

# THAILAND: Partnership for Development



Office of The Prime Minister  
Office of The National Economic and Social Development Board

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## Partnership for Development

### *Reestablished growth through the Dual Track Development Model*

**D**uring the first four years of this government (Thaksin I), the policy priority was focused on regaining growth for the Thai economy which was saddled with various problems from the crisis such as the loss of growth momentum, rising poverty and unemployment, disfunctioned financial institutions, high NPL and public debts. In addition, the pre-crisis model of development, which had made Thailand the assembling house of manufacturing products based on cheap labor, could no longer provide the engine of growth for the country, nor promise to deliver “true” happiness for the Thai people in the new global environment.

The Thaksin I Government had introduced the Dual-Track Development model which empowered the grassroot economy by increasing access to credit (e.g. the Village Funds and People Bank), reducing cost (e.g. the 30 baht health insurance scheme and the low cost housing), and expanding grassroot opportunities (e.g. One Tambon One Product-OTOP and dream school projects). At the same time, the government put tremendous effort to increase competitiveness of the economy by developing niche markets such as food, fashion, tourism, automobile, medical services, animation and software industries. Many Free Trade Agreements were also negotiated in order to increase Thailand’s global connectivity.

The result during 2002-2005 was a spectacular improvement. In 2005, the economy grew by 6.2 percent driven by high export and private investment. Inflation was moderate and the current account was in surplus. Unemployment reduced to 2 percent and more than 2 million people lifted themselves out of poverty. Financial stability resumed as NPL reduced to less than 10 percent of total banking loans, public debts and foreign debts drastically reduced and the national foreign reserves increased to 50 billion US dollars.

Public sector was reformed into a high performance agent of development and the grassroot economy was given a new life. The majority of population was covered by universal health insurance and rural economy noticeably expanded.

# Thailand : Partnership for Development (cont')

## Thailand : Partnership for Development

The current government (Thaksin II) aims to further strengthening a foundation for sustainable growth. The Thai economy must prepare for future challenges of globalization which manifest itself in four important aspects namely free flows of goods and services, people, finance and capital, and lastly, information, knowledge and technology. The government continues to strive to create prosperity as well as to build immunization to external shocks such as high oil prices and emerging epidemics.

In order for the country to reap the benefits of globalization and make sure that those benefits reach the poorest population, and also be immune from globalization negative effects, the task of building new model of development is even more urgent.

Thailand has a rich culture, natural resources, wisdom and creativity. The Thai people are kind-hearted, open-minded, peace loving people. The new development model will be a value creation model based on our indigenous comparative advantage, the so-called "Thainess", which is an inimitable combination of the above aesthetic qualities.

To reach these goals, Thailand needs new infrastructures for value creation and immunization. The Royal Thai Government has preliminary prepared a mega-projects package to be implemented during 2005-2009. It includes basic infrastructures such as mass transit, power plants, highway and railroad, water resources management as well as intermediate infrastructures such as education and public health services. These infrastructures and other related policies will modernize Thailand, create future income and enhance our endowments.

The package will be implemented within a framework of macroeconomic discipline. While the economy is expected to maintain 5-6 percent growth rate, the current account deficit will be kept under 3 percent of GDP, public debts to GDP ratio not more than 50 percent and debt services burden not exceeding 16 percent of annual government budget.

**Thailand modernization** means "the application of appropriate knowledge, technology and management which constantly evolve by new innovations to achieve the national economic, social and political development goals in the midst of changing environment". Thus we will choose the modernization which leads to our goal of sustainable growth and civilization.

We call for **partnership for development**, talents of the world, to join our endeavor for happiness and prosperity of the Thai people.

This process will result in an integrated development scheme which serves national goals based on the best utilization of appropriate technology, knowledge, resources and cost effectiveness financial option.

## Partnership for Development (cont')

## Next steps

**The Conference of Interested Parties** will be held in Bangkok around the third week of January 2006 where detailed modernization objectives and current projects in various fields such as transportation, integrated logistic system, ICT, sciences and technology, education, health services, cultures, agriculture, water resources management, will be explained.

**Proposal submission.** Interested parties shall submit initial proposal consists of new development ideas, appropriate technology and management and/or alternative financing which will improve existing plan of Thailand Modernization to the Royal Thai Government by the end of April 2006.

**National Development Partnership Committee** chaired by the Prime Minister will be set up to lead and supervise the open and transparent process of partnership in order to implement Thailand Modernization with most efficient resources.

	2001	2002	2003	2004	2005 (est.)
GDP growth (%)	2.2	5.3	7.0	6.2	4.7
Private consumption growth (%)	4.1	5.4	6.4	5.9	4.7
Private investment growth (%)	4.9	13.4	17.7	16.3	11.0
Export growth (% in US\$)	-7.1	4.8	18.2	21.6	16.0
GDP (bil.US\$)	115.4	126.7	142.8	161.5	176.2
Per Capita Income (US\$/year)	1,842	2,007	2,243	2,516	2,721
Inflation (%)	1.6	0.7	1.8	2.7	4.5
Current Account/GDP (%)	5.4	5.5	5.6	4.1	-1.8
Unemployment (%)	3.2	2.2	2.0	1.98	1.9
	2001	2002	2003	2004	2005 (Sept.)
Public Debts/GDP (%)	56.5	53.8	48.9	47.8	45.9
Government Budget Balance/GDP	-2.2	-2.8	-0.2	-0.2	0.2
NPLs/Total Loans (%)	10.5	15.7	12.7	10.8	9.93
SET Index	303.8	356.4	772.1	668.1	723.2
Exchange rate (Baht/US\$)	44.5	43.0	41.5	40.3	41.3
Foreign Reserves (bil. US\$)	33.0	38.9	42.1	49.8	49.8
Foreign Reserves/foreign short-term debts (%)	2.5	3.3	3.9	4.1	2.9
Total Foreign Debts (bil. US\$)	67.5	59.5	51.8	51.3	50.9

Source : Government Authorities

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# Logistics System

## Conceptual Framework

At the present, Thai government has a clear vision to improve Thai people's standard of living and quality of life. As the Thai economy has been modernized in every sector and people's living conditions are being affected by urbanization, the government determines that "Upgrading and modernizing logistics system" is one of the critical factors to significantly improve this situation by enhancing every economic sector's competitive advantage, reducing people's travel time, and increasing country's energy efficiency.

## Guidelines/ Key Initiatives

- Modernizing major ports, mass transit network and setting up distribution and logistics centers.
- Promoting integrated transport system in order to create linkage and optimize network i.e. air, sea, land.
- Promoting e-transaction both between G2B and B2B including establishing Single Window Entry System to facilitate import-export transactions.
- Promoting investment in logistics services industry.
- Creating logistics and supply chain management.
- Building capacity of workforces in logistics industry through training and studying program.



## Goals

- Enhance the country's agricultural, industrial and service sector's competitiveness.
- Encourage the country's efficient use of energy.
- Improve urban people's quality of life.
- Create economic values from growth of logistics service and other related businesses.
- Establish Thailand as trade and logistics hub of Indochina.

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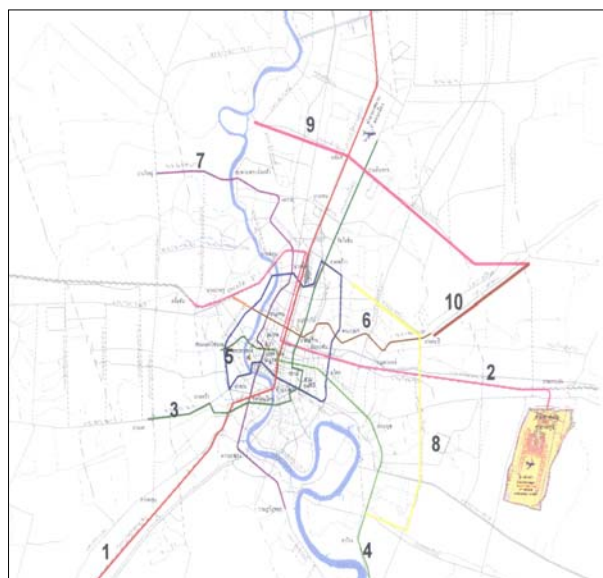
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# Mass Transit System

## Conceptual Framework

The necessity of modernizing Mass Transit Network in Bangkok and vicinity area is a direct result of increasing urbanization in the area. It's additional role is also provide the direction for urban development and relocation within Bangkok

and its vicinity. Moreover, it is expected that the technology used in the network will also render better quality of life in terms of travel time saving, more safety, convenience, cheaper transport expenses, and better environment.



## Guidelines/ Key Initiatives

- Improving the existing design of mass transit network so that it can cope with urbanization and set the direction of urban development.
- Introducing modern technologies on mass transit system such as heavy-rail, light-rail, mono-rail, or bus rapid transit (BRT), as a major and feeder lines of the network as appropriate depending on the demand in each line.
- Improving the interconnection between mass transit network and other public transport mode both in physical and in ticketing system, as well as provide suitable facility for private vehicle.

The priority of mass transit network is in the Bangkok area where a large demand for better transport system exists. It is anticipated that the implementation plan should aims to optimize economic benefit and investment. In addition, Thailand needs to acquire knowledge of modern mass transit technology in order to enhance the efficiency of all mass transit authorities.

The new designed mass transit network will substantially reduce the use of private vehicle and significantly improve efficiency on energy utilization, time saving and quality of life. Moreover, the better transport system will enhance the efficiency in business activities and materialize the potential of Bangkok as the business and tourist hub in the region.

## Goals

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# Integrated Transportation System

## Conceptual Framework

Thailand transport infrastructure has been a driver for economic growth and distribution for decades. It created a link between urban and rural area. It helped farmers and manufacturers access to the larger market both local and abroad. It also brought foreign tourists from far away to local destination in Thailand. These are economic activities that have been created substantial value for the nation.

As our nation is being developed, the role of transport system is even more important. To be modernized and thrive in the next decade we must be able to leverage our available networks by integrating various transportation modes into the One system so that we can optimize it. Seeing that the competition between nations is more and more intense, the integrated transport system will therefore be a key enabling factor to Thailand economic expansion for the next five to ten years. And its supporting role could never be more important.

Since it is anticipated that energy price will be at this high level for years to come, the Thai Government sees it viable that integrated transport system will boost efficiency in energy utilization.

## Guidelines/ Key Initiatives



- The Air-Sea-Land Link (Road and Rail), from Suvarnabhumi Airport to City Centers to Ports etc.
- East-West and North-South Economic Corridors.
- Variety of ICD, bus terminals, distribution and logistics centers, ring roads.
- Public and private partnership in transport service operation.
- Integrated ticketing system.

## Goals

- Increase competitiveness in production and service sector.
- Encourage the country's efficient use of energy.
- Create economic values from transport service and other related businesses.
- Help establish Thailand as trade and logistics hub of Indochina.



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# Integrated Water Resource Management

## Conceptual Framework

Thailand's water resources such as surface water and underground water have encountered three critical issues:

- Drought and water shortage due to greater population, increasing economic activities and degradation of watersheds areas.
- Flooding caused by natural disaster and inefficiency of the distribution and drainage systems.
- Quality of water deteriorated from rapid expansion of agricultural and industrial activities, the increasing in industrial areas, and urbanization.

In order to solve multi-dimensional water resource problems effectively (ecosystem, economic and social dimensions), the concept of **"Integrated Water Resource Management"** has recently been introduced. It is expected that this integrated management, which takes into account both demand and supply conditions, will bring about adequate water for agriculture, alternative energy, industry, portable water as well as improve the environmental quality and enhance Thailand's competitiveness.



## Guidelines/ Key Initiatives

- Enhancing the water storage capacity through the rehabilitation of degraded watersheds, the development of intra-basin water distribution channels (to divert water from the areas with excess of water to those with shortage of water) and the construction of check dams and reservoirs.
- Developing water retention area to prevent flooding by clearing the waterways to facilitate the water flow as well as improving the early warning system and dam safety.
- Establishing the wastewater treatment system particularly in municipal and industrial areas to improve water quality as well as encouraging the use of environmental friendly and cost-effective water treatment technology.
- Collaborating with international organizations in order to share knowledge and exchange experiences regarding water resource issues.

## Goals

- Adequate provision of water resources for production and consumption together with good quality of portable water to support economic and social restructuring policy.
- Minimization of economic, environmental and social impacts from natural disaster such as flooding and drought.
- Efficient network of the water distribution system.
- Prevention of water pollution.
- Improvement of livelihood and quality of life.



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# Integrated Natural Resources & Environment Management

## Conceptual Framework

The natural resources of Thailand represent extremely diverse and valuable assets. Management of these assets requires an integrated mapping and information system. Based on national map inventory, there are three types of base map available namely (1) topographic base map at the scale of 1:250,000 and 1:50,000, (2) Orthophoto at the scale 1:4,000, and (3) thematic map for various purposes such as hydrological map, provincial groundwater potential map, groundwater aquifer and quality map, geological map, mineral potential map, airborne geophysical map geohazard map and forest cover map.

The Government's policy is set to manage water resources as sub basin. The watershed will be classified in three parts consisting of forest area, agricultural and human settlement area and coastal areas, each of which representing different problem and challenges.

The Government needs to acquire Integrated Natural Resources and Environment Management Information System for the purpose of planning and management on watershed principle.

## Guidelines/ Key Initiatives



- Building a Digital Terrain Model (DTM) with suitable accuracy and resolution for watershed management and engineering work.
- Conducting rapid assessment survey and reassessment of major natural resources e.g. mineral, forest, groundwater and coastal zone resources.
- Installing Integrated Natural Resources and Environment Management Information System.
- Developing Geospatial INRE-MIS web portal for government agencies and all stakeholders.

## Goals

- Establish an Integrated Natural Resources and Environment Management Information System for planning and management and providing information and knowledge to the stakeholders through web based services and other e-services.

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# Biodiversity Management

## Conceptual Framework

Thailand has a high level of species richness in flora and fauna as well as microorganisms. Natural ecosystem in Thailand is also high in diversity, which can be generally divided into forest, freshwater, coastal and marine ecosystem. However, the richness of biodiversity in Thailand has been declining due to the unsustainable socio-economic development as well as agricultural development all over the country. The priority has thus been given to the biodiversity conservation due to the fact that biodiversity resources in Thailand serve as the natural resource base for prosperity and wealth in economic sectors.



The policy for biodiversity resources management in terms of economic development and conservation is crucial. In order to establish an effective management policy, it is essential to make all information available at every level including local community, business community and academia levels. Nevertheless, the information is currently scattering among agencies concerned. Therefore, it is vital to develop the information system, which could bring mutual benefits to all stakeholders including local communities, commercial companies, researchers and general public, particularly in the area of benefit sharing. The information system should be user-friendly and easily accessible.

## Guidelines/ Key Initiatives

- Designing Biodiversity Management Information System (BMIS) that meets the international standard. The system should be able to consolidate and reconcile all scattered information among agencies concerned for policy and decision making. It is also crucial that the system be applicable to all stakeholders including local community, business community, academic institutes and general public.
- Recommending the improvement of biodiversity conservation system and infrastructure in form of in-situ, ex-situ and in-silico conservation.
- To ultimately achieve the establishment of information system for biodiversity conservation, utilization, as well as research and development in this area, which will pave the way to bio-economy.



## Goals

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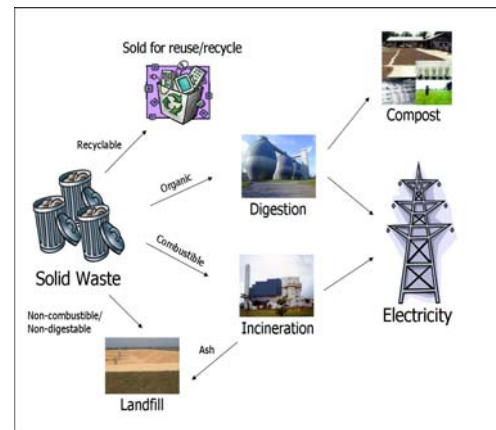
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# Waste to Energy

## Conceptual Framework

At the present, changes of waste composition, chemical properties, and socio-economic conditions result in a new municipal solid waste management. Conventional municipal solid waste disposal, i.e. landfill, cannot solely be utilized for sustainable management of waste. As a result, the integrated solid waste management must be introduced as a more sustainable municipal solid waste management scheme. The concept focuses on the ultimate utilization of waste generated to minimize the final disposal. Waste-to-Energy (WTE) is one of major strategies to reduce the quantities of municipal solid waste to final disposal and generate the energy to meet the increasing demand. The energy engendered can be recovered for any purposes, e.g., biogas, electricity, steam-turbine.

- Evaluating the feasibility of undertaking the WTE technologies, e.g., RDF, incinerator, and biogas to properly handle MSW management on the cost-effective basis.
- Developing the investment options /financially feasible for Thai conditions.
- Establishing the WTE disposal facilities particularly in major cities.



## Goals

The new endeavor of applying the WTE as a part of integrated waste management has the ultimate outcome as follows;

- Waste volume to landfill can be significantly reduced,
- Consumption of fossil fuels for electricity generation can be lowered,
- Energy recovery and conservation with cost effective can be promoted.

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# Information and Communication Technology

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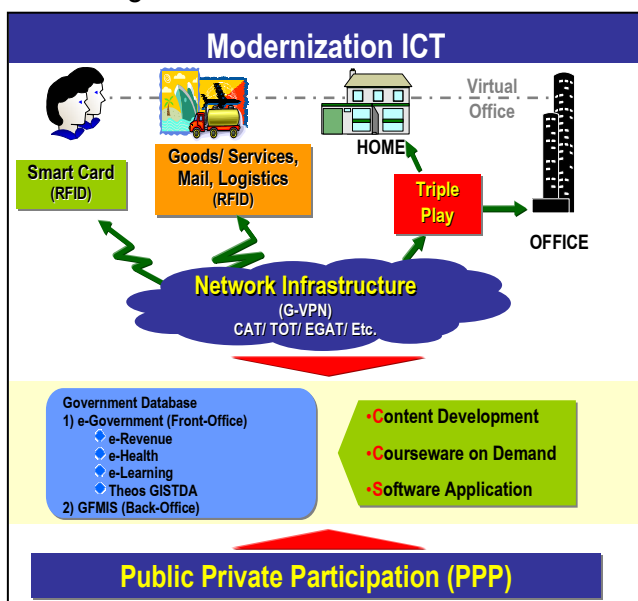


## Conceptual Framework

Thailand needs to improve its ICT infrastructure to keep up with future technology. By establishing Government Virtual Private Network (G-VPN) on existing ICT infrastructure, public will gain benefits from its various applications such as education, health care, taxes, business transaction, and etc. The modernization of ICT in Thailand needs to have intensive participation from foreign countries in terms of technical know-how, including partnership in research and development on hi-tech equipment and application as well as strengthening ICT personnel.

## Guidelines/ Key Initiatives

- **Establishing Government Virtual Private Network (G-VPN)** by using cutting edge technology on existing ICT infrastructure in order to upgrade government services, create one stop service, service to home, and virtual office.
- **Developing e-education application and content** to insure access to quality education for all, to transform schools to become lifelong learning center, to integrate education with research and industry, and to create on demand learning.



- **Improving health care management system (e-health)** by establishing health care data base and health care network to ensure accessibility and upgrade health care services.
- **Developing e-financing** to facilitate public, private sector, and investor concerning government affairs such as taxes, customs and etc.

- **Promoting ICT industry** in Thailand in order to create ICT development partnership with foreign countries.
- **Establishing ICT platform** of government services to insure access and upgrade government services to public such as education, health care, and etc.
- **Supporting business activities and upgrading quality of life.**
- **Supporting value creation** on ICT activities.
- **Becoming the center of ICT industry** in the region.

## Goals

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# E-Education

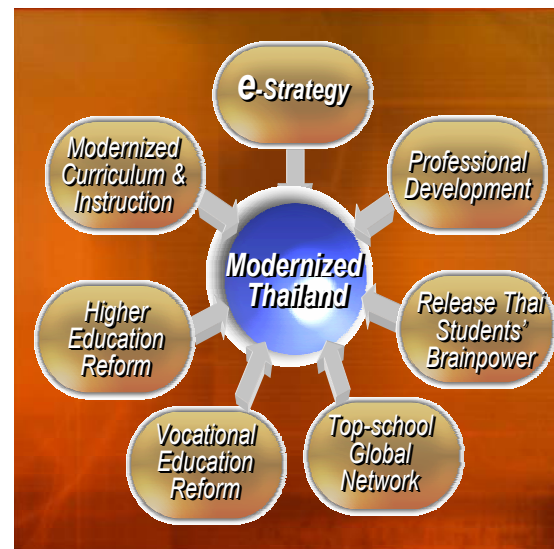
e-Education

## Conceptual Framework

The Thai education system has been the driving force in developing the human capital of the country. At the present, almost 90 percent of children and youth aged 3-24 are served by various forms of education and the workforce, as a whole, has an average of 8.7 years of schooling. In transforming Thailand towards a modernized and wisdom-based society. However, education must further maximize the competitive advantage of human capital and narrow the knowledge and digital gaps nationally and globally.

## Guidelines/ Key Initiatives

- **To serve as a more powerful instrument for change**, the education system is being reformed to ensure access to quality education for all.
- **To equip the learners** with tomorrow's technology.
- **To transform schools into lifelong learning centers** with global curriculum and diverse learning alternatives.
- **To achieve closer** research, industry and education integration.
- **To upgrade our workforce** with modernized skills for value creation in the new economy.



## Goals

- **E-strategy** to transform the learning process and the management system through e-learning ,e-management and link to global communication network.
- **Modernization of Curriculum**, and Professional Development by harnessing the wealth of global experiences and research to insure that our students will have access to relevant learning experiences at global standards.
- **Modernization of Vocational Education** to facilitate knowledge application and management and to establish institutional linkages.
- **Support of World Class Universities** with emphasis on research based learning excellence centers, and strategic research network for development of molecular economy.
- **Top-School Global Link** to create synergy among the world's leading schools.
- **Release Students' Brain Power** Project to support creative research and projects proposed by students.
- **Enrichment** of the Learning Environment with interactive lifelong learning centers in schools and in the communities, e-libraries, museum, educational parks, cultural and sports activities.

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# E-Health

## Conceptual Framework

The Thai health sector consists of various agencies both public and private. Regarding health care providers, primary health care units are located in rural area while hospitals are in urban areas and act as the referral system. In terms of health care purchasers, there are three main health insurance funds. These are 30 Baht scheme, the social security scheme and the civil servant benefit scheme. Manual medical records which are basic information of the patients of these system do not link the services delivery units to payment system. The Ministry plans to develop an electronic health information system to link the three systems in order to improve their quality and more efficient use of resources and have enough information to support the MIS for public health. This information system will finally link to the individual people record through the 13 digits I.D. and the smart card system

## Guidelines/ Key Initiatives

- **To develop linkages** of computerized and information system for the national health care system
  1. out patient system
  2. in patient system
  3. supporting medical services system
  4. secondary and tertiary medical services system
  5. payment system
  6. inventory system
  7. clearing house and cost center
  8. human resources
  9. pharmaceuticals
  10. public health services
- **To link personal medical record** to financial management information system.
- **To link the front and back offices** of the health facilities to setting up a management information system (MIS).
- **To develop a data center or data warehouse** of health with nationwide linkage.
- **To provide** telemedicine technology.



These initiatives require advanced information technology hardware, software and people-ware.

- **To achieve** the effective Health Information System to serve Thai people in the area of financing and medical information to support the e-government system.

## Goals

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# Tuna Fishing Fleets

## Conceptual Framework

Thailand continues to be the world exporter of canned tuna product. Tuna raw material being used in the processing factories are not wholly obtained from Thai fishing vessel. Approximately 90% of raw tuna are imported from tuna catching countries in Pacific, Atlantic and Indian Ocean. At the present, tuna fishing fleets have not yet been fully equipped with new technology. The existing tuna fishing fleets are currently operating in the Thai water only for neritic or small fishes. Being a membership of Indian Ocean Tuna Commission (IOTC), Thailand is competent to catch tuna in the Indian Ocean where the resources are still largely abundant. With the experience of Thai fishermen, Thailand has potential to catch tuna in the high seas. The Department of Fisheries together with the private sectors are determined to co-invest with the foreign countries in building tuna fishing fleets equipped with modernized tuna purse seiners required for high seas operation.

## Guidelines/ Key Initiatives

The modernization of the entire tuna fishing fleets system shall comprise of :

- Procuring modernized fishing fleets composed of 9 tuna purse seiners with the size of each vessel not more than 1,500 Gross Registered Tonnage (GRT).
- Transferring of technological and fishery expertise' to Thai masters and crews particularly in fishing and vessel operation as well as post harvest technology.
- Co-investing with private tuna fishing, learning experiences from foreign countries.



## Goals

- Modernize Thai tuna fishing vessels suitable for the high seas.
- Professionally trained and skillful personnel and crews to operate the new tuna fishing fleets.
- Create advanced tuna fishing technology for the new tuna fishing vessels.
- Reduction of importing tuna raw material from foreign fishing countries.

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# Dairy Industry

## Conceptual Framework

Currently there are 23,000 families in central, north-eastern and northern of Thailand raising dairy cattle. The supply of milk production is constantly increasing at the rate of 10% annually while milk consumption is increasing only 6% per annum. The market size for milk importing and locally produced amounts to 30,000 million baht (750 million USD). On the average, Thai people's milk consumption is still low with only 12 kg./person/year. Therefore, there is market opportunity to promote Thais to drink more milk. The milk producers often demand the Ministry of Agriculture and Cooperatives to engage in price intervention. Moreover, Thailand is capable of producing more and has the potential to become the dairy supply-hub to the neighboring countries and sub-regional continent. Realizing the potential of Thailand's production capacity, dairy industry has to be modernized and keep up their paces with the advanced technological changes. The advanced technology shall emphasize on actual field operation, value creation and market mechanism system.

## Guidelines/ Key Initiatives

The modernization of milk industry system shall comprise of

- Improving dairy farm management system by improving feeding technology, milking technology, collecting and storage system, logistic supply chain and personnel training.
- Establishing advanced technology of milk processing plant by adopting value creation technique in dairy products namely cheese, butter, milk powder etc.
- Incorporating market mechanism for domestic and regional markets.



## Goals

- Reduce the Government's market and prices intervention.
- Create original brand manufacture (OBM) of Thailand's milk products with new image of healthy and quality products.
- Self-sustaining of milk production.



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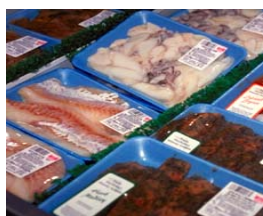
# Food Safety and Traceability

## Conceptual Framework

Thailand is an agricultural based economy. Thailand has been the largest exporter of agricultural products, namely, rice, shrimps, poultry, natural rubber, cassava and canned tuna. Export earning from agricultural products is over 22 billion US\$ per year. The Government's policy has clearly emphasize food security and safety by producing safe food for both domestic and international consumers. Higher level safety and quality assurances have become consumer and legal requirements in world market. Thailand also wishes to enhance its role as the 'Kitchen of the World' in supplying various kinds of food to the world market. To accomplish this goal, the Ministry of Agriculture and Cooperatives has implemented a seal of quality assurance (Q mark) policy. By doing so, the national system of traceability must be created to ensure the quality of food. The traceability system also aims to be a key component of a national surveillance system that would help limit the damages from food incidents as well as to improve the efficiency of food supply chain. The food safety measure especially traceability would enhance Thailand's competitiveness in exporting food to the world market.



- Establishing a national farmer registration database for important commodities such as shrimp, poultry, fruits etc.
  - Developing an e-certificate solution for movement, health and export of agricultural products.
  - Creating traceability system in order to support agricultural products to major markets such as EU, Japan, and the US.
  - Utilizing the advantage of new technologies such as RFID.
  - Advising the Ministry of Agriculture and Cooperatives in managing and utilizing the database effectively.
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- Ensure worldwide acceptance of high quality of safe food through traceability system.
  - "Q" Brand should be recognized internationally as the safety and quality of each entity in the Thai food supply chain.
  - "Kitchen of the World" with quality products.
  - Establish database using advanced technology for planning and control, and to be used as a surveillance system.



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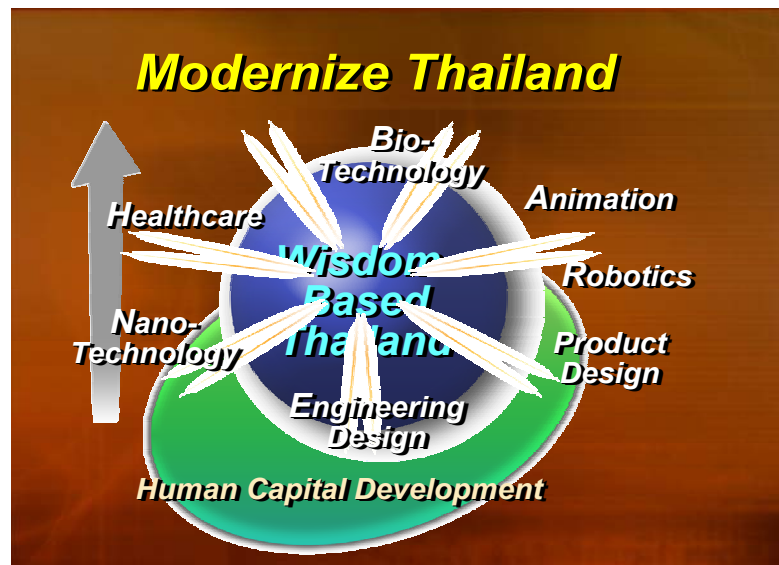
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# Science & Technology

## Conceptual Framework

In order to keep up with the advancement of science & technology and creates strong foundation for Thailand's next generation, Thailand needs to leap frog its own science & technology capability to become a wisdom based economy. There are plenty of knowledge in developed countries which will help Thailand to achieve its goal. The partnership on science & technology in the priority areas such as Bio-technology, material science, information technology, alternative energy, and Nano-technology is the first step to create the strong foundation of science & technology for Thailand.



## Guidelines/ Key Initiatives

- Establishing science & technology partnership on Bio-technology, material science, information technology, alternative energy, and Nano-technology, and etc.
- Enhancing R&D towards innovation and creating value-added for country's economy.
- Developing the efficient legal framework for science & technology.
- Developing integrated technology management system and institutional network.
- Supporting technology incubation.

## Goals

- Become a wisdom based economy.
- Lift up the country's innovative capability.

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# Excellent Center for Health Research and Medical Services

## Conceptual Framework

**H**health research system in Thailand consists of various health research institutes doing the biomedical, clinical and health system research. They also run the researches in traditional medicine, herbal products and alternative medicine. Thailand plans to develop excellent centers for biomedical and clinical research and treatment of the specific diseases such as heart diseases, cancer etc. These excellent centers require internal and external expertise, investments and skills. Advance technology such as biotechnology, nanotechnology, system biology and material technology are required. Capacity building is the most essential element of this initiative.

## Guidelines/ Key Initiatives

- **In preparing to be the excellent centers** in research and medical service, the Ministry requires capacity building and high investment.
- **For industrial linkage** with research network in the pharmaceutical products, Thailand requires capacity building in extracting active pharmaceutical ingredients (API) from herbs.
- **To be the center for the stem cell therapy and genomic research**, the Ministry needs huge investment including in the area of system biology.



## Goals

- **To achieve the sustainable national capacity** on basic science research, clinical research and to be the centers of excellent in specific fields of health in this region.

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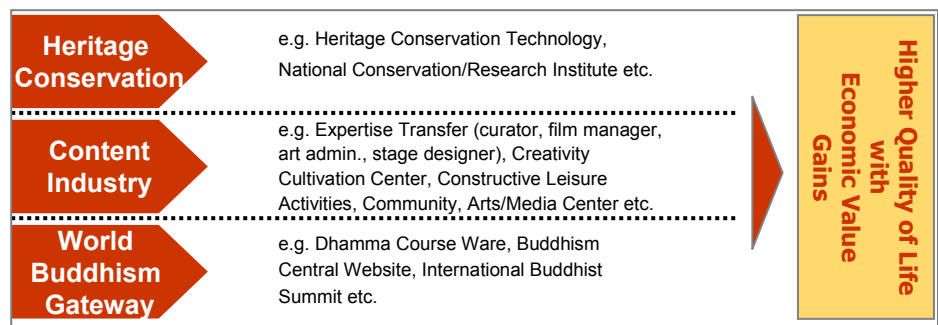
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# Culture

## Conceptual Framework

Thailand's majestic cultural heritage has been inherited over centuries. All, including historical sites, arts, traditional music, Thai way of life, and Buddhism, are already a testimony to our country's civilization. The concept of *cultural modernization* will play a role to instill a sense of belonging and pride in Thais as well as to incorporate its invaluable legacy, "Thainess", into Thailand's economic and social development.

*Cultural Modernization.* The strategic utilization of cultural resources for the integrated development of cities, regions and countries so as to lift up the people's pride and mindsets as well as the country's economy. It is not intended to preserve culture in a conventional approach, but rather as a *cultural approach* to enhance economic and social values, i.e.: **cultural-based economy and society.**



## Guidelines/ Key Initiatives

### Enhancing the capability to conserve Thai heritage:

- Exchanging heritage conservation technology.
- Introducing cultural heritage institute and research center for cultural properties.



### Strengthening Thailand content industry:

- Raising ability of people to mediate, adapt and make their own cultural forms and increasing cultural expression in Thai societies.
- Providing an informal and an energetic entry points for local communities, e.g. community arts center, local cultural parks etc.
- Promoting regular cultural exchange events.
- Finding channels for frog-leap capacity building of Thai personnel in the content industry.

### Leveraging existing cultural capitals

- Inviting experts to appraise/extract Thai culture and create "Thai Cultural Symbols" for commercial purposes e.g. OTOP packaging designs, story-to-tell labels etc.
- Reinforcing cultural resources to input downstream industries e.g. tourism, textiles, food etc.

- **To lift up people's quality of life by culture.**
- **To promote value creation from cultural capitals.**

## Goals

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# National Defense Technology

## Conceptual Framework

Since 1997, Thailand has seen changes in international political, economic and social landscapes which affected the government management. The modernization of Thailand's defence system would be focused on the restructuring of the Royal Thai Armed Forces. The development of modern technology has required changes of equipment and knowledge, as well as the learning of rapidly evolving concepts and ideas. If no action is taken, the Royal Thai Armed Forces would inevitably fall behind such development.

The Ministry of Defence must modernize the Armed Forces by bringing it up-to-date to international level with interoperability to maintain regional peace, security, safety, and stability; together with to support peace operations under the aegis of the United Nations.

- Restructuring the Armed Forces to be compact and efficient; creating suitable balance between combat and support elements in order to achieve high destructive power and mobility.
- Integrating armed service components' basic general academic curricula; enhancing teaching and learning methods in regular and specialist courses through use of information technology; acquiring and developing own training simulators to save on fuel, ammunition, and budget in place of field training or training with real equipment; promoting studies in subjects which are in need in the governmental organization and not those which are easy and only earn the personnel degrees for qualification for promotion to higher ranks; allowing opportunities for outside civilian experts to join units of the Ministry of Defence with suitable career advancement and rewards.
- Procuring and maintaining collectively (Package) defence equipment for the Ministry of Defence with duration period of 9 years (2006-2014) by synchronizing and enhancing capabilities of all armed services projects into an integrated that could serve all defence purposes. For example the C4I Command and Control System project, the Air Defence System project, the Joint Equipment Control Automation project, the Procurement of Equipment for Operational Technology Enhancement such as "Data Link" system for the Royal Thai Navy's main combat group, acquisition of fighter jets and assault helicopters.
- Promoting research and development (R&D) for manufacturing of equipment such as development of defence equipment manufacturing factories for use in the armed services and amendment of regulations which will lead to export of those equipments.



## Goals

- To have a modernized compact Armed Forces with greater efficiency and appropriate balance between combat and support elements, having high destructive power and mobility, unified command and control, networking and integration of capabilities of armed services.
- To have an internationally accepted standard of work conduct and administration to create multi-dimensional cooperation in the fields of training, education, seminars, idea exchanges with foreign armed forces in times of peace through to cooperation with civilian agencies/organizations both public and private, internally and externally to jointly tackle threats of all levels.
- To support Armed Forces development plan of procuring defence equipment for 101 projects in the next 9 years.

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