plan, and the Ministry's Action Plan. The latter are from the community, local organizations, and the private sector. Objectives, indicators and significant improvement issues should be introduced into Province and Provincial Cluster Development Plans. The implementation process should integrate tasks of various agencies so they can handle problems in each area efficiently, such as disasters and crimes.

**4.4.4 Coordinate collaboration between the private sector and government agencies in the implementation process.** Effort by the public sector alone is inadequate to realize the goals. Coordination is required among development partners operating in networks, including the private sector, academic institutions, professional associations, and independent organizations such as the National Farmers Council, the Board of Trade of Thailand, the Federation of Thai Industry, the National Reform Assembly, and all other cooperative groups. These networks will work through local or cluster structures to formulate strategies together and implement them.

**4.5 Strengthen the ability of stakeholders to make effective contributions to progress at every level.** All development partners should be strengthened by increasing their potential ability to implement the Eleventh Plan successfully as follows:

**4.5.1 Enable all stakeholders to contribute to collaboration in the development process and exercise their citizenship effectively.** The Thai people should be moral and ethical citizens of quality, aware of their responsibilities and roles in accordance with their social status and culture. They should respect the laws, rights and freedom of others, possess public awareness and be eager to participate in solving community and societal problems. Learning, both formal and informal, should be promoted to equip them with the ability to develop Thailand into a prosperous and peaceful society.

**4.5.2 Empower communities and local authorities to adapt to changes and participate in advancement for the common good.** Communities should be strengthened through information and the ability to manage their affairs, and benefit from knowledge from outside sources through local research networks. Sharing of knowledge should be promoted at all levels to support accomplishments and manage risks. Community plans should reflect local culture. Local citizens should undertake their own implementation. Cooperation among citizens, LAOs, and local academic institutions should be encouraged.

**4.5.3 Strengthen Local Administrative Organizations.** In order to perform their duties efficiently, the capability of LAOs should be enhanced and their administration simplified and made more flexible. Rules and regulations should guide their operations, and they should be fully self-sufficient. Public agencies should provide support so they can manage and make decisions about local developments and personnel. This will help them achieve their goals on projects delegated to them. The responsibilities of LAOs should be clearly defined. Their capability should be upgraded in the areas of management, anti-corruption and good governance.

**4.5.4 Encourage regional universities and vocational institutions to participate in community development.** Universities should apply research output and serve to coordinate community progress. The cluster concept should be employed. Vocational institutions should provide training in technological skills to assist local development.

**4.5.5 Enhance the role of the private sector in economic and social development.** Corporate governance should be emphasized, business targets should be linked to the nation's development, and proactive cooperation and creativity should be promoted along with corporate social responsibility. The private sector should form alliances with communities, non-governmental organizations (NGOs) and academic institutions to bring about collaboration in social activities.

**4.5.6 Encourage the media to deliver constructive messages.** They should display concern that progress benefits everyone, be impartial, deliver accurate information and reflect the needs of the populace.

**4.5.7 Motivate NGOs to provide active participation in development with regional and local organizations and with civil society.** The public sector will encourage them to participate greatly in development activities. NGOs have the advantage of being able to work flexibly and they maintain a close relationship with local citizens that can be used to make performance more efficient.



**4.5.8 Amend roles of government personnel and their work methods to support overall development and encourage regional government agencies to be coordinators.** Provincial organizations should join with development partners to work toward common goals, respond to national strategies, solve problems and develop potential at the local and community levels. Institutions that develop strategy managers should be established to create a “change agent” to share knowledge and execute plans.

**4.5.9 Enhance cooperation between civil society and international institutions.** International forums to share knowledge should be organized, especially for countries involved in regional and subregional cooperation. These will lead to mutual assistance in accomplishing significant development goals. Cooperation in technical and innovative fields should be encouraged to support domestic and international growth.

**4.6 Develop an efficient, transparent and participatory system of monitoring and evaluation at all levels.**

**4.6.1 Encourage continuous monitoring and evaluation that focuses on the objectives and targets of the Plan.** Monitoring and evaluation will be tools by which the Eleventh Plan’s administration can measure progress, develop indicators, and quantify outputs, results and effects of development. They should report to the Cabinet annually.

**4.6.2 Develop monitoring and evaluation systems for the Eleventh Plan.**

1) Develop an overall monitoring and evaluation system for implementation. NESDB should launch guidelines to monitor performance, develop indicators for outcomes, apply informative auditing and evaluation methods, coordinate with national committees, evaluate impacts and report to the Cabinet annually.

2) Develop means to monitor and evaluate at the local level. The Policy Committee for Integrative Provincial and Clustering of Province Administration (PCC) and the Regional Supervision Committee should create evaluation systems for area-based achievement and improve the main inspection system so it will be an efficient tool to qualify and quantify implementation. A main apparatus composed of the inspectors-general of the ministries will be established to monitor the process of Plan formulation, the participation of all parties, and budget utilization. This group should have authority to recommend reconsideration of budget allocations.

3) Strengthen an inspection mechanism for citizens to use to monitor and evaluate. Participation by citizen groups should be enhanced so they may

take part in auditing the progress, transparency and achievement of development projects in their communities. Each individual's potential should be developed in information technology and data management in order to monitor projects.

#### **4.6.3 Develop an efficient database to help monitor and evaluate.**

1) Create a comprehensive database. Information networks of government agencies at the policy level should be developed to monitor and evaluate significant issues, changes and conditions that have affected the country's progress. Application of information technology will increase the effectiveness and efficiency of a large number of databases.

2) Establish databases at the local level, that is, information systems that identify individual potential, community organizations, and civil society. All parties should assist in support of this effort. Government agencies and local academic institutions, with the participation of civil society and its communities, should join forces to provide technical assistance so that local people and their communities can set up databases to plan, monitor and evaluate.

3) Link information networks between central and local levels. The system should be user-friendly and provide every agency that is involved with accurate information for efficient planning, monitoring and evaluation at every level.

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