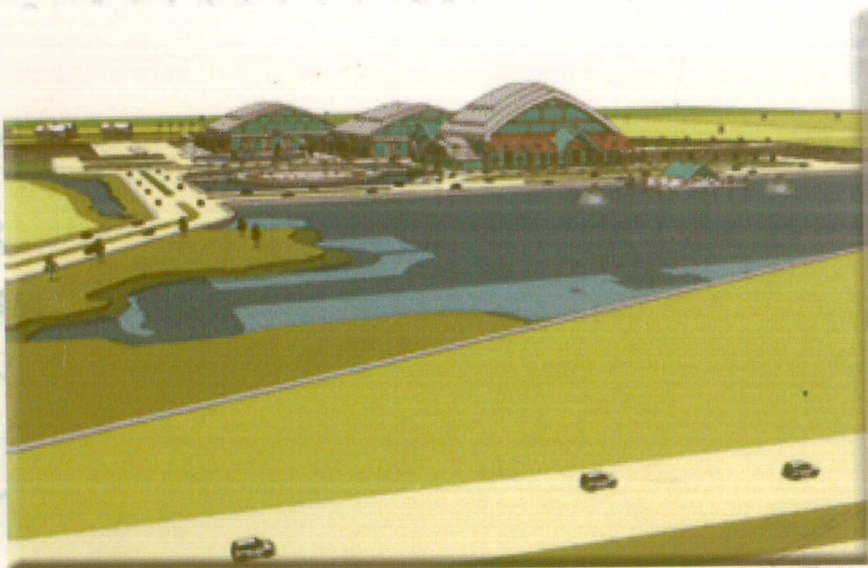


A Potential Study on the Establishment of the Northeast Convention and Exhibition Centre



Executive Summary Report



659.152

สถบ

ล.3 ฉ.2

Executive Summary Report

A Potential Study on the Establishment of
the Northeast Convention and Exhibition Centre

Submitted to
Tourism Authority of Thailand

Prepared by
Thailand Institute of Scientific and Technological Research

July 2008



017720

659,152

৳৩৮

ৱ.৩, ৱ.২

A Potential Study on the Establishment of the Northeast Convention and Exhibition Centre

By: Thailand Institute of Scientific and Technological Research (TISTR)

Submitted to: Tourism Authority of Thailand (TAT)

Monitoring Committee		Research Team	
Executive Director, Tourism Investment Department	Chairman	Governor of Thailand Institute of Scientific and Technological Research	Project Adviser
Executive Director, Investment Planning Division	Member	Deputy Governor Technology Transfer	Project Adviser
Executive Director, Tourism Investment Promotion Division	Member	Director of Industrial service and Consultancy Department	Project Adviser
Executive Director, Business Division	Member	<i>Project Manager</i>	
Executive Director, Attractions Promotion	Member	Mrs. Pomtip Boonsong	Project Director
Executive Director, Services Promotion	Member	<i>Experts</i>	
Executive Director, Events Planning Division	Member	Dr. Prasan Phirat Buri	Expert on Convention and exhibition centre
Executive Director, Northeastern Market Division	Member	Mrs. Anchalee Chayasombat	Expert on Convention Centre Design
Executive Director, East Asia Market Division	Member	<i>Technical Support</i>	
Executive Director, ASEAN, South Asia and South Pacific Market Division	Member	Mr. Somkiat Soontornchai	Master plan development
Executive Director, Europe, Africa, and Middle-east Market Division	Member	Dr. Anucha Leksakuldilok	Convention centre management
Executive Director, The Americas Market Division	Member	Mr. Suchat Sailamai	Investment and Management
Executive Director, Domestic Public Relations Division	Member	Dr. Tanes Tachasaen	Feasibility Study
Executive Director, International Public Relations Division	Member	Mr. Cherdchai Naktipawan	Marketing and Tourism
Executive Director, Organisational Investment Planning Section	Member	Mrs. Siriwan Issaree	Economic and Social Studies
Tourism Industry Investment Planning Section	Member and Secretary	Miss.Khuanruthai Bunruamkea	Physical Study
		Mr. Keeree Kruttanom	Survey and Drawings
		Mr. Vichian Grajang	Survey and Planning
		<i>Coordinators and Service Support</i>	
		Mrs. Thawin Phramphun	
		Miss Natataya Suwannapak	
		Miss Tanyalak Buachum	

Thailand Institute of scientific and Technological Research (TISTR)

Head Office: 35 Mu 3 Technopolis, Tambon Khlong 5, Khong Luang, Pathum Thani 12120

Tel: 0 2577 9000 Fax: 0 2577 9009

TISTR Bangkok: 196 Phahonyothin Road, Chatuchak, Bangkok 10900

Tel: 0 2579 1121, 0 2579 0160, 0 2579 5515 Fax: 0 2561 4771

<http://www.tistr.or.th> e-mail: TISTR@tistr.or.th

Foreword

This Executive Summary Report presents the results of “A Potential Study on the Establishment of the Northeast Convention and Exhibition Centre”, which has been prepared by the Thailand Institute of Scientific and Technological Research (TISTR) to submit to the Tourism Authority of Thailand (TAT)

The results presented in the Executive Summary Report aims can be used as a guideline for executives involved in the establishment of the convention and exhibition centre in the northeast of Thailand. The financial aspect, especially investment cost, is also given so that TAT can use it as basic information for the project in order to achieve effective results and obtain a high rate of return.

The research team wish to express their gratitude to various government and private organisations for the full cooperation in conducting this project. Special thanks to excellent collaboration of Udon Thani provincial officers, Tourism Authority of Thailand, Tourism Association and the private sector concerned, for the view and suggestions given which are substantially useful for the potential study. It is anticipated that these government agencies and organisations would make great benefits from the results obtained, leading to the establishment of the Northeast convention and exhibition centre in the near future.

TISTR Research Team

List of Contents

	Page
Foreword	
List of contents	-B-
List of tables	-C-
List of figures	-C-
1. Rationale	-1-
2. Analysis of proper location for the construction of a convention and exhibition centre	-2-
3. Province and site selection	-2-
4. Three alternative design of the Northeast Convention and Exhibition Centre	-7-
4.1 Conceptual design of land use plan	-7-
4.2 Architectural design	-9-
4.3 Capacity for future expansions	-10-
4.4 Internal traffic	-11-
4.5 Flexible use of area	-12-
5. Feasibility analysis of the establishment of the Convention and Exhibition Centre	-15-
5.1 Marketing analysis	-15-
5.2 Management analysis	-17-
5.3 Environmental analysis	-17-
5.4 Economic and financial analysis	-21-
5.4.1 Financial analysis	-21-
5.4.2 The economic analysis	-25-
5.5 The feasibility study of the project	-25-
6. Implementation of the Convention and Exhibition Centre Project	-28-
6.1 Implementation stages	-28-
6.2 Suggestions for project implementation	-29-
6.3 Project monitoring and evaluation	-30-

List of Tables

	Page
Table 1 Comparison of land appropriateness for the construction of Northeast Convention and Exhibition Centre	-4-
Table 2 Impacts of the Northeast Convention and Exhibition Centre project	-18-
Table 3 Environmental Impact Assessment on the development of the Northeast Convention and Exhibition Centre	-20-
Table 4 The results of financial analysis of the Northeast Convention and Exhibition Centre Project	-23-
Table 5 The results of economic analysis of the Northeast Convention and Exhibition Centre Project	-26-
Table 6 The results of the feasibility study of the Northeast Convention and Exhibition Centre Project	-28-

List of Figures

	Page
Figure 1 The plot of land at Nongdae, Udon Thani.	-3-
Figure 2 Ground flood plan of the Northeast Convention and Exhibition Centre	-8-
Figure 3 The legends of the great Naga in Cambodia Chronicles, Suwan Khomkham, and Ancient Kham Chanode city.	-9-
Figure 4 Land-use plan of the Convention and Exhibition Centre – Option 3	-10-
Figure 5 Circulation plan routes in the Northeast Convention and Exhibitor center: Option 3	-11-
Figure 6 Multi-purpose area of the Northeast Convention and Exhibition centre: Option 3	-12-
Figure 7 Land-use Plan of the Northeast Convention and Exhibition centre: Option 3.	-13-
Figure 8 Perspective view of the Northeast Convention and Exhibition centre: Option 3.	-13-
Figure 9 Perspective view of the Northeast Convention and Exhibition centre: Option 3.	-14-

Executive Summary
A Potential Study on the Establishment of
the Northeast Convention and Exhibition Centre

1. Rationale

In order to increase national income, the Thai government has launched a policy on promoting convention and exhibition services for international events and Convention as well as exhibitions. This is initiated from a large number of MICE (Meeting Incentive Convention and Exhibition) tourists or businessmen who visited Thailand for the purposes of attending Convention and trade exhibitions. Having been recognised as quality tourists, these groups are growing each year, leading to massive money spent and income distribution in various business sectors, particularly tourism industry and related businesses.

Tourism Authority of Thailand (TAT) has been promoting the MICE tourist group continuously, as stated in the Tourism Marketing Master Plan 2004. For instance, many events and Convention have been promoted to be organised throughout the country, especially at the Northeast part of Thailand, the area having high potential in setting up a convention and exhibition centre. The potential study then originated in order to select a proper area for construction. In this project, it is necessary to develop a master plan and conceptual framework, together with other details such as infrastructure and facilities of the convention and exhibition centre so that potential clients' demand would be met. To include all essential components, other related aspects were also studied, for instance, physical, economic, social and environmental analyses, initial design and cost evaluation. The objectives of the project are as follows:

- 1) To study for a possibility in the construction of the Northeast convention and exhibition centre.
- 2) To obtain a project proposal for TAT so that further development of the convention and exhibition centre can be achieved with ultimate effectiveness and highest rates of return.

2. Analysis of proper location for the construction of a convention and exhibition centre

The Framework of the Development of the Northeast places emphasis on establishing economic connection between provinces in the northeast and the neighbouring countries as well as other regions of the country. Two economic corridors have been set up including the North-South and East-West Economic Corridors. This study, therefore, initially selected the two key provinces: Ubon Ratchathani and Udon Thani on the basis of their locations, roles, developmental strategies, potentials, infrastructure availability and the readiness in connecting Thailand with the neighbouring countries. Ubon Ratchathani played key roles in being an economic centre of the lower Northeast provinces while Udon Thani and Nongkhai are considered as twin cities, a centre of upper Northeast provinces in terms of economic and tourism developments. As stated in the Framework of the Development of the Northeast, the convention and exhibition centre should be established in a province having ultimate potential for the development. The strategy was also written for promoting the organisations of Convention and exhibitions, in particular the MICE World Event, in this region, which was marked as a cultural zone of Southeast Asia. Moreover, cultural tourism in the Northeast part of Thailand and the neighbouring countries in the Great Mekhong Subregion (GMS) has been well-recognised, leading to growth potential of tourism industry in this region. Therefore, it is considered as the most proper location for accommodating international Convention and exhibitions.

3. Province and site selection

- **Comparison at provincial scale.** A study was undertaken to compare between provinces which would be the most appropriate location. Finally, two provinces were chosen: Ubon Ratchathani and Udon Thani. A comparative study was then conducted in order to evaluate selection indicators which include:

- 1) Roles and conformity to regional policies and strategies.
- 2) Readiness and potential of the province in being a convention and exhibition centres.
- 3) Opportunities and needs of a convention and exhibition centre.

- 4) Potential and readiness of necessary components
- 5) Potential in management and participation.

The results of the comparative study at provincial scale showed that Udon Thani was selected to be the most appropriate place for being a convention and exhibition centre in the northeast. Having high potential and readiness in economic and commercial terms and services, it is a promising location which can be developed to be a centre of commerce, services, transportation, and tourism. Moreover, the study on potential of upper Northeast provinces in connecting with Indo-China gave the same result that it was appropriate to be a Northeast convention and exhibition centre in the future.

- **Comparison at site scale.** Three important factors considered in the site selection include: 1) location of the site – its convenience, appropriateness, and availability of infrastructure and public utilities; 2) compliance with directions and strategies in city/community development, based on the purposes of land used as stated in the city plan, trends of community expansion, public utility and transportation development plans; 3) impacts of the location on city/community development in the future, especially in the use of land, public utilities, and environments.

The results of the comparison are shown in Table 1. The location at Nongdae, the plot of land for public use in Udon Thani, is selected for the construction of the Convention and Exhibition Centre, with the total area of 1,800 rai (see Figure 1). The land is located at Tambon Kudsa, Udon Thani.

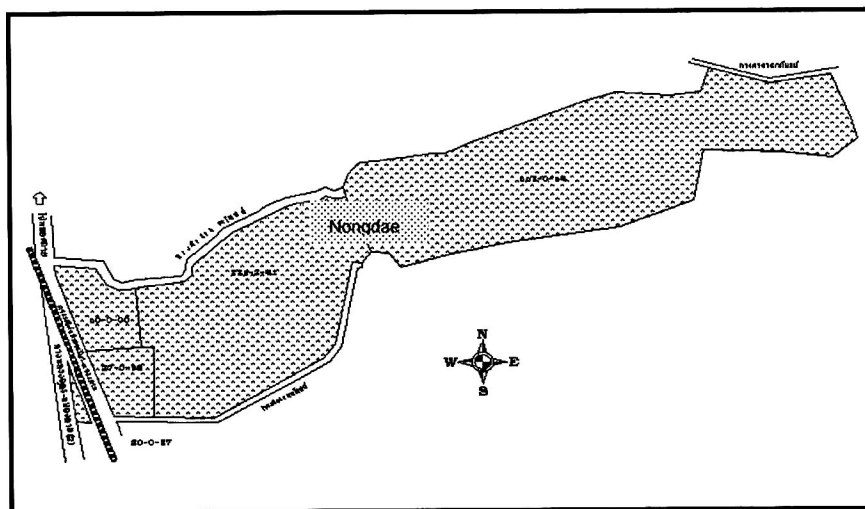


Figure 1 The plot of land at Nongdae, Udon Thani.

Table 1 Comparison of land appropriateness for the construction of Northeast Convention and Exhibition Centre

Factors/Indicators	Weight (%)	Rating criteria			Nongkhai province
		Udon Thani province		Nongdae	
		Ramasoon Army base	Prachak Army base		
1. Appropriateness of land for the construction 1.1 General conditions 1) The size of land is large for the project (present and future use) ¹	65 6	818 rai, of which 300-400 rai can be allocated for the project (3) Triangle-shaped land (3)	More than 2,000 rai, but only 200 rai would be allocated. (2) Rectangle-shaped land (2)	1,800 rai (4 plots) Not in use yet (3)	175 rai (3)
2) The shape of land is appropriate for the effective planning.	5	The entrance is close to the Main road No. 2. (3)	The entrance is close to the Main road No. 2. (3)	Long-shaped land of 4 plots (3) The entrance is close to the Main road No. 2. (3)	Rectangle-shaped land (3)
3) Convenience in access	5	The entrance is close to the Main road No. 2. (3)	The entrance is close to the Main road No. 2. (3)	The entrance is close to the Main road No. 2. (3)	The entrance is Wiang Kook Municipal Community Road, 6 m wide connected to Road 211 along the Mekhong River. (1)
4) Availability of public utilities	5	Electricity and water supply are available. (3)	Electricity and water supply are available. (3)	Electricity is available. (2)	Electricity is available (2)
5) Geography and environment	5	Low land, no flooding (2)	Part of land is close to Airport (2)	Part of land is low land/swamp. (3)	Low land/basin (1)
6) Risk to natural disasters	5	No flooding (3)	No flooding (3)	High risk of flooding (2)	High risk of flooding (1)
7) The land is available for utilisation.	4	Part of land is used as army base. (2)	Part of land is used as an airport and hospital. (1)	Not in use yet. (3)	The land is used for Eucalyptus plantation of Tobacco Organisation (1)

Table 1 (Continued)

Factors/Indicators	Weight (%)	Rating criteria			
		Udon Thani province		Nongkhai province	
		Ramasoon Army base	Prachak Army base	Nongdae	Wiang Kook
1.2 Difficulties of land use					
1) Proprietary right of land	5	Ratchaphatsadu land maintained by army (1)	Ratchaphatsadu land maintained by army (1)	Public Land (2)	Ratchaphatsadu land maintained by Tobacco Organisation (1)
2) Ownership/trespass	5	No (3)	No (3)	No (3)	No (3)
1.3 Cost and budget investment					
1) Land development	4	Filling not needed (3)	Filling not needed (3)	Filling needed in some parts (2)	Filling and road needed (1)
2) Access development	3	The land is adjacent to Main Road(3)	The land is adjacent to Main Road (3)	Adjacent to Main Road (3)	Road development needed (1)
3) Public utility development	3	Available (3)	Available (3)	Public utilities needed (2)	Electricity and water supply are needed to be improved(1)
1.4) Convenient transportation between land location and					
- City centre	4	14 km away (1)	In city centre (3)	7 km away (2)	12 km away from Nongkhai (1)
- Airport	3	10 km away (2)	Adjacent to Airport (3)	10 km away (2)	70 km away from Udon Thani Airport (1)
- Train station	3	14 km away (1)	3 km away (3)	7 km away (2)	12 km (1)
2. Compliance with directions and strategies in city/community development	25				
1) Area of land use (City plan)	5	Not included in city plan (1)	At the centre of city plan(2)	Not included in city plan (next to city plan) (2)	Included in city plan and in Wiang Kook Municipality (2)

Table 1 (Continued)

Factors/Indicators	Weight (%)	Rating criteria			
		Udon Thani province		Nongkhai province	
		Ramason Army base	Prachak Army base	Nongdae	Wiang Kook
2) Trends of community expansion	5	No tendency of community expansion (1)	Densely populated (2)	Having tendency of community expansion (North) (3)	No expansion since the land is for agricultural purpose. (1)
3) Transportation plan/projects	5	No project (1)	No project (1)	Included in the ring road project (2)	No project (1)
- Roads	5	Adjacent to railway (3)	Adjacent to Main Road, but far from railway	At the front adjacent to railway (3)	Not near railway (1)
- Trains	5	No project (1)	No project (1)	There was a development plan into a provincial stadium (2)	No project (1)
4) Public utility plan/projects	5	No project (1)	No project (1)		
3. impacts of the location on city/community development in the future	10				
1) Use of land and environments according to directions and trends of community expansion	4	No tendency of community expansion (2)	Located in the community near Airport (2)	Located in the area where there is a tendency of community expansion and land development (3)	There will be an impact on the community and school, but no tendency of community expansion as the land is currently used for agriculture. (1)
2) Transportation	3	Traffic flow is needed and promoted. (3)	May cause traffic congestion (1)	Supported to traffic distribution (3)	May cause traffic congestion because the access to the convention has to pass through Wiang Kook community (1)
3) Public utilities	3	The location is too far; high cost of public utility development. (1)	Near Airport (1)	Public utility development is promoted according to the plan. (3)	Public utilities need to be considerably developed; Road needs to be expanded. (1)

Note: (1), (2), (3) are the scores given to the plot of land compared.

4. Three alternative designs of the Northeast Convention and Exhibition Centre

Conceptual design of the Northeast Convention and Exhibition Centre is based on the projects which involve phase of development process, space dimensions, schematic design, and detailed compositions which a convention and exhibition centre requires. Three alternatives of land development are considered: The first alternative covers 400 rai while the second and the third cover 900 rai. Finally, the third alternative is selected for further development, particularly in design and planning of a convention and exhibition centre. Factors involved in the design include landscape design and area utilisation, architectural design, future trend of expansion, internal transportation, and flexible use of area.

4.1 Conceptual design of land use plan

The conceptual design of land use plan for the convention and exhibition centre project was studied and the results came out into 3 alternatives as mentioned above. It was assumed that the traffic inside the area of the convention and exhibition centre would be congested occasionally, which there might be jammed automobiles and commuters during the events. But when there is not any event, the congestion would be very few. Therefore, the planning must be flexible and allow for traffic flow that will not affect traffic conditions outside the centre. At the same time, traffic routes inside the centre must provide access to main roads for a large number of cars. Thus, more than one entrance and exit gate is required together with u-turns and slip roads before entering main roads. Apart from spacious traffic space inside the centre location, routing must be systematically organised and connected to the train station. Huge area of car parking is also needed at the train station for loading goods delivered by trains. Easy access to different areas of a project site is demanded for loading these goods too. (See Figure 2)

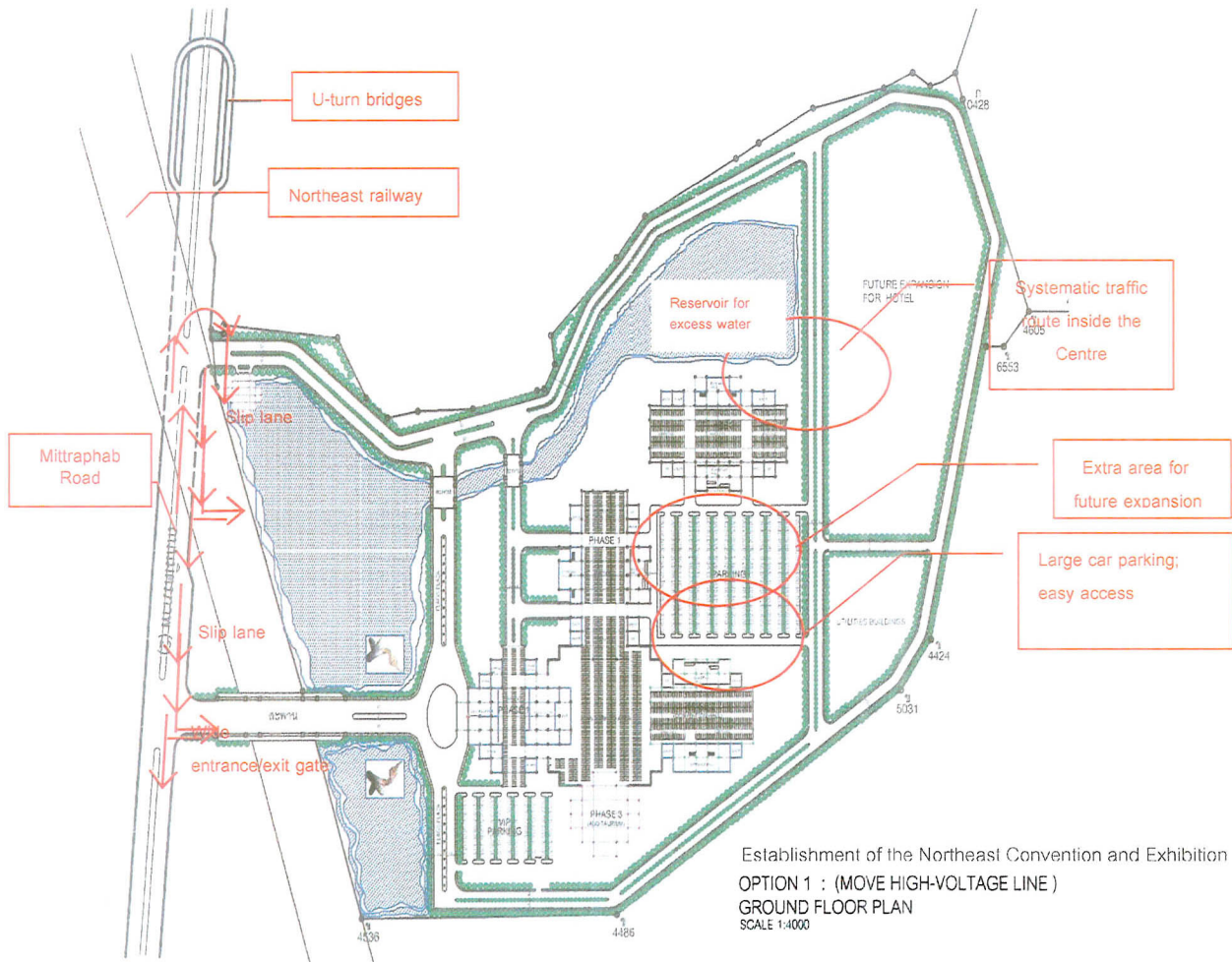


Figure 2 Ground floor plan of the Northeast Convention and Exhibition Centre

Part of land in the project is designed to be a reservoir for water storage and reshaped into beautiful scenery. The reservoir will be located at the front of the building, a reflection pool, thus displaying a silhouette of the building. Soil from digging of the pool will be used as land fill for other areas. The centre of the piece of land will locate main buildings of the centre and the area for future expansion, either building expansion or construction of new buildings which can be decided depending on marketing situation. The extra area can accommodate the building of hotels, accommodations, or warehouses in the future.

4.2 Architectural design

The Northeast Convention and Exhibition Centre will be set up as The Mekhong Basin Convention and Exhibition Centre for any events and activities initiated by countries in the Indo-china region. Possessing readiness and well-recognised experience of Thai private sector in organising national Convention and trade exhibitions, Thailand, when compared with neighbouring countries, is deemed appropriate to be a location for a convention and exhibition in the region. Moreover, the success of the East-West Economic Corridor Scheme could make the development project in the Mekhong River Basin more promising.

The architectural design of this project is a combination between traditional architecture and a contemporary style. The shape of the roof of each building will symbolise a vintage Thai houdah (saddle for elephant). With respect to landscape design, a reflection pool will give a perspective view from outside. Sculptures of Great Naga (serpents) images should be installed to spray water at both sides of the pool near the main entrance gate. This is a symbol of fortune-blessing to the Convention and Exhibition Centre according to the legend of Ancient Kham Chanode city (Figure3).

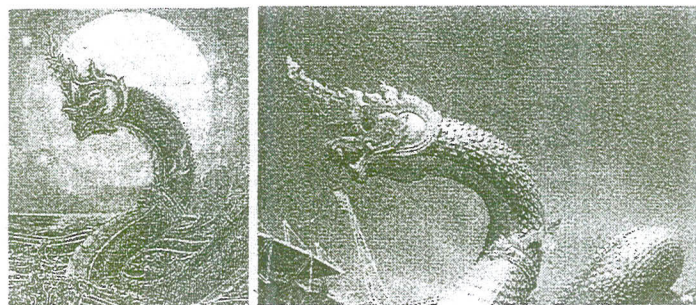


Figure 3 The legends of the great Naga in Cambodia Chronicles, Suwan Khomkham, and Ancient Kham Chanode city.

4.3 Capacity for future expansions

The design of the Northeast Convention and Exhibition Centre will reflect the combination of cultures among the Indo-china countries. Meanwhile, the modern style of the building is also considered in order to gain the multi-purpose use of area. Another factor concerned is the capacity for future expansions that can be either small or large scales, thus the design should welcome both the issues of pleasing symmetry and aesthetics. Moreover, the land-use planning should include trends of future projects such as constructions of a hotel, resort, spa, shopping mall, etc. The master plan for land development of this project must give importance to the preparedness for these expansions. (See Figure 4).

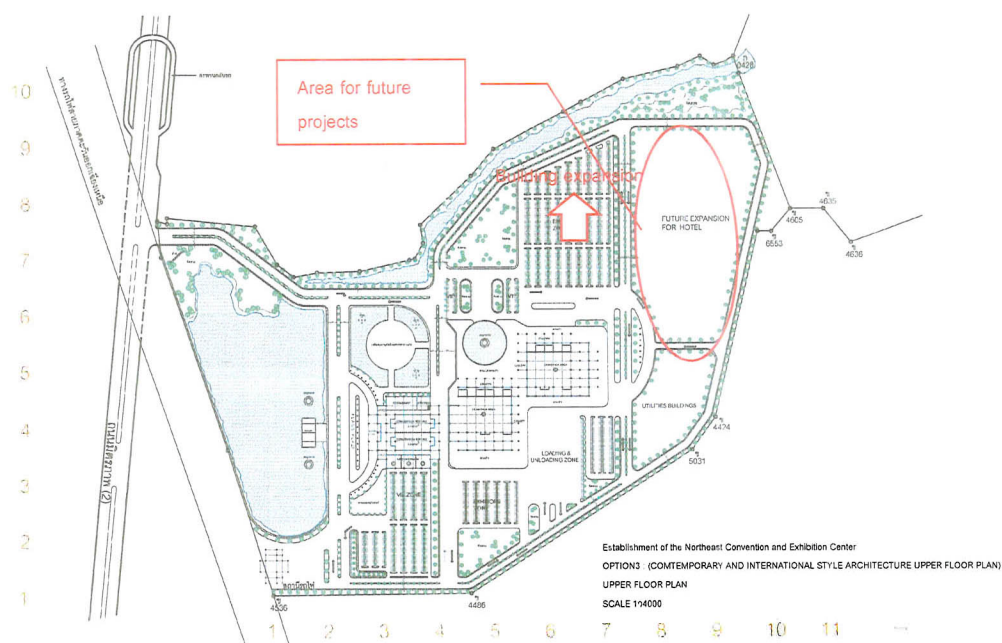


Figure 4 Land-use plan of the Northeast Convention and Exhibition Centre – Option 3.

4.4 Internal traffic

Due to its characteristic as a mega-project, circulation inside the area is another important factor to be included in design and planning. This aims to prevent confusion in travelling and provide aesthetic pleasing landscape to the overall perspective. Being constructed in a large plot of land, the building blocks must be harmoniously designed and connected to each other while representing the uniqueness.

Planning of traffic routes between buildings is designed based on serial numbers such as building 1, building 2 and building 3. The building blocks are overlapping so that different functions of areas can be obtained. (See Figure 5).

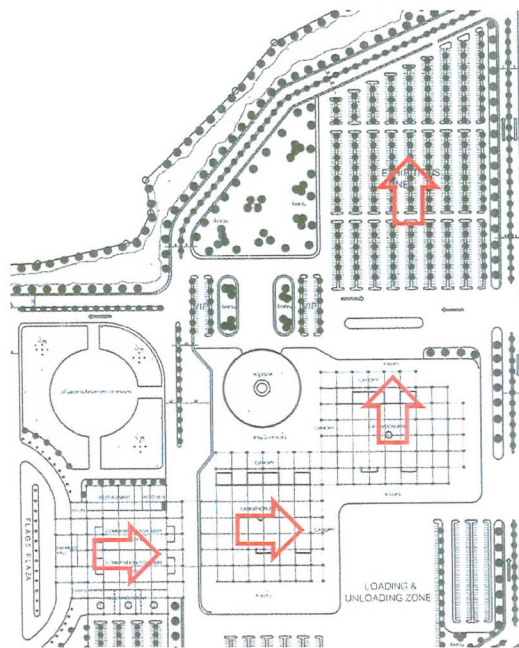


Figure 5 Circulation plan in the Northeast Convention and Exhibition Centre: Option 3.

4.5 Flexible use of area

Events organised in the Convention and Exhibition Centre can be varied ranging from regional to international levels. Regarding this, buildings in the Centre should be designed to accommodate all types, either large or small events which might occupy all or only some parts of the area. Planning of the buildings, therefore, should meet any purpose of the functions. Activities organised by different hosts at the same time need to use different entrance or exit so that visitors would not be confused. As for a larger scale event, all buildings might be occupied but must be able to represent one theme of the event. Apart from focusing on the flexible use of area for multi-purposes, the design of buildings must consider the long or short period of intervals subject to economic constraints. However, even during the interval, the buildings should not be left empty or without any activities. Some parts can be open for commercial and social purposes, for instance, shopping arcades, service centres so that the place will be lively all time. Moreover, some parts of area can be modified into car parking or entertainment square. (See Figure 6).

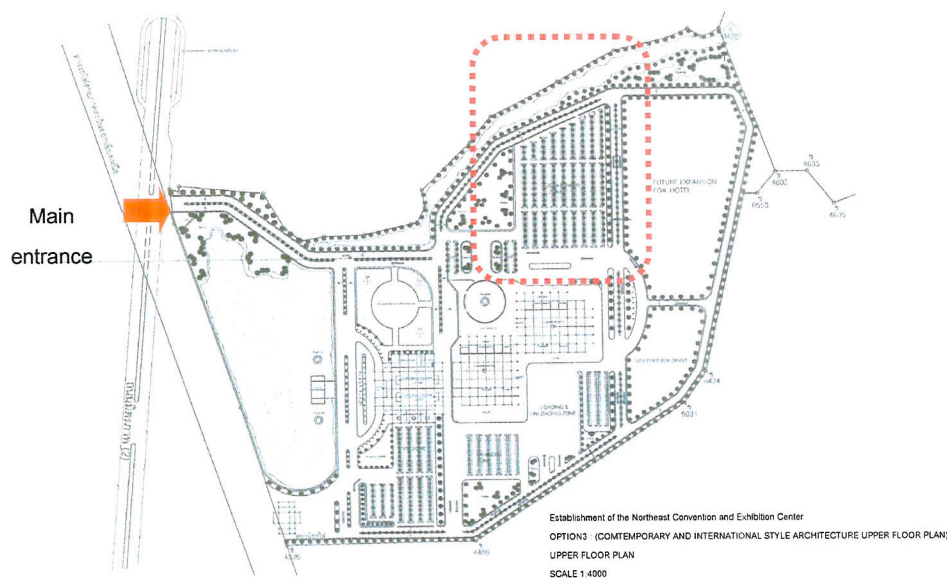


Figure 6 Multi-purpose area of the Northeast Convention and Exhibition Centre: Option 3.

Factors and concept mentioned earlier are, therefore, used as a guideline in design and land-use plan of the Northeast Convention and Exhibition Centre (See Figure 7,8 and 9).

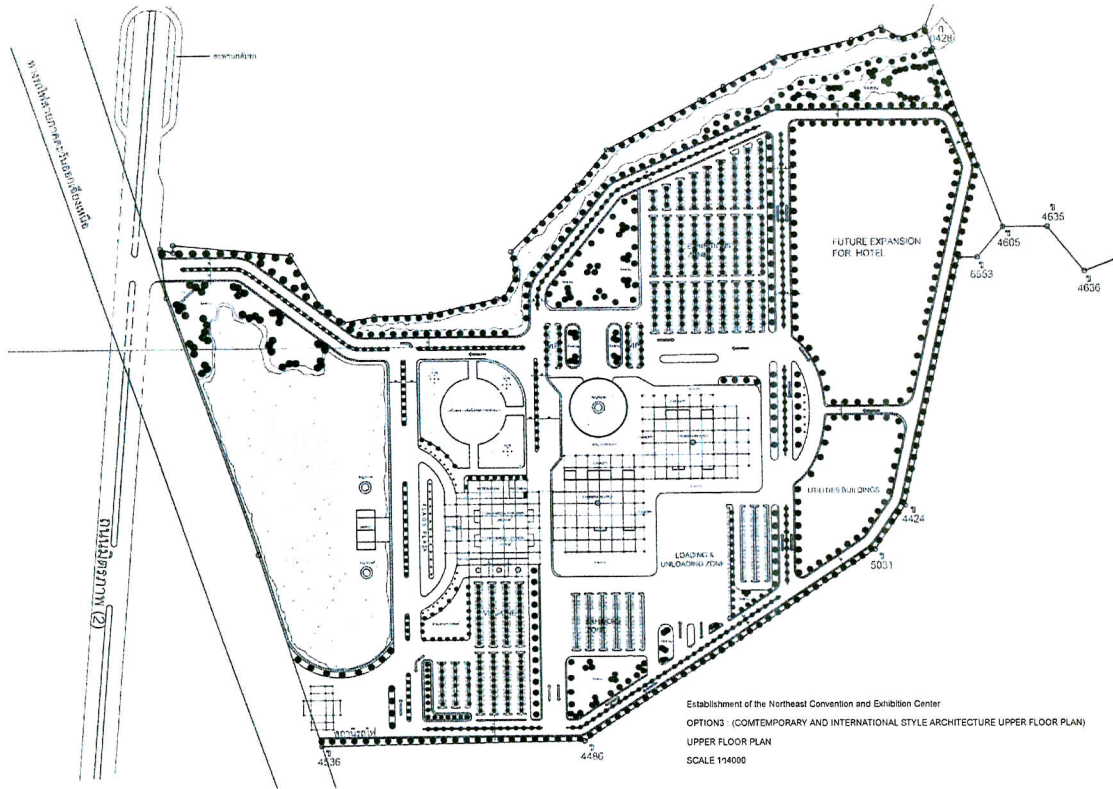


Figure 7 Land-use Plan of the Northeast Convention and Exhibition centre: Option 3.

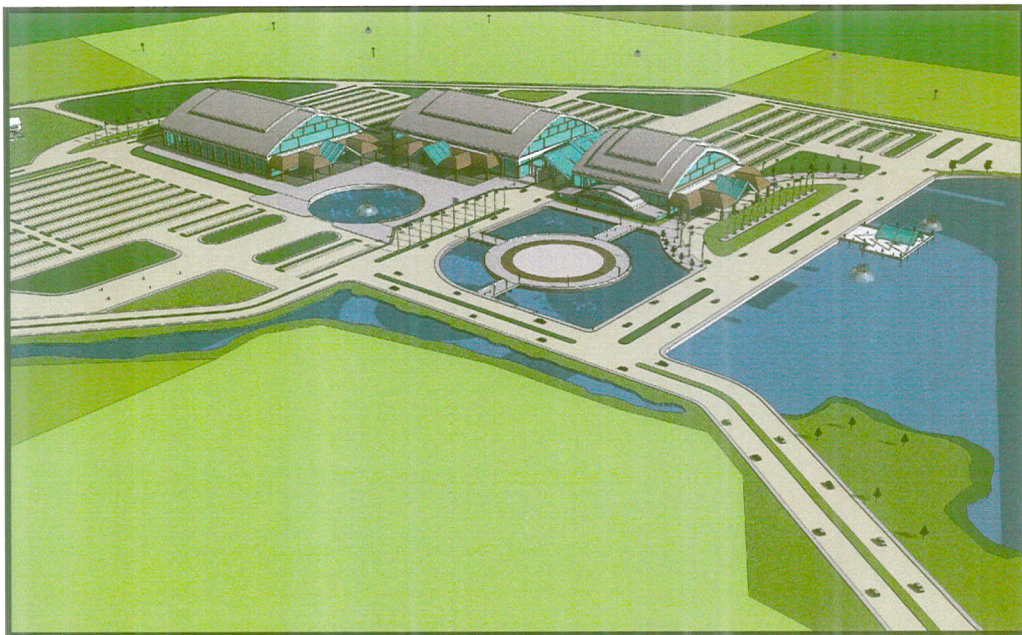


Figure 8 Perspective view of the Northeast Convention and Exhibition centre: Option 3.

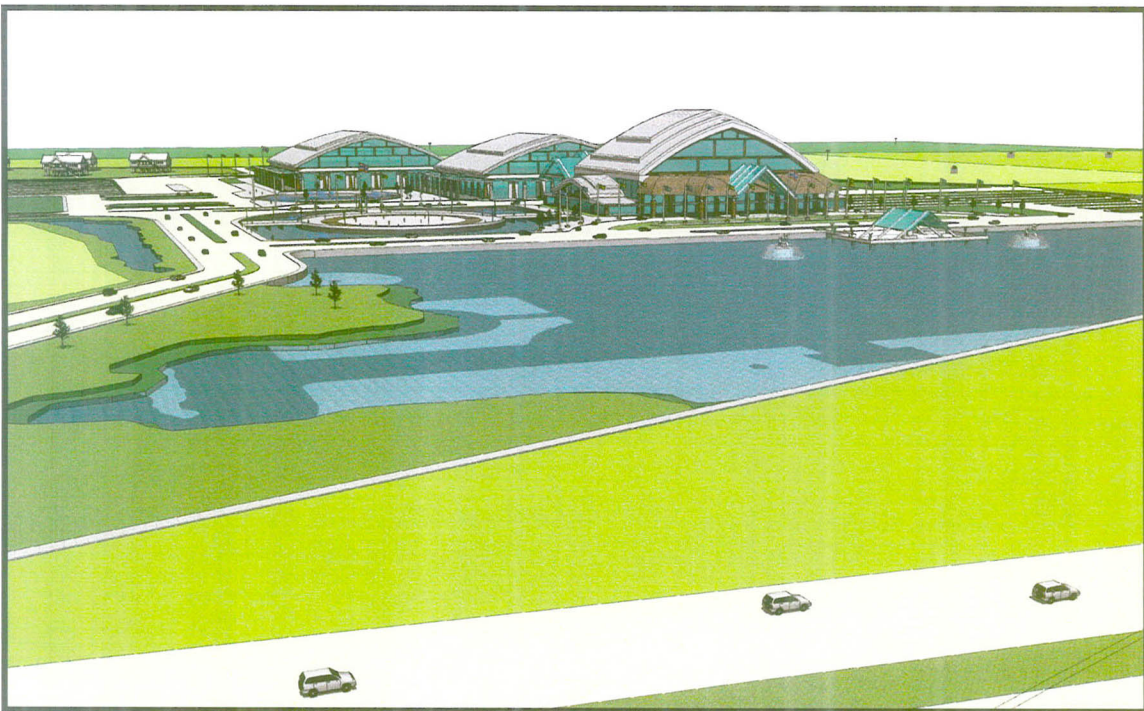
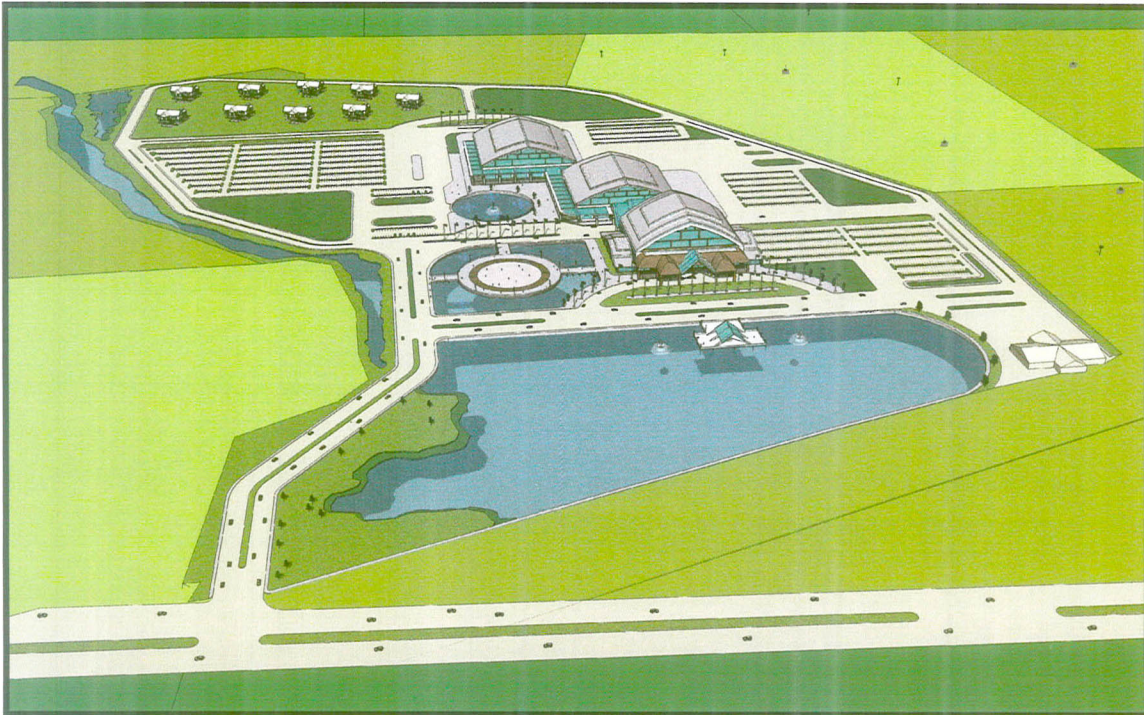


Figure 9 Perspective view of the Northeast Convention and Exhibition Centre: Option 3.

5. Feasibility analysis of the establishment of the Convention and Exhibition Centre

5.1 Marketing analysis

Marketing analysis of convention and exhibition industry was undertaken at various scales of events, for example, at global and national markets and within the Northeast region. The analysis aimed to study the feasibility of marketing in these following issues: market potential, competitiveness, target marketing, and marketing plans.

1) Market potential of convention and exhibition industry

The study reveals that both global and domestic markets are continually growing and there is a tendency of rapid growth in the Northeast region as well. It is found out that target group will come from organizations of both the public and private sectors including international companies and agencies, newly established associations, consortia, and expert groups. Thus, it is expected that more Convention and trade exhibitions will be increasing in the near future. Moreover, a vast number of business groups having high potential in the Northeast are promising for market expansion such as large and outstanding industrial clusters, agricultural groups, arts and cultural groups, and other outperforming associations. These organisations also have high tendency to develop their collaborative activities with other countries in the Mekhong basin for the benefits of growing competitiveness in global markets.

2) Competitiveness of convention and exhibition industry

Even though domestic competitiveness in the arena of convention and exhibition industry will be lessened in the future, it is forecast that domestic markets in particular of the northeast region and neighbouring countries will be considerably growing. Thus, new markets can be developed in the upper Northeast of Thailand together with neighbouring countries and other Mekhong basin countries, leading to increasing market shares domestically and regionally.

3) Target groups of convention and exhibition industry

Target clients of convention and exhibition industry can be divided into 3 market segments:

(1) Seminars, Convention, and international Convention. There has been a rapid growth of this market segment in the region. Moreover, there has been an upward trend in international Convention organised by business groups or organisations in the northeast.

(2) Trade shows and exhibitions. There have been both local and international trade fairs and exhibitions.

(3) Special events. Special events include activities such as banqueting, food and beverage services for guests and audience, permanent leasing of hall space and special shows.

4) Marketing plans

The market plan is formulated based on the target customer groups and market sizes which embrace:

(1) International Convention and Convention which are regularly organised twice a year. Thailand Convention and Exhibition Bureau (TCEB) acts as a host to call for country delegates to attend the international Convention regarding the Mekhong basin.

(2) International Convention and exhibitions organised in Thailand 8 events a year. The Tourism Authority of Thailand (TAT) is a coordinator between the public and private sectors.

(3) Provincial/Northeast/regional meetings 25 events a year. This is considered as new markets of provinces, the Northeast, and the Mekhong basin. The market plans have been collaboratively developed by the local organisations and representatives of the countries concerned.

(4) Local trade fairs and exhibitions 15 events a year. Customers are from local industries and the events are collaboratively organised by the local public and private organisations subject to popularity of products.

(5) Traditional and cultural shows at national and regional scales are held twice a year. The target group is for all countries in the Mekhong basin and the shows will be performed alternately.

(6) Special events are held 8 times a year. The events will be specially organised by organizations or government agencies, for example, exhibitions, celebrations, and indoor games, etc.

5.2 Management analysis

The newly established convention and exhibition centre can be managed in various patterns. In this study, it is recommended that the management of local governments and organisations should be empowered and participatory roles of the private sectors should be promoted. The management patterns of other countries and in Thailand were also studied. The results showed that the government should be an investor and allow the private sector in bidding. The management terms should cover five to ten years. On conditions that financial interests must be returned to the government, the bidder can manage the Centre according to the plans. Following this pattern, the Centre will be professionally managed with high flexibility and without any operational costs. At the same time, the government has full rights in defining terms and conditions, particularly the selection of an appropriate bidder and management framework, which should be transparent and fair.

5.3 Environmental analysis

The environmental impacts on Nongdae area in Udon Thani, the land for public use, which was investigated in terms of physical and biological issues, human benefits, and values of the quality of living revealed that the results obtained were positive rather than negative (See Table 2). Moreover, the environmental impacts of each phase of a construction project was analysed (See Table 3).

Table 2 Impacts of the Northeast Convention and Exhibition Centre project

Impact issues	Impact characteristics
Air	There will be formation of dust during the construction period caused by activities from land improvement, land-filling, and loading of construction materials. Traffic will also be heavy at the construction site with a large numbers of vehicles, resulting in higher dust volume and low quality of air in the area surrounded.
Surface water	As Nongdae area is a wetland, the construction must start with land filling to reduce the wetland part. There might be an impact on quality of water due to sediments from rinsing and land adjustment. Thus, water in the pond might become unclear and dirty.
Underground water	There is no impact to underground water as the water used in the project will be supplied by the Provincial Water Supply Authority. Wastewater will not be discharged into the pond.
Noise and shaking	There will be loud noise and shaking caused by machines used in the construction activities, and also heavy traffic at the sites. When the Centre is open for events and exhibitions, there will be much noise from traffic as well.
Living creatures	Sediments caused by land filling of some part of Nongdae will have an effect on living creatures in the pond. Numbers of plants and animals in the area might be lessened due to the change of their habitat.
Quality and volume of water	An impact will slightly occur on the quality and volume of water. There will be sediments in water only a short period (construction period) and this will happen only at the construction site. Besides, Nongdae is not used for nursing aquatic animals, only slight impact would be found.
Consumption water	At present, the water supplied to communities in Nongdae area is not sufficient. Therefore, water supply system must be improved, especially piping systems which should be lined along the Highway No. Communities in the area will be benefited from the improvement project of water supply as well.
Drainage system	During the construction period, water will be drained into the cesspool so that the drainage will be smoothly flowed while dirt is prevented not to be discharged in a public canal. This also prevents the problem of flooding.
Wastewater treatment system	The project will have a standard wastewater treatment system as required by the environmental authority. Treated wastewater will be discharged into public canals. Thus, it will have only slight impact on the wastewater treatment of the province.
Garbage and sewage	The garbage and sewage services are managed by the Tambon Kudsa Administrative Organisation, but, in the future, the services can be provided by Udon Thani Municipality.
Traffic system	There will be an effect of heavy traffic due to an increasing numbers of commuters on the main road connected to the Centre and also inside the site.

Impact issues	Impact characteristics
Land use	The construction project will have high impact on the development projects surrounded Nongdae. This includes the provision of public utilities in the area and other services concerned, which might result in the expansion of communities and ultimate use of land.
Economic and social aspects	<p>- Highly positive as the project will result in more employment, occupational promotion, and increasing income earning of communities/villagers. This will lead to other concerned activities which will bring about new occupations related to the project such as business and private employment.</p> <p>- Reduction of immigrant workers will yield positive impact on family and social issues. It is expected that there will be increasing numbers of employers of various occupations.</p>
Culture	The project might change ways of life and culture of villagers from agricultural-based to business- and service-based communities. Thus, community members must learn to manage themselves with outside changes.
Women's roles	Women's roles in the community will be greatly promoted due to increasing rate of employment. There will be more opportunity in boosting famous handicrafts of the province, thus increasing income of women in the community.
Cooperation among institutions/organisations	More cooperation among the public sector, locals, and community will be promoted in order to develop the Centre.
Infrastructure	The project will yield a great result in the development of necessary infrastructure and public utilities. This also brings more benefits to the community in terms of better quality of living and increasing numbers of population.

Table 3 Environmental Impact Assessment on the development of the Northeast Convention and Exhibition Centre

Natural resources	Issues of environmental impact		
	Construction period	Operation period	Initial measures
1. Physical natural resources			
1.1 Topography	■ ■		Design and planning appropriate to the environments of the site and surrounded areas.
1.2 Air	■	■	- prevention of dust during construction period - speed limit for vehicles
1.3 Surface water	X	X	- construction of a dike around the location - Development of water sources for sufficient use
1.4 Underground water	X	X	
1.5 Noise/shaking	■	■	- speed limit for vehicles
2. Environmental resources/bio resources			
2.1 Water ecology	■ ■	■	- dredging of Nongdae pond - water management system
2.2 Plants/animals	■	X	- conservation of local plants
2.3 Nursing of aquatic animals	X	X	
3. Value of human utilisation			
3.1 Natural water	X	+	
3.2 Water supply, electricity, telephone	+	++	
3.3 Drainage system	X	X	- construction of cesspool - Water management of Nongdae pond
3.4 Wastewater treatment system	■	■	- construction of wastewater treatment system - discharge of wastewater
3.5 Garbage and sewage	■	■ ■	- ask for cooperation from the Municipality - setting up of management system
3.6 Transportation and traffic	■ ■	■ ■	- setting up of a traffic system of the project - setting up of traffic system at main entrance/exit gates

Natural resources	Issues of environmental impact		
	Construction period	Operation period	Initial measures
3.7 Land use	X	■	- planning of land use control
3.8 Fire prevention	+	+	
4. Value of the quality of living			
4.1 economic-social	+	++++	
4.2 aesthetic	■	++	
4.3 culture	+	++	
4.4 Hygiene and safety	■	X	Control and medical checking of workers

Note: Signs of impacts Number of signs are subject to degrees of impact Low Moderate High
 + Positive impact ■ Negative impact X no impact/unable to assess

5.4 Economic and financial analysis

The analysis of project return of investment in terms of economic and financial aspects was aimed at investigating the feasibility and opportunity of the project. The analysis also emphasised on financial rate of return and break even point of the project. As a result, it would also identify whether the project was worth investment. Therefore, the investigation on the project value was composed of cost analysis, return rate analysis, net return rate, and the evaluation of project value.

5.4.1 Financial analysis

The financial analysis of the project plays an important role in identifying whether any project is valuable and worth for investment. In case of project financial investigation, this can be fundamentally analysed from the Internal Rate of Return (or IRR) of the project, Net Present Value (or NPV), and the Benefit Cost Analysis (B/C ratio).

The analysis of initial financial return of the project can be based on the analysis of the project duration of 25 years, the interest rate of opportunity cost (5%), and the evaluation of project financial rate of return.

The results of the evaluation of the financial rate of return of the project on the Northeast Convention and Exhibition Centre indicated that the project reached the maximum benefit for investment at 5% interest rate of opportunity cost. Since all the positive NPV, higher than 1 B/C, and 9.12% IRR (higher than that of opportunity cost) were achieved, these were, therefore, the most influential parameters for investment. Particularly, the surplus of 4.12% of IRR to that of opportunity cost could be referred as considerably high rate of return of the project in the long term of 25 years. The project would reach its break even point in the 13th year; the most investment fund would be 1,321.62 million bahts in the first year. The total investment in 25 years' period would approximately be around 11,442.98 million bahts. The results of financial analysis are summarised in **Table 4**.

Table 4 The results of financial analysis of the Northeast Convention and Exhibition Centre Project

Description	Year														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Cash outflow															
Development/investment costs															
(1) Wages and salary (5% increase annually)		41.20	43.26	45.42	47.69	50.08	52.58	55.21	57.97	60.87	63.91	67.11	70.47	73.99	77.69
(2) Facility cost (5% increase annually)		79.32	83.29	87.45	91.82	96.41	101.23	106.30	111.61	117.19	123.05	129.20	135.66	142.45	149.57
(3) Wastewater and sewage treatment costs (5% increase annually)		14.01	14.71	15.45	16.22	17.03	17.88	18.77	19.71	20.70	21.73	22.82	23.96	25.16	26.42
(4) Advertisement and marketing costs (5% increase annually)		55.00	57.75	60.64	63.67	66.85	70.20	73.71	77.39	81.26	85.32	89.59	94.07	98.77	103.71
(5) Other costs (5% increase annually)		37.91	39.80	41.79	43.88	46.07	48.38	50.80	53.34	56.00	58.80	61.74	64.83	68.07	71.48
(6) Construction cost	1,321.62														
Subtotal	1,321.62	227.44	238.81	250.75	263.29	276.45	290.27	304.79	320.03	336.03	352.83	370.47	388.99	408.44	428.86
Annual maintenance cost (approximately 10% of fixed investment cost and 3% increase annually)		22.74	23.43	24.13	24.85	25.60	26.37	27.16	27.97	28.81	29.68	30.57	31.48	32.43	33.40
Annual land rental fees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1,321.62	250.18	501.04	525.63	551.42	578.50	606.91	636.73	668.02	700.86	735.33	771.50	809.47	849.31	891.13
Cash inflow															
(1) Annual shop space rental fees		550.00	577.50	606.38	636.69	668.53	701.95	737.05	773.91	812.60	853.23	895.89	940.69	987.72	1,037.11
Total (5% increase of income annually)		550.00	577.50	606.38	636.69	668.53	701.95	737.05	773.91	812.60	853.23	895.89	940.69	987.72	1,037.11
Net cash flow	-1,321.62	299.82	76.46	80.75	85.27	90.03	95.04	100.32	105.88	111.74	117.90	124.39	131.22	138.41	145.98
Accumulated net profit		299.82	376.28	457.03	542.30	632.33	727.37	827.70	933.58	1,045.32	1,163.22	1,287.60	1,418.82	1,557.23	1,703.21

Table 4 (continued)

Description	Year										Total		
	16	17	18	19	20	21	22	23	24	25			
Cash outflow													
Development/investment costs	81.57	85.65	89.93	94.43	99.15	104.11	109.32	114.78	120.52	126.55	1,833.48		
(1) Wages and salary (5% increase annually)	157.05	164.90	173.15	181.80	190.89	200.44	210.46	220.98	232.03	243.63	3,529.90		
(2) Facility cost (5% increase annually)	27.74	29.13	30.58	32.11	33.72	35.40	37.17	39.03	40.98	43.03	623.47		
(3) Wastewater and sewage treatment costs (5% increase annually)	108.90	114.34	120.06	126.06	132.36	138.98	145.93	153.23	160.89	168.93	2,447.61		
(4) Advertisement and marketing costs (5% increase annually)	75.05	78.80	82.74	86.88	91.23	95.79	100.58	105.60	110.88	116.43	1,686.89		
(5) Other costs (5% increase annually)	450.31	472.82	496.46	521.29	547.35	574.72	603.46	633.63	665.31	698.58	11,442.98		
(6) Construction cost													
Subtotal													
Annual maintenance cost (approximately 10% of fixed investment cost and 3% increase annually)	34.40	35.43	36.50	37.59	38.72	39.88	41.08	42.31	43.58	44.89	782.98		
Annual land rental fees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Total	935.02	981.08	1,029.43	1,080.17	1,133.42	1,189.32	1,247.99	1,309.57	1,374.20	1,442.04	22,119.88		
Cash inflow													
(1) Annual shop space rental fees	1,088.96	1,143.41	1,200.58	1,260.61	1,323.64	1,389.82	1,459.31	1,532.28	1,608.89	1,689.34	24,476.10		
Total (5% increase of income annually)	1,088.96	1,143.41	1,200.58	1,260.61	1,323.64	1,389.82	1,459.31	1,532.28	1,608.89	1,689.34	24,476.10		
Net cash flow	153.95	162.33	171.16	180.44	190.22	200.50	211.33	222.71	234.70	247.30	2,356.22		
Accumulated net profit	1,857.16	2,019.49	2,190.64	2,371.08	2,561.30	2,761.81	2,973.13	3,195.84	3,430.54	3,677.84	40,010.64		

PV of Benefit

12,571

1. Interest rates are 12%, 7% and 5%.

PV of Cost

10,601

2. The project period is of 25 years.

NPV

1,971

3. The break even point period of the project is within 13th year.

IRR

9.12%

4. No cost of land rental fee included.

5.4.2 The economic analysis

The economic analysis to maximize the social return was composed of the evaluation of Social Cost in terms of people's benefits including the analysis of IRR, NPV, B/C ratio as such.

Similarly to that of the financial analysis, the results of cost-return analysis of the project showed that at the opportunity cost of 5%, positive NPV, higher than 1 B/C, and 8.47% IRR became the most influential parameters for investment for 25 years period, break even point of the project at 13th year. While the first year investment was 1,291.80 million bahts, the total investment for 25 years was 20,414.39 million bahts. The results of economic analysis are summarized in Table 5.

5.5 The feasibility study of the project

The feasibility study of the project was conducted in order to evaluate the successful opportunity of investment and the maximum profit for investors when the project would be implemented. The results of the feasibility study can be used as a decision-making factor for investment or implementing the project. Therefore, the feasibility study was generally composed of technical, marketing or demand, environmental, financial, economic, and management investigations. The results of this feasibility study are summarised in Table 6.

Table 5 The results of economic analysis of the Northeast Convention and Exhibition Centre Project

Descriptions	Year													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Cash outflow														
Development/investment costs														
(1) Wages and salary (5% increase annually) or $41.2 \times 0.92 = 37.90$		37.90	39.80	41.78	43.87	46.07	48.37	50.79	53.33	56.00	58.80	61.74	64.82	
(2) Facility cost (5% increase annually) or $79.32 \times 0.92 = 72.87$		72.87	76.51	80.34	84.36	88.57	93.00	97.65	102.54	107.66	113.05	118.70	124.63	
(3) Wastewater and sewage treatment costs (5% increase annually) or $14.01 \times 0.92 = 12.89$		12.89	13.53	14.21	14.92	15.67	16.45	17.27	18.14	19.04	20.00	21.00	22.05	
(4) Advertisement and marketing costs (5% increase annually) or $55.00 \times 0.92 = 50.60$		50.60	53.13	55.79	58.58	61.50	64.58	67.81	71.20	74.76	78.50	82.42	86.54	
(5) Other costs (5% increase annually) or $37.91 \times 0.92 = 34.85$		34.85	36.59	38.42	40.35	42.36	44.48	46.71	49.04	51.49	54.07	56.77	59.61	
(6) Construction cost (or $1055 \times 0.88 = 928.40$)	928.4													
(7) Information system (or $395 \times 0.92 = 363.40$)	363.4													
Subtotal	1,291.8	209.11	219.57	230.55	242.07	254.18	266.89	280.23	294.24	308.95	324.40	340.62	357.65	
Annual maintenance cost (approximately 10% of fixed investment cost and 3% increase annually) or $22.74 \times 0.92 = 20.92$		20.91	21.54	22.18	22.85	23.54	24.24	24.97	25.72	26.49	27.28	28.10	28.95	
Annual land rental fees	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1,291.80	230.02	460.67	483.28	507.00	531.89	558.01	585.43	614.20	644.40	676.09	709.35	744.25	
Cash inflow														
(1) Annual shop space rental fees		506.00	531.30	557.87	585.76	615.05	645.80	678.09	711.99	747.59	784.97	824.22	865.43	
Total (5% increase of income annually)		506.00	531.30	557.87	585.76	615.05	645.80	678.09	711.99	747.59	784.97	824.22	865.43	
Net cash flow	-1291.800	275.98	70.63	74.59	78.76	83.16	87.79	92.66	97.79	103.20	108.89	114.87	121.18	
Accumulated net profit		275.98	346.60	421.19	499.95	583.11	670.89	763.55	861.35	964.54	1,073.43	1,188.30	1,309.48	

Table 5 (continued)

Descriptions	Year											Total	
	14	15	16	17	18	19	20	21	22	23	24		25
Cash outflow													
Development/investment costs	68.06	71.47	75.04	78.79	82.73	86.87	91.21	95.77	100.56	105.56	110.84	116.41	1,686.63
(1) Wages and salary (5% increase annually) or $41.2 \times 0.92 = 37.90$													
(2) Facility cost (5% increase annually) or $79.32 \times 0.92 = 72.87$	130.86	137.41	144.28	151.49	159.07	167.02	175.37	184.14	193.35	203.01	213.16	223.82	3,242.86
(3) Wastewater and sewage treatment costs (5% increase annually) or $14.01 \times 0.92 = 12.89$	23.15	24.31	25.52	26.80	28.14	29.54	31.02	32.57	34.20	35.91	37.71	39.59	573.63
(4) Advertisement and marketing costs (5% increase annually) or $55.00 \times 0.92 = 50.60$	90.87	95.41	100.18	105.19	110.45	115.98	121.77	127.86	134.26	140.97	148.02	155.42	2,251.80
(5) Other costs (5% increase annually) or $37.91 \times 0.92 = 34.85$	62.59	65.72	69.00	72.45	76.08	79.88	83.88	88.07	92.47	97.10	101.95	107.05	1,550.98
(6) Construction cost (or $1055 \times 0.88 = 928.40$)													928.40
(7) Information system (or $395 \times 0.92 = 363.40$)													
Subtotal	375.54	394.31	414.03	434.73	456.47	479.29	503.25	528.42	554.84	582.58	611.71	642.29	10,597.70
Annual maintenance cost (approximately 10% of fixed investment cost and 3% increase annually) or $22.74 \times 0.92 = 20.92$	29.81	30.71	31.63	32.58	33.56	34.56	35.60	36.67	37.77	38.90	40.07	41.27	719.90
Annual land rental fees	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	780.88	819.33	859.68	902.04	946.49	993.14	1,042.11	1,093.50	1,147.44	1,204.06	1,263.48	1,325.86	20,414.39
Cash inflow													
(1) Annual shop space rental fees	908.70	954.14	1,001.85	1,051.94	1,104.53	1,159.76	1,217.75	1,278.64	1,342.57	1,409.70	1,480.18	1,554.19	22,518.01
Total (5% increase of income annually)	908.70	954.14	1,001.85	1,051.94	1,104.53	1,159.76	1,217.75	1,278.64	1,342.57	1,409.70	1,480.18	1,554.19	22,518.01
Net cash flow	127.82	134.81	142.16	149.90	158.05	166.62	175.64	185.14	195.13	205.64	216.70	228.34	2,103.62
Accumulated net profit	1,437.30	1,572.11	1,714.27	1,864.17	2,022.22	2,188.84	2,364.48	2,549.62	2,744.75	2,950.38	3,167.08	3,395.42	36,929.00
PV of Benefit				5,692.67		9,213.82			11,565.71				
PV of Cost				4,719.68		7,733.33			9,746.76				
NPV				972.99		1,480.48			1,818.92				
IRR				0.08		0.08			0.08				
B/C				1.21		1.19			1.19				
Notes :													
1. Interest rates are 12%, 7% and 5%.													
2. The project period is of 25 years.													
3. No cost of land rental fee included as this will be considered by the Treasury Department.													

Table 6 The results of the feasibility study of the Northeast Convention and Exhibition Centre Project

Study issues	Results of study	Conditions	Methods of implementation
<p>Technical</p>	<p>(1) Physical appearance The location of the project is situated in the public areas which is left in wilderness and currently used as garbage dump. The project would, therefore, change this landscape since land improvement would also be required for construction purposes by partly levelling and filling the surface. This would benefit the panorama of the land.</p> <p>(2) The planning, designing, and uses of land would be entirely prepared for future expansion. The total area of the project is 938 rai, but the initial stage of the project would require merely 400 rai. As the remaining 538 rai would be trespassed, the boundary line should be made clearly and the use of land should be controlled under the Master Plan. The future expansion would be for extension of current buildings and construction of new buildings</p> <p>(3) Permission of land use should be asked according to the legal requirements and procedures since this land is the public property. This would be based on the fact that the project would mostly benefit the development of the Northeast region. Therefore, the regional organisations should cooperate in utilising the Nongdae area by</p>	<p>Proprietary right of land: public</p>	<p>The withdrawal of proprietary right of land for public use is needed.</p>

Study issues	Results of study	Conditions	Methods of implementation
	<p>strictly following the official and legal procedures.</p> <p>The project showed the high technical potential, regarding the absolute withdrawal of land from public property scheme.</p>		
MICE	<p>The Convention and Exhibition centre has potential markets as follows</p> <p>(1) The world international Convention of at least twice a year.</p> <p>(2) International Convention and exhibitions in Thailand, 8 events per year</p> <p>(3) Provincial and regional Convention, 25 events per year</p> <p>(4) Local trade fairs and exhibitions, 15 events per year</p> <p>(5) National and regional culture shows, 2 events per year</p> <p>(6) Other activities, 8 events per year</p>	<p>(1) Organised by TAT in coordination with other ministerial organisations</p> <p>(2) Udon Thani province in cooperation with the Mekhong basin countries</p>	<p>TAT sets up the committee to supervise the project and provide the budget for the design and construction of the Convention centre</p>
Environment	<p>The environmental impact of the project such as physical, biotechnological, human benefit and quality of living has shown more positive aspects than the negative ones.</p>	<p>Air quality would be affected by dust during construction period</p>	<p>Following the initial measures suggested above.</p>
Financial	<p>The project requires three phases of construction within 25 years and would reach break even point at 13th year. The selected rate of reduction (discount) was that of the investment interest at 5% which would provide the highest return rate.</p>	<p>The overall project budget would be completely approved by the government.</p>	<p>Provincial private and governmental sectors call for attention from the government to approve budgets and support the project.</p>

Study issues	Results of study	Conditions	Methods of implementation
Economic	<p>Economically, the project is feasible for the period of 25 years. The investment cost and return would help support the economic and social welfare. The project would reach break even point in 13th year. The selected discount rate was the interest rate of the investment (5%) with the highest rate of return.</p>	<p>The project return purely reflects the genuine value via evaluation of social values benefiting the people.</p>	<p>Provincial private and governmental sectors call for attention from the government to approve budgets and support the project.</p>
Management	<p>From the evaluation results of the strength and weakness of the organisation the government should invest in the construction cost and the private sector will take care of management.</p>	<p>The massive investment certainly requires government budget for the construction of the centre, and later, managed by the private sector.</p>	<p>Under good governance, the government should appoint the committee to select the private company.</p>

6. Implementation of the Convention and Exhibition Centre Project

6.1 Implementation steps

From the results of the feasibility study of the Northeast Convention and Exhibition Centre Project, the Tourism Authority of Thailand (TAT) has set up the procedures to achieve the project objectives as follows:

Step 1 TAT should propose this project into its action plan by prioritising the importance of this project in order to create the potential of the upper Northeast of Thailand to compete with neighbouring countries such as PDR Laos, Cambodia, Vietnam and China.

In the meantime, TAT should push forward this project into the development plan of Udon Thani province in order to support the provincial strategies to develop Udon Thani as a trade and investment centre in the Northeast part of Thailand.

Step 2 TAT should propose the Ministry of Tourism and Sports as an intermediary in asking for permission of public land use at Nongdae from the Department of Provincial Administration (DPA), which takes care of the area. When the permission has been granted by DPA, the land will be under the supervision of the Treasury Department.

TAT should appoint the organising committee for this project which would be composed of representatives of the Ministry of Tourism and Sports, Thailand Convention and Exhibition Bureau, Thailand Exhibition Association (TEA), Thailand Incentive and Convention Association (TICA), Udon Thani governor, and the President of Udon Thani Chamber of Commerce, to drive the project to its success.

Step 3 The project organising committee should assign the consultancy services company to design and conduct the feasibility study of the project in details. This would include the investigation of environmental impact of the project and its analysis report. In case the low potential is the outcome, the project should be terminated.

Step 4 In case the project shows considerably high potential, the project organising committee should also assign the private organisation to manage the project and propose management framework.

Step 5 When the budget has been granted from the government, the project organising committee should organise the auction for the construction of the centre.

Step 6 After the construction has been completed, the project organising committee should monitor and perform the follow-up evaluation of the project in order to improve the efficiency of the project management.

6.2 Suggestions for project implementation

1) The asking for permission for the use of public land at Nongdae should be immediately carried out. In this regard, TAT should cooperate with Ministry of Tourism and Sports and propose to the Department of Provincial Administration, Ministry of Interior. TAT should also need the cooperation with Udon Thani province and other related organisations and people who currently use the land to withdraw the right of public use and transfer it to the Treasury Department. Ministry of Tourism and Sports should propose to establish the Northeast Convention and Exhibition Centre since the proposal for budget approval of the construction should be attached with the permission to use land by the Treasury Department.

2) The project organising committee should propose the State Railway of Thailand to arrange the cargo transportation as well as commuter trains at Nongdae Station which will be the new station adjacent to the convention and exhibition centre. The project would be responsible for the construction of the new train station there. The train services would be provided for all tourists, exhibitors, and people including neighbouring tourists for convenient travel.

3) TAT should push forward the initial step of this project within 3-5 years (2008-2010) in order to set up the readiness of the Northeast Convention and Exhibition Centre and create the network of services for the overall region of the Mekhong basin.

4) The personnel in either Udon Thani province or other Northeast provinces would be well trained to work efficiently as MICE business is under massive growth in the whole region of the Mekhong basin.

6.3 Project monitoring and evaluation

The management of this convention and exhibition centre should be monitored and evaluated in every six months with the project objectives as follows:

1) The progress of the targeted success and the project objectives in terms of budget, internal management processes, the time frame required in each step of the project management, numbers and characteristics of customers, personnel training, and the research and development of products and services as well as all the problems and obstacles of the project.

2) The performance of building system and the required criteria include the convenience, the sufficient use and environmental suitability.

3) The project environment and behaviour of personnel and customers. Customer satisfaction should be surveyed.

4) The evaluation of the project impact on the community such as the environment, the eco-social changes and situations, etc.

ศูนย์ความรู้ (ศคร.)



BT17720



Thailand Institute of Scientific and Technological Research

35 Moo 3 Technopolis, Klong 5, Klong Luang, Pathumthani 12120 Thailand

Tel. 66 2577-9000 Fax. 66 2577-9009

E-mail : tistr@tistr.or.th Website : www.tistr.or.th