Japan International Cooperation Agency (JICA)
Tourism Development Authority (TDA) /Ministry of Tourism / Egypt

The Study on Tourism Development Projects in the Arab Republic of Egypt

Final Report
Volume - 2
Main Report

July, 2000

Pacific Consultants International
Yachiyo Engineering Co.,Ltd.

The exchange rate applied in this study is US$1=LE3.4 (As of November 1999)

The Study on Tourism Development Projects in the Arab Republic of Egypt

Final Report
Main Report
Table of Contents

Preface

In response to the request from the Government of the Arab Republic of Egypt, the Government of Japan decided to conduct a Study on Tourism Development Projects in the Arab Republic of Egypt and entrusted the Study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Mr. Takahide Fujihira of Pacific Consultants International to Egypt, three times between June 1999 and July 2000. In addition, JICA set up an advisory committee headed by Mr. Susumu Takizawa, President, Japan Tourist Association, between June 1999 and July 2000 which examined the study from specialist and technical points of view.

The Study Team held discussions with the officials concerned of the Government of Egypt, and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Egypt for their close cooperation extended to the Study Team.

July, 2000

Kimio Fujita
President
Japan International Cooperation Agency

July 2000

Mr. Kimio Fujita
President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sir,

We are pleased to formally submit herewith the Final Report of "The Study on Tourism Development Projects in the Arab Republic of Egypt."

This report compiles the results of the Study which was undertaken in the Arab Republic of Egypt from June 1999 through July 2000 by the Study Team, represented by Pacific Consultants International.

We had been assisted by many people for the accomplishment of the Study, and we would like to express our sincere gratitude and appreciation to all those who extended their kind assistance and cooperation to the Study Team, in particular, the Tourism Development Authority who acted as the counterpart agency.

Also, we acknowledge the effective assistance by all the officials of your Agency and the Embassy of Japan in the Arab Republic of Egypt.

We hope that the report will be able to contribute to formulate appropriate polices and measures for the future development of Egypt.

Very truly yours,

藤平貞英

Takahide Fujihira
Team Leader,
The Study Team for the Study on
Tourism Development Projects in the
Arab Republic of Egypt

List of Tables

Part I Overview of National Tourism Development

List of Figures

List of Participants

Egyptian Side

Steering Committee

Name	Title	Organization
Eng. Adel Rady Chairman of Steering Committee	Chief Executive Offices	Tourism Development Authority, Ministry of Tourism.
Dr. Nabil Hana Saba	Technical Advisor	Tourism Development Authority, Ministry of Tourism.
Eng. Khaled Makhlouf	Head of Technical Department	Tourism Development Authority, Ministry of Tourism.
Eng. Mohmed Ali Ahmed	General Manager of Environmental Department	Tourism Development Authority, Ministry of Tourism.
Eng. Adel El Gendi	Coordinator & Follow-up Regional Planning,	Tourism Development Authority, Ministry of Tourism.
Eng. Abd El Mohayman	General Manger of Planning	Tourism Development Authority, Ministry of Tourism.
Dr. Mahmoud Khamis	Consultant of the minister	Ministry of Environment.
Eng. Mohamed Mostafa	General manager of road designing, Department	Tourism Development Authority, Ministry of Tourism.
Eng. Ibrahim Metwally	General manager of projects in Sinai Department	Tourism Development Authority, Ministry of Tourism.
Eng. Ghareeb Hashem	General manager of project in Red Sea Department	Tourism Development Authority, Ministry of Tourism.
Eng. Shawki Hassan	Deputy chairman, General Organization for Physical Planning	Ministry of Physical Development.
Pilot Mandoh Heshmat	Chairman of airports affairs department	Civil Aviation Authority.
Sailor A. Megeed Aldidi	General Authority of Red Sea ports	
Eng. Eissa Mabrook	Manager of urban & Land management unit	Aswan Governorate
Mr. Essam A. Wahid	Chairman of project & service sector	General Authority of Investment.
General A. Raoof Soliman	Deputy chairman	Ministry of defense-army forces operation authority.
Ms. Nargis Aziz	General manager of international cooperation department	Egyption Tourist Authority.

Counterpart

Name	Position	Organization
Eng. Adel El Gendi	Coordinator & Follow-up Regional Planning,	Tourism Development Authority, Ministry of Tourism

JICA Expert

Name	Position	Organization
Mr. Shinishi Satake	JICA Expert	Tourism Development Authority, Ministry of Tourism

Japanese Side

JICA Study Team

Name	Assignment
Mr. Takahide Fujihira	Team Leader/Implementation Program (1)
Mr. Tadashi Kume	Deputy Team Leader/Tourism Resource Evaluation. Human Resource Dep.
Mr. Yasutaka Nagai	Regional Development
Mr. Kanao Ito	Tourism Development
Mr. Yasuhiko Maeno	Tourism Administration
Mr. Hiroyuki Watanabe	Market Promotion
Mr. Makine Kusano	Tourism Facilities
Mr. Yoji Sakakibara	Demand Forecast
Ms. Chizuko Ihara	Economic and Financial Analysis /Implementation Program (2)
Mr. Kenji Igarashi	Environmental/Social Considerations
Mr. Naoyuki Minami	Historical/Cultural Resource
Mr. Isamu KOike	Tourism Service
Mr. Yasunori Nagase	Transport/Social Infrastructure
Ms. Junko Okamoto	Tourism Resource Survey

JICA Advisory Committee

Name	Position
Mr. Susumu Takizawa	Chairman of JICA Advisory Committee
Mr. Keiji Motomiya	Member of JICA Advisory Committee

JICA Tokyo

Name	Position
Mr. Takao Kaibara	Director, First Development Study Department, Social Development Study Division
Mr. Hidenori Kumagai	Deputy Director, First Development Study Department, Social Development Study Division
Mr. Kazuya Narukawa	First Development Study Department, Social Development Study Division

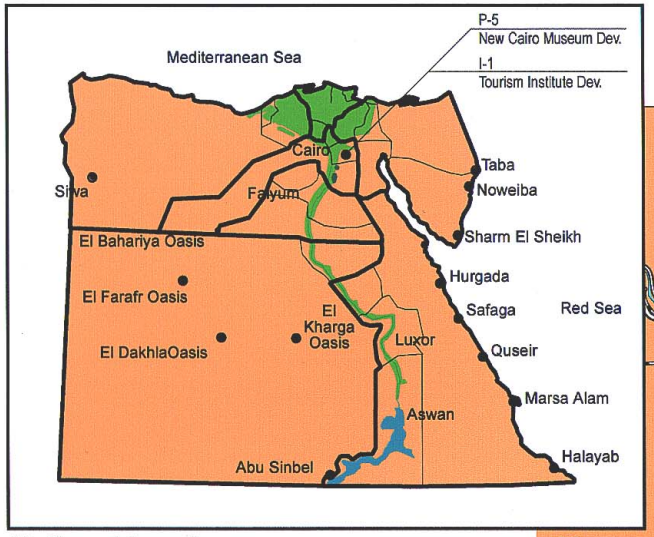
JICA Egypt

Name	Position
Mr. Kikuo Takeuchi	Resident Representative
Mr. Masami Fuwa	Deputy Resident Representative
Mr. Hitoshi Sato	Assistant Resident Representative

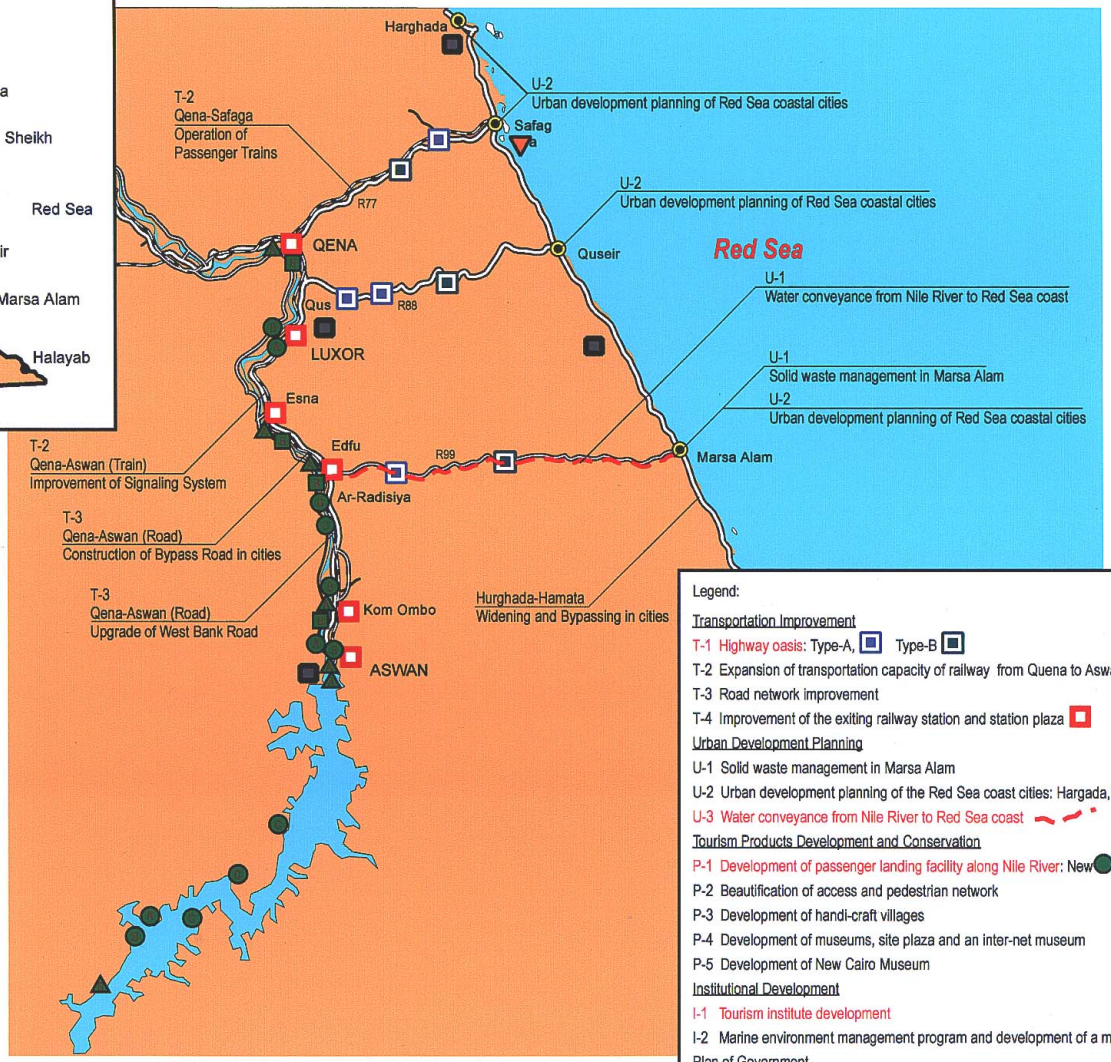
Abbreviations

ANUC	General Authority for New Urbanization Communities
BOT	Build, Operation and Transfer
CAPMS	Central Agency for Public Mobilization and Statistics
CICC	Cairo International Conference Center
CMPA	Coastal Marine Protected Area
ECA	Egyptian Chef's Association
ECAA	Egyptian Civil Aviation Authority
EEAA	Egyptian Environmental Affairs Authority
EGOTH	Egyptian Organization for Tourism & Hotel
EIA	Environmental Impact Assessment
ENR	Egyptian National Railway
ETA	Egyptian Tourist Authority
FIRR	Financial Internal Rate of Return
GAFI	General Authority for Investment and Free Zones
GAUADP	General Authority for Agrarian Development Projects
GEF	Global Environment Facility
GOE	Government of Egypt
GOIEF	General Organization for International Exhibition & Fairs
GOJ	Government of Japan
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HEPCA	Hurghada Environment Protection and Conservation Association
ICZM	Integrated Coastal Zone Management
IDC	Infrastructure Development Company
IDSC	Information Support and Development Center
IEE	Initial Environmental Examination
IMF	International Monetary Fund
JICA	Japan International Cooperation Agency
LB	Landing Berth
MHUUC	Ministry of Housing, Utilities and Urban Communities
MICE	Meeting, Incentive, Conference and Events
MOALR	Ministry of Agriculture and Land Reclamation
MOIMR	Ministry of Industry and Mineral Resources
MOPWWR	Ministry of Public Works and Water Resources
MOT	Ministry of Tourism
MOTR	Ministry of Transport
MSB	Major Station Berth
NCEM	Nile Cruise Environmental Management
NR	National Road
NR	National Road
OB	Other Berth
PCDDs	Polychlorinated Dibenzo Para Dioxins
RBA	Road and Bridge Authority
RR	Regional Road
SA	Service Area
SCA	Supreme Council of Antiquity
SPM	Suspended Particulate Matter
TDA	Tourism Development Authority
TDU	Tourism Development Unit
TIA	Tourism Investors Association
UK	United Kingdom
UNDP	United Nations Development Program
US	United States of America
USAID	United States Agency for International Development
WTO	World Tourism Organization

Study Area and Priority Projects



National Level



Regional Level

Legend:

Transportation Improvement

T-1 Highway oasis: Type-A, Type-B

T-2 Expansion of transportation capacity of railway from Quena to Aswan

T-3 Road network improvement

T-4 Improvement of the exiting railway station and station plaza

Urban Development Planning

U-1 Solid waste management in Marsa Alam

U-2 Urban development planning of the Red Sea coast cities: Hargada, Safaga, Quseir and Marsa Alam

U-3 Water conveyance from Nile River to Red Sea coast

Tourism Products Development and Conservation

P-1 Development of passenger landing facility along Nile River: New Improvement Expansion

P-2 Beautification of access and pedestrian network

P-3 Development of handi-craft villages

P-4 Development of museums, site plaza and an inter-net museum

P-5 Development of New Cairo Museum

Institutional Development

I-1 Tourism institute development

I-2 Marine environment management program and development of a marine environmental center

Plan of Government

GP-1 Construction & Improvement of Airport

GP-2 Improvement of Port

Red Letter is the most significant projects proposed.

Introduction

Study Background

Tourism has been a principal economic sector for Egypt for a long time, because Egypt is favored with her geographical location close to the European market, and has abundant famous historical monuments located all over the country. Foreign exchange earned from the tourism sector is a significant source of income for Egypt.

In the 1990s, with support from the IMF and the World Bank under a structural adjustment program, conditions for inducing private investment have been improved through privatization, deregulation, and other related measures. The TDA has also been established with the aim to facilitate and improve private investment to Egypt's tourism sector. The number of tourists visiting Egypt has increased since 1993 in response to this situation. The number of total visitors reached 3.9 million in 1997, but in 1998 accident at Luxor gave negative image to international tourists.

On the other hand, there is concern that such private investment will generate uncontrolled development, and that may damage the natural and social environment. Hence, the importance of policies to promote sustainable tourism development, which keeps harmony with the natural and social environment, are recognized

Given such circumstances, the importance of establishing regional tourism development plans in certain selected priority areas, is recognized.

The Government of the Arab Republic of Egypt (hereinafter referred to as "GOE") requested technical assistance from the Government of Japan (hereinafter referred to as "GOJ") to conduct a survey for countrywide tourism development in Egypt.

GOJ has dispatched two missions of the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official Agency of the Government of Japan responsible for the implementation of the technical cooperation programs in March and June 1997. As a result of the discussions held during the missions' meetings, GOJ and JICA have decided to conduct the Study on Tourism Development Projects in the Arab Republic of Egypt (hereinafter referred to as "the Study").

The Study has been suspended since 1997. However, in response to the official request of GOE, GOJ through JICA has dispatched the Contact Mission to discuss the Scope of Work for the Study to resume implementation of the Study in March 1999 and decided to commence the Study.

Study Objectives

The study objectives are:

- To appraise the current development plans concerned with the tourism sector in Egypt and select priority areas;
- To prepare a regional tourism development plan for each priority area for the year of 2012, select priority project packages with a need for implementation over a short-term period, and formulate pre feasibility study of priority project packages for the year of 2007;
- To recommend improvement measures for the tourism sector in Egypt; and
- To transfer technology to Egyptian counterparts regarding the formulation of Master Plans, and implementation plans of short-term priority projects/programs.

Study Area

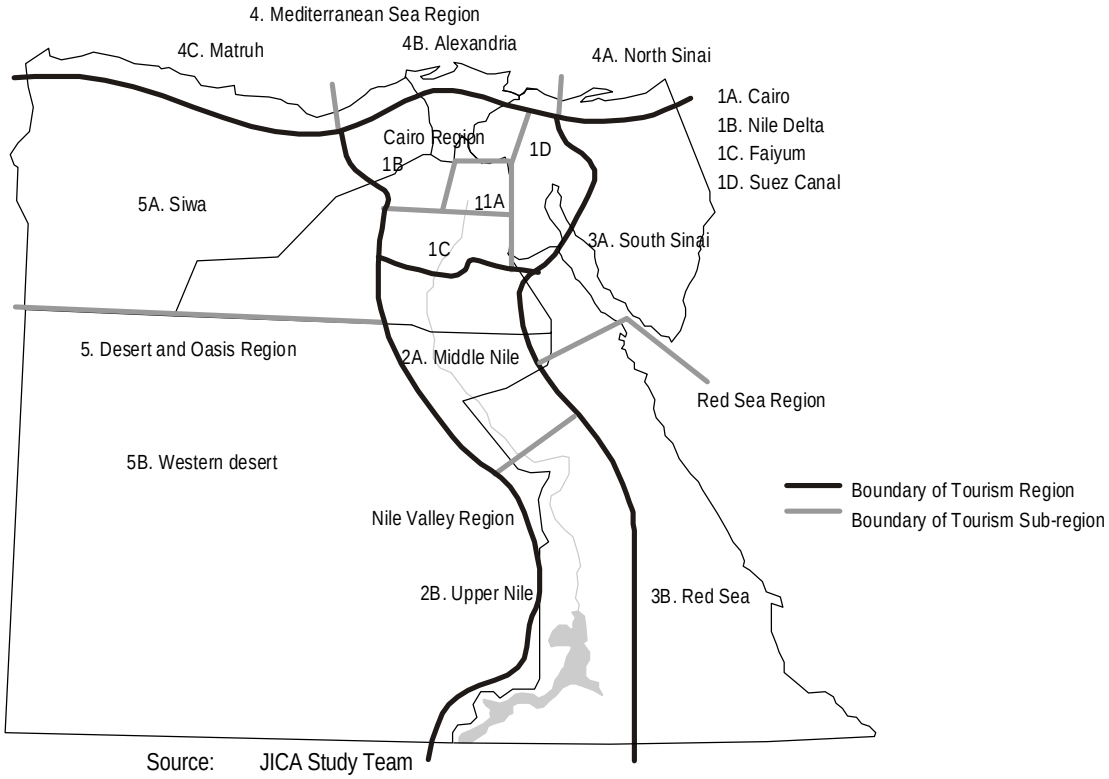
For analyses and appraisals of tourism sector's present condition in all over the country of Egypt, JICA Study Team set up 5 Tourism Regions and 13 Tourism Sub-regions according to the characteristics of tourism resources (historical, Cultural and Natural viewpoint), market conditions and development conditions in the Part I. 5 Tourism Regions and 13 Tourism Sub-regions are defined as Table 1 and Figure 1.

Table 1 Tourism regions and tourism sub-regions

Tourism Regions	Tourism sub-regions	
Cairo Region	1A	Cairo Sub-region
	1B	Nile Delta Sub-region
	1C	Faiyum Sub-region
	1D	Suez Canal Sub-region
Nile Valley Region	2A	Middle Nile Sub-region
	2B	Upper Nile Sub-region
Red Sea Region	3A	South Sinai Sub-region
	3B	Red Sea Sub-region
Mediterranean Sea Region	4A	North Sinai Sub-region
	4B	Alexandria Sub-region
	4C	Matruh Sub-region
Desert and Oasis Region	5A	Siwa Sub-region
	5B	Western Desert Sub-region

Source: JICA Study Team

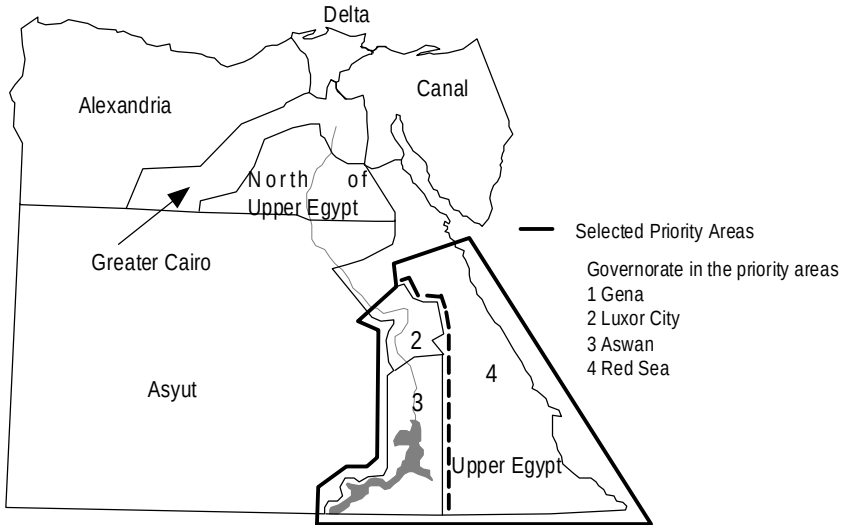
Figure 1 Tourism Regions and Tourism Sub-regions



Source: JICA Study Team

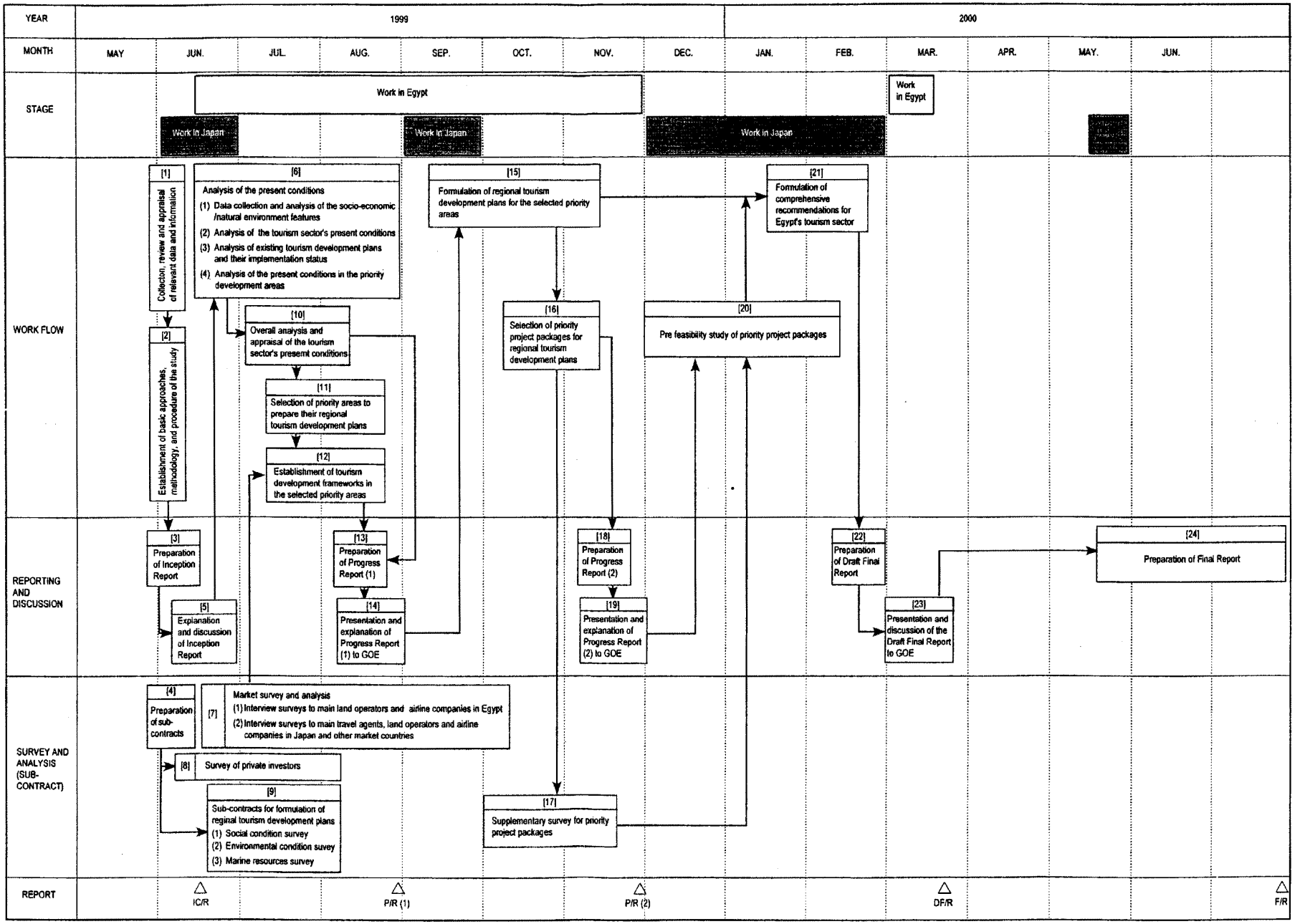
JICA Study Team selects Upper Nile Sub-region and Red Sea Sub-region as priority areas and formulates the regional tourism development plan under the thinking of the "Diversification of tourism products" and the "market integration" in the Part II. JICA Study Team recognizes the two Tourism Sub-regions as one area, and calls it as the "Upper Egypt" because it is as same as the category of Economic Region prepared by the Ministry of Housing, Utilities and Urban Communities.

Figure 2 Priority Area and Economic Region



Source: JICA Study Team

Figure 3 Work Flowchart



Part I
Overview of National Tourism Development

1. Findings on National Tourism Development

1.1 National Development Plan and Tourism Sector

1.1.1 National Development Plan

(1) Long-term national development plan

In 1997, Egyptian government announced long-term national development strategy, called "Egypt and 21st Century". The document lays out the National Development Plan of Egypt in the twenty-first century, with the following principal policies of development for stability and prosperity:

- To assume leadership in the Arab, African and Islamic countries;
- To promote a steady economic growth led by the private sector; and
- To develop the remote areas of the country in order to diversify the population pattern.

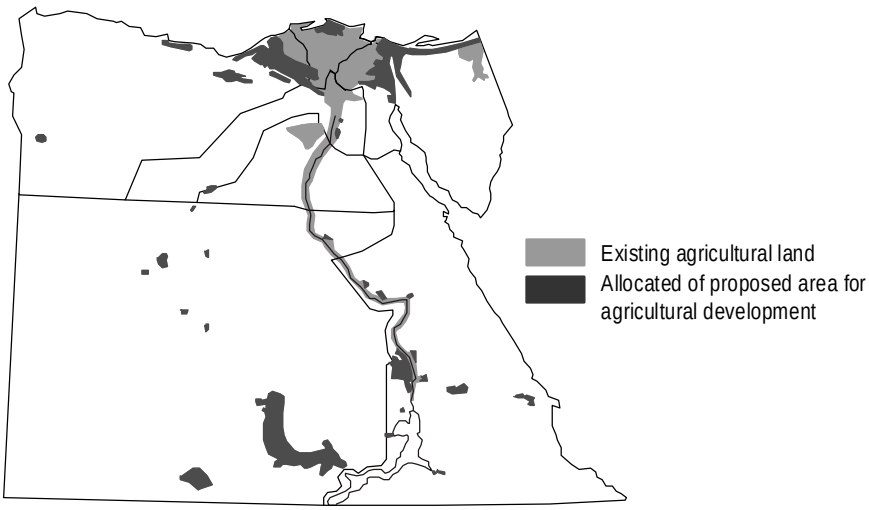
Egypt has an area of about 1,002 thousands km^2 and over 90% of its population are currently concentrated along the Nile River, while the remaining 10% are scattered in the areas of Sinai, the Red Sea and the Western Desert Oasis. Egypt plans to divert population from the Nile River to the remote areas by increasing habitable land from the current 5.5% to 25% in 2017.

In 1991, under Law No. 7/1991 regarding the State's ownership of land, the desert lands have been allocated to satisfy the following three categories of land development (see Figures 1.1.1, 1.1.2 and 1.1.3).

- Land for reclamation and plantation;
- Land for construction of new urban communities; and
- Land for construction of tourism projects.

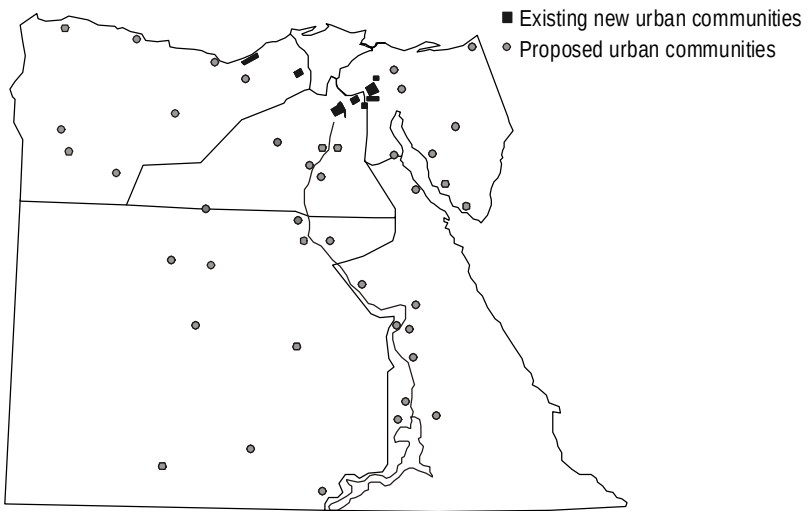
There are three government authorities responsible for those land developments. They are the General Authority for Agrarian Development Projects (GAUADP), the General Authority for New Urbanization Communities (ANUC) and the Tourism Development Authority (TDA).

Figure 1.1.1 Land for Reclamation and Plantation



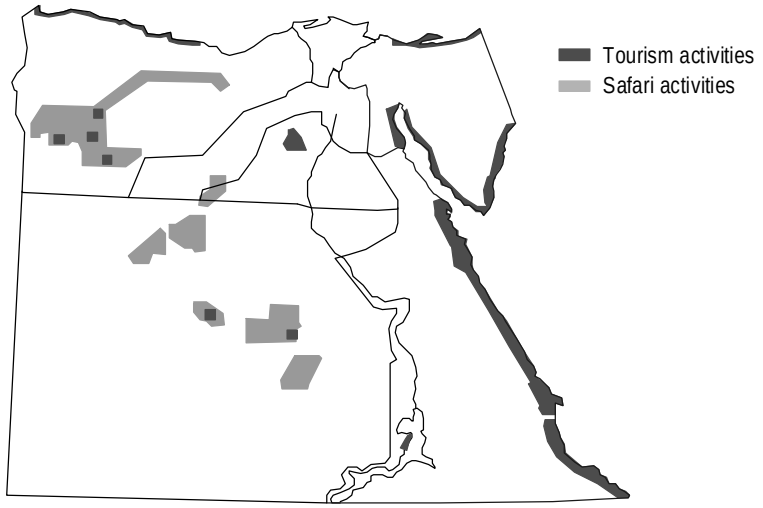
Source: Land Use Map of Egypt

Figure 1.1.2 Land for Construction of New Urban Communities



Source: Land Use map of Egypt

Figure 1.1.3 Land for Construction of Tourism Projects



Source: Land Use map of Egypt

The major economic indicators in Egypt and the 21st Century are as follows:

- Population will reach 80 million in 2017;
- GDP is estimated to increase 4.3 times (LE 1,100 billion) from 1996 to 2017 at an annual growth rate of 6.8%, and 7.6% during the periods 1997 to 2002 and 2003 to 2017 respectively;
- GDP per capita will reach from US$1,250 in 1997 to US$4,100 in 2017;
- 550,000 new jobs need to be generated annually to absorb the labor force increase, and there will be a rise in employment from 15.8 million in 1996 to 26.8 million in 2017; and
- International visitor arrivals will increase to 27 million in 2017 with an average annual growth rate of 10%. To accommodate that number of visitors, 600,000 rooms are needed until 2017.

The principal argument for encouraging tourism development is that the tourism sector contributes large foreign exchange earnings and creates new employment opportunities for the people living in remote areas.

Table 1.1.1 Major Economic Indicators of Egypt and the 21st Century

Items	1996 (Actual)	Egypt and the 21st Century	
		In 2017	Assumptions
Inhabited area	5.5% of total area	25% of total area	
GDP growth rate	4.8% in the last 15 years	6.8% in 1997-2002 and 7.6% in2003-2017 (tourism 11.1 % in 1997-2002)	4.3 times
GDP	LE257 billion (nominal)	LE1,100 billion (1996 price)	
GDP per capita	US$1,250	US$4,100	
Population	59 million	80 million	Growth rate is 1.3% until 2017
Employment	15.8 million	26.8 million	550,000 new jobs per year
International tourist arrivals	4.0 million	27.0 million	
International tourist bed nights	26 million	230 million	

Note: Actual figures are taken from the Statistics Yearbook and figures for 2017 are the targets in Egypt and the 21st Century.

Source: Egypt and the 21st Century by Cabinet in 1997, and Statistical Yearbook Arab Republic of Egypt 1998 by Central Agency for Public Mobilization and Statistics (CAPMS)

(2) The Fourth Five-Year Development Plan

In the Fourth Five-Year Development Plan (1997-2002), the average annual GDP growth rate had been estimated at 6.8%, and the forecast for the tourism sector was the highest among all sectors at 11.1%, as shown in Table 1.1.2.

The Plan outlines a total investment package amounting to LE 400 billion, of which the government, public enterprise and private sector investments are to account for 26%, 3% and 71% respectively, as shown in Table 1.1.3. Private investment is dominant in the tourism sector and housing sector, which combine for a 98% share under the privatization policy. Meantime, the government still plays an important role in the social service sector, excluding housing. The shares of government investment in public utilities and education are 98% and 85% respectively.

Table 1.1.2 GDP Growth Targets of Main Sectors under the Fourth Five-Year Development Plan

Sector	Target average growth rate per year
Agriculture	3.8%
Petroleum	3.2%
Construction	10.0%
Transport & Telecommunication	7.5%
Commercial & Finance	6.8%
Tourism	11.1%
Housing	7.0%
Public Utilities	9.7%
Total (average)	6.9%

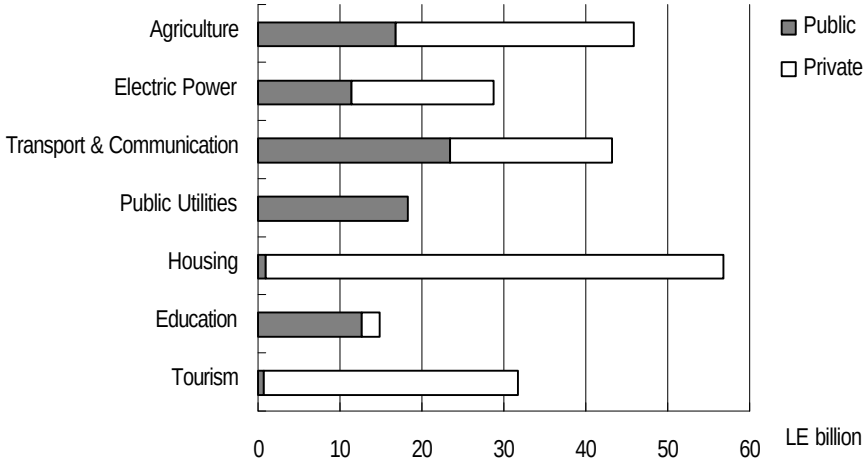
Source: Fourth Five-Year Development Plan

Table 1.1.3 Investment by Sector under the Fourth Five-Year Development Plan

Sector	Government sector		Public enterprise sector		Private sector		Total	
	LE billion	%	LE billion	%	LE billion	%	LE billion	%
1.Commodity Sector	32.4	16	7.6	4	164.2	80	204.2	100
2.Production Service Sector	22.4	26	5.6	7	58.1	67	86.1	100
(Tourism)	0.7	2	0	0	31.1	98	31.8	100
3.Social Service Sector	47.8	44	0.5	0.5	61.1	56	109.4	100
Housing	0.9	12	0	0	56.0	98	56.9	100
Public Utilities	18.0	98	0.3	2	0	0	18.3	100
Education	12.6	85	0	0	2.2	15	14.8	100
Insurance	6.5	74	0	0	2.3	26	8.8	100
Others	9.8	92	0.2	2	0.6	6	10.6	100
Total (average)	102.6	26	13.7	3	283.4	71	399.7	100

Source: Fourth Five-Year Development Plan

Figure 1.1.4 Investment under the Fourth Five-Year Development Plan



Source: Fourth Five-Year Development Plan

(3) Future GDP target

Based on the Fourth Five-Year Development Plan and Egypt and the 21st Century, the GDP in 2012, the target year of the Study, is estimated, as shown in Table 1.1.4

Table 1.1.4 Gross Domestic Product in 2012

GDP/GDP growth rate	Amount/percentage	Remarks
Nominal GDP in 1996/97	LE 257 billion	Actual
GDP Growth rate 1998 - 2002 2003 - 2012	6.9% 7.6%	Fourth Five-Year Development Plan Egypt and the 21st Century
GDP in 2012 at 1996/97 price	LE 750 billion	

Source: JICA Study Team

1.1.2 Contribution of Tourism to the National Economy

(1) Current situation

Table 1.1.5 shows the current performance of the tourism sector and its contribution to the national economy. In 1997 the international visitor arrivals in Egypt were almost 4 million and

bed nights were 26.6 million. In 1996/97 the amount of value added by tourism, including hotels and restaurants, amounted to LE 3.0 billion at constant price of 1991/92, or 1.9% of the total GDP, while the investment share of tourism was 7.2% in the 1997/98 budget. Regarding its contribution to foreign currency earnings, the tourism sector was the second earner in 1996/97, with a total of LE 12.4 billion, or 22.5% of the gross receipts of the country, including receipts of merchandise exports (30.5%). Those receipts covered trade balance deficit by 35%.

Table 1.1.5 Current Performance of the Tourism Sector (1996/97)

	Total sector	Tourism *1	Share of tourism
GDP (LE billion at constant price of 1991/92)	162	3	1.9 %
Investment (LE billion) *2	58.2	4.2	7.2 %
Employment (thousand)	15,862	145	0.9 %
Foreign currency earnings (LE billion)	54.9	12.4 (US$3.6 billion)	22.5 %

Note: *1 Tourism includes tourism establishments, hotels and restaurants
*2 Investment plan of 1997/98 in the Fourth Five-Year Development Plan

Source: Egypt, Tourism in Figures, Ministry of Tourism, Statistical Yearbook 1992-1997, and Fourth Five-Year Development Plan

(2) Future tourism development and contribution to national economy

In the "Egypt and the 21st century", the target international visitor arrivals are set to increase from 4 million in 1997 to 27 million in 2017, at an average annual growth rate of 10%. The Ministry of Tourism has announced the development strategies of tourism until 2012, as shown in Table 1.1.6. The target of visitor arrivals is estimated at 15 million in 2012 and 315 thousand rooms are additionally required to accommodate this number. The average expenditure per tourist night is estimated at US$ 130 and gross receipts are approximately US$ 16.8 billion (LE 57.1 billion). The number of generated jobs is expected to be 1,103 thousand, including direct and indirect employment.

Table 1.1.6 Development Target in Tourism Sector

Target items	2012	Remarks
Visitor arrivals (million persons)	15	Annual growth rate: 10%
Bed nights (million nights)	129	Average bed nights: 8.6
Accommodation capacity required (thousand rooms)	315	Room occupancy rate: 60% 1.5 guests per room
Foreign currency earnings (billion US$)	16.8	US$ 130 per tourist night
Employment Opportunity Generation (thousand persons)	1,103	Direct 1.5/room, indirect 2.0/room

Source: The Strategy of the Tourism Sector for the Five-Year Development Plans (4th, 5th, and 6th), Ministry of Tourism

(3) Tourism investment plan in the three five-year development plans

In line with the national target of tourism development, the Ministry of Tourism has estimated the investment cost, which includes public investment and private investment, until 2012, as shown in Table 1.1.7. The total investment cost is estimated at LE 76.6 billion from 1997/98 to 2011/12, of which superstructure development amounts to LE 63 billion, or 82% of the total. It includes the development of 315,000 rooms and infrastructure in the tourist areas under TDA's responsibility.

Table 1.1.7 Total Investment Cost for Tourism Development in 1997/98 to 2011/12

(Unit: LE Million)

Responsible bodies	Fourth Five year plan	Fifth Five year plan	Sixth Five year plan	Total	
MOT	61	61	59	182	0.2%
TDA	14,608	20,210	28,182	63,000	82.2%
ETA	-	-	-	120	0.2%
CICC	-	-	-	299	0.4%
Infrastructure development	3,015	4,195	5,790	13,000	17.0%
Total	-	-	-	76,601	100.0%

Note: *1 Improvement and development of tourist areas (beautification) and rest houses in tourist areas, *2 Superstructure development including infrastructure development within the tourist projects *3 Infrastructure development: regional infrastructure outside the tourist projects

Source: The Strategy of the Tourism Sector, "The Ministry and Its Affiliates," for the Five-Year Plans, The Central Department for Planning and Follow-up, the Ministry of Tourism

Meanwhile, in the Fourth Five-Year Plan (1997-2002), the investment of tourism sector is estimated at LE 31.8 billion, of which 98% is covered by the private sector.

Guarantees and incentives under Law No. 8/1997 encourage private investment in Egypt. For the tourism investment projects, including transportation projects, tax exemption is provided. Usually, tourism projects are exempted from corporate tax for five years and especially development projects aimed at developing tourist desert zones and supplying them with infrastructure are granted corporate tax exemptions for ten years. Moreover, a 20-year exemption is provided for business activities in the New Valley and Kharga, Baris and Farafra oases.

Though the share of public investment in tourism sector is very small, tax revenues from tourism-related industries are also small as the investment incentives are provided for 5-10 years.

1.2 Tourism Development Plans

This chapter reviews the previous tourism development plans, which have been prepared by the MOT, and defines the priority areas for tourism development by the MOT

1.2.1 Sequence of Egyptian Tourism Policies and Strategies

Table 1.2.1 summarizes the tourism development policies of Egypt over the past 30 years. The MOT was established in 1965 and under the MOT, the Egyptian Tourism Authority and the Tourism Development Authority were established in the 1980s and 1990s respectively. In 1978, the MOT and the German Agency for Technical Cooperation (GTZ) completed the first nationwide plan for tourism development; several plans were prepared afterwards.

Table 1.2.1 Chronological Events of Tourism Development

Year	Activity	International Visitor arrivals (thousand)
1965	Establishment of Ministry of Tourism	
1965	Law on tourist establishments (Law No.1)	
1968	Law on creation of chambers (Law No. 85)	
	Completion to relocate Abu Simbel temples and other 23 archaeological sites as work progressed on the Aswan High Dam	
1974	Law on foreign investment and zones (Law No. 43)	
1978	National Plan for tourism (The first plan for tourism development)	
1979	Inclusion of 5 monuments in the World Heritage List	
1981	Law for tourism promotion (Law No.124, superseding Law No. 85)	
	Organizing Egyptian Tourism Authority (ETA) (Presidential Decree No.134)	
1982.7	The 1st National Five-Year Plan (1982-1987)	1,423.3
1983	Organizing the system of travel agencies (Law No.188)	1,497.9
1985	Reorganizing the Higher Council for tourism (Presidential Decree No.266)	1,518.4
1987.7	The 2nd National Five-Year Plan (1987-1992)	1,795.0
1989	The Investment Law (Law No. 230)	2,503.4
	Establishment of the Tourism Development Unit in MOT (TDU)	
	Establishment of the Cairo International Conference Center (CICC)	
1991	Reestablishment of the Tourism Development Authority (TDA) from TDU	2,214.3
1992.7	The 3rd National Five-Year Plan (1992-1997)	3,206.9
1993	Tourism promotion plan	2,507.8
1994	Egypt's tourism development program and investment opportunities by MOT	2,582.0
	Designation of Tourism development areas by MOT	
1996.1	The Supreme Committee for investments approved 80 projects for tourism investment	3,895.9
1996.5	The Cabinet approved resolutions to boost the tourism sector	
1996	Alternative spatial strategy of tourism development	
	The strategy of tourism sector by MOT*	
	Egypt and the 21st Century including tourism development strategy	
	Land Use Plan by the year 2017 including tourism land use scheme	
1997.5	Investment incentives and guarantees law (Law No. 8)	3,961.4
1997.7	The 4th National Five-Year Plan (1997-2002)	
1998.6	Development Master Plan of South Egypt until Year 2017 by MHUUC	3,453.9

Source: JICA Study Team

1.2.2 Tourism Development Plans

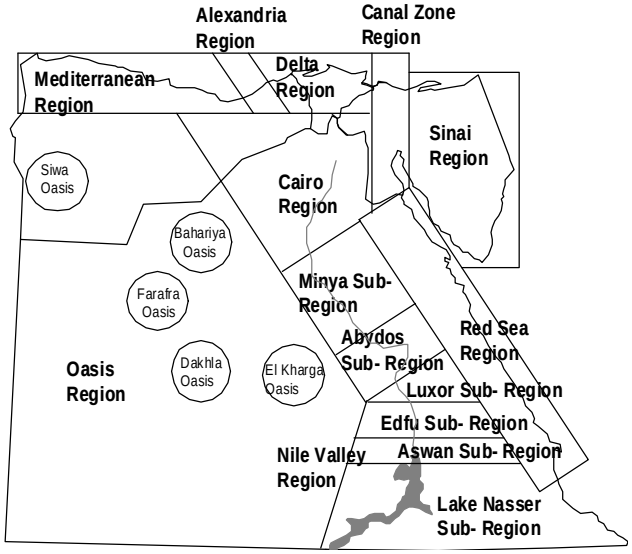
(1) National Plan for Tourism

The National Plan for Tourism was the first nationwide comprehensive development plan drawn up by MOT with the cooperation of GTZ in 1978. Though 8 tourism development regions were designated, the priority tourism development plans were not set in the plan.

The targets of the international visitor arrivals are 1.6 million in 1980, 2.1 million in 1985, and 2.5 million in 1990. About 47% of the international visitor consisted of people of the western countries in the plan.

The requisite number of rooms was concentrated in Cairo (50.2%) and the Nile Valley (31.3%) with the target year of 1990. Target hotel room in 1990 was 21,100.

Figure 1.2.1 Development Areas of the National Plan for Tourism



Source: National Plan for Tourism for the Arab Republic of Egypt by GTZ in 1978

Table 1.2.2 Tourism Regions and Tourism Subregions

Region	Subregion
Cairo	-
Nile Valley	Minya, Abydos, Luxor, Edfu, Aswan, Lake Nasser
Sinai	
Red Sea	-
Canal Zone	-
Delta	-
Alexandria	-
Mediterranean	-
Oasis	Siwa Oasis, Bahariya, Farafta, Dakhla, El Kharga

Source: National Plan for Tourism for the Arab Republic of Egypt by GTZ in 1978

Table 1.2.3 Development Framework of the National Plan for Tourism

	Base year		Targets					
	1976		1980		1985		1990	
International visitor arrivals (thousand persons)	984	100.0	1,564	100.0	2,092	100.0	2,478	100.0
Western	308	31.3	557	35.6	792	37.9	964	38.9
Arab	535	54.4	783	50.1	1,000	47.8	1,159	46.8
Others	141	14.3	224	14.3	300	14.3	355	14.3
No. of guests in 5- and 4-star hotels	446		753		1,103		1,322	
No. of bed nights in the above	2,676		4,518		7,721		9,254	
Length of stay	6		6		7		7	
Requisite number of rooms								
Cairo	2,650	55.2	3,850	44.9	9,400	60.4	10,600	50.2
Alexandria	550	11.5	670	7.8	970	6.2	1,270	6.0
Nile Valley Luxor	650	13.5	910	10.6	1,900	12.2	2,500	11.8
Aswan, Lake Nasser	600	12.5	800	9.3	1,100	7.1	1,400	6.6
Minya, Abbydos, Edfu	-		-		300	1.9	850	4.0
Nile cruisers	350	7.3	650	7.6	1,250	8.0	1,850	8.8
Mediterranean coast	-		-		300	1.9	1,500	7.1
Red Sea	-		100	1.2	400	2.6	1,200	5.7
Canal zone	-		80	0.9	580	3.7	1,080	5.1
Oasis	-		40	0.5	80	0.5	80	0.4
Total	4,800		8,566		15,553		21,100	

Source: National Plan for Tourism by GTZ in 1978

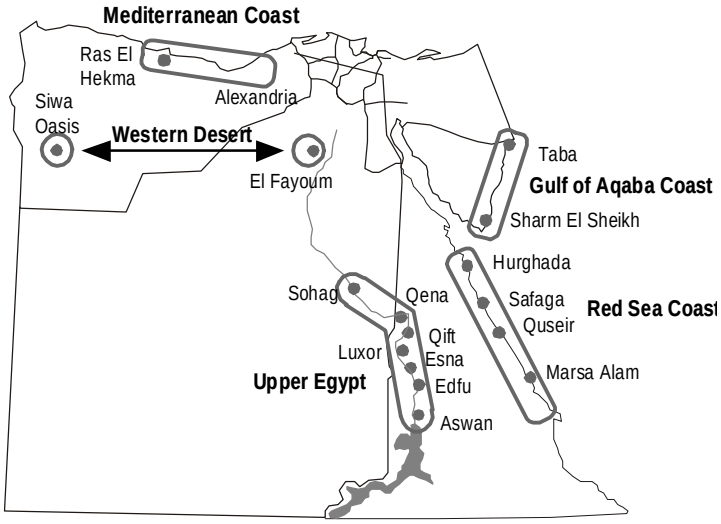
(2) Tourism Development Program and Investment Opportunities

"Tourism Development Program and Investment Opportunities" was prepared by the Ministry of Tourism in 1994. The report reviewed current condition of the tourism sector in Egypt, and set the following five priority zones for tourism development.

- Gulf of Aqaba Coast from Sharm El Sheikh to Taba
- Red Sea Coast from Hurghada to Marsa Alam
- Upper Egypt from Sohag to Aswan
- Mediterranean Coast from Alexandria to Ras El Hekma
- Western Desert, Faiyum and Siwa Oasis

The reports describe current conditions such as access and infrastructures area, and prepare for future development plans for each priority area. The report also has privatization program of tourism related public companies.

Figure 1.2.2 Priority Zones of Tourism Development Program and Investment Opportunities



Source: Egypt's Tourism Development Program and Investment Opportunities by MOT in 1994

(3) Designation of tourism development areas by MOT

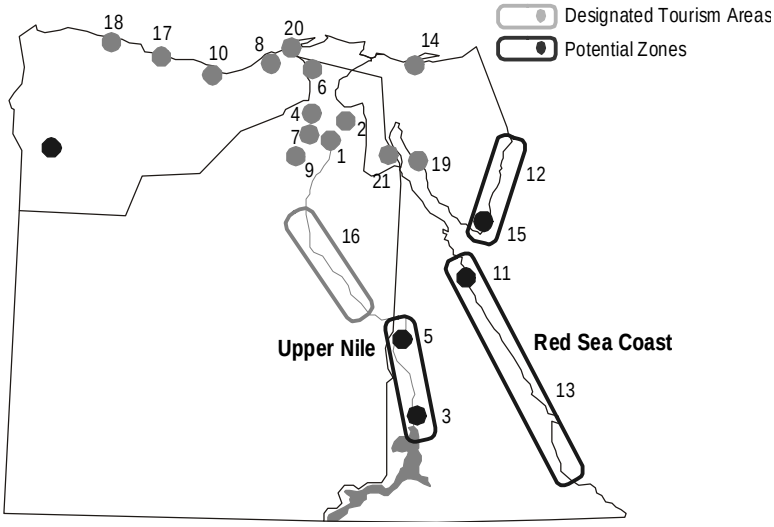
The MOT has specified 22 areas for tourism development in 1994. The following three areas are selected as priority areas in the tourism development areas:

- Gulf of Aqaba Coast;
- Red Sea Coast; and
- Upper Nile.

The MOT used the following criteria for the selection of the priority areas:

- Potential of natural environment as tourism resources and value as tourism products;
- Service capacity of economic and tourism infrastructure;
- Legal restrictions of the candidate areas such as land ownership; and
- Political and social consensus of the tourism development in the area.

Figure 1.2.3 Designation of Tourism Development Areas by MOT



Source: Best Practices for Tourism Center Development along the Red Sea Coast by TDA in 1998

Table 1.2.4 Name of Tourism Zones/Priority Areas

	Name	Remarks
1	Giza Pyramid	Designated Tourism Areas
2	Cairo Nile Banks	Designated Tourism Areas
3	Aswan	Potential Zones
4	Herwan	Designated Tourism Areas
5	Luxor and El Goma	Potential Zones
6	Central Nile Banks	Designated Tourism Areas
7	Khaen El Khariri	Designated Tourism Areas
8	El Montazah	Designated Tourism Areas
9	Faiyum	Designated Tourism Areas
10	Sidi Abdel Rahman	Designated Tourism Areas
11	Hurghada	Potential Zones
12	Gulf of Aqaba	Potential Zones
13	Red Sea	Potential Zones
14	El Arish	Designated Tourism Areas
15	Ras Mohamed	Potential Zones
16	Nile Valley	Designated Tourism Areas
17	Ras El Hekma	Designated Tourism Areas
18	Matruh	Designated Tourism Areas
19	Ras Sidr	Designated Tourism Areas
20	Rashid	Designated Tourism Areas
21	El Ain Sukhna	Designated Tourism Areas
22	Siwa	Potential Zones

Source: Best Practices for Tourism Center Development along the Red Sea Coast by TDA in 1998

(4) Alternative Spatial Strategy for Tourism Development

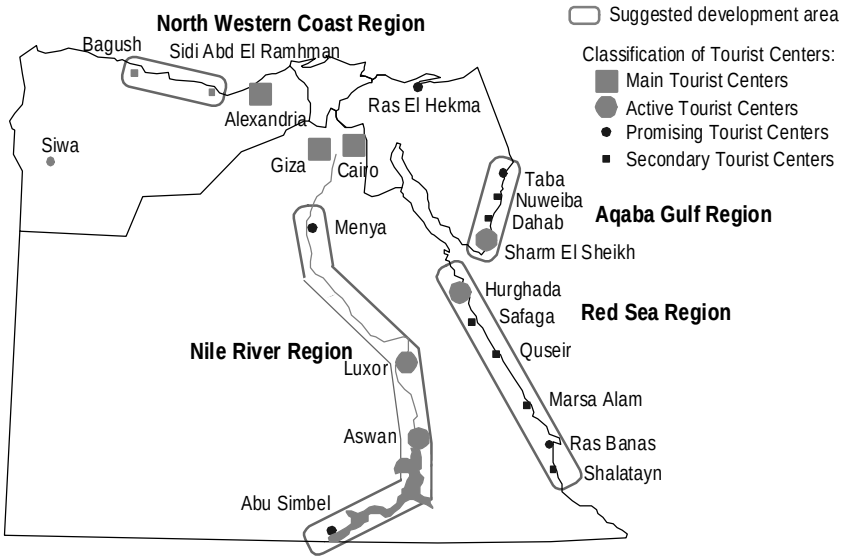
Alternative Spatial Strategy for Tourism Development was prepared by MOT in 1996. The strategies drawn up for tourism development were as follows.

- To control the rapid growth of tourism development sites that are drawing large numbers of visitors (Cairo region and Alexandria) alongside with raising the level of tourism products;
- To encourage development in the active regions that are internationally well known (Luxor, Aswan, Hurghada, Red Sea, Sharm El Seikh) and to include them in an integrated development plan;
- To develop promising tourist centers that have special potentials (like Ain El Sokhna, St. Catherine, and Ras Sidr); and
- To develop a number of secondary tourist centers in small scale according to the expected tourist demand and the development potentialities of each center.

Priority development areas included the followings:

- Aquaba Gulf region (Sharm El Sheikh, Dahab. Nuweiba, Taba);
- Red Sea region (Hurghada, Safaga, Quseir, Marsa Alam, Ras Banaas, Shalatayn);
- Nile River region (Qena, Luxor, Aswan, Abu Simbel); and
- North Western Coast region (Sidi Abd El Ramhman, Bagush).

Figure 1.2.4 Alternative Spatial Strategy for Tourism Development

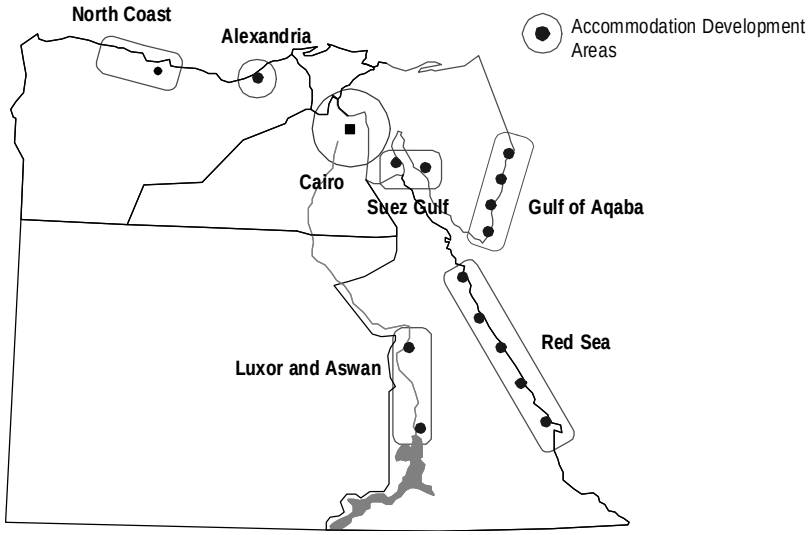


Source: Alternative Spatial Strategy for Tourism Development by MOT in 1996

(5) The Strategy of Tourism Sector

The Strategy of Tourism Sector was prepared by the Ministry of Tourism in 1996, targeting the year 2012. It estimated the additional number of rooms required until 2012 at 315,000, of which 201,000 rooms (63.8%) would be allocated to the Red Sea, as shown in table 1.2.5.

Figure 1.2.5 Main Accommodation Development Areas



Source: The Strategy of The Tourism Sector by Ministry of Tourism in 1996

Table 1.2.5 Accommodation Capacity which must be added until 2012

Areas	Numbers (room)	Shares (percent)
Cairo	3,500	1.1
Alexandria	2,500	0.8
Red Sea	201,000	63.8
Gulf of Aqaba	26,000	8.3
Luxor and Aswan	25,000	7.9
North Coast	22,000	7.0
Suez Gulf	10,000	3.2
Others	25,000	7.9
Total	315,000	100

Source: The Strategy of The Tourism Sector by Ministry of Tourism in 1996

(6) Tourism Development Strategies of "Egypt and the 21st Century"

Egypt and 21st Century are prepared by the cabinet of the Egyptian Government in 1997, and it lays out the long-term national development plan in the beginning of 21st century. Tourism was positioned as one of major leading industries in the strategy.

Following are the tourism development strategies in the beginning of 21st century:

- To increase the number of visitor arrivals to 27 million by the year 2017;
- To extend length of stay from 7 days in 1997 to 9 days by the year 2017, and to increase total bed nights from 26 million in 1997 to 230 million by 2017;
- To raise the accommodation capacity to 618 thousand rooms by the year 2017;
- To focus on tourism development projects in south Egypt;
- To formulate integrated development programs for new tourist areas;
- To establish new tourist camp sites for safaris in the middle of Sinai and in Wadi El Gemal of Red Sea;
- To preserve the ancient Egyptian civilization; and
- To supply new sites for tourism development with all the required facilities like in the Red Sea, Sinai, the New Valley, Luxor and Aswan.

(7) Land Use Scheme for Tourism Development by the Year 2017

The largest tourism development in the history of Egypt is being implemented along more than 220 km of coastline, stretching from Taba to Ras Mohammed and 900 km south of Hurghada, as shown in Figure 1.1.3. The development areas are identified as prime tourist sites and have been granted government concessions and incentives, including tax holidays and almost free land. The government has also identified a number of areas with huge potential for tourism development, including El Arish, Ras Mohammed, Sharm El Sheikh, Taba and Hurghada.

The aforementioned areas adjoin several areas rich in safari lands, notably Siwa, El Bahariya, El Farafra, El Dakhla and El Kharga.

1.2.3 Changes of Priority Areas by Each Plan

Table 1.2.6 shows changes of priority development area. The National Plan for Tourism is not prepared for the priority tourism development areas. The Nile Valley, Red Sea and Mediterranean Sea region are prioritized in 1990s. In Egypt and 21st Century, the Nile Valley will be strayed off from the priority tourism development area, and the Red Sea, Mediterranean Sea and Western Desert are prioritized.

Table 1.2.6 Designated Priority Areas by Each Plan

Tourism Region	Tourism Sub-region	Tourism development areas by MOT	Designated priority areas by each plan				
			(1)	(2)	(3)	(4)	(5)
Cairo	Cairo	2. Cairo Nile Banks	■				
		1. Giza Pyramid	■				
		4. Herwan	■				
		7. Kharn El Khariri	■				
	Nile Delta	6. Central Nile Banks	■				
	Faiyum	9. Faiyum	■	■			■
	Suez Canal		■				
Nile Valley	Middle Nile	16. Nile Valley	■	■		■	
	Upper Nile	5. Luxor and El Goma	■	■	■	■	
		3. Aswan	■	■	■	■	
		(Abu Simbel)	■			■	
Red Sea	South Sinai	12. Gulf of Aqaba	■	■	■	■	■
		15. Ras Mohamed	■	■	■	■	■
		19. Ras Sidr	■	■			■
		21. El Ain Sukhna	■				■
	Red Sea	11. Hurghada	■	■	■	■	■
		13. Red Sea	■	■	■	■	■
Mediterranean Sea	North Sinai	14. El Arish	■				■
	Alexandria	8. El Montazah	■	■			
		20. Rashid	■				
	Matruh	18. Matruh	■	■		■	■
		17. Ras El Hekma	■	■		■	■
		10. Sidi Abel Rahman	■	■		■	■
Desert and Oasis	Siwa	22. Siwa	■	■			■
	Western Desert						■

Source: (1) National Plan for Tourism in 1978, (2) Egypt's Tourism Development Program and Investment Opportunities in 1994, (3) Priority Zones of Tourism Development Areas in 1994, (4) Alternative Spatial Strategy for Tourism Development by MOT in 1996, (5) Land Use Map of Egypt 1997

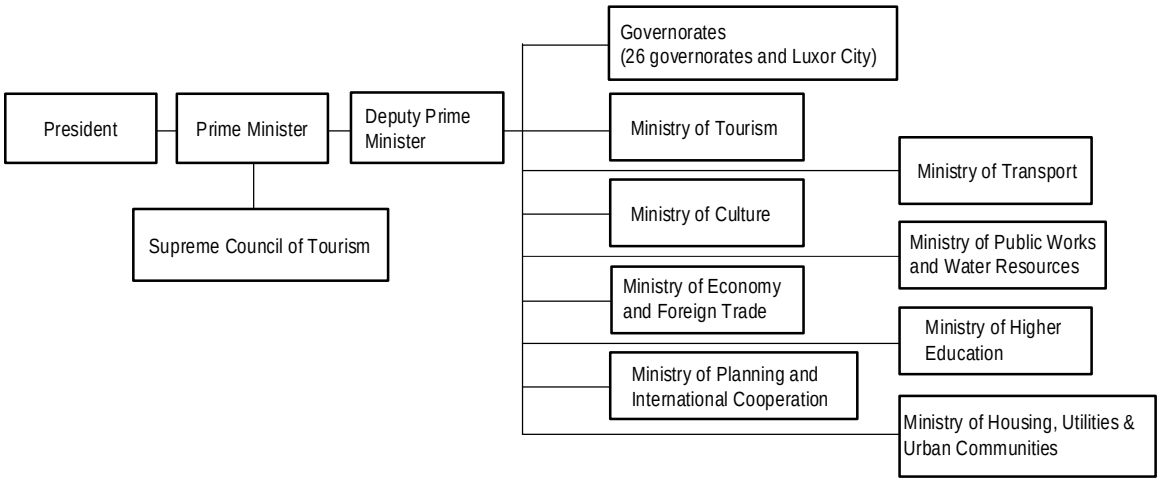
1.3 Tourism Administration and Activities

1.3.1 Tourism Related Organization in the Government of Egypt

Egyptian government is comprised of 33 organizational units, out of which 27 units are ministries, and 6 offices of the Minister of the State for specific responsibility (for example, Environmental Affairs). The ministry, which has responsibility for tourism, is the Ministry of Tourism (MOT).

The Minister of Tourism works his authority and directorship over three other governmental tourism units, respectively Egyptian Tourist Authority (ETA), Tourism Development Authority (TDA), and Cairo International Conference Center (CICC). ETA, TDA and CICC come direct under the Minister of Tourism, thus each being an autonomous agency (like a small kingdom). TDA does a roll of the counterpart of JICA Study Team on Tourism Development Projects of Egypt. Besides MOT, TDA, ETA and CICC, governmental organizations showed in Figure 1.3.1 are tourism related organizations in the government.

Figure 1.3.1 Tourism Related Government Organizations



Source: JICA Study Team

The Minister of Tourism has authority and directorship over three other governmental tourism units, namely, the Egyptian Tourism Authority (ETA), Tourism Development Authority (TDA), and Cairo International Conference Center (CICC). The ETA, TDA and CICC are directly under the Minister of Tourism, each one being an autonomous agency. The TDA is the counterpart agency of the JICA Study Team on this project.

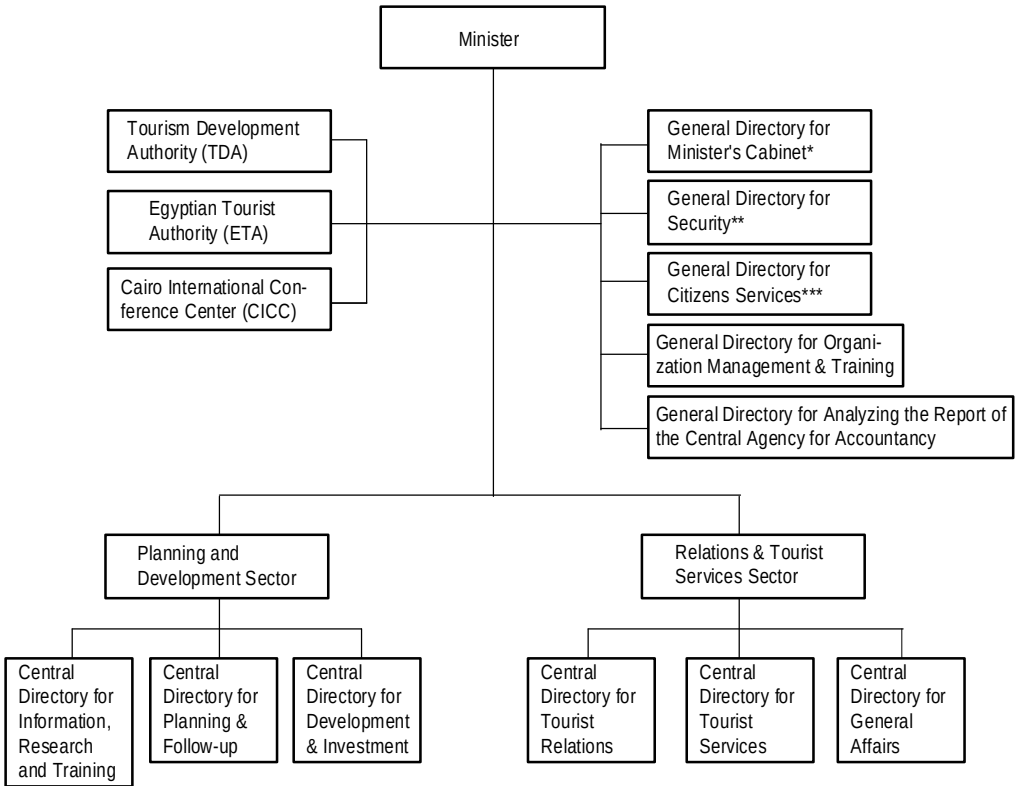
1.3.2 Ministry of Tourism (MOT)

The MOT was established in 1965 with limited responsibilities (mainly licensing and promotion). In 1981, by Presidential Decree No. 134, the Egyptian Tourism Authority (ETA) was established to strengthen the country's tourism promotional efforts in both international and Egyptian markets.

In 1989, by a ministerial decree, the Tourism Development Unit (TDU) was created in the MOT to strengthen technical expertise in developmental planning and to coordinate the required infrastructure and facilities for the designated tourism zones. In 1991, by Presidential Decree No. 374, the Tourism Development Authority (TDA) was established as an autonomous agency with jurisdiction over tourism areas, and the TDU was transformed into the TDA. However, the Planning and Development Sector of the current MOT organization is reminiscent of the TDU structure. The Sector performs secretariat work in support of the national tourism development.

The Relations and Tourist Services Sector is divided into three divisions: General Affairs, Tourist Services (dealing with licenses and tourism professionals organizations), Tourist Relations (dealing with formalities, protocol, international tourism organizations, etc.).

Figure 1.3.2 Organization of Ministry of Tourism



Note: * Main works of the General Directory for the Minister's Cabinet are specialized communication with politicians, media, etc. as assistant to the Minister.
** The General Directory for Security is responsible for security for MOT office building.
** The General Directory for Citizens Services is responsible for Egyptian Tourism

Source: Ministry of Tourism in 1999

1.3.3 Egyptian Tourism Authority (ETA)

(1) Organization and activity

By Presidential Decree No. 134, the Egyptian Tourism Authority (ETA) was established in 1981 as an autonomous agency for marketing Egypt as a tourist destination both in the international and domestic markets. It has five sectors, namely, Planning and Follow-up, Tourist Promotion Sector, Technical Affairs, Domestic Tourist, and Financial, Administration, and Economic Sector. As of July 1999, the number of staffs of ETA is 225.

The ETA has 21 offices overseas (12 in Europe, 4 in North America, 2 each in East Asia and the Middle East and 1 in Africa) providing possible visitors with information about Egypt. Within the country, the ETA offices are found at 17 localities, furnishing international visitors mainly with on-site information.

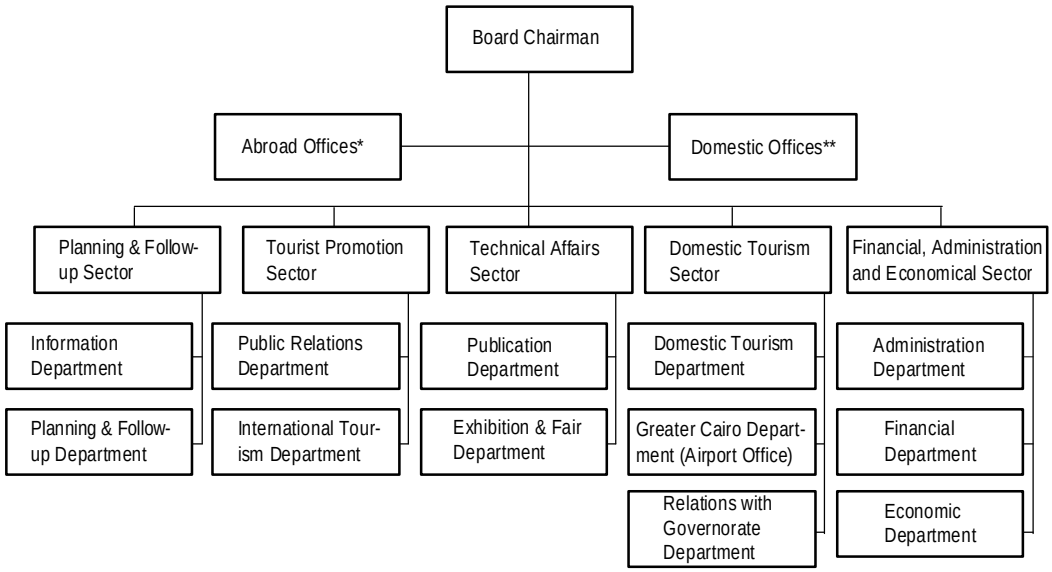
The ETA's publicity and promotional efforts include the following items:

- Working out strategies to attract new markets or previously weak markets;
- Preparing promotional tools, such as printed material and audio-visuals;

- Setting-up tourist information centers overseas and in Egypt, and disseminating promotional material, such as brochures;
- Posting web site information;
- Publicizing Egypt via newspaper and TV ads in major markets;
- Organizing familiarization tours for travel agents and the press;
- Maintaining a presence at vital international travel fairs in the main tourist generating markets (such as in ITB Berlin, WTM London, JATA Travel Trade Show Tokyo); and
- Organizing travel trade missions to existing, new or possible markets.

ETA recognizes that Italy, Germany, United Kingdom, France Switzerland and Japan are important market and carry out advertising and promotional campaign. And they consider Russia, Ukraine, North Europe, South Africa as future target market, and starts action such as establishes of offices.

Figure 1.3.3 Organization of Egyptian Tourist Authority



Note: * Abroad offices consist of (i) Europe: Athens, Brussels, Frankfurt, Geneva, London, Paris, Rome, Vienna, Stockholm Madrid, Kiev, Moscow, (ii) North America: Montreal, Chicago, San Francisco, New York, (iii) Asia: Tokyo, Seoul, (iv) Africa: Johannesburg, and (v) Middle East: Kuwait, Dubai.

** Domestic offices consist of Cairo (6 offices), Alexandria (4 offices), Luxor (3 offices), Suez (3 offices), Port Said (2 offices), Aswan (2 offices) Ismailia, Faiyum, Menya, Asyut, Sohag, Kharga Oasis, Matruh, Siwa Oasis, Hurghada, Arish, Rafah, Sharm el Sheikh

Source: Egyptian Tourist Authority in 1999

(2) ETA's budget

Table 1.3.1 shows ETA's budget in FY1999 and FY2000. The level of budget is as same as TDA's income in Table 1.3.2, and a half of its expenditure. 23% to 24% out of total budget in ETA is Tourism Promotion Fund, which is used for special promotion campaigns. In 1999 this fund is used for special campaigns in Japan and Australia.

Target countries and distribution of the fund is determined by the Supreme Council of Tourism, and ETA can't commit the decision making. The Supreme Council of Tourism consists of ministers, head of the 4 chamber of commerce in Egypt, and professors of universities, the representative of media, etc.

Table 1.3.1 ETA's Budget

(Unit: LE thousand)

	FY1999	FY2000
Total Budget	26,600	27,560
In which Tourism Promotion Fund	6,107	6,707

Source: ETA in 1999

1.3.4 Cairo International Conference Center (CICC)

The CICC is an autonomous agency under the Minster of Tourism. Opened at the end of 1989, it occupies over 30 hectares, of which 58,000 square meters are dedicated to conference facilities. The world-class conference and exhibition facilities are contributing to development of the Meeting, Incentive, Convention and Exhibition (MICE) market.

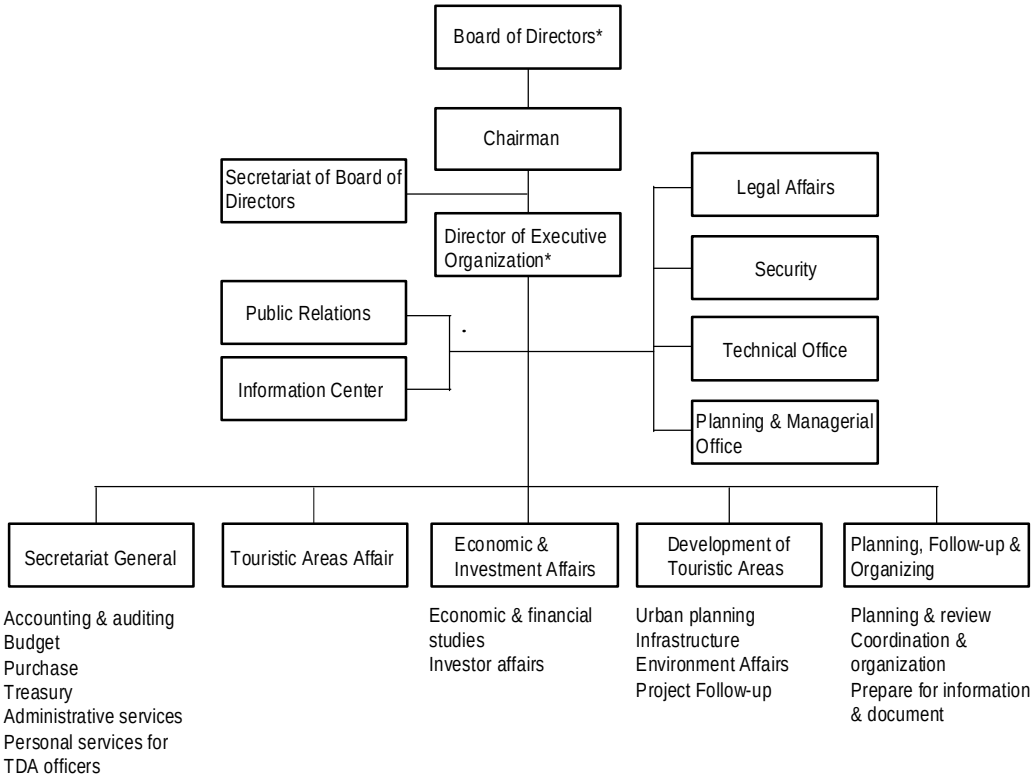
1.3.5 Tourism Development Authority (TDA)

(1) Organizational structure and financing of TDA

The TDA comes under the jurisdiction of the Ministry of Tourism (MOT). In September 1991, the TDA was established under Law No. 7 of March 1991, which granted jurisdictional authority over the designated tourism zones to a national tourism authority, and whose functions as an autonomous agency were determined by Presidential Decree No.374.

The Board of Director of TDA is chaired by the Minister of Tourism, and the Director of TDA's executive body is appointed by Presidential Decree upon nomination by the Minister of Tourism. TDA is staffed by 178 members in diversified functions in 1999, as shown in Figure 1.3.4. TDA keeps a relatively small number of staff, and contracts specific tasks to outside consultants.

Figure 1.3.4 Organizational Structure of the Tourism Development Authority



Note: * Board of Directors is chaired by the Minister of Tourism. Members of Board of Director consist of (i) three governors selected by the prime minister, (ii) the concerned governors when the Board reviews projects in his/her governorate, (iii) head of Legal Interpretation Department of the State's Council, (iv) Undersecretary of Ministry of Tourism, (v) Representatives from Ministries of Defense, Transport, Finance, Planning & International Cooperation, and (vi) three experts in TDA selected by the Prime Minister.

Source: Tourism Development Authority in 1999

(2) Aims, roll and functions of TDA

TDA has responsibility for planning, coordinating, and promoting new tourism development projects within the framework of the country's general policy and its economic plan. To accomplish its objectives, TDA carries out those required undertakings, contracts and arrangements such as:

- Establish a national strategy for tourism development to increase and upgrade the supply side of tourism in the country;
- Prepare, review and evaluate plans, programs, studies and projects indispensable for tourism development, and setting priorities for their implementation;
- Develop infrastructure schemes in the designated tourism development areas, and recover their cost;
- Promote sound policies of environmental and cultural planning in the development of tourist centers;
- Supervise the implementation of development plans in tourist centers;
- Manage and exploit, and dispose of desert lands allocated to tourist centers;
- Promote tourism investment opportunities with a greater role for the private sector; and
- Play a major catalytic role in improving the regulatory framework for private local and foreign investors.

(3) Budget of TDA

The income of TDA consists of current income and capital income. Table 1.3.1 shows current income of TDA over three years from 1996/97 to 1998/99 fiscal year, which includes land income, service & activity income and transfer income as followings:

- Land income: revenue of land sale and land rent;
- In the Limited and Integrated Development of TDA, TDA receives land selling income at a price of US$ 1.00 per m^2. Payment period land price is 10 years after contract. First payment is 20 % of total land price and the rest is paid by seven times after three years grace period;
- Service & activity income: charge and fee for the integrated and limited development, such as allocation expense, contract expense and review expenses of documents; and
- Interest income: TDA receives interest income at a rate of 5 % of the balance of land price.

As shown in Table 1.3.2, TDA received the highest revenue from current income in 1997/98 fiscal year. In 1998/99, total current income decreased from LE 50 million in 1997/98 to LE 27 million by 46 %. In addition to the current income, TDA receives capital income amounting to LE 18 million from Foreign Grants and Aids and loans from the National Investment Bank in 1998/99. Therefore total income of TDA including current and capital income is LE 45 million in 1998/99 budget.

Table 1.3.2 TDA's Income

(Unit: LE thousand)

	1996/97	1997/98	1998/99 budget	97/98 - 98/99 Change
1. Current Income				
(1) Current Activity Income				
(a) Land Income				
Land sale	17,018	17,652	11,000	62%
Land rent	1,150	548	2,000	365%
Total current land income	18,168	18,200	13,000	71%
(b) Service & Activities Income				
Allotment expenses (2% of the gross value of land)	5,193	3,226	3,500	108%
Contract expenses (5% of the gross value of land)	1,835	6,356	3,500	55%
Preliminary review expenses & review expenses of executive documents (0.35% of the investment cost)	3,621	10,529	1,500	14%
Interest income	1,063	2,812	2,613	93%
Total current service income	11,712	22,923	11,113	48%
Total Current Activity Income	29,880	41,123	24,113	59%
(2) Transfer Income				
Total Transfer Income	1,416	8,792	2,600	30%
Total Current Income	31,296	49,915	26,713	54%

Source: TDA in1999

Expenditure of TDA consists of current expenditure and capital expenditure as shown sharing 60 % and 40 % respectively as shown in Table 1.3.3.

Table 1.3.3 TDA's Expenditure in 1998/99

(Unit: LE thousand)

	1998/99 budget	Share (%)
1. Current Expenditure		
(1) Salaries	1,697	4%
(2) Expenditure and Current Transfers	10,016	22%
(3) Government Surplus	15,000	34%
Total Current Expenditure	26,713	60%
2. Capital Expenditure		
(1) Investment Expenditure		
(a) Infrastructure Project	9,185	20%
(b) Area Development	2,000	4%
(c) Improvement Program	780	2%
(d) National Project of Sinai Development	3,400	8%
Total Investment Expenditure	15,365	34%
(2) Capital Transfer	2,525	6%
Total Capital Expenditure	17,890	40%
Total expenditure	44,603	100%

Source: TDA in 1999

Table 1.3.3 shows TDA's investment projects proposed under the Fourth-Five Year Plan (1996/97-2001/02). The amount of expenditure in the 4th Five Year Plan will be LE26,050 thousand for studies & designs, and infrastructure development of tourism developments.

(4) TDA's promotion for foreign and local investment opportunities

To promote Foreign Direct Investments, the TDA organizes conferences and fairs in possible investment-generating countries as they did in Kuwait in March 1998. Locally TDA holds conferences and exhibitions in newly developed tourism zones as they did at the "First Conference of Tourism and Environment Development" in Ain El Sukhna-El Zafarana in June 1998.

Table 1.3.4 TDA's Investment Projects under the 4th Five Year Plan

(Unit: LE thousand)

Project	Studies & Designs	Infrastructure development	Total
Arish Tourism Development	300	0	300
North Coast Tourism Development	200	0	200
Developing Nile facade for Aswan	250	0	250
Wadi Al Natron Tourism Development	250	0	250
Health Tourism Development	150	0	150
Emergency medicine project	200	0	200
Aswan Tourism Development	600	0	600
Saloum- Matruh Tourism Development	400	0	400
Bany Sweif-Menya Tourism Development	200	0	200
El Menya Tourism Development	400	0	400
Luxor-Qena Tourism Development	300	0	300
Bahariya Oasis Tourism Development	250	0	250
Greater Cairo Tourism Development	500	0	500
Sinai Western Coast Tourism Development	500	0	500
Marina Construction Plan	500	0	500
South of Valley (Toushka) Tourism Development	500	0	500
Egyptian Western desert Tourism Development	400	0	400
Rural Tourism Development	500	0	500
Rashid-Edko Tourism Development	300	200	500
Karoun Lake North coast Tourism Development	300	1,000	1,300
Sinai Sub roads Tourism Development	400	1,400	1,800
Nile Cruising Marina improving project	200	3,000	3,200
High Dam Lake improvement project	200	1,000	1,200
Abu Simble Tourism Development	0	1,500	1,500
Nabq Tourist Road	0	8,500	8,500
Rafah Gate	450	1,200	1,650
Total	8,250	17,800	26,050

Source: TDA 1999

(5) TDA's coordination with the authorities involved in the tourism development

By the Presidential Decree, the Board of Directors of TDA consists of representatives from the Ministries of: Defense, Minister of Transport, Minister of Communication and Information, Minister of Finance, Minister of Planning and International Cooperation (selected by the concerned Ministers must not be less than Heads of Sectors), provided that increased collaboration between the relevant authorities is absolutely necessary in tourism development project. Other than those ministries participated in the TDA Board Directors, other authorities are involved in TDA's implementation of the tourism development projects and tourism activities afterwards.

Related Ministries, Authorities over the tourism development by category are as follows.

- Infrastructure Development: Ministry of Transport, Ministry of Communication and Information, Ministry of Electricity and Energy, Ministry of Public Works and Water Resources;
- Tourism Promotion: Egyptian Tourism Authority (ETA), General Organization for International Exhibition & Fairs (GOIEF);
- Tourism resource management: Egyptian Environmental Affairs Agency (EEAA), Ministry of Culture;
- Human Resource Development: Ministry of Education, Ministry of Higher Education, Egyptian Organization for Tourism & Hotel (EGOTH: under jurisdiction of Ministry of Public Enterprises);
- Area development: Ministry of Housing, Utilities, and Urban Communities, Ministry of Local Administration, Governorates;

- Land space & Airspace use: Ministry of Defense;
- Visitors welfare and security: Ministry of Health, Ministry of Interior
- Tourism investment opportunities: Lawmakers (President, Prime Minister, the People's Assembly), General Authority for Investment and Free Zones (GAFI)
- Other tourism related government agencies: Egypt Air, Misr Travel (under jurisdiction of Ministry of Public Enterprises)

1.3.6 Tourism Professionals Organizations

Tourism professional organizations are listed below.

- Egyptian Federation of Tourist Chambers
- Chamber of Tourist Establishments
- Egyptian Hotel Association
- Egyptian Travel Agents Association
- Egyptian Chamber of Tourist Commodities
- Tourism Investors Association (TIA)
- Egyptian Chef's Association (ECA)
- Hurghada Environment Protection and Conservation Association (HEPCA)
- Hurghada Hotel General Managers Association
- Egyptian Travel Writers Press Club

1.3.7 Major Issues on Tourism Administration

In order to achieve the tourism development with harmony and mature, appropriate demarcation and coordination of roles of TDA, other related agencies, and the private sector are required.

Several basic issues are identified as follows:

- Appropriate tourism promotion activities by ETA;
- Coordination of administration and promotion activities on tourism industry development by MOT;
- Development of accommodation and tourism facilities by TDA, and related transportation facilities;

In addition, following issues are highly required to be carried out.

- Coordination and demarcation among Ministry of Tourism, Tourism Development Authority, Egyptian Tourism Authority;
- Urban development in gateways and in tourist towns, which are required to receive a population of direct and indirect employees and their families; and
- Development and promotion of local industries related to tourism such as construction, foodstuff, and souvenir industry.

Tourism development planed by MOT needs the consistency of the basic strategy such as target market, promoting products, accommodation distribution among MOT, ETA and TDA. To coordinate and demarcate their activities, some kinds of coordination system are required. The Supreme Council of Tourism should have such a function. The following points should be improved:

- Though TDA can use the profit by itself if it is made, it should be used for tourism development such as beatification by MOT, and tourism promotion, etc by ETA.
- TDA is responsible for promotion for investors; otherwise ETA is responsible for tour agents and visitors. Improvement of the communication between two agencies or the integration of the promotion function to the

either agency is needed.

The large scale accommodation developments utilizing unused areas are proceeding at the Red Sea coast, the Sinai and so on, where the urban infrastructure has not formed yet. The development of new towns as gateways and/or tourist towns, including the development of road network and other urban infrastructure, and social infrastructure such as educational and medical facilities, is required in order to support the tourism development. It is recommended to demarcate and coordinate appropriately the roles of TDA and related agencies such as the Ministry of Housing, Utilities and Urban Communities and the Ministry of Public Works and Water Resources in order to develop these infrastructures at each development stage.

Not only the large scale accommodation and urban development, but also the encouragement and promotion of local industries, such as construction industry to support tourism facilities and urban management, agricultural, fishing and food processing industry to provide foodstuffs, and souvenir industry and sales, is important issue in order to develop harmonized and matured tourism destinations.

1.4 Tourism Products and Tourism Market

1.4.1 Tourism Products and Resources

(1) Tourism products in Egypt

Because of the rich tourism resources covering wide range of the fields as shown in Figure 1.4.1, Egypt has various potential tourism products. The outlines of the products are described here.

Historical/Archeological Tourism:

This segment represents the tourism of Egypt traditionally with huge number with high value of archeological resources represented by Pyramids in the Cairo and various temples and tombs in Luxor, which are the specific in Egypt, but no other countries. Therefore, this attracts visitors from all over the world irrespective of distances from the origin areas (long, medium and short haul market).

Marine Resort Tourism:

This is also one of the traditional products at the beaches along the Mediterranean Sea, but in old-fashioned development. However, new style of the marine resort development has gotten significant success in the southern Sinai region since the beginning of 1990's. It is recognized that a door has been opened to a new era of the marine resort development in Egypt with a geographical advantage; having a huge market of European countries nearby, and beautiful seawater with various types of coral reefs and unique species of sea animals.

Following the development of the southern Sinai, the development is started along the coastal areas of the Red Sea with the unique development system of TDA. It is shown in the Chapter 1.3 of Part II.

The product attracts visitors mostly from short and mid haul markets. However, this is rather hard to attract the long haul market, since there are many of competitor destinations with beautiful beaches and marine resorts in any places closer than Red Sea.

The marine resort of Red Sea has a disadvantage compare with other marine resort destinations that game fishing cannot be preferable, because the fishes and sea animals is limited in number due to Red Sea can be considered as a biosphere closed at the Bab Al Mandab strait in-between Djibouti and Yemen. Marine resort is one of the most environmentally fragile products without any proper control measures for the activities of developers and visitors.

And more, though historical tourism can attract rather up markets of high aged group according to the trend of the world tourism, the marine resort tourism is meet for the all segments of market, but rather down markets.

Cruise Tourism:

The Nile River cruise between Qena and Aswan, which takes four days or five days, is one of the best products of Egypt, while the cruise in Nasser Lake is yet matured. The cruise ships operated between Cairo and Aswan and Qena and Aswan are 208 ships with 11,088 rooms and 3 ships with 155 rooms respectively in 1997. The Nile River cruise has been attracting all segments of markets. This segment can attract all segments of market irrespectively in distance, age group, sex, etc.

It is alarmed the proper counter measures should be taken against pollution of river water by the cruise ships which becomes seriously year-by-year. It is essential to improve the cruising system for the promotion of and maintaining the segment.

Eco-tourism:

This segment is still pre-matured except small activities along the Nile River and in the Desert and Oasis region, while they have different features of the eco-tourism.

Eco-tourism in Nile River:

In green areas and islets along the Nile River some resorts have been promoting such eco-tourism activities, however these activities are not attracting visitors but supplemental ones for the visitors staying in the resorts.

Safari in desert and oasis tourism:

Though the current situations of the eco-tourism in the region seem to be limited to SIT, this has high potential for the future Egypt's tourism, subject to develop in proper manners which will meet requirements of new markets. The oases will be tourism bases of the eco-tourism. The eco-tourism should be managed by the local people for eco-tour guides, eco-lodges manager and staff, etc.

Other potential areas:

The following areas have potentials of eco-tourism.

- Hinterland of Red Sea coast; and
- Surrounding of Lake Nasser.

City tourism:

City tourism is represented by the two largest cities in Egypt: Cairo and Alexandria. Each of which has cultural facilities as well as the town amenities in it. This is supported by the second large tourism market of Arab region. Most of them are independent visitors, there being no language problem.

For Cairo city, beautification of the city itself and the tourism areas in the city should be required to give good sense of arrival to the visitors as a largest gateway of the Egypt where majority of visitors are staying in Cairo at least one day. The more development should be required for visitors such as improvement of sidewalk and/or pedestrian paths, waiting places at entrance of cultural facilities, for example Cairo National Museum. The improvement of urban traffic congestion is also required there.

MICE (Meeting, Incentive, Conference and Event) Tourism:

Cairo International Conference Center (CICC), an autonomous agency of the Ministry of Tourism has been established and built at the end of 1989 in Cairo to promote this segment. CICC's activities are contributing to promote this segment.

Except CICC MICE tourism is not matured, however, the marine resort is the favorable one for this segment from the world trend, especially for the incentive tours. The incentive tour should find its market in the neighboring counties.

Religious Tourism:

The assets for this segment are limited to the followings:

- St. Catherine Cathedral in Sinai;
- Coptic Museum, Monastery & Church of St. George, etc. in Old Cairo;
- Monasteries in Wadi Natrun;
- Monastery of St. Anthony, Monastery of St. Paul in the northern Red Sea;
- Mosques in Cairo (Mosque of Mohamed Ali, Ibn Tulun Mosque, Mosque of Amr, etc.); and
- Abu el Hassan el Shazly Mosque in the Red Sea.

Although this is another traditional tourism, but so far limited to the market of religious pilgrims.

(2) Tourism resources

Tourism resources are available based on the rich tourism resources of Egypt, which can be classified into three categories as follows:

Table 1.4.1 Classification of Tourism Resources

A. Historical Resources	A1	Ancient	(Prehistoric-Pharaonic/Greco-Roman) temple, tomb, statue, relief, painting, remains
	A2	Coptic/Christian	Monastery, church, place of historic/religious significance
	A3	Islamic	Mosque, fort
	A4	Modern monuments	Dam, canal, bridge
B. Cultural Resources	B1	Folklore	Folklore, folk festival, fork music, handicraft (textile, hardware, woodwork, jewellery)
	B2	City life	Shopping, dining, events, entertainment, theatre, etc.
C. Natural Resources	C1	Marine	Beach, diving/snorkeling site
	C2	Landscapes	River, mountain, lake, desert, oasis
	C3	Spa	Hot & cold springs
	C4	Fauna & Flora	Mangrove, migrant birds, vegetation in oases

Source: JICA Study Team

Historical Resources

Historical resources are classified into four categories. Ancient tourism resources are the most unique and valuable in Egypt, attracting visitors from all over the world. They are located mainly along the Nile River with the Great Pyramids of Giza and the Temples in Luxor as highlights, followed by the Temple of Abu Simbel. Coptic/Christian tourism resources are mainly churches and monasteries which are located in Cairo and the desert areas. Most of them are places of religious life and not suitable for mass tourism. Examples are Mt. Sinai and the Monastery of St. Catherine, which are famous for the story of Moses. Islamic tourism resources are represented by Islamic Cairo, which is a medieval town with a number of original mosques, gates and streets. Modern monuments, the Suez Canal, Aswan Dam and Aswan High Dam are also included in this category.

Cultural Resources

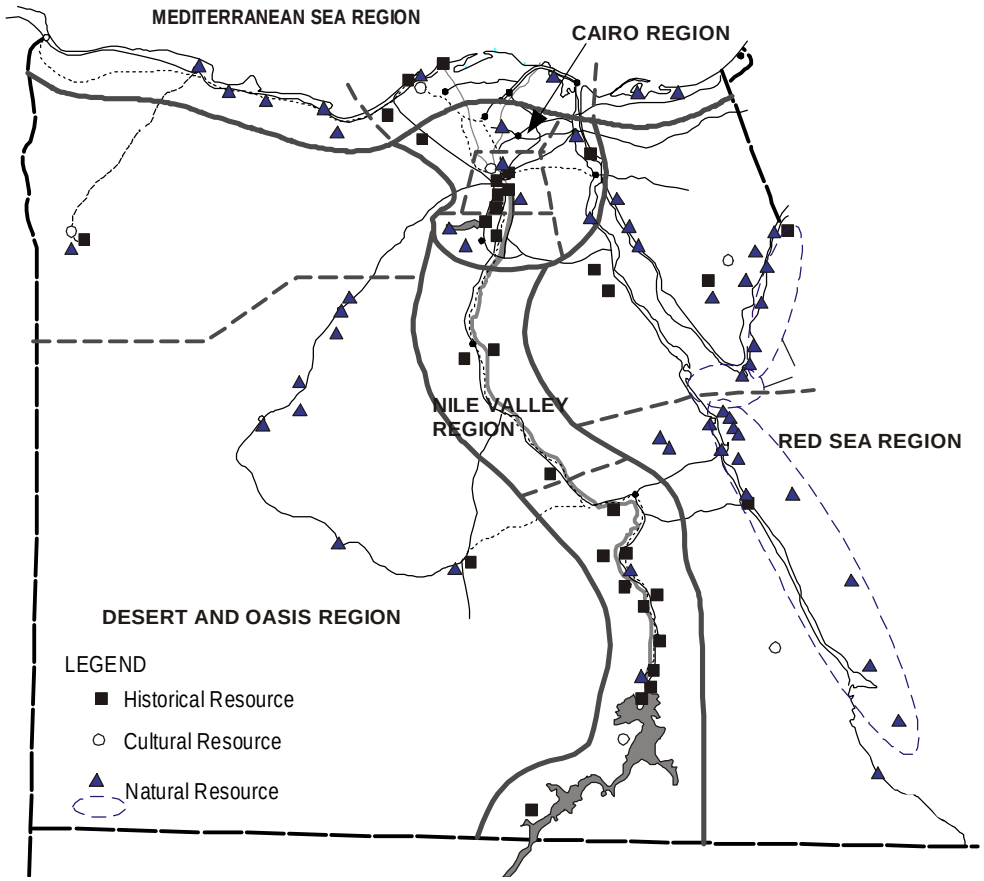
Cultural resources are classified into two: folklore and city life. Folklore is represented by the Bedouin folklore in Sinai, and the Nubia folklore in Upper Nile, although these are not established attractions. Typical Egyptian souvenirs, such as papyrus, metalwork, perfume bottles, accessories, etc., are found in every tourist place. The attractions of city life are provided in Cairo and Alexandria where there are luxury hotels, restaurants, shops and entertainment, such as clubs, casinos and bars.

Natural Resources

Natural resources are classified into four categories. Marine resources are the relatively new attraction of Egyptian tourism. The Red Sea and South Sinai has rich marine life, such as coral reefs and fishes, and its clear waters attract a number of divers from Europe. Main resources such as the Nile River in Upper Nile and the desert and oases are categorized as landscapes. Other resources such as hot and cold springs, and fauna and flora are located mainly in oases and wetlands. Although they are not considered main attractions of Egyptian tourism, they add to the natural tourism of the area.

The distribution of main tourism resources is shown in Figure 1.4.1.

Figure 1.4.1 Distribution of Main Tourism Resources in Egypt



Source: JICA Study Team

(3) Characteristics of Tourism Regions

The Study Team classified 5 Tourism Regions and 13 Sub-regions by tourism products, market conditions. The characteristics of each Tourism Region/Tourism Sub-region are as follows.

Cairo Region

Cairo Region is characterized as historical and urban tourism area. It consists of four sub-regions, namely, Cairo, Nile Delta, Faiyum and Suez Canal.

Cairo Sub-region: This Sub-region functions as a gateway of international visitors. Tourism in the sub-region is characterized historical/cultural/business tourism destination with variety of tourism resources such as ancient heritage (Pyramids of Giza, Saqqara and Dahshur), Coptic/Christian/Islamic heritages, various museums and city life. 1.3 million guest arrivals to hotel/accommodations in the Sub-region were counted the largest Sub-region in Egypt, and the average length of stay of international visitors was comparatively longer compared with other Sub-regions. Most of Arab visitors in Cairo are repeaters enjoying city life, staying much longer than other nationality groups.

Table 1.4.2 Characteristics of Cairo Sub-region

Number of hotel guests in 1997		1,317,015
Average length of stay of international visitors in 1994 (days)	Arabian	14.8
	European	7.1
	North American	8.1
	Other countries	5.7
Share of bed nights by nationality in 1997 (percent)	Arabian	16
	European	30
	Egyptian	13
	Other countries	41

Source: Egyptian Tourism in Figures 1997 by MOT

Nile Delta Sub-region: Nile Delta has some historical resources such as Monasteries of Wadi Natrun and rich scenery of fertile agricultural field of the delta. Those tourism resources are not well utilized for tourism products yet.

Faiyum Sub-region: This Sub-region has the largest oasis in Egypt, which is an expanded tourism destination from Cairo both for international and Egyptian visitors. There are various species of water birds around Lake Qarun and some historical resources, such as the ruins of Karanis and Meidum Pyramid. The number of hotel guests was about 84,000 in 1997.

Suez Canal Sub-region: This Sub-region includes some accessible tourism destinations from Cairo, such as Suez Canal, city of Ismailia, and beach resorts in Ain Sukhna, which are attracting Egyptian and Arab visitors.

Nile Valley Region

The Nile Valley Region along the Nile River can be characterized as historical tourism area, which is the classic and matured area of Egyptian tourism. This Region is divided into two Sub-regions of Middle Nile and Upper Nile.

Middle Nile Sub-region: This Sub-region includes valuable archaeological sites, such as Tombs of Beni Hassan and Temples of Seti I and Rameses II. At present, security anxiety has been obstructing its progress as a main and independent destination for international visitors.

Upper Nile Sub-region: This Sub-region includes classic and representative destinations of Egyptian tourism, such as Luxor, Aswan and Abu Simbel. There are numerous archaeological sites including world heritage sites such as Karnak Temple, ancient Thebes and Necropolis on the West Bank of the Nile, which are mainly attracting international visitors. The landscape of the Nile River and riverine islands, and the Aswan High Dam are also main attractions. Visitors in this sub-region take sightseeing tours, so that the average length of stay in each destination is shorter than those of other destinations.

Table 1.4.3 Characteristics of Upper Nile Sub-region

Number of hotel guests in 1997		387,607	
Average length of stay of international visitors in 1994 (days)		Luxor	Aswan
	Arabian	2.8	7.3
	European	4.9	2.9
	North American	2.8	2.3
	Other countries	1.8	1.6
Share of bed nights by nationality in 1997 (percent)		Luxor	Aswan
	Arabian	10	6
	European	35	32
	Egyptian	14	20
	Other countries	41	42

Source: Egyptian Tourism in Figures 1997 by MOT

Red Sea Region

The Red Sea Region consists of two Sub-regions, namely, South Sinai and the Red Sea. This Region is a marine resort area, which has newly grown as a main tourism destination in Egypt. The Red Sea is a world famous destination for divers with its clear waters, colorful coral reefs and rare fishes. Other attractions include various kinds of water sports.

South Sinai Sub-region: This sub-region consists of the coast of Gulf of Aqaba and Gulf of Suez, and the desert and mountains of inland Sinai. The coast of Gulf of Aqaba is a marine resort area, which has newly grown as a main tourism destination in Egypt, mainly for European holidaymakers and divers. Most of them are repeaters on package tour. Mt. Sinai is another main attraction for international visitors. There are beach resorts, such as Ras Sidr at the coast of Gulf of Suez, mainly attracting Egyptian and Arab visitors.

Table 1.4.4 Characteristics of South Sinai Sub-region

Number of hotel guests in 1997		996,427
Average length of stay of international visitors in 1994 (days)	Arabian	5.6
	European	8.1
	North American	5.6
	Other countries	4.4
Share of bed nights by nationality in 1997 (percent)	Arabian	1
	European	89
	Egyptian	9
	Other countries	1

Source: Egyptian Tourism in Figures 1997 by MOT

Red Sea Sub-region: The Red Sea is a world famous destination for divers with its clear waters, colorful coral reefs and rare fishes. In recent years, huge beach resort developments have been launched at the Red Sea coast, such as Al Gouna and Abu Soma, as new tourist centers, while Hurghada functions as the gateway of this region. The number of hotel guests was around one million in 1997, which was the second largest in Egypt following Cairo, and the volume is stable throughout the year. A majority of visitors are European holidaymakers. The average length of stay is longer compared with other destinations.

Table 1.4.5 Characteristics of Red Sea Sub-region

Number of hotel guests in 1997		743,832
Average length of stay of international visitors in 1994 (days)	Arabian	4.5
	European	5.7
	North American	4.7
	Other countries	3.3
Share of bed nights by nationality in 1997 (percent)	Arabian	3
	European	65
	Egyptian	23
	Other countries	9

Source: Egyptian Tourism in Figures 1997 by MOT,

Mediterranean Region

The Mediterranean Region consists of three Sub-regions of North Sinai, Alexandria and Matruh. This region is characterized as coastal resort tourism area.

North Sinai Sub-region: This Sub-region includes some beaches for Egyptian and Arab visitors. Lake Bardawil is a wetland for migrant birds.

Alexandria Sub-region: This Sub-region includes Alexandria City, which is a major recreational tourism destination for Egyptian and Arab holidaymakers with popular beaches and coastal row of buildings. There is good accessibility from Cairo by highway and railway. The volume of visitors is almost same as Luxor, but some of its historical sites are less attractive.

Table 1.4.6 Characteristics of Alexandria Sub-region

Number of tourist arrivals in 1997		393,255
Average length of stay of international visitors in 1994 (days)	Arabian	13.3
	European	6.1
	North American	8.9
	Other countries	5.7
Share of bed nights by nationality in 1997 (percent)	Arabian	16
	European	18
	Egyptian	53
	Other countries	13

Source: Egyptian Tourism in Figures 1997 by MOT,

Matruh Sub-region: This Sub-region provides beach resorts that attract Egyptian and Arab holidaymakers. Recently, there has been rapid development of tourism villages in this region.

Desert and Oasis Region

This Region covers the Western Desert including the five main oases of Siwa, Bahariyya, Farafra, Kharga, and Dakhla. This Region can be characterized as adventure tourism/eco-tourism area, which is still immature but considered as a new alternative tourism destination in Egypt. In recent years, the number of visitors has been increasing, though the volume is not yet large. Most of visitors are international visitors.

An overview of each tourism region is shown in Table 1.4.7.

Table 1.4.7 Overview of Tourism Regions

Tourism Region	Tourism Sub-region	History: Ancient	History: Coptic/Christian	History: Islamic	History: Modern Monuments	Culture: Folklore, Handicraft	Culture: City Life	Culture: Cultural Facilities	Nature: Marine Resort	Nature: River Resort	Nature: Lake Resort	Nature: Landscape	Nature: Spa	Nature: Fauna & Flora	Cruise: River Cruise	Cruise: Lake Cruise	Eco-tourism	Convention Tourism	Urban Tourism	Market: Egyptian	Market: Arabic	Market: European & Others
Cairo	Cairo	●	●	○	○	○	●	●				○			●			●	●	■	■	■
	Nile Delta		○									○										
	Faiyum	○	○									○		○			○			□		□
	Suez Canal				○		○		○			○								■	■	
Nile Valley	Middle Nile	●								○					●							
	Upper Nile	●	○		●	○				●	○	●		○	●	○	○			□		■
Red Sea	South Sinai	○	●			○			●			●	○					○		□	□	■
	Red Sea								●									○		□	□	■
Mediterranean	North Sinai													○						■		
	Alexandria	●					●	●	●									○	●	■	■	
	Matruh																			■	■	
Desert & Oasis	Siwa	○										●	○	○			○					□
	Western Desert	○										●	○				○					□

Note: ● major products, ○ second products, ■ main target, □ second target

Source: JICA Study Team

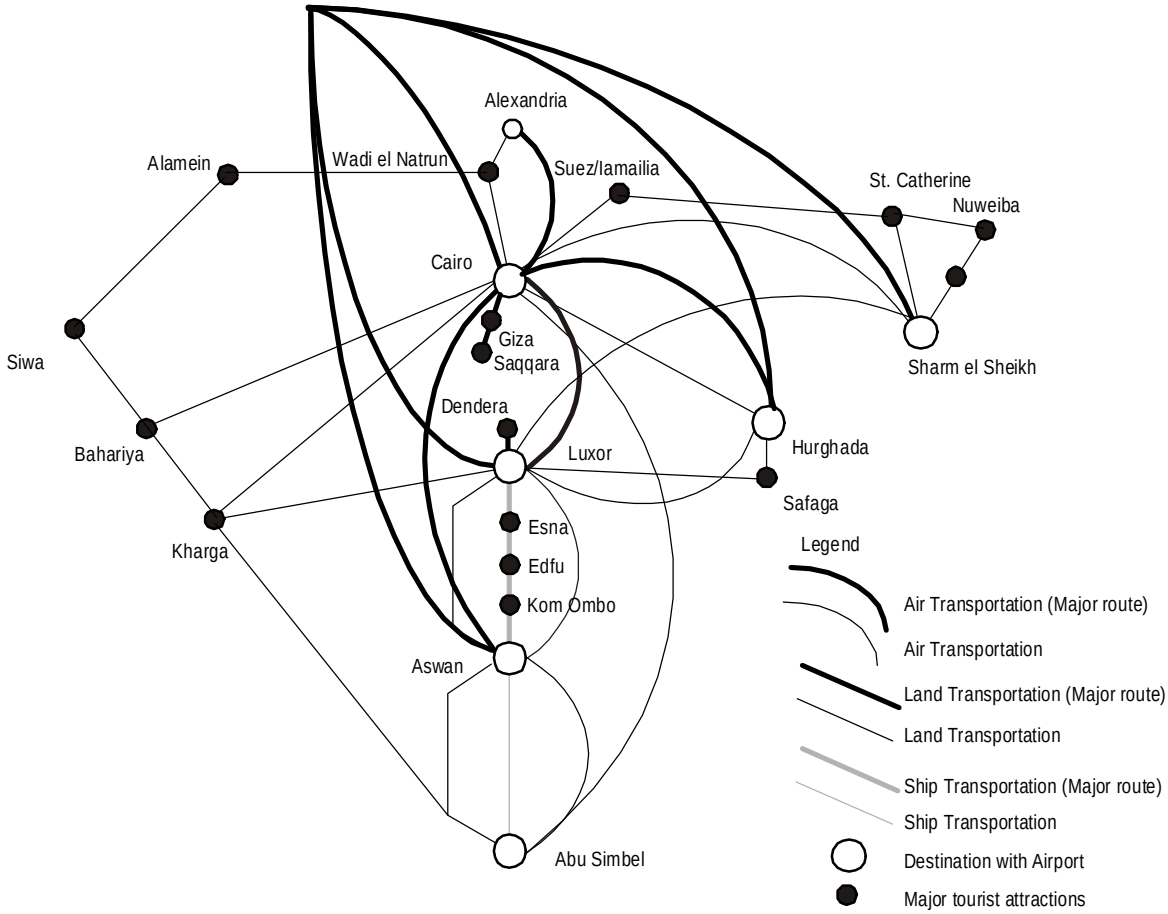
1.4.2 Travel Pattern

Figure 1.4.2 to Figure 1.4.4 shows the travel patterns of visitors of major origin, Italy, Germany, United Kingdom, France, the United States and Japan. These figures are prepared by the analyses of tour pamphlets; therefore travel patterns of free individual visitors are not reflected in the figures. And more, it has to be paid attention that it doesn't reflect the needs of visitors. But these it can show the characteristics of the travel patterns of each country's visitors.

Figure 1.4 2 shows the travel patterns of Italian and German visitor, which can be said short haul countries. They have the following characteristics.

- They enter into Egypt not only at Cairo Airport but also at Luxor, Aswan, Hurghada, Sharm el Sheikh Airports.
- Nile River Cruise between Luxor to Aswan is a major product in the Upper Nile Sub-region. On the other side Lake Nasser Cruise is not a major product until now.
- Marine resort in South Sinai Sub-region and Red Sea Sub-region is booming.
- Safari & Oasis tour to the Western Desert has not developed enough yet. The access method is limited by only land transport from Cairo Sub-region and Upper Nile Sub-region now.
- Mediterranean Sub-region has not developed as tourist destination for short haul visitors.
- Except for the relation between Cairo Sub-region and Upper Nile Sub-region, Movements among Tourism Regions are limited.

Figure 1.4.2 Travel Pattern of Short Haul Visitors

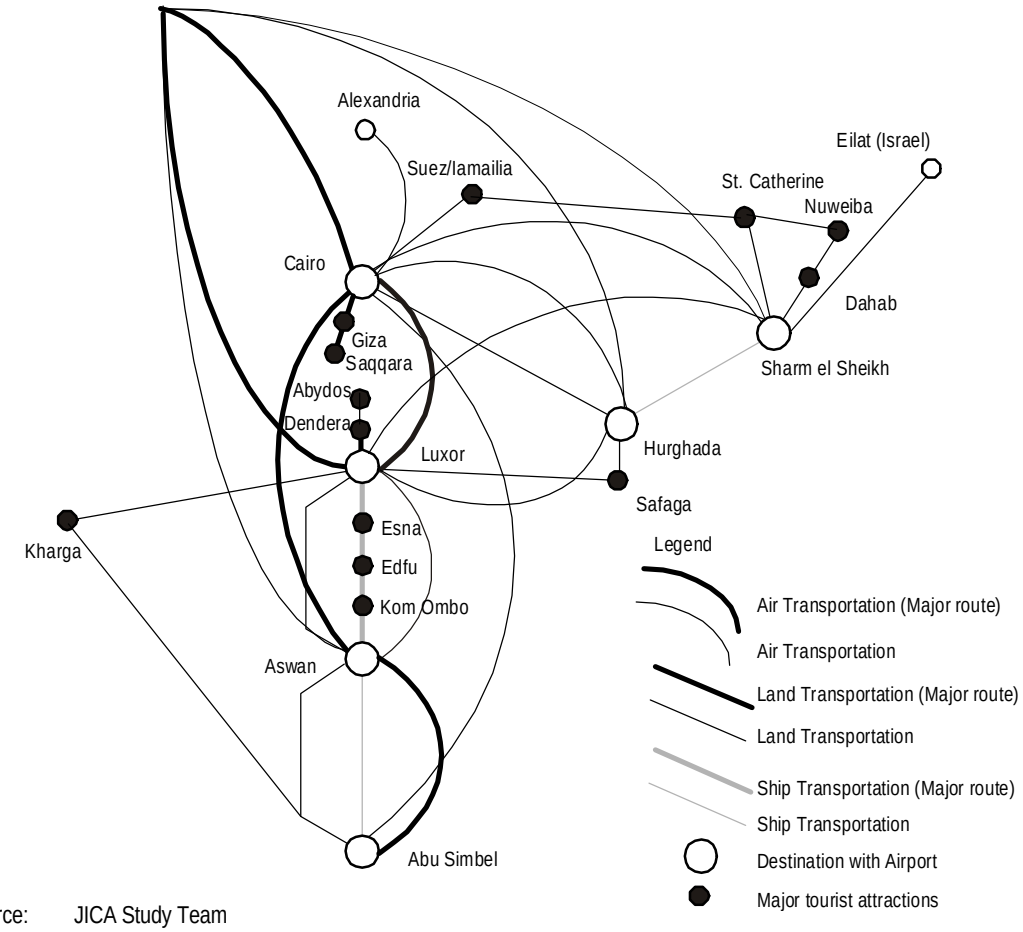


Source: JICA Study Team

Figure 1.4.3 shows the travel pattern of UK and French visitors, which can be said mid haul countries. They have the following characteristics.

- A variety of travel patterns is not shown compared with short haul visitors. They have a few tour program to South Sinai and Red Sea;
- Cairo Airport has an important role as a gateway for visitors, especially for the visitors from UK. For French visitors Luxor Airport also has a role of a gateway;
- As same as short haul countries, Nile River Cruise between Luxor to Aswan is a major product in the Upper Nile Sub-region. On the other side Lake Nasser Cruise is not a major product until now; and
- West Desert, Mediterranean, and Red Sea Sub-region have not developed as tourist destination for middle haul visitors yet. Almost travel pattern run only north and south.

Figure 1.4.3 Travel Pattern of Mid Haul Visitors

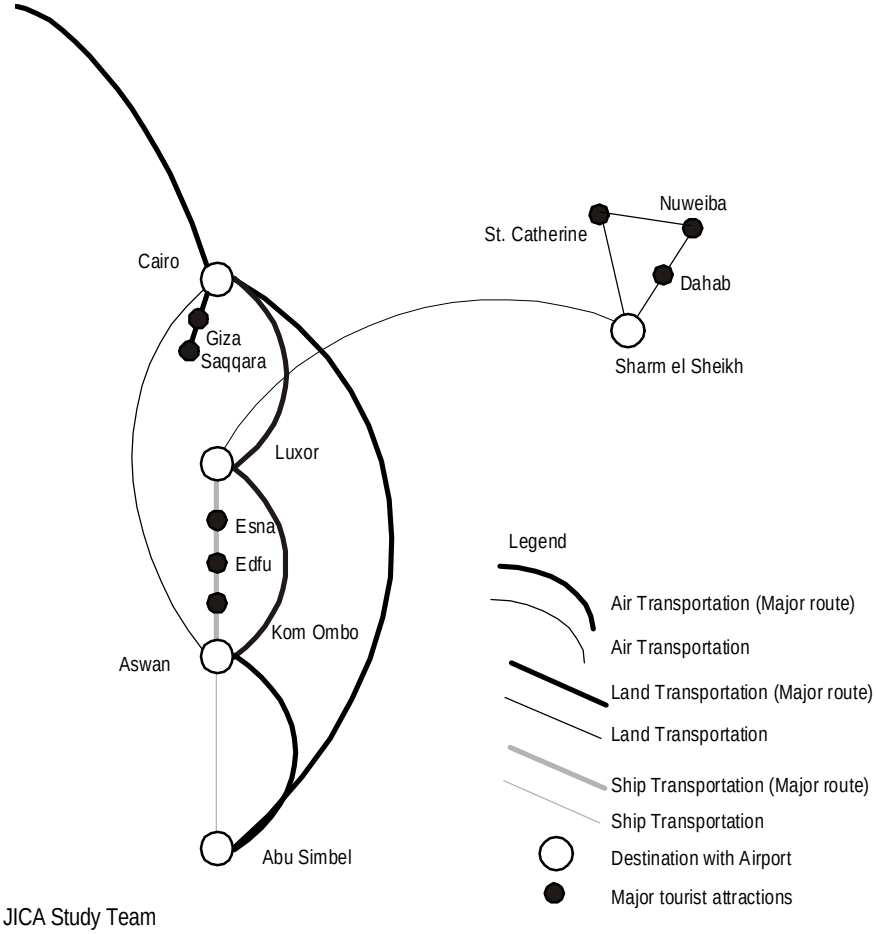


Source: JICA Study Team

Figure 1.4.4 shows the travel pattern of the US and Japanese visitors, which can be said long haul countries. They have the following characteristics.

- Travel pattern is too simple and destinations are limited. Travel patterns which runs only north and south are seen more clearly than middle haul countries;
- Only Cairo Airport is the only gateway for visitors. They visit Cairo at first and then go to their destinations;
- Cairo Sub-region and Upper Nile Sub-region have developed as destinations for long haul visitors, and South Sinai Sub-region has a little developed. Otherwise other Sub-regions have not developed at all;
- In Upper Nile Sub-region, Nile River Cruise is the popular product for US visitors. Though it is not popular for Japanese visitors until now, it will be popular when Japanese Government permit Japanese tour agent to add it in their tour program.
- Almost methods of movements to another destinations are by airplane.

Figure 1.4.4 Travel Pattern of Long Haul Visitors



Source: JICA Study Team

1.4.3 Tourism Market

(1) World tourism trend

The world tourism statistics by WTO indicates the following trend in recent years:

- 5.0% of annual increase in international visitor arrivals worldwide between 1989 and 1993 with remarkable growth resistant to economic fluctuation and other problems.
- Slow down of 3.5% between 1994 and 1998 causing high unemployment in major industrial countries, and the Asian financial crisis.
- The trend of tourist receipt in the world in the past 10 years heavily fluctuated from 0.1% to 21.5% by the economic situations and tourist arrivals.
- Tourist receipt in the world on 1997 and 1998 record the serious stagnation. On the other hand, Middle East region got 6.4 and 10.8% annual increase on the tourist receipt in the same period.

Table 1.4.8 World Tourism Trend

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Arrivals (million)	426.6	458.3	463.6	503.1	517.9	544.5	563.4	597.0	611.0	625.0	657.5
Annual increase (%)	8.0	7.4	1.2	8.5	2.9	5.1	3.6	6.0	2.3	2.3	5.2
Receipt (US$ billion)	221	269	278	315	324	354	305	436	436	445	-
Annual increase (%)	8.31	21.54	3.21	13.52	2.85	9.23	14.44	7.52	0.09	2.01	-

Source: WTO

(2) Trend and characteristics of tourism market in Egypt

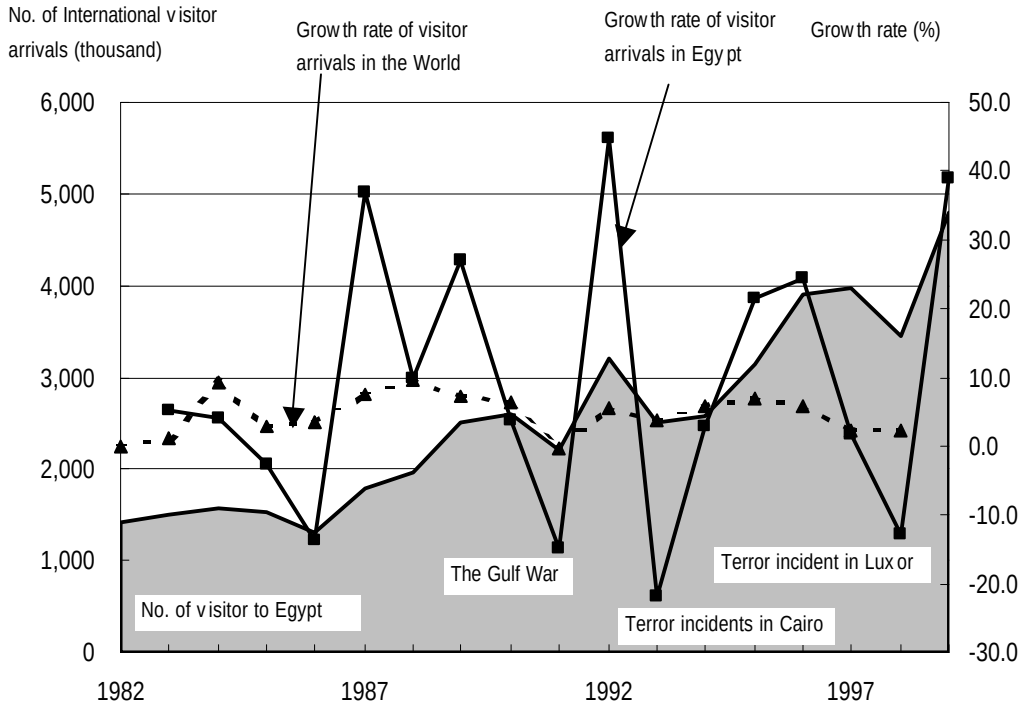
Number of visitor arrivals

Figure 1.4.5 shows that the number of visitor arrivals increased from 150 thousand in 1982 to 350 thousand in 1998. During the first half of the 1980s, the number of visitors stayed in the level of 150 thousand, and exhibited rapid growth during the latter half of the decade only. This is why liberalization policies were implemented in the aspects of exchange system, accommodation charge, deregulation of chartered flights, and development of some airports, upon recommendation by the International Monetary Fund.

In the 1990s the number of visitors registered extreme highs and lows. There were four factors that could explain the increase of tourist numbers. The first was the peace process in the Middle East; second was the aggressive tourism promotion policy by the Egyptian government. The third reason was the trickle-down effect of the improvement of tourist services; and the fourth was the diversification of tourism destinations, especially marine resort tourism.

But international affairs and terrorism involving Muslim fundamentalists pulled down tourist numbers in the 1990s. The growth rate of visitor arrivals in 1991 decreased 17.4% because of the Gulf War, but it recovered the following year at 31.0%. In July 1992, a terrorist act, which killed a tourist, brought down the numbers again. The number of visitors increased more than 17% from 1995 to 1996 then decreased 14% due to the terrorist attack in Luxor in November 1997.

Figure 1.4.5 Number of International Visitors



Source: Egyptian Tourism by Ministry of Tourism 1996, Egypt Tourism in Figures, annual issues by Ministry of Tourism, Number of worldwide tourists 1982-1999 by WTO

Bed nights and average length of stay

Table 1.4.9 presents the number of bed nights and average length of stay. In 1992 the number of bed nights had a high of 22 million after the Gulf War but it dropped to 15 million because of terrorism incidents. From 1995 to 1997, total bed nights grew to 27 million but decreased again in 1998 because of the terrorist attack in Luxor. The length of stay was in the range of 6.0 to 6.8

until 1997 but went down to 5.8 in 1998. During the same year, the shares of European and Asian visitors dropped, while visitors from the Middle East increased.

Table 1.4.9 Bed Nights and Average Length of Stay

Year	1992	1993	1994	1995	1996	1997	1998
Bed nights (thousand)	21,836	15,089	15,433	20,451	23,765	26,579	20,151
Average Length of Stay (days)	6.8	6.0	6.0	6.5	6.1	6.7	5.8

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Regions and Countries of Origin

Table 1.4.10 and Table 1.4.11 show the regions and countries where most visitors to Egypt originate. From the point of regional origin, Europe ranks first with a 60% share in 1997, up from 48% in 1993 (there was a decrease in 1998 because of the Luxor incident). Visitors from the Americas and the Asia & Pacific region have also been growing although not as large as Europe. The shares of visitors from Middle East and Africa have been decreasing slightly.

As to country of origin, Western European countries, such as Germany, United Kingdom and France, claimed the top five. Visitors from Italy have been rapidly growing in the 1990s and tourist numbers increased more than double from 1992 to 1998.

Table 1.4.10 Share of Visitors by Region of Origin

(Unit: percent)

Region	1992	1993	1994	1995	1996	1997	1998
Middle East	28.8	30.6	31.7	23.7	21.3	22.6	28.6
Africa	6.4	7.4	5.9	4.2	3.0	3.0	3.8
Americas	7.0	7.5	7.1	7.3	6.6	6.5	6.3
Europe	51.9	48.1	48.2	57.8	60.1	60.4	56.7
Asia & Pacific	5.8	6.3	7.0	7.0	7.4	6.6	4.7
Others	0.0	0.1	0.1	0.1	1.6	0.9	0.1

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Table 1.4.11 Main Countries of Origin

Year	First	Second	Third	Fourth	Fifth
1992	Germany	United Kingdom	France	Libya	Saudi Arabia
1993	United Kingdom	Germany	Libya	Saudi Arabia	United States
1994	Germany	Saudi Arabia	United Kingdom	Israel	Libya
1995	Germany	United Kingdom	Israel	Italy	Saudi Arabia
1996	Germany	Italy	United Kingdom	Israel	France
1997	Germany	Italy	United Kingdom	Israel	France
1998	Italy	Israel	Germany	United Kingdom	Saudi Arabia

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Table 1.4.12 shows the bed nights by region of origin. In general, the shares of Middle East and Africa are decreasing, while that of Europe is increasing. In 1997, visitors from Europe generated 63% of bed nights. In 1993, 1994 and 1998 when tourist numbers decreased because of terrorism, the shares of Europe decreased drastically, while that of Middle East increased.

Table 1.4.12 Share of Bed Nights by Region of Origin

(Unit: percent)

Region	1992	1993	1994	1995	1996	1997	1998
Middle East	32.0	33.1	37.0	28.3	23.8	21.2	26.9
Africa	6.8	7.0	7.0	5.1	3.4	3.3	4.2
Americas	6.0	6.7	6.5	7.2	6.2	6.4	6.4
Europe	50.3	47.7	43.1	52.5	60.5	63.3	58.2
Asia & Africa	4.9	5.3	6.3	6.8	6.0	5.7	4.2
Others	0.0	0.1	0.2	0.1	0.1	0.1	0.1

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Table 1.4.13 gives the average length of stay by region of origin. Figures for the Middle East reflect a downward trend, while no pattern is seen for the other areas.

Table 1.4.13 Average Length of Stay by Region of Origin

(Unit: days)

Region	1992	1993	1994	1995	1996	1997	1998
Middle East	7.6	6.5	7.0	7.8	6.8	6.3	5.5
Africa	7.2	5.7	7.0	8.1	7.0	7.2	6.5
Americas	5.9	5.4	5.5	6.4	5.7	6.6	6.0
Europe	6.6	6.0	5.3	5.9	6.1	7.0	6.0
Asia & Africa	5.7	5.1	5.3	6.3	5.0	5.9	5.3
Others	7.5	5.5	7.7	11.7	0.3	0.6	8.2

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

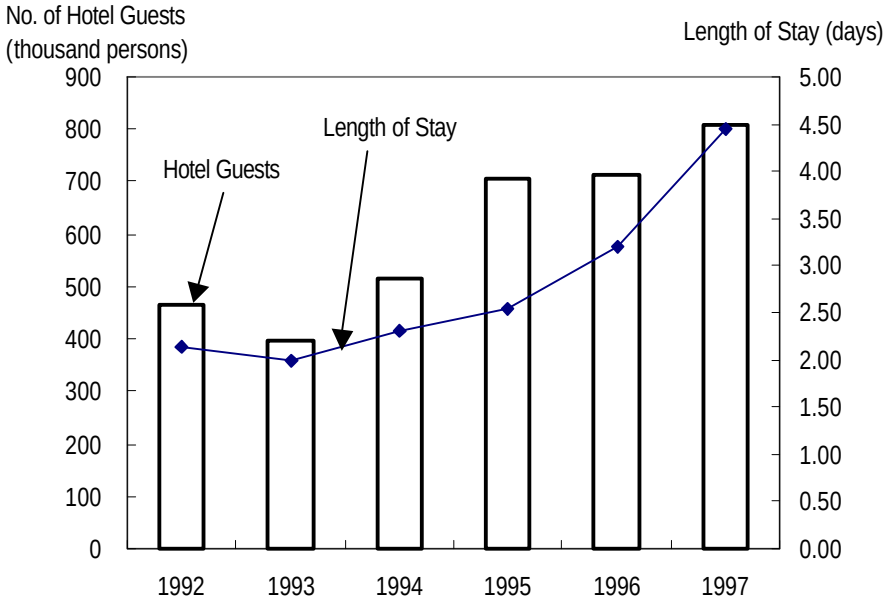
Egyptian market

Data and information about Egyptian market is limited in Egypt. Only the publication "Egypt Tourism in Figures" has the number of hotel guests and number of hotel nights in major six tourist destinations. Nonetheless, the following trend could be gleaned:

- There is a steady growth of Egyptian visitors in Egypt after 1993. Average annual growth rate is 11.6%.
- The average length of stay has also increased from 2.0 days in 1993 to 4.5 days in 1997.
- Preferred tourism products by the Egyptian market is beach resort in summer holiday, week end or one-day trip
- Business trips may share rather large portion of the Egyptian tourism.

Figure 1.4.6 shows the change of Egyptians' number of hotel guests and their average length of stay.

Figure 1.4.6 Egyptians' number of hotel guests and their average length of stay



Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Destination

Table 1.4.14 shows the share of hotel guests in major six destinations. It in Cairo dropped from 50.5% in 1993 to 31.7% in 1997. On the other hand, it in South Sinai and Red Sea has increased from 17.7% in 1992 to 41.9% in 1997. It in Luxor and Aswan has decreased from 18.6% in 1992 to 9.3% in 1997 and 10.1% to 7.8% respectively.

Table 1.4.14 Share of Hotel Guests in Major Six Destinations

(Unit: percent)

	1992	1993	1994	1995	1996	1997
Cairo	42.3	50.5	50.1	37.6	34.7	31.7
Alexandria	11.3	13.6	16.4	14.2	12.8	9.4
Luxor	18.6	11.3	8.6	7.2	9.9	9.3
Aswan	10.1	6.1	4.0	3.5	4.8	7.8
South Sinai	8.1	9.1	9.4	17.9	16.0	17.9
Red Sea	9.6	9.5	11.5	19.7	21.7	24.0

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Table 1.4.15 is the share of bed nights by destination. The share of Cairo remained high level during 1992 to 1997. Meanwhile, the shares of Alexandria, Luxor and Aswan have been continuously decreasing; especially, the share of Luxor dropped more than 10% from 1992 to 1995. The shares of South Sinai and the Red Sea increased during the same period; in fact, the Red Sea garnered one-fourth share of bed nights from 1994 to 1997. This is why the marine resort of Red Sea is booming while the history/archaeology tourism in the Upper Nile is declining, although the share is recovering gradually in 1997.

Table 1.4.15 Share of Bed Nights by Destination

(Unit: percent)

	1992	1993	1994	1995	1996	1997
Cairo	27.9	36.1	35.1	23.0	28.6	31.2
Alexandria	10.0	10.9	11.5	7.9	6.6	9.9
Luxor	17.8	12.3	8.7	6.3	7.4	9.7
Aswan	7.2	4.0	2.8	2.1	2.4	8.2
South Sinai	16.2	17.1	17.4	27.5	21.8	13.8
Red Sea	20.9	19.7	24.5	33.3	33.2	27.3

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Table 1.4.16 shows the average length of stay by destination. Figures of the South Sinai and the Red Sea indicate more than five days stay; other destinations have lesser numbers of days. The reasons of the drastic drop of South Sinai in 1997 should be clarified and provide proper countermeasures, and other similar destinations should learn from the reasons for maintain and prolong their length of stay.

Table 1.4.16 Average Length of Stay by Destination

(Unit: days)

	1992	1993	1994	1995	1996	1997
Cairo	1.7	1.9	2.0	2.0	3.3	4.7
Alexandria	2.3	2.1	2.0	1.8	2.0	5.1
Luxor	2.4	2.9	2.9	2.8	3.0	5.0
Aswan	1.8	1.8	2.0	2.0	2.0	5.1
South Sinai	5.1	5.1	5.2	5.0	5.4	3.7
Red Sea	5.5	5.6	6.0	5.5	6.1	5.5

Source: Egypt Tourism in Figures, annual issues by Ministry of Tourism

Expenditure

Table 1.4.17 indicates tourist expenditure per night by origin region from "A research on Estimating the Tourist Expenditure in the Arab Republic of Egypt (Tourist Expenditure Survey)" in 1994. This survey is carried out every two years by CAPMS at International Airports in Egypt. In the survey, actual expenditure amount, purpose of visit, length of stay, destination, and evaluation of tourism services in hotels and transportation, etc. are asked to international visitor.

Compared to individual visitors from Europe, visitors traveling in a group from the same origin spend a little more. Because most group visitors stay in accommodation with inclusive terms like marine resorts, where prices are more competitive worldwide, and prices tend to down.

On the other hand, individual visitors from the Americas and other areas, including Asia, spend much less than group visitors. The reason seems that most of them is young back packer.

Table 1.4.17 Tourist Expenditure by Region of Origin

(Unit: US$)

Region	Individuals	Groups	Average
Middle East	94	-	94
Europe	110	108	109
The Americas	169	177	170
Others	138	173	148
Average	103	119	106

Source: A Research on Estimating the Tourist Expenditure in the Arab Republic of Egypt by CAPMS in 1994

Age group

Table 1.4.18 shows the age structure of visitors by origin region. Visitors from the Middle East who are 30s, 40s and 50s, and have combined shares of 20% to 30%. A majority of visitors from Europe, the Americas and other countries are 50s.

Table 1.4.18 Share of Visitors by Age Group and by Region of Origin

(Unit: percent)

Region	No. of sampled visitors	Less than 30	30-	40-	50-	60-	70-	Not stated
Middle East	11,545	2.0	30.9	32.8	20.7	10.2	3.0	0.5
Europe	7,578	1.3	12.5	12.5	64.3	7.6	1.5	0.3
The Americas	1,850	1.9	11.0	18.2	48.1	14.6	5.4	0.8
Others	2,348	2.2	26.5	26.5	44.2	6.8	2.3	0.7
Total	23,321	1.8	22.9	24.4	39.4	9.4	2.6	0.5

Source: A Research on Estimating the Tourist Expenditure in the Arab Republic of Egypt by CAPMS in 1994

Frequency of visit

Table 1.4.19 shows the frequency of visit of individual visitors. About 70% of visitors from the Middle East have visited Egypt more than three times. More than half of visitors from the Americas and other long-haul visitors are on their first visit. Though first timers dominate the European market, those on their second visit have a high percentage share (21.0%). Individual visitors from Europe and the Americas who are visiting for the fourth time or more have a 22% share.

Table 1.4.19 Frequency of Visit of Individual Visitors by Region of Origin

(Unit: percent)

Region	Frequency of visit			
	1st time	2nd time	3rd time	4th time & over
Middle East	8.4	10.2	13.2	68.2
Europe	44.2	21.0	12.2	22.6
The Americas	50.0	15.2	11.9	22.8
Others	52.1	26.9	7.6	13.5

Source: A Research on Estimating the Tourist Expenditure in the Arab Republic of Egypt by CAPMS in 1994

1.4.4 Major Issues on Tourism Products Development and Tourism Market Development in Egypt

(1) Issues on tourism products in Egypt

Traditional tourism products

The existing tourism products should be maintained their value and also added new attractions improving facilitation of each tourism resources.

New tourism products

Beside the traditional tourism products, it is required to develop new products in order to promote the tourism of Egypt, such as eco-tourism in desert areas, formulate the newly found ruins in the sea of Alexandria as a product, etc.

Integration of tourism products

As one of the effective diversification methods of the tourism products is to integrate tourism products each of which characteristics is different. To supplement the characteristic each other

could be a new products integrating attractiveness of each. While Nile cruise and Historical/Archeological tourism have been integrated and become the most essential tourism product in Egypt, the followings are the possible integration in future:

- History/Archaeology tourism of Cairo Tourism Region and marine resort tourism in South Sinai Region: this integration may be being matured.
- History/Archaeology tourism of Upper Nile Region and marine resort tourism in Red Sea Region: this integration is the potential one to have most effectiveness for each together.
- History/Archaeology tourism of Upper Nile Region and eco-tourism in Desert & Oasis Region: this will have another high potential in near future.
- Eco-tourism in hinterlands of the Red Sea coast and marine resort of red sea
- Eco-tourism in hinterland of the Nasser lake and Nasser lake cruise

Reinforcement of linkage of the destinations each of which has different characteristics is essential to promote the integration of the tourism products improving transportation facilities.

Tourism products in Egypt, which are attractive to international visitors, are represented by historical tourism along the Nile River as well as by marine tourism mainly with diving activities along the Red Sea coast. The activity patterns and the markets of these tourism are definitely different.

The historical tourism takes the form of sightseeing tours, while the marine tourism takes the form of long-term staying. Historical tourism attracts visitors from all over the world irrespective of distances from origin areas (long, medium and short haul market), while the marine tourism attracts visitors mostly from European countries (short and mid haul market). Integrated products, which include both types of tourism destinations, are rare. In most cases, these two products are separated in each sub-region and prepared as optional tours with each other. That is because (a) the market of each tourism is deferent; (b) the domestic transportation system is not adequate to absorb the integrated tourism product; and (c) the capacity of Egyptian tourism industry is not satisfactory developed to supply the services for various needs of visitors. In other words, the capability of the Egyptian tourism industry is not yet matured enough to meet the various requirements from independent international visitors.

The other largest markets of Egyptian tourism are the Arab countries. They enjoy city tourism, staying in Cairo or Alexandria. Most of them are independent visitors, because there is no language barrier in communications.

<u>The enhancement of products in Cairo as the national Gateway</u>

Travel patterns in 1.4.2 shows that Cairo has the important role as the national gateway. International visitors arriving at Cairo at first, and then go to their destination. This is why basic information about each destination should be provided to them in Cairo. From the point of view, the improvement of Cairo National Museum is needed. Although it has a long history with important historical/archeological treasures, the building is not enough space to exhibit these treasures. And more, information supply for international visitor is limited.

(2) Issues on tourism market in Egypt

Its famous historical heritage sites have enabled Egyptian to carry out simple market promotion for a long time, but conditions have changed at the onset of the 1990s with the addition of marine resort tourism to the main tourism products in Egypt. Egypt has to compete with its competitor countries in many aspects, such as service level and price, in the marine resort market from now on. It is therefore important to develop an appropriate market promotion plan. There is a need to look into diversification of customers (not only group visitor but also free independent visitor) in order to achieve the tourism development target. Considerable and complete services and provision of necessary information for individual visitors will be needed

to increase free independent visitors in the future.

The Study Team carried out an interview survey of travel agents in Europe and in Japan last June and August 1999. Table 1.4.20 shows their opinions about the current condition and future prospects for Egyptian tourism.

Table 1.4.20 Results of Interview of Travel Agents in Europe and Japan (1/2)

Country		Italy	Germany	United Kingdom
Current Condition	Products/Customs/Competitors	• Historical tourism in Nile valley products and marine resort in Red Sea are different products (handled by different agents, different pamphlet in large-scale agent). • For almost customer, "Red Sea" Resorts means "Sinai Peninsula". • Middle-aged people and families is main target segment. • No competitor in aspect of historical tourism.	• Egyptian tourism is booming now. • Competitor in marine resort is Tunisia. • Hurghada is the most favorite marine resort destination for German.	• Historical tourism is dominant in Egyptian Market. Recently adventure (desert) tour and diving tour are getting popular. • Historical tourism products including Nile cruise are most favorite products. • Competitors are Middle East Countries (Israel, Jordan and Syria), which have unstable international relations.
	Problems/Constrains	• Transportation method should be improved, especially international & domestic airlines (Service standard by Egypt air, Jam in airport terminals). • Hygiene standards in hotel, cruising ships and local restaurant should be improved. • Quality and quantity of tourist guide should be improved. • Ratings of hotels and floating hotels are not carried out properly.	• Air transportation services. • Domestic transportation. • Poor infrastructure.	• Service standard in domestic freight (airfare, delay and service standard), and domestic airport terminal. • Hygiene standard.
Future prospecting		• Historical tourism in Egypt will be steady product in the future. • Marine resort tourism and Oasis tourism have potential. • Development of supporting infrastructure will be important. • Publicity campaign such as CF, and advertisement in newspapers and magazines are useful.	-	• Historical tourism will continue to dominate Egyptian market. • Safari (desert) tourism will be getting popular. • Decreasing terrorist incident and price decrease in charter freight would be necessary to keep steady growth of tourist number

Source: JICA Study Team

Table 1.4.20 Results of Interview of Travel Agents in Europe and Japan (2/2)

Country		France	Japan
Current Condition	Products/Customs/Competitors	• Main product is historical tourism and cruise in Nile valley • For Marine resort, Tunisia is the most favorite place • Some tour agents prepare for tour products that mixed historical tourism and marine resort tourism. The other companies consider them as different products. • French people prefer FIT to package tour. • Number of young tourist is growing however rich middle-aged people remains target segment. • No competitor in aspect of historical tourism resources	• Historical tourism is dominant in Egyptian market. • Historical tourism that includes Nile cruse was most favorite products for customers before Luxor incident. • Competitors are Turkey and Morocco will be in the future. But Egypt has unique historical tourism resources. • Middle-aged group is major target segment while share of honeymooners and young ladies have decreased after Luxor incident.
	Problems/Constrains	• Service standard of Egypt air (Cancel of freight and delay) should be improved. • Services in airport terminals (Information, signs and jam) should be improved. • Hygiene standard should be improved.	• Price is high than other Middle East destinations (prices for international tourist, pricing without seasonal demand) • International & domestic freight (number of fright & number of seat is limited). • Decrease of tourist number has not recovered yet (Especially Japanese agents cannot prepare for an itinerary with Nile cruise. Recently Japanese Government has admitted it).
Future prospecting		• Nile cruse will be a major tourist product for French people. • Marine resort tourism in Red Sea will develop however it is doubt that French people will go there or not. • Product mix of historical tourism in Nile valley and marine resort tourism in Red Sea will be possible. • Oasis and safari (desert) tourism will have potential to be developed. • Publication by ETA office to tour agents is not enough. Further co-operation between ETA and tour agents would be needed to increase tourist number to Egypt.	• Security assurance is most important to recover tourist number. • Improvement of publicity has to be needed in Japan. ETA is emphasizing on marine resort, but it will not appeal for Japanese mass market since various alternative destinations are located in short haul range.

Source: JICA Study Team

The opinions on the tourism promotion are summarized below:

- Historical/archeology tourism is a major tourism product for Egypt and will grow steadily in the future;
- Historical/archeology tourism with the Nile cruise is the most popular products in the top five countries of origin of visitors. Japanese travel agents recognize that offering a historical tourism product without the Nile cruise is one of the most important reasons for the limited recovery of Japanese tourist numbers after the Luxor incident in 1997;
- As to historical tourism, Egypt has no competitors because of its unique historical tourism resources;
- Marine resort tourism is a more important product in Italy and Germany than in the United Kingdom and France. On the other hand, marine tourism does not hold any attraction for most Japanese consumers;
- In marine resort tourism, Mediterranean countries will provide stiff competition to Egypt because more than 50% of visitors to marine resorts in the Red Sea area come from Western Europe, which is also a potential market for Mediterranean tourism. Travel agents in Italy and Germany pointed out that Tunisia is a would-be rival because of its competitive pricing;
- New tourism products such as desert tourism and oasis tourism have potentials;

- Service improvements are needed in air transport (both domestic and international flights), hotels and floating hotels, tour guides, etc.;
- The rating of hotels and floating hotels is not carried out appropriately. Some of them still have high rankings even though their facilities are already in poor condition and their service level has gone down; and
- Publicity activities of each ETA office are different by country. It was highly evaluated by travel agents in Italy but received low ratings in France and Japan.

1.5 Tourism Facilities

1.5.1 Existing Condition of Tourism Facilities

(1) Accommodation

Classification of accommodation

The categories of tourist accommodation are hotel, tourist village and floating hotel, according to the Ministry of Tourism. Hotels are defined as high buildings, and tourist villages are defined as cottage typed accommodation facilities. In this report hotel means the both of tourist villages and hotels.

Table 1.5.1 Accommodation in Egypt in 1997

	Number	Rooms	Beds
Hotel	515	50,239	99,900
Tourist Village	100	14,118	28,461
Floating Hotel	214	11,322	22,625
Total	829	75,679	150,986

Source: Egypt Tourism in Figures 1997 by MOT

Ranks

Hotels and tourist villages are ranked according to quality of facilities and services; the same goes for floating hotel, which has four ranks (from 2 star to 5 star). Table 1.5.2 shows that 60% of 5-star rooms are located in the Cairo region. In the Mediterranean region, 3-star and 2-star hotels have large shares, and there are 30% under-classified hotels in the Red Sea Region.

Table 1.5.2 Distribution of Rooms by Hotel Rank in 1997

Tourism Region	5star	4star	3star	2star	1star	Under classified*	Total
Cairo	9,673	2,671	4,384	2,011	643	776	20,158
(Share)	60.1	34.0	44.2	34.9	22.1	15.5	42.4
Nile Valley	2,555	1,435	1,153	994	650	836	7,623
(Share)	15.9	18.3	11.6	17.2	22.3	16.7	16.0
Mediterranean	1,114	1,350	3,389	1,800	1,359	90	9,102
(Share)	6.9	17.2	34.1	31.2	46.6	1.8	19.1
Red Sea	2,744	2,402	999	849	237	3,318	10,549
(Share)	17.1	30.6	10.1	14.7	8.1	66.1	22.2
Desert & Oasis	0	0	0	114	27	0	141
(Share)	0.0	0.0	0.0	2.0	0.9	0.0	0.3
Total	16,086	7,858	9,925	5,768	2,916	5,020	47,573**
(Share)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: * Under classified means that the star ranking by MOT has not done.

** Total hotel rooms in Egypt are 50,259 rooms in 1997. 2,686 hotel rooms are excluded in the list.

Source: Egypt Tourism in Figure 1997 by MOT

Accommodations in the Red Sea Region are mostly tourist villages, which in 1997 numbered 72, with a total of 10,260 rooms.

Geographical distribution of accommodation

In 1982 and 1993, more than 50% of hotel rooms were distributed in the Cairo Tourism Region but the share decreased to 30% in 1997, as indicated in Table 1.5.3. The share of the Red Sea Tourism Region rapidly grew to 31.1% in 1997 from 7.7% in 1993. The number of hotel rooms in the Nile Valley also developed three times as much during the same period while the share

increased only 8%.

Table 1.5.3 Number of Hotel Rooms in Tourism Regions

Tourism Region	1982		1993		1997	
	Number	Share	Number	Share	Number	Share
Cairo	10,639	56.4	20,233	51.3	22,598	30.0
Nile Valley	3,314	17.6	6,879	17.4	18,874	25.1
Mediterranean Sea	3,170	16.8	9,189	23.3	9,947	13.2
Red Sea	639	3.4	3,032	7.7	23,579	31.3
Desert and Oasis	1,102	5.8	118	0.3	259	0.3
Total	18,864	100.0	39,451	100.0	75,257*	100.0

Note: The number of hotel rooms comes from Governorate Net. On the other hand the number of accommodation rooms in 1997 in the Table 1.5.1 comes from "Egyptian Tourism in Figure 1997". This is why there is some difference between the two figures.

Source: Egyptian Tourism 1982-1996 by MOT, Egypt Tourism in Figures 1993 by MOT, Governorate Net

(2) Travel agent and tourism establishments

There are three categories of travel agents according to type of duties performed. Category A can issue tickets and handle transportation services. Category B only issues tickets, while Category C takes care of transportation services. In 1997, there were 678, 50 and 115 of each category respectively.

As defined by the Ministry of Tourism, a tourist establishment is a restaurant, cafeteria or place of entertainment. 60% of tourist establishments, mostly restaurants or cafeterias, are located in the Cairo Tourism Region.

Table 1.5.4 Number of Tourist Establishments by Tourism Region in 1997

Tourism Region	Number
Cairo	612
Nile Valley	65
Mediterranean	284
Red Sea	53
Desert & Oasis	0
Total	1014

Source: Egypt Tourism in Figures 1997

(3) Public tourism facilities

Historical sites and museums

There are few amenities, for example visitors' center kiosk and shelter, to protect visitors from the elements. Especially in the summer, visitors stand for long hours under the heat of the sun. There is also lack of material on historical sites printed in major languages, which makes it difficult for international visitors without a guide to fully appreciate the attractions.

Museums built in recent years, such as Nubian Museum and Luxor Museum, have excellent quality and quantity of exhibits, but information about them is limited. Similarly, museums of historical significance, such as the National Museum, have an abundance of display but lack printed information although it attracts many of visitors every day.

Tourist information center

The Egyptian Tourism Authority is in charge of operation of tourist information centers located in the principal cities of governorates (27 offices). The major functions of tourist information centers are promotion of Egyptian tourism, coordination of the different tourism departments in each governorate, and support to overseas information centers, especially those with low

performance ratings.

At the St. Catherine and Ras Mohanmmed in Sinai Peninsula, a visitor's center, which is operated by the Egyptian Environmental Affairs, is located nearby parking facilities. At the center, visitors could easily get information about the natural and social environment of St. Catherine's area.

More close coordination is required among the agencies concerned for tourism development and promotion of Egypt in order to make the tourist information center effectively serve to the visitors, which are authentic roles of the center.

Public toilet

The public toilets in park facilities and museums are well maintained, but their number is inadequate during peak tourist season.

Other facilities

Conference hall: CICC is the only public conference facility. Other requirements are covered by private sector. Almost 5 star hotels have such function.

Berth facility: Berthing facilities satisfying necessary functions such as drink water inlet, sewerage outlet, solid waste disposal, etc., are much short in Nile River for the its cruise. It is urged to construct new berths and improve the existing berths to avoid more pollution of the river water.

1.5.2 Overview of Tourism Facilities Development Plan

(1) Accommodation development plans and projects by TDA

The Tourism Development Authority and the Ministry of Tourism have set their target tourist numbers, bed nights and required accommodation in The Strategy of the Tourism Sector for the fourth (1997/98-2001/2002), fifth (2002/2003-2006/2007) and sixth (2007/2008-2011/2012) five-year development plans. It is reported that 390,000 rooms would be needed until 2011/12. In 1995, the accommodation capacity in Egypt was estimated at 65,000 rooms, and 10,000 more were under construction. Therefore, the additional accommodation requirement by 2011/12 is 315,000, and the necessary investment costs for development will reach LE 76 billion.

Table 1.5.5 Target Number of Visitor Arrivals, Bed Nights and Required Accommodation

	2002	2007	2012
Number of visitor arrivals (thousand)	5,800	9,400	15,000
Bed nights (thousand)	40,600	75,200	129,000
Length of stay (days)	7	8	8.6
Accompany rate	1.5	1.5	1.5
Occupancy rate (percent)	60	60	60
Required number of hotel rooms	73,083	101,112	140,805
Investment costs (superstructure and Infrastructure) (LE million)	17,623	24,405	33,972

Source: The Strategy of the Tourism Sector by Ministry of Tourism in 1996

As for distribution of accommodation, the Red Sea Tourism Region is expected to play an important role. In the future, it would have a 50% to 65% share compared to just 30% in 1997.

(2) Other governmental plans

The Strategy of the Tourism Sector also indicated investment projects and costs for the Ministry of Tourism, Egyptian Tourism Authority and Cairo International Conference Center during the three 5-year development plans. The MOT would handle the beautification of tourist areas, construction and improvement of tourist rest houses, etc., costing LE 181 million. The ETA

would take charge of development of tourist centers, establishment and improvement of tourist information centers, improvement of tourist bureaus abroad, and construction of the headquarters building, which will cost LE 120 million in total. Lastly, CICC would be responsible for development and renovation/rehabilitation of conference facilities, amounting to LE 299 million until 2012.

As for other developments, Luxor City plans to seek financial support to develop a new berthing facility along the east side of the bridge, which is located south of Luxor City. Aswan also recognizes the need to expand its existing berthing facilities in the future.

1.5.3 Business and Investment Environment

JICA Study Team conducted a business environment/investment survey through subcontractor. The survey was based on questionnaire distributed to 52 companies and institutions, which consist of five banks, one private and two public institutions for tourism promotion and 44 tourism related companies (16 hotels and resorts, 13 contractors, and 15 tour operators/tour agents). The opinion of tourism related companies about business environment/investment environment are summarised as follows;

- Followings are serious reasons which prevent vivid business activity/investment activity; regulations and complicated public procedure, lack of institutions and laws, tax administration, difficulty of fund procurement and lack of human resource, difficulty of labour management and lack of infrastructure. Improvements related to public sectors are highly ranked.
- Almost companies are satisfied with the return of business activity/investment activity, and 60% of them plan to expand business activity in Egypt.
- 70% of them gather information from Tourism Development Authority when they start/expand business activity. Investment promotion organisation/agencies (to foreign investment countries) in foreign countries, General Authority for investment and free zones (GAFI) and Egyptian Banks follow it. 70% of companies/institutes agree that information from TDA is the most effective in the information supply institutions/agencies in Egypt.
- As for target visitor arrivals, 30% of companies/institutes said Western European people are the main target. Next target is Egyptian and visitors from Middle East. Eastern Europe and Russia ranked fourth. Company/institution which aim to visitors from Asia and pacific is only one out of 43 companies/institutes.
- Companies expect to get turnover of investment in a short time. More than three forth companies expect to get turnovers in four years from the beginning of the new investment.

On the other hand, all banks subcontractor had interviews have financed and continue to finance for tourism related projects. Although the banks consider tourism to be a higher risk industry compared to another industry, all the banks said they continue to finance for tourism sector by project basis. They also indicated that the rate of return on tourism projects is overall what they expect, but this covers a wide range of variation, with some projects paying back capital ahead of schedule, while others fall behind. In times of crisis for the tourism sector, such as after the Luxor incident in 1997, they had to reschedule some of their loans to help their clients overcome this crisis, but that again some clients were more able to recover than others were.

Subcontractor surveyed two public institutions that promote investment in tourism in Egypt, GAFI and TDA. GAFI's role is to promote investment in Egypt, and is not specialised in the tourism sector. According to GAFI's data, 797 companies in the tourism sector had been established by December 1998, with a total investment cost of L.E. 38,977 million. Of these companies, 39 companies were established in Luxor and Aswan, and 241 in the Red Sea. The Red Sea governorate has the highest number of established companies followed by Cairo and Southern Sinai, with Upper Egypt a distant fourth contender. This is in line with the information obtained from the banks on the distribution of investment. The data obtained from GAFI also shows that investment in tourism has increased markedly over the past two years, with 455 companies out of the total of 797 having been established in 1997 and 1998. TDA is responsible for providing investors with detailed information on investment in all areas of the country, and

most companies rely on it for information as input into their investment decisions. It looks that TDA's promotion method is to prepare for booklets which attract investments to new tourism development area and to distribute it for investors. But investors who have much relation with TDA seem to be able to have informal information.

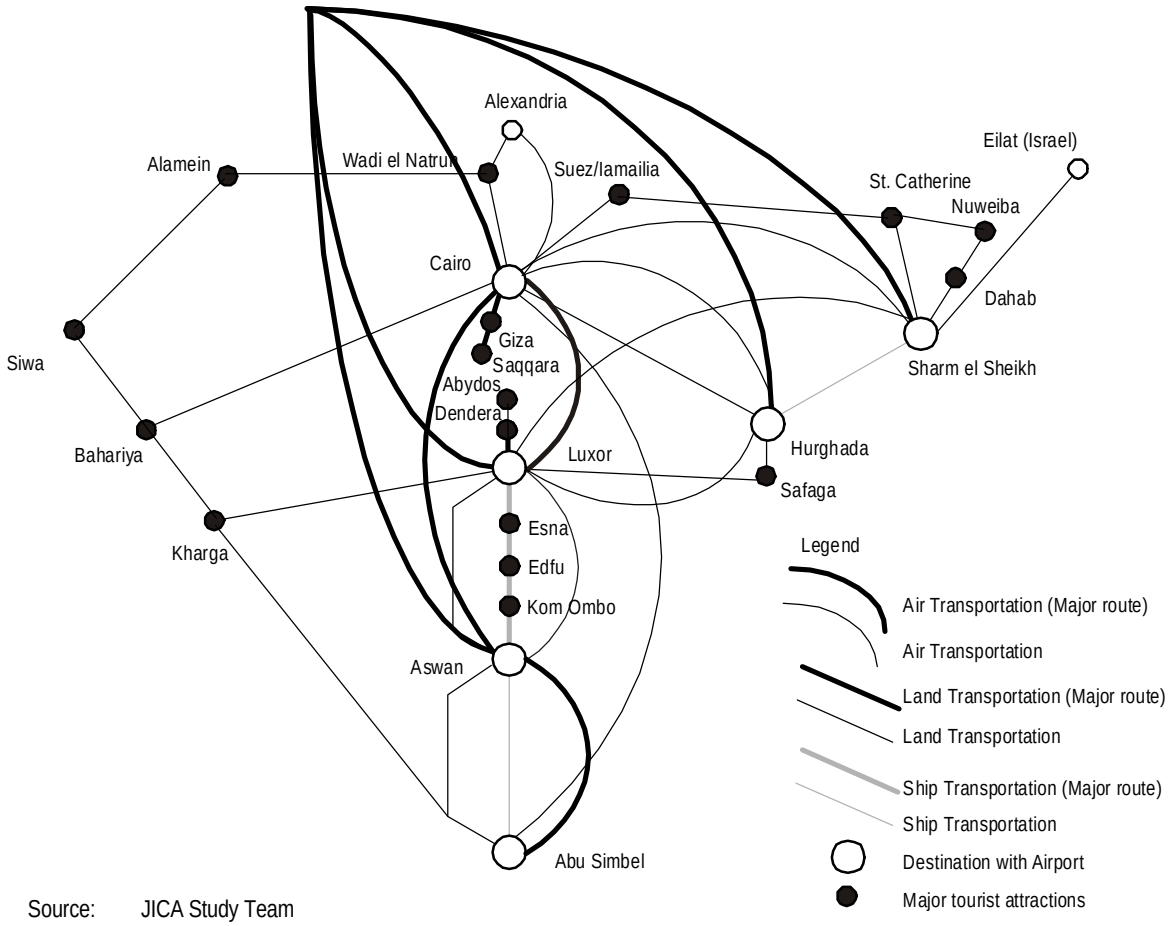
1.6 Transportation

1.6.1 Major Transportation Mode for International Visitor

Figure 1.6.1 shows the travel pattern of major international visitors in Italy, Germany, France, United Kingdom, United States and Japan. It is prepared by the analyses of tour pamphlets of each country. It means that travel patterns of individual visitor are not included, and visitors' actual needs are also not included in the figure. But it can show visitors' movement methods in Egypt.

Air transportation and ship transportation in the Nile River have important role in visitors' movement. They run north and south of Egypt, while land transportation has limited role of connecting destinations east and west.

Figure 1.6.1 Travel Pattern of International Visitor



Source: JICA Study Team

1.6.2 Air transportation

Though there are 18 is classified in 3 kinds of airport (Prime/major international airport, Secondary/other international airport and Domestic airport) by Egyptian Civil Aviation Authority, 14 airports were being operated in 1997 according to its annual statistical report.

In 1997, there were around 73,000 international flights, and they carried 8.4 million air passengers from and to Egypt. The counted international air passengers were almost shared by 3.96 million international visitors arrivals (7.92 million passenger demands) in the year. Non-scheduled flights carried 2.64 million passengers, which are one third of passenger demands of total international visitors to Egypt. Scheduled flights carried remaining 5.28 million passenger demands of international visitors to Egypt.

Almost of international flights used the 6 major international airports of Cairo, Alexandria, Hurghada, Luxor, Aswan and Sharm el Sheikh. Around 90% of scheduled international flights used Cairo Airport. Non-scheduled international flights mainly used Cairo, Hurghada, Luxor and Sharm el Sheikh international airports.

Domestic flights and air passengers were also concentrated to the 6 major international airports and Abu Simbel airport.

Table 1.6.1 Number of Flight by Major Airport in 1997

Airports	International		Domestic	Total Flight	
	Scheduled	Non-scheduled		Number	Share (%)
Cairo	44,112	6,983	18,469	69,564	49.6
Alexandria	2,509	522	3,449	6,480	4.6
Hurghada	1,003	6,626	7,258	14,887	10.6
Luxor	1,028	5,162	11,311	17,501	12.5
Aswan	14	691	9,598	10,303	7.4
Sharm el Sheikh	293	3,955	5,734	9,982	7.1
Asyut	26	2	32	60	0.0
Taba	0	179	197	376	0.3
St. Catherine	0	0	136	136	0.1
El Arish	37	242	67	346	0.2
Abu Simbel	0	0	5,337	5,337	3.8
New Valley	0	0	706	706	0.5
Matruh	0	0	290	290	0.2
Port Side	0	0	4,178	4,178	3.0
Total	49,022	24,362	66,762	140,146	100.0
Share (%)	35.0	17.4	47.6	100.0	

Source: Annual Statistical Report 1997 by Egypt Civil Aviation Authority in 1997

Table 1.6.2 Number of Passengers by Major Airport in 1997

Airport	International		Domestic	Total Passenger	
	Scheduled	Non-scheduled		Number	Share (%)
Cairo	5,307,410	493,321	1,927,091	7,727,822	56.1
Alexandria	225,733	45,192	48,606	319,531	2.3
Hurghada	116,394	841,559	509,780	1,467,733	10.7
Luxor	147,323	699,797	1,144,610	1,991,730	14.5
Aswan	810	37,250	785,826	823,886	6.0
Sharm el Sheikh	42,721	499,042	439,817	981,580	7.1
Asyut	2,497	151	2,433	5,081	0.0
Taba	0	15,936	6,970	22,906	0.2
St. Catherine	0	0	1,821	1,821	0.0
El Arish	2,284	7,314	1,143	10,741	0.1
Abu Simbel	0	0	372,084	372,084	2.7
New Valley	0	0	11,260	11,260	0.1
Matruh	0	0	1,927	1,927	0.0
Port Side	0	0	25,470	25,470	0.2
Total	5,845,172	2,639,562	5,278,838	13,763,572	100.0
Share (%)	42.5	19.2	38.4	100.0	

Source: Annual Statistical Report 1997 by Egypt Civil Aviation Authority in 1997

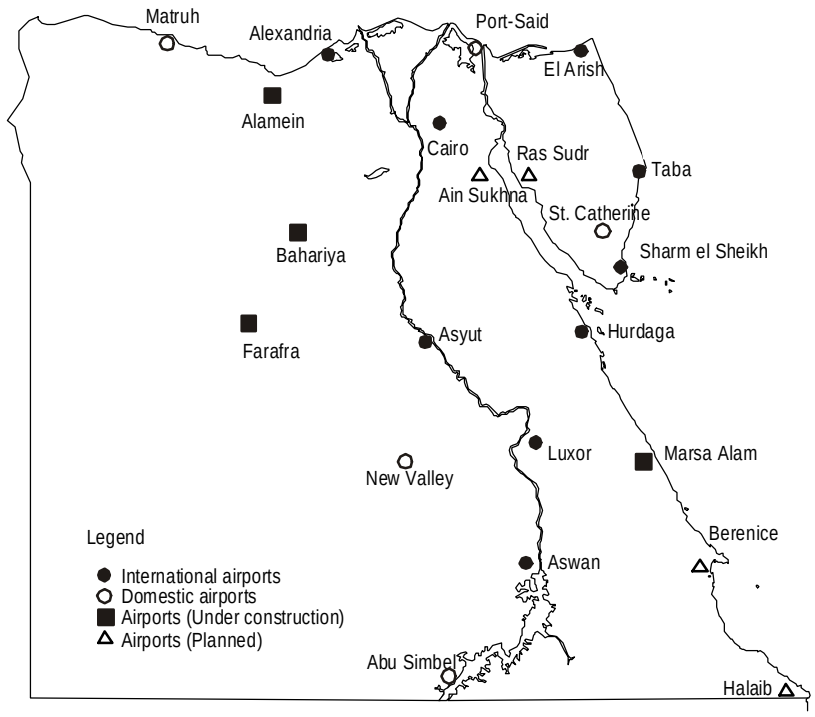
The Cairo Airport managed and operated by Cairo Airport Authority, has been the hub airport of Egypt since it opened in 1963. The number of domestic and international passengers who used the airport in 1997 reached 7.73 million, or 56% of the total passengers in Egypt. In addition,

the number of arrival and departure flights, both domestic and international, was approximately 93,600. It is the largest airport in the Middle East, and has three 3,000 to 4,000meter runways for international flights and four runways, which could accommodate A-300-class airplanes, for domestic flights. The airport is not only used for civil aviation, but also for military purpose.

In consideration of the increasing number of visitors in the future, the Government of Egypt is planning to expand existing airports and build new airports. The government is also planning to expand and build these airports by BOT scheme. Currently, 6 new airports are planned, and four of them have already been under construction. The other two are looking for investors. In the future, additional two airports will be built along the Red Sea by BOT scheme.

- Four airport projects under construction by BOT: Marsa Alam (Red Sea), Farafra (Western Desert), Bahariya (Western Desert), El Alamein (Mediterranean);
- Two airport projects announced by BOT: Ras Sudr (Red Sea), Ain Sukhna (Red Sea); and
- Two future airport projects scheduled by BOT: Ras Banas (Red Sea), Halaib (Red Sea)

Figure 1.6.2 Major Airports in Egypt



Note: Classification of airports is based on the Annual Statistical Report 1997.
Source: JICA Study Team

1.6.3 Road Transportation

Road transportation is not used for long distance transportation for international group visitors. Almost road transportation need for them is intra-city transportation and inter-city transportation which has not a long distance for international visitors.

Generally road condition in Egypt is good. In 1992, Egypt's inter-city road network was approximately 14,028 km, of which 1,319 km, belonged to local governments, and the rest were under the jurisdiction of the Road and Bridge Authority (RBA). A majority (87%) of inter-city highways were characterized as two-way, two-lane, of which 40% were sub-standard with less than 7.5m widths; 12% and 1% were four-lane and six-lane divided highway respectively. The pavement condition of about 16% of the road network was poor, while 84% was in fair to

excellent condition. The condition of the shoulder pavement was poorer than the driveway condition; 56% was unpaved while 44% was paved, of which only 31% was in good condition.

But traffic congestions seldom occur in large cities such as Cairo, Alexandria. The shortage of parking space is one of reasons why such traffic congestions occur. Some improvements such as developments of parking spaces and bypass road are required.

When visitors travel from Cairo to Saqqara and from Luxor to Dendera, they are seldom caught in a jam because of narrow road width. In such roads upgrading is needed in accordance with the increase of visitor arrivals. In Red Sea Region, in which a large scale of accommodation development is planned, improvement and upgrading are also needed in accordance with the increase of visitor arrivals.

For international independent visitors, long distance bus network can offer a good transportation method. It has services network where train transportation has not service such as Western Desert, Eastern Desert and Sinai Peninsula. Although it takes much time compared with another transportation mode such as air transportation, it costs very low.

But for international visitor, it is difficult to use the bus network because of limited information. In accordance with the diversification of tourist products, such a situation has to be resolved.

1.6.4 Railway Transportation

The railway network of Egyptian National Railway (ENR) consists of 43 lines/segments, as of October 1996. Total length of lines is approximately 4,401 km, including 19 km and 1,320 km of four-track and double-track lines respectively. More than 30% of the lines/segments have been developed as double or four-track lines.

The ENR lines are classified into three types by train speed and/or passing tonnage as listed Table 1.6.3. First class lines are listed in Table 1.6.4.

Table 1.6.3 Types of ENR Lines

Class	Length (km)	Number of Lines and Segments	Remark
1st	1,403	6	Line No. 1 - 6
2nd	787	11	Line No. 7 - 17
3rd	2,211	26	
Total	4,401	43	

Source: The Master Plan Study for Egyptian National Railways (JICA study, 1996)

Table 1.6.4 List of First Class Lines

No.	Name of Line	Length (km)	Remarks
1	Cairo - Alexandria	209	Including 19 km of 4-track line
2	Cairo - El Sad El Ali	898	
3	Benha - Port Said	191	
4	Tanta - El Mansoura	54	
5	Abis - Ras El Ten	10	
6	Helwan - El Marg	41	
Total		1,403	

Source: The Master Plan Study for Egyptian National Railways by Japan International Cooperation Agency in 1996

Though train transportation has not developed as transportation mode for international group visitors, express trains and limited express trains which connect Cairo to Aswan, and Cairo to Alexandria are useful for international independent visitors. It costs much cheaper than air transportation and passenger can enjoy the scenery seen from train windows although it takes more time than air transportation. Wagons Lits Egypt, which is foreign owned company, runs limited express train with sleeping cars between Cairo to Aswan.

In general it is difficult to reserve seat or bed of these trains. Information about them is limited and reservation system has not developed enough yet. And more cities in Middle Nile such as Asyut had security problem before.

In order to develop train transportation as transportation mode for international visitors, such issues have to be proved.

1.6.5 Major Issues on Transportation Network and Services

Transportation network is generally identified one of most important tourism infrastructure, which can be called basic tourism infrastructure such as foods, accommodation and transportation. The expansion of capacities on each transportation facilities and upgrading of transportation service are indispensable measures to realize the national tourism development target in 2012.

(1) Issues on airport development

Developments and expansion of airport facilities have to be implemented to cater a dramatically increasing international tourist. Details are described below:

- The target of 15 million international visitor arrivals, which is planned by MOT, will require around 500 international flights with more than 120,000 passengers per day. Increases of the capacity of Cairo Airport, Luxor Airport, Aswan Airport, Sharm el Sheikh Airport Hurghada Airport are needed in the future.
- Especially more than 65% of total accommodations are distributed in the Red Sea Region, as indicated in The Strategy of the Tourism Sector by MOT. It will generate more than 400 international flights with over 100,000 passenger demands during peak day. Enhancement of Sharm el Sheikh Airport and Hurghada Airport, and development of Marsa Alam Airport, coordinating with accommodation development in the surroundings are needed.
- Cairo Airport will continue to work as the only gateway for most of international visitors. The Construction of the third terminal should be implemented in accordance with the development plans.
- Extension of the terminal building at Luxor Airport should be implemented in accordance with the development plan. Though airport facilities at Aswan Airport are new and have enough capacity, a separation of military use has to be considered in the future.
- International visitors will visit more than one Tourism Regions, which will also require a appropriate domestic air transport services and terminal facilities development until target year of 2012.

(2) Issues on road transportation

Road network improvements and developments will be required in inter-city network in order to provide and improve accessibility of destinations and to utilize potential tourism resources. Especially the traffic congestion in Cairo, the most important gateway in Egypt, should be solved. And more, because accommodation development in Red Sea and South Sinai will bring about traffic congestions in city area, developments of bypass road and improvements of junction will be needed there in the future.

When international visitors move to destination by tourist bus they have to form a convoy for security. Social stability and appropriate security measures will be required to realize the national tourism development target.

(3) Issues on railway transportation

At present, railway could not take major transport function for international visitors for the following reasons,

- Coach train is not so clean and not appropriate for international visitors;
- Security problem in Middle Nile (Asyut);
- Train operation is not so frequent and not clear; and
- Seat reservation system is not appropriately easy for international visitor.

Rail transport service will be improved and upgraded to utilize for international and Egyptian visitors, which will create big potentials of railway tourism demand in the future.

1.7 Environment

1.7.1 Legislative and Institutional Framework related to Environmental Protection

The legislative and institutional framework related to environmental protection and environmental impact assessment (EIA) system for tourism development project in Egypt can be briefly summarized as follows.

(1) National constitution

The Egyptian Constitution, which was promulgated on September 11, 1971 and modified in 1980, does not refer directly to the environment. However, it obligates the Government to protect the people's rights to a good living environment and to provide the Egyptian population with welfare services.

(2) Decrees, laws and regulations

Decree No. 631/1982

In 1982, Presidential Decree No. 631/1982 established an environmental authority. This move demonstrated the government's recognition of the necessity of a cross-sectoral governmental authority in the field of environmental protection, and promoted environmental concerns to the level of national interest.

Law No. 4/1994

In 1994, the Egyptian Government promulgated Public Law No. 4 to strengthen environmental administration, protection and development activities in Egypt. This is Egypt's first modern and comprehensive law regulating the environment as a whole, including air, water, land, living creatures and human activities.

In accordance with this law, the Egyptian Environmental Affairs Authority (EEAA) was established in 1994 as the competent authority in charge of environmental protection in Egypt, replacing the former Environmental Agency established by Presidential Decree No. 631. This law calls for the establishment of an environmental protection fund and a system of incentives to encourage the protection of the environment.

Decree No. 338/1995

Law No. 4/1994 and its executive regulation (Decree no. 338/1995) gives the EEAA full authority to implement the environmental impact assessment (EIA) of selected projects.

Others

Table 1.7.1 is a list of other laws, decrees and regulations related to environment in Egypt.

Table 1.7.1 List of Other Environmental Laws, Decrees and Regulations

Laws, Decrees and Regulations	Contents
Decree No. 8/1983	Protection of the Nile River & waterways against pollution
Decree No. 106/1983	Implementing some provisions of Law No. 102/1983 concerning natural reserves
Decree No. 338/1995	The executive statutes of Law on Environment as enacted by Law No. 4/1994
Decree No. 349/1979	Establishment of Egyptian Organization for Wild Life Protection
Decree No. 470/1971	Norms of atmospheric pollution in establishments and industrial subordinated units
Presidential Decree No. 93/1962	Concerning drainage of liquid wastes
Presidential Decree No. 748/1957	Management of drinking operations
Ministerial Decree No. 649/1962	The executive regulations of Law No. 93/1962 on the drainage of liquid waste
Law No. 4/1984 (Article 28)	Prohibiting animal hunting
Law No. 12/1984	Irrigation & water circulation
Law No. 27/1978	General resources of water suitable for drinking & human use
Law No. 48/1982	Re-protection of the River Nile & waterways against pollution
Law No. 53/1966	Protection of birds and wild life (Article 3)
Law No. 93/1962	Liquid wastes disposal
Law No. 101/1985	Fund for environmental and tourism development
Law No. 5711978	On elimination of pools and swamps and prevention of digging works

Source: Information and Decision Support Center, in 1999

(3) Natural protectorates

In 1983, the Egyptian Government enacted Law No. 102 concerning the establishment and management of natural protectorates. At present, a total of 21 natural protectorates exist and 10 protectorates have been proposed nationwide.

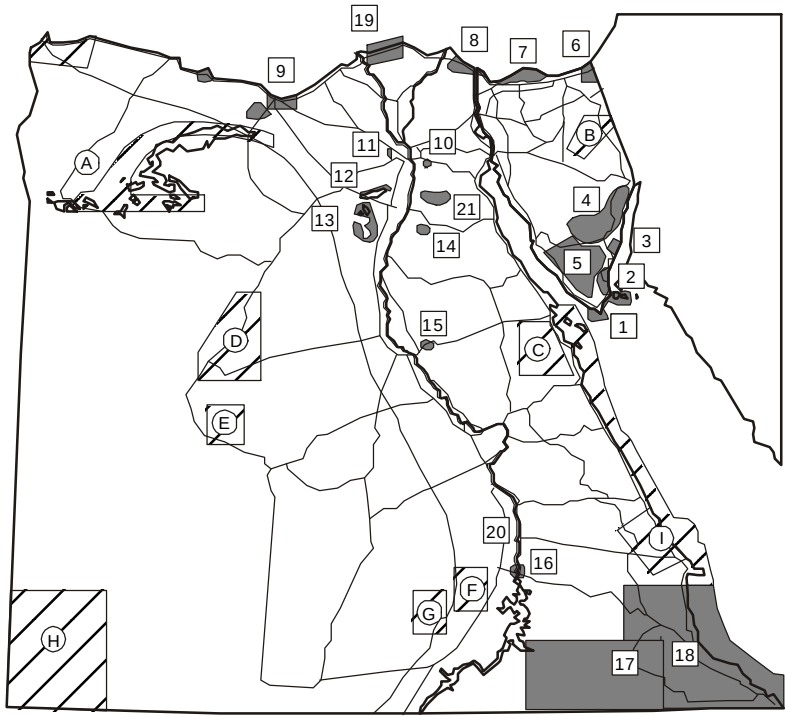
Table 1.7.2 Existing Natural Protectorates and Proposed Natural Protectorates

	Existing Natural Protectorates		Proposed Natural Protectorates
1	Ras Mohamed National Park	A	El Magharra Protectorate
2	NABQ Protectorate	B	El Cosaiema Protectorates
3	Abu Galum Protectorate	C	Shaieb Albanat Protectorate
4	Taba Protectorate	D	El Farafra Protectorate
5	St. Catherine Protectorate	E	El Dakhara Protectorate
6	Alahrash Protectorate	F	Karkar Protectorate
7	Zaranik Protectorate	G	Donkol Protectorate
8	Astum el Gamil Protectorate	H	El Galf el Kabir Protectorate
9	Omayed Protectorate	I	Hamata Protectorate
10	El Maadi Protectorate		
11	Hassana Dome National Monument		
12	Qarun Protectorate		
13	Wadi Alrayan Protectorate		
14	Wadi Sannur Cave		
15	Wadi Asyuty Protectorate		
16	Saluga Ghasal Protectorate		
17	Wadi Alaqi Protectorate		
18	Elba Protectorate		
19	Borollos Protectorate		
20	All Islands in Nile River		
21	Wadi Degla Protectorate		

Note: Marks before each name shows locations in Figure 1.7.1

Source: JICA Study Team

Figure 1.7.1 Location of Natural Protectorates



Note: Figures and characters show name of protectorate. Refer to 1.7.2.
Source: EEAA in 1999

(4) Environmental impact assessment system in Egypt

Legislative Background

Law No. 4/1994 has formulated the official procedures of the EIA system in Egypt. An important aspect of the executive regulations is the new licensing requirement related to the EIA. The executive regulations provide a list of specific companies and establishments which has to obtain an environmental approval as part of the licensing procedures from the related administrative authority to carry out a project which might impact on the environment. The list includes industrial facilities, tourism projects, companies operating in the oil and gas sector, power generating facilities, mines and quarries, infrastructure projects and other projects which could have an impact on the environment. Also included in this list are all establishments or facilities to be constructed on the banks of the Nile River, its branches and canals; in tourist and historical monument areas; in high population density areas; on sea and lake shores, in protected areas, etc.

The Egyptian Environmental Affairs Authority (EEAA) has prepared guidelines on the EIA procedure. Establishments and projects that are required to conduct the EIA are listed in the guidelines as well. As for the coastal area, the EEAA prepared the "Environmental Guidelines for Development in the Coastal Areas" in 1996, the "Environmental Impact Assessment, Guidelines for Development of Ports, Harbors and Marines", etc.

Institutional Framework of the EIA

Egyptian Environmental Affairs Authority (EEAA): As mentioned above, Law 4/1994 and Decree No. 338/1995 have given the EEAA full authority to implement the EIA. Under the Executive Director (Vice Chairman) of the EEAA, this authority consists of the following two sectors:

- Environmental Quality Sector, and

- Environmental Management Sector.

In the Environmental Management Sector, there is the Central Directorate of EIA that has all the responsibility for appraisal of EIA in Egypt.

Environmental Department in TDA: According to Law No. 4/1994, all new projects or extensions of existing projects are required to prepare and submit an EIA report, together with an application to the licensing authority, such as Tourism Development Authority or other authorities, ministries and government entities.

The Ministry of Industry, Ministry of Agriculture, General Authority of Investment, General Authority for Agricultural Development, and others, which deal with large- scale projects, have an environmental affairs related office or department to enforce EIA studies.

The office or directorate refers potential investors and developers to the Central Directorate of EIA in the EEAA to conduct the EIA study before they obtain the approval for their project.

The EEAA works closely with the Tourism Development Authority (TDA), developers and design professionals at the conceptual stage of each new tourism development in order to influence and provide technical inputs to design and environmental protection measures.

In the TDA, an Environment Department has been organized under the Directorate of Tourist Area Development. This department advises the proponent of a project in the conduct of EIA study, and submits the EIA report to EEAA for their approval. It has also launched the following tourism development program and other related activities:

- Environmental survey and inventory work for tourism development regions (site analysis);
- Environmental assessment of conceptual tourism development plans (environmental screening);
- Conserving unique cultural and natural resources for development;
- Developing urban and tourism work from the socio-environmental point of view, TDA has planned, constructed and monitored two major projects in the Gulf of Aqaba, the "Bedouin" Center and the Environmental Center;
- Special studies of local and immigrated birds ecology and (spa) tourism to verify tourism products, in cooperation with USAID;
- Preparation of environmental guidelines, regulations and management plans for tourism development areas, in cooperation with EEAA;
- Review and evaluation of the EIA of private projects submitted to TDA for approval, together with EEAA;
- Environmental awareness program for investors (conferences, publications, discussions, etc.), in cooperation with EEAA; and
- Flood studies and protection works in Gulf of Aqaba (South of Sinai) and the Red Sea Region to help the investors in the development process.

1.7.2 Environmental Condition

(1) Solid waste

In the tourism areas and historical spots, solid waste is primarily collected using handcarts. Although relatively well managed, an accumulation of solid waste has been observed in those areas, including residential areas.

In the desert, light domestic waste, such as plastic bags, are scattered by the wind and get hooked on shrubs or accumulate in the hollows of a "Wadi". Open burning of solid waste is often practiced in the desert and other places, and this could generate toxic chemical substances, such as PCDDs (Polychlorinated-dibenzo-para-dioxins).

In addition to the domestic waste, industrial waste and construction debris are disposed of and dumped in development areas and the surrounding desert.

Generally, solid wastes from residential areas, industrial facilities, hotels and resorts are managed according to the area where they are generated. To comply with the Environmental Law No. 4/1994, most industries are taking some measures to set up solid waste treatment facilities.

A number of private companies have been contracted to collect domestic solid waste. As primary collection, several private individuals collect waste by the use of handcarts. Domestic waste is then sorted, and recyclable waste is segregated. Packaging materials are sold to dealers for further processing and recycling. After sorting, most of the remaining waste is fed to animals.

The Central Government is encouraging the local governorates to set up post-treatment facilities for solid waste. The Government has committed to set up 50 composting plants so far and 30 of them have been constructed in Upper Egypt. The designed treatment capacity of each plant is about 500 tons/day.

(2) Fluctuation of ground water level

In Luxor and Aswan, the rising of ground water level has grown remarkable in recent years. This is a potential environmental hazard from the viewpoint of conserving the ruins and historical assets, and the ecosystem in Luxor and Aswan.

(3) Air pollution

Many large- and middle-sized buses for tourist transportation and travel are operated in the tourism areas and historical spots. Taxicabs are also available but most of them are old models. An increase of visitors will result in the increased use of public transportation, which in turn will raise the level of gas emission, including NO_x, SO_x, SPM (suspended particulate matter), etc., thereby worsening the quality of the surrounding air.

Most of the ruins and other historical assets are situated in an open environment, without any roof or walls. Consequently, they are directly affected by the negative impacts brought about by the emitted gases and vibrations from vehicular traffic. In addition, there is the natural erosion of ruins and assets, which is caused by wind, humidity, temperature, solar radiation, etc.

Leaded fuel is still used in Egypt. However, the Study Team has observed during one of their field trips a campaign for use of unleaded fuel at a gasoline station. In due course, a positive policy and trend is expected to emerge on the use of unleaded fuel, taking into account the health of the people and the protection of the environment.

(4) Water pollution

According to officials in Aswan and Luxor, a trickling filter and oxidation pond comprise the major wastewater treatment plant in these governorates. Initial observations indicate that the degree of water turbidity of the Nile River along the tourism areas of Luxor and Aswan is relatively low. No offensive odor is identified from the Nile River along these areas. However, some solid waste and water hyacinth are observed floating on the river around an anchorage for boats. It might be assumed that the water quality in those areas would have high concentrations of BOD (biochemical oxygen demand) load.

On the one hand, in the Red Sea coastal area, some resort hotels operate their own seawater desalination plant for their water consumption, and a wastewater treatment plant for their sewage water. The treated wastewater is then utilized for various purposes, including agricultural use and golf course maintenance, and the treated sludge is used as soil conditioner. However, operation of these activities on a large scale is a potential threat to the ecological balance of the surrounding environment.

(5) Biodata

Red Sea is one of the richest coral habitats on earth, and it has a very diverse ecosystem, especially cyanophyceae, tropical fishes and others. According to a group of scientists at Duke University and others (New Scientist, 1st July 1999, UK), the drought in the Sahara Desert has increased the amount of dust in the air, and the dust has scattered all over the world, often serving as the vector of some viruses and fungi which can damage corals (Press release).

Several natural communities of mangrove forest are observed in the surrounding areas of Marsa Alam and the southern part of Sinai Peninsula.

In addition to the coastal area, unique and diverse fauna and flora in the desert area have been reported by a number of publications. As a matter of fact, several interesting birds, lizards, insects, shrub trees and plants have been identified in and around the 'Wadi' area of the desert.

Generally, the increase in population of divers and visitors, and in construction of tourism facilities would easily bring negative impacts on the marine and desert biota if there were no suitable and appropriate countermeasures for preserving them.

(6) Social aspect

Illegal settlements and minority races have been identified in Egypt. Among them are approximately 13 clans of typical nomads called Bedouin found in the Sinai Peninsula and in Red Sea. They have a unique culture, lifestyle, land ownership, and traditional concept of land use, among other things. From the viewpoint of anthropology, it can be considered that there are several territories among the clans without any physical border lines in the Sinai and other areas of Egypt.

Considering that the Bedouin themselves have the potential as tourism resource, any tourism development plan should include special attention and consideration to mitigate any negative impacts on their lives. For example, Accommodation development in South Sinai caused the down of ground water level, and Bedouin peoples are suffering from water shortage. Additionally, even if there were no physical settlement found in a proposed area for tourism development, the necessary study and survey on the Bedouin should be carried out in accordance with social environmental consideration before the implementation of a specific project. On the other hand, the developments of tourism accommodations enable Bedouin people to be employed as guards of hotels, and they can get money.

Therefore, a tourism development project shall be planned and designed to mitigate possible negative impacts on these settlements and minority groups.

1.7.3 Major Issues for Sustainable Tourism Development

Tourism in Egypt consists of historical tourism utilizing historical and cultural resources along the Nile River, and natural tourism utilizing marine resources at the Red Sea and the Mediterranean Sea, and inland resources of desert and oasis, and urban tourism in Cairo and Alexandria. The environmental conservation and management system as below should be established in order to sustain the tourism development utilizing these resources, to preserve the world and national heritages, and to maintain the balance of preservation and utilization of the historical and natural heritages.

- Reinforcement of zoning system and management system for the preservation and restoration of historical heritages and for the conservation of historical climate around the heritages;
- Reinforcement of zoning system for the conservation of coastal, terrestrial and freshwater environment executed by the environment related agencies /Establishment of conservation and management system for each natural resource; and
- Reinforcement of EIA enforcement system and its appropriate operation in order to prevent any negative impacts on natural resources, historical heritages and local communities and to promote sustainable and harmonized tourism developments.

1.8 Tourism Services and Human Resource Development

1.8.1 Tourism Services

(1) General

The Central Agency for Public Mobilization and Statistics (CAPMAS), in conjunction with the Ministry of Tourism, had conducted a Tourism Sample Survey once every two years. The survey looked into the factors affecting tourist activities and movement. To analyze the issues on tourism services, the results of the Tourism Sample Survey in 1992, 1994 and 1996 were used. In accordance with the survey results, the quality of tourism services of Egypt has been gradually improved, although cleanliness of environment remains as a significant issue in general. And domestic flights and taxi services are also ranked to dissatisfactory level, which will be issues for future improvement. The evaluation on the tourism service items in Egypt by the visitors is shown in Table 1.8.1. The results are similar to the opinion given by the tour agents at the survey in the major market countries of Europe shown in Table 1.4.20.

Table 1.8.1 Evaluation of Tourist Services

Year		1992	1994	1996	Category
Arrival					
	Immigration and Customs	1	1	1	Satisfactory
Accommodation					
	Hotel	1	1	1	Satisfactory
	Tourist Village	1	1	1	Satisfactory
	Floating Hotel	1	1	1	Satisfactory
	Youth Hostel	4	2	2	Medium
	Bank	1	1	1	Satisfactory
Eating					
	Restaurant	2	2	2	Medium
Seeing					
	Tourist Guide	2	3	3	Unsatisfactory
Transport					
	Railway	4	3	2	Medium
	Domestic Flight	3	3	4	Unsatisfactory
	Rented Vehicle	3	2	2	Medium
	Bus	4	3	2	Medium
	Taxi	5	4	4	Unsatisfactory
	Reservation	2	2	2	Medium
Shopping					
	Souvenir Shop	3	3	3	Unsatisfactory
	Antique Shop	3	3	3	Unsatisfactory
	Bazaar	3	3	3	Unsatisfactory
General					
	Attitude of People	2	2	2	Medium
	Health Care	5	2	2	Medium
	Cleanliness of Environment	5	5	5	Poor

Note: 1 (Satisfactory), 2 (Medium), 3 (Unsatisfactory), 4 (Unsatisfactory), 5 (Poor)
Source: Tourism Sample Survey, 1992, 1994, 1996, CAPMAS and Ministry of Tourism

(2) Tourism services and human factors

In line with the economic transition and the tourism boom, the role and function of the private sector has become an important and leading factor since the beginning of the 1990s. Tourist establishments considered satisfactory by visitors, such as hotels, tourist villages, floating hotels, restaurants, cafeteria, souvenir shops and banks, are all in the hands of the private sector in

alliance with foreign interests like internationally well known hotel management companies. On the other hand, the tourism element under the public sector evaluated as satisfactory by visitors is the immigration and customs services at the airport and information supply services in town as well as care of security on visitors.

The analysis of the tourist sample surveys also showed that the dissatisfaction of visitors could be traced to two factors. First is the exploitative manner of local business people towards international visitors in restaurants (except those in hotels managed by foreigners), souvenir shops, antique shops, bazaars, taxicabs, horse cart, etc. Second is the inefficiency and shortage of facilities, such as irregular/unreliable operation of railways and domestic flights; mistakes in reservations; acute shortage of public toilets; low hygiene standard; and garbage. Improvements in the attitude of local business people and cleanliness of the environment cannot be realized easily because of the cooperation required between the public agency concerned and the citizens. Nevertheless, the bigger responsibility rests on the former to lead and educate the people about these issues.

In accordance with the development of the marine resort tourism, Egyptian people will have to compete with their competitor more. In addition to it, marine resort tourism tends to be small profits and quick returns due to the competition with rivals. It is necessary for Egypt not only to improve the service level but also to reduce it.

1.8.2 Human Resource Development

(1) Employment structure and level of education required

From the viewpoint of tourism service improvement, education and training should be focused on personnel who provide services directly to the visitors, such as staffs of hotels, restaurants, tour operators and guides. There are many other fields related to tourist services, such as transportation, banks, clinics, that requires training and development from the viewpoint of tourist services.

Although there are many educational institutions of university and secondary levels in Egypt, personnel requirement in the tourism industry covers a wide range of fields. The most significant training, however, is practical training with scientific method. The level and type of education/training should be examined according to type of work.

The following table shows the employment structure of hotels and tourist establishments, together with the required level of education or training. Since it would be impossible to make available to all of them full time education in a formal setting, such as university, college, technical training institute, and so on, short courses, refresher courses, orientation seminars, should be provided and integrated with formal education.

Table 1.8.2 Employment Structure of Hotels and Tourist Establishments

Type of work	Accommodation establishment	Tourist establishment	Level of education required
Management & front office	6%	-	2 years of college or more
Housekeeping & laundry	17%	-	2 years of college or more
Food & beverage	22%	20%	2 years of college or more
Kitchen	14%	20%	2 years of college or more
Steward	6%	60%	Not specified
Engineering	12%		2 years of college or more
Others	23%		Not specified
Total	100%	100%	

Source: JICA Study Team

The above table does not indicate the type of work in travel agencies, shops and bazaars, because the education requirement involves a wide variety in terms of both levels and types. In addition, there are many institutions providing tourism courses relating to those fields at present.

Therefore, this study is targeting specific types of work in accommodation and tourist establishments.

Tour guides are another important service for historical tourism and eco-tourism. It is a highly professional trade and guides usually work alone. Intensive training and rather long-term efforts are required. The education and training are usually provided at the university level. Aside from language skills and knowledge of history and culture, the hospitality of tour guides is a most welcome trait. The importance of hospitality could be highlighted in orientation seminars for tour guides by tourism training institutes.

(2) Training capacity in Egypt

The training capacity on tourism for related industries at the various levels has been examined from the viewpoint of both level of education and number of students.

University level

The enrolment in the faculty of tourism and hotels has been increasing from approximately 2,000 in 1993 to more than 5,000 students in 1997. It is estimated that enrolment would reach almost 9,000 in 2001.

There are approximately 2,000 tourism and hotel graduates every year. Out of this number, 600 go to the tour guide business, 800 to tourism services and 600 to hotel management.

Technical institutes:

There are many technical institutes that offer tourism-related courses, such as tourism study, hotel management and tour guide. There are three categories of technical institutes. The first one accepts enrolment of students who finish secondary school and the study period is four years. The number of students studying tourism-related courses is estimated at over 17,000. The second category of technical institute is similar to the first one, except that the study period is two years. The number of students enrolled in this type of school is estimated at around 4,000. The third category accepts students who finish preparatory school, and the study period is five years. The number of students enrolled in this kind of institute is about 4,000, too.

There are approximately 2,700 students who graduate from tourism-related courses at the technical institutes every year. Out of this, 600 work in tourism services and 2,100 in hotels. Between 400 to 800 students graduate from vocational school every year.

In total, between 3,000 and 3,500 students graduate from technical institutes.

Comparing to the required training capacity described in the previous section training and education capacity of tourism related personnel in Egypt is summarized as following:

- Training capacity of management class and tour guide is sufficient in terms of number of students' graduate. Improvement of training curriculum and facilities as well as teaching staff to meet with actual ability required by the tourism industry.
- Training capacity for mid-management level in target type of work (accommodation and tourist establishment) is not enough. Expansion of training capacity in terms of both facilities and qualities of teaching method. Especially food and beverage and kitchen are not sufficient in terms of capacity of facilities and teaching staff.
- Expand the education and training capacity other than formal full-time course. Refresher course, part time course, apprenticeship training with crediting system and so on. Provide wide range of training and education opportunity for all the level of personnel is quite effective for skill improvement.

1.8.3 Major Issues for Tourism Service Improvement and Human Resource Development

Though Egypt is considered as one of the major international tourism destination in the Middle East, the tourism services in Egypt is not valuated highly except that of accommodation facilities, banks and passport/customs.

Especially, cleanliness condition is valuated as poor, and services of domestic air transport, taxi, shops and the tour guides are valuated as dissatisfactory. The services of restaurants, railways, car rental, bus, and transport reservations, and hospitality of Egyptians are also not valuated highly. It is required to improve the quality of tourism services in conjunction with the capacity expansion, which meet the quantitative increase of foreign visitors.

The existing organizations for tourism related education and training have provided the personnel to meet the increase of foreign tourist arrivals with an average annual growth rate of about 7% over the period from 1991 to 1998.

It is targeted that the number of international and Egyptian visitors will increase with an average annual growth rate of over 10% in future. The following issues have been identified in order to expand the training capacity and to improve the quality of personnel to meet future rapid expansion of tourism industry:

- Improvement of training curriculum and facilities as well as teaching staff of faculty at university for the training of management class and tour guides;
- Improvement and expansion of capacity of the practical training for middle management class of accommodation and tourist establishment; and
- Expansion of existing training institutes and retraining of employees.

Especially, expansion of capacity of the practical training for middle management class personnel is urgently necessary.

Besides human resource development described above, the following issues are also identified in order to improve the quality of tourism services.

- Conduct of regular follow-up survey for a continuous approval and ranking of accommodation facilities including hotels and cruise ships by MOT
- Tourism administration such as retraining system corresponded to the approval system of tour guide in each language
- Enlightenment of the people to be hospitable in conjunction with the promotion of international tourism
- Improvement of domestic transportation services including that of domestic air transportation in reservation and operation
- Development, promotion and improvement of tourism related industry such as souvenir and restaurant industries

1.9 Major Development Issues

The Study Team identified the following five development issues in order to promote the tourism development and to achieve the tourism development target, based on the previous chapters including the review of existing development plans and analysis of the existing conditions concerned with the tourism sector, such as tourism administration and promotion activities, international tourism market and tourism resources distribution, tourism facility development, tourism infrastructure development, natural and social environment, and tourism service and human resource development.

- Expansion of international/Egyptian tourism market and extension of length of stays: Development, diversification, and integration of tourism products;
- Improvement of tourism administration and enhancement of promotion activities to establish the new international tourism market and upgrading the present major markets in Egypt;
- Provision of accessibility to destinations and development of transportation facilities for tourism circuits: Expansion of international and domestic transportation capacity/Diversification and reinforcement of inter-regional transportation services;
- Sustainable tourism development: Introduction of pollution prevention countermeasures, environmental management and protection measures;
- Development of harmonized and matured tourism destinations: Appropriate demarcation and co-ordination of roles of TDA, other related agencies, and the private sector; and
- Tourism service improvement: Development of human resource and tourism related industries.

2. Development Framework and Priority Areas

2.1 Development Scenario and Framework

It is necessary to provide a clear development scenario in order to determine a phased development plan for accommodation and infrastructure. In this section, demand forecasts of international visitor arrivals are treated as development scenarios, considering that tourism development efforts, such as accommodation and infrastructure development, mostly rely on them. Three alternative development scenarios are presented herein and a favorable scenario is selected. And the optimum scenario is determined and accommodation target is set.

2.1.1 World Market Share of Egypt

Table 2.1.1 shows number of international visitor arrivals in Egypt and in the world, their annual growth rate, and the share of Egypt. Annual growth rates in Egypt went up and down, from -21.8% in 1993 to 38.9% although they in the world stayed from 1.2% to 9.1%. The shares of international visitor arrivals of Egypt are from about 0.46% to 0.63% until the first half of 1990s. Since the latter half of 1990s, the share seemed to go up from 0.55% to 0.73%.

In 1999 the share was the highest figure, 0.730%. It was brought about the increase of short haul visitor such as Italy and Germany mainly.

Table 2.1.1 Number of International visitor arrivals in Egypt and in the World

Year	International visitor arrivals (Egypt, thousand)	Annual growth rate (%)	International visitor arrivals (World, million)	Annual growth rate (%)	Share of Egypt (%)
1982	1423.3		287.6		0.495
1983	1497.9	5.20	291.6	1.40	0.514
1984	1560.5	4.20	318.2	9.10	0.490
1985	1518.4	-2.70	327.9	3.00	0.463
1986	1311.3	-13.60	339	3.40	0.387
1987	1795	36.90	362.3	6.90	0.495
1988	1969.5	9.70	395	9.00	0.499
1989	2503.4	27.10	426.6	8.00	0.587
1990	2600.1	3.90	458.3	7.40	0.567
1991	2214.3	-14.80	463.6	1.20	0.478
1992	3206.9	44.80	503.1	8.50	0.637
1993	2507.8	-21.80	517.9	2.90	0.484
1994	2582	3.00	544.5	5.10	0.474
1995	3133.5	21.40	563.4	3.50	0.556
1996	3895.9	24.30	597	6.00	0.653
1997	3961.4	1.70	611	2.30	0.648
1998	3453.9	-12.80	625	2.30	0.553
1999	4796.5	38.90	657.5	5.20	0.730
Average		7.09		4.90	0.539

Source: Tourism in Figures annual issues by MOT, Tourism 2020 Vision by WTO in 1997

2.1.2 Scenarios of International Visitor Arrivals

(1) Alternative growth scenarios

The JICA Study Team introduces three alternative scenarios to forecast international visitor arrivals at Egypt such as; Scenario-1: Market Share Scenario, Scenario-2: Ambitious Growth Scenario and Scenario-3: Intermediate Growth Scenario.

Scenario-1: Market Share Scenario

This scenario sets a target that the share of international visitor arrivals at Egypt should keep 7.30%, which is the highest share recorded in 1999 against the world tourism shown by WTO. The past share should be a clear target to be achieved.

Table 2.1.2 shows the estimations of international visitor arrivals at Egypt and the world tourism. It will reach to 8.3 million in 2012 according to the estimation with annual growth rate of 19.0% and the average annual growth rate in the period from 1997 to 2012 of 5.06% should be achieved.

Table 2.1.2 Target number of International visitor arrivals in the Market Share Scenario

Scenario	1997*	2002	2007	2012	average annual growth rate (%)
International tourism in the world	611,000	758,700	932,000	1,139,000	4.24
International visitor arrivals (x 1,000)	3,961.4	5,535.0	6,799.1	8,309.9	5.06
World market share of Egypt (percent)	0.648	0.730	0.730	0.730	

Note: * International visitor arrivals in 1997 is actual result.
** Figures of International visitor arrivals in the world are estimated by JICA Study Team

Source: JICA Study Team

Scenario-2: Ambitious Growth Scenario

This scenario is based on the target of "Egypt and 21st Century" as the Strategy of the Tourism Sector prepared by the Egyptian government, in which 17 million of international visitor arrivals are targeted in 2017. According to the estimation by the Study Team, it will reach 17 million in 2012, the end year of the 6th five years development plan, with an annual average growth rate of 10.07% in the period.

Table 2.1.3 shows international visitor arrivals in Egypt and the market share of Egypt under Ambitious Growth Scenario. The market share of international visitor arrivals of Egypt should increase from 0.648% in 1997 to 1.467% in 2012. It means Egypt has to expand its market share more than double in 12 years.

Table 2.1.3 Target Number of International Visitor Arrivals under Ambitious Scenario

Scenario	1997*	2002	2007	2012	average annual growth rate (%)
International tourism in the world	611,000	758,700	932,000	1,139,000	4.24
International visitor arrivals (x 1,000)	3,961.4	6,400.2	10,341.5	16,709.9	10.07
World market share of Egypt (percent)	0.648	0.844	1.110	1.467	

Note: International visitor arrivals in 1997 are actual result.

Source: Egypt and 21st Century by the Cabinet of Government of Egypt in 1997, The Strategy of the Tourism Sector by Ministry of Tourism in 1996

Scenario-3: Intermediate Growth Scenario

This scenario assumes that the market share of Egypt against the world tourism should position in-between the Market Growth Scenario and Ambitious Growth Scenario, which may be the lowest and the highest targets respectively.

Table 2.1.4 shows international visitor arrivals and the market share of Egypt in Intermediate Scenario. It will reach about 12.5 million in 2012 with annual growth ratio of 7.97%. The share of international visitor arrivals at Egypt against the world tourism should increase gradually and reach to 1.099% in 2012. It means that approximately 50% of the share should be expanded from the past highest one.

Figure 2.1.1 shows the performances of three alternative scenarios. The increase in Market Share Scenario is almost linear in accordance with the growth of international visitor arrivals in the world. On the other hand, the increase in Ambitious Scenario will increase in a geometric

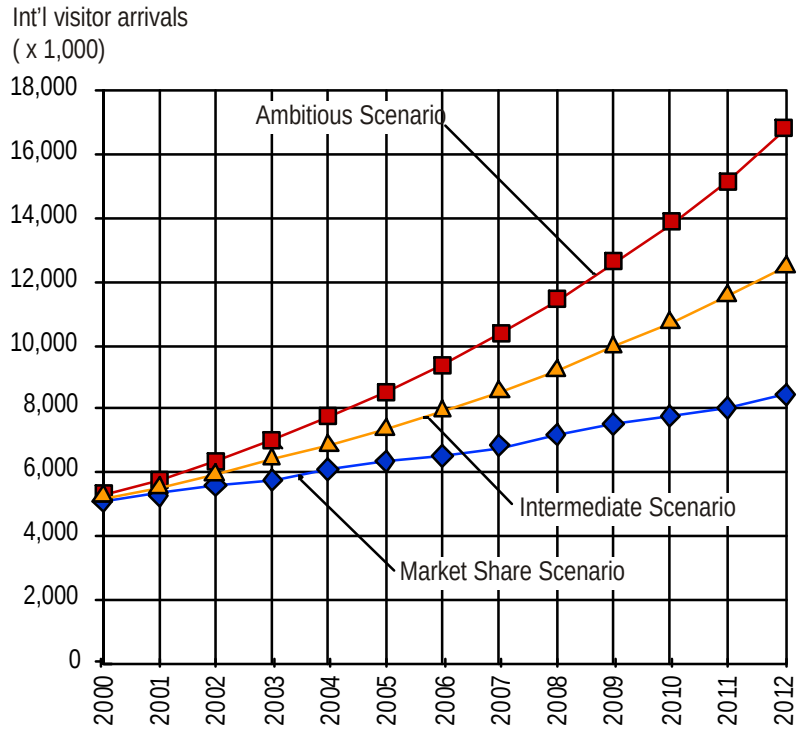
progression. The curve of Intermediate Scenario lies on the just middle between the other two scenarios.

Table 2.1.4 Target Number of International Visitor Arrivals under Intermediate Scenario

Scenario	1997*	2002	2007	2012	average annual growth rate (%)
International tourism in the world	611,000	758,700	932,000	1,139,000	4.24
International visitor arrivals (x 1,000)	3,961.4	5,969.5	8,572.6	12,512.2	7.97
World market share of Egypt (percent)	0.648	0.787	0.920	1.099	

Note: International visitor arrivals in 1997 are actual result.
Source: JICA Study team

Figure 2.1.1 Three Alternative Scenarios of International Visitor Arrivals



Source: JICA Study Team

(2) Selection of favorable scenario

The JICA Study Team determined a favorable scenario from the three scenarios explained above. In the period between 1982 and 1999 the average annual growth rate of international visitor arrival at Egypt was 7.40% in spite of many and big fluctuations caused by the various reasons as shown in Figure 1.4.5. The figure is used for the evaluation of each scenario as a major criterion.

It can be said that Scenario-1 is the easy target to achieve/to have to achieve it, since 5.06% of the average annual growth is required against the past rate of 7.40% as shown in Table 2.1.1. For the market share, it is also necessary to achieve the figure as a target with efforts by the all agencies concerned even it is the highest. It can be said that Scenario-2 is the target too heavy to achieve it, since 10.07% of the growth rate is required and it should increase approximately 35% from the past one. The market share is also required a tough figure to achieve to expand more than 2 times of the past highest share in 2012. Scenario-3 is considered in the possible range to achieve, since the growth rate of 7.97% against 7.04% 0f the past and the market share should be expanded to approximately 50% of the past share. The Scenario-3 is the selected as the favorable one.

(3) Introduction of Optimum Growth Scenario

Although JICA Study team selected Intermediate Growth Scenario as most favorable scenario, it is recommended to set higher level of target in consideration of the following conditions in Egypt, but with much efforts paid by the all agencies concerned.

- Egypt has world-class tourism resources, and the historical tourism products. It will lead historical tourism in the world from now on;
- New tourism developments such as marine resort tourism in South Sinai and Red Sea are booming for short haul and middle haul countries. Economic recovery in eastern European countries and Russia enable to create new market for Egypt;
- Security for tourists is assured recently in accordance with weakening activity of Islamic Fundamentalist in Middle Nile; and
- Egyptian economy developed with satisfactory due to structural adjustment policy in 1990s.

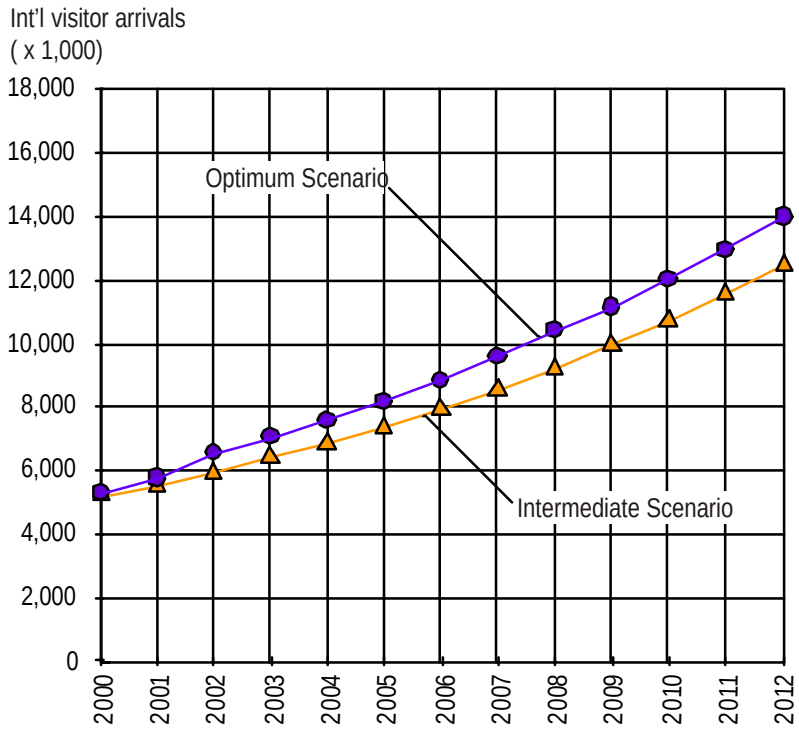
In the Optimum Scenario, international visitor arrivals will be 14 million in 2012 with 8.8% of annual growth rate as set in Figure 2.1.2 and Table 2.1.5.

Table 2.1.5 International Visitor Arrivals under Optimum Scenario

Scenario	1997*	2002	2007	2012	average annual growth rate (%)
International tourism in the world	611,000	758,700	932,000	1,139,000	4.24
Optimum/recommendable Scenario					
International visitor arrivals (x 1,000)	3,961.4	6,400.0	9,600.0	14,000.0	8.78
World market share of Egypt (percent)	0.648	0.844	1.030	1.229	
Scenario-3: Intermediate growth scenario					
International visitor arrivals (x 1,000)	3,961.4	5,969.5	8,572.6	12,512.2	7.97
World market share of Egypt (percent)	0.648	0.787	0.920	1.099	
Difference between Optimum and Scenario-3	0	430.5	1,027.4	1,487.8	

Source: JICA Study Team

Figure 2.1.2 Optimum Scenario and Intermediate Scenario



Source: JICA Study Team

2.1.3 Development of Egyptian tourism market

In Egypt, information about Egyptian tourism is limited, and the only data sources for Egyptian tourist demand forecast are hotel guests in major 6 destinations in Egypt Tourism in Figures by MOT. In 1998 the number of hotel guests was about 800 thousand, or 13% of total hotel guests in major 6 destinations. This figure is expected to increase according to the economic development in Egypt. It is projected in Egypt and the 21st Century that by 2017 GDP per capita will reach US$4,100 from US$1,250 in 1997. The number of Egyptian tourists would then increase with improvement in the standard of living. On the other hand almost Egyptian stays not hotel and tourist village but villa and their relation's house generally, and they don't stay at hotel as long as international visitors. This is why the share of Egyptian's bed night at hotels in total bed nights will not increased rapidly.

Second line in Table 2.1.6 shows bed nights of international visitors, which is introduced by international tourist arrivals time average length of stay showed in Table 2.1.5. In 1997, the share of Egyptian's bed nights in major 6 destinations was about 12%. JICA Study Team assumes that it will increase to 17%, which is 5% up, in 2012, and calculated Egyptian's bed nights at hotels. The result is shown in third line, and total bed nights are seen the fourth line. In 2012 Egyptian's bed nights at hotels will increase to about 23 million with annual growth ratio of 13.2%, and total bed nights will be about 135 million with the annual growth rate of 10.5%.

Table 2.1.6 Egyptian's Bed Nights at Hotels

(Unit: thousand)

	1997*	2002	2007	2012	Annual average growth rate
Bed nights of international visitors	26,578.8	45,313.0	71,775.7	112,261.3	10.1
Share in total bed nights (percent)	11.9	9.5	10.6	17.0	-
Egyptian's bed nights at hotels in major six destinations**	3,591.8	4,754.4	8,477.2	22,966.4	13.2
Total bed nights at hotels in Egypt	30,170.6	50,076.4	80,252.9	135,227.7	10.5

Note: * Bed nights of international visitors, Egyptian's bed nights at hotels in major six destinations, and Share in total bed nights are actual figures.
** Major six destinations mean Cairo, Alexandria, Luxor, Aswan, Red Sea and South Sinai.
Sources: Egypt Tourism in Figures by MOT, the JICA Study Team

2.1.4 Examination of Accommodation Development Framework

The national accommodation development framework was examined from total bed nights showed in Table 2.1.7. The following numbers have been set as targets for accommodation development framework at the beginning. All figures are set according to targets by MOT and assumptions by the Study Team.

Table 2.1.7 Target Figures for National Accommodation Framework

	Hotel Guest	1997	2002	2007	2012	Source
Average length of stay	International visitor	6.7*	7.0	7.5	8.0	Egypt and 21st Century
Guests per room	International visitor	1.5	1.5	1.5	1.5	The Strategy of Tourism Sector
	Egyptian	1.8	1.8	1.8	1.8	Assumption by the Study team
Occupancy rate	Both	60	60	60	60	The Strategy of Tourism Sector

Source: JICA Study Team

According to the Egypt and 21st Century, the target average length of stay for international

tourists would gradually reach 8.6 days in 2017. The Study Team prepare for the assumption that it will increase 6.7 in 1997 to 8.0 in 2012 from actual result in 1990s and target figure in 2012. The difference of accompany rate between international visitors and Egyptians is shown in Table 2.1.8. Although the number of international visitors could conform to the national target, it would be difficult for Egyptians because they usually stay with family in hotels. Considering the target by MOT and interviews of hotel managers by the Study Team, a 60% occupancy rate is a suitable target. If occupancy rate were less than 60%, it would be difficult to continue with hotel operation.

Table 2.1.8 Target Numbers of National Tourist Nights, Tourists and Rooms Required

Target		1997	2002	2007	2012
Bed nights at hotels (thousand)	International visitors	26,578.8	45,313,0	71,775.7	112,261.3
	Egyptian	3,591.8	4,754.4	8,477.2	22,966.4
	Total	30,170.6	50,067.4	80,252.9	135,277.7
Number of Rooms		76,000	150,000	240,000	400,000

Source: JICA Study Team

2.1.5 Distribution of Accommodation

Accommodation distribution was determined from information such as current accommodation development, accommodation development plans, national development plans, and tourism development potentials in each Tourism Region. Table 2.1.9 shows accommodation distribution by Tourism Region/Tourism Sub-region in the Study.

In Mediterranean Region, trend of accommodation development and land development was rapid in the past, which cause land speculation and over accommodation supply in the latter half of 1990s. Accommodation development in the region will be slow down in order to balancing the demand and supply. After 2007, increased Egyptian visitor will reactivate accommodation development.

In Cairo Region, the share of accommodation rooms will decrease from 30% to 20%, which will be caused by rapid and massive marine tourism development in Red Sea. However, Cairo Region should keep the appropriate accommodation share, which is 20%, and qualities until 2012 to maintain the roles of international gateway, capital and metropolitan functions of Egypt.

In Nail Valley Region, accommodation will be steadily developed by increasing demand of historical tourists on long, mid and short haul markets in the world.

75% of 74,000 rooms of increment accommodation development target for 2002 are strategically distributed into Red Sea Region, which are based on the rapid development trends and the accumulation of on-going projects in the region. The half of 400,000 rooms, which is target accommodation development in 2012, is strategically distributed to Red Sea as international marine resort destination, which is based on the assigned strategic locomotive functions of Red Sea for rapid tourism and economic development in Egypt.

In Desert & Oasis Region, tourism products will debut to soft adventure and eco-tourism markets in the world after 2002. However, scale and type of tourism development in the region should take care a fragile eco-system of oasis, capability and availability of water resources and etc. and niche market development.

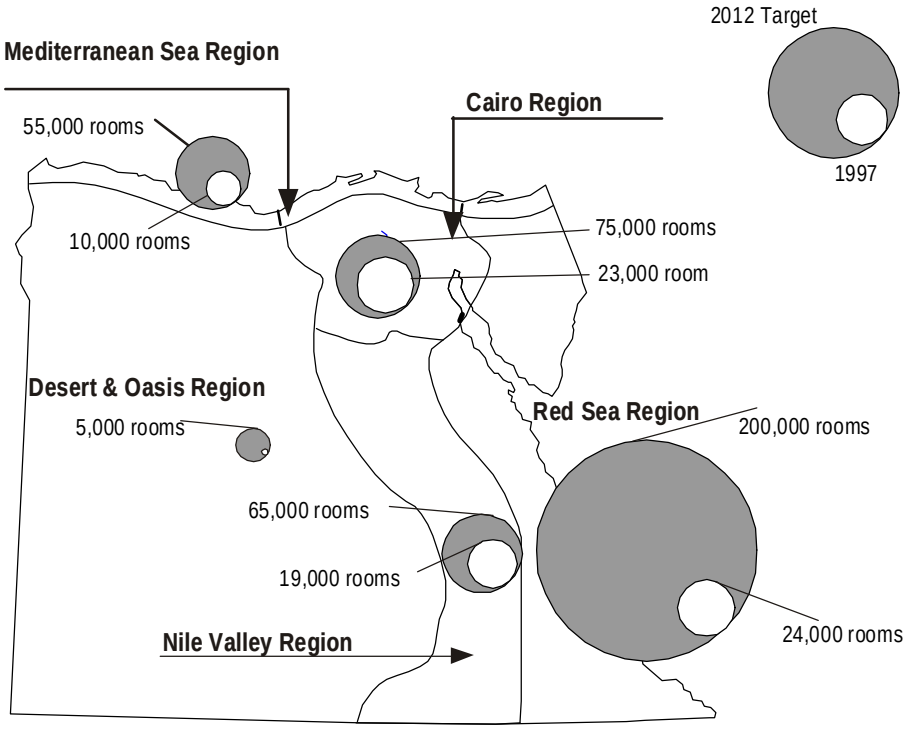
Table 2.1.9 Distribution of Accommodation by Tourism Region/Tourism Sub-region

(Unit: thousand rooms)

Tourism Regions/ Tourism Sub-regions	1997		2002		2007		2012	
	Number	Share	Number	Share	Number	Share	Number	Share
Cairo	23	30.3	28	18.7	45	18.8	75	18.8
Nile Valley	19	25.0	26	17.3	38	15.8	65	16.3
Red Sea	24	30.6	80	53.3	130	54.2	200	50.0
Mediterranean	10	13.2	15	10.0	25	10.4	55	13.8
Desert & Oasis	0	0.0	1	0.7	2	0.8	5	1.3
Total	76	100.0	150	100.0	240	100.0	400	100.0

Source: JICA Study Team

Figure 2.1.3 National Tourism Development Framework (Accommodation distribution)



Source: JICA Study Team

2.2 Socioeconomic Impacts

The impact of tourism on the national economy is significant. Direct economic benefits of tourism include generation of employment, increase of foreign exchange earnings, income generation and contribution to government revenues. Tourism also provides indirect economic impacts on the other economic sectors, such as agriculture, fisheries, handicraft manufacturing and construction, which supply the goods and services for tourism sector.

Furthermore, the improvement of transportation and other infrastructure facilities and services encourage the economic and cultural development of the community in the regional area.

The impacts of tourism sector in the national economy can usually be examined in the following contexts of economic impact:

- Increase of employment opportunities,
- Foreign exchange earnings,
- Contribution to GDP, and
- Increase of government revenues.

Based on the optimum development scenario of tourist arrivals until 2012, the impacts to tourism are assumed for the target year of 2012 as follows:

2.2.1 Employment

Tourism is a labor-intensive industry and the employment generated by tourism varies widely among sectors. It creates direct employment in accommodation establishments and indirect employment in tourism-related industries, such as restaurants, tour operators, shops and bazaars, guides and transportation. Based on the estimated number of additional rooms of accommodation, new job creation is estimated for direct and indirect employment until 2012 in Table 2.2.1 under some assumptions. Until 2012, the target year of master plan, employment for 1.14 million workers is estimated in the tourism sector. On the other hand, 8.25 million new jobs are required in order to absorb the increasing labor force until 2012 in whole Egypt (Egypt & the 21st Century). Tourism sector will provide 14% of the total new jobs required.

In addition to the above, employment is also stimulated by tourist expenditures such as manufacturing or primary sector that supply goods and services to tourism sector, and investment-related employment, such as construction of hotels and infrastructure development.

Table 2.2.1 Additional Employment of Tourism Sector until 2012

	In 2012	Assumptions
Additional number of accommodation until 2012 (thousand rooms)	325	
Additional direct employment (thousand persons)	488	1.5 employment per room 1)
Additional indirect employment (thousand persons)	650	2.0 employment per room 1)
Total additional employment until 2012 (thousand persons)	1,138	
New employment in total sector until 2012 (thousand persons)	8,250	550 thousand per year 2)
Share of tourism (%)	14	

Note: 1) Based on the estimation in "The Strategy of the Tourism Sector" by Ministry of Tourism, 2) Based on the estimate in "Egypt and the 21st Century"

Source: JICA Study Team

2.2.2 Foreign Exchange Earnings

Tourist expenditure of foreign and domestic tourists in 2012 is estimated as shown in Table 2.2.2. Total expenditure will amount to LE 52,900 million in 2012, of which 93.6% and 6.4% are expenditure by international and domestic tourists respectively.

Table 2.2.2 Tourist Nights and Expenditure in 2012

	Number of tourist nights (million nights)	Average expenditure per night	Total expenditure
International tourist	112	US$ 130 (LE 442)	US$ 14,560 million (LE 49,500 million)
Domestic tourist	23	LE 170	LE 3,910 million
Total	135		LE 53,410 million

Source: JICA Study Team

Foreign currency earnings from international tourists (US$ 3.6 billion in 1997) will amount to US$ 15 billion in 2012. It will be increase about four times in 15 years.

2.2.3 Contribution to Gross Domestic Product

The basic input for estimating the economic impact is tourist expenditure. Table 2.2.3 shows the estimated tourist expenditure by item in 2012.

Table 2.2.3 Tourist Expenditure Structure in 2012

Expenditure items	LE million	Share (%)	Remarks
Hotel expenses	17,625	33	Accommodation, food & beverage
Food & beverage outside hotel	5,875	11	
Shopping	9,614	18	
Entertainment	10,148	19	
Transportation & sightseeing	7,477	14	Excluding international transport
Others	2,671	5	
Total	53,410	100	

Note: Share of each expenditure item is referred to the results of Tourism Survey in 1994

Source: JICA Study Team

For the evaluation and quantification of tourism effects and its links with the rest of the economic activities in the national economy, an "Input-Output Table" is a most effective tool, though there remains the argument about the changes in the coefficients of each sector in the future.

Using an Input-Output Table of 1991/92, the contribution of tourist expenditure to the GDP in 2012 is estimated at LE 33.4 billion as shown in Table 2.2.4. This figure is about 4.5% of the country's GDP of LE 750 billion in 2012.

Table 2.2.4 Contribution of Tourism to GDP in 2012

Sectors in I/O table	Total output (LE billion)	Coefficient of Intermediate input 1)	Value added 2) (LE billion)	Expenditure items
Whole sale & retailing	9.6	0.190	7.8	Shopping
Restaurants & hotels	23.5	0.556	10.4	Hotel expenses and food/beverage
Transportation	7.5	0.099	6.7	Transportation & sights seeing
Entertainment & culture services	12.8	0.339	8.5	Entertainment and others
Total	53.4	0.371 (Average)	33.4	

Note 1) Input/Output Table, 1991/92, Central Agency for Public Mobilization and Statistics,
2) Value added = Total output x (1- Coefficient of intermediate input)
Source: JICA Study Team

2.2.4 Increase of Government Revenues

The contribution to state government revenues is another economic impact of tourism. Government receives revenues in the forms of income taxes on tourism enterprises and workers in the tourism sector, sales tax on tourism expenditures, and import duties on goods and services. Local tax is also imposed on the expenditure of tourists in hotels (2% for accommodation and food & beverage expenditure).

However, under Law No. 8, the investment projects in Egypt including hotels and tourist transportation are granted tax holidays for corporate profit, personal income and taxes on dividends, and customs duties. For hotels and tourism projects, tax exemption incentives are given for 5 to 10 years.

TDA, as well as the state government, derives income from tourism in the form of current income by tourism projects. The income of TDA consists of the following incomes from the Integrated and Limited Projects in TDA areas:

- Land sale: US$ 1.00 per $1m^2$
- Land rent
- Service and activity income, such as Allocation Expense (2 % of the gross value of land), Contract Expense (5% of the gross value of land), Preliminary Review Expense (0.1% of investment costs) and Review Expense of Executive (0.25% of investment cost)
- Interest income: 20% of the land price is paid in advance and the rest is paid in 7 equal installments after a 3-year grace period. Annual interest is 5% for the deferred part of the price.

In the 1998/99 fiscal year, TDA received LE 24 million as current activity income from those incomes and LE 15 million was transferred to the state government as surplus. Besides TDA, some authorities and government-owned companies also receive income from tourism activities. Entrance fees for museums and historical sites are collected by the Supreme Council of Antiquities, which amounted to LE 160 million in 1996.

Under the Ministry of Public Enterprises, many companies are receiving tourism incomes. They are EGOTH, Egyptian Hotel Co., MISR Co., Duty Free Shop Co., etc. EGOTH, for example, receives income from owning and participating in the management of many historical hotels.

2.3 Selection of Priority Areas

2.3.1 Selection Procedure

The priority areas for the study will be selected based on existing conditions of Egyptian tourism on the national level and the tourism development plans of MOT, which are described in the section1.2, “Tourism Development Plans.”

The procedure of selection is shown below:

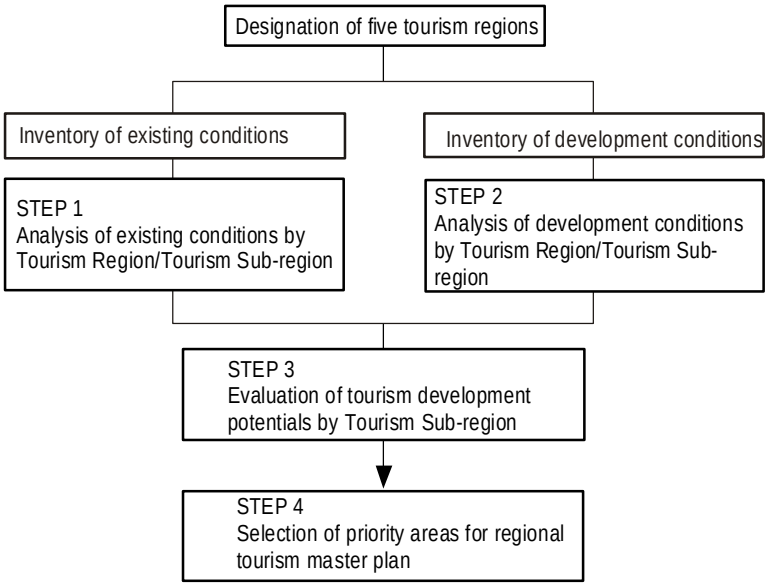
STEP 1：Analysis of existing conditions by tourism region

STEP 2：Analysis of development conditions by tourism region

STEP 3：Evaluating potentials of tourism development by tourism region

STEP 4：Selection of priority areas for the study

Figure 2.3.1 Study Procedure



Source: JICA Study Team

2.3.2 Analysis of Development Potentials

(1) Analysis of existing conditions (STEP 1)

Existing conditions of Tourism Regions are evaluated by the following five criteria by Tourism Region as shown in Table 2.3.1:

- Tourism resources: Geographic condition and characteristics of tourism resources;
- Development maturity: International tourist inflow and number of tourist accommodations;
- Tourism market: Origin of international tourists and distribution of hotel classes;
- Accessibility: International and local airports; and
- Consideration: Population problem, minority, natural and historical environments, and water resources.

Tourism resources:

The regions of Cairo, the Nile Valley and the Mediterranean have a lot of historical resources dating back from ancient Egypt, while urban amenities concentrate in Cairo and Alexandria. The Red Sea and Mediterranean Sea regions are rich in marine resources.

Development maturity:

In 1997, the Red Sea region received the highest number of tourist arrivals at 1,740 thousand; coming second was Cairo region at 1,317 thousand. Over the past fifteen years, the increase of tourist accommodation is extremely high in the Red Sea among the five regions. Number of rooms increased by almost forty times from 1982 to 1997 at the Red Sea and only doubled for the same period in Cairo.

3) Tourism market:

Origin of tourists varies among regions. Cairo and the Nile Valley receive middle and long stay tourists from all over the world. In the Red Sea, European tourists share 76% of the total tourist arrivals. The Mediterranean region received domestic tourists and had 53% of total tourist arrivals.

Considering the classification of hotels, 5-star hotels have a share of 48% and 33.5% in Cairo and the Nile Valley regions respectively. On the other hand, 3-star hotels show the highest share in the Mediterranean region.

Accessibility:

Every region except the Desert and Oasis regions has international and domestic airports within the region. In the Desert and Oasis regions, there are three local airports serving scheduled flights.

Considerations:

The following should be taken into consideration for the selection of priority area:

- Contribution of tourism to population diversification from the Nile Valley to the remote areas;
- Awareness of minority groups such as Bedouins;
- Environmental conservation of marine resources in the Red Sea as well as historical resources in Cairo, the Nile Valley and Mediterranean regions; and
- Capacity of water resources and tourism development.

Table 2.3.1 Analysis of Existing Conditions by Tourism Region

		Cairo	Nile Valley	Red Sea	Mediterranean Sea	Desert & Oasis
(A) Products	Geographical Condition	Nile Delta and Cities	River Zone	Coastal Zone	Costal Zone	Desert Zone
	Tourism Products					
	Historical	Ancient-Islamic	Ancient, Modern	Coptic	-	-
	Cultural/Urban	Cairo	-	-	Alexandria	Folklore
	Nature	-	Cruise	Marine	Marine	Desert/Oasis
(B) Maturity	International Hotel Guests to Major Destinations in 1997	(Cairo)	(Luxor + Aswan)	(South Sinai, Red Sea)	(Alexandria)	No data
	No. of Guests	1,317	710	1,740	393	
	No. of Guest nights	8,232	3,571	8,210	1,990	
	Length of Stay	1.7	5.0	4.7	5.1	
	Share of Hotel Rooms in 1997 (%)	30.0	25.1	13.2	31.3	0.3
(c) Market	Share of Origin of Tourists (%)					No data
	Egyptian	13.1	17.0	17.5	53.4	
	Arab	18.6	7.0	1.8	15.9	
	European	31.8	32.6	76.0	17.9	
	Others	36.5	43.4	4.7	12.8	
	Share of hotel Class in 1997(%)					
	5star	48.0	33.5	26.0	12.2	0.0
	4star	13.3	18.8	22.8	14.8	0.0
	3star	21.7	15.1	9.5	37.2	0.0
	2star	10.0	13.0	8.0	19.8	80.9
	1star	3.2	8.5	2.2	14.9	19.1
	Under Classification	3.8	11.0	31.5	1.0	0.0
(D) Accessibility	Major Airport	Cairo	Luxor	Hurghada	Alexandria	-
	International		Aswan	Sharm el Sheikh		
				Taba		
	Domestic	-	Abu Simbel	St. Catherine	Port Said	New Valley
			Asyut		El Arish	
					Matruh	
(E) Considerations	Considerations					
	Population	Over population	Over Population	Limited Population	-	Limited Population
	Minority	-	-	Bedouins	-	-
	Natural Environment	-	-	Habitat	-	-
	Historical Environment	Preservation Need	Preservation Need	Preservation Need	-	-
	Water Source	Nile River	Nile River	-	Nile River	Oasis
				Desalination		

Source: Egypt Tourism in Figures 1983 and 1997 by MOT, Governorate Net, and Annual Statistical Report 1997 by ECAA

Table 2.3.2 Analysis of Development Conditions by Tourism Region

		(1) Potential Area set by MOT				(2) Infrastructure Development		(3) Accommodation Development		
Tourism Regions	Tourism Sub-regions	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Cairo	Cairo	2. Cairo Nile Banks				Cairo (M)		11,779		75,000
		1. Giza Pyramid				Giza (M)		7,724		
		4. Herwan								
		7. Kharn El Khariri								
	Nile Delta	6. Central Nile Banks						944		
	Faiyum	9. Faiyum			TA			273		
	Suez Canal							1,878		
Nile Valley	Middle Nile	16. Nile Valley				Menya (P)		787		65,000
	Upper Nile	5. Luxor and El Goma				Luxor (A)		18,087		
		3. Aswan				Aswan (A)				
						Abu Simbel (P)				
Red Sea	South Sinai	12. Gulf of Aqaba			TA	Taba (P) Sharm el Sheikh		10,515	44,830	200,000
		15. Ras Mohamed			TA					
		19. Ras Sidr			TA		Ras Sudr (A)	622	24,717	
		21. El Ain Sukhna			TA		Ain Sukhna (A)		18,653	
	Red Sea	11. Hurghada			TA	Hurghada (A)	Marsa Alam (C) Ras Banas (S) Halaib (S)	12,521	92,907	
		13. Red Sea			TA	Ras Banas (P)				
Mediter-anean Sea	North Sinai	14. El Arish			TA	Ras el Hekma		1,892	300	55,000
	Alexandria	8. El Montazah				Alexandria (M)		3,675		
		20. Rashid						985		
	Matruh	18. Matruh			TA			3,395	3,680	
		17. Ras El Hekma			TA					
		10. Sidi Abel Rahman			TA		Alamein (C)			
Desert & Oasis	Siwa	22. Siwa			SA	Siwa (P)	Baharya (C) Farafra C)	259		5,000
	New Valley				SA					

Note: (a) Designation of Tourism Development Area by MOT in 1997, (b) Priority Zones of Tourism Development by TDA in 1997,(c) Alternative Tourism Special Strategy for Tourism Development by MOT in 1996, (d) Land Use Map of Egypt in 1997

In row (e), (M) means Main Tourist Centers, (A) means Active Tourist Centers and (P) means Promising Tourist Centers

In row (f), (C) means construction, (A) means announcement and (S) means scheduled.

Source: JICA Study Team

(2) Analysis of development conditions (STEP 2)

Table 2.3.2 shows the future development conditions, which have been set forth by government, by Tourism Region and Sub-region, including tourism infrastructure and accommodation development.

Designation of tourism development areas by MOT

In 1978 the Ministry of Tourism selected the priority development areas for the first time in the nation-wide tourism development. Thereafter, priority areas have been designated several times by MOT. In Table 2.3.2, the tourism potential areas, which have been designated in the latest development plans of MOT, are identified. The Nile Valley, the Red Sea Regions and Matruh Sub-region of Mediterranean region show high development potential in those plans.

Tendency of tourism development and infrastructure development

In the 1996 "Alternative Spatial Strategy for Tourism Development," MOT identified Cairo, Giza and Alexandria as "Major Touristic Centers" and Luxor, Aswan, Sharm El Sheik and Hurghada as "Active Touristic Centers." Seven airports such as Cairo, Luxor, Aswan, Sharm El Sheik and Hurghada have been designated as international gateways for tourism development now. The additional international airports in Marsa Alam, which is under construction by BOT scheme, will provide good accessibility.

Tendency of tourism accommodation development

Current accommodation establishments concentrate in Cairo including Giza, Upper Nile, the Red Sea and South Sinai sub-regions, which amount to 19.5, 18.1, 12.5 and 10.5 thousand rooms respectively. These combined numbers account for about 80% of the total rooms in Egypt. In the meantime, the Red Sea is a most promising area under TDA Development.

The Ministry of Tourism is targeting the establishment of 315 thousand rooms of accommodation in long-term perspective in the Strategy of the Tourism Sector. Out of 315 thousand, 201 thousand has been allocated to the target in the Red Sea, followed by Upper Nile, South Sinai and Matruh. MOT has set target numbers of rooms in those sub-regions between 22 thousand and 26 thousand.

(3) Evaluation of tourism potential (STEP 3)

Based on the previous analysis of existing conditions of each tourism region and the qualitative evaluation of development conditions, the potentiality of each tourism Sub-region was evaluated by point system as shown in Table 2.3.3. As a result, four Sub-region are selected as priority areas as follows:

- Red Sea (40 points)
- South Sinai (38 points)
- Upper Nile (29 points)
- Cairo (19 points)

Table 2.3.3 Results of Evaluation

Tourism Sub-region	Existing conditions	Planning conditions	Total points	Order
Red Sea	15	25	40	1
South Sinai	15	23	38	2
Upper Nile	15	14	29	3
Cairo	13	6	19	4

Source: JICA Study Team

Table 2.3.4 Comparison Chart of Potentiality by Tourism Sub-region

	Tourism Regions	Cairo		Nile Valley		Red Sea		Mediterranean Sea			Desert and Oasis	
	Sub-regions / Evaluation criteria	Cairo	Nile Delta Fayum Suez Canal	Middle Nile	Upper Nile	South Sinai	Red Sea	North Sinai	Alexandria	Matruh	Siwa	New Valley
Existing conditions	(A) Products: Type of tourism Geographical condition Tourism Products	Historical and cultural tourism		Historical tourism		Marine resort		Marine resort			Safari and Oasis resort	
	(B) Maturity	4	0	0	6	6	6	0	1	1	0	0
	International Hotel Guests	◎	△	△	◎	◎	◎	△	○	△	△	△
	Share of Hotel Rooms	○	△	△	◎	◎	◎	△	△	○	△	△
	(C) Market	6	0	1	6	6	6	2	2	2	0	0
	Origin of tourists	◎	△	○	◎	◎	◎	○	○	○	△	△
	(Hotel class	◎	△	△	◎	◎	◎	○	○	○	△	△
	(D) Accessibility	3	0	1	3	3	3	1	3	1	0	1
	Airport facilities	◎	△	○	◎	◎	◎	○	◎	○	△	○
	(E) References Critical issues											
	Population	◎	◎	◎	◎	○	○	○	○	○	△	○
	Minority	△	△	△	△	○	○	△	△	△	△	△
	Natural environment	△	△	△	△	◎	◎	○	○	○	○	○
	Historical environment	◎	○	◎	◎	○	○	△	○	△	○	△
	Source of water	○	○	○	○	◎	◎	△	△	△	△	△
Development conditions	(1) Potential Area Set by MOT	1	2	1	7	10	10	4	1	7	4	3
	Tourism development area	○	○	○	○	○	○	○	○	○	○	△
	Priority zones	△	△	△	◎	◎	◎	△	△	△	△	△
	Suggested development areas	△	△	△	◎	◎	◎	△	△	◎	△	△
	Concession areas	△	○	△	◎	◎	◎	◎	△	◎	◎	◎
	(2) Infrastructure development	4	0	1	4	6	6	1	3	0	4	3
	Certification of Tourist Center	◎	△	○	◎	◎	◎	○	◎	△	○	△
	Airport Development	○	△	△	○	◎	◎	△	△	△	◎	◎
	(3) Accommodation development	1	1	1	4	7	9	1	1	2	0	0
	Ongoing projects by TDA	△	△	△	△	◎	◎	△	△	△	△	△
	Accommodation until 2012	○	○	○	○	◎	◎	○	○	○	△	△
Evaluation												
	(1) Points of existing conditions	13	0	2	15	15	15	3	6	4	0	1
	(2) Points of development conditions	6	3	3	14	23	25	6	5	9	8	6
	(3) Total points	19	3	5	29	38	40	9	11	13	8	7
	(4) Order	4	11	10	3	2	1	7	6	5	8	9
	(5) Overall evaluation	●			●	●	●					

Note: ◎: High 3 point, ○: Moderate 1 point, △: Low 0 point

Source: JICA Study Team

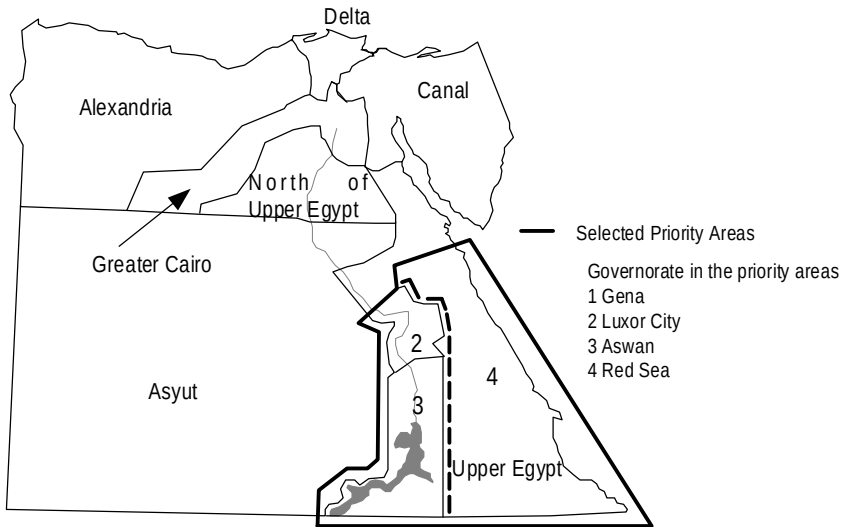
2.3.3 Selected Priority Areas

The Red Sea Sub-region and Upper Nile Sub-region are selected as priority areas because of the following reasons:

- The Red Sea Sub-region and South Sinai Sub-region, which are ranked 1st and 2nd, are both coastal resort types. Coastal development has advanced in the South Sinai Sub-region. On the other hand, development of the Red Sea Sub-region is rapidly increasing at a high growth rate at present and there is an urgent need to formulate a regional tourism master plan.
- Tourism resource of the Upper Nile Sub-region, representing Egyptian tourism, is unique in the tourism world and continues to be indispensable to Egyptian tourism development.
- The Upper Nile Sub-region adjoins the Red Sea Sub-Region and they are included in one economic region of Upper Egypt in the development master plan of Egypt until year 2017. A simultaneous development of both regions is expected to have multiple effects on Egyptian tourism.

In this report, the Study Team refers to the "Upper Nile Sub-region" and the "Red Sea Sub-region" as "Upper Nile" and "the Red Sea," and the integrated area as "Upper Egypt." It is as same as Economic Region defined by General Organization for Physical Planning, Ministry of Housing, Utilities and Urban Communities.

Figure 2.3.2 Selected Priority Areas and Tourism Development Areas



Source: JICA Study Team

1. Existing Condition

1.1 Socio-economy

1.1.1 Geographic and Demographic Information

Qena Governorate and Aswan Governorate have large agricultural lands amounting to 1,383km^2 and 763km^2 respectively, and the total population of Upper Nile (Qena, Luxor and Aswan) amounts to 3.8 million. Luxor City was part of Qena Governorate until 1989, when Presidential Decree (No.135/1989) was issued and gave Luxor separate status as an autonomous administration. Economy of the city depends largely on the tourism sector, and investment in tourism projects is being encouraged. Upper Nile can supply agricultural products and labor for the Red Sea's tourism industries as well as for its own tourism needs.

On the other hand, Red Sea Governorate is one of the coastal, frontier governorates in Egypt, extending 1,080 km along the Red Sea. It consists of 6 cities, 11 local village units, and 19 villages. Due to its location, the governorate is strategically important to national security. Inhabited land in Red Sea Governorate is extremely small (0.1% of total land area) and its 1999 population of 165 thousand is scattered over six cities from north to south. The pattern of population distribution indicates a particular feature, i.e., the share of female population is 43%. It can be considered that more than 20 thousand male workers are living alone in Red Sea Governorate, which has booming tourism-related industries.

Table 1.1.1 Land Use in Qena, Luxor, Aswan and Red Sea Governorates in 1996

	Qena	Luxor	Aswan	Red Sea
Total area (km^2)	10,265	91	34,608	130,000
Inhabited area (km^2)	1,610	91	940	71
	15.7%	100.0%	2.7%	0.1%
Residential	92	6	78	71
Utilities	112	20	52	0
Swamps and Others	23	1	46	0
Agricultural	1,383	64	763	0.3

Source: Governorate net by IDSC

Table 1.1.2 Population in Qena, Luxor, Aswan and Red Sea Governorates in 1996

Governorate/City	Population (thousand)	Urban population (%)	Female population (%)
Qena	2,441	21%	50%
Luxor City	360	100%	49%
Aswan	974	43%	50%
Sub total	3,775	-	-
Red Sea	156	89%	43%
Whole Egypt	59,272	43%	49%

Source: Statistical Yearbook 1992-1997 by CAPMS

Table 1.1.3 Population of Cities in Red Sea Governorate in 1999

Cities in Red Sea Governorate	Population (thousand)	Urban population (%)	Natural growth rate of population
Ras Gharib	30	96%	2.0%
Hurghada	63	100%	1.8%
Safaga	29	88%	2.2%
Quseir	27	80%	2.2%
Marsa Alrm	4	49%	0.8%
Bir Shalateen	12	49%	3.7%
Total	165	89%	1.9%

Source: Information department of the Red Sea Governorate, 1999

Table 1.1.4 shows the total number of households and family structure in the study area and Egypt in 1996. Average number of household members is large in Qena, while those in Luxor, Aswan and Red Sea are almost same as the country's average.

Table 1.1.4 Total Number of Households and Family Structure in 1996

	Qena	Luxor	Aswan	Red Sea	Egypt
Number of households (thousand)	2,703	78	201	29	12,703
Average number of household members	5.1	4.6	4.8	4.6	4.7

Source: 1996 Census of Population, Housing and Establishments. Household Conditions, Final Results, CAPMAS, April 1999

1.1.2 Economic Activities

In Qena Governorate and Aswan Governorate, agriculture is the major economic sector contributing to about 25-30% of their GRDP. Major crops are sugar cane, tomato, banana, wheat, etc. Particularly, Qena shares 44% of sugar cane area in Egypt. Red Sea Governorate owes its economy to natural and mineral resources. Agricultural land is currently only 80 feddans and 11,850 feddans areas are planned for reclamation. Most of the oil, gold, iron, marble and precious stones in Egypt are products of the Red Sea Governorate.

Tourism sector shares 2.8%, 2.9% and 55.3% in Qena (including Luxor), Aswan and Red Sea Governorate respectively in 1993/94.

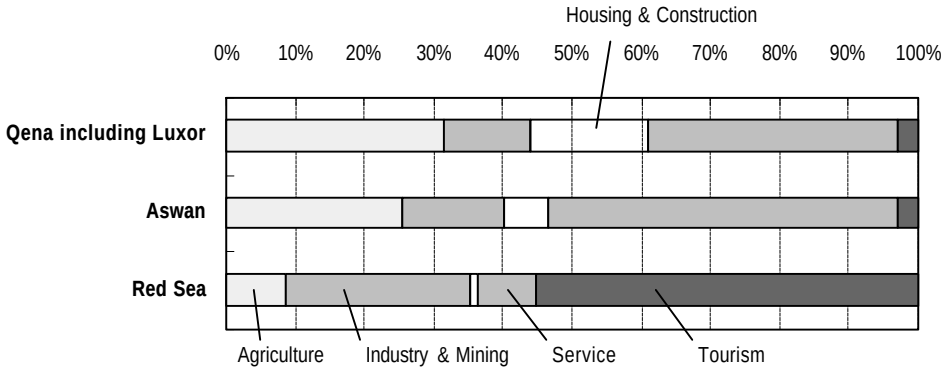
Regarding the employment structure, share of service sector is high in Aswan and Red Sea accounting for more than 50%, while in Qena, agriculture shares 42% of total employment. GRDP per capita in 1996 is LE 1,548, LE 2,031 and LE 5,482 in Qena, Aswan and the Red Sea respectively. The figures of Qena and Aswan are lower than the national average (LE 3,461) but that of the Red Sea is higher, as shown in Table 1.1.5. Unemployment of Aswan shows an extremely high rate at 21%.

Table 1.1.5 GRDP by Sector in Qena, Aswan and Red Sea Governorates in 1993/94

Sector	Qena including Luxor	Aswan	Red Sea
GRDP (LE) millions	4,207	1,974	592
Share of sector (%)			
Agriculture	31.5%	25.5%	8.6%
Industry & Mining	6.6%	6.4%	25.3%
Electricity	5.9%	8.2%	1.3%
Housing & Construction	17.1%	6.5%	1.1%
Service	38.9%	53.5%	63.7%
-Transportation, Storage & Communications	5.1%	5.0%	1.3%
-Trade	9.7%	18.8%	0.0%
-Finance, Insurance & Soc. Insurance	2.5%	3.9%	0.0%
-Tourism	2.8%	2.9%	55.3%
-Public Utilities	0.3%	0.2%	0.6%
-Public & Private Services	18.6%	22.7%	6.4%
Total	100.0%	100.0%	100.0%

Source: Kilani, El Sayed Mohammed, Estimation of Regional Income in Egypt, National Institute of Planning 1998

Figure 1.1.1 Composition of GRDP in Qena, Aswan and Red Sea Governorates in 1993/94



Source: Kilani, El Sayed Mohammed, Estimation of Regional Income in Egypt, National Institute of Planning 1998

Table 1.1.6 Share of Employment by Sector and GRDP per Capita in Qena, Aswan and Red Sea Governorates in 1996

	Qena including Luxor	Aswan	Red Sea	Whole Egypt
Employment (thousand)	567	268	56	15,340
Share of total population	20%	28%	36%	27%
Employment				
Agriculture	42 %	29 %	20 %	31 %
Industry (including manufacturing)	20 %	21 %	19 %	22 %
Services	38 %	50 %	61 %	47 %
Unemployment Ratio	10.9%	20.6%	6.5%	9.2%
GRDP per Capita (LE)	1,548 (Qena only)	2,031	5,482	3,461

Source: Labor Surveys 1996 by CAPMAS

1.1.3 Social Condition

(1) Illegal Settlements

Table 1.1.7 shows the number of illegal settlements and their population in Upper Egypt.

Table 1.1.7 Number of Illegal Settlements and their Population in Upper Egypt in 1996

	Qena	Luxor	Aswan	Red Sea
Total number of illegal settlements (Areas)	57	3	40	26 (1993)
Total population in illegal settlements (persons)	493,616	12,550	412,162	50,000 (1993)

Source: Qena, Luxor and Aswan: CAPMAS 1996 Census and the Annual Statistics Yearbook, June 1999
Red Sea: Human Resources Development Report 1996 by The National Institute of Planning

(2) Minority Races and Communities

Until 1960, the "Bedouin" in Egypt were considered nomads. They lived in frontier governorates, particularly north and south of Sinai, Matrouh, the Red Sea and the Western Desert. However, through population censuses, it was identified that a majority of them have already settled in permanent communities and are no longer living a nomadic life

Qena Governorate

The population of Qena Governorate predominantly lives in rural areas (78.8% rural in 1998). They constitute a homogenous group sharing the same tradition and cultural traits with the rest of southern Egypt's population.

Luxor City

The population of Luxor City is all urban population and nomads do not exist. They are mainly of southern Egyptian origin and migrants from other regions of the country who came to work in Luxor City.

Aswan Governorate

There are several sub-groups of the Egyptian population which have distinctive sub-cultures within the Egyptian culture rooted in Islamic, Arab and old Egypt traditions. At present, the following five of these sub-groups live in Aswan:

- El Kunouz is Nubian tribe. They had lived north of old Nubia (south of Aswan City), and moved to an area north of Kom Ombo City after the establishment of the High Dam and the formation of Nasser Lake. This tribe speaks its own dialect in addition to Arabic language, and uses their dialect in singing, which is accompanied by drums and tanboura music.
- El Fajeka is another Nubian tribe. They had lived south of old Nubia to wards close to Sudanese borders, and moved to the area east of Kom Ombo City after the establishment of the High Dam. They also have their own dialect, which is different from that of El Kunouz, in addition to the Arabic language. Their folkloric music and songs are similar to those of El Kunouz, but have their special dances such as Arajid.
- Bashariya and Abaddah tribes live in the area east of Aswan and in Red Sea Mountains. They have a special dialect, which is different from Nubian dialects, and speak Arabic.
- Arab tribe had lived in the middle of old Nubia between El Kunouz and El Fajika tribes, and currently lives in the area east of Kom Ombo. They speak Arabic language only.
- El Gaafrah tribe lives in small cities and villages along the banks of the Nile River, north of Aswan City. This tribe is of Arab origin and came to Aswan during the Islamic invasion of Egypt.

It should be noted that despite their relatively low economic standards, these subgroups share norms of generosity, hospitality and respect. They are willing to participate in efforts directed to development of their communities.

Red Sea Governorate

There are few sub-groups of the Bedouin population who live in Red Sea area and have their distinctive way of life, including a special dialect (in addition to the main language), special dress and ceremonies of marriage and birth. The two distinctive subgroups in Red Sea area are Basharia and Ababdah tribes who live in the area extending from east of Aswan to Shalatin and

Halayeb at the southeast corner of Red Sea Governorate close to the Sudanese borders.

These tribes live on camel and sheep rising and some work in indigenous jobs in tourist villages, oil fields, mines and fisheries in the area.

1.1.4 Population Projection

The Ministry of Housing, Utilities and Urban Communities has estimated the future population framework for 2017. As shown in Table 1.1.8, the growth rates of Qena Governorate and Luxor City are the same level as the average growth rate of the population of the country, which is estimated at 1.66% per year. On the contrary, Red Sea Governorate shows a very high growth rate at 4.8%, while it is low in Aswan Governorate.

Table 1.1.8 Population Projection for 2017

Governorate/City	Population in 1996 (thousand)	Population in 2017 (thousand)	Increase 1996-2017 (thousand)	Average annual growth rate
Qena	2,441	3,432	991	1.64%
Luxor City	361	502	141	1.60%
Aswan	974	1,172	198	0.89%
Red Sea	156	419	263	4.82%
Total	3,932	5,525	1,593	-
Whole Egypt	59,727	83,702	23,975	1.66%

Source: Development Master Plan in Egypt until 2012, June 1998, by General Organization for Physical Planning, Ministry of Housing, utilities and Urban Communities

In the meantime, regarding Luxor City and Red Sea Governorate, the regional development plans have individually been formulated afterward with a special focus on tourism development.

1.1.5 Local Government Budget

Table 1.1.9 shows the budget of local governments in the priority area for the 1998/99 fiscal year. The sources of revenue of governorates consist of tax, transfers from the state government, fees and charges, and capital revenue. In the 1998/99 fiscal year, the revenues of Luxor City and Qena, Aswan and Red Sea Governorates are LE 123 million, LE 562 million, LE 363 million and LE 118 million respectively. In the meantime, Luxor City and Qena, Aswan and Red Sea Governorates have allocated 11%, 5%, 7% and 13% of their total expenditure to investment expenditure respectively. Share of the investment budget is comparatively high in Red Sea Governorate and Luxor City.

Amount of expenditure budget per person varies among the governorates. In Red Sea Governorate it is the highest at LE 693 per person per year. It is lowest in Qena Governorate, amounting to LE 223, which is one third that of Red Sea Governorate.

Figure 1.1.2 illustrates the change of budget amounts and composition of revenue of the four local governments from 1994/95 to 1998/99. Share of local fee revenues is high in Red Sea Governorate and it increased from 30% in 1994/95 to 40% in 1998/99.

Table 1.1.9 Local Government Budgets in 1998/99 Fiscal Year

	Luxor City	Qena Governorate	Aswan Governorate	Red Sea Governorate
Total Revenues (LE million)	123	562	363	118
Tax	11%	6%	5%	7%
Transfers	63%	80%	81%	39%
Local Fees	15%	9%	6%	40%
Capital Revenues	11%	5%	7%	13%
Total Expenditures (LE million)	123	562	363	118
Investment	11%	5%	7%	13%
Recurrent Expenditures	89%	95%	93%	87%
Share of budget revenue to GRDP 1)	N.A.	12%	12%	14%
Expenditures per person per year (LE) 2)	331	223	366	693

Note: 1) Share of budget to GRDP is calculated by projected GRDP in 1998/99.

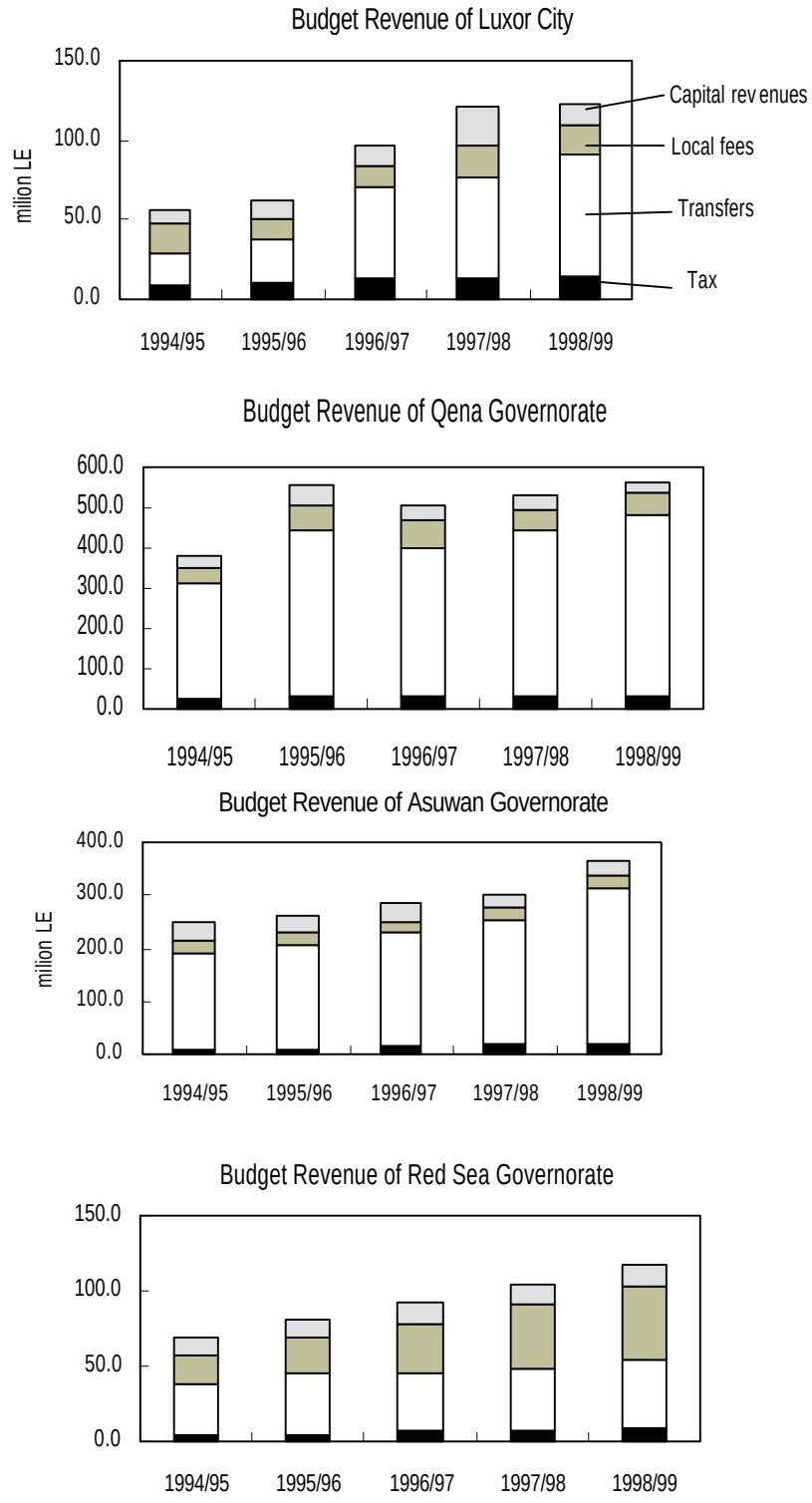
2) Expenditure per person per year is calculated by population projection in 1998/99.

GRDP projections in 1998/99 are based on 1993/94 data given in Table 1.1.4, the average annual sectoral growth rate of the 3rd Five-Year plan (1992/99-1996/97) and the 4th, Five-Year Plan (1997/98-2001/2002).

Population in 1998/99 is projected based on 1996 population and future population is estimated by General Organization for Physical Planning.

Source: Governorates

Figure 1.1.2 Revenues of Local Governments (1994/95-1998/99)



Source: Information from each governorate

1.1.6 Existing Plans of City Development in Upper Nile and the Red Sea

Formulation of master plans of cities in Upper Nile has been planned recently by several agencies such as Ministry of Housing, Utilities and Urban Communities (MHUUC) with UNDP such as Luxor and Aswan cities, local governorates, and the Ministry of Planning. This is in line with the National Project for Developing Southern Egypt, aimed at redressing the grave imbalance in the distribution of investments and returns of development among Egypt's governorates. TDA has helped cities in Upper Nile not only at advisory level but also financial level to develop tourism facilities such as berthing facilities for the Nile cruise boats.

On the other hand, Red Sea Governorate is currently reviewing master plans for seven cities, which were planned by MHUUC in 1999. Development master plans for four cities within the Upper Egypt Region (Hurghada, Safaga, Quseir and Marsa Alam) should be well coordinated with the development plan of TDA Tourist Centers to set up the future population distribution and regional structure and to distribute regional urban functions to each city.

1.2 Tourism Products and Tourism Market

1.2.1 Tourism Product in Upper Egypt

Travel patterns in 1.4.2 of Part I show that the Upper Nile and the Red Sea are the major destinations for international visitors. The outline of products is summarized as follows.

Historical/Archeological Tourism:

In the Upper Nile, historical assets traditionally represent tourism products. It is not only lead tourism in Egypt but also lead Historical/Archeological tourism in the world. Major resources are located not only major cities like Luxor, Aswan, Abu Simbel, but also, small towns like Dendera , Esna, Edfu and Kom Ombo. The highlights are Karnak Temple, Luxor Temple, Valley of the Kings in Luxor, Philae in Aswan and Abu Simbel. Many historical sites are located along the Nile; some are prepared and opened to visitors and some are left unexcavated.

Karnak Temple, West Thebe, El Kab and Gebel El Silsila have much potential as new tourism products.

Some efforts to add value to these products are being done recently. The examples are sound and light show at Karnak Temple, Philae, and construction of museums such as Luxor Museum and Nubia Museum. But in almost historical sites don't have enough information system both of the suggested route and explanation of sites.

Approach methods and approach to historical sites have also problems. Approach methods to historical sites such as Dendera, Esna, Edfu Kom Ombo are almost limited Cruise Ship, and it is difficult for international visitors to go there by bus or railway. The reason of it is limited information in foreign languages and limited operations and cleanness.

Cruise Tourism:

The Nile River cruise between Qena and Aswan, which takes four days or five days, is one of the best products of Egypt, while the cruise in Nasser Lake is yet matured. The cruise ships operated between Cairo and Aswan and Qena and Aswan are 214 ships with 11,167 rooms and 3 ships with 155 rooms respectively in 1997. The Nile River cruise has been attracting all segments of markets. This segment can attract all segments of market irrespectively in distance, age group, sex, etc.

It is alarmed the proper counter measures should be taken against pollution of river water by the cruise ships which becomes seriously year-by-year. It is essential to improve the cruising system for the promotion of and maintaining the segment.

In the Red Sea, Quseir has a town which has a history of trading port until the opening of Suez Canal in 19th Century. It has 16th Century fort and traditional buildings. An old building is renovated as accommodation by a Swedish donation. Excavations of archeological sites in Islamic period are done by British University, and construction of a museum is planned by municipality government.

Marine Resort Tourism:

Tourism products in the Red Sea are represented by marine resort tourism. Tourism development in Hurghada started in the begging of 1970s. In recent years, huge beach resort developments have been launched from the center of Hurgada to surrounding of the city. For example, Al Gouna and Abu Soma have been developed as new tourist centers. And more, new accommodation development has started near Safaga, Qusir Marsa Alam and TDA Tourist Centers. As a result, not only the numbers of divers but also holidaymakers on package tours from European countries have increased rapidly after 1995, and the tourist activities are getting diversified into marine activities, such as diving, snorkeling, fishing, water-skiing, yacht, etc.

On the other hand, an atomospare of downtown Hurghada is getting worse because of

uncontrolled urban developments and disordered land reclamations. Luxury hotel is moving to from downtown to the surroundings.

Diving Tourism:

The Red Sea has been a world famous destination for divers with its clear waters, colorful coral reefs and rare fishes for more than 10 years. Hurghada has been a center of diving activities in Egypt.

The main diving spots are concentrated around Hurghada and divers prefer these spots because of the easier accessibility. Therefore, some of the diving spots such as Gota Abu Ramada and Small Giftun have high density of divers (about 20 boats per day at Gota Abu Ramada). The diving spots distributed at the middle and southern part of the Red Sea coast, around Quseir and Marsa Alam are more isolated and untouched. These are accessible by long-distance cruises, which take one or two weeks, from Hurghada or Sharm el Sheikh. In addition, it is possible to access them through dive centers, which have been recently developed around Quseir or Marsa Alam.

According to the marine survey conducted by the Study Team, some diving spots around Hurghada are damaged because of diving and snorkeling activities including anchoring. Damage due to the same reasons are expected at the southern Red Sea coast, where large scale tourism developments are making progress rapidly and since the Marsa Alam new airport is under construction. It is required to educate diving instructors and diving centers to manage diving activities appropriately. It is also identified that many diving centers recognize that the natural conditions, such as crown of thorns, also cause damage. It is required to monitor and research the marine environment for effective environmental management in the Red Sea.

Other tourism resources:

From the evaluation of tourism resources, the following utilization of tourism resources are expected:

- Lake Nasser as cruise tourism;
- Nile River and Lake Nasser as eco-tourism;
- Lifestyle and customs of Nubian and Bedouins people as rural tourism;
- Hinterland of the Red Sea coast as safari tourism; and
- MICE (Meeting, Incentive, Conference and Events) tourism in the Red Sea.

1.2.2 Tourism Market in the Upper Egypt

Table 1.2.1 shows the number of hotel guests, their composition by generating areas and the tourist shares of the major six destinations, namely, Cairo, Luxor, Aswan, Alexandria, South Sinai and Red Sea. The number of hotel guests suddenly dropped to half in 1993 and in 1994. It increased from 1995 to 1997 but it in 1997 was just 70% of the 1992 level. The collective share of the six destinations also decreased from 18.6% in 1992 to 9.3% in 1997.

As for composition of hotel guests, the number of hotel guests from European countries decreased sharply the last six years. It was 423 thousand in 1992 but only 129 thousand in 1997. Therefore, the share of European hotel guests decreased from 78.0% to 33.4%. On the other hand, the shares of other regions of origin increased, although they could not compensate for the loss of European persons.

Table 1.2.1 Tourism Market of Luxor

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of hotel guests (persons)	542,513	264,200	189,747	230,697	355,565	387,607
Share of 6 major destinations	18.6	11.3	8.6	10.4	9.9	9.3
Composition of hotel guests						
Egyptian	6.3	10.8	16.3	15.8	13.6	14.4
Arab	0.5	0.5	2.0	4.0	5.7	7.6
Europe	78.0	69.5	41.1	38.9	36.0	33.4
Americas	7.3	7.5	19.0	20.5	23.8	24.4
Africa	0.8	0.5	2.2	3.3	5.6	6.5
Asia & Pacific	7.1	11.2	19.5	17.5	15.3	13.8

Source: Egypt Tourism in Figures annual issues, MOT

In Aswan and Luxor, the number of hotel guests decreased in 1993, 1994 and 1995. However, it increased in 1996 and 1997, and it in 1997 even exceeded the level of 1992. However, the 1997 shares of the six major destinations have not recovered to their 1992 levels as yet.

The share of European hotel guests dropped to 30% from 1992 to 1997. Otherwise the shares of the other regions of origin have been increasing. The shares of hotel guests from Egypt and the Americas have exceeded 20% and have an important role for Aswan especially.

Table 1.2.2 Tourism Market of Aswan

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of Hotel guests	294,526	141,977	87,958	110,466	171,886	322,365
Share of 6major governorates	10.1	6.1	4.0	3.5	4.8	7.8
Composition of hotel guests						
Egyptian	11.6	18.5	25.6	21.1	21.4	20.2
Arab	0.6	1.0	1.7	4.2	1.9	6.2
Europe	68.3	56.9	34.2	32.5	37.3	31.6
Americas	7.7	8.7	9.6	13.6	11.7	20.0
Africa	0.8	1.0	1.8	4.5	3.4	4.7
Asia & Pacific	11.1	14.0	27.2	24.2	24.3	17.3

Source: Egyptian Tourism in Figure annual issues, MOT

The number of hotel guests in the Red Sea has increased satisfactorily from 280 thousand in 1992 to 996 thousand in 1997. Shares of the major six destinations also increased from 9.6% in 1992 to 24.0% in 1997. The share of hotel guests, as well as bed nights, of the Red Sea has exceeded the total shares of Luxor and Aswan.

About 85% of hotel guests consisted of European in 1997. The share of European increased from 56% in 1992 to 84.3% in 1997. Meanwhile, the share of Egyptian has been decreasing, though the number of hotel guests increased from 84 thousand in 1992 to 135 thousand in 1997. Shares of the other regions have stayed almost at 0% levels.

Table 1.2.3 Tourism Market of the Red Sea

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of visitor	280,911		254,774	629,145	777,660	996,427
Share of 6 major visitors	9.6		11.5	19.7	21.7	24.0
Composition of tourists						
Egyptian	24.3	-	32.8	18.5	13.4	13.6
Arab	-	-	4.4	7.2	1.3	0.8
Europe	-	-	56.0	50.6	84.0	84.3
Americas	-	-	2.6	11.8	0.9	0.6
Africa	-	-	0.5	5.8	0.1	0.1
Asia & Pacific	-	-	3.8	6.0	0.2	0.5
International	75.7	-	-	-	-	-

Source: Egypt Tourism in Figures annual issues, MOT

1.2.3 Market Development in Upper Egypt

Although Egypt's famous historical heritage sites have enabled its tourism to carry out simple market promotions for a long time, the situation has changed since the beginning of the 1990s when marine resort tourism began to grow as the other main tourism products in Egypt.

To obtain information about the advantages and disadvantages of Egyptian tourism products, the Study Team carried out interview surveys to travel agents in some European countries, which are major markets for Egypt, and in Japan in June and August 1999. Information from these surveys and opinions from the Study Team were used to draw up recommendations for market promotion strategies.

The following opinions were given by the travel agents and the Study Team regarding tourism products, market segments and competitors:

- Historical tourism is a major tourism product for Egypt in each country surveyed and will grow steadily in the future. Therefore, Upper Nile will continue representing major tourism destinations worldwide.
- Historical tourism products with the Nile cruise are most popular products in all five countries surveyed. Japanese travel agents recognize that historical tourism product without the Nile cruise is one of the most important reasons why recovery of Japanese tourist numbers has been limited after the Luxor accident in 1997.
- As for historical tourism, Egypt has no competitors because of its unique historical tourism resources.
- Marine resort tourism products are more important in Italy and Germany than in the United Kingdom and France. On the other hand, marine tourism in the Red Sea does not attract most Japanese consumers.
- When considering marine resort development in the Red Sea and South Sinai, development in South Sinai should be carried out first. Marine resort in South Sinai is more popular for European tourists, especially for Italians. But some environmental problems have started in South Sinai because too many tourists visit there. For example, coral reefs in some diving spots have shown damage and the calm atmosphere in South Sinai has been lost. Therefore, some people, such as highly skilled divers and tourists, who like undeveloped atmosphere may set their sights to the southern Red Sea coast in the near future.
- Pollution has started in beach sites near Hurghada and some hotels have started to move to the south Red Sea coast. If there is no environmental management policy, the whole stretch of the Red Sea coast would be polluted after "consumption" of natural environment, and
- In marine resort tourism, it is expected that Mediterranean countries will provide stiff competition for Egypt because more than 50% of tourists to marine resorts in the Red Sea come from Western Europe, which is also a potential market for Mediterranean countries. Travel agents in Italy and Germany pointed out Tunisia as a would-be rival because of price competition.

1.3 Tourism Accommodation

1.3.1 Accommodation Facility in the Upper Nile

Table 1.3.1 shows the present condition of accommodation facilities and their distribution in Upper Nile. In 1997, 60% of accommodation consisted of cruise ships in the Nile River. About 25% of accommodation rooms were in Luxor City and 15% in Aswan City.

Table 1.3.1 Accommodation Rooms in Upper Nile in 1997

Governorate	Location	No. of rooms	Share in total (%)
Qena	Qena City	116	0.6
	Armanat/Esna	0	0
	Qena Total	116	0.6
Luxor	Luxor City	4,669	24.7
	El Toad	0	0
	Luxor Total	4,669	24.7
Aswan	Aswan City	2,739	14.5
(Nile River)	New Aswan City	0	0
	Edfu	0	0
	Kom Ombo	0	0
	Aswan-Nile Total	2,739	14.5
(Lake Nasser)	Toshka/Abu Simbel	161	0.9
	Aswan-Nasser Total	2,900	15.3
Cruise Ship	Nile River (Luxor-Aswan)	11,088*	58.6
	Lake Nasser	155	0.8
	Cruise Ship Total	11,243	59.4
Upper Nile Total		18,928	100.0

Note: Figure with * mark includes the number of cruise ships in Cairo Tourism Region (Number in 1998 was 10,675)
Source: JICA Study Team

Upper Nile has several plans in relation with tourism sector development, as listed below. Table 1.3.2 shows major plans of this region although there is lack of detailed information about them.

- National Plan for Development South Egypt to 2017 by Ministry of Planning, 1996
- Comprehensive Development of the City of Luxor Project by Ministry of Housing Utilities and Urban Communities, UNDP, 1999
- Toshka Tourism Development Plan 1998 by TDA
- Aswan New City Development Plan by Ministry of Housing Utilities and Urban Communities (MoHURNC), 1997
- Other development plans by Local Governorates, 1999

Table 1.3.2 Existing Development Plans and Programs in Upper Nile

Governorate	Location	No. of rooms	Reference, data source
Qena	Quena City	500	2017 target, Development Scheme of South Egypt Plan
	Armant/Esna	125	2017 target, Development Scheme of South Egypt Plan
	QenaTotal	625	
Luxor	Luxor City	6,600	2017 target, Luxor City Development Plan/MoHURNC-UNDP
	El Toad	1,000	2017 target, El Zoraykat Island project
	LuxorTotal	7,600	
Aswan	Aswan City	-	Under study by MoHURNC-UNDP
	Edfu	-	Aswan Governorate has a plan to develop a tourist area.
(Nile)	New Aswan City	9,200	2017 target, Aswan New City Development Plan/MoHURNC
	Sub-total	9,200	
	Toshka	9,040	2017 target, Toshka Tourism Development Plan/TDA
(Lake Nasser)	Cruise ship	5,000	2017 target, Development Scheme of South Egypt Plan
	Sub-total	14,040	
	Aswan Total	23,240	
Cruise ship	Cairo/Luxor/Aswan	3,799	Under construction, Hotel Capacity in Republic Egypt 1999/TDA
Grand Total		35,264	

Source: The development plans mentioned in the reference.

1.3.2 Accommodation Facility in the Red Sea

(1) Concept of Tourist Sector and TDA Tourist Center

TDA areas for tourism development at the Red Sea coast are allocated between existing cities. Each area is called a Tourist Sector, which consists of Tourist Centers, as shown in Figure 1.3.1.

One Tourist Center includes several projects, which are carried out by investors. A project lot 50ha or larger is developed according to the integrated development procedure; a lot less than 50 ha is developed according to the limited development procedure.

Infrastructure projects implemented by TDA

TDA finances infrastructure development for tourism, such as beautification of pedestrian network along the Nile. The projects are implemented by local agencies.

Development of Tourist Centers

TDA has authority to acquire and sell tourism development lands and retain the income and to charge fees for assessing and monitoring projects. TDA's tourism development lands are allocated mainly along the coastlines of Gulf of Aqaba, Red Sea, Mediterranean, and Toshka around Lake Nasser.

Development Scheme of Tourist Centers

The allocated lands for TDA tourism development are called Tourist Sectors, which consist of clusters of tourist centers.

One Tourist Center comprises several projects that are developed by investors. An individual project lot 50 ha or larger is developed according to the integrated development procedure and a lot smaller than 50 ha is developed according to the limited development procedure.

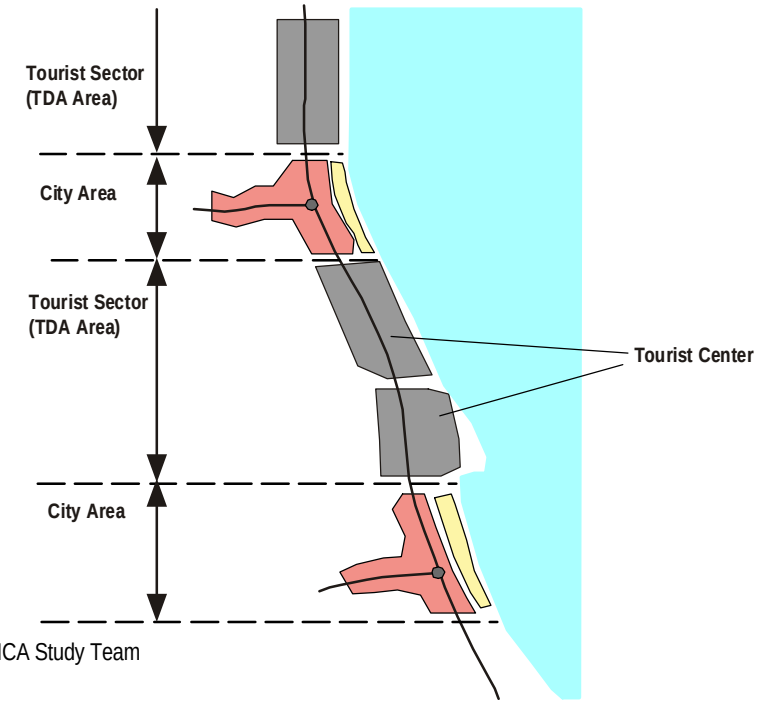
There are two types of development schemes for the Tourist Center, as shown in Figure 1.3.2. Type A consists of one integrated development project and type B consists of some integrated and limited development projects. In the case of type A, the investor is required to formulate a development plan for the Tourist Center. For type B, the investors in one Tourist Center are required to form one mother company and formulate a development plan for the Tourist Center.

Development Procedure of Individual Project Lot

Integrated Development Projects: For the integrated development projects, the investor buys the land and creates a self-sufficient tourism area, and at his cost, facilitates the required infrastructure and utilities that are indispensable for the superstructure projects. For such investor, the formation of an Infrastructure Development Company (IDC) is made at TDA's recommendation and supervision. Its Board of Directors is to be represented by significant investors, developers, and resort or tourism facilities managers; a small staff is maintained though. IDCs can sell small plots of infrastructure, or utility-facilitated land, to individual investors provided that TDA gets 50% of the sale price after the costs of the infrastructure and utilities are deducted. IDCs are also responsible for preparing EIAs required by the EEAA. The flow of Integrated Development Projects is shown in Figure 1.3.3.

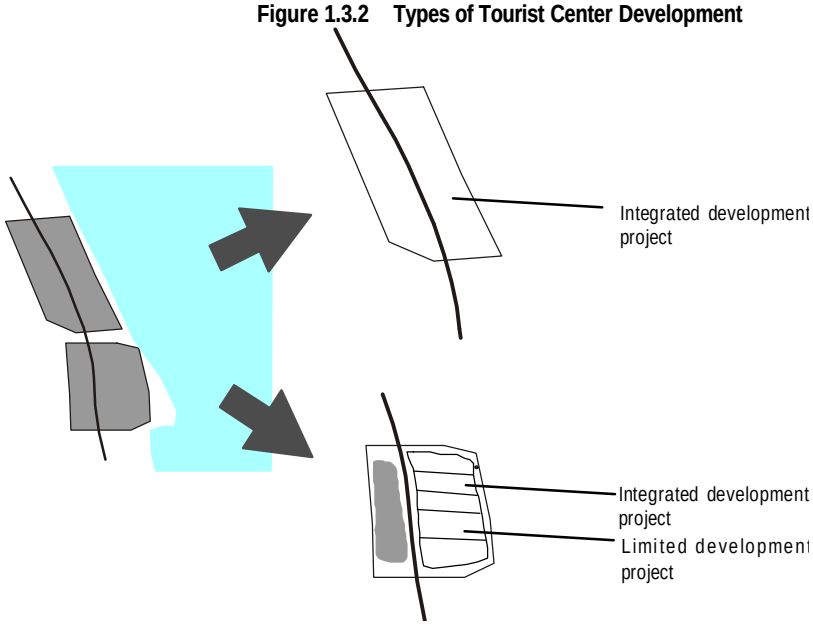
Limited Development Projects: For specific projects, including hotels, resorts, commercial or recreational facilities, in which land requirements vary between 50,000 and 500,000 square meters, the investor (private company) is required to provide the infrastructure and utilities at his cost in the limited tourism project. The land can be purchased or leased directly from the TDA. In case an investor of limited tourism project puts up more than one firm in the tourism developing area, an IDC is formed at TDA's recommendation and supervision. The investor is also responsible for preparing EIAs required by the EEAA. The flow of Limited Development Projects is shown in Figure 1.3.3.

Figure 1.3.1 Tourist Sector and TDA Tourist Center



Source: JICA Study Team

Figure 1.3.2 Types of Tourist Center Development



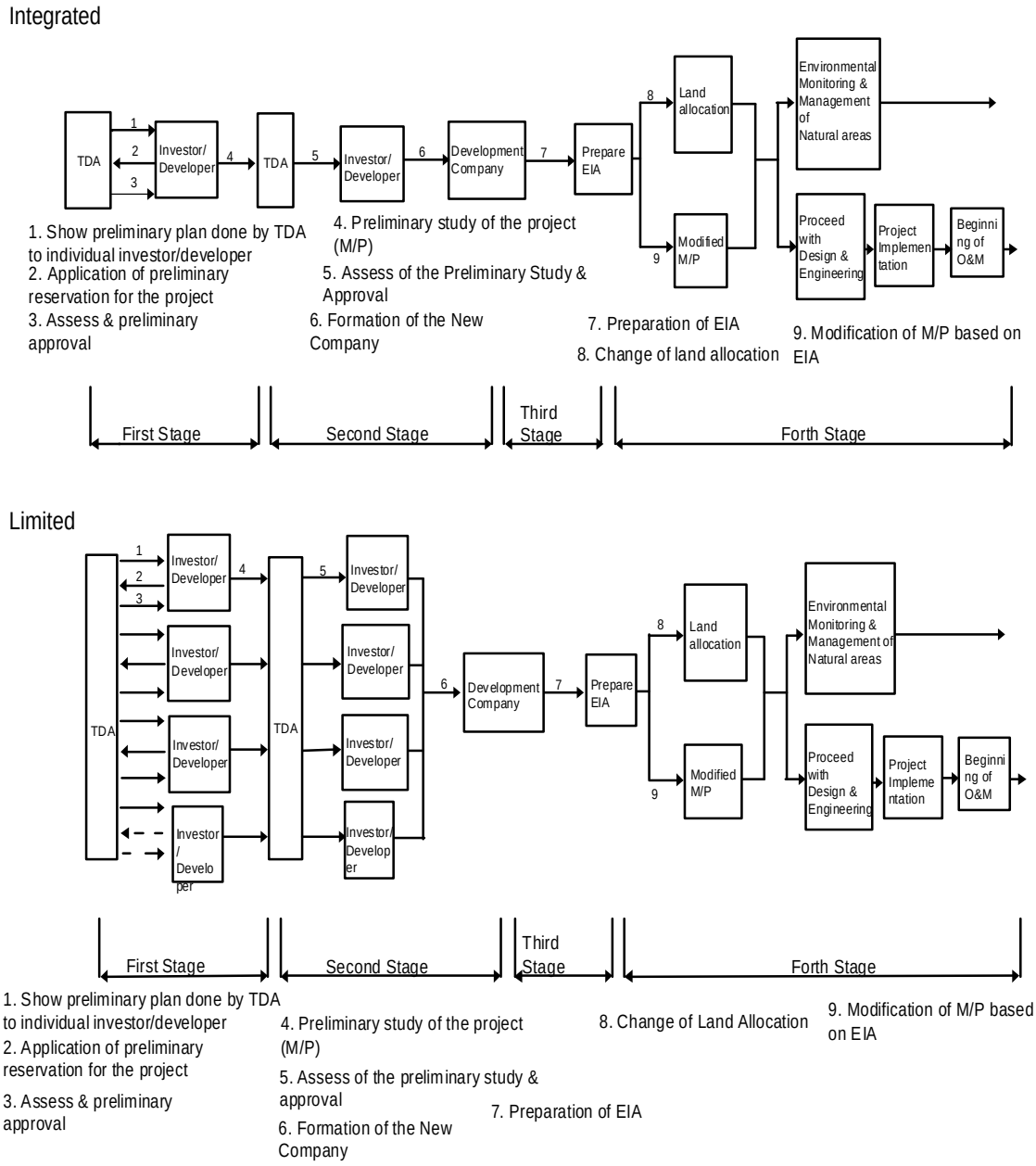
Source: JICA Study Team

Table 1.3.3 Situation of Tourist Centers in the Red Sea

Sector	Center	Type of Development	Mother Company
North Hurghada Sector	Gemsa	B	Not formed
	El Gouna	A	-
Hurghada- Safaga Sector	South Magawish	B	Not formed
	Sahl Hashish	A	-
	Abu Makhadiq	B	Established
	Abu Soma	A	-
	North Safaga	B	Not formed
Safaga-Quseir Sector	Safaga – Quseir	B	Not formed
Quseir-Marsa Alam Sector	Bir Asal	B	Established
	Sharm El Bahari	B	Not formed
	Marsa Wazir	B	Established
	Ras Trombi (Om Ghieg)	B	Not formed
	El Gezera El Hamra	B	Not formed
	Marsa Shoni/Morren	B	Established
	El Naba El Sagier	B	Not formed
	Marsa Shagara	B	Established
Marsa Alam-Ras Benas Sector	Ras Dori	B	Not formed
	Sharm Fokiery	B	Not formed
	Sharm El Loly	A	-
	Ras Honkorab	B	Not formed
	Hamata	B	Not formed
	Wadi Lahemi	B	Not formed

Note: Refer to Figure 1.3.2 for types A & B development.
Source: TDA, JICA Study Team

Figure 1.3.3 Development Processes of Tourism Centers



Source: JICA Study Team

(2) Current accommodation development by TDA scheme

Table 1.3.4 shows the status of accommodation rooms by TDA scheme. The total number of hotel rooms, which is assigned or contracted by TDA, is around 109 thousand and tourist housing is around four thousand.

Table 1.3.4 Current Situation of Accommodation Development in the TDA Area in October 1999

(Unit: rooms)

Sector	Center	TDA contract/assignment			In operation		Under construction	
		Area (ha)	Hotel	Tourist housing	Hotel	Tourist housing	Hotel	Tourist housing
North Hurghada	Gemsa	0	0	0	0	0	0	0
	El Gouna	2,800	2,287	797	1,176	283	1,486	599
Hurghada–Safaga	South Magawish	700	10,922	503	3,962	204	3,897	260
	Sa`l Hashish	3,200	6,000	0	0	0	4,592	1,008
	Abu Makhadiq	616	4,775	819	538	0	2,987	63
	Abu Soma	150	1,730	270	620	25	1,110	245
	North Safaga	136	853	0	300	0	519	0
Safaga-Quseir	Safaga-Quseir	322	1,138	468	178	0	72	0
Quseir- Marsa Alam	Bir Asal	742	5,099	116	300	0	4,078	64
	Sharm El Bahari	946	4,323	16	90	0	736	0
	Marsa Wazir	487	8,029	0	0	0	0	0
	Ras Trombi (Om Ghieg)	1,349	11,652	0	0	0	0	0
	El Gezera El Hamra	2,639	6,294	28	214	0	532	0
	Marsa Shoni/Morren	769	9,331	270	0	0	13	7
	El Naba El Sagier	461	7,430	0	0	0	2	0
	Marsa Shagara	699	6,450	256	383	0	1,147	47
Marsa Alam-Ras Benas	Ras Dori	814	6,651	0	30	0	0	0
	Sharm Fokiery	964	6,772	0	72	0	100	0
	Sharm El Loly	0	0	0	0	0	0	0
	Ras Honkorab	409	5,390	0	0	0	0	0
	Hamata	251	3,448	0	0	0	0	0
	Wadi Lahemi	0	0	0	0	0	60	0
Total		18,454	108,574	3,543	7,863	512	21,331	2,293

Source: TDA and JICA Study Team

(3) Tourism development in city areas

The number of accommodation rooms in operation and under construction in city areas is shown in Table 1.3.5.

Table 1.3.5 Accommodation Development in City Areas

City	Number of rooms in operation	Number of rooms Under construction
Hurghada	14,300	6,300
Safaga	2,000	700
Quseir	800	1,200
Marsa Alam	1,300	100
Total	18,400	8,300

Source: Ministry of Tourism

Hurghada City has grown as a tourism city especially for divers since ten years ago. In recent years, a huge number of accommodation rooms were constructed rapidly, and still a remarkable number of constructions are occurring not only along the coastline, but also on the hinterland. In Quseir and Marsa Alam City, the accumulation of accommodation facilities is small. The coastal lands and tourism areas in these cities are going to be developed.

1.3.3 Business Environment and Investment Opportunity

(1) Upper Nile

Tourism related companies and banks have the following opinions about business environment/investment environment in Upper Nile:

- About 70% (30 out of 44) of the surveyed companies have business in Upper Nile. Their constraints for business activity are ranked as follows: Regulations and complicated public procedure for business activity and investment, poor public security, difficulty of land acquisition, lack of institutions and laws for business activity/investment, lack of infrastructure, and difficulty of procurement of materials and inputs. The issue of public security ranks quite low for investors in general, and seems to be of special concern only to investors in Upper Egypt.

- Investment activities are concentrated in Luxor. However, the city has run out of suitable building sites now. Other areas in Upper Egypt do not have so much demand. Egyptian government is conducting a master plan study for Luxor City, which has a new development concept of city area expansion. But this information is not spread to investors as yet.

- Finances by banks for tourism projects cover hotels, Nile cruise boats, and tour operators in Upper Egypt. One bank did specify that they are partners in a Nile cruise boat, and that it is doing well and has adjusted to the crisis, while another boat they had financed is having trouble adjusting after the Luxor crisis. The four other banks did not finance cruise boats.

- The banks all agreed that there is little physical space left for building new hotels and resorts in Luxor and that no new licenses are being issued for boats for Nile cruises. Therefore, current investment in Upper Egypt consists mostly of renovating or expanding existing facilities. Upper Egypt is also considered to be one of the highest risk investments, because it suffers crisis such as the Luxor incident in 1997 and it takes long time to recover from them. Cairo and Southern Sinai are the areas that recover the fastest and suffer the least in any crisis. However, the banks made it clear that they are not unwilling to finance investments in Upper Egypt; it is simply that they do not receive many financing requests for this area.

According to data from GAFI, 39 companies out of 797 were established in Luxor and Aswan until December 1998. Investment cost is LE 383 million, which is only 1% of total investment cost.

(2) Red Sea

Tourism related companies have the following opinions about business environment/investment environment in the Red Sea:

- About 40% (18 out of 44) of the surveyed companies have business in the Red Sea. Their constraints for business activity are ranked as follows: 1st: regulations and complicated public procedure for business activity and investment, 2nd: lack of infrastructure, 3rd: lack of reliable business partner, 4th: difficulty of land acquisition, 5th: difficulty of procurement of materials and inputs and 6th: insufficient economic and business information.

- About 50% (26 out of 44) of the companies started their business or want to start a business in the Red Sea. 10 companies think it is too early to start business in the Red Sea. Three companies replied that the Red Sea does not have a potential for tourism development. Five companies said they do not have enough information to start business/investment activity.

- In the Red Sea, problems of land acquisition and registration are due to the fact that all the land is owned by the government, and is sold under special contracts to developers. The companies reported that it takes a long time to register land, which makes it difficult to use as collateral for financing a project. However, they also said that the process has become faster over the past year.

- As for operation of banks, the Red Sea has the largest investment portfolio in two banks interviewed. One of the banks pointed out that lack of adequate urban planning is a major problem in the Red Sea. For example there is no public beach in Hurghada, which implies that hotels and resorts must have their own private beaches. There are also no strict zoning laws that give the area a uniform appearance in terms of building height, color, style, etc. Another problem is lack of cooperation and coordination between investors in the Red Sea. Hotel owners compete on price in package tours bringing the price for five star hotels to low levels. Since the cost of building and operating five star hotels is very high, low prices make projects less profitable and more vulnerable. It also makes it very difficult for the four star hotels to compete, because there is not enough of a price differential.

According to GAFI's data, 241 companies out of 797 were established in the Red Sea until December 1998. The investment cost of LE 13,868 million was 35% of total investment cost.

1.4 Transportation and Infrastructure

1.4.1 Airports

(1) Upper Nile

Airports are located in Luxor, Aswan, and Abu Simbel, which have important roles for tourism.

Not only domestic flights but also international flights are using Luxor Airports and Aswan Airport. Many charter flights from Europe are directly arriving there, which are a big help because of the poor condition of domestic flights for European tourists.

The total number of domestic and international flights at Luxor Airport in 1997 was about 17,500 with one million passengers, which were the second largest next to Cairo International Airport. The number of domestic flights using Luxor Airport was about 11,300 with 892,000 passengers. The number of international flights was approximately 6,200 with 147,000 passengers, of which about 5,170 and 1,030 were non-scheduled and scheduled flights respectively.

The total number of domestic and international flights, which used Aswan Airport, was approximately 10,300 with 750,000 passengers. The domestic flights were about 9,600 with 712,000 passengers. The international flights were 705 with 38,000 passengers.

Both Luxor Airport and Aswan Airport have runways that can accommodate A-300-class-airplanes. However, the terminal building of Luxor Airport is too small and too old to handle the volume of arriving and departing passengers. Furthermore, the parking space in front of the terminal building is inadequate.

The newly built terminal building of the Aswan Airport has the capacity to control passengers smoothly. The parking space in front of the terminal building is also large enough.

Majority of passengers using the Abu Simbel Airport are tourists visiting the Abu Simbel Temple. Most of them visit the temple as part of an optional tour from Luxor and Aswan so that they fly to Abu Simbel via Luxor or Aswan. Most of the tourists stay only three or four hours there and fly back to Luxor or Aswan. The total number of flights using Abu Simbel Airport was about 5,340 in 1997. This airport is only for domestic use now.

The terminal building of the Abu Simbel Airport is small but newly constructed. The space in front of the terminal building is causing congestion of passengers and vehicles because the airport does not have a parking space for buses and taxies.

The Egyptian Civil Aviation Authority has already studied the redevelopment and expansion of the runway, taxiway and terminal building in Luxor and other airports to meet future air transportation demands. They expect to be implemented by BOT scheme.

(2) Red Sea

Hurghada International Airport is the only airport in the Red Sea. It had the third largest number of flights in 1997, which was about 17,610. The number of international flights was 7,630, which was the second largest in Egypt. It consisted of 1,000 scheduled flights and 6,630 non-scheduled flights.

The Hurghada International Airport is not only used by civil aviation but also by military operation. This airport has a runway that can accommodate A-300-class-airplanes. Expansion of terminal building is underway. And the development of the second runway and new terminal building is planned. It was scheduled for implementation by BOT scheme.

Mersa Alam Airport, which is located 60 km north of Mersa Alam, is under construction by BOT scheme. The airport is being constructed and will be operated by an investor of TDA Tourist Center with a 40-year concession. The project is divided into four phases. The construction of the first phase will be completed in 2002, the second phase in 2005, the third

phase in 2008, and the fourth phase in 2010. This airport is planned to have a runway that is 3000 m long and an apron that can accommodate three airplanes.

1.4.2 Roads

Eight major roads exist in Upper Egypt. Current conditions of National Road Nos.2, 44, 77 and 88 are good with enough traffic capacity. Regional roads, such as Nos. 53 and 99, are also in good condition. However, development condition of secondary roads is poor with narrow widths and sharp curves.

Table 1.4.1 Existing Major Roads in Upper Egypt

Route No.	Section	Length (km)	Lane		Side Walk (m)	Total Width of Road (m)	Capacity (car/day)	Remarks
			Width (m)	No.				
National Road No.2	Qena - Aswan	294	3.75	2	1.5x2	10.50	10,000	Upper Nile (East Bank)
Regional Road No.53	Qena - Edfu	188	3.00	2	1.5x2	9.00	6,500	Upper Nile (West Bank)
Secondary Road	Edfu - Aswan	104	2-3.0	1-2	0-1.0x2			Upper Nile (West Bank)
National Road No. 77	Qena - Safaga	161	3.75	2	1.5x2	10.50	10,000	Linking two regions
National Road No.88	Qift - Quseir	183	3.00	2	1.5x2	9.00	6,500	Ditto
Regional Road No.99	Edfu -Marsa Alam	230	3.00	2	1.5x2	9.00	6,500	Ditto
Secondary Road	Aswan - Shalatain	300	3.00	2	1.0x2	8.00	6,500	Ditto
National Road No.44	Hurghada - Marsa Alam	281	3.50	2	1.5x2	10.00	10,000	Red Sea coast
National Road No.44	Marsa Alam - Shalatayn	230	3.00	2	1.5x2	9.00	6,500	Ditto

Source: Urban Development Planning Report for Red Sea, May 1999 by Ministry of Construction, Housing & New Communities

Traffic condition on the roads except secondary roads is not so bad at present, but it is expected to worsen in the near future in accordance with the tourism development in Upper Egypt.

(1) Upper Nile

National Road No. 2, which is one of the main national roads in Egypt, lies along the east bank of the Nile River from Cairo to Aswan. This road has an important role not only for regional people but also for tourists, because it is the only main road connecting Cairo to Upper Nile. The road is two-way, two lanes with enough width to allow large tourist buses to pass each other. Its pavement is also in good condition.

A regional road from Qena to Aswan lies along the East Bank of the Nile River. This road has been developed to serve the regional people as well as tourists visiting historical monuments located at the West Bank of the river. However, it is a poorly developed narrow road with some unpaved parts. There is a need to improve this road from the viewpoints of regional development and tourism development.

(2) Red Sea

National Road No. 44 starts at the Suez and runs to the border of Sudan along the coastline of the Red Sea. This road is the only main highway there and has a very important role not only for national defense but also for the development of the Red Sea. This road is two-way, two lanes with enough width, and also has good pavement condition.

The part of the road, which passes through city areas, is well developed with divided four lanes at Hurghada, Safaga and Mersa Alam. In Quseir, however, the road narrows and curves sharply.

The road running along the coastline passes across a lot of wadis (valleys). Drainage facilities (box or pipe culvert) are provided at wide wadis and high embankments to prevent erosion by rainwater. Some parts of the road crossing wadis, however, have not been provided any drainage facilities.

(3) Eastern Desert

Three roads running through the Eastern Desert connect Upper Nile to the Red Sea. These roads will have more important roles for tourism product diversification in the regional tourism development.

- National Road 77 Safaga - Kena
- National Road 88 Quseir - Quift
- Regional Road 99 Marsa Alam - Edfu

National Road 77 is a major route, which connects Upper Nile to the Red Sea at present. High-voltage cable, railway and water conveyance pipes are running along the road. The road is two-way, two lanes with wide shoulders and good pavement condition. Furthermore, a roadside rest area exists in the mountainous area between Qena and Safaga.

Conditions of the other two roads are comparatively good except for the mountainous sections. These two roads, however, have no roadside rest areas for drivers and passengers. Tourists are not allowed to pass through these roads because of security reasons at present.

(4) Safety facilities

Road signs, markings, and streetlights have not been set sufficiently along roads. Some sections of roads have quite monotonous environment, e.g., flat and straight alignment with monotonous landscape.

(5) Parking space and rest areas

Development of parking spaces for tourist buses and taxis is one of the most important issues. Cruise ships are moored at the centers of cities, and tourists visit tourist spots by vehicles. Most tourist vehicles are parked on roads along the river because there are no parking spaces near the berthing places of cruise ships. This causes not only traffic jam but also possible traffic accidents to tourists, and likewise spoil the scenery of the Nile.

Presently, roadside rest facilities are not sufficient. Rest facilities with parking and toilets should be provided at sufficient intervals along roads, especially the road sections used by tourists.

1.4.3 Railway

(1) Upper Nile

A standard gauge track from Cairo to Aswan runs along the Nile River. A double-track line runs between Luxor and Aswan after the completion of track works in 1996.

This railway is an important transport mode connecting Cairo to Upper Nile as well as to National Road No.2. Trains with 1st, 2nd and 3rd class coach are being operated on the line. And more night trains are being operated from Cairo to Aswan now. But the number of users remains low.

Both Luxor Station and Aswan Station were recently renovated. But open spaces in front of these stations have not been thoroughly developed as yet. Parking spaces and sidewalks are still inadequate.

(2) Eastern Desert

A railway connecting Upper Egypt and the Red Sea through Eastern Desert started operations in 1987. Recently rails have been changed to new ones and embankment protection works have been done recently. The Egyptian National Railway operates and maintains this railway as well as other lines. Trains with passenger coaches had been operated before but recently this route has been used only for freight trains from Upper Nile to Safaga and Quseir.

The Egyptian National Railway is studying the operation of regular-scheduled passenger trains. Regularly run passenger trains will be one of the modes of transportation between Upper Nile and the Red Sea and will contribute much to tourism product diversification of the regional tourism development.

(3) Red Sea

The railway from the Eastern Desert diverges from Safaga and runs parallel to National Road No. 44 up to Quseir. Rails have also been changed to new ones and protection works of embankment has also been done.

1.4.4 Water Transportation and Cruising

(1) Upper Nile

The Nile River has been an important waterway for transportation in Egypt for a long time. In fact, the Nile cruise from Cairo to Aswan is now a popular tourist product among international tourists. However cruising from Cairo to Luxor has been suspended since the Luxor accident in 1997.

As of 1997, there are 208 cruise ships being operated in the Nile River and 3 cruise ships in Lake Nasser. Cruise ships basically sail at night and stay at tourism sites such as Luxor and Aswan during the daytime. Thus cruise ships have not only played a role of tourist attraction but also play a role of supplementing insufficient number of hotel rooms in Upper Nile.

Cairo University has formulated the master plan for development of berth facilities on the Nile River between Aswan and Cairo and is conducting a design study financed by TDA.

Luxor

The berth and moorage of cruise ships at Luxor is located in the center of the city and the East Bank of the Nile River. Five to six cruise ships are moored closely in parallel order due to limited berth facilities. In such case, passengers have to get on and off by passing through these moored cruise ships. This practice is not safe for passengers.

Protection of bank and promenade in front of the moorage is almost finished. But a transfer facility is not developed near the berthing space so that tour buses have to park on street. As a result, when many ships arrive at the moorage, streets become over-crowded. This practice is not safe for tourists.

Private firms are currently constructing berthing facilities, which will have a 28-ship capacity, at the upper and lower side of the bridge over the river in the southern part of Luxor. UNDP is preparing the future city plan in consideration of this moorage construction. According to this plan, some space in front of the new moorage, including space for 28 ships mentioned above, is planned for commercial facilities and hotels, and the existing moorage is planned for parking and open space.

Aswan

The current condition of berthing facilities in Aswan is same as Luxor's. Development of moorage with capacity for 14 ships is planned with the support of International Finance Corporation. However, this project cannot find a private investor, thus the project has not been implemented yet.

Abu Simbel

In Abu Simbel, cruise tours from Aswan High Dam is now provided. Currently, there is moorage for only one ship in front of Abu Simbel Temple.

Others

Aside from Luxor and Aswan, new moorage will be constructed in Dandara (for 11 ships), Esna (for 4 ships), Kom Ombo (for 8 ships), and Edfu (for 8 ships) by investment of private sector with the assistance of IFC.

(2) Red Sea

Hurghada and Safaga have ports where ferryboats can dock. An express ship, which connects Hurghada to Sharm El Sheikh in only 90 minutes, is being operated three times a week. In addition, a ferry route connecting Safaga to Jeddah in Saudi Arabia is also operated.

1.4.5 Water Supply

(1) Water resource

Most water demand for social and economic activities in Egypt depend on the water resources of the Nile River. Seasonal floods from the Nile River provide fertile soil and irrigation for agriculture along the riverside area until the middle of the 19th Century.

Aswan Dam was constructed to stabilize and utilize the rich water resources, avoiding flood in the urbanized area. Utilization of water resource of Lake Nasser is demarcated by the water use rights agreement with Sudan. The agreed discharging water volume from Aswan High Dam is 55 billion m^3 in a year.

The water resource of the Nile River affords the opportunity to expand agricultural land, to increase agricultural products, and to support increased population.

The government of Egypt has been planning to increase water resources to redistribute from the concentrated population along the Nile Valley to remote areas such as New Valley and the Red Sea. Development of the remote areas will require a large volume of water resource from the Nile River. However, water use rights for Egypt is controlled by the above agreement. Formation of a comprehensive plan for water resource management including ground water should be implemented for more efficient utilization of water resources in the future.

(2) Upper Nile

Water resource for potable water of urban and rural areas in Upper Nile come from surface water of the Nile River and from ground water.

Luxor

At present, two water purification plants provide potable water for Luxor City. To cope with future water shortage by urban expansion and population increase, the Supreme Council of Luxor is planning to expand and develop water purification plants. The water rate in Luxor City is described in Table 1.4.2.

Table 1.4.2 Water Rates in Luxor City

Category of Consumer	Volume (m^3)	Water Rate (LE/m^3)	Remark
Residential	1 – 30 More than 30	0.15 0.18	35% of water rate charged for sewerage treatment
Commercial Establishment	Per m^3	50	Ditto
Hotel and Restaurant	Per m^3	80	Ditto

Source: JICA Study Team

Aswan

In Aswan, the network of potable water supply serves 98% of the governorate. A new water purification plant, which was financed by USAID, has been constructed in Kom Ombo. The plant has a service center function in which water charges are collected.

The water supply networks and tapping facilities for berthing facilities are located in Aswan and Luxor.

(3) Red Sea

The river water of the Nile and desalination plants, and groundwater in wadis are used as water resources in the Red Sea. The water transmission pipeline starts from Koraymet, running through Zafarana and Ras Gharib, providing 39,000m^3/day of water to Hurghada. And the desalination plant in Hurghada is also providing 1,000m^3/day of water for the city.

The second water pipeline from Qena to Quseir is providing 12,000m^3/day of water to Safaga and 6,000m^3/day to Quseir. This water pipeline used to provide water to Hurghada City.

The Marsa Alam desalination plant, which can generate 600m3/day, is being operated. It will be expanded to 3,000m^3/day in the future in accordance with redevelopment of the new city. The third water transmission pipeline from Edfu to Marsa Alam is planned to cope with the increase of water demand by the regional tourism development.

Developers of TDA Tourist Centers have to provide infrastructures by themselves. Seawater is the only source of drinking water for them, considering construction schedules of their projects and construction cost of water supply facilities. The desalination plant in Soma Bay Tourist Center generates 3,900m^3/day of purified water. Desalinated water is chlorinated and contains 80 ppm mineral.

1.4.6 Sewage Disposal

(1) Upper Nile

Luxor

The Supreme Council of Luxor is developing a sewage disposal system, which will cover 50% of 370,000 citizens, within 2 years. The present condition of sewage works is as follows:

Table 1.4.3 Present Condition of Sewerage Treatment Plants in Luxor

Status	Capacity (m^3/day)	Disposal Method
Developed	13,000	Oxidation
Under Construction	13,000	Ditto
Plan (within 2 years)	11,000	Ditto
Total	37,000	

Source: JICA Study Team

The demand for sewage work is estimated at 200 liters/person/day, which is set at 80% of water supply volume per person per day.

370,000 persons x 50% x 0.2m^3/person/day＝ 37,000m^3/day

Major hotels are located within the above sewage work coverage. Most of the sewage from hotels are collected and disposed by the present system. Sewage of cruise boats and cruise ships are disposed and discharged to the river by their own disposal system.

To cope with the future demand by the regional tourism development and urban expansion, the municipality is planning three additional sewage works development, which are northwest, southwest, and southwest of the city. The municipality is also promoting septic-tank disposal systems for those outside the sewage work coverage area.

On historical sites in Luxor City, some portable toilets are provided for tourists. Those toilets

are comparatively well maintained.

In the training center for sewage disposal in the city center, workers are given operation, maintenance and management training.

Aswan

Aswan Governorate comprises 5 administrative centers. Sewage disposal system has been developed in the two centers of Aswan and Edfu. The government of Aswan has a plan to develop sewage disposal facilities for the other 3 centers.

(2) Red Sea

A sewage treatment plant with a capacity of 20,000m^3/day has started operations in Hurghada. Its capacity will be expanded to 12,000m^3/day in the near future. A wastewater treatment system by septic tank is used outside the service area. In Safaga, Quseir and Marsa Alam, septic tank system is also used. TDA Tourism Centers must have their own sewage disposal systems.

1.4.7 Solid Waste Disposal

In Upper Nile and the Red Sea, local governments or subcontracted private companies are operating a solid waste disposal. In the developed Tourism Centers in the Red Sea, developers of the center are operating daily solid waste collection and disposal.

In the east of Qena, an open dumpsite lies at the desert along National Road No. 77. This gives a bad image to passengers who see this dumpsite as they travel this road. When garbage in the site is incinerated, smoke fills the area. This will cause pollution problems in the future.

In the Red Sea, open dumpsites are developed and operated by city councils. They are located outside the city area and are filled with smoke just like the one in Qena. A private company has a contract with the city council of Hurghada to collect garbage. The other three cities in the Red Sea collect their own garbage.

1.4.8 Electric Power Supply

A 220-kv transmission line connects from Aswan to Harghada by way of Safaga, and electric power is now being supplied to these cities. Each city in the Red Sea has its own power station.

Table 1.4.4 Power Stations in the Red Sea

City	Power station
Hurghada	Thermoelectric power plant (not activated)
	Wind power plant (testing)
Quseir	Thermoelectric power plant (activated)
Marsa Alam	Thermoelectric power plant (activated)

Source: JICA Study Team

TDA Tourist Centers develop their own power generation and supply system. All of the Tourist Centers do not utilize the national grid system.

1.4.9 Telecommunication Network

Current condition of telecommunication network in Egypt has rapidly improved in the past few years. It is based on introduction of new machines, development of new stations, and rapid increase of mobile phone users. Traffic of domestic and international telecommunication is dramatically increasing so that more improvement is needed from now on. Some Tourism Centers in the Red Sea develop their own optical fiber network to Hurghada to maintain good condition of communication.

1.5 Environment

1.5.1 Meteorological Conditions

The meteorological condition in the study area is summarized in Table 1.5.1.

Table 1.5.1 Meteorological Conditions in Upper Egypt

	Qena and Luxor	Aswan	Red Sea
Temperature	Maximum of 42.8°C during the months of July-August and part of September and minimum of 6.1°C during the months of January through March.	Maximum of 43.2°C during the months July and August and part of September and minimum of 8.8°C during the months of January and February.	Maximum of 40-41°C at Ras Benas (south) and 32-34°C at North of Hurghada and Quseir. July and August are the warmest months of the year. Minimum of 8-10°C at south and 9-10°C at Hurghada and 16-18°C at Quseir with January and February as the coldest months of the year
Rain Falls	Rainfall is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking water and other uses is the river Nile.	Rainfall is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking water and other uses is the river Nile	Minimum rainfall is in October and November. Some record shows 68.1 mm in the south and 62 mm in north as highest rainfall
Relative Humidity	Ranged between 47-55% during winter (December-February) and 27-40% during summer	Ranged between 34-43% during winter (December-February) and 17-27% during summer.	Ranged between 50-60% from November-December in the south and 40-50% from June-August in the north.
Winds	Ranged between 1.8 -4.5 m/sec in summer and between 2.4 - 5.8 in winter	Ranged between 4.5 -10.0 m/s in summer and between 3.9 - 8.6 in winter	n/d

Source: General Authority for Meteorology, Cairo Egypt

1.5.2 Geology and Topology

(1) Geology

The geological formation of Upper Egypt can be divided into two main geological characteristics.

The Nile valley basin (Qena, Luxor and Aswan)

The geological formation of the Nile Valley of Upper Egypt is called the Nubian sandstone formation and is composed of an alteration of sandstone and clays which have water absorption power. Such sandstone of the Cretaceous Age essentially constitutes a main complex of aquifer, which is widely extending in the study area. Thickness of the Nubian sandstone varies from several meters to 303 m. The basement rocks, which are mainly represented by Aswan granite, are exposed on the surface at different places. Thus, the rocks are hindering direct groundwater flow through the Nubian sandstone aquifer (El-Shazly & El-Hady, 1977).

Eastern desert and Red Sea mountain chains (Red Sea)

Geology of eastern desert and the Red Sea mountain chains is a rocky plateau dissected by a number of drainage systems with a main channel and numerous tributaries. The Red Sea mountain range forms the watershed (divide) which parts the drainage eastward to the Red Sea and westward to the Nile River. Most principal wadis have their heads in the Red Sea Mountains and extend across the whole stretch of the eastern desert until they debouch into the Nile Valley. The area has a rugged surface with high mountain peaks rising to 1,350 m above sea level (not including the Red Sea mountain). The average elevation of the wadis range between 350 m and 546 m above sea level.

Most basement consist of a complex of the Precambrian. The rocks are dominated by geosynclinal metasediments (schist-mudstone-graywacke series), gneiss, amphibolite, diorite, and granodiorite complex, old and younger granite.

Alluvial deposits cover the beds of the wadis. These deposits show a notable variation in texture through the soil profile that is typical successive layers of the wadi-fill deposits. The physical characteristics of deposits vary in different wadis as well as within one wadi, according to the surrounding rocks and topography of the wadi.

(2) Topology

It can be said that the Nile River is the most prominent physical feature as far as population and settlements of Egypt are concerned. The desert extending on the eastern side to the Red Sea mountain chain is dissected by a number of large and small wadis. On the western side, another desert extends whose configuration is rather flat or gently undulating and almost featureless except at the Kurkur and Dungul Oases and the Sinn El-Kaddab escarpment. At about 500 km west from the Nile of Aswan region, the mountain massif of Oweinat rises.

(3) Natural Hazards

According to Shata (1988), natural hazards in Aswan region are of the following three types:

- Flash floods pass through wadis in Eastern Desert (Allaqi, Agag, Natash, Shait, Kharit and Abbad) and Western Desert (Kalabsha and Kurkur).
- Earthquakes with a magnitude of 5.7 on the Richter scale observed in 1981 when water level of the Nasser Lake was at about 176 m.
- Sand creep is obvious on the western desert side of Nasser Lake area and moves in successive rows in a NW/SE direction. As a result, sand fills the Toshka spillway.

(4) Soil Condition, Erosion and Landscape of the Study Area

In accordance with the survey results of the "High Dam Soil Survey Project"(UNDP, FAO and Egypt, 1974), the soil characteristics of the study area from Aswan to Qena can be divided into 5 sectors as follows:

Aswan-Kom Ombo:

The Nile Valley in Aswan is narrow and has practically no alluvial soil along the river. Configuration of the valley is steep with rock debris slopes that lead up to a rock plateau. The plateau is situated approximately 100 m above the valley of the Nubian sandstone. The valley opens quite abruptly into the Kom Ombo plateau. In the Paleolithic era, the Kom Ombo plain was a swamp in which sedimentation of silt had occurred. The sediment at the edge of the plain is sandier.

East of Kom Ombo Plain:

A hill complex forms the eastern limit of the Kom Ombo plain. The hills are terrace remnants, with coarse sandy or gravelly substrata. Beyond them, a wadi plain extends eastward and is divided into a rather small western part and a larger eastern part by an outcrop of the Nubian sandstone. The eastern part lies within the watershed of Wadi El-Kharit and its tributary Wadi El-Natash and is called Atmour Nugra. Both parts of the plain are in part alluvial and sandy or loamy to a variable extent, partly of shale and sandstone of the Nubian sandstone series. The western plain lies a little higher than the alluvial deposits. In the eastern plain, the relief is more pronounced, it could be said that the sandstone outcrops give the plain a rather rugged appearance, and the alluvium contains silt or less loam and is less suitable for agricultural development.

Edfu-Esna-Gebelein:

In the east of the Nile, the processes of erosion have carved the rock land into a separate plateau, capped by the lower Eocene limestone which are exposed on both banks of the river further north. High above the valley, two or three terrace levels can be distinguished, marking early Pleistocene, or even in part Pliocene, erosion levels of the Nile. There are also a number of

rather wide and very gravelly tributary valleys, including Wadis Sillim, el Sarrag, el Hawa, Abbad, el Domi and el Shoki.

North of Edfu, the Nubian sandstone gives places to Cretaceous limestone, which form a more mountainous terrain traversed by a main road, which no longer follows the Nile Valley, and contains some phosphate mines. The harder lower Eocene limestone still survives as a capping at some of the highest points, Gebel Bakhmanyia above the Nile valley just to the east of Gebelein. The older gravelly terraces continue as far as Esna, beyond which point the rubble terrace deposits occupy the entire fringe area. On both sides of the valley between Edfu and Esna the desert fringe generally presents either a smooth slope, of at most a few degrees, between the cultivated area and higher terraces or the rock land, or consists mainly of the youngest terrace deposits. The smooth slope usually shows a loamy surface soil over compact shale, shale clay, or intercalated sandstone, all of the Nubian sandstone series.

Gebelein-Qena

Below Esna, the rock land on the west bank lies further from the river, around the V-shaped mouth of a tributary gully system, but closes in again from Luxor to Qena to leave only small areas of rubble terrace land in the desert fringe. Soft Cretaceous limestone forms a precipitous escarpment. Four rubble terrace stages can be recognized and between them and the foothills there is a debris slope or stony pediment that, at an altitude of about 148 m, marks the approximate level of the Pleistocene inland sea.

Below Gebelein, on the east bank, an important tributary system formerly entered the valley and the ancient gulf must have been very wide at this point. At present the rock land lies about 12 to 18 km beyond the edge of cultivation and wide stretches of the oldest rubble interspersed with outwash plains and wadi beds.

The debris slope or stony pediment presents a remarkable feature, for the soft Cretaceous limestone, which is much less resistant to erosion than the gravelly rubble and the stony debris of the pediment has led to an inversion of relief. Close to the deeply incised gullies little of the limestone remains and there are hollows, far below the level of the terraces, when these were formerly hills. This steep rough country looks like a landscape of the moon.

The marine clays of the Pliocene Inland Sea occur under the gravel cover of all the rubble terraces, of whatever stage, as far south as Esna. Close to the rock escarpments and just in front of tributary gullies these deposits may be gravelly or stony and near the edge of the cultivated land, between Luxor and Hegaza as the original rubble cover has been eroded in places, or removed by man, so that the clayey subsoil reaches, or almost reaches, the surface.

Where Wadi Matulah joins the valley opposite Qift, the rubble terrace landscape gradually merges eastward into a wide plain of predominantly sandy, sometimes loamy deposits, developed in a strongly denuded Nubian sandstone country. This landscape begins a little to the east of the Lakeittah Wells. The marked differences in elevation, both between different rubble terraces and between the plain and the surrounding rock land, have disappeared. In the plain itself, there are only a few outcrops of the Nubian Sandstone. North of Qena, the rubble terrace landscape extends a long way up into the Wadi Qena.

As seen from the river the rubble terrace landscape, for all their variations in elevation, hardly show up; the land falls away and one may get the impression of a rather level hinterland.

Qena-Nag' hammadi:

After the big westward bend, which the Nile Valley makes at Qena, the appearance of the valley definitely changes. On the east side, the high rock land closes in, leaving only an insignificant desert fringe of rubble terraces. On the west, the landscape is quite different; first, the high rock land plateau retreats to a distance of 10-14 km from the cultivated land of the valley. Second, although the different rubble terraces are still present, fan and outwash gravel, and wide wadi plain deposit, are dominant. As these have a notably steeper slope than the rubble terraces, they bury the part of the terrace which lies closest to the rock land. The rubble terraces emerge half

way up this outwash slope; while below their escarpments there extends a long slope of outwash material, relatively flat and consisting of fine textured sands.

1.5.3 Hydrology and Groundwater

The Nubian sandstone formation is a main and important water-bearing formation in the area. Boundary of the formation covers Egypt, Sudan, Libya and Chad. The great variation in its geographic distribution could be attributed to the variation that occurred during its deposition (El Ramly, 1973).

(1) Water Flow

Water is being recharged from the Nile to the aquifer (Mitwally 1953 and Sheta 1962). Geoistrazivanja (1965) estimated a seepage of 6 million m^3 /annum with the average permeability of 3 x 10^{-3}cm/sec. At Nasser Lake, seepage the level of 180 m was expected at 73.5 million m^3/annum.

The saved volume of water discharged from the Nubian aquifer was estimated at 257 million m^3/annum in total and the extraction average could be 800 million m^3/km^2/annum. (Soilman. 1987)

(2) Nasser Lake and River Nile

It can be said that the Nasser Lake and the river Nile represent the hydrology of Egypt. The Nasser Lake is located 7 km south of the Aswan Dam. The lake as whole is mostly surrounded by rocky terrain. The entire reservoir has a gross capacity of 157,000 million m^3. The riverbed of the high dam is 99 m above sea level. Some of the arms of the lake called Khors are over 50 km. There are 85 major Khors of which 48 are on the eastern shore and 37 on the western. The shoreline morphology is primarily dependent on both erosion and sedimentation.

Total shoreline length of these Khors is 969.9 km. The most important factor, which affects shoreline morphology, is the sedimentation of a huge amount of silt carried by the river during the flood. Changes in the shoreline morphology are expected to occur at a faster rate during the filling stage of the reservoir than later on when the reservoir has reached its maximum holding capacity which already had happened during the 1998 flood.

Evaporation and mean annual discharge through floodgates and turbines result in an annual variation in water level of about 5m. As a consequence of constructing the high dam, the river Nile in Aswan region formed the following three separate water bodies:

- Nasser Lake;
- Aswan reservoir (lying between the High Dam and the Aswan Dam, 7 km down stream); and
- Nile River (down stream of the Aswan Dam).

In the Nasser Lake, there is an annual cycle of water level change related to the seasonal flood pattern of the river Nile, together with a long-term pattern of net rise and fall of the mean lake level. During the drought years in the mid 980s, the mean monthly level of the Nasser Lake dropped to 157.37 m above mean sea level.

The Nasser Lake has the following environmental features:

- It is one of the cleanest artificial lakes based on periodic analyses of its water and soil;
- Limited number of residential areas around the lake;
- Agricultural development is limited along the shoreline of the lake;
- 5,500 farmers have planted 25,000 Feddans, which represent 2% of the total shoreline of the lake;
- There are no pollution-generating activities on the lake except one factory for fish preparation and freezing;

- Total number of cruise ships is 6l; and
- There is no any disposal activity from industries and agriculture or sewage into the lake.

As for the water quality of the Nile River, Table 1.5.2 shows an analytical data of river water quality from Aswan to Esna in1993/94.

Table 1.5.2 Quality of Nile River Water from Aswan to Esna (1993/94)

Parameter	Concentration
DO	6.0 (mg/l)
BOD	3.6 (mg/l)
COD	13.6 (mg/l)
Cl	8.0 (mg/l)
TSS	12.0(mg/l)
F. Coli.	410 (col/100 ml)

Source: Institute of River Nile Research, WRPW

(3) Groundwater

According to officials of Luxor and Aswan, rising of the ground water level in each governorate has grown remarkable in recent years. Table 1.5.3 shows the groundwater fluctuation in shallow boreholes around the Nasser Lake. Most of the data were taken from 1965 and 1991.

Table 1.5.3 Hydrogeological Data of Shallow Boreholes

Distance from the Lake (km)	Direction	Initial Ground water level		Latest Ground water level	
		Level (m)	Year	Level (m)	Year
2.00	East	120.75	1965	120.90	1966
3.00	West	118.00	1965	162.00	1991
4.00	West	118.00	1965	159.00	1991
4.50	East	111.27	1965	141.67	1969
5.80	East	115.00	1965	160.40	1991
5.90	West	113.77	1965	158.23	1973
6.00	West	119.48	1965	150.23	1991
7.00	West	104.26	1965	125.86	1971
8.00	East	113.85	1965	158.38	1991
9.00	West	104.21	1965	141.54	1991
9.00	East	109.81	1965	129.06	1969
10.00	West	115.00	1965	149.52	1979
11.00	West	104.18	1965	127.15	1991
30.40	East	117.27	1965	134.21	1991
33.50	South	168.03	1974	165.85	1991
80.00	West	112.09	1965	160.77	1991
107.50	South	168.13	1974	168.24	1983
187.15	South	176.89	1974	171.09	1981

Source: Ground water of Upper Egypt, Masters Thesis, 1994 and Faculty Engineering, Cairo University.

1.5.4 Flora & Fauna

(1) Flora

The flora of the Egyptian ecosystem is profiled, as shown in Table 1.5.4.

Table 1.5.4 Profile of Flora in Egypt

Flora	Number of Species
Virus	44
Bacteria	238
Fungi	1,260
Algae	1,148
Flowering Plant	2,072
Non-flowering Plant	369

Source: Environmental Quality Report of 1996, EEAA

The flora of Aswan, Luxor, Qena and the Red Sea have been studied by Aswan Faculty of Science as well as other institutions since 1978. Based on those studies, following data and information are shown in the Appendix.

- List of flora species in Upper Egypt;
- List of indigenous flora species in Upper Egypt and their uses; and
- Zone of vegetation in the eastern side of the Aswan area.

(2) Fauna

A list of fauna in Upper Egypt including mammals, birds, soil fauna and others is attached as Appendix.

(3) Coastal Area

The Red Sea is one of the richest coral habitats on earth, and has a very diverse ecosystem, specially cyanophyceae, tropical fishes and so on.

Several natural communities of mangrove forest that need to be protected are observed in the surrounding area of Marsa Alam, south of the Sinai Peninsula, among other sites.

1.5.5 National Parks and Natural Reservation

In Upper Egypt, the Egyptian Government has established a total of 21 natural protectorates (National Parks and Natural Reservations) in accordance with the Law 102/1983 to protect natural resources and endangered bio-diversity. A list of National Parks and Natural Reservations in Upper Nile is given in Table 1.5.5, and attractions of ecosystems and others identified in each natural protectorate is summarized, as shown in Table 1.5.6.

Table 1.5.5 List of National Parks and Natural Reservations in Upper Egypt

Name of Park or Reservation	Governorate	Total Area (km^2)	Protection Decree /Year
Elba	Red Sea	36,500	No. 450/1986
Saloga & Gazall	Aswan	13	No. 928/1986
El Alaki Valley	Aswan	275	No. 945/1989
River Nile Island	River Nile	8,775	No. 928/1986

Source: EEAA Natural Reservations Guide for Egypt, 1994

Table 1.5.6 Attractions of National Parks and Natural Reservations

Natural Protectorate	Year Established	Type of unique ecosystem					
		Bird	Flora	Fauna	Wild life	Marine	Geology
Elba	1986				■	■	
Saloga & Gazal	1986	■	■	■			
El Alaki Valley	1989	■	■	■	■		
River Nile Islands	N.A.	■		■			

Source: Natural Reservation and Culture Interest Areas of Egypt, EEAA, 1995

1.5.6 Pollution

(1) Air Quality

It is considered that the other sources of air pollution are mostly from industrial establishments (sugar mills and textile mills in Qena; chemical plants in Aswan), power generation stations, housing and agricultural areas (smoke from open burning of solid wastes) and so on. In Aswan, 130 tons/year of NO_x had been generated from a fertilizer company. (Source: Environmental Quality Report of 1996, EEAA).

Table 1.5.7 shows data on SO_2 and O_3 obtained from monitoring stations.

Table 1.5.7 Air Quality as of August 1999

Monitoring Position	SO_2 (ug/m^3)		O_3 (ug/m^3)	
	Minimum	Maximum	Minimum	Maximum
Qena (Kom Ombo)	15.23	62.79	3.5	141.2
Luxor	6.81	45.61	3.6	140.4
Aswan	1.10	145.2	4.1	133.5

Source: EEAA data report to the JICA Study Team, October 3, 1999.

Data on O_3 concentration in those areas shows less than the maximum limit recommended by WHO (World Health Organization) which suggests that the maximum concentration of O_3 should be in the range of 150-200 ug/m^3 for every exposure hour.

In the Red Sea area, less information regarding air pollution is available at present. However, Red Sea Governorate covers 130,000 km^2 of which only 0.05% is occupied by human/commercial activities. Therefore, the present situation of air pollution caused by usual human activities might not be so serious. As a matter of course, an increase in human activities and travelers will lead to increase in total quantity of air pollutants, including NOx, SOx, SPM, benzene (C_6H_6), etc. and easily make the surrounding air quality bad for human health.

(2) Water Pollution

Water supply and its consumption

The river Nile is the main source of water in Egypt. It supplies about 97% of the water requirements of Egypt. According to the Nile Water Agreement, the Nile supplies 55.5 billion m^3 of water. In addition to the river, 4.7 billion m^3 of groundwater and 19 million m^3 of water treated by desalination plants add to the water supply. There are additional 3.9 billion m^3 of agricultural drainage water and 600 million m^3 of domestic water which are recycled for irrigation. Of the water used for irrigation, it is estimated that almost 70% will be lost to the drainage channel and to the underground water reservoir. Table 1.5.8 shows the water consumption ratio by sector in Egypt.

Table 1.5.8 Water Consumption Ratio by Sector

Sector	Irrigation use	Industry use	Residential use	Other use
	83.2%	9.8%	5.5%	1.5%

Source: Environmental Quality Report of 1996, EEAA

Sources of water pollution

The sources of water pollution in Upper Egypt are summarized as shown in Table 1.5.9.

Table 1.5.9 Sources of Water Pollution in Upper Egypt

Source	Drainage	Industry	Sewage
	58.2%	32.1%	9.7%

Source: Environmental Quality Report of 1996, EEAA

Drainage channels:

From Aswan to near Cairo there are 67 drainage channels pouring into the river Nile directly or indirectly with a total of 4 million m^3 per year from agricultural activities and some sewage sources (treated or semi-treated). It is considered that agriculture drainage water is contaminated by several kinds of pollutants, such as nutrients, pesticides, etc.

Industrial Wastewater

Industrial wastewater is a critical source of pollutants in Upper Egypt and the Gulf of Suez (i.e. north of the Red Sea coast). The present situation of industrial wastewater in the study is summarized as follows:

Upper Nile (Qena, Luxor and Aswan): It has been detected that around 190 million m^3 of industrial wastewater is disposed into the drainage channels in Upper Egypt every year. Industrial wastewater increases the salinity of the river Nile from 130mg/l at Aswan to 250mg/l near Cairo (Source; Environmental Quality Report of 1996, published 1997 by EEAA). In Qena, the sources of industrial wastewater are the aluminum complex, sugar mills, plastics plants, textile mills, and some food manufacturers. In Aswan, industrial wastewater is discharged by sugar mills and chemical plants. However, Luxor has no such sources of industrial wastewater. To comply with the environmental law No. 4, industrial companies have to set up suitable wastewater treatment facilities. For instance, an aluminum industrial complex has set up precipitation tanks for suspended materials and a sugar manufacturer has set up facilities for recycling of organic wastewater.

Red Sea: The north part of the Red Sea is remarkably active in oil and shipping activities. The EEAA newly established coastal water quality monitoring stations in the area, in cooperation with Danish International Development Authority (DANIDA). From the stations various data on coastal water quality are obtained as shown in Table 1.5.10. All parameters represent the average of data of 13 monitoring stations located along the Red Sea coast.

Table 1.5.10 Eutrophication in the Red Sea Coastal Surface Water (as of June 1999)

Parameters		DO (mg/l)	DO saturation (%)	Chlorophyll (g/l)	TSM (mg/l)	Transparency (m)	Total Nitrogen (mm/l)	Nitrate (mm/l)	Nitrite (mm/l)	NH_4 (mm/l)	Total Phosphorus (mm/l)	Silicate (mm/l)
Gulf of Suez	Min	6.48	103.8	0.05	4.96	2.50	11.11	0.04	0.00	0.62	0.08	1.04
	Max	7.56	119.2	0.78	17.77	9.00	34.96	14.44	0.75	3.98	5.04	2.16
Red Sea proper	Min	6.84	111.4	0.01	3.49	4.50	8.82	0.04	0.00	0.56	0.28	0.92
	Max	7.38	121.4	0.31	9.06	17.00	38.22	0.63	0.15	1.50	3.64	2.40
Gulf of Aqaba	Min	6.66	106.3	0.06	4.05	7.50	8.17	0.17	0.00	0.52	0.56	0.88
	Max	7.92	131.4	0.30	6.34	21.50	21.89	0.60	0.14	1.74	2.52	2.84

Source: EEAA Report to the JICA Study Team, October 3, 1999.

Sewage

Upper Nile (Qena, Luxor and Aswan): According to officials in Aswan and Luxor, wastewater in those areas is treated by trickling filter and oxidation pond. The sewage system of the city of Luxor does not cover all its residential areas. Those not covered have been encouraged to use septic tanks, which contribute significantly to contamination of ground water. The treated sewage is discharged to the river Nile. Sewage of cruise boats is also disposed to the river Nile. In Qena only 15% of the residential areas are covered by sewage disposal system. A pit, which is prone to leaching, is often used to collect sewage. In Aswan, only 40% of the governorate is covered by a sewage disposal system.

Red Sea: In the Red Sea coastal area, some resort hotels own a seawater desalination plant and a wastewater treatment plant. They use the treated sewage for agricultural purpose including golf course maintenance, and the treated processed sludge is used as soil conditioner. However,

increasing these activities or engaging in large-scale operations poses a potential threat to the ecological balance of the surroundings. As a matter of fact, the related laws for conservation of the marine natural resources and the environment prohibit the discharge of wastewater to the Red Sea. Based on the above, the sources of water pollution in the study area can be briefly summarized as shown in Table 1.5.11.

Table 1.5.11 Sources of Water Pollutants in Upper Egypt

Area	Industrial	Residential	Agricultural Drainage	Others
Luxor	None	Leaching Pit Untreated and Semi-treated Sewage	Low, drainage from 174 feddans (4,200 m^2 each)	Floating boats and hotels
Qena	Sugar mills, Textile mills, Aluminum complex	Only 15% of the area is served by sewage disposal system. Leaching Pit	Medium, Only drainage from 1,402 feddans	Floating boats and hotels
Aswan	Sugar industry, Chemical fertilizer	Only 40% of the area is covered by sewage disposal system Leaching Pit	Low, Only drainage from 617 feddans	Floating boats and hotels
Red Sea	Petroleum in Gulf of Suez and shipping	Harghada and surrounding tourism area	None	Hotels, related facilities, and desalination plants

Source: JICA Study Team

(3) Noise and Vibration

Several monitoring stations have been newly setup in the study area to monitor parameters of noise and vibration. These stations are still under calibration process.

(4) Solid Waste

Solid waste management

Present condition of the solid waste management in each study area can be summarized as follows.

Upper Nile: In Qena, domestic solid waste is being collected door to door through governmental, private waste collectors and NGO. In tourism areas, the solid wastes are well collected, however, accumulations of waste have been seen in the residential area. The governorate is encouraging investors to set-up factories to convert agricultural solid waste into animal feeds, and composting factories to produce organic fertilizers and so on. The situation in Luxor and Aswan are almost similar to Qena. In Luxor, there is no large industry that can cause pollution. Open burning of solid waste is observed in the area. Most of the landfill sites are located in the east side of the Nile River.

Red Sea: The Red Sea has been divided into 7 sectors and 22 tourist centers along the coastal sea. The solid wastes generated from these centers are collected and disposed daily by each owner of the tourist center. Segregation and separate collection are not implemented in this area. However, a large volume of waste is transported to a city composting plant. There is a composting plant in Hurghada but its treatment capacity is not enough. Most of the non-organic solid wastes and other construction wastes are buried in the desert.

Generation Amount

Table 1.5.12 shows the average generated amount of municipal solid waste in the study area. Based on the data shown in the table, it is calculated that 40-60% of the municipal solid waste in the study areas is combustible.

Table 1.5.12 Average Generation of Municipal Solid Waste in Upper Egypt

1996	Qena	Luxor	Aswan	Red Sea
Combustible (ton)	512	121	236	30
Non-combustible (ton)	332	89	159	14
Total (ton)	845	200	395	44

Source: Information offices of each governorate

The daily unit amount of solid waste per capita in the study area is given in Table 1.5.13.

Table 1.5.13 Unit Amount of Solid Waste in Upper Egypt

Governorate	Urban (kg/capita/day)	Rural (kg/capita/day)
Qena	0.6	0.25
Luxor	0.6	0
Aswan	0.6	0.25
Red Sea	0.4	0.3

Source: Solid Waste Survey, EEAA 1999

Part II
Upper Egypt Tourism Development Plan

1. Existing Condition

1.1 Socio-economy

1.1.1 Geographic and Demographic Information

Qena Governorate and Aswan Governorate have large agricultural lands amounting to 1,383km^2 and 763km^2 respectively, and the total population of Upper Nile (Qena, Luxor and Aswan) amounts to 3.8 million. Luxor City was part of Qena Governorate until 1989, when Presidential Decree (No.135/1989) was issued and gave Luxor separate status as an autonomous administration. Economy of the city depends largely on the tourism sector, and investment in tourism projects is being encouraged. Upper Nile can supply agricultural products and labor for the Red Sea's tourism industries as well as for its own tourism needs.

On the other hand, Red Sea Governorate is one of the coastal, frontier governorates in Egypt, extending 1,080 km along the Red Sea. It consists of 6 cities, 11 local village units, and 19 villages. Due to its location, the governorate is strategically important to national security. Inhabited land in Red Sea Governorate is extremely small (0.1% of total land area) and its 1999 population of 165 thousand is scattered over six cities from north to south. The pattern of population distribution indicates a particular feature, i.e., the share of female population is 43%. It can be considered that more than 20 thousand male workers are living alone in Red Sea Governorate, which has booming tourism-related industries.

Table 1.1.1 Land Use in Qena, Luxor, Aswan and Red Sea Governorates in 1996

	Qena	Luxor	Aswan	Red Sea
Total area (km^2)	10,265	91	34,608	130,000
Inhabited area (km^2)	1,610	91	940	71
	15.7%	100.0%	2.7%	0.1%
Residential	92	6	78	71
Utilities	112	20	52	0
Swamps and Others	23	1	46	0
Agricultural	1,383	64	763	0.3

Source: Governorate net by IDSC

Table 1.1.2 Population in Qena, Luxor, Aswan and Red Sea Governorates in 1996

Governorate/City	Population (thousand)	Urban population (%)	Female population (%)
Qena	2,441	21%	50%
Luxor City	360	100%	49%
Aswan	974	43%	50%
Sub total	3,775	-	-
Red Sea	156	89%	43%
Whole Egypt	59,272	43%	49%

Source: Statistical Yearbook 1992-1997 by CAPMS

Table 1.1.3 Population of Cities in Red Sea Governorate in 1999

Cities in Red Sea Governorate	Population (thousand)	Urban population (%)	Natural growth rate of population
Ras Gharib	30	96%	2.0%
Hurghada	63	100%	1.8%
Safaga	29	88%	2.2%
Quseir	27	80%	2.2%
Marsa Alrm	4	49%	0.8%
Bir Shalateen	12	49%	3.7%
Total	165	89%	1.9%

Source: Information department of the Red Sea Governorate, 1999

Table 1.1.4 shows the total number of households and family structure in the study area and Egypt in 1996. Average number of household members is large in Qena, while those in Luxor, Aswan and Red Sea are almost same as the country's average.

Table 1.1.4 Total Number of Households and Family Structure in 1996

	Qena	Luxor	Aswan	Red Sea	Egypt
Number of households (thousand)	2,703	78	201	29	12,703
Average number of household members	5.1	4.6	4.8	4.6	4.7

Source: 1996 Census of Population, Housing and Establishments. Household Conditions, Final Results, CAPMAS, April 1999

1.1.2 Economic Activities

In Qena Governorate and Aswan Governorate, agriculture is the major economic sector contributing to about 25-30% of their GRDP. Major crops are sugar cane, tomato, banana, wheat, etc. Particularly, Qena shares 44% of sugar cane area in Egypt. Red Sea Governorate owes its economy to natural and mineral resources. Agricultural land is currently only 80 feddans and 11,850 feddans areas are planned for reclamation. Most of the oil, gold, iron, marble and precious stones in Egypt are products of the Red Sea Governorate.

Tourism sector shares 2.8%, 2.9% and 55.3% in Qena (including Luxor), Aswan and Red Sea Governorate respectively in 1993/94.

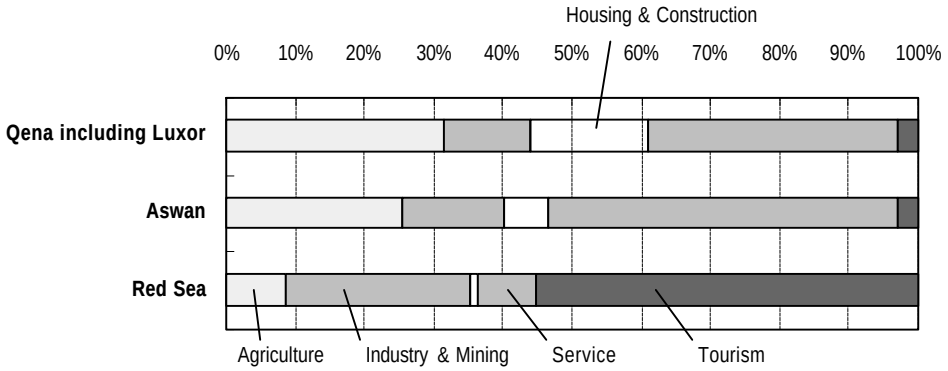
Regarding the employment structure, share of service sector is high in Aswan and Red Sea accounting for more than 50%, while in Qena, agriculture shares 42% of total employment. GRDP per capita in 1996 is LE 1,548, LE 2,031 and LE 5,482 in Qena, Aswan and the Red Sea respectively. The figures of Qena and Aswan are lower than the national average (LE 3,461) but that of the Red Sea is higher, as shown in Table 1.1.5. Unemployment of Aswan shows an extremely high rate at 21%.

Table 1.1.5 GRDP by Sector in Qena, Aswan and Red Sea Governorates in 1993/94

Sector	Qena including Luxor	Aswan	Red Sea
GRDP (LE) millions	4,207	1,974	592
Share of sector (%)			
Agriculture	31.5%	25.5%	8.6%
Industry & Mining	6.6%	6.4%	25.3%
Electricity	5.9%	8.2%	1.3%
Housing & Construction	17.1%	6.5%	1.1%
Service	38.9%	53.5%	63.7%
-Transportation, Storage & Communications	5.1%	5.0%	1.3%
-Trade	9.7%	18.8%	0.0%
-Finance, Insurance & Soc. Insurance	2.5%	3.9%	0.0%
-Tourism	2.8%	2.9%	55.3%
-Public Utilities	0.3%	0.2%	0.6%
-Public & Private Services	18.6%	22.7%	6.4%
Total	100.0%	100.0%	100.0%

Source: Kilani, El Sayed Mohammed, Estimation of Regional Income in Egypt, National Institute of Planning 1998

Figure 1.1.1 Composition of GRDP in Qena, Aswan and Red Sea Governorates in 1993/94



Source: Kilani, El Sayed Mohammed, Estimation of Regional Income in Egypt, National Institute of Planning 1998

Table 1.1.6 Share of Employment by Sector and GRDP per Capita in Qena, Aswan and Red Sea Governorates in 1996

	Qena including Luxor	Aswan	Red Sea	Whole Egypt
Employment (thousand)	567	268	56	15,340
Share of total population	20%	28%	36%	27%
Employment				
Agriculture	42 %	29 %	20 %	31 %
Industry (including manufacturing)	20 %	21 %	19 %	22 %
Services	38 %	50 %	61 %	47 %
Unemployment Ratio	10.9%	20.6%	6.5%	9.2%
GRDP per Capita (LE)	1,548 (Qena only)	2,031	5,482	3,461

Source: Labor Surveys 1996 by CAPMAS

1.1.3 Social Condition

(1) Illegal Settlements

Table 1.1.7 shows the number of illegal settlements and their population in Upper Egypt.

Table 1.1.7 Number of Illegal Settlements and their Population in Upper Egypt in 1996

	Qena	Luxor	Aswan	Red Sea
Total number of illegal settlements (Areas)	57	3	40	26 (1993)
Total population in illegal settlements (persons)	493,616	12,550	412,162	50,000 (1993)

Source: Qena, Luxor and Aswan: CAPMAS 1996 Census and the Annual Statistics Yearbook, June 1999
Red Sea: Human Resources Development Report 1996 by The National Institute of Planning

(2) Minority Races and Communities

Until 1960, the "Bedouin" in Egypt were considered nomads. They lived in frontier governorates, particularly north and south of Sinai, Matrouh, the Red Sea and the Western Desert. However, through population censuses, it was identified that a majority of them have already settled in permanent communities and are no longer living a nomadic life

Qena Governorate

The population of Qena Governorate predominantly lives in rural areas (78.8% rural in 1998). They constitute a homogenous group sharing the same tradition and cultural traits with the rest of southern Egypt's population.

Luxor City

The population of Luxor City is all urban population and nomads do not exist. They are mainly of southern Egyptian origin and migrants from other regions of the country who came to work in Luxor City.

Aswan Governorate

There are several sub-groups of the Egyptian population which have distinctive sub-cultures within the Egyptian culture rooted in Islamic, Arab and old Egypt traditions. At present, the following five of these sub-groups live in Aswan:

- El Kunouz is Nubian tribe. They had lived north of old Nubia (south of Aswan City), and moved to an area north of Kom Ombo City after the establishment of the High Dam and the formation of Nasser Lake. This tribe speaks its own dialect in addition to Arabic language, and uses their dialect in singing, which is accompanied by drums and tanboura music.
- El Fajeka is another Nubian tribe. They had lived south of old Nubia to wards close to Sudanese borders, and moved to the area east of Kom Ombo City after the establishment of the High Dam. They also have their own dialect, which is different from that of El Kunouz, in addition to the Arabic language. Their folkloric music and songs are similar to those of El Kunouz, but have their special dances such as Arajid.
- Bashariya and Abaddah tribes live in the area east of Aswan and in Red Sea Mountains. They have a special dialect, which is different from Nubian dialects, and speak Arabic.
- Arab tribe had lived in the middle of old Nubia between El Kunouz and El Fajika tribes, and currently lives in the area east of Kom Ombo. They speak Arabic language only.
- El Gaafrah tribe lives in small cities and villages along the banks of the Nile River, north of Aswan City. This tribe is of Arab origin and came to Aswan during the Islamic invasion of Egypt.

It should be noted that despite their relatively low economic standards, these subgroups share norms of generosity, hospitality and respect. They are willing to participate in efforts directed to development of their communities.

Red Sea Governorate

There are few sub-groups of the Bedouin population who live in Red Sea area and have their distinctive way of life, including a special dialect (in addition to the main language), special dress and ceremonies of marriage and birth. The two distinctive subgroups in Red Sea area are Basharia and Ababdah tribes who live in the area extending from east of Aswan to Shalatin and

Halayeb at the southeast corner of Red Sea Governorate close to the Sudanese borders.

These tribes live on camel and sheep rising and some work in indigenous jobs in tourist villages, oil fields, mines and fisheries in the area.

1.1.4 Population Projection

The Ministry of Housing, Utilities and Urban Communities has estimated the future population framework for 2017. As shown in Table 1.1.8, the growth rates of Qena Governorate and Luxor City are the same level as the average growth rate of the population of the country, which is estimated at 1.66% per year. On the contrary, Red Sea Governorate shows a very high growth rate at 4.8%, while it is low in Aswan Governorate.

Table 1.1.8 Population Projection for 2017

Governorate/City	Population in 1996 (thousand)	Population in 2017 (thousand)	Increase 1996-2017 (thousand)	Average annual growth rate
Qena	2,441	3,432	991	1.64%
Luxor City	361	502	141	1.60%
Aswan	974	1,172	198	0.89%
Red Sea	156	419	263	4.82%
Total	3,932	5,525	1,593	-
Whole Egypt	59,727	83,702	23,975	1.66%

Source: Development Master Plan in Egypt until 2012, June 1998, by General Organization for Physical Planning, Ministry of Housing, utilities and Urban Communities

In the meantime, regarding Luxor City and Red Sea Governorate, the regional development plans have individually been formulated afterward with a special focus on tourism development.

1.1.5 Local Government Budget

Table 1.1.9 shows the budget of local governments in the priority area for the 1998/99 fiscal year. The sources of revenue of governorates consist of tax, transfers from the state government, fees and charges, and capital revenue. In the 1998/99 fiscal year, the revenues of Luxor City and Qena, Aswan and Red Sea Governorates are LE 123 million, LE 562 million, LE 363 million and LE 118 million respectively. In the meantime, Luxor City and Qena, Aswan and Red Sea Governorates have allocated 11%, 5%, 7% and 13% of their total expenditure to investment expenditure respectively. Share of the investment budget is comparatively high in Red Sea Governorate and Luxor City.

Amount of expenditure budget per person varies among the governorates. In Red Sea Governorate it is the highest at LE 693 per person per year. It is lowest in Qena Governorate, amounting to LE 223, which is one third that of Red Sea Governorate.

Figure 1.1.2 illustrates the change of budget amounts and composition of revenue of the four local governments from 1994/95 to 1998/99. Share of local fee revenues is high in Red Sea Governorate and it increased from 30% in 1994/95 to 40% in 1998/99.

Table 1.1.9 Local Government Budgets in 1998/99 Fiscal Year

	Luxor City	Qena Governorate	Aswan Governorate	Red Sea Governorate
Total Revenues (LE million)	123	562	363	118
Tax	11%	6%	5%	7%
Transfers	63%	80%	81%	39%
Local Fees	15%	9%	6%	40%
Capital Revenues	11%	5%	7%	13%
Total Expenditures (LE million)	123	562	363	118
Investment	11%	5%	7%	13%
Recurrent Expenditures	89%	95%	93%	87%
Share of budget revenue to GRDP 1)	N.A.	12%	12%	14%
Expenditures per person per year (LE) 2)	331	223	366	693

Note: 1) Share of budget to GRDP is calculated by projected GRDP in 1998/99.

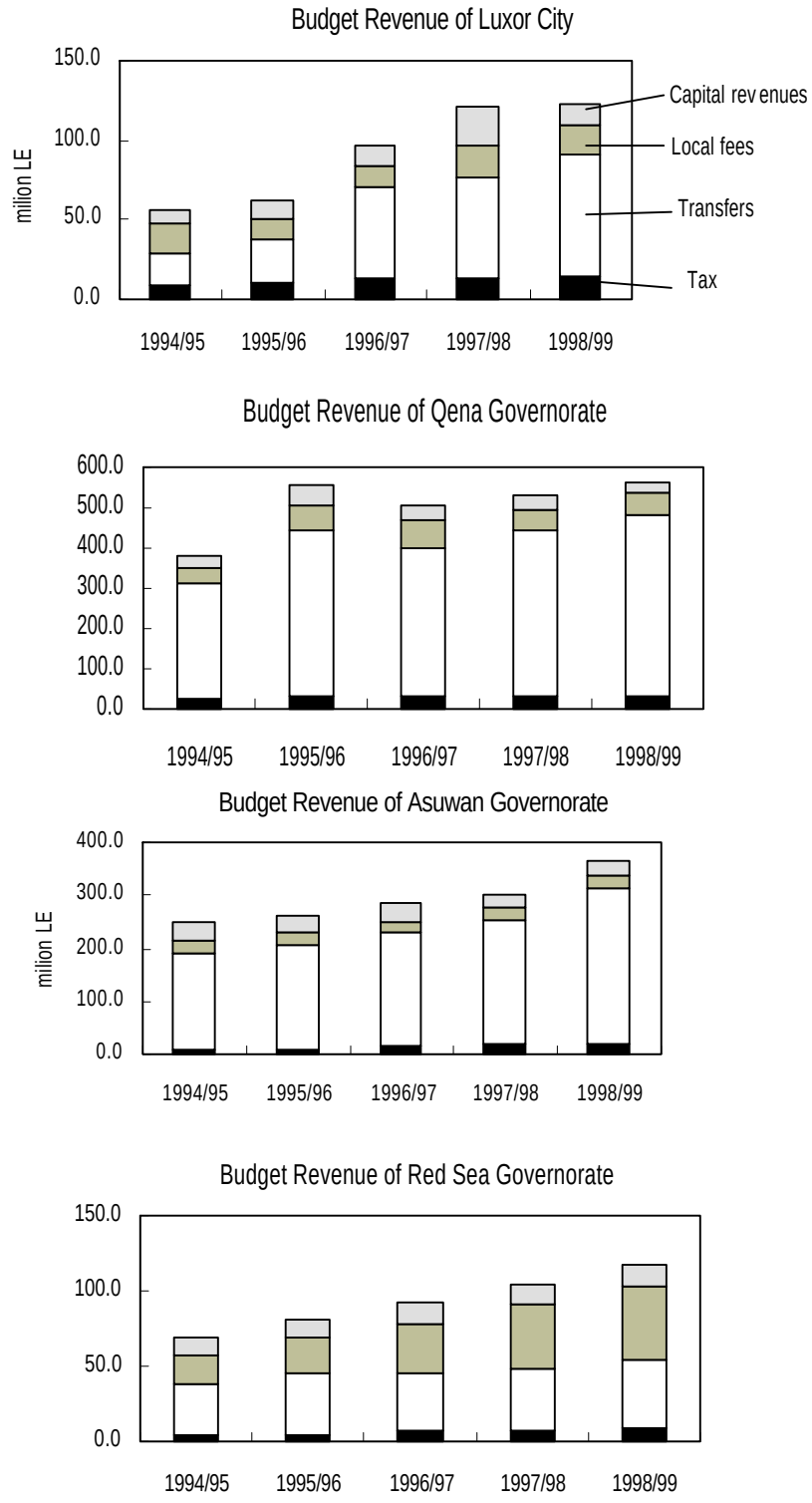
2) Expenditure per person per year is calculated by population projection in 1998/99.

GRDP projections in 1998/99 are based on 1993/94 data given in Table 1.1.4, the average annual sectoral growth rate of the 3rd Five-Year plan (1992/99-1996/97) and the 4th, Five-Year Plan (1997/98-2001/2002).

Population in 1998/99 is projected based on 1996 population and future population is estimated by General Organization for Physical Planning.

Source: Governorates

Figure 1.1.2 Revenues of Local Governments (1994/95-1998/99)



Source: Information from each governorate

1.1.6 Existing Plans of City Development in Upper Nile and the Red Sea

Formulation of master plans of cities in Upper Nile has been planned recently by several agencies such as Ministry of Housing, Utilities and Urban Communities (MHUUC) with UNDP such as Luxor and Aswan cities, local governorates, and the Ministry of Planning. This is in line with the National Project for Developing Southern Egypt, aimed at redressing the grave imbalance in the distribution of investments and returns of development among Egypt's governorates. TDA has helped cities in Upper Nile not only at advisory level but also financial level to develop tourism facilities such as berthing facilities for the Nile cruise boats.

On the other hand, Red Sea Governorate is currently reviewing master plans for seven cities, which were planned by MHUUC in 1999. Development master plans for four cities within the Upper Egypt Region (Hurghada, Safaga, Quseir and Marsa Alam) should be well coordinated with the development plan of TDA Tourist Centers to set up the future population distribution and regional structure and to distribute regional urban functions to each city.

1.2 Tourism Products and Tourism Market

1.2.1 Tourism Product in Upper Egypt

Travel patterns in 1.4.2 of Part I show that the Upper Nile and the Red Sea are the major destinations for international visitors. The outline of products is summarized as follows.

Historical/Archeological Tourism:

In the Upper Nile, historical assets traditionally represent tourism products. It is not only lead tourism in Egypt but also lead Historical/Archeological tourism in the world. Major resources are located not only major cities like Luxor, Aswan, Abu Simbel, but also, small towns like Dendera , Esna, Edfu and Kom Ombo. The highlights are Karnak Temple, Luxor Temple, Valley of the Kings in Luxor, Philae in Aswan and Abu Simbel. Many historical sites are located along the Nile; some are prepared and opened to visitors and some are left unexcavated.

Karnak Temple, West Thebe, El Kab and Gebel El Silsila have much potential as new tourism products.

Some efforts to add value to these products are being done recently. The examples are sound and light show at Karnak Temple, Philae, and construction of museums such as Luxor Museum and Nubia Museum. But in almost historical sites don't have enough information system both of the suggested route and explanation of sites.

Approach methods and approach to historical sites have also problems. Approach methods to historical sites such as Dendera, Esna, Edfu Kom Ombo are almost limited Cruise Ship, and it is difficult for international visitors to go there by bus or railway. The reason of it is limited information in foreign languages and limited operations and cleanness.

Cruise Tourism:

The Nile River cruise between Qena and Aswan, which takes four days or five days, is one of the best products of Egypt, while the cruise in Nasser Lake is yet matured. The cruise ships operated between Cairo and Aswan and Qena and Aswan are 214 ships with 11,167 rooms and 3 ships with 155 rooms respectively in 1997. The Nile River cruise has been attracting all segments of markets. This segment can attract all segments of market irrespectively in distance, age group, sex, etc.

It is alarmed the proper counter measures should be taken against pollution of river water by the cruise ships which becomes seriously year-by-year. It is essential to improve the cruising system for the promotion of and maintaining the segment.

In the Red Sea, Quseir has a town which has a history of trading port until the opening of Suez Canal in 19th Century. It has 16th Century fort and traditional buildings. An old building is renovated as accommodation by a Swedish donation. Excavations of archeological sites in Islamic period are done by British University, and construction of a museum is planned by municipality government.

Marine Resort Tourism:

Tourism products in the Red Sea are represented by marine resort tourism. Tourism development in Hurghada started in the begging of 1970s. In recent years, huge beach resort developments have been launched from the center of Hurgada to surrounding of the city. For example, Al Gouna and Abu Soma have been developed as new tourist centers. And more, new accommodation development has started near Safaga, Qusir Marsa Alam and TDA Tourist Centers. As a result, not only the numbers of divers but also holidaymakers on package tours from European countries have increased rapidly after 1995, and the tourist activities are getting diversified into marine activities, such as diving, snorkeling, fishing, water-skiing, yacht, etc.

On the other hand, an atomospare of downtown Hurghada is getting worse because of

uncontrolled urban developments and disordered land reclamations. Luxury hotel is moving to from downtown to the surroundings.

Diving Tourism:

The Red Sea has been a world famous destination for divers with its clear waters, colorful coral reefs and rare fishes for more than 10 years. Hurghada has been a center of diving activities in Egypt.

The main diving spots are concentrated around Hurghada and divers prefer these spots because of the easier accessibility. Therefore, some of the diving spots such as Gota Abu Ramada and Small Giftun have high density of divers (about 20 boats per day at Gota Abu Ramada). The diving spots distributed at the middle and southern part of the Red Sea coast, around Quseir and Marsa Alam are more isolated and untouched. These are accessible by long-distance cruises, which take one or two weeks, from Hurghada or Sharm el Sheikh. In addition, it is possible to access them through dive centers, which have been recently developed around Quseir or Marsa Alam.

According to the marine survey conducted by the Study Team, some diving spots around Hurghada are damaged because of diving and snorkeling activities including anchoring. Damage due to the same reasons are expected at the southern Red Sea coast, where large scale tourism developments are making progress rapidly and since the Marsa Alam new airport is under construction. It is required to educate diving instructors and diving centers to manage diving activities appropriately. It is also identified that many diving centers recognize that the natural conditions, such as crown of thorns, also cause damage. It is required to monitor and research the marine environment for effective environmental management in the Red Sea.

Other tourism resources:

From the evaluation of tourism resources, the following utilization of tourism resources are expected:

- Lake Nasser as cruise tourism;
- Nile River and Lake Nasser as eco-tourism;
- Lifestyle and customs of Nubian and Bedouins people as rural tourism;
- Hinterland of the Red Sea coast as safari tourism; and
- MICE (Meeting, Incentive, Conference and Events) tourism in the Red Sea.

1.2.2 Tourism Market in the Upper Egypt

Table 1.2.1 shows the number of hotel guests, their composition by generating areas and the tourist shares of the major six destinations, namely, Cairo, Luxor, Aswan, Alexandria, South Sinai and Red Sea. The number of hotel guests suddenly dropped to half in 1993 and in 1994. It increased from 1995 to 1997 but it in 1997 was just 70% of the 1992 level. The collective share of the six destinations also decreased from 18.6% in 1992 to 9.3% in 1997.

As for composition of hotel guests, the number of hotel guests from European countries decreased sharply the last six years. It was 423 thousand in 1992 but only 129 thousand in 1997. Therefore, the share of European hotel guests decreased from 78.0% to 33.4%. On the other hand, the shares of other regions of origin increased, although they could not compensate for the loss of European persons.

Table 1.2.1 Tourism Market of Luxor

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of hotel guests (persons)	542,513	264,200	189,747	230,697	355,565	387,607
Share of 6 major destinations	18.6	11.3	8.6	10.4	9.9	9.3
Composition of hotel guests						
Egyptian	6.3	10.8	16.3	15.8	13.6	14.4
Arab	0.5	0.5	2.0	4.0	5.7	7.6
Europe	78.0	69.5	41.1	38.9	36.0	33.4
Americas	7.3	7.5	19.0	20.5	23.8	24.4
Africa	0.8	0.5	2.2	3.3	5.6	6.5
Asia & Pacific	7.1	11.2	19.5	17.5	15.3	13.8

Source: Egypt Tourism in Figures annual issues, MOT

In Aswan and Luxor, the number of hotel guests decreased in 1993, 1994 and 1995. However, it increased in 1996 and 1997, and it in 1997 even exceeded the level of 1992. However, the 1997 shares of the six major destinations have not recovered to their 1992 levels as yet.

The share of European hotel guests dropped to 30% from 1992 to 1997. Otherwise the shares of the other regions of origin have been increasing. The shares of hotel guests from Egypt and the Americas have exceeded 20% and have an important role for Aswan especially.

Table 1.2.2 Tourism Market of Aswan

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of Hotel guests	294,526	141,977	87,958	110,466	171,886	322,365
Share of 6major governorates	10.1	6.1	4.0	3.5	4.8	7.8
Composition of hotel guests						
Egyptian	11.6	18.5	25.6	21.1	21.4	20.2
Arab	0.6	1.0	1.7	4.2	1.9	6.2
Europe	68.3	56.9	34.2	32.5	37.3	31.6
Americas	7.7	8.7	9.6	13.6	11.7	20.0
Africa	0.8	1.0	1.8	4.5	3.4	4.7
Asia & Pacific	11.1	14.0	27.2	24.2	24.3	17.3

Source: Egyptian Tourism in Figure annual issues, MOT

The number of hotel guests in the Red Sea has increased satisfactorily from 280 thousand in 1992 to 996 thousand in 1997. Shares of the major six destinations also increased from 9.6% in 1992 to 24.0% in 1997. The share of hotel guests, as well as bed nights, of the Red Sea has exceeded the total shares of Luxor and Aswan.

About 85% of hotel guests consisted of European in 1997. The share of European increased from 56% in 1992 to 84.3% in 1997. Meanwhile, the share of Egyptian has been decreasing, though the number of hotel guests increased from 84 thousand in 1992 to 135 thousand in 1997. Shares of the other regions have stayed almost at 0% levels.

Table 1.2.3 Tourism Market of the Red Sea

(Unit: percent)

Year	1992	1993	1994	1995	1996	1997
No. of visitor	280,911		254,774	629,145	777,660	996,427
Share of 6 major visitors	9.6		11.5	19.7	21.7	24.0
Composition of tourists						
Egyptian	24.3	-	32.8	18.5	13.4	13.6
Arab	-	-	4.4	7.2	1.3	0.8
Europe	-	-	56.0	50.6	84.0	84.3
Americas	-	-	2.6	11.8	0.9	0.6
Africa	-	-	0.5	5.8	0.1	0.1
Asia & Pacific	-	-	3.8	6.0	0.2	0.5
International	75.7	-	-	-	-	-

Source: Egypt Tourism in Figures annual issues, MOT

1.2.3 Market Development in Upper Egypt

Although Egypt's famous historical heritage sites have enabled its tourism to carry out simple market promotions for a long time, the situation has changed since the beginning of the 1990s when marine resort tourism began to grow as the other main tourism products in Egypt.

To obtain information about the advantages and disadvantages of Egyptian tourism products, the Study Team carried out interview surveys to travel agents in some European countries, which are major markets for Egypt, and in Japan in June and August 1999. Information from these surveys and opinions from the Study Team were used to draw up recommendations for market promotion strategies.

The following opinions were given by the travel agents and the Study Team regarding tourism products, market segments and competitors:

- Historical tourism is a major tourism product for Egypt in each country surveyed and will grow steadily in the future. Therefore, Upper Nile will continue representing major tourism destinations worldwide.
- Historical tourism products with the Nile cruise are most popular products in all five countries surveyed. Japanese travel agents recognize that historical tourism product without the Nile cruise is one of the most important reasons why recovery of Japanese tourist numbers has been limited after the Luxor accident in 1997.
- As for historical tourism, Egypt has no competitors because of its unique historical tourism resources.
- Marine resort tourism products are more important in Italy and Germany than in the United Kingdom and France. On the other hand, marine tourism in the Red Sea does not attract most Japanese consumers.
- When considering marine resort development in the Red Sea and South Sinai, development in South Sinai should be carried out first. Marine resort in South Sinai is more popular for European tourists, especially for Italians. But some environmental problems have started in South Sinai because too many tourists visit there. For example, coral reefs in some diving spots have shown damage and the calm atmosphere in South Sinai has been lost. Therefore, some people, such as highly skilled divers and tourists, who like undeveloped atmosphere may set their sights to the southern Red Sea coast in the near future.
- Pollution has started in beach sites near Hurghada and some hotels have started to move to the south Red Sea coast. If there is no environmental management policy, the whole stretch of the Red Sea coast would be polluted after "consumption" of natural environment, and
- In marine resort tourism, it is expected that Mediterranean countries will provide stiff competition for Egypt because more than 50% of tourists to marine resorts in the Red Sea come from Western Europe, which is also a potential market for Mediterranean countries. Travel agents in Italy and Germany pointed out Tunisia as a would-be rival because of price competition.

1.3 Tourism Accommodation

1.3.1 Accommodation Facility in the Upper Nile

Table 1.3.1 shows the present condition of accommodation facilities and their distribution in Upper Nile. In 1997, 60% of accommodation consisted of cruise ships in the Nile River. About 25% of accommodation rooms were in Luxor City and 15% in Aswan City.

Table 1.3.1 Accommodation Rooms in Upper Nile in 1997

Governorate	Location	No. of rooms	Share in total (%)
Qena	Qena City	116	0.6
	Armanat/Esna	0	0
	Qena Total	116	0.6
Luxor	Luxor City	4,669	24.7
	El Toad	0	0
	Luxor Total	4,669	24.7
Aswan	Aswan City	2,739	14.5
(Nile River)	New Aswan City	0	0
	Edfu	0	0
	Kom Ombo	0	0
	Aswan-Nile Total	2,739	14.5
(Lake Nasser)	Toshka/Abu Simbel	161	0.9
	Aswan-Nasser Total	2,900	15.3
Cruise Ship	Nile River (Luxor-Aswan)	11,088*	58.6
	Lake Nasser	155	0.8
	Cruise Ship Total	11,243	59.4
Upper Nile Total		18,928	100.0

Note: Figure with * mark includes the number of cruise ships in Cairo Tourism Region (Number in 1998 was 10,675)
Source: JICA Study Team

Upper Nile has several plans in relation with tourism sector development, as listed below. Table 1.3.2 shows major plans of this region although there is lack of detailed information about them.

- National Plan for Development South Egypt to 2017 by Ministry of Planning, 1996
- Comprehensive Development of the City of Luxor Project by Ministry of Housing Utilities and Urban Communities, UNDP, 1999
- Toshka Tourism Development Plan 1998 by TDA
- Aswan New City Development Plan by Ministry of Housing Utilities and Urban Communities (MoHURNC), 1997
- Other development plans by Local Governorates, 1999

Table 1.3.2 Existing Development Plans and Programs in Upper Nile

Governorate	Location	No. of rooms	Reference, data source
Qena	Quena City	500	2017 target, Development Scheme of South Egypt Plan
	Armant/Esna	125	2017 target, Development Scheme of South Egypt Plan
	QenaTotal	625	
Luxor	Luxor City	6,600	2017 target, Luxor City Development Plan/MoHURNC-UNDP
	El Toad	1,000	2017 target, El Zoraykat Island project
	LuxorTotal	7,600	
Aswan	Aswan City	-	Under study by MoHURNC-UNDP
	Edfu	-	Aswan Governorate has a plan to develop a tourist area.
(Nile)	New Aswan City	9,200	2017 target, Aswan New City Development Plan/MoHURNC
	Sub-total	9,200	
	Toshka	9,040	2017 target, Toshka Tourism Development Plan/TDA
(Lake Nasser)	Cruise ship	5,000	2017 target, Development Scheme of South Egypt Plan
	Sub-total	14,040	
	Aswan Total	23,240	
Cruise ship	Cairo/Luxor/Aswan	3,799	Under construction, Hotel Capacity in Republic Egypt 1999/TDA
Grand Total		35,264	

Source: The development plans mentioned in the reference.

1.3.2 Accommodation Facility in the Red Sea

(1) Concept of Tourist Sector and TDA Tourist Center

TDA areas for tourism development at the Red Sea coast are allocated between existing cities. Each area is called a Tourist Sector, which consists of Tourist Centers, as shown in Figure 1.3.1.

One Tourist Center includes several projects, which are carried out by investors. A project lot 50ha or larger is developed according to the integrated development procedure; a lot less than 50 ha is developed according to the limited development procedure.

Infrastructure projects implemented by TDA

TDA finances infrastructure development for tourism, such as beautification of pedestrian network along the Nile. The projects are implemented by local agencies.

Development of Tourist Centers

TDA has authority to acquire and sell tourism development lands and retain the income and to charge fees for assessing and monitoring projects. TDA's tourism development lands are allocated mainly along the coastlines of Gulf of Aqaba, Red Sea, Mediterranean, and Toshka around Lake Nasser.

Development Scheme of Tourist Centers

The allocated lands for TDA tourism development are called Tourist Sectors, which consist of clusters of tourist centers.

One Tourist Center comprises several projects that are developed by investors. An individual project lot 50 ha or larger is developed according to the integrated development procedure and a lot smaller than 50 ha is developed according to the limited development procedure.

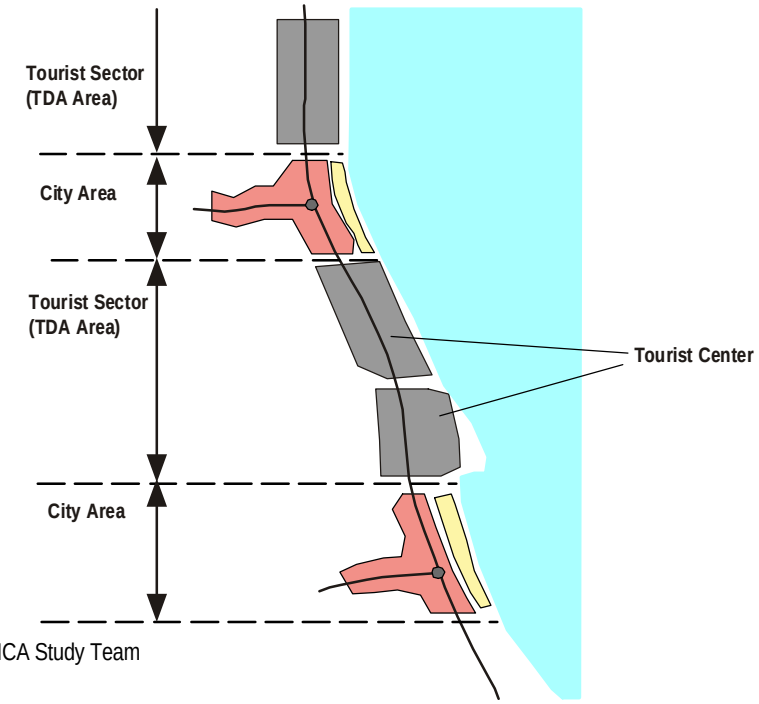
There are two types of development schemes for the Tourist Center, as shown in Figure 1.3.2. Type A consists of one integrated development project and type B consists of some integrated and limited development projects. In the case of type A, the investor is required to formulate a development plan for the Tourist Center. For type B, the investors in one Tourist Center are required to form one mother company and formulate a development plan for the Tourist Center.

Development Procedure of Individual Project Lot

Integrated Development Projects: For the integrated development projects, the investor buys the land and creates a self-sufficient tourism area, and at his cost, facilitates the required infrastructure and utilities that are indispensable for the superstructure projects. For such investor, the formation of an Infrastructure Development Company (IDC) is made at TDA's recommendation and supervision. Its Board of Directors is to be represented by significant investors, developers, and resort or tourism facilities managers; a small staff is maintained though. IDCs can sell small plots of infrastructure, or utility-facilitated land, to individual investors provided that TDA gets 50% of the sale price after the costs of the infrastructure and utilities are deducted. IDCs are also responsible for preparing EIAs required by the EEAA. The flow of Integrated Development Projects is shown in Figure 1.3.3.

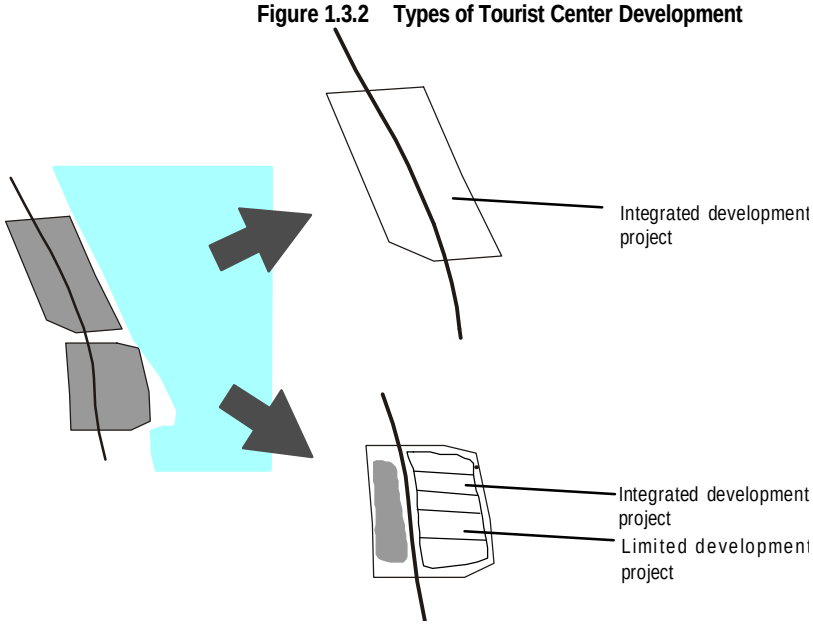
Limited Development Projects: For specific projects, including hotels, resorts, commercial or recreational facilities, in which land requirements vary between 50,000 and 500,000 square meters, the investor (private company) is required to provide the infrastructure and utilities at his cost in the limited tourism project. The land can be purchased or leased directly from the TDA. In case an investor of limited tourism project puts up more than one firm in the tourism developing area, an IDC is formed at TDA's recommendation and supervision. The investor is also responsible for preparing EIAs required by the EEAA. The flow of Limited Development Projects is shown in Figure 1.3.3.

Figure 1.3.1 Tourist Sector and TDA Tourist Center



Source: JICA Study Team

Figure 1.3.2 Types of Tourist Center Development



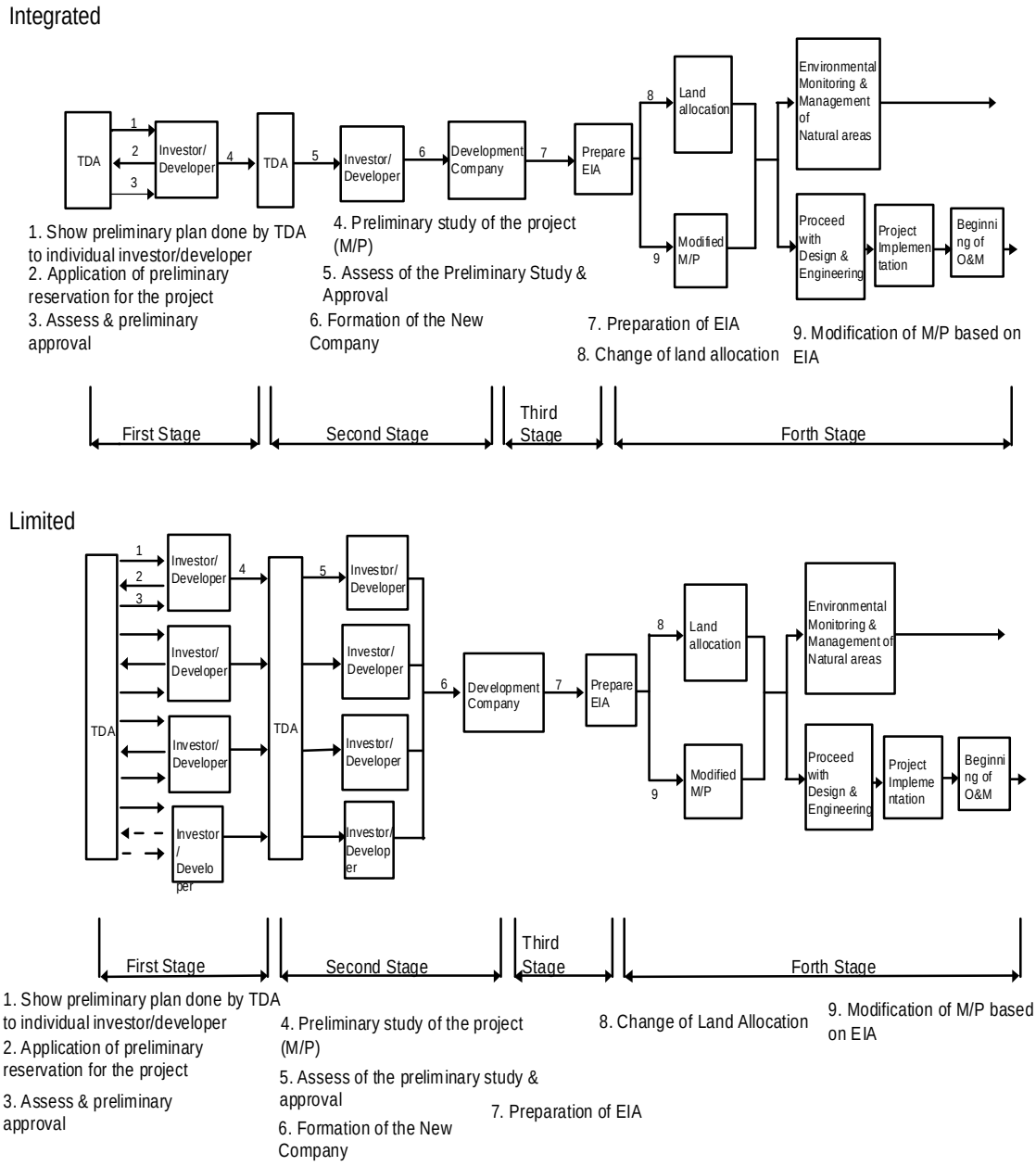
Source: JICA Study Team

Table 1.3.3 Situation of Tourist Centers in the Red Sea

Sector	Center	Type of Development	Mother Company
North Hurghada Sector	Gemsa	B	Not formed
	El Gouna	A	-
Hurghada- Safaga Sector	South Magawish	B	Not formed
	Sahl Hashish	A	-
	Abu Makhadiq	B	Established
	Abu Soma	A	-
	North Safaga	B	Not formed
Safaga-Quseir Sector	Safaga – Quseir	B	Not formed
Quseir-Marsa Alam Sector	Bir Asal	B	Established
	Sharm El Bahari	B	Not formed
	Marsa Wazir	B	Established
	Ras Trombi (Om Ghieg)	B	Not formed
	El Gezera El Hamra	B	Not formed
	Marsa Shoni/Morren	B	Established
	El Naba El Sagier	B	Not formed
	Marsa Shagara	B	Established
Marsa Alam-Ras Benas Sector	Ras Dori	B	Not formed
	Sharm Fokiery	B	Not formed
	Sharm El Loly	A	-
	Ras Honkorab	B	Not formed
	Hamata	B	Not formed
	Wadi Lahemi	B	Not formed

Note: Refer to Figure 1.3.2 for types A & B development.
Source: TDA, JICA Study Team

Figure 1.3.3 Development Processes of Tourism Centers



Source: JICA Study Team

(2) Current accommodation development by TDA scheme

Table 1.3.4 shows the status of accommodation rooms by TDA scheme. The total number of hotel rooms, which is assigned or contracted by TDA, is around 109 thousand and tourist housing is around four thousand.

Table 1.3.4 Current Situation of Accommodation Development in the TDA Area in October 1999

(Unit: rooms)

Sector	Center	TDA contract/assignment			In operation		Under construction	
		Area (ha)	Hotel	Tourist housing	Hotel	Tourist housing	Hotel	Tourist housing
North Hurghada	Gemsa	0	0	0	0	0	0	0
	El Gouna	2,800	2,287	797	1,176	283	1,486	599
Hurghada–Safaga	South Magawish	700	10,922	503	3,962	204	3,897	260
	Sa`l Hashish	3,200	6,000	0	0	0	4,592	1,008
	Abu Makhadiq	616	4,775	819	538	0	2,987	63
	Abu Soma	150	1,730	270	620	25	1,110	245
	North Safaga	136	853	0	300	0	519	0
Safaga-Quseir	Safaga-Quseir	322	1,138	468	178	0	72	0
Quseir- Marsa Alam	Bir Asal	742	5,099	116	300	0	4,078	64
	Sharm El Bahari	946	4,323	16	90	0	736	0
	Marsa Wazir	487	8,029	0	0	0	0	0
	Ras Trombi (Om Ghieg)	1,349	11,652	0	0	0	0	0
	El Gezera El Hamra	2,639	6,294	28	214	0	532	0
	Marsa Shoni/Morren	769	9,331	270	0	0	13	7
	El Naba El Sagier	461	7,430	0	0	0	2	0
	Marsa Shagara	699	6,450	256	383	0	1,147	47
Marsa Alam-Ras Benas	Ras Dori	814	6,651	0	30	0	0	0
	Sharm Fokiery	964	6,772	0	72	0	100	0
	Sharm El Loly	0	0	0	0	0	0	0
	Ras Honkorab	409	5,390	0	0	0	0	0
	Hamata	251	3,448	0	0	0	0	0
	Wadi Lahemi	0	0	0	0	0	60	0
Total		18,454	108,574	3,543	7,863	512	21,331	2,293

Source: TDA and JICA Study Team

(3) Tourism development in city areas

The number of accommodation rooms in operation and under construction in city areas is shown in Table 1.3.5.

Table 1.3.5 Accommodation Development in City Areas

City	Number of rooms in operation	Number of rooms Under construction
Hurghada	14,300	6,300
Safaga	2,000	700
Quseir	800	1,200
Marsa Alam	1,300	100
Total	18,400	8,300

Source: Ministry of Tourism

Hurghada City has grown as a tourism city especially for divers since ten years ago. In recent years, a huge number of accommodation rooms were constructed rapidly, and still a remarkable number of constructions are occurring not only along the coastline, but also on the hinterland. In Quseir and Marsa Alam City, the accumulation of accommodation facilities is small. The coastal lands and tourism areas in these cities are going to be developed.

1.3.3 Business Environment and Investment Opportunity

(1) Upper Nile

Tourism related companies and banks have the following opinions about business environment/investment environment in Upper Nile:

- About 70% (30 out of 44) of the surveyed companies have business in Upper Nile. Their constraints for business activity are ranked as follows: Regulations and complicated public procedure for business activity and investment, poor public security, difficulty of land acquisition, lack of institutions and laws for business activity/investment, lack of infrastructure, and difficulty of procurement of materials and inputs. The issue of public security ranks quite low for investors in general, and seems to be of special concern only to investors in Upper Egypt.

- Investment activities are concentrated in Luxor. However, the city has run out of suitable building sites now. Other areas in Upper Egypt do not have so much demand. Egyptian government is conducting a master plan study for Luxor City, which has a new development concept of city area expansion. But this information is not spread to investors as yet.

- Finances by banks for tourism projects cover hotels, Nile cruise boats, and tour operators in Upper Egypt. One bank did specify that they are partners in a Nile cruise boat, and that it is doing well and has adjusted to the crisis, while another boat they had financed is having trouble adjusting after the Luxor crisis. The four other banks did not finance cruise boats.

- The banks all agreed that there is little physical space left for building new hotels and resorts in Luxor and that no new licenses are being issued for boats for Nile cruises. Therefore, current investment in Upper Egypt consists mostly of renovating or expanding existing facilities. Upper Egypt is also considered to be one of the highest risk investments, because it suffers crisis such as the Luxor incident in 1997 and it takes long time to recover from them. Cairo and Southern Sinai are the areas that recover the fastest and suffer the least in any crisis. However, the banks made it clear that they are not unwilling to finance investments in Upper Egypt; it is simply that they do not receive many financing requests for this area.

According to data from GAFI, 39 companies out of 797 were established in Luxor and Aswan until December 1998. Investment cost is LE 383 million, which is only 1% of total investment cost.

(2) Red Sea

Tourism related companies have the following opinions about business environment/investment environment in the Red Sea:

- About 40% (18 out of 44) of the surveyed companies have business in the Red Sea. Their constraints for business activity are ranked as follows: 1st: regulations and complicated public procedure for business activity and investment, 2nd: lack of infrastructure, 3rd: lack of reliable business partner, 4th: difficulty of land acquisition, 5th: difficulty of procurement of materials and inputs and 6th: insufficient economic and business information.

- About 50% (26 out of 44) of the companies started their business or want to start a business in the Red Sea. 10 companies think it is too early to start business in the Red Sea. Three companies replied that the Red Sea does not have a potential for tourism development. Five companies said they do not have enough information to start business/investment activity.

- In the Red Sea, problems of land acquisition and registration are due to the fact that all the land is owned by the government, and is sold under special contracts to developers. The companies reported that it takes a long time to register land, which makes it difficult to use as collateral for financing a project. However, they also said that the process has become faster over the past year.

- As for operation of banks, the Red Sea has the largest investment portfolio in two banks interviewed. One of the banks pointed out that lack of adequate urban planning is a major problem in the Red Sea. For example there is no public beach in Hurghada, which implies that hotels and resorts must have their own private beaches. There are also no strict zoning laws that give the area a uniform appearance in terms of building height, color, style, etc. Another problem is lack of cooperation and coordination between investors in the Red Sea. Hotel owners compete on price in package tours bringing the price for five star hotels to low levels. Since the cost of building and operating five star hotels is very high, low prices make projects less profitable and more vulnerable. It also makes it very difficult for the four star hotels to compete, because there is not enough of a price differential.

According to GAFI's data, 241 companies out of 797 were established in the Red Sea until December 1998. The investment cost of LE 13,868 million was 35% of total investment cost.

1.4 Transportation and Infrastructure

1.4.1 Airports

(1) Upper Nile

Airports are located in Luxor, Aswan, and Abu Simbel, which have important roles for tourism.

Not only domestic flights but also international flights are using Luxor Airports and Aswan Airport. Many charter flights from Europe are directly arriving there, which are a big help because of the poor condition of domestic flights for European tourists.

The total number of domestic and international flights at Luxor Airport in 1997 was about 17,500 with one million passengers, which were the second largest next to Cairo International Airport. The number of domestic flights using Luxor Airport was about 11,300 with 892,000 passengers. The number of international flights was approximately 6,200 with 147,000 passengers, of which about 5,170 and 1,030 were non-scheduled and scheduled flights respectively.

The total number of domestic and international flights, which used Aswan Airport, was approximately 10,300 with 750,000 passengers. The domestic flights were about 9,600 with 712,000 passengers. The international flights were 705 with 38,000 passengers.

Both Luxor Airport and Aswan Airport have runways that can accommodate A-300-class-airplanes. However, the terminal building of Luxor Airport is too small and too old to handle the volume of arriving and departing passengers. Furthermore, the parking space in front of the terminal building is inadequate.

The newly built terminal building of the Aswan Airport has the capacity to control passengers smoothly. The parking space in front of the terminal building is also large enough.

Majority of passengers using the Abu Simbel Airport are tourists visiting the Abu Simbel Temple. Most of them visit the temple as part of an optional tour from Luxor and Aswan so that they fly to Abu Simbel via Luxor or Aswan. Most of the tourists stay only three or four hours there and fly back to Luxor or Aswan. The total number of flights using Abu Simbel Airport was about 5,340 in 1997. This airport is only for domestic use now.

The terminal building of the Abu Simbel Airport is small but newly constructed. The space in front of the terminal building is causing congestion of passengers and vehicles because the airport does not have a parking space for buses and taxies.

The Egyptian Civil Aviation Authority has already studied the redevelopment and expansion of the runway, taxiway and terminal building in Luxor and other airports to meet future air transportation demands. They expect to be implemented by BOT scheme.

(2) Red Sea

Hurghada International Airport is the only airport in the Red Sea. It had the third largest number of flights in 1997, which was about 17,610. The number of international flights was 7,630, which was the second largest in Egypt. It consisted of 1,000 scheduled flights and 6,630 non-scheduled flights.

The Hurghada International Airport is not only used by civil aviation but also by military operation. This airport has a runway that can accommodate A-300-class-airplanes. Expansion of terminal building is underway. And the development of the second runway and new terminal building is planned. It was scheduled for implementation by BOT scheme.

Mersa Alam Airport, which is located 60 km north of Mersa Alam, is under construction by BOT scheme. The airport is being constructed and will be operated by an investor of TDA Tourist Center with a 40-year concession. The project is divided into four phases. The construction of the first phase will be completed in 2002, the second phase in 2005, the third

phase in 2008, and the fourth phase in 2010. This airport is planned to have a runway that is 3000 m long and an apron that can accommodate three airplanes.

1.4.2 Roads

Eight major roads exist in Upper Egypt. Current conditions of National Road Nos.2, 44, 77 and 88 are good with enough traffic capacity. Regional roads, such as Nos. 53 and 99, are also in good condition. However, development condition of secondary roads is poor with narrow widths and sharp curves.

Table 1.4.1 Existing Major Roads in Upper Egypt

Route No.	Section	Length (km)	Lane		Side Walk (m)	Total Width of Road (m)	Capacity (car/day)	Remarks
			Width (m)	No.				
National Road No.2	Qena - Aswan	294	3.75	2	1.5x2	10.50	10,000	Upper Nile (East Bank)
Regional Road No.53	Qena - Edfu	188	3.00	2	1.5x2	9.00	6,500	Upper Nile (West Bank)
Secondary Road	Edfu - Aswan	104	2-3.0	1-2	0-1.0x2			Upper Nile (West Bank)
National Road No. 77	Qena - Safaga	161	3.75	2	1.5x2	10.50	10,000	Linking two regions
National Road No.88	Qift - Quseir	183	3.00	2	1.5x2	9.00	6,500	Ditto
Regional Road No.99	Edfu -Marsa Alam	230	3.00	2	1.5x2	9.00	6,500	Ditto
Secondary Road	Aswan - Shalatain	300	3.00	2	1.0x2	8.00	6,500	Ditto
National Road No.44	Hurghada - Marsa Alam	281	3.50	2	1.5x2	10.00	10,000	Red Sea coast
National Road No.44	Marsa Alam - Shalatayn	230	3.00	2	1.5x2	9.00	6,500	Ditto

Source: Urban Development Planning Report for Red Sea, May 1999 by Ministry of Construction, Housing & New Communities

Traffic condition on the roads except secondary roads is not so bad at present, but it is expected to worsen in the near future in accordance with the tourism development in Upper Egypt.

(1) Upper Nile

National Road No. 2, which is one of the main national roads in Egypt, lies along the east bank of the Nile River from Cairo to Aswan. This road has an important role not only for regional people but also for tourists, because it is the only main road connecting Cairo to Upper Nile. The road is two-way, two lanes with enough width to allow large tourist buses to pass each other. Its pavement is also in good condition.

A regional road from Qena to Aswan lies along the East Bank of the Nile River. This road has been developed to serve the regional people as well as tourists visiting historical monuments located at the West Bank of the river. However, it is a poorly developed narrow road with some unpaved parts. There is a need to improve this road from the viewpoints of regional development and tourism development.

(2) Red Sea

National Road No. 44 starts at the Suez and runs to the border of Sudan along the coastline of the Red Sea. This road is the only main highway there and has a very important role not only for national defense but also for the development of the Red Sea. This road is two-way, two lanes with enough width, and also has good pavement condition.

The part of the road, which passes through city areas, is well developed with divided four lanes at Hurghada, Safaga and Mersa Alam. In Quseir, however, the road narrows and curves sharply.

The road running along the coastline passes across a lot of wadis (valleys). Drainage facilities (box or pipe culvert) are provided at wide wadis and high embankments to prevent erosion by rainwater. Some parts of the road crossing wadis, however, have not been provided any drainage facilities.

(3) Eastern Desert

Three roads running through the Eastern Desert connect Upper Nile to the Red Sea. These roads will have more important roles for tourism product diversification in the regional tourism development.

- National Road 77 Safaga - Kena
- National Road 88 Quseir - Quift
- Regional Road 99 Marsa Alam - Edfu

National Road 77 is a major route, which connects Upper Nile to the Red Sea at present. High-voltage cable, railway and water conveyance pipes are running along the road. The road is two-way, two lanes with wide shoulders and good pavement condition. Furthermore, a roadside rest area exists in the mountainous area between Qena and Safaga.

Conditions of the other two roads are comparatively good except for the mountainous sections. These two roads, however, have no roadside rest areas for drivers and passengers. Tourists are not allowed to pass through these roads because of security reasons at present.

(4) Safety facilities

Road signs, markings, and streetlights have not been set sufficiently along roads. Some sections of roads have quite monotonous environment, e.g., flat and straight alignment with monotonous landscape.

(5) Parking space and rest areas

Development of parking spaces for tourist buses and taxis is one of the most important issues. Cruise ships are moored at the centers of cities, and tourists visit tourist spots by vehicles. Most tourist vehicles are parked on roads along the river because there are no parking spaces near the berthing places of cruise ships. This causes not only traffic jam but also possible traffic accidents to tourists, and likewise spoil the scenery of the Nile.

Presently, roadside rest facilities are not sufficient. Rest facilities with parking and toilets should be provided at sufficient intervals along roads, especially the road sections used by tourists.

1.4.3 Railway

(1) Upper Nile

A standard gauge track from Cairo to Aswan runs along the Nile River. A double-track line runs between Luxor and Aswan after the completion of track works in 1996.

This railway is an important transport mode connecting Cairo to Upper Nile as well as to National Road No.2. Trains with 1st, 2nd and 3rd class coach are being operated on the line. And more night trains are being operated from Cairo to Aswan now. But the number of users remains low.

Both Luxor Station and Aswan Station were recently renovated. But open spaces in front of these stations have not been thoroughly developed as yet. Parking spaces and sidewalks are still inadequate.

(2) Eastern Desert

A railway connecting Upper Egypt and the Red Sea through Eastern Desert started operations in 1987. Recently rails have been changed to new ones and embankment protection works have been done recently. The Egyptian National Railway operates and maintains this railway as well as other lines. Trains with passenger coaches had been operated before but recently this route has been used only for freight trains from Upper Nile to Safaga and Quseir.

The Egyptian National Railway is studying the operation of regular-scheduled passenger trains. Regularly run passenger trains will be one of the modes of transportation between Upper Nile and the Red Sea and will contribute much to tourism product diversification of the regional tourism development.

(3) Red Sea

The railway from the Eastern Desert diverges from Safaga and runs parallel to National Road No. 44 up to Quseir. Rails have also been changed to new ones and protection works of embankment has also been done.

1.4.4 Water Transportation and Cruising

(1) Upper Nile

The Nile River has been an important waterway for transportation in Egypt for a long time. In fact, the Nile cruise from Cairo to Aswan is now a popular tourist product among international tourists. However cruising from Cairo to Luxor has been suspended since the Luxor accident in 1997.

As of 1997, there are 208 cruise ships being operated in the Nile River and 3 cruise ships in Lake Nasser. Cruise ships basically sail at night and stay at tourism sites such as Luxor and Aswan during the daytime. Thus cruise ships have not only played a role of tourist attraction but also play a role of supplementing insufficient number of hotel rooms in Upper Nile.

Cairo University has formulated the master plan for development of berth facilities on the Nile River between Aswan and Cairo and is conducting a design study financed by TDA.

Luxor

The berth and moorage of cruise ships at Luxor is located in the center of the city and the East Bank of the Nile River. Five to six cruise ships are moored closely in parallel order due to limited berth facilities. In such case, passengers have to get on and off by passing through these moored cruise ships. This practice is not safe for passengers.

Protection of bank and promenade in front of the moorage is almost finished. But a transfer facility is not developed near the berthing space so that tour buses have to park on street. As a result, when many ships arrive at the moorage, streets become over-crowded. This practice is not safe for tourists.

Private firms are currently constructing berthing facilities, which will have a 28-ship capacity, at the upper and lower side of the bridge over the river in the southern part of Luxor. UNDP is preparing the future city plan in consideration of this moorage construction. According to this plan, some space in front of the new moorage, including space for 28 ships mentioned above, is planned for commercial facilities and hotels, and the existing moorage is planned for parking and open space.

Aswan

The current condition of berthing facilities in Aswan is same as Luxor's. Development of moorage with capacity for 14 ships is planned with the support of International Finance Corporation. However, this project cannot find a private investor, thus the project has not been implemented yet.

Abu Simbel

In Abu Simbel, cruise tours from Aswan High Dam is now provided. Currently, there is moorage for only one ship in front of Abu Simbel Temple.

Others

Aside from Luxor and Aswan, new moorage will be constructed in Dandara (for 11 ships), Esna (for 4 ships), Kom Ombo (for 8 ships), and Edfu (for 8 ships) by investment of private sector with the assistance of IFC.

(2) Red Sea

Hurghada and Safaga have ports where ferryboats can dock. An express ship, which connects Hurghada to Sharm El Sheikh in only 90 minutes, is being operated three times a week. In addition, a ferry route connecting Safaga to Jeddah in Saudi Arabia is also operated.

1.4.5 Water Supply

(1) Water resource

Most water demand for social and economic activities in Egypt depend on the water resources of the Nile River. Seasonal floods from the Nile River provide fertile soil and irrigation for agriculture along the riverside area until the middle of the 19th Century.

Aswan Dam was constructed to stabilize and utilize the rich water resources, avoiding flood in the urbanized area. Utilization of water resource of Lake Nasser is demarcated by the water use rights agreement with Sudan. The agreed discharging water volume from Aswan High Dam is 55 billion m^3 in a year.

The water resource of the Nile River affords the opportunity to expand agricultural land, to increase agricultural products, and to support increased population.

The government of Egypt has been planning to increase water resources to redistribute from the concentrated population along the Nile Valley to remote areas such as New Valley and the Red Sea. Development of the remote areas will require a large volume of water resource from the Nile River. However, water use rights for Egypt is controlled by the above agreement. Formation of a comprehensive plan for water resource management including ground water should be implemented for more efficient utilization of water resources in the future.

(2) Upper Nile

Water resource for potable water of urban and rural areas in Upper Nile come from surface water of the Nile River and from ground water.

Luxor

At present, two water purification plants provide potable water for Luxor City. To cope with future water shortage by urban expansion and population increase, the Supreme Council of Luxor is planning to expand and develop water purification plants. The water rate in Luxor City is described in Table 1.4.2.

Table 1.4.2 Water Rates in Luxor City

Category of Consumer	Volume (m^3)	Water Rate (LE/m^3)	Remark
Residential	1 – 30 More than 30	0.15 0.18	35% of water rate charged for sewerage treatment
Commercial Establishment	Per m^3	50	Ditto
Hotel and Restaurant	Per m^3	80	Ditto

Source: JICA Study Team

Aswan

In Aswan, the network of potable water supply serves 98% of the governorate. A new water purification plant, which was financed by USAID, has been constructed in Kom Ombo. The plant has a service center function in which water charges are collected.

The water supply networks and tapping facilities for berthing facilities are located in Aswan and Luxor.

(3) Red Sea

The river water of the Nile and desalination plants, and groundwater in wadis are used as water resources in the Red Sea. The water transmission pipeline starts from Koraymet, running through Zafarana and Ras Gharib, providing 39,000m^3/day of water to Hurghada. And the desalination plant in Hurghada is also providing 1,000m^3/day of water for the city.

The second water pipeline from Qena to Quseir is providing 12,000m^3/day of water to Safaga and 6,000m^3/day to Quseir. This water pipeline used to provide water to Hurghada City.

The Marsa Alam desalination plant, which can generate 600m3/day, is being operated. It will be expanded to 3,000m^3/day in the future in accordance with redevelopment of the new city. The third water transmission pipeline from Edfu to Marsa Alam is planned to cope with the increase of water demand by the regional tourism development.

Developers of TDA Tourist Centers have to provide infrastructures by themselves. Seawater is the only source of drinking water for them, considering construction schedules of their projects and construction cost of water supply facilities. The desalination plant in Soma Bay Tourist Center generates 3,900m^3/day of purified water. Desalinated water is chlorinated and contains 80 ppm mineral.

1.4.6 Sewage Disposal

(1) Upper Nile

Luxor

The Supreme Council of Luxor is developing a sewage disposal system, which will cover 50% of 370,000 citizens, within 2 years. The present condition of sewage works is as follows:

Table 1.4.3 Present Condition of Sewerage Treatment Plants in Luxor

Status	Capacity (m^3/day)	Disposal Method
Developed	13,000	Oxidation
Under Construction	13,000	Ditto
Plan (within 2 years)	11,000	Ditto
Total	37,000	

Source: JICA Study Team

The demand for sewage work is estimated at 200 liters/person/day, which is set at 80% of water supply volume per person per day.

370,000 persons x 50% x 0.2m^3/person/day＝ 37,000m^3/day

Major hotels are located within the above sewage work coverage. Most of the sewage from hotels are collected and disposed by the present system. Sewage of cruise boats and cruise ships are disposed and discharged to the river by their own disposal system.

To cope with the future demand by the regional tourism development and urban expansion, the municipality is planning three additional sewage works development, which are northwest, southwest, and southwest of the city. The municipality is also promoting septic-tank disposal systems for those outside the sewage work coverage area.

On historical sites in Luxor City, some portable toilets are provided for tourists. Those toilets

are comparatively well maintained.

In the training center for sewage disposal in the city center, workers are given operation, maintenance and management training.

Aswan

Aswan Governorate comprises 5 administrative centers. Sewage disposal system has been developed in the two centers of Aswan and Edfu. The government of Aswan has a plan to develop sewage disposal facilities for the other 3 centers.

(2) Red Sea

A sewage treatment plant with a capacity of 20,000m^3/day has started operations in Hurghada. Its capacity will be expanded to 12,000m^3/day in the near future. A wastewater treatment system by septic tank is used outside the service area. In Safaga, Quseir and Marsa Alam, septic tank system is also used. TDA Tourism Centers must have their own sewage disposal systems.

1.4.7 Solid Waste Disposal

In Upper Nile and the Red Sea, local governments or subcontracted private companies are operating a solid waste disposal. In the developed Tourism Centers in the Red Sea, developers of the center are operating daily solid waste collection and disposal.

In the east of Qena, an open dumpsite lies at the desert along National Road No. 77. This gives a bad image to passengers who see this dumpsite as they travel this road. When garbage in the site is incinerated, smoke fills the area. This will cause pollution problems in the future.

In the Red Sea, open dumpsites are developed and operated by city councils. They are located outside the city area and are filled with smoke just like the one in Qena. A private company has a contract with the city council of Hurghada to collect garbage. The other three cities in the Red Sea collect their own garbage.

1.4.8 Electric Power Supply

A 220-kv transmission line connects from Aswan to Harghada by way of Safaga, and electric power is now being supplied to these cities. Each city in the Red Sea has its own power station.

Table 1.4.4 Power Stations in the Red Sea

City	Power station
Hurghada	Thermoelectric power plant (not activated)
	Wind power plant (testing)
Quseir	Thermoelectric power plant (activated)
Marsa Alam	Thermoelectric power plant (activated)

Source: JICA Study Team

TDA Tourist Centers develop their own power generation and supply system. All of the Tourist Centers do not utilize the national grid system.

1.4.9 Telecommunication Network

Current condition of telecommunication network in Egypt has rapidly improved in the past few years. It is based on introduction of new machines, development of new stations, and rapid increase of mobile phone users. Traffic of domestic and international telecommunication is dramatically increasing so that more improvement is needed from now on. Some Tourism Centers in the Red Sea develop their own optical fiber network to Hurghada to maintain good condition of communication.

1.5 Environment

1.5.1 Meteorological Conditions

The meteorological condition in the study area is summarized in Table 1.5.1.

Table 1.5.1 Meteorological Conditions in Upper Egypt

	Qena and Luxor	Aswan	Red Sea
Temperature	Maximum of 42.8°C during the months of July-August and part of September and minimum of 6.1°C during the months of January through March.	Maximum of 43.2°C during the months July and August and part of September and minimum of 8.8°C during the months of January and February.	Maximum of 40-41°C at Ras Benas (south) and 32-34°C at North of Hurghada and Quseir. July and August are the warmest months of the year. Minimum of 8-10°C at south and 9-10°C at Hurghada and 16-18°C at Quseir with January and February as the coldest months of the year
Rain Falls	Rainfall is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking water and other uses is the river Nile.	Rainfall is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking water and other uses is the river Nile	Minimum rainfall is in October and November. Some record shows 68.1 mm in the south and 62 mm in north as highest rainfall
Relative Humidity	Ranged between 47-55% during winter (December-February) and 27-40% during summer	Ranged between 34-43% during winter (December-February) and 17-27% during summer.	Ranged between 50-60% from November-December in the south and 40-50% from June-August in the north.
Winds	Ranged between 1.8 -4.5 m/sec in summer and between 2.4 - 5.8 in winter	Ranged between 4.5 -10.0 m/s in summer and between 3.9 - 8.6 in winter	n/d

Source: General Authority for Meteorology, Cairo Egypt

1.5.2 Geology and Topology

(1) Geology

The geological formation of Upper Egypt can be divided into two main geological characteristics.

The Nile valley basin (Qena, Luxor and Aswan)

The geological formation of the Nile Valley of Upper Egypt is called the Nubian sandstone formation and is composed of an alteration of sandstone and clays which have water absorption power. Such sandstone of the Cretaceous Age essentially constitutes a main complex of aquifer, which is widely extending in the study area. Thickness of the Nubian sandstone varies from several meters to 303 m. The basement rocks, which are mainly represented by Aswan granite, are exposed on the surface at different places. Thus, the rocks are hindering direct groundwater flow through the Nubian sandstone aquifer (El-Shazly & El-Hady, 1977).

Eastern desert and Red Sea mountain chains (Red Sea)

Geology of eastern desert and the Red Sea mountain chains is a rocky plateau dissected by a number of drainage systems with a main channel and numerous tributaries. The Red Sea mountain range forms the watershed (divide) which parts the drainage eastward to the Red Sea and westward to the Nile River. Most principal wadis have their heads in the Red Sea Mountains and extend across the whole stretch of the eastern desert until they debouch into the Nile Valley. The area has a rugged surface with high mountain peaks rising to 1,350 m above sea level (not including the Red Sea mountain). The average elevation of the wadis range between 350 m and 546 m above sea level.

Most basement consist of a complex of the Precambrian. The rocks are dominated by geosynclinal metasediments (schist-mudstone-graywacke series), gneiss, amphibolite, diorite, and granodiorite complex, old and younger granite.

Alluvial deposits cover the beds of the wadis. These deposits show a notable variation in texture through the soil profile that is typical successive layers of the wadi-fill deposits. The physical characteristics of deposits vary in different wadis as well as within one wadi, according to the surrounding rocks and topography of the wadi.

(2) Topology

It can be said that the Nile River is the most prominent physical feature as far as population and settlements of Egypt are concerned. The desert extending on the eastern side to the Red Sea mountain chain is dissected by a number of large and small wadis. On the western side, another desert extends whose configuration is rather flat or gently undulating and almost featureless except at the Kurkur and Dungul Oases and the Sinn El-Kaddab escarpment. At about 500 km west from the Nile of Aswan region, the mountain massif of Oweinat rises.

(3) Natural Hazards

According to Shata (1988), natural hazards in Aswan region are of the following three types:

- Flash floods pass through wadis in Eastern Desert (Allaqi, Agag, Natash, Shait, Kharit and Abbad) and Western Desert (Kalabsha and Kurkur).
- Earthquakes with a magnitude of 5.7 on the Richter scale observed in 1981 when water level of the Nasser Lake was at about 176 m.
- Sand creep is obvious on the western desert side of Nasser Lake area and moves in successive rows in a NW/SE direction. As a result, sand fills the Toshka spillway.

(4) Soil Condition, Erosion and Landscape of the Study Area

In accordance with the survey results of the "High Dam Soil Survey Project"(UNDP, FAO and Egypt, 1974), the soil characteristics of the study area from Aswan to Qena can be divided into 5 sectors as follows:

Aswan-Kom Ombo:

The Nile Valley in Aswan is narrow and has practically no alluvial soil along the river. Configuration of the valley is steep with rock debris slopes that lead up to a rock plateau. The plateau is situated approximately 100 m above the valley of the Nubian sandstone. The valley opens quite abruptly into the Kom Ombo plateau. In the Paleolithic era, the Kom Ombo plain was a swamp in which sedimentation of silt had occurred. The sediment at the edge of the plain is sandier.

East of Kom Ombo Plain:

A hill complex forms the eastern limit of the Kom Ombo plain. The hills are terrace remnants, with coarse sandy or gravelly substrata. Beyond them, a wadi plain extends eastward and is divided into a rather small western part and a larger eastern part by an outcrop of the Nubian sandstone. The eastern part lies within the watershed of Wadi El-Kharit and its tributary Wadi El-Natash and is called Atmour Nugra. Both parts of the plain are in part alluvial and sandy or loamy to a variable extent, partly of shale and sandstone of the Nubian sandstone series. The western plain lies a little higher than the alluvial deposits. In the eastern plain, the relief is more pronounced, it could be said that the sandstone outcrops give the plain a rather rugged appearance, and the alluvium contains silt or less loam and is less suitable for agricultural development.

Edfu-Esna-Gebelein:

In the east of the Nile, the processes of erosion have carved the rock land into a separate plateau, capped by the lower Eocene limestone which are exposed on both banks of the river further north. High above the valley, two or three terrace levels can be distinguished, marking early Pleistocene, or even in part Pliocene, erosion levels of the Nile. There are also a number of

rather wide and very gravelly tributary valleys, including Wadis Sillim, el Sarrag, el Hawa, Abbad, el Domi and el Shoki.

North of Edfu, the Nubian sandstone gives places to Cretaceous limestone, which form a more mountainous terrain traversed by a main road, which no longer follows the Nile Valley, and contains some phosphate mines. The harder lower Eocene limestone still survives as a capping at some of the highest points, Gebel Bakhmanyia above the Nile valley just to the east of Gebelein. The older gravelly terraces continue as far as Esna, beyond which point the rubble terrace deposits occupy the entire fringe area. On both sides of the valley between Edfu and Esna the desert fringe generally presents either a smooth slope, of at most a few degrees, between the cultivated area and higher terraces or the rock land, or consists mainly of the youngest terrace deposits. The smooth slope usually shows a loamy surface soil over compact shale, shale clay, or intercalated sandstone, all of the Nubian sandstone series.

Gebelein-Qena

Below Esna, the rock land on the west bank lies further from the river, around the V-shaped mouth of a tributary gully system, but closes in again from Luxor to Qena to leave only small areas of rubble terrace land in the desert fringe. Soft Cretaceous limestone forms a precipitous escarpment. Four rubble terrace stages can be recognized and between them and the foothills there is a debris slope or stony pediment that, at an altitude of about 148 m, marks the approximate level of the Pleistocene inland sea.

Below Gebelein, on the east bank, an important tributary system formerly entered the valley and the ancient gulf must have been very wide at this point. At present the rock land lies about 12 to 18 km beyond the edge of cultivation and wide stretches of the oldest rubble interspersed with outwash plains and wadi beds.

The debris slope or stony pediment presents a remarkable feature, for the soft Cretaceous limestone, which is much less resistant to erosion than the gravelly rubble and the stony debris of the pediment has led to an inversion of relief. Close to the deeply incised gullies little of the limestone remains and there are hollows, far below the level of the terraces, when these were formerly hills. This steep rough country looks like a landscape of the moon.

The marine clays of the Pliocene Inland Sea occur under the gravel cover of all the rubble terraces, of whatever stage, as far south as Esna. Close to the rock escarpments and just in front of tributary gullies these deposits may be gravelly or stony and near the edge of the cultivated land, between Luxor and Hegaza as the original rubble cover has been eroded in places, or removed by man, so that the clayey subsoil reaches, or almost reaches, the surface.

Where Wadi Matulah joins the valley opposite Qift, the rubble terrace landscape gradually merges eastward into a wide plain of predominantly sandy, sometimes loamy deposits, developed in a strongly denuded Nubian sandstone country. This landscape begins a little to the east of the Lakeittah Wells. The marked differences in elevation, both between different rubble terraces and between the plain and the surrounding rock land, have disappeared. In the plain itself, there are only a few outcrops of the Nubian Sandstone. North of Qena, the rubble terrace landscape extends a long way up into the Wadi Qena.

As seen from the river the rubble terrace landscape, for all their variations in elevation, hardly show up; the land falls away and one may get the impression of a rather level hinterland.

Qena-Nag' hammadi:

After the big westward bend, which the Nile Valley makes at Qena, the appearance of the valley definitely changes. On the east side, the high rock land closes in, leaving only an insignificant desert fringe of rubble terraces. On the west, the landscape is quite different; first, the high rock land plateau retreats to a distance of 10-14 km from the cultivated land of the valley. Second, although the different rubble terraces are still present, fan and outwash gravel, and wide wadi plain deposit, are dominant. As these have a notably steeper slope than the rubble terraces, they bury the part of the terrace which lies closest to the rock land. The rubble terraces emerge half

way up this outwash slope; while below their escarpments there extends a long slope of outwash material, relatively flat and consisting of fine textured sands.

1.5.3 Hydrology and Groundwater

The Nubian sandstone formation is a main and important water-bearing formation in the area. Boundary of the formation covers Egypt, Sudan, Libya and Chad. The great variation in its geographic distribution could be attributed to the variation that occurred during its deposition (El Ramly, 1973).

(1) Water Flow

Water is being recharged from the Nile to the aquifer (Mitwally 1953 and Sheta 1962). Geoistrazivanja (1965) estimated a seepage of 6 million m^3 /annum with the average permeability of 3 x 10^{-3}cm/sec. At Nasser Lake, seepage the level of 180 m was expected at 73.5 million m^3/annum.

The saved volume of water discharged from the Nubian aquifer was estimated at 257 million m^3/annum in total and the extraction average could be 800 million m^3/km^2/annum. (Soilman. 1987)

(2) Nasser Lake and River Nile

It can be said that the Nasser Lake and the river Nile represent the hydrology of Egypt. The Nasser Lake is located 7 km south of the Aswan Dam. The lake as whole is mostly surrounded by rocky terrain. The entire reservoir has a gross capacity of 157,000 million m^3. The riverbed of the high dam is 99 m above sea level. Some of the arms of the lake called Khors are over 50 km. There are 85 major Khors of which 48 are on the eastern shore and 37 on the western. The shoreline morphology is primarily dependent on both erosion and sedimentation.

Total shoreline length of these Khors is 969.9 km. The most important factor, which affects shoreline morphology, is the sedimentation of a huge amount of silt carried by the river during the flood. Changes in the shoreline morphology are expected to occur at a faster rate during the filling stage of the reservoir than later on when the reservoir has reached its maximum holding capacity which already had happened during the 1998 flood.

Evaporation and mean annual discharge through floodgates and turbines result in an annual variation in water level of about 5m. As a consequence of constructing the high dam, the river Nile in Aswan region formed the following three separate water bodies:

- Nasser Lake;
- Aswan reservoir (lying between the High Dam and the Aswan Dam, 7 km down stream); and
- Nile River (down stream of the Aswan Dam).

In the Nasser Lake, there is an annual cycle of water level change related to the seasonal flood pattern of the river Nile, together with a long-term pattern of net rise and fall of the mean lake level. During the drought years in the mid 980s, the mean monthly level of the Nasser Lake dropped to 157.37 m above mean sea level.

The Nasser Lake has the following environmental features:

- It is one of the cleanest artificial lakes based on periodic analyses of its water and soil;
- Limited number of residential areas around the lake;
- Agricultural development is limited along the shoreline of the lake;
- 5,500 farmers have planted 25,000 Feddans, which represent 2% of the total shoreline of the lake;
- There are no pollution-generating activities on the lake except one factory for fish preparation and freezing;

- Total number of cruise ships is 6l; and
- There is no any disposal activity from industries and agriculture or sewage into the lake.

As for the water quality of the Nile River, Table 1.5.2 shows an analytical data of river water quality from Aswan to Esna in1993/94.

Table 1.5.2 Quality of Nile River Water from Aswan to Esna (1993/94)

Parameter	Concentration
DO	6.0 (mg/l)
BOD	3.6 (mg/l)
COD	13.6 (mg/l)
Cl	8.0 (mg/l)
TSS	12.0(mg/l)
F. Coli.	410 (col/100 ml)

Source: Institute of River Nile Research, WRPW

(3) Groundwater

According to officials of Luxor and Aswan, rising of the ground water level in each governorate has grown remarkable in recent years. Table 1.5.3 shows the groundwater fluctuation in shallow boreholes around the Nasser Lake. Most of the data were taken from 1965 and 1991.

Table 1.5.3 Hydrogeological Data of Shallow Boreholes

Distance from the Lake (km)	Direction	Initial Ground water level		Latest Ground water level	
		Level (m)	Year	Level (m)	Year
2.00	East	120.75	1965	120.90	1966
3.00	West	118.00	1965	162.00	1991
4.00	West	118.00	1965	159.00	1991
4.50	East	111.27	1965	141.67	1969
5.80	East	115.00	1965	160.40	1991
5.90	West	113.77	1965	158.23	1973
6.00	West	119.48	1965	150.23	1991
7.00	West	104.26	1965	125.86	1971
8.00	East	113.85	1965	158.38	1991
9.00	West	104.21	1965	141.54	1991
9.00	East	109.81	1965	129.06	1969
10.00	West	115.00	1965	149.52	1979
11.00	West	104.18	1965	127.15	1991
30.40	East	117.27	1965	134.21	1991
33.50	South	168.03	1974	165.85	1991
80.00	West	112.09	1965	160.77	1991
107.50	South	168.13	1974	168.24	1983
187.15	South	176.89	1974	171.09	1981

Source: Ground water of Upper Egypt, Masters Thesis, 1994 and Faculty Engineering, Cairo University.

1.5.4 Flora & Fauna

(1) Flora

The flora of the Egyptian ecosystem is profiled, as shown in Table 1.5.4.

Table 1.5.4 Profile of Flora in Egypt

Flora	Number of Species
Virus	44
Bacteria	238
Fungi	1,260
Algae	1,148
Flowering Plant	2,072
Non-flowering Plant	369

Source: Environmental Quality Report of 1996, EEAA

The flora of Aswan, Luxor, Qena and the Red Sea have been studied by Aswan Faculty of Science as well as other institutions since 1978. Based on those studies, following data and information are shown in the Appendix.

- List of flora species in Upper Egypt;
- List of indigenous flora species in Upper Egypt and their uses; and
- Zone of vegetation in the eastern side of the Aswan area.

(2) Fauna

A list of fauna in Upper Egypt including mammals, birds, soil fauna and others is attached as Appendix.

(3) Coastal Area

The Red Sea is one of the richest coral habitats on earth, and has a very diverse ecosystem, specially cyanophyceae, tropical fishes and so on.

Several natural communities of mangrove forest that need to be protected are observed in the surrounding area of Marsa Alam, south of the Sinai Peninsula, among other sites.

1.5.5 National Parks and Natural Reservation

In Upper Egypt, the Egyptian Government has established a total of 21 natural protectorates (National Parks and Natural Reservations) in accordance with the Law 102/1983 to protect natural resources and endangered bio-diversity. A list of National Parks and Natural Reservations in Upper Nile is given in Table 1.5.5, and attractions of ecosystems and others identified in each natural protectorate is summarized, as shown in Table 1.5.6.

Table 1.5.5 List of National Parks and Natural Reservations in Upper Egypt

Name of Park or Reservation	Governorate	Total Area (km^2)	Protection Decree /Year
Elba	Red Sea	36,500	No. 450/1986
Saloga & Gazall	Aswan	13	No. 928/1986
El Alaki Valley	Aswan	275	No. 945/1989
River Nile Island	River Nile	8,775	No. 928/1986

Source: EEAA Natural Reservations Guide for Egypt, 1994

Table 1.5.6 Attractions of National Parks and Natural Reservations

Natural Protectorate	Year Established	Type of unique ecosystem					
		Bird	Flora	Fauna	Wild life	Marine	Geology
Elba	1986				■	■	
Saloga & Gazal	1986	■	■	■			
El Alaki Valley	1989	■	■	■	■		
River Nile Islands	N.A.	■		■			

Source: Natural Reservation and Culture Interest Areas of Egypt, EEAA, 1995

1.5.6 Pollution

(1) Air Quality

It is considered that the other sources of air pollution are mostly from industrial establishments (sugar mills and textile mills in Qena; chemical plants in Aswan), power generation stations, housing and agricultural areas (smoke from open burning of solid wastes) and so on. In Aswan, 130 tons/year of NO_x had been generated from a fertilizer company. (Source: Environmental Quality Report of 1996, EEAA).

Table 1.5.7 shows data on SO_2 and O_3 obtained from monitoring stations.

Table 1.5.7 Air Quality as of August 1999

Monitoring Position	SO_2 (ug/m^3)		O_3 (ug/m^3)	
	Minimum	Maximum	Minimum	Maximum
Qena (Kom Ombo)	15.23	62.79	3.5	141.2
Luxor	6.81	45.61	3.6	140.4
Aswan	1.10	145.2	4.1	133.5

Source: EEAA data report to the JICA Study Team, October 3, 1999.

Data on O_3 concentration in those areas shows less than the maximum limit recommended by WHO (World Health Organization) which suggests that the maximum concentration of O_3 should be in the range of 150-200 ug/m^3 for every exposure hour.

In the Red Sea area, less information regarding air pollution is available at present. However, Red Sea Governorate covers 130,000 km^2 of which only 0.05% is occupied by human/commercial activities. Therefore, the present situation of air pollution caused by usual human activities might not be so serious. As a matter of course, an increase in human activities and travelers will lead to increase in total quantity of air pollutants, including NOx, SOx, SPM, benzene (C_6H_6), etc. and easily make the surrounding air quality bad for human health.

(2) Water Pollution

Water supply and its consumption

The river Nile is the main source of water in Egypt. It supplies about 97% of the water requirements of Egypt. According to the Nile Water Agreement, the Nile supplies 55.5 billion m^3 of water. In addition to the river, 4.7 billion m^3 of groundwater and 19 million m^3 of water treated by desalination plants add to the water supply. There are additional 3.9 billion m^3 of agricultural drainage water and 600 million m^3 of domestic water which are recycled for irrigation. Of the water used for irrigation, it is estimated that almost 70% will be lost to the drainage channel and to the underground water reservoir. Table 1.5.8 shows the water consumption ratio by sector in Egypt.

Table 1.5.8 Water Consumption Ratio by Sector

Sector	Irrigation use	Industry use	Residential use	Other use
	83.2%	9.8%	5.5%	1.5%

Source: Environmental Quality Report of 1996, EEAA

Sources of water pollution

The sources of water pollution in Upper Egypt are summarized as shown in Table 1.5.9.

Table 1.5.9 Sources of Water Pollution in Upper Egypt

Source	Drainage	Industry	Sewage
	58.2%	32.1%	9.7%

Source: Environmental Quality Report of 1996, EEAA

Drainage channels:

From Aswan to near Cairo there are 67 drainage channels pouring into the river Nile directly or indirectly with a total of 4 million m^3 per year from agricultural activities and some sewage sources (treated or semi-treated). It is considered that agriculture drainage water is contaminated by several kinds of pollutants, such as nutrients, pesticides, etc.

Industrial Wastewater

Industrial wastewater is a critical source of pollutants in Upper Egypt and the Gulf of Suez (i.e. north of the Red Sea coast). The present situation of industrial wastewater in the study is summarized as follows:

Upper Nile (Qena, Luxor and Aswan): It has been detected that around 190 million m^3 of industrial wastewater is disposed into the drainage channels in Upper Egypt every year. Industrial wastewater increases the salinity of the river Nile from 130mg/l at Aswan to 250mg/l near Cairo (Source; Environmental Quality Report of 1996, published 1997 by EEAA). In Qena, the sources of industrial wastewater are the aluminum complex, sugar mills, plastics plants, textile mills, and some food manufacturers. In Aswan, industrial wastewater is discharged by sugar mills and chemical plants. However, Luxor has no such sources of industrial wastewater. To comply with the environmental law No. 4, industrial companies have to set up suitable wastewater treatment facilities. For instance, an aluminum industrial complex has set up precipitation tanks for suspended materials and a sugar manufacturer has set up facilities for recycling of organic wastewater.

Red Sea: The north part of the Red Sea is remarkably active in oil and shipping activities. The EEAA newly established coastal water quality monitoring stations in the area, in cooperation with Danish International Development Authority (DANIDA). From the stations various data on coastal water quality are obtained as shown in Table 1.5.10. All parameters represent the average of data of 13 monitoring stations located along the Red Sea coast.

Table 1.5.10 Eutrophication in the Red Sea Coastal Surface Water (as of June 1999)

Parameters		DO (mg/l)	DO saturation (%)	Chlorophyll (g/l)	TSM (mg/l)	Transparency (m)	Total Nitrogen (mm/l)	Nitrate (mm/l)	Nitrite (mm/l)	NH_4 (mm/l)	Total Phosphorus (mm/l)	Silicate (mm/l)
Gulf of Suez	Min	6.48	103.8	0.05	4.96	2.50	11.11	0.04	0.00	0.62	0.08	1.04
	Max	7.56	119.2	0.78	17.77	9.00	34.96	14.44	0.75	3.98	5.04	2.16
Red Sea proper	Min	6.84	111.4	0.01	3.49	4.50	8.82	0.04	0.00	0.56	0.28	0.92
	Max	7.38	121.4	0.31	9.06	17.00	38.22	0.63	0.15	1.50	3.64	2.40
Gulf of Aqaba	Min	6.66	106.3	0.06	4.05	7.50	8.17	0.17	0.00	0.52	0.56	0.88
	Max	7.92	131.4	0.30	6.34	21.50	21.89	0.60	0.14	1.74	2.52	2.84

Source: EEAA Report to the JICA Study Team, October 3, 1999.

Sewage

Upper Nile (Qena, Luxor and Aswan): According to officials in Aswan and Luxor, wastewater in those areas is treated by trickling filter and oxidation pond. The sewage system of the city of Luxor does not cover all its residential areas. Those not covered have been encouraged to use septic tanks, which contribute significantly to contamination of ground water. The treated sewage is discharged to the river Nile. Sewage of cruise boats is also disposed to the river Nile. In Qena only 15% of the residential areas are covered by sewage disposal system. A pit, which is prone to leaching, is often used to collect sewage. In Aswan, only 40% of the governorate is covered by a sewage disposal system.

Red Sea: In the Red Sea coastal area, some resort hotels own a seawater desalination plant and a wastewater treatment plant. They use the treated sewage for agricultural purpose including golf course maintenance, and the treated processed sludge is used as soil conditioner. However,

increasing these activities or engaging in large-scale operations poses a potential threat to the ecological balance of the surroundings. As a matter of fact, the related laws for conservation of the marine natural resources and the environment prohibit the discharge of wastewater to the Red Sea. Based on the above, the sources of water pollution in the study area can be briefly summarized as shown in Table 1.5.11.

Table 1.5.11 Sources of Water Pollutants in Upper Egypt

Area	Industrial	Residential	Agricultural Drainage	Others
Luxor	None	Leaching Pit Untreated and Semi-treated Sewage	Low, drainage from 174 feddans (4,200 m^2 each)	Floating boats and hotels
Qena	Sugar mills, Textile mills, Aluminum complex	Only 15% of the area is served by sewage disposal system. Leaching Pit	Medium, Only drainage from 1,402 feddans	Floating boats and hotels
Aswan	Sugar industry, Chemical fertilizer	Only 40% of the area is covered by sewage disposal system Leaching Pit	Low, Only drainage from 617 feddans	Floating boats and hotels
Red Sea	Petroleum in Gulf of Suez and shipping	Harghada and surrounding tourism area	None	Hotels, related facilities, and desalination plants

Source: JICA Study Team

(3) Noise and Vibration

Several monitoring stations have been newly setup in the study area to monitor parameters of noise and vibration. These stations are still under calibration process.

(4) Solid Waste

Solid waste management

Present condition of the solid waste management in each study area can be summarized as follows.

Upper Nile: In Qena, domestic solid waste is being collected door to door through governmental, private waste collectors and NGO. In tourism areas, the solid wastes are well collected, however, accumulations of waste have been seen in the residential area. The governorate is encouraging investors to set-up factories to convert agricultural solid waste into animal feeds, and composting factories to produce organic fertilizers and so on. The situation in Luxor and Aswan are almost similar to Qena. In Luxor, there is no large industry that can cause pollution. Open burning of solid waste is observed in the area. Most of the landfill sites are located in the east side of the Nile River.

Red Sea: The Red Sea has been divided into 7 sectors and 22 tourist centers along the coastal sea. The solid wastes generated from these centers are collected and disposed daily by each owner of the tourist center. Segregation and separate collection are not implemented in this area. However, a large volume of waste is transported to a city composting plant. There is a composting plant in Hurghada but its treatment capacity is not enough. Most of the non-organic solid wastes and other construction wastes are buried in the desert.

Generation Amount

Table 1.5.12 shows the average generated amount of municipal solid waste in the study area. Based on the data shown in the table, it is calculated that 40-60% of the municipal solid waste in the study areas is combustible.

Table 1.5.12 Average Generation of Municipal Solid Waste in Upper Egypt

1996	Qena	Luxor	Aswan	Red Sea
Combustible (ton)	512	121	236	30
Non-combustible (ton)	332	89	159	14
Total (ton)	845	200	395	44

Source: Information offices of each governorate

The daily unit amount of solid waste per capita in the study area is given in Table 1.5.13.

Table 1.5.13 Unit Amount of Solid Waste in Upper Egypt

Governorate	Urban (kg/capita/day)	Rural (kg/capita/day)
Qena	0.6	0.25
Luxor	0.6	0
Aswan	0.6	0.25
Red Sea	0.4	0.3

Source: Solid Waste Survey, EEAA 1999

2. Upper Egypt Tourism Development Plan

2.1 Development Goals and Basic Development Strategies

2.1.1 Development Goals

Upper Egypt is expected to have an important role in tourism in Egypt, thereby contributing to national economic development. According to the issues on national tourism development described in Part I, the following tourism development goals are laid out:

(1) Contribution to national economy and promotion of regional development

Tourism-related industries are expected to create job opportunities, to boost foreign currency earnings and to encourage regional development.

(2) Sustainable utilization of the world-class heritage sites toward the next millennium

Sustainable utilization of the world-class heritage sites, both the ancient heritage sites in Upper Nile and the natural heritage sites in the Red Sea which will be passed on to future generations, are also needed.

(3) Maximization of tourist satisfaction

In order to secure competitiveness in the world market, enhancements and improvements in tourist services, infrastructure development, tourism product development and institutional development are needed.

2.1.2 Basic Strategy for Tourism Development

Tourism in Upper Egypt has reached the turning point of a new stage. Further growth would not be achieved without increasing the world market share, and without diversifying tourism products. In order to achieve the above stated development goals, basic strategies for the tourism development are set as follows:

(1) Diversification and integration of tourism products

In order to not only hold current tourism markets but also steadily expand them, it is necessary to provide an assortment of tourism products as well as make them attractive to various segments of tourism markets, considering origin, age, income, etc. Efforts for developing new products by using potential tourism resource, improving existing tourism products and finding a new market are needed. Furthermore, the integration of tourism products will be useful in generating a synergy effect in Upper Egypt

(2) Enforcement of environmental management for precious tourism resources and their surroundings

In Upper Nile, ancient historical assets with the Nile River cruises will attract world tourists, and tourists and divers will enjoy the coastal beaches and beautiful coral reefs in Red Sea. But balanced tourism development has to be done at the same time.

The concentration of visitor arrivals in limited destinations coupled with the failure to provide adequate facilities and control measures to meet the increase tourist demand have endangered the tourism resources of both Upper Nile and the Red Sea.

Taking account of the expansion of tourism development, especially the large-scale accommodation development in the Red Sea, strong management and enforcement are needed to sustain the environment and tourism activities.

(3) Comfortable access and tourism services with high quality

In spite of the grand impressions and reputation of tourism products in Upper Egypt, international visitors have complained about some inconvenience they have experienced, which are usually cancellations or delays of flights and overbooking of hotels. These complaints can easily spread by word of mouth, lead to a bad reputation, and eventually the loss of potential international visitors.

In the expectation of the increase of inter- and/or intra-regional tourist activities, the capability of transportation and tourism services should be improved, both in terms of quantity and quality. On the other hand, taking account of expansion of the accommodation development in the Red Sea, it is necessary to develop human resource in order to cope with the shortage of tourism service manpower in the future.

(4) Coordination and demarcation of public sector and private sector for tourism development

The large-scale accommodation development in the Red Sea, including infrastructure under the privatization policy of the Egyptian Government, was launched in cooperation with the World Bank in the middle of 1990s. However, most of the private developments have been approved by TDA in an ad-hoc manner without adequate infrastructure support and environmental protection. It should be noted that the large-scale accommodation development has to be supported by adequate service industries, urban infrastructure and social services. In the case of Upper Nile, Cruise Tourism has been carried out with limited public investments due to financial difficulties of the local government.

Under such circumstances, more coordination and demarcation between public sector and private sector is needed to achieve sustainable tourism development efficiently.

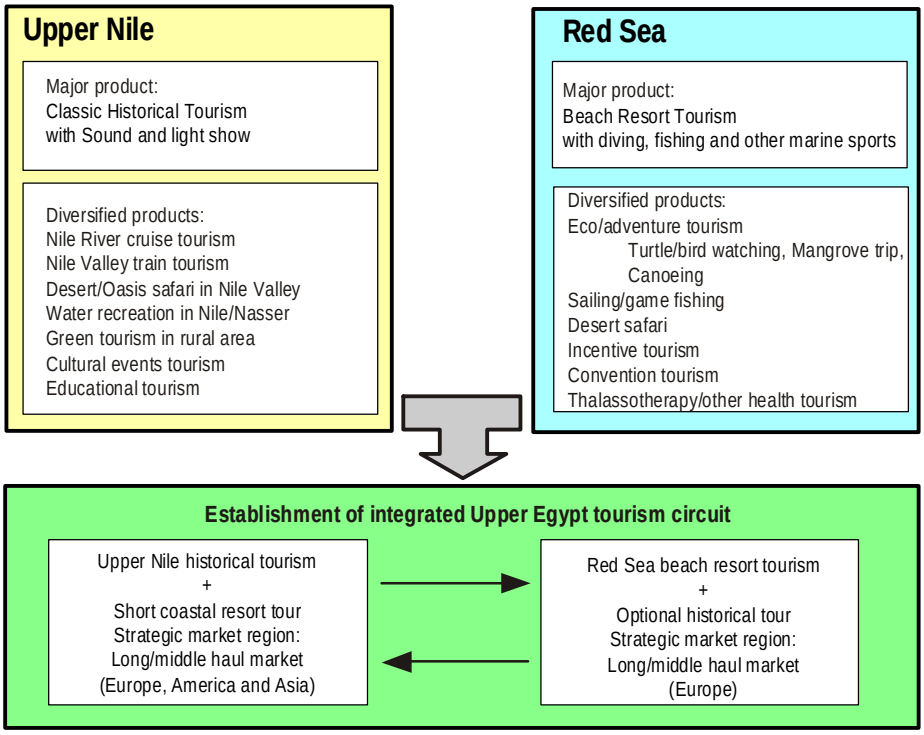
2.2 Tourism Products Development

Diversification of tourism products is essential to strengthen the competitiveness of tourism destinations in both Upper Nile and the Red Sea, and to attract a wider range of tourism markets in the world. Diversification of tourism products should be developed and applied to this region in the manner described hereafter.

Although tourism in Egypt has been established as a historical heritage destination, marine resort tourism has begun to find new markets. More attractions should be developed to keep its dominant position in the competitive world tourism market. Not only the utilization of potential natural and cultural resources in Upper Nile and the Red Sea but also the combination of both tourism destinations is needed.

In addition, the differences of travel patterns in the future will depend on what visitors will be looking for in their travel experience, interactions with other visitors, and so on. On the other hand, increased awareness of global environmental and social issues has brought out a new trend as an alternative tourism concentrating on natural environment and indigenous culture. Tourism products that meet such needs might be the winners in the new tourism market.

Figure 2.2.1 Tourism Products Development in Upper Egypt



Source: JICA Study Team

2.2.1 Policies for Tourism Diversification and Integration

The following measures are useful to promote diversification of tourism products.

- Formulation of "Tourism Circuits," such as day trip, inter-local and regional circuits in combination with existing tourism products;
- Composition of tourism functions, such as accommodation base, transportation facilities, tourist service facilities on the basis of tour circuit formulation, and service town development to support tourism industries;
- Improvement of multi-modal transportation network to connect with each destination by cars, railway, cruise ship and air transportation, with the aim of not only expanding its capacity but also promoting and preparing alternative products;
- Creation of alternative tourism products utilizing potential resources in Upper Egypt, such as eco-tourism,

agro-industrial tourism in rural areas and artificial recreational tourism;

- Enhancement of attractiveness of historical and natural heritage sites by improvement of visitor facilities, such as tourist information, interpretation service, amenities (rest place, public toilet, etc.) and related cultural facilities in conjunction with historical and natural assets conservation; and
- Encouragement of local participation on tour circuits, such as introduction of handicraft village in cooperation with local manufacturers and community, and agro-industrial tourism in conjunction with a tourism environmental awareness program.

2.2.2 Formulation of the "Tourism Circuit"

Establishment of various tourism circuits will extend the average length of stay of visitors, promote diversification of tourism products, and generate the synergy effect.

Historical/archeological tourism in Upper Nile and marine resort tourism in the Red Sea should be integrated, utilizing both tourism products. In order to achieve this, the following items are required:

- Formulate "Tourism Circuits" with improvement of transportation and access;
- Connect gateways, tourist towns, and tourist spots;
- Diversify transportation modes to destinations (cruise, railway, others),
- Develop roadside amenities (highway oasis, observation/shopping points), and
- Utilize potential historical, cultural, and natural resources.

The tourism circuits preferred by visitors based on travel patterns and market segments are summarized in Table 2.2.1.

Table 2.2.1 Preferred Types of Spatial Movement by Market Segment

Length of stay	Travel activities	Short-haul market	Middle-haul market	Long-haul market	Domestic market
Beach Resort (1-2 weeks)	One destination only	●	●	○	○
Touring (1-2 weeks)	Inter-regional	◎	●	●	○
Short excursion (3-6 days)	Inter-local	◎	○	○	◎
Single destination (1-2 days)	One-day Trip Area	-	-	-	●
Legend: ●＝dominant ◎＝middle position ○＝few market - ＝ impossible		South Europe Neighboring countries	North/East Europe South Asia South Africa Ex-USSR countries	USA and Canada East Asia & Pacific Latin America	Egyptian International Resident

Source: JICA Study Team

2.2.3 Enhancement of Attractiveness and Conservation of Historical and Natural Heritage Areas

Tourism development with inadequate infrastructure and over use of tourism resource will damage both the coastal environment in the Red Sea and the historical environment in Upper Nile.

In the Red Sea, there should be a more effective management of the environment by the Egyptian Government under its coastal zone management program. On the other hand, in order to prevent damaging the historical environment of Upper Nile, adequate visitor control and environmental management are needed, as explained by the following measures:

Visitor Control

- Control of visitors at historical heritage sites (access control, zoning control, visitor facilitation, tourist awareness program, etc.) in Upper Nile;
- Management and control of marine sports recreation in the Red Sea (diving, fishing, visitor facilitation, tourist awareness program, etc.); and
- Management and control of river recreation on the Nile River (control of *felucca* and day cruise, visitor facilitation, tourist awareness program, etc.).

Environmental management

- Management and control of the Nile Cruises (operational management, waste management, security control, visitor facilitation, etc.):
- Landscape control of historical sites in Upper Nile (control of urban development, and façade design, etc.);
- Urban environmental management in the Red Sea (management of solid waste and sewerage, control of urban development, etc.);
- Tourism development guideline for certain tourism areas (introduction of design guidelines, environmental standards, etc.);
- Management of nature conservation (endemic flora and fauna in coastal desert areas of the Red Sea and the Nile River and their surroundings); and
- Development of an environmental management center in the Red Sea (monitoring enforcement, training, local communities awareness program)

2.2.4 Encouragement of Local Participation

(1) Encouragement of small and medium-scale local enterprises

The handicraft industry has been contributing traditionally to the local economy in Upper Nile to a certain extent. However, due to technical and financial limitations, sometimes the industry does not develop enough in terms of improvement of quality and the creation of new products matching the needs of international visitors

When the quality of handicraft is upgraded, the infusion of local character, such as utilization of natural and cultural materials, is necessary. On the other hand, marine materials and Bedouin culture in the Red Sea also have the potential of being developed into a handicraft industry. Local industries should be encouraged and promoted with adequate public support.

Handicraft should be improved with market-oriented products, not only for international visitors but also for export. The establishment of a Handicraft Center is an effective measure to provide a place for design development and market research.

(2) Alternative tourism products with local participation

In Upper Nile, many visitors are concentrating in historical sites. This situation gives rise to congestion and environmental deterioration. Major destinations in both Upper Nile and the Red Sea should have alternative destinations to solve this problem. The creation of a new tourism product enables the dispersion of visitors, and the diversification of tourism products.

An example of an alternative tourism development in Upper Nile, with the participation of local communities, would be the rural agricultural landscape, which is one tourism resource with the most potential. In order to diversify the agricultural industry from mono-production, agro-tourism, such as orchard garden, which can provide a rest place and enjoyment for visitors, would be one alternative tourism product in historical destinations.

(3) Management of tourism destination through local participation

Conflicts between local communities and tourists in a tourism area sometimes occur due to different customs and cultures. And it also happens that people in local communities do not care enough about tourism and the historical and natural environments of their territory. The following local participation and public awareness are necessary for adequate tourism development:

- Environmental management by local participation: Development of environmental awareness in local communities is an indispensable measure to achieve sustainable tourism development. It should be included in the environmental management programs.
- Enhancement of tourism awareness: Providing tourism education and training is necessary to establish the foundation of tourism development. A tourism awareness program should be provided not only to local people but also to students who will be able to contribute to creating an attractive tourism environment.

2.3 Market Development

Egypt has already enjoyed an established market perception as "a destination of world heritage tourism" for international visitors, and begun to attract vacationers with "Sun and Beach" in the Red Sea for short- and mid-haul visitors. These tourism products obtain a certain measure of market segments.

In order to secure the tourism market more and to expand it steadily, it is necessary to integrate typical historical products into various existing products and potential products in Upper Nile and the Red Sea. The integration of tourism products would be effective to develop its market. Furthermore, there is a need to upgrade the quality of tourism products and services. The following approaches are necessary to obtain new markets.

2.3.1 Assurance of Core International Source Market

It is clear that the beach resort in the Red Sea would play the most important role to achieving the target number of international visitor arrivals to Egypt, which will be 14 million in 2012. There is, therefore, a great demand that the Egyptian people undertake every effort to accommodate this large number of visitors.

In spite of the competition with other beach resort destinations, the Red Sea could be a competitive destination in the following targets:

- Gain European mass-market, such as Italy and Germany, with competitive price and qualified services;
- Gain distribution channels of products and ensure qualified service by famous travel agents, charter flight companies, etc.;
- Find new markets for marine tourism by use of prestigious historical world-class tourism products in combination with beach resort product; and
- Develop new tourism products, such as eco-tourism and rural tourism, integrate with famous tourism product in the Upper Nile, and obtain repeat market segment.

Table 2.3.1 shows market preferences and potentials.

Table 2.3.1 Market Preferences and Potentials

Upper Egypt Destination	Short-mid haul		Long haul	Main tourism product
	Europe/ Russia	Arab/ Africa	Americans/East Asia-Pacific	
Upper Nile	XXX	X	XXX	World Heritage tourism Other historical cultural tourism Nile Cruise tourism
Red Sea	XXX	XX	XX	Beach resort tourism Diving/Marine Sports recreation / MICE

Legend: X low, XX important, XXX strongly high
Source: JICA Study Team

2.3.2 Development of New market and Segment

It is needless to say that European countries have a key role for developing tourism in Egypt, especially marine resort tourism from now on. But to achieve the national development target of international visitor arrivals, which is 14 million in 2012, the following efforts are needed.

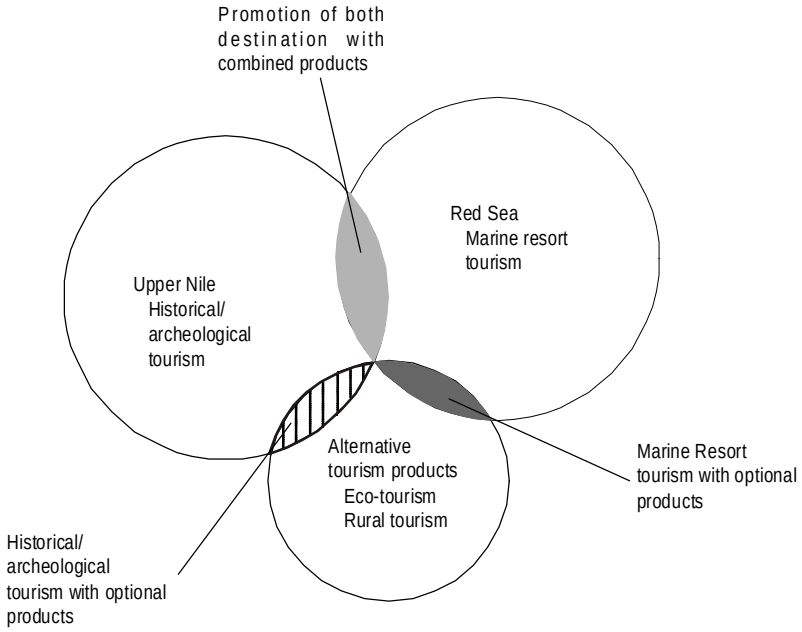
- Emerging market: People of middle and upper segments in Central-Eastern Europe (Switzerland, Romania, Bulgaria, etc.), East Asia (China, Korea and Japan), Russia and South America, etc.) who already have the budget or can save enough money to travel to Egypt;
- Potential market: "Senior Tourist Group" or "baby boomers" in developed countries in Europe, North America and East Asia, and in Australia for heritage tourism and beach resort;

- Domestic market: Egyptians that have increased income in accordance with economic development.

2.3.3 Diversification and Integration of Tourism Product and Market Image

As mentioned in section 2.2, diversification of tourism products is needed to develop tourism in Upper Egypt with full use of tourism resources. This requires new efforts to market development. Figure 2.3.1 shows an image of market development in the diversification and integration of tourism products.

Figure 2.3.1 An image of Market Development



Source: JICA Study Team

(1) Product combination of History and "Sun and Beach"

This combination intends that visitors enjoy historical/archeological products in Upper Nile and marine resort products in the Red Sea. The importance of tourism products is viewed differently by origin market. For long haul market, the main product is historical/ archeological tourism and the optional product is marine resort tourism in the Red Sea. Otherwise, for short and middle haul markets, both products are interchangeable; the combination can be historical/archeological tourism and marine resort tourism as main product and optional product respectively, or optional product and main product respectively. By the use of any of these combinations, the following results are expected:

- Contribute to extend the length of stay;
- Expand the opportunity to obtain wide market segment from both destinations; and
- Offer highly competitive and qualified tourism products for Incentive and Convention market as optional tour.

(2) Sophisticated product development and marketing

International visitors are becoming experienced visitors in that they now want high-qualified tourism services and look for something different from their previous travels.

Although Upper Nile has been established as a well-known destination, that kind of reputation cannot compensate for the dissatisfaction of tourists with the scenery of historical sites, visitor

facilitation and services. Images of historical and cultural tourism in Egypt should be improved in accordance with improvements made on information system, interpretative facilities site museums, transportation service, traditional handicrafts, and events and performance, etc.

(3) Combination of alternative tourism product and market promotion

Increased awareness of global environment and social issues has brought out a new trend of alternative tourism which concentrates on the natural environment and indigenous cultures of the world. Although alternative tourism products have yet to be developed in Upper Egypt, the area boasts a wide range of tourism resources with great potential as alternative tourism products such as cultural events (Nubian or Bedouin culture), desert adventure tourism (Safari, wildlife sightseeing), religious tourism, therapeutic tourism, etc. And those products should be promoted together with major products to the international market. An example of combination of alternative products is shown in Figure 2.3.2.

Figure 2.3.2 Possible Combination of Products and Market Promotion

Tourism Products	Upper Nile		Red Sea
Historical/Archeological Tourism	Ancient Heritage	>>	Optional
Cultural Events Tourism	Ancient, Nubian Cultural Events	<<>>	Bedouin Life and Cultural Events
Rural Area Green Tourism	Orchard Garden & Park	>>	Optional
Adventure Tourism	Nile Valley Safari & Nile River Rafting	<<>>	Mountain Desert Adventure
Nature Eco-tourism	Nile River Environment	<<>>	Marine Protected Areas
Holiday Resort Tourism	Optional	<<	Beach and Marine Resort
Water Sports Tourism	Nile River Canoeing and Yachting in Lake Nasser	<<>>	Diving, Yachting, Surfing, Other Water Recreational Sports
Special Interest Tourism	Religious, Volunteer, etc	<<>>	Therapy, Bedouin Culture, etc
Convention Tourism	Small-scale Convention		Major Convention Center

High potential products Possibility of new product development

>> Promotion of optional products <<>> Promotion of product combination

Source: JICA Study Team

2.3.4 Improvement of Hospitality and Image of Tourism

Although Egypt has built a reputation as a popular tourism destination for international visitors, complaints have remained about tourism services, according to the tourist expenditure surveys conducted by the Egyptian Government. While the complaints of individual visitors have always been overshadowed by the majority of tour package groups that seldom encounter inconvenience and problems, sometimes even they have to deal with some kind of problem, such as cancellations or delays of flights or overbooking of hotels. Those situations might give rise to serious negative impressions about tourism in Egypt. In order to address this, broad efforts are needed as follows:

(1) Introduction of management system of qualified tourism service in tourism destinations

Educational program and training opportunity should be provided, especially in the Red Sea where many tourism industries require to be developed. Tourism facilities, such as hotels and restaurants, also should be upgraded in terms of offering safety and qualified services.

(2) Promotion of tourism awareness in cooperation with local communities

In order to upgrade the quality of tourism services and the environment of tourism destinations, community participation and cooperation is essential. It is necessary to prepare for guidance,

adequate program for tourism, environmental awareness program, such as sanitation and solid waste disposal, and understanding of the benefit of tourism development by the central and local administration.

On the other hand, security concerns in Upper Nile caused by the Luxor incident have brought grave damage to tourism in Egypt. Local communities should also cooperate in the creation of a safe and comfortable tourism destination through appropriate awareness program for tourism security.

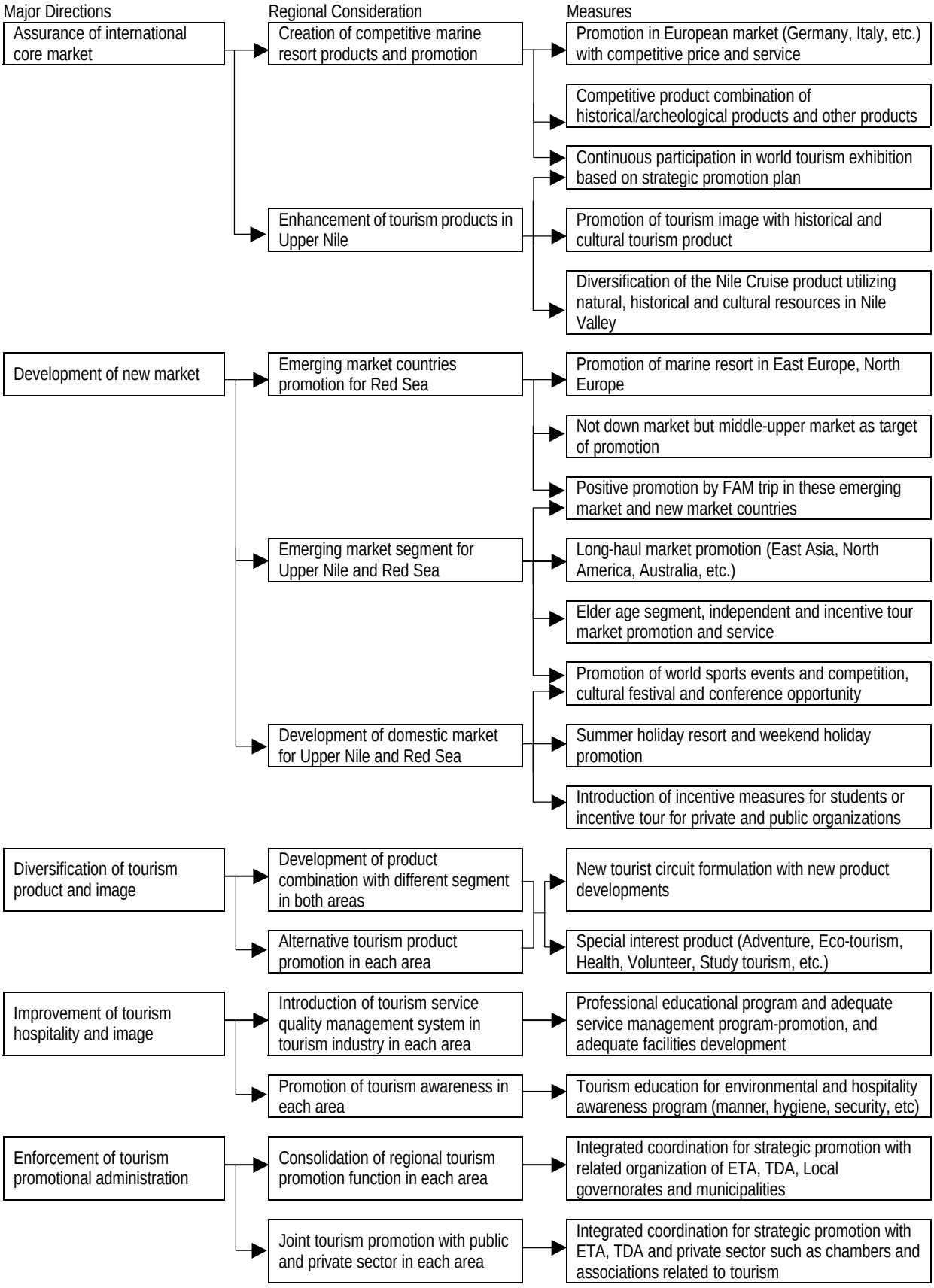
2.3.5 Enforcement of Tourism Promotions Administration

Tourism promotional activities by the public and private sectors in the national level for the international market have brought a certain measure of success. On the other hand, regional promotional activities including ETA offices and local governorates are limited. In conjunction with the diversification of tourism products and market promotion, it is necessary to enforce the promotional function of regional offices that have information on regional tourism resources and products. The following are needed:

- Strategic promotion by ETA, TDA, and local governorates with uniform promotional activities; and
- Joint tourism promotions with related agencies and private sector are more efficient when resources are limited.

Figure 2.3.3 shows market development efforts.

Figure 2.3.3 Market Development Process



Source: JICA Study Team

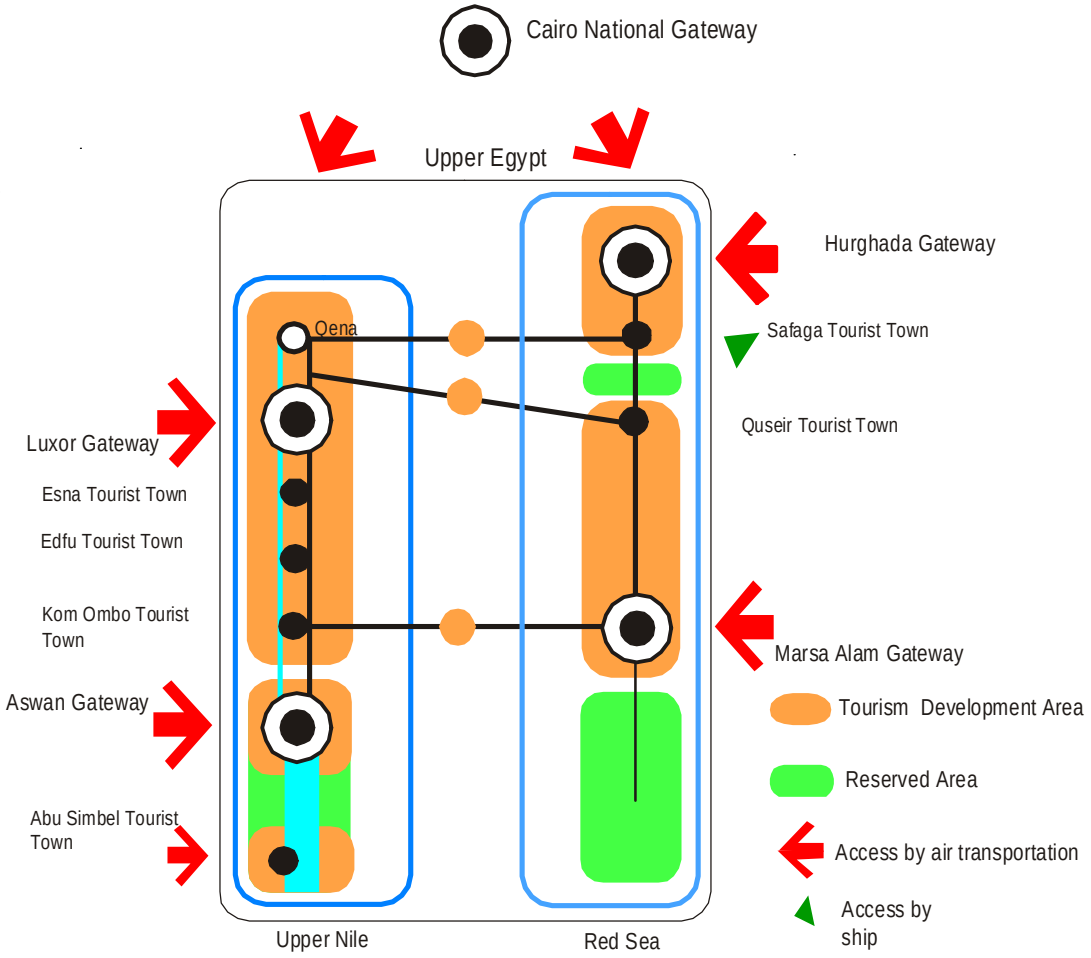
2.4 Tourism Structure

2.4.1 Tourism Structure in Diversification of Tourism Products

The Study Team recommends the introduction of new tourism products in addition to historical/archeological tourism in Upper Nile and marine tourism in the Red Sea, in order to expand the international visitor market and extend the average length of stay. Development of new products consisting of Nubian and Bedouin tourism, Safari tourism, handicraft center and sports base are recommended from the point of diversification of tourism products with adequate environmental management. It is also recommended to improve and formulate various tourism circuits connecting Upper Nile with the Red Sea.

According to the current condition of city development and potentials of product developments, the tourism structure in Upper Egypt is illustrated in Figure 2.4.1.

Figure 2.4.1 Spatial Tourism Structure in Upper Egypt



Source: JICA Study Team

2.4.2 Roles and Functions of the Cities

From the point of tourism development, cities in Upper Egypt are classified as “Gateway” or “Tourist Town.” Gateways, which include Luxor, Aswan, Hurghada and Marsa Alam, have international airports and can accept international visitors directly. They are also major accommodation bases, major centers for information supply and tourist service, and goods distribution. Gateways also have the functions of a tourist town. Tourist towns, such as Qena, Esna, Edfu, Kom Ombo, Abu Simbel, Safaga and Quseir, are accommodation bases, centers for

tourist information, tourist services, bases for one-day trip, transit base and goods distribution centers.

The roles and functions of cities in Upper Egypt are summarized in Table 2.4.1. They should be applied in order to form a rational and efficient tourism structure. Especially, urban development as tourism service town in the Red Sea is necessary to support the tourism industries.

Table 2.4.1 Functions and Roles of Cities

Category	Location	Tourism activities	Function	Network
Gateway	Upper Nile Luxor Aswan Red Sea Hurghada Marsa Alam	• Air transportation access & gateway • Major accommodation base • Tourist information service center • Tourism service base (agents, transportation, restaurant, shop, security, hospital, convention, etc.)	• Airport • Base for grand circuit and one- day trip • Distribution Center	• International Scheduled and Chartered flight • Cruise • Train • Bus and Taxi
Tourist Town	Upper Nile Qena, Esna, Edfu Kom Ombo Abu Simbel Red Sea Safaga, Quseir	• Accommodation base • Tourist information services • Tourism services (agent, restaurant, souvenir shop, security, etc.) • Tourism material distribution	• Excursion destination or station • Base of one-day trip • Distribution Center	• Domestic Flight (Abu Simbel) • Cruise • Train • Bus and Taxi

Source: JICA Study Team

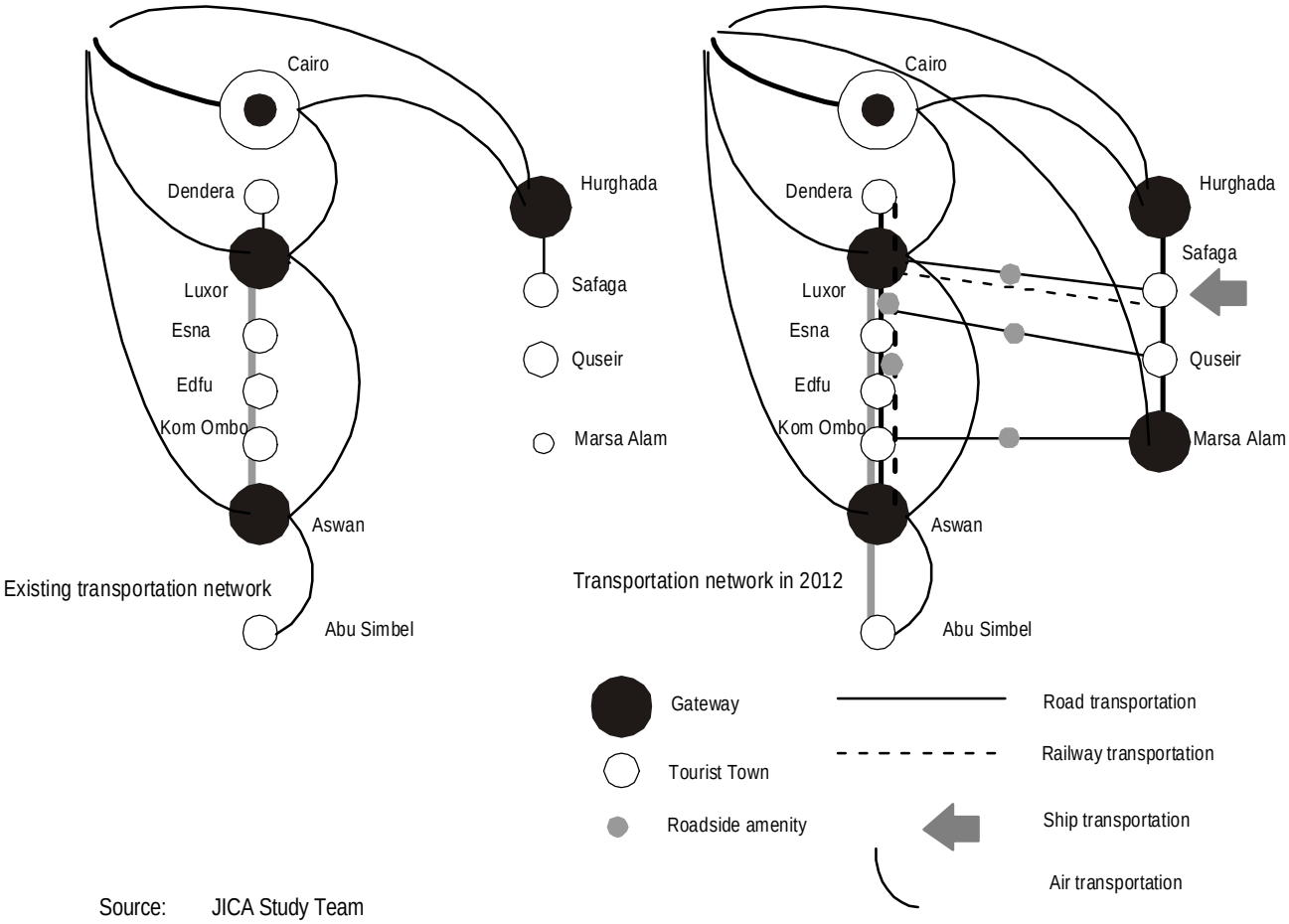
2.4.3 Improvement of Transportation Network

Taking account of expansion of transportation capacity and diversification of measures of travel, Upper Egypt needs improvements of not only transportation infrastructure such as airports, road network, railway and Nile Cruise facilities, but also transportation services as a multi-modal transportation network. The following improvements are needed:

- Improvement of international gateways (improvement of airports and ports);
- Improvements of national highways with roadside amenities (rest place, attractions); and
- Improvements of the Nile Cruise and railway as tourism products with facility improvement.

Figure 2.4.2 shows the schematic improvements of transportation in Upper Egypt.

Figure 2.4.2 Improvement of Multi-modal Transportation Network



Source: JICA Study Team

2.4.4 Development Scenario of Tourism Structure

Considering time frame and tourism functions, tourism development consists of three stages, which represent the growth pattern of tourism.

(1) First Stage: Reinforce products in Upper Nile and the Northern Red Sea destinations.

The capacity of the Nile cruise, which is one of the most important products of historical/archeological tourism in Upper Nile, has to be reinforced, taking account of its environmental and operational capacities.

Marine resort development in the Red Sea should be implemented with consideration to adequate urbanization and coastal environmental management and necessary institutional arrangement. New Marsa Alam airport will have a role of new gateway of the southern part of the Red Sea.

(2) Second Stage: Diversify tourist destinations and establish four gateways

With four gateways achieving their full function in this stage, the development of tourism products will be important to generate the synergy effect of historical/archeological tourism and marine tourism in Upper Egypt.

The road network between Upper Nile and the Red Sea, playing an important role to connect both destinations with each other, should be improved to provide visitors with convenient tourist facilities.

(3) Third Stage: Integrate and establish Upper Egypt's tourism circuit

Based on the integration of tourism products, tourists will be able to enjoy a variety of tourism products under a well-managed environment and very hospitable services.

In this stage, various transportation modes by land, water, and rail should be necessary to provide various measures for travel and to meet the transportation demand.

Table 2.4.2 shows the tourism product diversification scenarios.

Table 2.4.2 Tourism Development Scenarios and Development Issues

	First stage: 2002	Second stage: 2007	Third stage: 2012
Development strategy	To reinforce Upper Nile and establish the Northern Red Sea	To diversify tourist destinations and formulate gateways	To integrate and establish Upper Egypt's tourism circuit
Development scenario	• Improvements of airport facilities at Luxor, Hurghada, Abu Simbel • Development of New airport in Marsa Alam • Improvements of cruise facilities in the Nile River and conservation of historical environment • Developments and improvement of visitor facilities and tourist services for historical/archeological tourism in Upper Nile • Establishment of environmental conservation methods in the Red Sea coast • Improvement of NR 77 with development of Highway Oasis	• Establishment of four major international gateways in Upper Egypt • Improvements of NR 88, 99 with Highway Oasis development • Improvement of Safaga Port for international cruise ships • Expansion of cruise facilities in the Nile River • Development of new tourism products in Upper Nile • Acceleration of marine resort developments in the Red Sea with development of service town	• Establishment of various Tourism Circuit in Upper Nile and the Red Sea • Acceleration of marine resort development in the Mid Red Sea coast • Start tourism development in Lake Nasser • Improvement of railway facilities between Qena and Aswan, and to start operation between Qena and Safaga

Source: JICA Study Team

2.4.5 Structure in Upper Nile

(1) Structure for tourism development in Upper Nile

Upper Nile is divided into two parts: Qena-Aswan Zone and Lake Nasser Zone. Luxor, Esna, Edfu, Kom Ombo and Aswan in Qena-Aswan Zone have already been established as well-known destinations in the world. Although tourism development in Lake Nasser Zone is limited until now, new tourism developments are being planned, such as the Toshka projects, which are expected to start soon.

Luxor City and Aswan City will function as international gateways. Aswan City will also play an important role in serving both Qena-Aswan Zone and Lake Nasser Zone. Qena, Esna, Edfu, Kom Ombo and Abu Simbel will serve as tourist towns.

(2) Improvement of Gateway and Tourist Town

Since Luxor and Aswan are to be the gateways to Upper Nile, airport improvements are necessary. The airport terminal in Luxor needs to be improved in order to handle more international visitors. Aswan airport has enough capacity to accept international visitors now. But phased expansion of airport facility will be needed in accordance with the development of Toshka Tourism Center. There is also a need for both cities to improve tourism services such as tourist information service.

Esna, Edfu, Kom Ombo and Abu Simbel have not developed as Tourist Towns at all. Accommodation development, visitor service facilities, visitor information facilities have to be

developed from now on.

Table 2.4.3 Improvement of Gateways and Tourist Towns

City and town	International Gateway	Tourist Town
Luxor	◎	-
Esna	-	●
Edfu	-	●
Kom Ombo	-	●
Aswan	○	-
Abu Simbel	-	●

Note: ●=Development of the function,
◎=Enhancement of existing function,
○= Supplemental improvement
Source: JICA Study Team

2.4.6 Structure in the Red Sea

(1) Structure for tourism development in the Red Sea

A dual gateway structure is proposed for the establishment of an international coastal resort destination covering a stretch of more than 500 km on the northern half of the Red Sea coast. About 215 km of the northern Red Sea coast could be supported by Hurghada gateway functions. Around 305 km of the southern Red Sea coast could be supported by a new gateway, which is presently being constructed at Marsa Alam.

TDA tourist center developments and beachfront tourism development in the cities will create additional job opportunities giving rise to urban settlement in the cities and TDA tourist centers. Future industry and population distribution will serve as guides to form a regional structure. A future regional structure is proposed in Figure 2.4.4.

(2) Three zones for tourism development in Red Sea

Tourism development in the Red Sea covers three zones for tourism development and coastal and marine conservation.

Northern Red Sea Zone

The Northern Red Sea Zone from El Gouna to northern Safaga has accumulated hotel and accommodation stocks of 24,000 rooms. Under development are 22,000 rooms along 100 km of main road. The area is being developed on the potential of its rich marine natural resource, such as coral reef and small offshore islands.

The appropriate scale of development for the Northern Red Sea Zone is around 50,000 hotel and accommodation rooms, which will mostly be developed up to the year 2007. In the northern Red Sea coast, uncontrolled hotel development in Hurghada City reclaimed and changed the shape of the original shoreline and damaged rich natural marine resource. For the mid- and long-term future, the most important tourism resources, mostly damaged fragile marine natural resource and habitat, should be rehabilitated by the proposed environmental management measures.

Safaga will act as the region's center of transportation, trading and material processing industries to support tourism development in the Red Sea coast.

Mid Red Sea Zone

It is proposed that the 200 km Mid Red Sea Zone from Quseir to south of Marsa Alam be the next major coastal tourism development area. Rich marine natural resources, habitat and terrestrial natural resources and traditional/historical culture could be major development

potentials in the Mid Red Sea Zone. BOT project of Marsa Alam International Airport may boost tourism development in the Mid Red Sea Zone after 2002.

Southern Red Sea Zone

Over 500 km of the Southern Red Sea Zone from Hamata to Halaib is proposed as nature conservation area, which should be coordinated and reassessed with the present and proposed conservation zoning and environmental management plans by EEAA and GEF.

(3) Improvement of Gateway and Tourist Town

Hurghada and Marsa Alam are serving as gateways to the Red Sea. The improvement of airport terminal, development of new runway, etc. are needed in Hurghada in order to accept more international visitors. The construction of airport in Marsa Alam has to proceed as scheduled in order to carry out steady tourism development in the Southern Red Sea Zone. And phased expansion of airport facility will be needed in accordance with the increase of international visitor arrivals. There is also a need for both cities to improve tourism services such as tourist information service. Especially urban development of Marsa Alam is important to continue tourism development in the Red Sea.

Safag and Qusir have not developed as Tourist Towns at all. Accommodation development, visitor service facilities, visitor information facilities have to be developed from now on.

Table 2.4.4 Improvement of Gateways and Tourist Towns

City and town	International Gateway	Tourist Town
Hurghada	◎	-
Safaga	-	●
Qusir	-	●
Marsa Alam	●	-

Note: ●=Development of the function,
◎=Enhancement of existing function,
○= Supplemental improvement

Source: JICA Study Team

2.5 Development Framework

2.5.1 Conditions and Distribution Policy for Accommodation Development

(1) Conditions of accommodation development framework

According to the national tourism development target, the conditions of regional tourism development framework are set as shown in Table 2.5.1.

Table 2.5.1 Conditions of Regional Accommodation Development

Target year	2012
Priority region	Upper Egypt region
National target number of tourist nights	132 million tourist nights
National target number of rooms	400 thousand rooms

Source: JICA Study Team

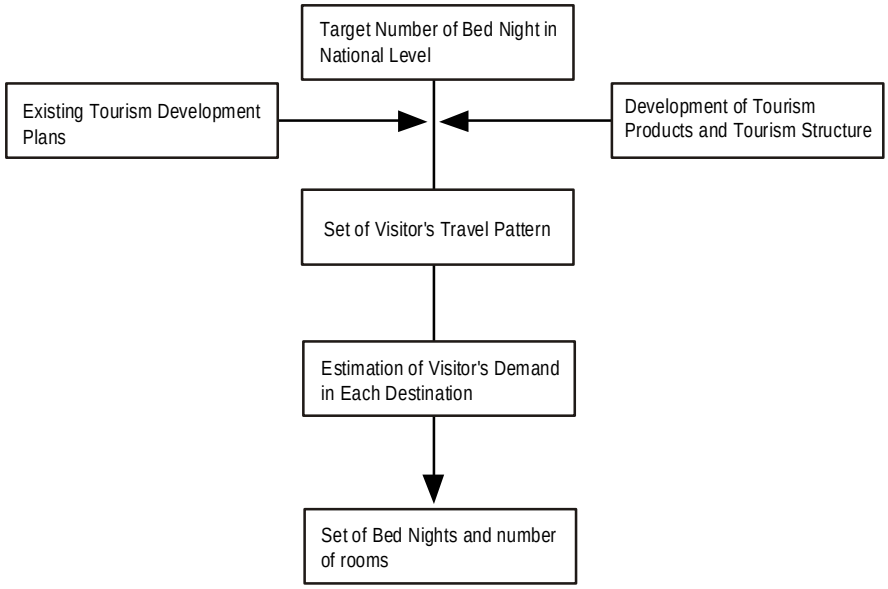
(2) Policy for accommodation development

Taking account of the characteristics of Upper Egypt, such as tourism products, market potentials and development conditions, the accommodation development should be set strategically. The following key strategies are prepared:

- Coordination of existing tourism development plans;
- Sustainable use of tourism resources in the Red Sea and environmental consideration of marine environment;
- Expansion and dispersion of accommodation in order to avoid congestion in limited historical sites in Upper Nile;
- Consistency with the formulation of tour circuits, in terms of intra-regional (Upper Nile and Red Sea) and inter-regional (connecting with Cairo and other regions) circulation; and
- Promotion of visitor flow between Upper Nile and the Red Sea.

A workflow to determine target numbers of bed nights and accommodation rooms is presented in Figure 2.5.1. Target number of bed nights in national level is a precondition for regional target setting.

Figure 2.5.1 Workflow of Target Number Setting of Tourist Nights and Accommodation



Source: JICA Study Team

2.5.2 Accommodation Distribution

(1) Methodology of distribution

Based on the national target figures, numbers of accommodation rooms are set according to the following step-wise process:

STEP-1: Set-up of inter-regional travel pattern

Set-up of typical travel pattern (access to gateway, stay in each destination) of international visitors and Egyptians between Upper Egypt and other regions, taking account of existing and potential tour circuits.

STEP-2: Target of key figures for accommodation development

Estimation of target figures for accommodation development, such as length of stay, guests per room, and share of international and Egyptian hotel guests.

STEP-3: Examination of visitor arrivals generated by target accommodation capacity

Examination of bed nights at hotels by travel pattern in 2012 based on STEP-1 (travel pattern) and STEP-2 (target figures).

STEP-4: Target set for distribution of bed nights and accommodation rooms

Estimation of target numbers of bed nights and accommodation capacity based on above examination.

(2) Set-up of inter-regional travel pattern

A tourist flow model, as typical travel pattern by both international visitors and Egyptians in the future, has been set through the analyses of present travel patterns as shown in Table 2.5.2. The following assumptions are also adopted:

- A large number of visitors to the Red Sea will generate additional visitors to Upper Nile by way of optional historical tours to marine resort tourism.

- The Marsa Alam Airport will function as one of the major gateways to the Red Sea.
- Charter flights from foreign countries will continue to be one of the major direct access methods to Upper Egypt.
- Egyptian visitors from Cairo and other regions will play an important role as market sources to Upper Egypt.

Table 2.5.2 Travel Pattern in Upper Egypt in 2012

Tourist Type	Travel Pattern of by each Sub-region			
	Upper Nile	Share (%)	Red Sea	Share (%)
International visitors	1. CA - UPN – CA	5	1. CA - RED - CA	5
	2. CA – UPN	5	2. CA - RED	5
	3. UPN – CA	15	3. RED - CA	5
	4. UPN (only)	30	4. RED (only)	60
	5. UPN – RED	7	5. RED - UPN	10
	6. RED – UPN	19	6. RED - UPN - RED	10
	7. RED - UPN – RS	19	7. UPN - RED	5
	Total	100	Total	100
Egyptian visitors	1. (CA/Others) – UPN	90	1. CA/Others <<->> RED	90
	2. UPN <<>> RED	10	2. UPN <<->> RED	10
	Total	100	Total	100

Note: CA= Cairo, UPN= Upper Nile sub-region, RED= Red Sea sub-region
Source: JICA Study Team

(3) Target of key figures of accommodation

The average length of stay of international visitors and Egyptians is affected by travel pattern and type of tourism. The following are taken into consideration when figures were estimated as shown in Table 2.5.3:

- Visitors of marine resort tourism in the Red Sea will stay longer than visitors of historical/archeological tourism in Upper Nile, and visitors of marine resort tourism will include an optional historical tour to Upper Nile.
- Egyptians as weekend visitors or summer holidaymakers will tend to have a short vacation.
- The figures for hotel guests staying with their family in one room will be higher for Egyptians than for international visitors.

Table 2.5.3 Target Key Figures for Accommodation Development

Category	Sub-region	Tourist	1997	2002	2007	2012
Length of Stay (day)	Upper Nile	International	5.05	5.00	4.75	4.50
		Egyptian	4.90	3.00	3.00	3.00
	Red Sea	International	5.75	6.00	6.50	7.00
		Egyptian	3.78	4.00	4.25	4.50
Guests per Room	Both	International	1.5			
		Egyptian	1.8			
Share of Bed Nights (%)	Upper Nile	International	97.1	95.0	90.0	85.0
		Egyptian	2.9	5.0	10.0	15.0
	Red Sea	International	97.5	95.0	90.0	85.0
		Egyptian	2.5	5.0	10.0	15.0

Source: JICA Study Team, Tourism in Figure1997/ Ministry of Tourism

(4) Potential bed nights generated by inter-regional travel

According to STEP-1 and STEP-2, the target number of bed nights in hotels is estimated as follows:

Table 2.5.4 Distribution of Bed Nights in Hotels by Travel Pattern in 2012

(Unit million)

	Upper Nile		Red Sea	
International Visitors	1. CA - UPN - CA	0.6	1. CA - RED - CA	2.7
	2. CA - UPN	0.6	2. CA - RED	2.6
	3. UPN - CA	1.9	3. RED - CA	2.6
	4. UPN (only)	5.6	4. RED (only)	24.2
	5. UPN – RED	1.2	5. RED - UPN	4.0
	6. RED - UPN*	2.9	6. RED - UPN - RED	4.0
	7. RED - UPN - RED*	1.2	7. UPN - RED*	0.5
	Sub-total	14.0	Sub-total	40.6
Egyptians	1. (CA/Others) – UPN	2.5	1. CA/Others <<->> RED	7.2
	2. UPN <<->> RED	0.3	2. UPN <<->> RED	0.8
	Sub-total	2.8	Sub-total	8.0
Total		16.8		48.6

Note: Upper Nile visit ratio from Red Sea tourist = 10%, Red Sea visit ratio from Upper Nile= 8%
CA= Cairo, UPN= Upper Nile sub-region, RED= Red Sea sub-region
Refer to Table 2.5.4(a).

Upper Nile	Length of stay (day)				Red Sea	Length of stay (day)			
	CA	UPN	RED	Total		CA	UPN	RED	Total
Internatinal visitors					Internatinal visitors				
1. CA-UPN -CA	3	4	-	7	1. CA-RED-CA	2	-	8	10
2. CA - UPN	3	4	-	7	2. CA - RED	1	-	9	10
3. UPN - CA	3	4	-	7	3. RED - CA	3	-	9	10
4. UPN (only)	-	6	-	6	4. RED (only)	-	-	7	7
5. UPN-RED	2	5	2	9	5. RED-UPN	-	2	7	9
6. RED – UPN	-	2	6	8	6. RED-UPN-RED	-	2	7	9
7. RED-UPN-RED	-	2	6	8	7. UPN-RED	-	6	2	8
Egyptian					Egyptian				
1. CA/Others-UPN	-	3	-	3	1. CA/Others-UPN	-	4.5	-	4.5
2. UPN-RED	-	3	-	3	2. UPN- RED	-	4.5	-	4.5

Source: JICA Study Team

(5) Target set for distribution of bed nights and accommodation rooms

According to the above steps, the target number of bed nights in Upper Egypt is estimated in Table 2.5.5. In 2012, bed nights of Upper Egypt will be 65.4 million, or 49.4% of total bed nights in Egypt. Table 2.5.6 shows the number of rooms required in Upper Egypt, i.e., 50,000 rooms in Upper Nile and 13,000 rooms in the Red Sea.

Table 2.5.5 Target Number of Bed Nights

(Unit: million)

		1997*		2002		2007		2012	
		Number	Share	Number	Share	Number	Share	Number	Share
Upper Nile	International	3.0	9.0	7.8	15.6	10.4	13.0	14.0	10.4
	Egyptian	0.6	2.0	0.5	1.0	1.3	1.6	2.9	2.2
	Total	3.6	11.8	8.3	16.6	11.7	14.6	16.9	12.5
Red Sea	International	4.9	16.4	14.0	28.0	23.9	29.8	40.6	30.7
	Egyptian	0.5	1.7	0.2	0.3	0.9	1.1	2.5	1.9
	Total	5.5	18.1	14.2	28.3	24.8	30.9	43.1	31.9
Other Sub-regions**		21.1	70.1	27.6	55.2	43.8	54.5	75.2	55.6
Total		27.7	100.0	48.7	100.0	78.7	100.0	132.4	100.0

Note: * Figures in 1997 are actual numbers. ** Major six destinations in Egyptian Tourism in Figures 1997.
Source: JICA Study Team

Table 2.5.6 Number of Rooms Required in Upper Egypt

(Unit: thousand rooms)

	1997*		2002		2007		2012	
	Number	Share	Number	Share	Number	Share	Number	Share
Upper Nile	18.2	24	25.0	17	35.0	15	50.0	12
Red Sea	11.1	15	43.0	29	75.0	31	130.0	33
Other Sub-regions	46.4	61	82.0	54	130.0	54	220.0	55
Total	75.7	100	150.0	100	240.0	100	400.0	100

Note: * Actual number
Source: JICA Study Team

2.5.3 Flow of International Visitors

(1) Inter-regional flow of international visitors in 2012

The flow of international visitors is generated based on the future accommodation development. The volume is estimated taking into account figures of inter-regional travel pattern and those for the development framework.

Inter-regional travel pattern

According to the future travel pattern in Upper Egypt and number of hotel guests, the following flow of international visitors is estimated as shown below.

Table 2.5.7 Flow of International Visitors in 2012

(Unit: thousand persons)

Upper Nile	Volume	Red Sea	Volume
1. CA - UPN – CA	155	1. CA - RED - CA	339
2. CA – UPN	155	2. CA - RED	289
3. UPN – CA	465	3. RED - CA	289
4. UPN (only)	930	4. RED (only)	3,468
5. UPN - RED	239	5. RED - UPN*	578
6. RED - UPN*	578	6. RED - UPN - RED*	578
7. RED - UPN - RED*	578	7. UPN - RED	239
Total	3,100	Total	5,780

Note: CA= Cairo, UPN= Upper Nile sub-region, RED= Red Sea sub-region
10% of all hotel guests in Red Sea are assumed to visit Upper Nile, and ratio of visitors from Upper Nile to Red Sea is 8% of all hotel guests.
Source: JICA Study Team

Inter-regional flow of international visitors in 2012

Based on the above estimation, inter-regional flow of international visitors is estimated as indicated in Table 2.5.8 and Figure 2.5.2. This flow includes all transportation modes. Total number of international visitor arrivals in Upper Nile (3.10 million) and the Red Sea (5.78million) comes from bed nights of international visitors (14.0 million and 40.6 million) divided by average length of stay (4.50 and 7.00).

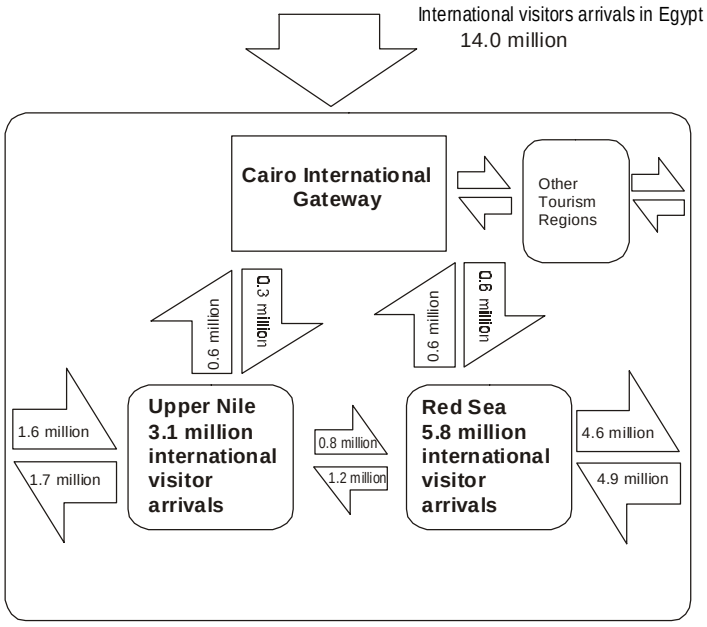
Table 2.5.8 Inter-regional Flow of International Visitors

	Flow of visitors in Upper Nile				Flow of visitors in Red Sea			
		Flow from other sub-regions		Direct flow		Flow from other sub-regions		Direct flow
	Total	Cairo	RedSea	From OC*	Total	Cairo	Upper Nile	From OC*
In Flow	3.10	0.31	1.16	1.63	5.78	0.63	0.24**	4.91
Out Flow	3.10	0.62	0.82	1.66	5.78	0.63	0.58**	4.57
Total	6.20	0.93	1.97	3.30	11.56	1.26	0.82	9.49

Note: * OC indicates the flow form other countries directly by the scheduled or non-scheduled flight and others.
** Exclude round trip flow from Red Sea.

Source: JICA Study Team

Figure 2.5.2 Inter-regional Flow of International Visitors in 2012



Source: JICA Study Team

(2) Intra-regional flow of international visitors in Upper Egypt in 2012

According to the inter-regional flow of international visitors, intra-regional flow within Upper Egypt is then estimated using the following assumptions:

- Volume of flow within Upper Egypt is based on hotel guests;
- Set-up of typical travel pattern (access to gateway, stays in each destination) for international visitors within Upper Egypt, taking account of existing and potential tour circuits;
- Transportation modes of flow consist of three types: domestic airlines, cruise ship and land transportation (bus, taxi, train, etc).
- The flow between Upper Nile and the Red Sea is assumed to use land transportation.
- The flow between Aswan and Abu Simbel assumes that one-day-trip visitors will decrease gradually according to the increase of accommodation development by the Toshka projects in Nasser.

Volume of international visitors generated by accommodation capacity

Table 2.5.9 shows the examination of bed nights in Upper Nile based on accommodation capacity in section 2.5.2, taking account of the distribution of the Nile cruise facilities.

Table 2.5.9 Bed Nights of International Visitors by Transportation Mode

(Unit: million)

Year / Tour type	2002		2007		2012	
	Number	Share	Number	Share	Number	Share
Air transport and Land Transport	4.1	53	6.3	61	9.6	69
Cruise	3.7	47	4.1	39	4.4	31
Total	7.8	100	10.4	100	14.0	100

Note: Refer to Table 2.5.10(a).

Category	Tour type	Tourist	2002	2007	2012
Length of Stay	Ordinal Tour	International	5.00	4.60	4.30
	Nile Cruise	International	5.00	5.00	5.00
Guest per Room	Both	International	1.5		

Source: JICA Study Team

The flow of international visitors by land transportation between Upper Nile and the Red Sea will be generated mainly by accommodation development in the Red Sea and the diversification of tourism products. In addition, the flow of international visitors is also generated by the development of tourism products. The share of international visitors traveling between Upper Nile and the Red Sea, and the arrivals to gateway access are shown in the following table:

Table 2.5.10 Share of Tourist Flow by Route

(Unit: percent)

Highway Access	2002	2007	2012
NR 77	84	64	40
NR 88	7	16	25
RR 99	9	20	35
Total	100	100	100

Note: Nile cruise tourists are assumed to use both gateways (Luxor & Aswan) equally.
Refer to table 2.5.11(a).

	2002	2007	2012
Luxor	49	46	40
Aswan	49	48	47
Abu Simbel	1	6	13
	100	100	100

Source: JICA Study Team

The share of tourist flow by transportation mode, i.e. to Nile cruises and within Upper Nile, is distributed as follows:

Table 2.5.11 Share of Tourist Flow by Transportation Mode

(Unit: percent)

		2002	2007	2012
Cruise	Luxor-Aswan	44	32	23
	Lake Nasser	1	1	1
	Sub-total	45	33	24
Others (Air and land)	Luxor-Aswan	54	61	64
	Lake Nasser	1	6	12
	Sub-total	55	67	76
Total		100	100	100

Source: JICA Study Team

Number of intra-regional visitors generated by travel pattern within Upper Nile

Typical travel pattern of international visitors has been set through the analyses of present travel patterns such as tour programs of several travel agents. The following assumptions have been considered as well:

- Trips between Luxor and Aswan will be a major tour route by Nile Cruise and other transportation modes;
- In accordance with the increase of visitors from the Red Sea, short trips to historical tourism destinations, such as Luxor and Aswan, will become popular;
- Flow of tourists within Lake Nasser and Abu Simbel assumes that one-day-trip tourists will be dominant in the early stage until the increment of accommodation to be developed in the middle and long-term.

Table 2.5.12 Travel Patterns within Upper Nile

(Unit: percent)

	Travel Pattern	Intra-region flow ratio		
		2002	2007	2012
From Luxor	LUX	-	1	5
	LUX-ASW	80	75	70
	LUX-ASW-ABS	15	20	20
	LUX-(ASW)-ABS	5	4	5
	Total	100	100	100
From Aswan	ASW	-	1	5
	ASW-LUX	75	70	65
	ASW-ABS	1	4	5
	ASW-ABS-LUX	24	25	25
	Total	100	100	100
From Abu Simbel	ABS-ASW	5	10	15
	ABS-ASW-LUX	70	65	60
	ABS-(ASW)-LUX	25	25	25
	Total	100	100%	100%

Note: LUX=Luxor, ASW= Aswan, ABS= Abu Simbel, ( ) = transit without stay

Source: JICA Study Team

Demand on intra-regional flow in 2012

Based on the above assumptions and estimations, the intra-regional tourist flow (including all transportation modes) is determined as shown below.

Table 2.5.13 Flow of International Visitors in 2012 (1)

(Unit: million persons)

Air Transportation		Land transportation		Air Transportation	
Qena/Luxor	1.7	R 77	0.8	Hurghada	4.3
		R 88	0.5		
Aswan	2.0	R 99	0.7	Marsa Alam	6.5
Abu Simbel	0.5				
Total	4.2	Total	2.0	Total	10.8

Note: 4.2 million tourist = 6.2 (total in-out flow in Upper Nile) - 2.0 (from Red Sea)
10.8 million tourist = 11.6 (total in-out flow in Red Sea) - 0.8 (from Upper Nile exclude round trip from Red Sea)

Source: JICA Study Team

Table 2.5.14 Origin of Tourists by Gateways to Upper Nile

(Unit: million persons)

Area		2012
Luxor/Qena	Direct	0.9
	Via Cairo/other	0.8
	Sub-total	1.7
Aswan	Direct	1.1
	Via Cairo/other	0.9
	Sub-total	2.0
Abu Simbel	Direct	0.0
	Via Cairo/other	0.5
	Sub-total	0.5
	Total	4.2

Source: JICA Study Team

Table 2.5.15 Origin of Tourists by Gateways to the Red Sea

(Unit: million persons)

Area		2012
Hurghada	Direct	3.0
	Via Cairo/other	1.3
	Sub-total	4.3
Marsa Alam	Direct	4.3
	Via Cairo/other	2.2
	Sub-total	6.5
	Total	10.8

Source: JICA Study Team

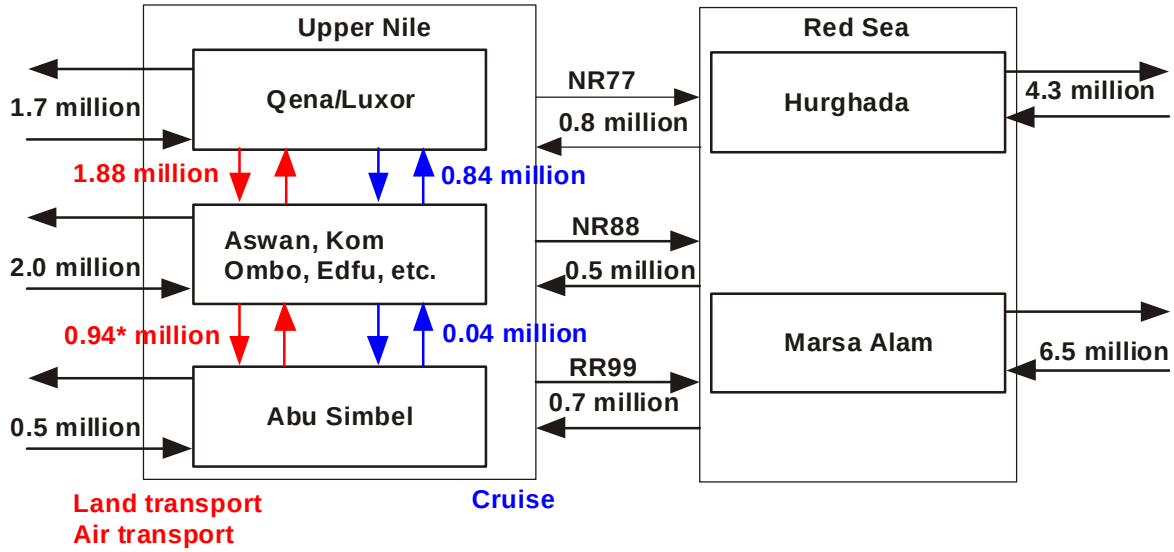
Table 2.5.16 Flow of International Visitors in Upper Nile Cities

(Unit: million)

Area		2012	
Luxor-Aswan	Cruise	0.84	
	Others	1.88	
	Sub-total	2.72	
Lake Nasser	Cruise	0.04	
	Others	0.94*	(0.48)**
	Sub-total	0.89	
Total		3.61	

Note: * Includes day trip from Luxor and Aswan, ** Not including day trips.
Source: Study Team

Figure 2.5.3 International Visitor Demand in 2012



Note: Black figures show Cairo+others and/or direct flights. In Abu Simbel, domestic flights only. * Includes one-day trip
Source JICA Study Team

2.6 Tourism Development Plan for Upper Nile

2.6.1 Background and Policy

(1) General background

The Nile Valley, with its Pharaonic historical heritage, and Lake Nasser, formed in 1971, are the essential elements of Upper Nile. Upper Nile with the Nile River and Lake Nasser has four major historical towns and some regional service towns. Agricultural land along the Nile River offers a typical landscape in the Nile Valley but with a unique atmosphere that attracts visitors.

In comparison with the Red Sea, there is not much TDA intervention of tourism development in Upper Nile, although TDA is responsible for the Toshka Tourism Development project along Lake Nasser. Local governorates have played an important role in tourism development in cooperation with TDA, such as the berth facilities improvement project.

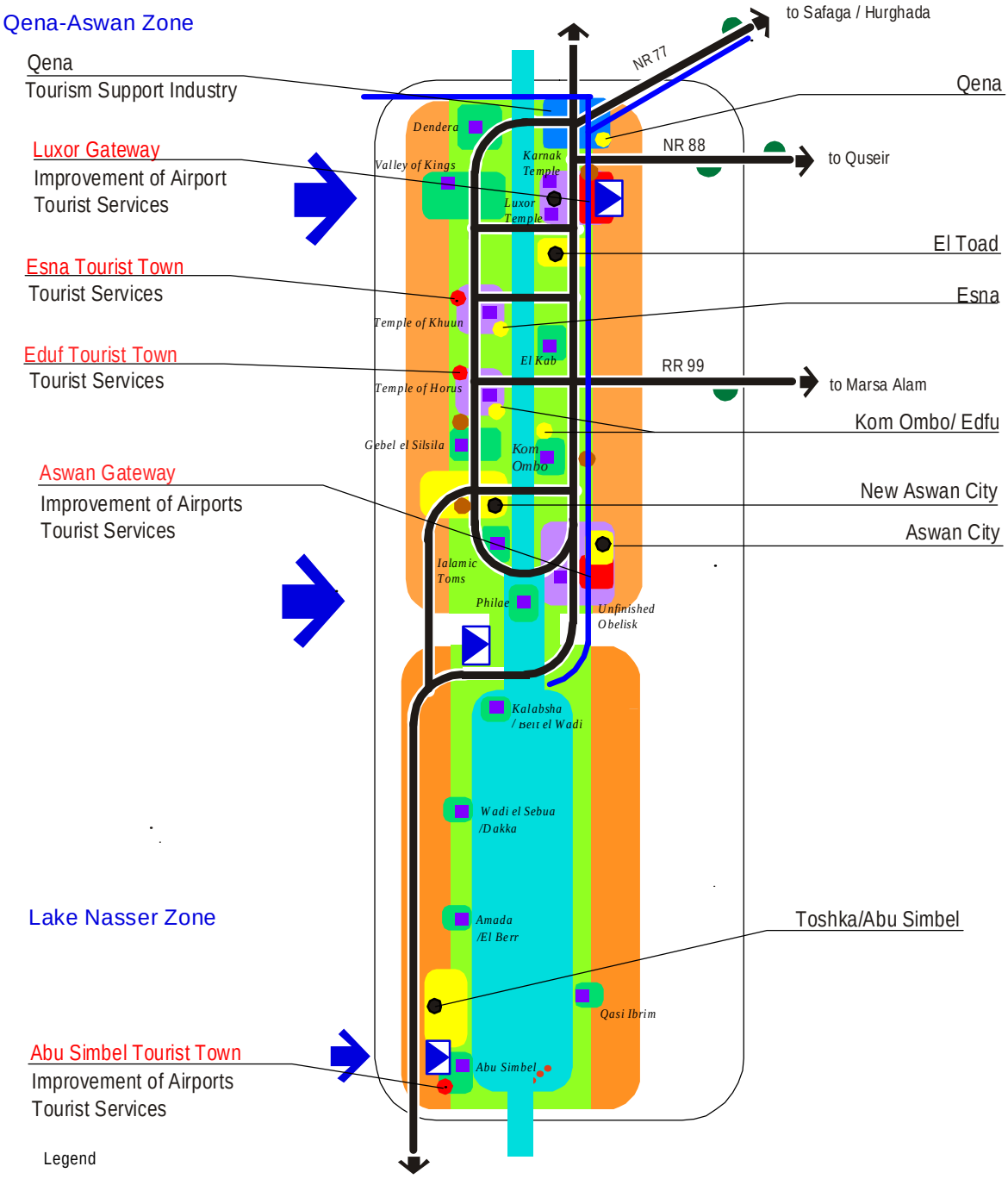
However, it is expected to upgrade tourism service more and to expand both public and private investments, in order to achieve a well-managed tourism destination and eventually gain a reputation as one of the greatest historical sites in world tourism destinations.

(2) Development policy: Promotion and improvement of Upper Nile tourism toward the next millennium

In order to secure the value of ancient assets in the Nile Valley and their tourism potential, more promotion and further improvement of tourism products in Upper Nile are required based on the following policies:

- Harmonized development of tourism products with historical monuments in the integrated environmental management system;
- Development of attractive tourism products or improvement of visitor facilities;
- Introduction of alternative tourism products which can support the Historical/Archeological Tourism; and
- Promotion of local community participation to share the benefit and responsibility of tourism development in Upper Nile.

Figure 2.6.1 Tourism Development in the Upper Nile



Source: JICA Study Team

2.6.2 Accommodation Development Framework

(1) Development policy of accommodation facilities

The following are principles for accommodation development:

- To spread accommodation development pressure in major destinations in Luxor and Aswan in order to protect historical environment;
- To diversify accommodation development type to meet tourist needs, such as rural resort development, and to utilize potential areas that attract tourists, such as water-front zone and agricultural zone of the Nile Valley, and
- To utilize and combine attractive local character, such as Nubian culture.

(2) Accommodation development framework

The target room number in Upper Nile is shown in Table 2.6.1.

Table 2.6.1 Accommodation Distribution Framework in Upper Nile

(Unit: room)

Governorate	Location	1997	2002	2007	2012
Qena	Qena City	116	200	500	1,000
	Armanat/Esna	0	0	200	500
	Qena Total	116	200	700	1,500
Luxor	Luxor City	4,669	6,500	8,500	10,000
	El Toad	0	0	500	1,700
	Luxor Total	4,669	6,500	9,000	11,700
Aswan	Aswan City	2,739	4,350	5,200	7,500
	New Aswan City	0	2,200	4,600	7,700
(Nile River)	Edfu	0	0	200	600
	Kom Ombo	0	0	500	1,000
	Sub-total	2,739	6,550	10,500	16,800
(Lake Nasser)	Toshka/Abu Sim	161	200	1,880	5,650
	Aswan Total	2,900	6,750	12,380	22,450
Cruise ship	Nile River (Luxor-Aswan)	11,088*	11,250	12,500	13,750
	Lake Nasser	155	300	420	600
Total		18,928	25,000	35,000	50,000

Note: * Includes the number of Cairo region cruise ship rooms and excludes the number of Red Sea cruise ship rooms (Number in 1998 is 10,675)

Source: JICA Study Team

2.6.3 Tourism Product Development

(1) Formulation of a multi-modal transportation system as tourism products

The growth of international visitor arrivals in Upper Nile will create a need to expand transportation capacity and to upgrade the quality of service. Only the Nile cruises will not be able to accommodate the increasing demand of international visitors, even if navigational and environmental issues are resolved. Therefore, the diversification of transportation modes together with the diversification of tourism products will be necessary. The required measures and considerations for the formulation of a multi-modal transportation system are as follows:

- Improvement of road network: Bypass rod development in the urban areas, improvement of junction, development of roadside amenity, and improvement of roadside security;

- Improvement of railway network and development of railway tourism: Improvement of signaling systems, improvement of station, provision of information;
- Improvement of Nile Cruise Tourism: Improvement and development of berth facility, development of safe navigation system, and improvement of environment (e.g. pollution control).
- Taking account of the long interval between destinations, stopover development could serve to offer rest places or attractions for tourists such as Craft Center.

(2) Improvement and formulation of various tourism circuits

Based on section 2.2.4, the formation of "Tourism Circuits" is needed in order to diversify and integrate tourism products. The potential tourism circuits in Upper Nile are as follows:

Grand Circuit (**Gateway,** Service town or destination)

Classical circuit	
Nile cruise circuit	Cairo-**Luxor**-Dendera-Edfu-Kom Ombo-**Aswan**-Abu Simbel-Cairo
Neo-classical circuit	
Nile train circuit	Cairo-**Luxor**-Esna-Edfu-Kom Ombo-**Aswan**
Nile caravan circuit	**Aswan**-Kom Ombo-Edfu-Esna-**Luxor**-Desert Oasis -Cairo
Nile Valley+Resort	Cairo-**Luxor**-Esna-Edfu-Kom Ombo-**Marsa Alam**
Green and blue circuit	
Nile adventure+Resort	Cairo-**Luxor**-Esna-Edfu-Kom Ombo-**Aswan**-Nubian Village-Desert-**Marsa Alam**

Short Circuit

Classical circuit	
Nile cruise circuit	**Luxor**-Esna-Edfu-Kom Ombo-**Aswan**
Green and desert circuit	
Nile adventure circuit	**Luxor**-Desert Oasis-**Luxor**
Wildlife safari circuit	**Aswan**-Wadi Allaqi/Elba protected area-Shalatayn-**Marsa Alam**
Historical caravan circuit	
Pharaonic trade circuit	**Luxor**-Qift-Qasr el Banat-Quseir-**Marsa Alam**

One-day Trip

Classical circuit	
Nasser cruise circuit	**Aswan**-Isis temples-Nubian ruins-Abu Simbel
Neo-classical circuit	
Nasser caravan circuit	**Aswan**-Nubian ruins-Abu Simbel
Rural valley circuit	
Agro-tourism circuit	**Luxor**-Esna-Edfu-**Luxor**
Desert caravan circuit	**Luxor**-Wadis in mountain's valley-**Luxor**
Nasser adventure circuit	**Aswan**-Nasser Lake-Abu Simbel-**Aswan**

(3) Introduction of integrated environment management system

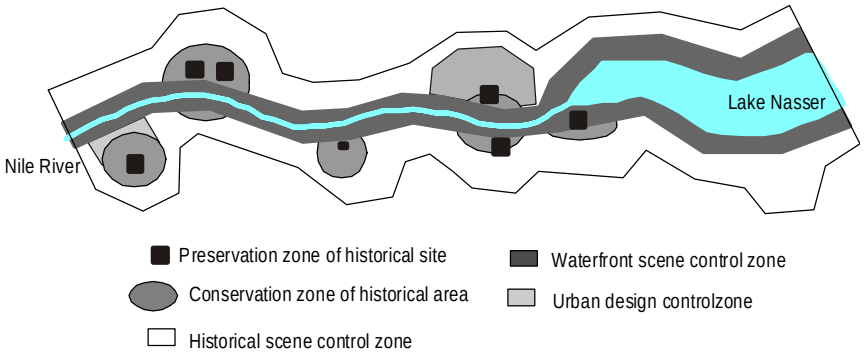
A combination of ancient monuments and the Nile River with greenery of agricultural land is undoubtedly the most important tourism resource in the Nile Valley. It seems that the Nile Valley has not been protected by adequate control measures, except for the partial protection system of historical monuments by the Supreme Council of Antiquity (SCA) and Natural Protectorates applied only for the islands in the Nile River.

To protect the unique characteristics of Upper Nile, the whole area of the Nile River and its surroundings, including historical monument sites, are to be protected by the following measures:

- Total environmental management of the Nile River, Lake Nasser and the waterfront areas along the river and lake, including historical towns and monuments, by appropriate zoning control and regulations;

- Management, control and zoning system of urban development with adequate urban design code and traffic management zoning;
- Visitor management system;
- Management of visitor activity area in historical sites, Nile Cruise Tourism area and water recreational areas by adequate zoning control and necessary facility improvements.

Figure 2.6.2 Conceptual Diagram and Proposed Zoning Control System



Zoning System	Change and Development					Environmental Management		
	Building height	Building use	Land reclamation	Facility Develop-ment	Advertise ment	Color/ Material guideline	Visitor managem ent	Traffic managem ent
Historic Site Preservation Zone	---	---	---	---	---	◆	◆	---
Historic Area Conservation Zone	---	◎	---	◎	---	◆	◆	◆
Historic Scenic Control Zone	◎	●	◎	●	◎	◆	---	---
Waterfront Scenic Control Zone	◎	◎	---	◎	---	◆	◆	◆
Urban Design Control Zone	◎	◎	◎	●	◎	◆	---	◆

Note: ●= allowed, ◎= conditionally allowed, -----= not allowed or not applicable, ◆= necessary

Source: JICA Study Team

Table 2.6.2 Proposed Zoning Control System for Upper Nile Valley and Lake Nasser

Zone	Location	Existing Control		Proposed Zoning Control System				
		Historical Monument	Nature Protected Area	Historic Site Preservation Zone	Historic Area Conservation Zone	Historic Scenery Control Zone	Waterfront Scenic Control Zone	Urban Design Control Zone
Nile River with Islands and its Bank		*	*Islands	-	●	●	●	●
Agricultural land along the Nile River		*	-	●	◎	●	●	-
Qena-	Qena City	-	-	●	○	◎	●	◎
Aswan	Dendera	*	-	●	●	●	●	-
	Luxor City/East Bank	WH	-	●	●	●	●	●
	Luxor West Bank	WH	-	●	●	●	●	◎
	Esna City/West Bank	*	-	●	●	●	●	●
	Esna East Bank	-	-	-	○	◎	●	○
	El-Kab area	*	-	●	●	●	●	-
(Aswan	Edfu City/West Bank	*	-	●	●	●	●	●
Gov.)	Edfu East Bank	-	-	-	○	◎	●	◎
	Gebel el Silsila	*	-	●	●	●	●	-
	Kom Ombo	*	-	●	●	●	●	◎
	Aswan New City	-	-	-	-	○	●	●
	Aswan City/East Bank	*	-	●	◎	○	●	●
	Aswan City/West Bank, Islands	*	-	●	●	●	●	●
	Philae Island	WH	-	●	●	●	●	-
	River water between the two dams	-	-	-	○	●	●	-
Nasser Lake and its Bank		*	-	-	●	●	●	-
Lake	Aswan High Dam	-	-	-	-	-	●	●
Nasser	Kalabsha Island	WH	-	●	●	●	●	-
	El Sebua	WH	-	●	●	●	●	-
	Amada	WH	-	●	●	●	●	-
	Qasr Ibrim	WH	-	●	●	●	●	-
	Toshka Tourist Center	-	-	-	-	-	●	●
	Abu Simbel area	WH	-	●	●	●	●	●

Note: WH= World Heritage, ●= Compulsory, ◎= Necessary, ○= Desirable, — = not necessary or no relation

Source: JICA Study Team

(4) Development of component for tourism development

In order to meet the future increase of international visitors and to enhance the attractiveness of Upper Nile's historical environment, the following development components are recommended:

- Improvement and development of berth facility;
- Improvement of accesses to historical site and beautification of sites;
- Development of site museums and development of virtual museum by use of the Internet;
- Development of handicraft villages; and
- Development of Highway Oasis.

Table 2.6.3 and Figure 2.6.3 show the proposed facility development in Upper Nile.

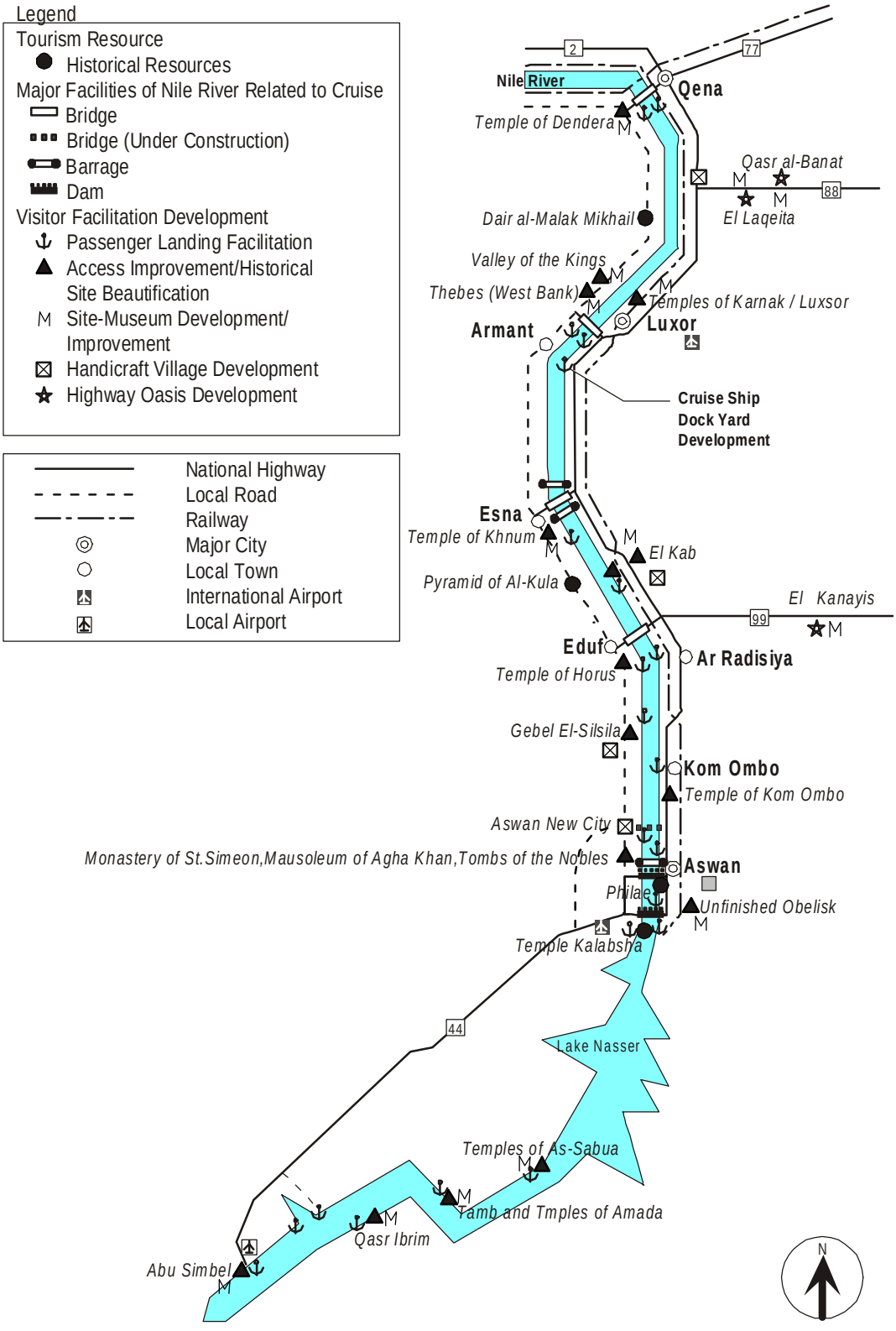
Table 2.6.3 Proposed Tourism Facility Development in Upper Nile

Zone	Location	Existing Status		Proposed Tourism Facilities					
		Historical Monument	Berth Facilities	Passenger Landing Facilities	Access Improvement	Site Beautification	Site Museum Development	Handicraft Village	(Highway Oasis)
Qena-Aswan	Qena (Dendera)	X	X	◎/○	○	○	◎	-	-
	National NR 77	X	-	-	-	-	-	●Qus	○
	National NR 88	X	-	-	-	-	●	-	●
	Luxor East Bank	WH	X	-	○	-	●	-	-
	Luxor East New Bank	-	-	●*1	-	-	-	-	-
	Luxor West Bank	WH	-	○	○	○	●	-	-
	Armant	-	-	●Dock*2	-	-	-	-	-
	Esna	X	X	◎/○	○	○	●	-	-
	El-Kab	X	-	●	●	○	●	●	-
	Edfu West Bank	X	X	◎/○	○	●	●	-	-
	Edfu East Bank	-	-	●	-	-	-	-	-
	National NR 99	-	-	-	-	-	●	-	●
	Gebel el Silsila	X	-	●	●	●	●	●	-
	Kom Ombo	X	X	●/◎/○	○	○	●	-	-
	Aswan New City	-	-	●*3	-	-	-	●	-
	Aswan East Bank	X	X	◎	○	○	-	-	-
	Aswan West Bank, Islands	X	-	●	●	○	○	●	-
	Philae Island	WH	-	-	-	-	-	-	-
	Start point to Philae Island	-	X	-	○	-	●	-	-
Lake Nasser	Aswan High Dam Port	-	X	○	○	-	-	-	-
	Kalabsha Island	WH	-	○	-	○	●	-	-
	Start point to Kalabsha	-	-	●	●	-	-	-	-
	El Sebua	WH	-	●	●	●	●	-	-
	Amada	WH	-	●	●	●	●	-	-
	Qasr Ibrim	WH	-	●	●	●	●	-	-
	Toshka Tourist Center	-	-	●*4	-	-	-	●	-
	Abu Simbel area	WH	X	○	○	○	●	-	-

Note: WH= World Heritage, ●= New development, ◎= Additional expansion, ○= Facility improvement, — = not necessary or not existent, *1= El Toad Development Plan/UNDP, *2= Plan of Qena Governorate, *3= Aswan New City Plan/ MHUU, *4= Toshka Tourism Development Plan by TDA

Source: JICA Study Team

Figure 2.6.3 Proposed Tourism Facility Development in Upper Nile



Source: JICA Study Team

(5) Improvement and development of berth facilities

Nile Cruise Tourism as an essential product of Upper Nile

Cruise Tourism plays one of the most important roles in the tourism of Upper Nile, not only for the accommodations that it can provide but also for being the most favorite product of international visitors. Cruise Tourism is characterized as follows:

- One of the traditional tourism products on the Nile River;
- One of the most attractive transportation measures to see antiquities along the Nile River and Nasser Lake and to enjoy the atmosphere of the Nile Valley; and
- Advantageous accommodation in terms of investment efficiency.

Objectives of the improvement of cruise facilities

In order to cope with the problems of cruise facilities, such as lack of navigation system and lack of safe landing facilities, it is necessary that the government should be responsible for public facilities and infrastructure. On the other hand, the nature of the Nile River and Nasser Lake should be protected by several measures. Urgent action has to be taken for the improvement of their environments. The role and function to meet the requirements of cruise tourism improvement are summarized by the following objectives:

- To enhance tourism product in Upper Nile by providing convenient and safe cruise ship and small boats, etc.;
- To support the development of water transportation in terms of efficient service and smooth operation;
- To provide an attractive and comfortable waterfront environment as a base for historical tourism and recreational tourism of the Nile River; and
- To prevent environmental damage of the Nile River and Nasser Lake by cruise tourism.

Table 2.6.4 Objectives of the Improvement of Cruise Facilities

Objectives	Function of Cruise Tourism Product			
	Accommodation	Water Transportation	Facility for visitors	Environmental Awareness
Convenient and safe use of facilities	●	●	●	-
Efficient and well-organized service and operation	●	●	◎	◎
Creation of an attractive and comfortable environment	◎	◎	●	●
Mitigation of natural environmental impacts	◎	●	◎	●

Legend: ●= the most important factor, ◎= secondary factor, - = no relation

Source: JICA Study Team

Improvement plan of berth facilities

Improvement plans of each site differ by type of facility, taking account of existing conditions and function needed. For Qena-Aswan Zone, 17 projects are proposed and for Nasser Lake Zone, 8 projects are proposed, as shown in Table 2.6.5. Berth facilities consist of three types: type A, type B and type C.

Table 2.6.5 Proposed Berthing Facilities in Upper Nile

Zone	Location	Status of Existing Facility	Improvement Plan by Type			Reference
			A	B	C	
QENA-ASWAN	Qena City	Newly developed	○	-	-	Type A: Berth facilities with utility services and amenities for visitors by wharf embankment type
(Qena Governorate)	Other area	No facilities	-	◎	-	
	Luxor West bank/El Toad	Planned	●	-	-	
(Luxor City)	Luxor East bank/El Toad	No facilities	-	●	-	
	Luxor East bank	Existing Berth	-	-	-	
(Qena Governorate)	Esna City	Existing Berth	○	-	-	
	Other area	No facilities	-	◎	-	
	El-Kab area	No facilities	-	-	●	Type B: Berth facilities with limited utilities and limited visitor facilities by landing pier type
	Edfu City west bank	Existing Berth	○	-	-	
	Other area	No facilities	-	◎	-	
	Edfu City east bank	No facilities	-	●	-	
	Gebel el Silsila	No facilities	-	-	●	
(Aswan Governorate)	Kom Ombo east bank	Existing Berth	○	-	-	
	Other area	no facilities	-	◎	-	Type C: Floating bridge type with limited utilities
	Kom Ombo east bank	no facilities	-	●	-	
	Aswan New City	resort city planned	●	-	-	
	Aswan east bank	Existing Berth	○	-	-	
	Aswan new east bank	no facilities	◎	-	-	
LAKE NASSER	Aswan High Dam Port	Existing Berth	○	-	-	
	Landing pier* to the island**	No facilities	-	-	●	
	Dakka / El Sebua	No facilities	-	-	●	
	Amada / El Derr Penut	No facilities	-	-	●	
	Qasr Ibrim	No facilities	-	-	●	
	North Kohr Toushka	No facilities	-	●	-	
	North Abu Simbel	No facilities	-	●	-	
	Abu Simbel area	Existing Berth	-	○	-	

Note: ●= New development, ◎= Additional expansion, ○= facility improvement, — = not necessary, not existing, * Inland pier beside lake, ** Kalabsha/Beit el Wadi

Source: JICA Study Team

Details of the project are found in the "Projects & Programs" report as a Pre-Feasibility Study, including the following planning matters.

- Development framework;
- Estimation of project cost, implementation plan and financial evaluation; and
- Implementation program of the Nile Cruise Environmental Management.

(6) Improvements of access to historical sites and beautification of tourist sites

Objectives of improvements

The goal of improvements is to provide the access and network connecting berth facilities to historical sites, and to provide information to visitors.

Components of improvements

The improvements consist of the following:

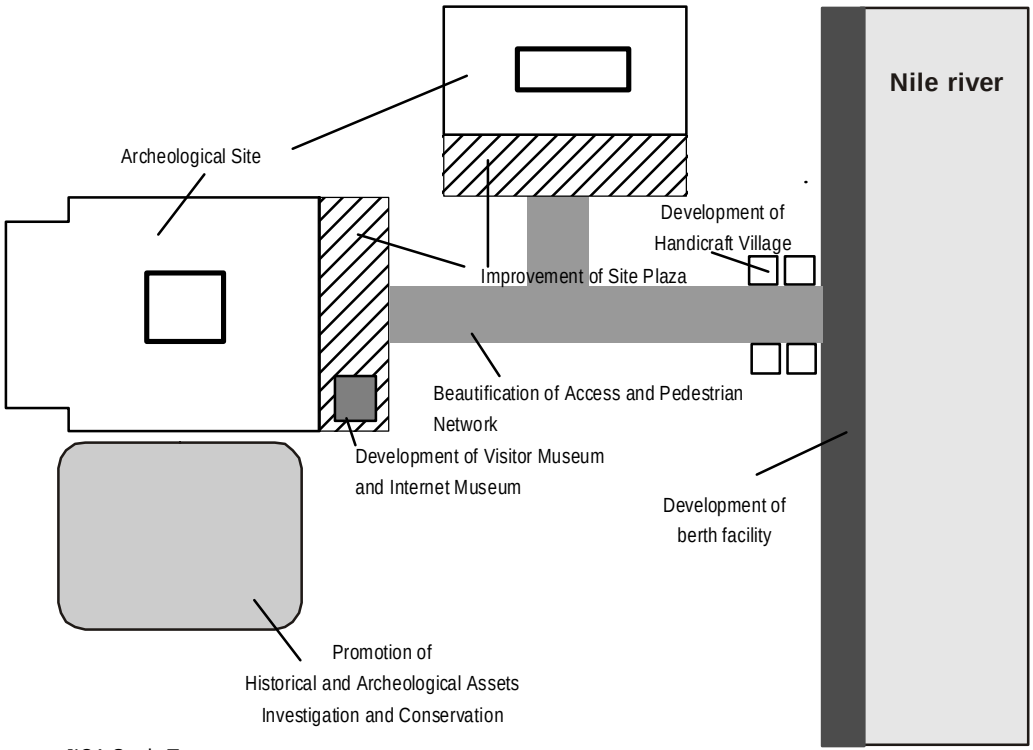
- Improvement of access road to historical sites (paving, markings, traffic signs, lighting, greening of roadside;
- Development of pedestrian network (sidewalks, pedestrian crossings);
- Provision of information to visitors (information boards, signs, kiosks), construction of site museums with historical database by use of the Internet; and
- Regulation of roadside buildings and traffic management.

On the other hand, in order to provide comfort and maintain a beautiful landscape, the following should be done:

- Beautification of access road to historical sites, and
- Provision of pedestrian network with shade, sign and vegetation.

Details of the projects are found in "Projects & Programs".

Figure 2.6.4 Improvement of Historical Sites and Beautification



Source: JICA Study Team

(7) Development of handicraft village for small-scale tourism industries

Objectives of development

In general, the development aims to upgrade the quality of souvenirs as well as to provide souvenirs to visitors. Specifically, the objectives of the development are as follows:

- Promotion of local small-scale industries;
- Provision of service amenity and resting place for visitors between major cities or destinations;

- Research and development for quality control of products, marketing and design; and
- Training and promotion of handicraft work with provision of micro-credit.

Components of development

In the handicraft village, in-house craftsmen and designers will demonstrate the process of handicraft work, and sell the finished product directly to tourists. There will be convenient parking spaces, rest areas/rest rooms, coffee shops restaurants, and information on the village and handicraft.

Proposed locations are as follows: Qus (between Dendera and Luxor), El-Kab (between Esna and Edfu), Gebel El-Silsila (between Edfu and Kom-Ombo), and West Bank of Aswan (between Aswan and New Aswan City) and Toshka tourism development area.

2.6.4 Marketing Development

(1) Formulation of product image and promotion direction

It is necessary to undertake the following:

- Expansion of the Nile Valley product image by use of river recreation and rural area resort from classic historical tourism to alternative tourism images;
- Formulation of attractive destination image for independent tourists;
- Formulation of high-grade product image in order to entice upper market tourists and to solicit financial support for environmental conservation of historical sites;
- Mutual promotion of study area in combination with the Nile Valley and the Red Sea coast for mid- and long-haul market source, and
- Improvement of Islamic culture product image for other cultural nations.

Table 2.6.6 shows the potential of the different markets for Upper Nile tourism.

Table 2.6.6 Potential of Geographical Market Segments for Upper Nile Tourism

Diversification of Products	Short haul			Middle haul		Long haul	
	Domestic	Middle East	South Europe	Central-North Europe	Ex-Soviet Union	North America	Asia/ Oceania
Classic Historical Tourism	◎	△	◎	●	●	●	●
Urban Cultural Events Tourism	●	●	△	△	△	◎	◎
Rural Area Green Tourism	●	●	●	◎	◎	△	△
Adventure Tourism	△	△	◎	●	◎	●	◎
Nature Eco-tourism	△	△	◎	●	●	●	◎
Rural Holiday Resort Tourism	△	△	◎	●	◎	△	△
Water Sports Tourism	◎	△	◎	◎	◎	●	◎
Special Interest Tourism	△	△	●	●	●	●	●
Convention & Resort Tourism	●	●	◎	◎	◎	△	△

Note: Major target market potential ●=High potential, ◎=Medium potential, △=Low potential
Source: JICA Study Team

(2) Integration of regional marketing function

The following efforts are needed:

- Development of planning function and human resource development for regional market strategy;
- Formulation of institutional cooperation scheme between public and private sectors; and
- Maximizing optional tourism volume from potential Red Sea tourists who do not have so much seasonal variations.

(3) Development of campaign and awareness program

In order to achieve this, the following are required:

- Promotion of regional tourism industries;
- Participation of local communities; and
- Educational program for tourism awareness in elementary and secondary levels.

2.6.5 Qena-Aswan Zone Tourism Development Plan

(1) Qena Tourism Town

The following developments and improvements are needed:

- Development of berth facilities including hotels, commercial facilities, parking facilities and a hospital in order to further increase cruise ship demand;
- Improvement of access to tourist destination (the berth facility is located at the opposite side of Dendera Temple, and visitors have to ride a bus to get there);
- Conservation measures for the Dendera temple to address the high level of groundwater; and
- Zoning control of the surrounding area of Dendera Temple for conservation of its rich history.

(2) Luxor Gateway

As one of the gateways to Upper Nile, Luxor can provide multi-modal transportation, and offer major historical assets to visitors.

The study team recommends that the conservation and development plans in the "Comprehensive Development Plan for the City of Luxor" should be carried out in the wider context of regional development. Furthermore, the following developments and improvement are needed:

- Promotion of "Sphinx Avenue and Open Museum District Project" between Karnak Temple and Luxor Temple;
- Improvement and beautification of west bank roads with sidewalk, greening of side road, signs, linking of historical sites in the West Bank; and
- Improvement and expansion of berth facilities with parking, promenade, shops, water supply, and fuel supply.

(3) Esna Tourist Town

The following improvements are recommended:

- Beautification of the road between the berth facility and Esna Temple (pavement, sign, etc.); and
- Improvement and expansion of berth facility.

(4) El-Kab

The following action is required:

- Development of berth facilities;
- Development of access between the landing area and the archaeological site; and
- Development of Handicraft Village.

(5) Edfu Tourist Town

The Supreme Council of Antiquities is constructing a new entrance at the front of the temple, parking and a site museum west of the temple. The high level of groundwater is affecting the temple; its columns are being damaged by moisture. Countermeasures are urgently needed. Other improvement and development are proposed as follows:

- Promotion of current project by SCA;
- Beautification of the road between the berth facility and Edfu Temple (pavement, greening of roadside, sign etc.);
- Improvement and expansion of the existing berth facility on the west bank; and
- Development of berth facility with utilities on the East Bank.

(6) Gebel El Silsila

As potential tourism destinations, the following are proposed:

- Development of berth facilities;
- Preparation of site plaza and site museum;
- Beautification of access between the berth and the historical site; and
- Development of handicraft village on the West Bank.

(7) Kom Ombo Tourism Town

The following measures are proposed:

- Improvement and expansion of berth facility; and
- Improvement of site plaza and provision of site museum.

(8) Aswan Gateway with development of Aswan New City

Aswan is the other major gateway to Upper Nile, having a variety of beautiful historical and natural assets. A large-scale development in tourism-oriented Aswan New City about 30 km north of Aswan City is planned. It is important to keep and protect the beautiful landscape of Aswan, especially the islands in the river and the West Bank. On the other hand, Nubian culture should be used for tourism products.

In addition, the following is recommended:

- Improvement and expansion of existing berth facilities;
- Development of berth facility with utilities in Aswan New City;
- Improvement of berth for *felucca* and small boats;
- Beautification of road linking *suq* (market), riverside promenade and Aswan Museum;
- Development of handicraft village on the West Bank near Aswan New City; and
- Development of a site museum nearby berth and parking area to the Philae Island.

2.6.6 Lake Nasser Zone Tourism Development Plan

Lake Nasser Zone has the potential of being a tourism product, e.g., cruise of Nubian assets and pristine atmosphere. First priority should be placed on the conservation of environment and landscape of the lake. Construction of buildings along the shore should be regulated. Number of cruise boats on Lake Nasser should also be regulated. Other recommendations are given below.

(1) Lake Nasser Cruise

Aswan High Dam

- Improvement of berth facility with utilities;
- Development of a jetty to serve Kalabsha Temple; and
- Development of a site museum at Kalabsha.

El Sebua

- Minimum berth facility for safe and comfortable access, and a site museum

Amada

- Small berth facility for comfortable access to the site museum.

Qasr Ibrim

- Small berth facility for comfortable access to the site museum.

(2) Abu Simbel Tourism Town and Toshka Tourism Development

Abu Simbel has the most important role in Lake Nasser in terms of tourism development. It serves as a terminal for Lake Nasser Cruise and for air transportation. It is also recommended to function as a gateway to the Toshka Tourism Project in the distant future. Other proposals include the following:

- Improvement and expansion of berth facilities with utilities;
- Development of Toshka Tourism Development Center; and
- Provision of a site museum at Abu Simbel Temple.

2.7 Tourism Development Plan for the Red Sea

2.7.1 Background and Development Policy

(1) General background

The Red Sea coastal area has a unique geography in combination with flourishing coral reefs and endemic marine biota. The Egyptian Government has designated 520 km of coastal area from north of Hurghada to south of Marsa Alam for tourism development. Length of shoreline of buffer areas and beachfront tourism development areas of four cities are presented in Table 2.7.1. On the other hand, the southern coastal area from the south end of TDA Tourist Center to Halaib, which is around 460-km long, should be reserved for natural conservation and future expansion.

Table 2.7.1 Shoreline of the Red Sea Coast

	Shoreline (km)
Four Cities (Hurghada/Safaga/Quseir/Marsa Alam)	140 (27%)
TDA Tourist Centers	260 (50%)
Buffer Area for Tourist Center and cities	120 (23%)
Total	520(100%)

Source: JICA Study Team

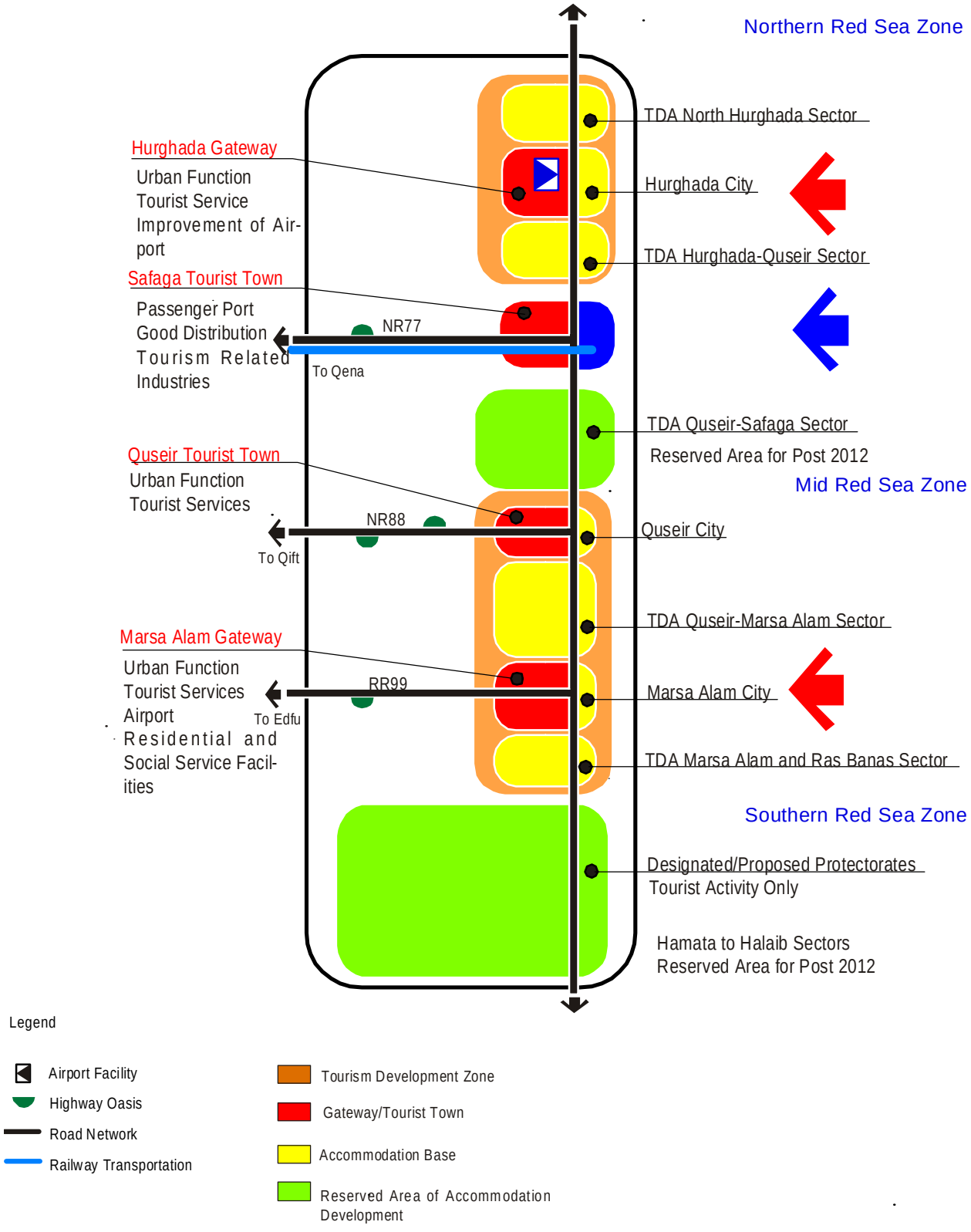
The tourism development areas have enormous capacities for tourism. However, they are surrounded by natural resources and heritage sites, which have fragile natural environments and ecosystems. Sub-regional tourism development in the Red Sea should be well coordinated with natural environment and local community development.

(2) Development policy: Development of a new destination toward the next Millennium

In order to accept a large amount of international visitors without deterioration or degradation of marine environment, careful tourism development and development of competitive tourism products are required in the following manner:

- Tourism development in harmony with natural resources, especially coral reefs on the basis of integrated environmental management system in order to accommodate future demand;
- Development of a certain volume of human settlement requisite for the supporting tourism industries, which requires appropriate infrastructure and sustainable development management in the coastal area;
- Attractive coastal development to formulate globally competitive marine tourism products with appropriate visitor facilitation and recreational management;
- Introduction of alternative tourism products into the Red Sea tourism to support the marine tourism with synergy effects expectations; and
- Promotion of local participation to share the benefit of the Red Sea tourism development.

Figure 2.7.1 Tourism Development in the Red Sea



Source: JICA Study Team

2.7.2 Accommodation Development

The following assumptions are made in the accommodation development framework for the Red Sea and the TDA development areas and city areas:

- In 2012, the total number of accommodation rooms in each area will be in proportion to the length of shoreline of each area;
- In city areas, two-thirds of shoreline will be developed as tourism area;
- In TDA development areas, the total length of shoreline for tourism development is considered as the total length of shoreline of tourism centers.

North Hurghada Sector

Gemsa Center will not be developed until 2012 for the reason that the oil pipeline must be relocated to outside of the tourism development area.

In El Gouna Center, upon completion of the ongoing accommodation room construction by 2007, the accommodation development will be finished.

Hurghada-Safaga Sector

In South Magawish Center, Sahl Hasheesh Center and Abo Soma Center, upon completion of the ongoing accommodation room construction by 2007, the accommodation development will be finished.

Safaga-Quseir Sector

In Safaga-Quseir Center, the ongoing accommodation room construction will be completed by 2007, and henceforth will not be increased until 2012. Coordination with the military for land use is necessary.

Marsa Alam-Ras Benas Sector

Sharm El Loly Center will not be developed as a tourism area. This center is proposed to be a natural conservation area.

Wadi Lahmi Center will not be developed as a tourism area except the area which is under construction. This center is mostly Coastal and Marine Protected Area proposed by GEF.

Tourism Development in Cities

In Hurghada City, upon completion of the ongoing accommodation room construction by 2007, the accommodation development will be finished.

In Safaga City, the ongoing accommodation room construction will be completed by 2007, and henceforth will not be increased until 2012. The current environmental condition caused by the port facilities does not fit the tourism development.

Table 2.7.2 shows the estimation of accommodation rooms by each area.

Table 2.7.2 Distribution of Accommodation Rooms

(Unit: rooms)

TDA development areas and cities	Length of shoreline (km)	1999	2002	2007	2012
North Hurghada Sector (TDA)	23	1,459	3,000	4,000	4,000
Hurghada City	43	14,300	17,000	21,000	21,000
Hurghada-Safaga Sector (TDA)	56	5,649	13,000	21,000	23,000
Safaga City including Safaga-Quseir Sector (TDA)	51	2,178	3,000	3,000	3,000
Quseir City	31	800	1,000	3,000	8,000
Quseir-Marsa Alam Sector (TDA)	103	987	4,000	14,000	42,000
Marsa Alam City	31	1,300	1,500	3,000	8,000
Marsa Alam-Ras Benas Sector (TDA)	71	102	500	6,000	21,000
Total of TDA Development Areas	253	8,197	20,500	45,000	90,000
Total of City Areas	155	18,578	22,500	30,000	40,000
Grand Total	408	26,775	43,000	75,000	130,000

Source: JICA Study Team

2.7.3 Tourism Product Development

(1) Improvement and formulation of "Tourism Circuits"

As the case for Upper Nile, the diversification and integration of tourism products in the Red Sea are also necessary to compete with the international marine resort destinations. Improvement and formation of tourism circuits can provide such products to international visitors. The following show examples of tourism circuits.

Grand Circuit (**Gateway**, Service town or destination)

Neo-classical circuit	
Resort + world heritage tour	**Hurghada**-Dendera-**Luxor**-Edfu-Kom Ombo-**Aswan**-Abu Simbel-**Hurghada**
Red Sea circuit	
Resort+ Religious site tour	**Marsa Alam**-Quseir-Safaga-Sharm el Sheikh-St. Catherine-Sharm el Sheikh
Blue and Desert circuit	
Resort+Wildlife safari circuit	Marsa Alam-Wadi Allaqi-Edfu-Kom Ombo-Aswan-Desert Oasis-Cairo

Short Circuit

Neo-classical circuit	
Nile adventure circuit	**Hurghada**-Qena-**Luxor**-Quseir-**Hurghada**
Egypt heritage circuit	Marsa Alam-Edfu-**Luxor**-Quseir-Marsa Alam
Train circuit	Hurghada-Safaga-Dendera-Safaga-**Hurghada**
Bedouin circuit	
Caravan circuit	**Marsa Alam**-Wadi Allaqi-Edfu-Elba protected area-Shalatayn –**Marsa Alam**
Marine cruise circuit	
Resort + Marine cruise circuit	**Hurghada**-Safaga-Islands-Quseir-**Marsa Alam**

One-day Trip

Neo classical circuit

Egypt heritage circuit	**Hurghada**-Qena-**Luxor**-Quseir-**Hurghada**

Marine cruise circuit

Sunset cruise circuit	**Hurghada**-Safaga-Major Marine Spots-Safaga-**Hurghada**
Night cruise circuit	**Marsa Alam**-Quseir-Major Marine Spots-Quseir-**Marsa Alam**

(2) Development of Highway Oasis

A new tourism product connecting Upper Nile with the Red Sea

In order to develop attractive facilities between Upper Nile and the Red Sea in conjunction with the tourism circuit development, it is necessary to develop "Highway Oases" which provide amenity and attraction to visitors. The government should have the responsibility for the provision of public facilities and infrastructure.

On the other hand, the historical assets along the highways should be protected by several measures. Urgent actions are needed to protect and improve their environment.

The roles of a Highway Oasis are summarized as follows:

- Provide safe and comfortable travel between Upper Nile and the Red Sea;
- Provide attractive and comfortable visitor service facilities;
- Support formation of tourism circulation; and
- Provide new tourism products in the Eastern Desert.

Table 2.7.3 Role and Measures for Highway Oasis Development

	Car Service Station	Rest Place	Tourist Attraction	Conservation of Assets
Assurance of safe traffic for cars	●	●	-	-
Provision of services to travelers	◎	●	◎	-
Support of formation of tour circuits	◎	◎	●	●
Development of historical sites along the highways	-	◎	●	●

Note : ●= the most important factor, ◎= secondary factor, — = no relation
Source: JICA Study Team

Types of "Highway Oasis"

Two types of roadside facilities are introduced. The difference of each type is as follows:

- Type A: Development of integrated service area; and
- Type B: Development of site museum with parking space.

Table 2.7.4 Types of Highway Oasis Facilities

Type	Role & Function	Facilities	Car Services	Joint Tourism Facilities
Type A	Service station and rest stop Provide convenient services A small base to stop and access historical and natural tourism sites	Lighting, benches, etc. Telephone booth Toilet Kiosk/Information Booth Souvenir shop Restaurant, coffee/shop Parking	Gas station Car repair shop Road information	Archeological site joint case Fossil site museum utilizing antiquities along roads Tourism information Wild-life tourism joint case Base of oasis tourism Bedouin handicraft shop or center
Type B	Small destination to have a rest Facilitate visitors	Lighting, benches, etc. Telephone booth Toilet Parking	-	Information booth about tourism resource Site museum for the ruins

Source: JICA Study Team

Table 2.7.5 shows the condition at the proposed sites of a Highway Oasis development.

Table 2.7.5 Condition of Highway Oasis Development by Route

Highway	Location	Reference
NR 77	Wadi Abu Shih site	Upgrading existing facilities
	Mons Claudianus site	No facilities
NR 88	Bir Umm Fawakhir site	Upgrading existing facilities
	El Laqeita site	No facilities
	Qasr el Banat site	No facilities
NR 99	Barramiya site	No facilities
	El Knayis site	No facilities

Source: JICA Study Team

Design guideline of Highway Oasis

Considering a Highway Oasis as one of transportation facilities, formulation of safe and efficient traffic flow should be considered. Guidelines and regulations have to be prepared. It is also necessary to make visitor flow smooth and comfortable.

More details are given in "Projects & Programs" as a Pre-Feasibility Study, with discussion of the following:

- Development framework;
- Implementation plan;
- Estimation of project cost; and
- Financial evaluation.

(3) Adequate tourism growth management in the Red Sea

To keep natural tourism resource and to sustain tourism development in the Red Sea, the following efforts are needed:

- Implementation of coastal resort development guidelines by TDA in 1999;
- Provision of necessary public facilities to local towns that support tourism development areas by TDA;
- Provision of adequate infrastructure for urban development and tourism development, with consideration for marine resource protection;

- Urban development control and land use plan for service towns in order to protect coastal environment;
- Enhancement of tourism service industries and functions in Hurghada and Quseir and development of suitable logistics for the other towns;
- Urgent establishment of a coastal environmental management system and protectorate area, which covers all coral reef to conserve the fragile marine environment; and
- Development of the Environmental Management Center, which is to be located in El Gezera and El Hamura with the International Visitor Center, planned by TDA;
- Development of "Public Access to Marine" such as public beach and waterfront promenade development and its management system.

(4) Coordination with resort development and product images

- Provision of suitable information and guidelines to developers to avoid unhealthy competition in resort development;
- Improvement of transportation link to each resort;
- Improvement of connection between Upper Nile and the Red Sea;
- Improvement of tourist information services to develop marine tourism circuit in this region; and
- Improvement of security system for visitors and coastal and marine assets (coral reefs, flora and fauna, mangroves, etc.).

(5) Development of alternative tourism products

- Introduction of adventure tourism such as caravan tourism, wild-life adventure traveling via the coastal desert;
- Development of "Bedouin Tourism" in several wadis in association with local Bedouin communities;
- Introduction of marine cruise on the Red Sea, such as sunset cruise, dolphin or turtle watching; and
- Establishment of recreational areas such as camping sites in protected nature areas.

(6) Visitor facilitation

- Integration of visitor services to develop tour circuits in Hurghada, Quseir and Marsa Alam;
- Improvement of interpretation facilities and program for coral reef conservation in conjunction with USAID program; and
- Provision of convention facilities for international and domestic MICE (Meeting, Incentive, Conference, and Events) activities.

(7) Development of tourism-related industries

Utilization of traditional culture, fish and other resources are proposed to establish tourism product development harmonized with local communities in the Red Sea.

Traditional handicraft center

Traditional textile and handicraft of Ababuda and the Bedouin tribe are potential souvenirs for international tourists. These items can be upgraded through productivity improvement, quality improvement and design development. It will be a new livelihood opportunity for traditional Bedouin communities. Traditional handicraft center development will effectively contribute to establish quality merchandise as tribal souvenirs.

Fossil/shell/other handicraft souvenir industry

Found on the western mountain of the Red Sea, fossilized seashells and other sea flora and fauna in rocks are potential tourism resources and souvenir items. Seashell is also a potential resource for handicraft and souvenir for international tourists. Handicraft centers must utilize materials with potential and should support and establish local industries of qualified handicraft and souvenir producers.

Fishing port, fish processing and circulation system and fish market/restaurants

Traditional fishing villages are located on the southern part of the Red Sea coast. Some hotels serve seafood dishes to tourists. Seafood is one of the most important foods for coastal tourism development.

Establishment of fishing port with ice plant, cold storage and circulation system in Berenice and in the other four cities is proposed to keep seafood fresh. However, fishery activities should be carefully operated and controlled from the viewpoint of marine resource conservation and management.

Development of a fisherman's wharf (seafood restaurants/market) is also proposed to create interesting recreational centers in TDA Tourist Centers as well as the port areas of each city.

Nursery and greening service industry

Coastal tourism development will require a huge amount of nursery trees and plants and fertile soil to create a soft landscape. Greening center or material center for the above demand will be one potential industry for the four cities in the Red Sea and for Qena, Qift and Edfu in Upper Nile.

Goods distribution/trading center

Demand of enormous construction materials and materials for hotel operation should be generated in the Red Sea and transported from Hurghada to Marsa Alam. Those materials are currently transported by road mainly from Cairo, Alexandria and Upper Nile.

Safaga has a multi-modal transportation terminal function with the national railway network, road network to Cairo and Upper Nile, and the biggest seaport on the Red Sea coast. Storage, wholesale market and truck terminal developments are proposed in order to establish a goods distribution base for the Red Sea considering the stated goods demand. It will require improvement and upgrading of Safaga's port facilities and railway station.

2.7.4 Market Development

The formulation of good product images entails the following efforts:

- Formulation of the Red Sea product image by use of marine recreation potential from classical beach resort tourism to alternative tourism images;
- Formulation of attractive destination image for independent tourists;
- Formulation of high-grade product image in order to entice upper market tourists and to solicit financial support for marine environment conservation; and
- Mutual promotion of Upper Nile and the Red Sea for mid/long haul market.

Table 2.7.6 shows the potential of geographical market segments for Red Sea Tourism.

Table 2.7.6 Potential of Geographical Market Segments for the Red Sea Tourism

Diversification of Products	Short haul			Middle haul		Long haul	
	Domestic	Middle East	South Europe	Central North Europe	Ex Soviet Union	North America	Asia/ Oceania
Coastal Holiday Resort Tourism	●	◎	●	●	●	△	△
Urban Cultural Events Tourism	●	●	◎	◎	◎	△	△
Rural Area Desert Tourism	△	△	●	●	◎	△	△
Adventure Tourism	△	△	◎	●	◎	△	△
Nature Eco-tourism	△	△	◎	●	●	◎	◎
Water Sports Tourism	◎	◎	●	●	◎	◎	◎
Special Interest Tourism	△	△	●	●	●	◎	◎
Convention & Resort Tourism	●	●	◎	◎	◎	△	△

Note: Major target market potential ●=High potential, ◎=Medium potential , △=Low potential
Source: JICA Study Team

2.7.5 Northern Red Sea Zone Tourism Development Area

(1) Hurghada Gateway and surrounding TDA Centers

This area has the following diversified tourism development types:

- Sophisticated TDA Integrated Tourist Center developments by single investor type;
- Large scale, limited type Tourist Center development;
- High-class, beach resort type developments in the city area; and
- Medium/low class urban resort hotel mix in the urban center.

Tourism development in the northern Red Sea coast could be divided into the following geographical areas:

North Hurghada TDA Tourism Sector

Southern part of the sector is well developed by the single investor type. It will be fully developed in the short and mid terms.

However, the northern part of the sector is still used for crude oil extraction, and oil pipelines traverse south to north within the tourist center. These pipelines will have to be relocated by 2012 to proceed with the development of the Gemsa Tourist Center. Coordination with related government agencies would be necessary.

Undeveloped northern part of Hurghada City

The richest marine natural resources in the northern Red Sea coast have been deteriorated by impacts of tourism and development activities. Considering the condition of marine natural resources, all development plans for the area should be postponed until 2012.

Mix of tourism and urban center developments in the city center

Hotel development occupies the beachfront area and is approaching the city center, resulting in mixed land use. Demand and pressure for housing in the city is very high due to the increase of employment in the tourism sector.

Red Sea Governorate and Hurghada City are reviewing the city development master plan of the Ministry of Housing, Construction and New Community. Their main objectives are to prepare for a new residential area and several inter- and intra-regional transportation terminals, and the

reorganization of the city center. All of the tourism development activities should follow the revised master plan to materialize a comfortable urban environment in Hurghada.

Some city hotels will be required to support business and tourism center functions in the future.

High class beach resort within the southern part of the city

Large-scale, urban-oriented beach resort hotels are being constructed in the southern part of the city. Almost the whole shoreline is occupied by hotel developments. The remaining area leading to the main road is proposed for urban development of Hurghada.

South Hurghada TDA Tourist Sector

Five TDA Tourist Centers are being developed in this TDA Sector, which has around 5,700 rooms and an additional number of hotel rooms under construction. This is the most active tourism development area in the Red Sea coast. The coastal area in this sector will be mostly developed by ongoing construction projects and planned projects in the mid term. An offshore area is proposed as anchorage for international cruise boats in the future.

(2) Safaga Tourist Town and surroundings

Safaga Tourist Town: regional goods distribution center

Safaga City should function as the center of transportation and goods distribution/trading in the regional tourism development. The coastal area within the urbanized area is currently being utilized as a port. Therefore, it should be improved and upgraded to a regional port with railway station for goods and passengers, and wholesale and truck terminals to establish a regional goods distribution center. Improvement of the Safaga port is also proposed so that it can handle international cruise ships.

The southern coastal area in Safaga is one of the richest mangrove habitats in the Red Sea coast and it should be considered as a natural environmental conservation area.

TDA Safaga-Quseir Sector: rehabilitation of marine natural resources

In TDA Safaga-Quseir Sector, marine natural resources should be assessed and analyzed for damages as a result of the phosphate industry and port activities in El Hamarawein and the surrounding areas of Safaga City. To rehabilitate and revitalize damaged/deteriorated coral reefs, countermeasures and mitigation measures have to be adopted. The TDA tourist center in the sector also has to deal with land issues with the military.

Reserved area for post 2012 tourism development

Safaga City and TDA Safaga-Quseir Sector should be reserved for the post 2012 tourism development, when the rich natural marine resources have been rehabilitated.

2.7.6 The Mid Red Sea Zone Tourism Development Area

The mid Red Sea coast is proposed as the main tourism development area for international tourist market up to the year 2012. Potentials of international marine tourism development in this area are identified as rich marine and inland natural resources, historical heritage sites and traditional cultural resources. The present Quseir City and Marsa Alam City should take on functions to support tourism development and services.

(1) Quseir Tourist Town: historical tourism center

Quseir City is historically developed as the mother town in the Red Sea coast. The old town of the city still maintains a traditional Arabic urban form with traditional architecture and an old fort although some traditional buildings had been renovated and used as hotels. Designated coastal tourism development areas in the city are around 30 km, which will have huge

development capacity for future hotel development.

Tourism development in Quseir

Rehabilitation and beautification projects are proposed in order to utilize the old town for historical tourism. Establishment of historical research and exhibition center is also proposed in the city to conserve historical heritage sites and enhance cultural tourism in the mid Red Sea coast. It is proposed that the present port in the city be improved and rehabilitated to increase its capacity and enable it to serve all the resort development within the 30-km shoreline of the city area.

Vocational training facilities, general hospital and health care center, tourist police center, fire fighting center and other sub-regional center facilities are proposed for development, which will be planned by the local government.

(2) TDA Quseir-Marsa Alam Sector

Eight Tourist Centers are designated along 130 km of shoreline. Around 20% (27 km) of the shoreline is allocated for buffer area in between each tourist center. Development of Marsa Alam International Airport is being implemented and it will be opened by the year 2002. Major tourism development activities in the sector are starting from northern and southern tourist centers, where there are currently 1,000 rooms in operation and 3,000 rooms under construction.

The distribution of accommodation for this sector is as follows: 4,000 rooms for 2002, 14,000 rooms for 2007 and 42,000 rooms up to the year 2012. The 42,000 rooms could be allocated as follows: 13,000 rooms to 3 northern tourist centers, 19,000 rooms to 3 middle tourist centers and 10,000 rooms to 2 southern tourist centers.

A pier and marina should not be developed in every tourist center considering shoreline and coral reef protection. One or two natural bays in each tourist center could be utilized as marina and berth facilities for diving and fishing boats. Large natural bays in the middle zone could be used only for anchorage space of international cruise boats in the future. International complex for convention and tourist service and marine conservation are proposed in the middle zone as follows:

Marsa Alam Convention and Tourist Center: Large, medium, and small-scale convention facilities with office/business center, business supporting shops/workshops, international tourist information, airline offices, tour agent and operator offices, bank and insurance offices and post office.

Red Sea Conservation Center: marine bio-diversity research center with aquarium/sea marine science museum, terrestrial bio-diversity research center, marine protectorate management/enforcement center, training center for ranger and guide, and environmental awareness center.

(3) Marsa Alam Gateway

Marsa Alam City was originally a small fishing village. It has developed as a small mining service town. Marsa Alam is currently developing as a tourism development support town and tourist service town.

The development plan of Marsa Alam City has designated 28 km of beachfront area for tourism development. This will have big potential of hotel development, with 8,000 hotel rooms up to 2012. Within the city area, there is no natural bay available for marina and berth facilities development for diving and fishing activities, which are the major image and lead activities of the Red Sea. Improvement and expansion of the existing port facilities as marine sports base facilities for all marine tourism development within the city area should be considered. Fisherman's wharf development is also proposed in the port area to create tourist recreation in the city.

Bedouin communities are settling up in the surroundings of the city. Traditional handicraft center is proposed for development in the city.

(4) TDA Marsa Alam-Ras Benas Sector

TDA Marsa Alam-Ras Benas Sector is located south of Marsa Alam. The 83-square kilometer planned development area is along 120 km of shoreline.

EEAA is proposing the formation of Hamata Protectorate, which covers four Tourist Centers on the middle and southern part of the sector. GEF project is also proposing the establishment of Wadi El-Gemal and Hamata Coastal and Marine Protected Areas, which also cover the mid-southern part of the sector proposed by EEAA.

The Ras Dori and Sharm Fokiery Tourist Centers in the north are proposed for development up to 2012. Development of the remaining four Tourist Centers in the middle and southern parts of the sectors should be postponed after 2012 to reassess its environmental impact and to coordinate plans with those of EEAA and GEF.

2.7.7 TDA Development and City Development

(1) Issues of urban functions to support tourism development

The magnitude of tourism development and operation in the Red Sea will have large-scale impacts to the local communities and economy as follows:

Table 2.7.7 Increases of Hotel Rooms and Employment

	Present	Additional	2012
1. Hotel Accommodation Room	27,000	103,000	130,000
2. Job Creation of Direct Employment	40,500	154,500	195,000
3. Job Creation of Indirect Employment	27,000	103,000	130,000
4. Tourism Related Population	81,000	569,000	650,000
Share (4/5, %)	60	98	91
5. Total Population	136,000	581,000	717,000

Source: JICA Study Team

Tourism and related industries are already major industries in the Red Sea. The existing 27,000 hotel rooms in the Red Sea study area are targeted to reach 130,000, which is almost five-fold the existing stock.

Those tourism developments will require and create around 0.7 million urban settlements on the expanded Hurghada, Safaga, Quseir, Marsa Alam and new communities in TDA tourist centers.

TDA with private sector investors and the local government should coordinate well and support the harmonized Red Sea coastal development to establish an appropriate scale and function of regional administrative, social service and supporting services of tourism development/operation. Especially, private and public sector roles in the four major cities and settlements in TDA tourist centers should be well coordinated with municipal infrastructure services.

(2) Roles of public and private sectors for municipal infrastructure services

As indicated in Table 2.7.7, the population of the priority area in the Red Sea is estimated to increase by more than five times (or annual growth rate of 13.6 %) over the period from 1999 to 2012. There is an urgent and indispensable requirement for local governments to improve and upgrade municipal infrastructure as well as social facilities.

It is the responsibility of local governments to develop and manage municipal infrastructure, such as road network, urban water supply, solid waste management, and sewerage, in their respective administrative area, in principle. On the other hand, TDA is proceeding to develop

the centers as self-contained type of development. In TDA area, the cost of infrastructure services is high compared with the city areas because of the limited use of resources.

Focusing on the mid- and long-term perspectives, the roles of public and private sectors for municipal infrastructure development are proposed for each development stage in the city area as well as in TDA Centers, as shown in Table 2.7.8, based on land use as follows:

- Hotel accommodation area in TDA Centers;
- Service towns in TDA areas for the settlements to provide services to hotel accommodations;
- Residential area in the city; and
- Hotel accommodation area in the city.

Table 2.7.8 Municipal Infrastructure Development by Land Use

		Hotel accommodation	Town/residential
TDA Tourist Center	Short Term (2007)	Private	(Private)
	Mid Term (2012)	Private	Private/Public
	Long Term (2017)	Private/Public	Public
City (urbanized area)	Short Term (2007)	Private	Public
	Mid Term (2012)	Public	Public
	Long Term (2017)	Public	Public

Source: JICA Study Team

In the Red Sea, it is imperative for the public sector to improve and upgrade municipal infrastructure services for the existing four major cities. In the service towns of TDA Centers, it will also be the public sector that will guide and organize stable settlements of new communities so as to attain sustainable tourism development by avoiding negative impacts on natural and social environments.

TDA Tourism Development area

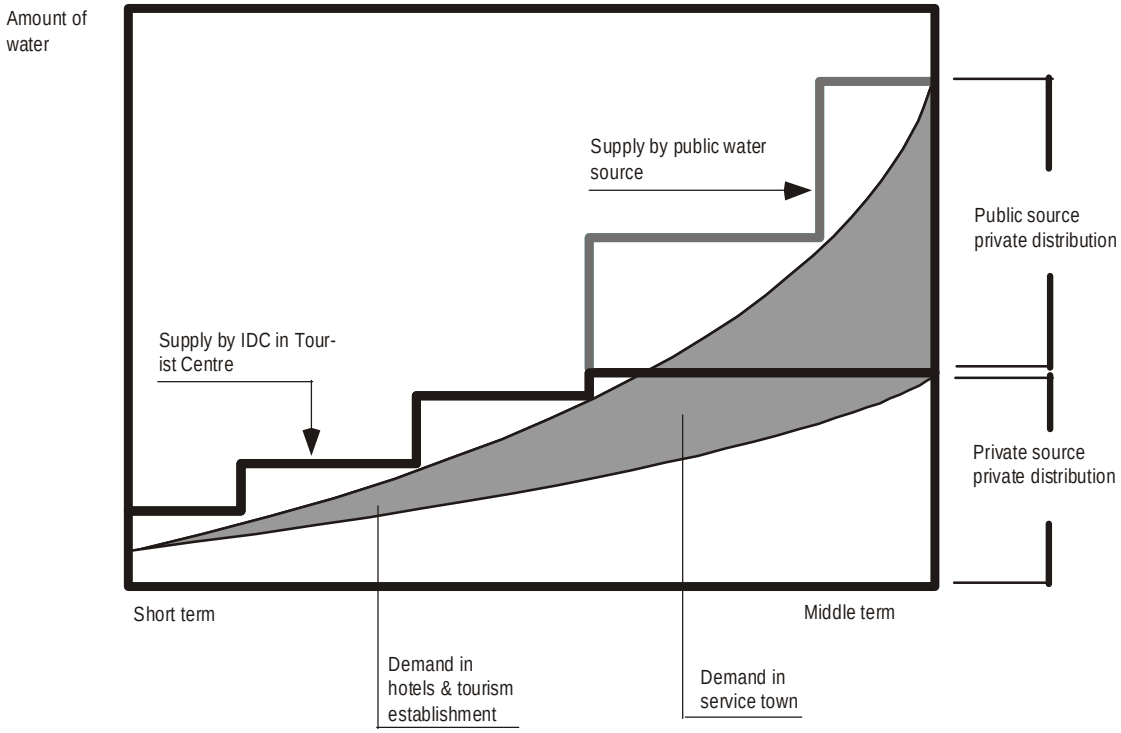
Infrastructure can be developed and managed by the Infrastructure Development Corporation (IDC) based on the development contract between TDA and IDC in the short-term period until 2007. Up to this period, the settlements in the service towns are going to be small.

In mid term until 2012, considerable settlements of inhabitants will emerge in the service towns of TDA Centers. In those service towns, the public sector will be involved in developing infrastructure, though it will be basically operated by the IDC. Figure 2.7.2 illustrates public and private coordination for water supply in a typical TDA Center in the Red Sea. Infrastructure development and management of hotel accommodation remain IDC's responsibility in this stage.

In the long-term perspective after 2007, there will be a need to expand the capacity of infrastructure in the TDA Centers developed by self-contained type. It is proposed that the public sector be involved and to develop infrastructure so as to supply that additional capacity in the TDA Centers. The role of the public sector is to supply the infrastructure outside the TDA Center and IDC will be responsible for its distribution within the Center.

Public-private sector coordination is indispensable for the economic, financial and sustainable environmental facilities utilization. It is unrealistic to depend solely on either the public or private sector to provide all environmental utility services for all the industries and communities in the region. Roles and responsibilities of each sector should be set in consideration of public interest and private-sector capability.

Figure 2.7.2 Development Scheme of Public-Private Coordination in TDA Centers



Source: JICA Study Team

Tourism development area in Cities

In the city areas, major infrastructure and utility services are currently provided to the communities at subsidized prices by the public sector. It is an urgent requirement that the public sector develop municipal infrastructure to cope with increasing demand under pressure of rapid urban expansion. Otherwise, living environments in the existing inhabited areas will deteriorate. Under the current circumstances, it is preferable that municipal infrastructure development remains with the public sector.

In tourism areas in the city, it will be developed by the private sector in the short term, but it will be more efficient if management is transferred afterwards to the public sector, along with the municipal management system of the city.

Regarding social services, including health and education, it is a public responsibility to provide them both in cities and TDA areas. In TDA areas, primary social services can be provided by IDC but public sector resources are required for higher services. It is noted that public utility investments and educational services had shares of 98% and 85% of total investments respectively in the Fourth Five-Year Plan.

(3) Roles of public and private sectors for social services

Public social services, such as health/medical care, education, social welfare, and security/fire-fighting services, in the region are still inadequate.

The role of the public sector is not only indispensable to improve and upgrade social services for the existing and expanding four major cities, but also necessary to create settlements in TDA tourist centers. It will guide and organize the creation of hospitable and stable local communities for sustainable tourism development in the region.

Distribution and development of social service facilities in the future should be coordinated with the future urban hierarchy and urban function distribution in the region. A higher level of regional center facilities for each social service should be distributed in Hurghada Regional

Center. Quasi-regional center facilities for each social service are also proposed in Quseir to support a 500-km-long regional development. Middle level of social service facilities should be distributed to the four major cities. The other social service facilities for daily life should be distributed not only to the four major cities, but also to residential areas in TDA tourist centers.

(4) Roles of IDCs for development of TDA Tourist Centers

For a smooth and appropriate implementation of TDA Tourist Center development, the following measures are proposed:

Coordination of development activities

Around 420 km^2 land with 234 km shoreline spread out in 19 tourist centers have been designated, subdivided and sold by TDA without infrastructures. More than 300 contacts with private sector investors are underway or have been completed in 19 tourist centers.

The enormous ribbon development along the Red Sea coast requires huge infrastructure development cost, which will require more than 40% of total investment cost in early development stage. Originally, the task for infrastructure development is assigned to the IDC of each tourist center development.

IDCs of Tourist Centers should observe the following coordination functions before implementation of development activities:

- Reorganization and demarcation of semi-public and common-use area belonging to the IDC (roadside setback area, bay area and surrounding, shoreline setback area and inland area from main road, access road to beach, etc.); and
- Coordination and demarcation of capital share of IDC by investors.

Development of road network

The IDC should plan, coordinate and implement road network development. This includes new road network development in semi-public and common areas and access roads to beach area, including improvement/or removal of the existing main road.

Infrastructure development

The IDC should plan, coordinate and implement infrastructure development. Included here are water and power supply, sewerage collection/disposal/recycling system and telecommunication network development. Development plan and implementation schedule of each infrastructure should be well coordinated with scheduled demand of all private investors.

- Staged development system for short-, mid- and long-term development should be introduced to minimize initial infrastructure investment cost; and
- Fuel consuming desalination system for water supply in TDA areas should be substituted with the Nile River water by the public sector for regional water supply to avoid negative impact on global environment on the long term.

Common facilities development

Planning, coordination and development of common facilities, including marina for diving and fishing boats and public beach on natural bay, amenity, shopping/tourist center, beachside promenade/landscape, roadside landscape, residential area/housing with community center for staff, etc. should be undertaken by IDC.

To induce public sector participation for social service facilities

Development and operation of social service facilities are indispensable to establish a stable community, especially for frontier development. Most of the tourist centers are isolated from the four major cities, and they are expected to create more than 5,000 jobs for direct

employment in hotel accommodation development. New town development for a total population of 10,000, including staffs and family members, will be required within the Tourist Centers.

The IDC should undertake residential land or housing development with community center. For residential new town development in tourist centers, the public sector is to be responsible for social service facilities development and operation, which should be based on Egyptian standard for urban community, including the following:

- Nursery, primary and secondary educational facilities;
- Health and medical care facilities;
- Security facilities (tourist police station, fire fighting); and
- Market place.

Operation and management activities

During the initial operation stage, IDC should not only be involved with operation and management activities for common facilities and area, but also share in the public sector's role on municipal services, as follows:

- Operation and management of infrastructure;
- Operation of common facilities;
- Solid waste collection and disposal (reuse and sanitary land fill);
- Cleaning of common area;
- Awareness and monitoring of hotel/accommodation operation for environmental conservation; and
- Awareness and monitoring, control of tourist activities for environmental conservation.

2.8 Transportation and Infrastructure

2.8.1 Improvement of Airport Facilities

(1) Development Framework

Air transportation is the main mode not only for international visitors but also for Egyptian tourists. Cairo International Airport is the national gateway of Egypt, while Luxor Airport, Aswan Airport and Hurghada Airport function as gateways of Upper Egypt. This situation will continue in the future.

By 2012, the total number of international visitor arrivals is expected to reach about 14 million. Therefore, it will be necessary to strengthen and expand the international and domestic air transportation networks in terms of steady tourism development in Upper Egypt. The number of international passengers and airplanes from/to abroad in 2012 is estimated in Table 2.8.1, while the number of international and domestic tourists who will use the airports in Upper Egypt is presented in Table 2.8.2.

Table 2.8.1 Number of International Passengers and Flights in 2012

Airport	Cairo	Luxor	Aswan	Hurghada	Marsa Alam	Others	Total
Passenger (million)	10.7	1.7	2.0	4.3	6.5	4.0	29.2
Flight (thousand)	71.3	11.3	13.3	28.7	43.3	17.6	185.5

Note: Average passenger per flight: Cairo = 120p/flight, Luxor-Aswan = 150p/flight, Hurghada, Marsa Alam, Others =150p/flight

Source: JICA Study Team

Table 2.8.2 Number of Airport Passengers in 2012

(Unit: million)

Airport		Luxor	Aswan	Abu Simbel	Hurghada	Marsa Alam	Total
Passengers total		1.7	2.0	0.5	4.3	6.5	15.0
Mode	Direct flight	0.9	1.1	0.0	3.0	4.3	9.3
	Via Cairo/other	0.8	0.9	0.5	1.3	2.2	5.7

Source: JICA Study Team

(2) Improvement of airport facilities

Almost all the developments and improvements of airport facilities are done by BOT scheme in Egypt. They include the following:

- Improvement of airport terminal to meet future demand;
- Improvement of operation and management system (security, navigation system, customers services, etc.);
- Development of tourist information system for tourist destinations.

Improvement of Cairo International Airport

Cairo Airport Authority and Egyptian Civil Aviation Authority have already studied the expansion of the runway, taxiway and terminal building in Cairo Airport, Luxor Airport and Hurghada Airport to meet future traffic demand. These expansion projects will be implemented by BOT scheme.

Development of Marsa Alam Airport

The airport in Marsa Alam is under construction by BOT scheme, and will start operation in 2002. This airport is expected to accelerate tourism development in the Red Sea because

international direct flights will be dominant in this airport. Therefore, the airport development has to be implemented on schedule.

2.8.2 Road Improvement

(1) Development of bypass roads and road widening

Road transportation is the most convenient mode for visitors. It is expected that the volume of road traffic will increase in accordance with the tourism development in Upper Egypt. Road sections that need improvement are as follows:

Upper Nile

- Construction of bypass on National Road No. 2 between Qena and Aswan; and
- Improvement and widening of existing road along the West Bank of the Nile River between Qena and Aswan.

Red Sea

- Construction of bypass on National Road No. 44 between Hurghada and Marsa Alam, and
- Widening of National Road No. 44 between Marsa Alam and Hamata.

(2) Development of Highway Oasis

Future traffic demand for connection roads (Route 77, 88, 99)

Future passenger demand shown in Table 2.8.3 has been estimated by reviewing the current transportation statistics together with related information on future population and target tourist flow estimates by the Study Team. Tourist traffic includes Egyptian tourists who stay in hotels.

Table 2.8.3 Future Demand of Highway Traffic

(Unit: thousand passengers)

Highway	Mode	Existing	2002	2007	2012	Growth Rate
NR 77	Tourist traffic	-	400	700	900*	8
	Other Traffic	-	1,100	1,700	3,000	11
	Total	(1,110)	1,500	2,400	3,900*	10
NR 88	Tourist traffic	-	50	200	600	28
	Other Traffic	-	950	1,400	2,000	8
	Total	(740)	1,000	1,600	2,600	10
RR 99	Tourist traffic	-	50	200	800	32
	Other Traffic	-	450	800	1,300	11
	Total	(370)	500	1,000	2,100	15

Note: Passenger traffic indicates two-way traffic volume

* Includes tourist passengers who take the train (5% share of total tourist).

: Other traffic is estimated by correlation coefficient between future population and assumption of car ownership rate and traffic volume in each highway.

: Future population is based on the annual growth rate provided by the Ministry of Planning in Qena, Luxor and Aswan and the proposed figures in Red Sea Governorate.

Source: JICA Study Team, (figure) includes all sector traffic/Ministry of Transport and Telecommunication1999 (unpublished).

Demand on Highway Oasis

The demand on roadside facility is set assuming that the correlation of possibilities to stop for a rest or to buy something such as fuel oil and others. For this exercise, Japanese traffic statistics were used as reference for basic data. The estimation does not include the number of train passengers, which is assumed to be 5% of total tourists between Upper Nile and Red Sea in

2012. Table 2.8.4 shows the demand on roadside amenity per day.

Table 2.8.4 Demand of Roadside Amenity

(Unit: passengers)

Route	Highway Oasis Facilities Type	Traffic volume per day		
		2002	2007	2012
NR 77	Type A (SA)	1,070	1,780	2,500
	Type B (SM)	110	190	250
NR 88	Type A + B (SA+SM)	460	880	1,720
	Type B (SM) x 2	40	160	490
RR 99	Type A (SA)	410	960	2,540
	Type B (SM)	30	160	660

Note: Refer to Table 2.8.4(a) and (b)

Table 2.8.4(a) Stopover ratio for Type A

Road	Type	Rest	Repair, gas, etc	Total
NR 77, 88	Tourist traffic	70%	5%	75%
	Other traffic	30%	5%	35%
RR 99	Tourist traffic	90%	5%	95%
	Other traffic	50%	5%	55%

Table 2.8.4(b) Stopover ratio of Type B

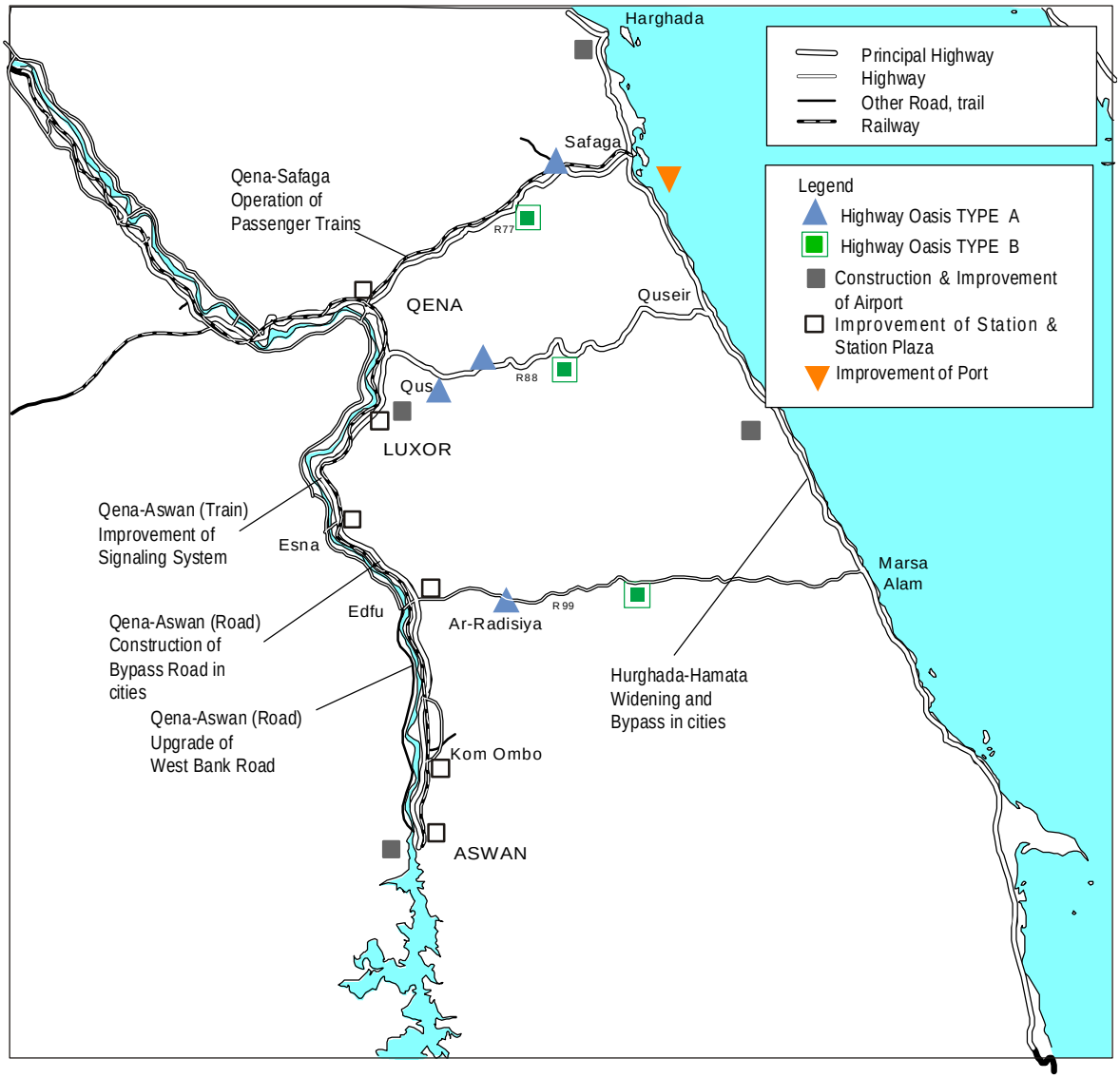
Road	Type	Rest and sightseeing
NR 77	Tourist traffic	10%
	Other traffic	0%
NR 88, RR 99	Tourist traffic	30%
	Other traffic	0%

Note: As for types of facility, refer to Table 2.7.4

Source: JICA Study Team

The development of a Highway Oasis is described in detail in section 2.7.3 and in the 'Pre-Feasibility Study of Service Area Development along Route 77, 88, and 99' in the report volume "Projects & Programs".

Figure 2.8.1 Transportation Network Improvement



Source: JICA Study Team

2.8.3 Railway Improvement

(1) Railway improvement plan

The number of tourists using the train at present is low because of minimal development of the railway as a tourism product. But the role of railway will be important in the future when the number of international independent tourists increase. In order to provide tourists with wide options of transport mode, the improvement of railway will be needed. Proposed improvement on sections of railway are as follows:

- Improvement of signaling system between Qena and Aswan, and
- Operation of passenger trains between Qena and Safaga.

(2) Station plaza improvement plan

Railway station is a transportation node for trains, vehicles and pedestrians, and it is one of the main gateways of cities. A well-developed station plaza is not only a good gateway of cities, but also of facilities which can provide the convenience of movement and safety for people. And information centers, which can provide information to tourists, have to be developed. Improvement and development of a station plaza is necessary for regional tourism development in Upper Egypt. Station plazas that need to be improved or developed are Qena, Luxor, Esna, Eduf, Kom Ombo Aswan and Safaga.

2.8.4 Improvement of Water Transportation Facilities

(1) Nile Cruise facility improvement

Development plan of berth facilities

According to the accommodation development in Upper Nile, the target for cruise ships is given below:

Table 2.8.5 Target Number of Accommodation Rooms of Cruise Ships

		2002	2007	2012
Guests (million)		0.76	0.85	0.94
Bed nights (million)		3.8	4.2	4.7
Share in total bed Nights (%)		46	36	28
Number of ship	Luxor-Aswan	225	250	275
	Nasser Lake	5	7	10
	Total	230	257	285

Note: Refer to Table 2.8.5(a).

Table 2.8.5(a) Correlation coefficient

Occupancy Rate	0.6
Guests per cabin	1.5
Length of stay in all phases	5.0
Cabins per ship in Nile River	50
Cabins per ship in Nasser Lake	60

Source: JICA Study Team

And the following development conditions are set as follows:

- Develop and improve single parallel berth facilities with adequate buffer considering safe navigation;
- Fill the demand-supply gap in the early phase of improvement; and
- Not only cruise ship but also other river transport such as *felucca* can use the facility.

Based on the above framework and development conditions, the berth facilities for cruise ships and other ships are set as follows:

Table 2.8.6 Target Number of Slots of Berth Facilities

		2002	2007	2012
Number of berths	Cruise ship	230	257	285
	Felucca, etc	3	8	15
	Total	233	265	300

Note: Refer to Table 2.8.6(a).

Table 2.8.6(a) Felucca, etc. per cruise ship

	2002	2007	2012
Felucca, etc. per cruise ship	0.1%	0.3%	0.5%

Source: JICA Study Team

The distribution of berth facilities is set as shown in the Table 2.8.7, taking account of the following policies:

- Disperse development pressure of berth facilities to other potential areas in order to prevent the concentration on major destinations such as Luxor and Aswan;
- Secure suitable berth places for night-stay with limited navigation system;
- Ensure adequate places for rest stops and tourist sites visits;
- Introduce a temporary measure of parallel berthing in the early phase in order to fill the gap between demand and capacity
- Provide adequate development type for berth facilities taking account of environmental conditions and scale of development

Table 2.8.7 Required Numbers of Berth Facilities Slots

Location of Berth		2002	2007	2012
QENA-ASWAN	Qena-Dendera	(30)	(30)	20
	Luxor City	(62)	(63)	39
	El Toad	(10)	(10)	25
	Esna	(20)	(20)	20
	El Kab	–	–	5
	Edufu	(20)	(22)	37
	Gebel el Silsila	–	–	5
	Kom Ombo	(14)	(14)	21
	Aswan New City	–	20	32
	Aswan City	(51)	(52)	54
	Sub-total	207	231	258
LAKE NASSER	High Dam Port	(2)	1	1
	Pier to Kalabsha	1*	–	–
	Dakkha/Wadi	–	1	1
	Amada	–	1	1
	Qasir Ibrim	–	1	1
	North Kohr Toushka	–	–	1
	North Abu Simbel	–	1	3
	Abu Simbel	(2)	1	1
	Sub-total	4	6	9
Total		211	237	267

Note: Figures in parentheses are estimated considering multi parallel berthing
* Small boats pier development inland to Kalabsha Island.
Refer to Table 2.8.7(a)

Table 2.8.7(a) Total numbers exclude ships in-transit on the river and lake

		2002	2007	2012
Ship in-transit to each destination on the Nile River and Lake	Qena-Aswan	21	26	30
	Lake Nasser	1	2	3
	Total	22	28	33
(Share of total ships)		9%	10%	10%
Ships needing berth facilities		211	237	267
Grand total		233	265	300

Source: JICA Study Team

Environmental consideration

From the viewpoint of environmental protection, facilities for the following will be needed to protect the quality of water of the Nile River and Lake Nasser:

- Sewerage treatment;
- Oil supply; and
- Water supply.

Improvement of berth facilities is discussed in section 2.6.3 and in the 'Pre-Feasibility Study of the Development of Passenger Landing Facilities along the Nile' in the report volume "Projects & Programs".

(2) Sea transportation in the Red Sea

The Port at Safaga is one of the main trading ports in Egypt. In accordance with the tourism development in Upper Nile and the development of other industries, the role of this port will become more important, and will therefore require improvement.

Safaga Port should be improved as a ferry port as well. Although primarily used by Egyptian pilgrims at present, the port should be improved to handle international passenger ships in accordance with tourism development in the Red Sea. At present, international tourists cannot visit Safaga Port because it is also used by the military. It will be necessary to designate the port areas for military use and for civilian use.

2.8.5 Water Supply

In accordance with the regional tourism development and improvement of people's standard of living, water demand will be increased in the future.

Water demand in major cities in the Red Sea in 2007 and 2012 is estimated in Table 2.8.8 and Figure 2.8.2.

Table 2.8.8 Water Demand at Major Cities in the Red Sea

(Unit: m^3)

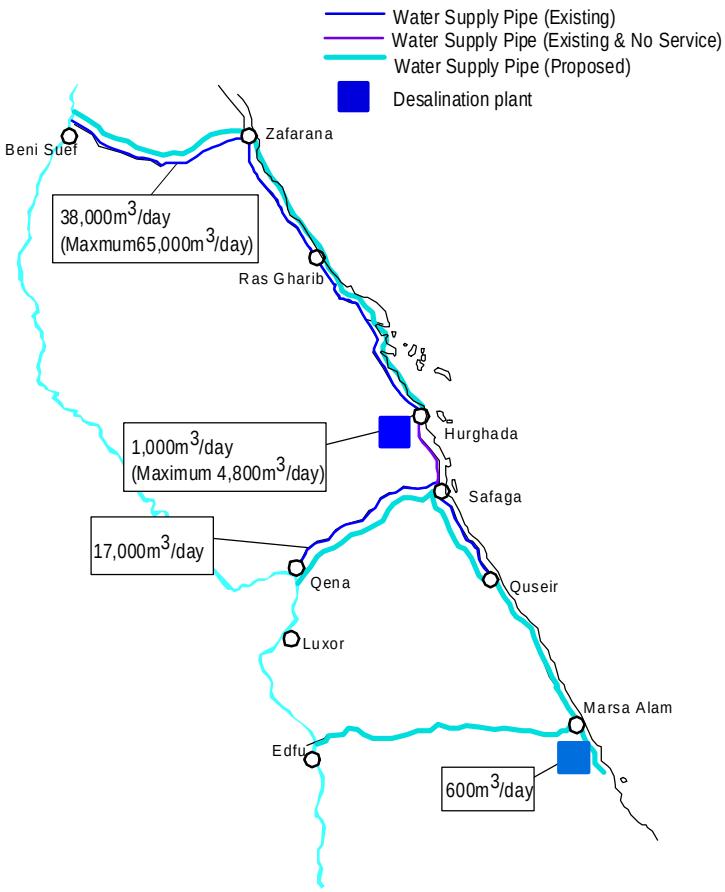
City	Hurghada	Safaga	Quseir	Marsa Alam	Remarks
Existing	39,000	11,630	5,650	600	In 1998
Demand	37,380	13,850	15,170	10,110	In 2007, city area only
	58,300	27,250	54,325	62,625	In 2012, including TDA Centers
Water needed	-	2,220	9,520	9,510	In 2007, city area only
	19,300	15,620	48,675	62,025	In 2012, including TDA Centers

Source: JICA Study Team

(1) Water supply plan for Upper Nile

Future demand of water supply for cities in Upper Nile will increase because of the regional tourism development and regional development. There is a need to improve and expand water supply facilities in order to provide a steady supply of water in the future.

Figure 2.8.2 Water Supply Facilities



Source: JICA Study Team

(2) Water supply plan for the Red Sea

Source of drinking water

Developers of TDA Tourist Centers have to provide their own infrastructure. Seawater is the only source of drinking water for them, considering construction schedules of their projects and construction cost of water supply facilities.

Source of potable water for city area should come from the Nile River because of its huge supply. However, the environmental impact of the operation of desalination plants should be considered.

Water supply projects of cities should be implemented by the public sector in order to supply the community with water at less cost. The public sector should supply water to TDA Tourist Centers as well as the city area in the future.

Water supply development plan

To meet future water demand and to accelerate development in the Red Sea, the required volume of water to be taken from the Nile River through water pipelines is as follows:

Table 2.8.9 Additional Amount of Water Required

Consumption place	Intake place	Water needed (m^3)	Remarks	
Hurghada	Koraymet	-	In 2007	Expansion of existing facilities
		19,300	In 2012	
Safaga and Quseir	Qena	11,740	In 2007	Expansion, along NR 77
		64,300	In 2012	
Marsa Alam	Edfu	9,510	In 2007	New development, along NR 99
		62,000	In 2012	

Source: JICA Study Team

2.8.6 Sewage Disposal

(1) Volume of sewage treated

In accordance with the regional tourism development, tourism-related industry developments and improvement of people's living standard, the volume of sewage discharged will increase rapidly. Volume of sewage discharged in cities in the Red Sea in 2012 will be as follows:

Table 2.8.10 Volume of Sewage Discharged in Cities in the Red Sea

(Unit: m^3)

City	Hurghada	Safaga	Quseir	Marsa Alam	Remarks
Existing volume	30,000	-	-	-	In 1999
Sewage discharged	38,800	15,050	29,960	28,690	In 2012
Treatment volume needed	8,800	15,260	29,960	28,690	

Source: JICA Study Team

(2) Sewage disposal plan

In order to save drinking water and to protect the natural environment of the Red Sea, sewage disposal plants with collecting pipes should be installed in cities and TDA Tourist Centers. Following disposal plants are needed with collecting networks:

- New developments at Safaga, Quseir and Marsa Alam; and
- Expansion of existing facility at Hurghada.

(3) Reuse of treated water and sludge

Treated water should be reused for irrigation to save on drinking water. Sludge generated at treatment plants should also be reused as fertilizer.

2.8.7 Solid Waste Disposal

(1) Estimation of volume of solid waste

In accordance with the regional tourism development and regional development, the amount of solid waste discharged will increase in the future. The amount of solid waste in cities and TDA centers in the Red Sea in 2012 is estimated in Tables 2.8.12 and 2.8.13.

Table 2.8.11 Volume of Solid Waste Discharged in Cities in the Red Sea

(Unit: t/day)

City	Hurghada	Safaga	Quseir	Marsa Alam	Remarks
Volume (t/day)	113.5	40.8	83.8	80.5	In 2012

Source: JICA Study Team

Table 2.8.12 Volume of Solid Waste Discharged from TDA Tourist Centers in the Red Sea

(Unit: t/day)

Tourist Center	North Hurghada	Hurghada-Safaga	Quseir-Marsa Alam	Marsa Alam-Ras Benas	Remarks
Volume (t/day)	9.3	56.9	112.5	29.0	In 2012

Source: JICA Study Team

(2) Solid waste collection system and recycling

Both public and private sectors should be responsible for solid waste disposal. Business firms, such as hotels and construction companies, should be responsible for the collection and disposal of their own solid waste. On the other hand, the public sector should collect solid waste discharged by inhabitants.

Solid waste should be segregated to several types, such as metals, bottles, plastics, and others, for recycling and for extending the life span of final disposal sites. To do this, solid waste should be disposed of by type at proper places for easy collection.

(3) Final disposal site

Final disposal sites are the most important facilities in the solid waste disposal system. From the viewpoint of environment and landscape, disposal sites must be selected carefully so as not to affect people and nature. Selected final disposal sites must be managed and operated well. Inspection of quality and quantity of wastes brought and kept in site and of the surrounding area is very important from the viewpoints of sanitation and environmental protection.

2.8.8 Electric Power Supply

(1) Future daily consumption volume of electric power

Cities are being supplied electricity from the national grid or are generating their own electricity, and each TDA Tourist Center has its own generator at present. However, electricity should be supplied from the national grid in the future.

Total daily consumption of electric power in cities and TDA centers in 2012 is 9,358 MWh/day.

Table 2.8.13 Consumption Volume of Electric Power in the Red Sea

(Unit: MWH/day)

City	Hurghada	Safaga	Quseir	Marsa Alam	Total	Remarks
Volume of electric power	2,723	1,190	2,455	2,990	9,358	In 2012

Note: 10 hours per day
Source: JICA Study Team

(2) Electric power supply system for Upper Nile

High voltage power transmission lines along both sides of the Nile River supply electricity to the whole nation. Upper Nile Sub-region, except Lake Nasser area, receives electricity from these lines, and this arrangement is expected to remain in the future. In the case of Lake Nasser, the tourism development areas developed by TDA will provide the necessary electrical facilities for themselves or will be supplied electricity from Abu Simbel.

(3) Electric Power Supply Development for Red Sea

To meet future demand for electric power, thermoelectric and wind power plants in Hurghada should be operated, and other thermoelectric plants in Quseir and Marsa Alam should be expanded.

In addition, a transmission line of 220 kV should be extended to Marsa Alam via Quseir from Safaga by year 2012 to provide a steady supply of electricity. Each city generator should be connected to this line.

(4) Power Supply Development Plan

Transmission lines from Safaga to Marsa Alam should be installed. Length and development phasing is shown in Table 2.8.15.

Table 2.8.14 Expansion of Transmission Line in the Red Sea in 2012

Section	Length (km)	Transmission Line	Transformer (kV)	Remarks
Safaga-Quseir	80	220kv	220/66/22	By 2007
Quseir-Marsa Alam	120	220kv	220/66/22	By 2012

Source: JICA Study Team

2.8.9 Telecommunication

(1) Capacity of stations

Future demand for circuits and additional circuits in each station in the Red Sea is estimated as shown below.

Table 2.8.15 Circuit Demand of Cities in the Red Sea in 2012

City	Hurghada	Safaga	Quseir	Marsa Alam	Remarks
Existing (Circuit)	11,312	3,000	3,000	400	In 1997
Demand (Circuit)	70,900	34,100	70,300	98,500	In 2012
Additional (Circuit)	59,588	31,100	67,300	98,100	

Source: JICA Study Team

(2) Telecommunication Network Plan

Diffusion rate of telephone will increase rapidly in the Red Sea. To cope with future demand, number of circuits should be expanded immediately.

In terms of service coverage, each of the four cities in the Red Sea should be covered as one service area by each center (sub center). Considering size and geographical location of the cities, Hurghada and Marsa Alam should become area center stations covering Safaga and Quseir respectively and connected to/from outside regions by microwave. An optical fiber network should be set between area center stations in the future.

2.9 Socioeconomic Impact

2.9.1 Tourism Development and Employment Generation

Development of the remote areas and diversion of population to those areas is a national policy in the "Egypt in the 21st Century." Tourism is one of the three key sectors to encourage population diversion from the Nile Valley to the remote areas as well as being the main source of economic growth.

Table 2.9.1 shows the estimated accommodation capacity in Upper Egypt in the development framework. Number of additional rooms in Upper Egypt has been estimated at 134.7 thousand until 2012.

Table 2.9.1 Number of Accommodation Rooms in Upper Egypt in 2012

(Unit: thousand rooms)

Governorate/City	Priority Area	Exiting number	Total addition	Total number in 2012
Qena, Aswan, Luxor (Cruise Ship)	Priority Area	19.0	31.0	50.0
		(10.8)	(6.5)	(17.3)
Red Sea	Priority Area	27.0	103.0	130.0
	Other area	0.6	14.4	15.0
	Sub-total	27.6	117.4	145.0
Upper Egypt Total		46.0	134.0	180.0

Note: Existing number of rooms in Upper Nile in 1997; existing number of rooms in the Red Sea in 1999
Source: JICA Study Team

New accommodation establishments create direct employment in those establishments and indirect employment in the related tourism industries, such as restaurants, tour operators, shops and bazaars, tour guides and transportation. Until 2012, an estimated 0.47 million jobs are to be generated in Upper Egypt as shown in Table 2.9.2, including 0.20 direct and 0.27 indirect employment.

In Upper Nile and the Red Sea, 0.11 million and 0.36 million will be generated respectively.

Table 2.9.2 Additional Employment in Upper Egypt until 2012

Governorate /City		Direct employment (thousand)	Indirect employment (thousand)	Total (thousand)
Upper Nile	Priority Area	47	62	109
Red Sea Governorate	Priority Area	155	206	361
	Other area	22	29	51
	Sub-total	177	235	412
Upper Egypt Total		202	268	470

Note: Direct employment = additional number of rooms x 1.5, Indirect employment = additional number of rooms x 2.0
Source: JICA Study Team

For those jobs, new employees could be recruited in the following manner, considering the current labor force distribution in Egypt and the economic conditions of Upper Nile and the Red Sea:

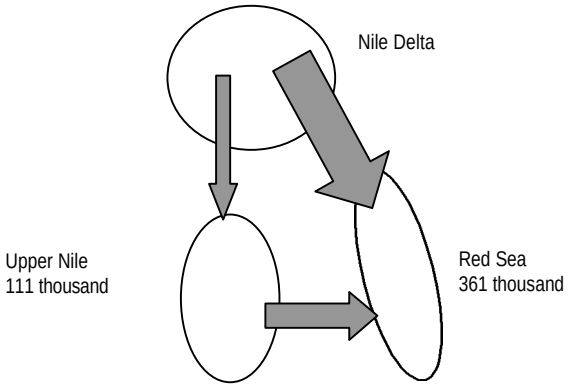
Upper Nile: In 1996, Upper Nile had 3,775 thousand and 835 thousand population and employment respectively. Its unemployment ratio is comparatively high, which was 10.9 % and 20.6 % in Qena and Aswan Governorate respectively in 1996. In Upper Nile, employees for higher management positions will come from the Delta area, because of the scarcity of those levels of human resources in Upper Nile. On the other hand, middle management class and labor class can be recruited within the region. Furthermore, Upper Nile will play the role of providing labor resources for development of the Red Sea. As far as employment in cruise ships is concerned, almost one-third is currently recruited in the Delta area and it will not change

considerably in the future.

Red Sea: In 1996, population was 156 thousand and total number of employment was 56 thousand in Red Sea Governorate. Taking into account the recruitment of labor force for direct employment only, it will require an additional 155 thousand of labor force until 2012 in the Red Sea. This is almost three times the present total employment, or almost as large as the population in the governorate in 1996. The available new labor force within the governorate will be small. Therefore, some employees will have to be recruited from the Delta area and others from Upper Nile.

Figure 2.9.1 illustrates the immigration of workers between Upper Nile, the Red Sea and the Nile Delta area due to tourism development in the Upper Nile.

Figure 2.9.1 New Employment Opportunity and Immigration of Workers between Upper Nile, the Red Sea and the Nile Delta



Source: JICA Study Team

In addition to the above, a considerable number of employment for the construction of accommodation and infrastructure facilities will be continuously generated in the region. Employment for manufacturing or primary sector to supply goods and services to tourism-related sectors, such as handicraft, wholesale and retail industries, banking and agriculture, will also be generated. Due to the immigration of those workers, the population of Upper Egypt will increase at a higher rate and it will be remarkable especially in the Red Sea. Some of the employees will accompany their families and that will accelerate the increase of population.

2.9.2 Employment Generation and Population Increase in the Red Sea

(1) Rapid population increase in the Red Sea

For the accommodation development in the Red Sea priority area, 155 thousand and 206 thousand employment will be required additionally between 1999 and 2012. Based on the accommodation development framework, the number of additional population generated by tourism development is estimated by city and TDA sector as shown in Table 2.9.3, under the following assumptions:

- 1.5 direct employees are required per room;
- 2 indirect employees are required per room;
- An employee will be accompanied by a family member. Half of total number of employees will bring their families;
- Employees will start living with family members five years after moving to the Red Sea;
- Direct employees in TDA development areas and their family members will settle in the same areas which generate the job opportunities;

- Indirect employees in TDA development areas and their family members will settle in the nearest cities from the areas which generate the job opportunities; and
- Direct and indirect employees in city areas and their family members will settle in the same cities which generate the job opportunities.

Table 2.9.3 Additional Population Generated by Tourism Development

(Unit: persons)

	1999-2002			2002-2007			2007-2012			Total
	Direct employee	Indirect employee	Family member	Direct employee	Indirect employee	Family member	Direct employee	Indirect employee	Family member	Increase (1999-2012)
North Hurghada Sector (TDA)	2,300	0	0	1,500	0	1,200	0	0	800	5,800
Hurghada City	4,100	15,800	0	6,000	17,000	9,900	0	4,000	11,500	68,300
Hurghada-Safaga Sector (TDA)	11,000	0	0	10,500	0	5,500	6,000	0	5,300	38,300
Port Safaga /Safaga-Quseir Sector (TDA)	1,200	9,000	0	0	7,000	5,100	0	4,000	3,500	29,800
Quseir City	300	3,400	0	4,500	18,000	1,900	9,000	42,000	11,300	90,400
Quseir-Marsa Alam Sector (TDA)	4,500	0	0	18,000	0	2,300	45,000	0	9,000	78,800
Marsa Alam City	300	4,200	0	3,800	22,000	2,300	9,000	60,000	12,900	114,500
Marsa Alam-Ras Benas Sector (TDA)	600	0	0	3,800	0	300	13,500	0	1,900	20,100
Total of TDA Development Areas	18,400	0	0	33,800	0	9,300	64,500	0	17,000	143,000
Total of City Areas	5,900	32,400	0	14,300	64,000	19,200	18,000	110,000	39,200	303,000
Grand Total	24,300	32,400	0	48,100	64,000	28,500	82,500	110,000	56,200	446,000

Source: JICA Study Team

Because of the tourism development in the Red Sea, it is estimated that 446 thousand population, including direct employees, indirect employees for tourism-related sectors and their families which are 155 thousand, 206 thousand and 85 thousand respectively, will be diverted from the Nile Valley to the Red Sea until 2012.

(2) Population framework for tourist towns and cities in the Red Sea

Based on population increase by natural growth and immigration by tourism development, the population of Red Sea Governorate is estimated as shown in Table 2.9.4. In the Red Sea, population is estimated to increase 4.6 times that of 1999 in the target year of 2012 and its average annual growth is estimated at 12.4% from 1999 to 2012. Table 2.9.5 shows the distribution of population to six cities and TDA Sectors between those cities in the priority area. Hurghada City is estimated to have the largest population in 2012, however, the growth rates of Qusier City and Marsa Alarm City are much higher than Hurghada's.

Table 2.9.4 Future Population in Red Sea Governorate

(Unit: thousand persons)

Area	Item	1999	2002	2007	2012	Annual Ave. Growth Rate
Priority area	Existing population and natural increase	136	144	158	174	
	Direct/indirect employee	0	57	169	361	
	Other increase	0	0	28	86	
	Sub-total	136	201	355	621	12.4%
Other area	Existing population and natural increase	30	32	35	38	
	Direct/indirect employee	0	5	33	51	
	Other increase	0	0	2	16	
	Sub-total	30	37	70	105	10.1%
Total of Red Sea Governorate	Existing population and natural increase	166	176	193	212	
	Direct/indirect employee	0	62	202	412	
	Other increase	0	0	30	102	
	Total	166	238	425	726	12.0%

Source: JICA Study Team

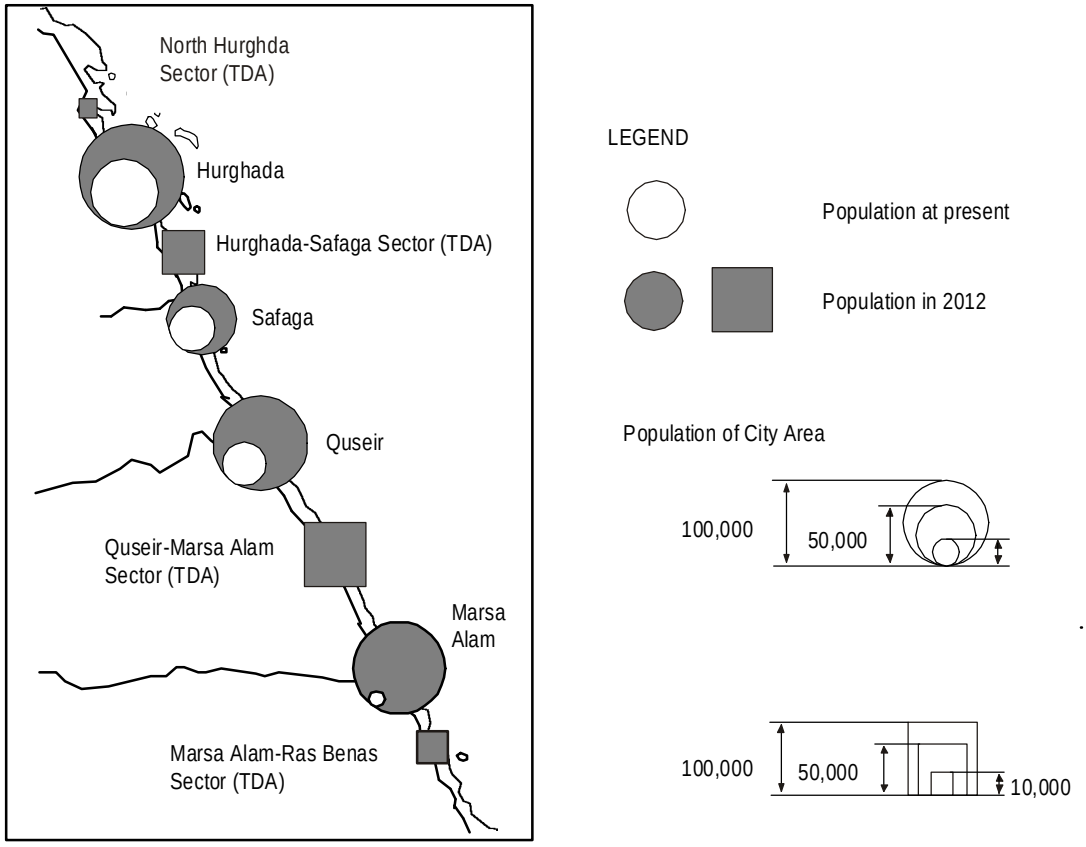
Table 2.9.5 Population in TDA Tourist Centers and Cities in the Red Sea

(Unit: persons)

	1999	2002	2007	2012
North Hurghada Sector (TDA)	0	2,000	5,000	6,000
Hurghada City	63,000	87,000	126,000	149,000
Hurghada-Safaga Sector (TDA)	0	11,000	27,000	38,000
Safaga City/Safaga-Quseir Sector (TDA)	28,000	40,000	55,000	66,000
Quseir City	27,000	32,000	59,000	125,000
Quseir-Marsa Alam Sector (TDA)	0	5,000	25,000	79,000
Marsa Alam City	4,000	8,000	37,000	119,000
Marsa Alam-Ras Benas Sector (TDA)	0	1,000	5,000	20,000
Shalateen City	12,000	13,000	14,000	16,000
Halaib City	2,000	2,000	2,000	3,000
Total of TDA Development Areas	0	19,000	62,000	143,000
Total of City Areas	136,000	182,000	293,000	478,000
Grand Total	136,000	201,000	355,000	621,000

Source: JICA Study Team

Figure 2.9.2 Population Distribution in the Red Sea



Source: JICA Study Team

It is essential to consider the impacts of rapid growth of the tourism sector on the urban environment of cities in the priority areas, such as Hurghada, Quseir and Mars Alarm.

The planning of water supply and sewerage system and solid waste management will be required for a sound urban life of the people living in those cities as well as the tourists in those areas. In order to support urban living and the tourism sector, transport networks should be reviewed from the viewpoint of inhabitants as well as tourists.

2.9.3 Contribution of Tourism Expenditure to Gross Domestic Product

Based on the development framework, tourist expenditure of international visitors and Egyptians in Upper Egypt in 2012 is estimated as shown in Table 2.9.6. Total expenditure of visitors in Upper Nile and the Red Sea is estimated at LE 6,681 million and LE 18,370 million respectively, of which 96% is expenditure by international visitors.

Table 2.9.6 Tourist Nights and Expenditure in Upper Egypt in 2012

		Bed nights at hotel (million)	Average expenditure per night	Total expenditure
Upper Nile	International visitors	14.0	LE 442 (US$ 130)	LE 6,188 million
	Egyptians	2.9	LE 170	LE 493 million
	Sub-total	16.9		LE 6,681 million
Red Sea	International visitors	40.6	LE 442 (US$ 130)	LE 17,945 million
	Egyptians	2.5	LE 170	LE 425 million
	Sub-total	43.1		LE 18,370 million
Upper Egypt Total				LE 25,051 million

Source: JICA Study Team

Table 2.9.7 shows tourist expenditure by item, assuming that expenditure structure will be same as that of the 1994 Tourism Survey results. Hotel expense is the highest at an estimated LE 8,440 million, or 33 % of the total expenditure.

Table 2.9.7 Tourist Expenditure by Item in Upper Egypt in 2012

Items	Amount (LE million)	Composition (%)	Remarks
Hotel expenses	8,267	33	Accommodation, food & beverage
Food & beverage outside hotel	2,756	11	
Shopping	4,509	18	
Entertainment	4,760	19	
Transportation & sightseeing	3,507	14	Excluding international transport
Others	1,253	5	
Total	25,051	100	

Note: Share of each expenditure item is referred to the results of Tourism Survey in 1994
Source: JICA Study Team

The contribution of tourist expenditure to the GDP is estimated in Table 2.9.8, using the input-output table of 1991/92. The total amount of value added is estimated at LE 15.7 billion. It indicates that GDP produced from tourist expenditure in the Red Sea in 2012 will be more than ten times the current GRDP of Red Sea Governorate.

Regarding sector distribution of LE 15.7 billion of the GDP, 23%, 31%, 20% and 2 % are from "wholesale and retail," "restaurant and hotel," "transportation" and "entertainment and cultural service" sectors respectively.

On the other hand, "wholesale and retail," "restaurant and hotel," "transportation" and "entertainment and cultural service" sectors show different backward linkages of the intermediate input to those sectors. Coefficient of intermediate input is high in "restaurants and hotel sector," amounting to 0.556, indicating firm linkages of the sector to other economic sectors. Table 2.9.9 shows coefficients of intermediate input by sector to those four sectors. Other sectors, such as agriculture, food and beverage manufacturing and industry, and financial and insurance, supply goods and services to tourism sector.

For example, considering the intermediate input of "restaurant and hotel" sector, 20% and 43% of intermediate input are shared by the "agriculture" sector and "food and beverage and tobacco" sector respectively. Increase of the GDP in "restaurant and hotel" sector requires an increase of intermediate input especially from the agricultural and food and beverage industries.

Table 2.9.8 Contribution of Tourism Expenditure to GDP in 2012

Sectors in I/O table	Total output (LE billion)	Coefficient of Intermediate input [1]	Value added [2] (LE billion)		Expenditure items
Whole sale & retailing	4.5	0.190	3.6	23%	Shopping
Restaurants & hotels	11.0	0.556	4.9	31%	Hotel expenses and food/beverage
Transportation	3.5	0.099	3.2	20%	Transportation & sightseeing
Entertainment & culture services	6.1	0.339	4.0	26%	Entertainment and Others
Total	25.1	0.371 (average)	15.7	100%	

Note 1) Input/output Table, 1991/92 by Central Agency for Public Mobilization and Statistics
2) Value added = Total output x (1- Coefficient of intermediate input)
Source: JICA Study Team

Table 2.9.9 Coefficients of Intermediate Input to Four Sectors

Sector		Whole sale & retail	Restaurant & hotels	Transport	Entertainment & culture service
1	Agriculture	0.017	**0.201**	0.000	0.006
2	Oil & mineral	0.000	0.001	0.000	0.000
3	Food & beverage, tobacco	0.000	**0.426**	0.000	0.004
4	Manufacturing & industries	**0.218**	0.060	**0.389**	0.140
5	Electricity, gas & water	0.014	0.057	0.018	0.049
6	Construction	0.114	0.079	0.028	0.043
7	Wholesale & retail	0.109	0.069	0.051	0.046
8	Restaurant & hotels	0.000	0.000	0.064	0.002
9	Transport	0.111	0.018	0.134	0.044
10	Financial & insurance	**0.199**	0.035	**0.204**	0.087
11	Social service	0.005	0.001	0.003	0.004
12	Entertainment & cultural service	0.000	0.020	0.001	**0.249**
	Total domestic intermediate	0.788	0.966	0.891	0.673
	Import	0.196	0.028	0.099	0.237
	Tariffs	0.016	0.006	0.010	0.090
	Total value of import	0.212	0.034	0.109	0.327
Intermediate Total		1.000	1.000	1.000	1.000

Source: JICA Study Team, Input/output Table 1991/92 by CAPMS

2.9.4 Increase of Government Revenues

Contribution to the state government's revenues is another economic impact of tourism. Government receives tourism revenues in the forms of income taxes from tourism enterprises, persons working in the tourism sector, sales tax on tourism expenditures, import duties on goods and services in the tourism sector. Local tax is also imposed on tourist expenditure in hotels at the rate of 2% of accommodation and food & beverage expenditure.

However, under Law No. 8, the investment projects in Egypt, including hotels and tourist transportation, are granted tax holidays for corporate profit, personal income and taxes on dividends, and customs duties. For hotels and tourist projects, the tax exemption incentives are given for 5 to 10 years.

On the other hand, local tax is imposed at 2% on expenditure of accommodations and restaurants and its revenue is expected to increase proportionally to the increase of tourist expenditures. In Upper Nile, it is estimated at LE 31 million, LE 42 million and LE 59 million in 2002, 2007 and 2012 respectively. In Red Sea Governorate it is estimated to increase to LE 55 million, LE 94 million and LE 162 million in 2002, 2007 and 2012 respectively under some assumptions based on the target bed nights and average expenditure.

In the current budgetary system of local administrative units in Egypt, local tax revenues are collected by governorate, transferred to the state government and redistributed by the state government. Because of the rapid increase of population caused by tourism development especially in Red Sea Governorate, the local government is required to shoulder a heavy cost for municipal infrastructure management. Local governments can hardly bear these costs on their own even in the industrialized countries. On the other hand, environmental conservation is essential for sustainable tourism development. Under such circumstances, it is proposed to allocate the local tax revenues for such special purposes to contribute to an environmentally sound and sustainable development of tourism.

2.10 Environmental Management

Each type of tourism destination in Upper Egypt and the Red Sea is characterized by their particular patterns of environmental sensitivity. In order to fulfill a sustainable tourism development in those regions, full attention and a program on environmental conservation should be given as follows:

- Environmental management by area (coastal area, the Nile River, cultural-historical heritage sites) should be pushed with each program by international cooperation;
- Product development taking account of carrying capacity of environment;
- Awareness program for local communities and tourism industries;
- Establishment of development standard and design code, especially for existing and future destinations apart from TDA development;
- Preparation for infrastructure development of cities and service centers; and
- Landscape control for tourist destinations as integrated atmosphere.

2.10.1 Concept of Environmental Management

In Egypt, at present, National Park, Managed Resource Protected Area (Protectorate) and others have been set up in accordance with Law No.102/1983. The EEAA is the competent authority to deal with such parks and protectorates and is provided the necessary legal instruments by Law No.102. The law and its instruments principally aim to protect and preserve natural resources and ecosystems and other environmental circumstances.

In order to protect and conserve the environment and to consider environmentally sustainable tourism development, new concepts for environmental management shall be considered for specific development. The new concepts should address the following:

- Consistent with the proposed National Park and Protectorate as mandated by Law No. 102; and
- Promote environmentally sustainable tourism development practically by TDA.

Therefore, to meet the conditions mentioned above, a new national park system oriented to sustaining the environment should be prepared as a new environmental management concept for tourism development. It is considered to establish the following to carry out this new concept:

- Zoning system;
- Classification of national parks;
- Economic evaluation concept for new environmentally sustainable tourism development concept; and
- Constructive relationship and coordination system between EEAA and TDA.

2.10.2 Environmental Management Plan in the Red Sea

An environmental management plan has been formulated within the context of the framework program for the development of a national ICZM (Integrated Coastal Zone Management) plan for Egypt. An action plan is also formulated as a part of "Red Sea Coastal and Marine Resource Management Project" in cooperation with TDA, EEAA and Red Sea Governorate, funded by the Global Environment Facility/World Bank. The overview of ICZM action plan and proposed institutional roles has been prepared as shown in Table 2.10.1.

(1) Conservation of natural environmental

Beachfront tourism development in TDA Tourist Centers and the four cities should be well

coordinated with surrounding natural resources from the viewpoint of environmental conservation. Especially, nature conservation zoning and management plans should be incorporated for tourism development in the entire Red Sea. The following designation of areas and other proposals have to be implemented as follows:

Areas designated by EEAA by protectorate:

- Elba and Wadi Alaqi Protectorates: covering the southern area from Ras Benas to the national border with Sudan;
- Proposed New Hamata Natural Protectorates: covering all inland areas of Marsa Alam-Ras Benas Tourism Sector of TDA and covering most of the offshore from Hurghada to Elba Protectorate; and
- Proposed New Shaieb Al Banat Protectorate: Mountain area behind Hurghada.

Proposed as protected areas by GEF (Global Environmental Facility) project:

- Hurghada Coastal Marine Protected Area (CMPA): covering the entire offshore area of Hurghada City;
- Wadi El Gemal CMPA: covering the TDA buffer area between Sharm Fokeie and Sahrm El Loly Tourist Centers of Marsa Alam-Ras Benas Sector; and
- Hamata CMPA: TDA buffer and Wadi Lahmi Tourist Center.

(2) Proposal for natural environmental conservation

The following protection measures of shoreline, coral reef communities, water quality and terrestrial ecosystem are necessary to conserve natural resources and to sustain tourism resource in the Red Sea:

- Within the inland area of around 500 km shoreline of Hamata Protectorate to Elba and Wadi Alaqi Protectorates, TDA Tourist Center developments should be postponed and reassessed from the viewpoint of natural environmental conservation up to 2012;
- In the proposed New Shaieb Al Banat Protectorate, all construction activities should be prohibited in conservation facilities and research/natural trails;
- All the allocated buffer area between TDA Tourist Centers should be maintained free from any development activities;
- Major *wadis* (flooding plains) are proposed to be nature conservation areas to avoid natural disasters;
- All the shoreline and coral reef should be strictly protected from all development activities (substitute functions for marine activities base can utilize all natural bays); and
- Within the area of Safaga-Quseir Sector of TDA development, the development of a TDA Tourist Center should be postponed and mitigation measures applied for improvement of seawater quality. Furthermore, rehabilitation of deteriorated coral reef should be carried out until 2012.

Table 2.10.1 ICZM Action Plan and Proposed Institutional Roles

Roles		Integrated Coastal Use Planning and Development	Environmentally Sustainable Tourism	Environmentally Sustainable Tourism	Information Management System
TDA		Coordinate with coastal development working group with EEAA; develop sustainable reef recreation Support RSG (Codes of Practice) for reef rehabilitation Estimate carrying capacity Zoning of level of tourism development intensity/type	Small industry development needs analysis Development of environmental certification Environmental impact assessment	Information access node Provision of tourism planning data	Establish environmental education function of the international visitors centre Public awareness via international visitor centre Investor and hotel management awareness
EEAA	Law 4/94	ICZM Coordination Environmental monitoring via EMECU Reef rehabilitation management zoning Risk assessment Environmental impact assessment	Environmental impact assessment Environmental management support and training	Central data input Information access node Environmental planning information Reef rehabilitation, EMECU & risk database	Environmental education & public awareness
	Law 102/83	Establishment and management of protectorates and management of bio-diversity conservation Environmental monitoring in protectorates Estimate of carrying capacity and assessment of anthropogenic activities in protectorates Reef recreation zoning in protectorate areas/buffers Risk assessment Implement Law No. 102/83	Public awareness and visitors outreach Link with tourism through promotion of eco-tourism, and zoning the scale and type of development near parks and sensitive areas	Information access node Environmental & ecosystem mapping and monitoring Conservation data Reef rehabilitation database Risk database	Environmental education & public awareness inside and outside of park areas
Red Sea Governorate		Enforcement of laws on reef rehabilitation Allowed use of reef resources Stakeholder participation via working group Implementation of reef rehabilitation (Codes of Practice)	Secure permit	Information access node Provision of municipal development information Integration with IDMSC	Stakeholder awareness
Other Agencies		Shore and flood protection Coastal research (NWRC) Training (donors & NGOs) Municipal planning and zoning Strategic planning (GOPP)	EST training courses (universities and colleges)	Database sharing (EEIS, IDMCS, NARSSS, NIC)	Stakeholder awareness (Government, donor activities)

Source Red Sea Coastal and Marine Resource Management Project, TDA, EEAA, Red Sea Governorate

2.10.3 Urban Development and Environmental Protection

There development of Tourism Centers is rapidly occurring in the Red Sea coast and the development of urban centers as well; more intensive and rapid development is planned in the future. It is estimated that population will grow at the rate of more than 13% per annum and it will mostly be urban population.

Generally speaking, most of the urban environmental problems, both social and natural, appear when urban population growth rate exceeds 5%. Most cities in developing countries begin to experience all kinds of urban environmental problems, especially when the growth rate exceeds

10% per annum. Even though careful assessment and planning of land use is formulated, carefully planned urban development as well as TDA center development in coordination with environmental facilities utilization is indispensable to avoid environmental deterioration in the region.

Another environmental impact that should be avoided or minimized is hazardous conditions during the construction of facilities, especially along and near the coast. The biggest cause of damage to coral reef is excessive siltation from the land development during construction. Application of well-planned construction method and protection system should be employed. Specific construction guidelines should be established especially during developments along *wadis* and natural bays.

2.10.4 Development Method of TDA Tourism Center

TDA and EEAA have set design guidelines and development procedures aimed at environmentally sustainable development. However, there are a number of inconsistencies on the procedures and the application of procedures and guidelines to the actual development. The most difficult part for the investors, especially for small- scale, individual investors, is to establish a company that takes care of the infrastructure development in the TDA tourism center. Each small-scale investor is a member of a TDA Tourism Center Development Company, which is called "Infrastructure Development Company." There remain many complicated problems and constraints on each investor regarding actual development on site. Some problems are related to the environmental impact of the project. The Study Team recommends the following amendments to the development procedures from the viewpoint of environmental sustainability:

(1) Environmental survey and detail development planning with clear standard setting

Investors who develop TDA centers are required to prepare a facility development plan. The plan includes an environmental impact analysis (EIA) and it has to be approved by the TDA and EEAA. However, in many cases, a detailed environmental survey carried out in conjunction with the TDA tourism center development and individual hotel development site, which is part of a TDA Tourism Center, are not coordinated and the level of detail is not consistent. Moreover, in the EIA report approval process, the evaluation procedure and applied standard by TDA and EEAA are not very clear. The EIA preparation and approval process generates many unexpected delays and cancellations of development projects.

Uncertainty of administrative and technical procedure causes unfavorable development conditions both for investment promotion and environmental conservation. Setting up a clearer and more concrete environmental standard and approval process is indispensable, and the EIA should be conducted in a transparent manner. Survey procedure also has to be clearly set in detail.

(2) Integrated development and land use of natural bays

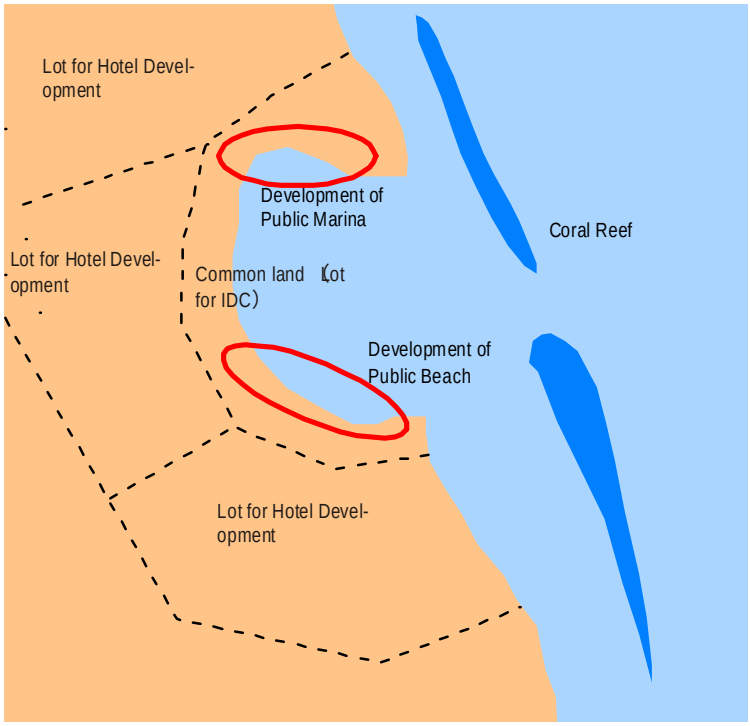
One of the reasons of coral reef deterioration is construction of marina for diving boats and other recreational boats. Access to the open sea from the beach is one of the most important facilities for hotel operators. In many cases, they construct a marina in front of their hotel and a channel to the open sea causing destruction of coral reefs.

There is a potential to build a marina in front of natural bays, because there is often no reef in front of them. Instead of a private marina constructed by each developer, a public marina to be used by all members of the TDA centers should be considered. However the natural bay areas have some potential for flooding in case of rainwater runoff from the hinterland of the natural bays.

Conservation of *wadis* should be considered at the same time. Coordination among all members in the TDA center and IDC should be made. Setting up natural bay development criteria together with development code and norm is urgently required. Financial arrangement for the

development should be considered at the same time. Figure 2.10.1 shows the integrated development scheme in a natural bay area.

Figure 2.10.1 Integrated Development and Land Use of Bay Area

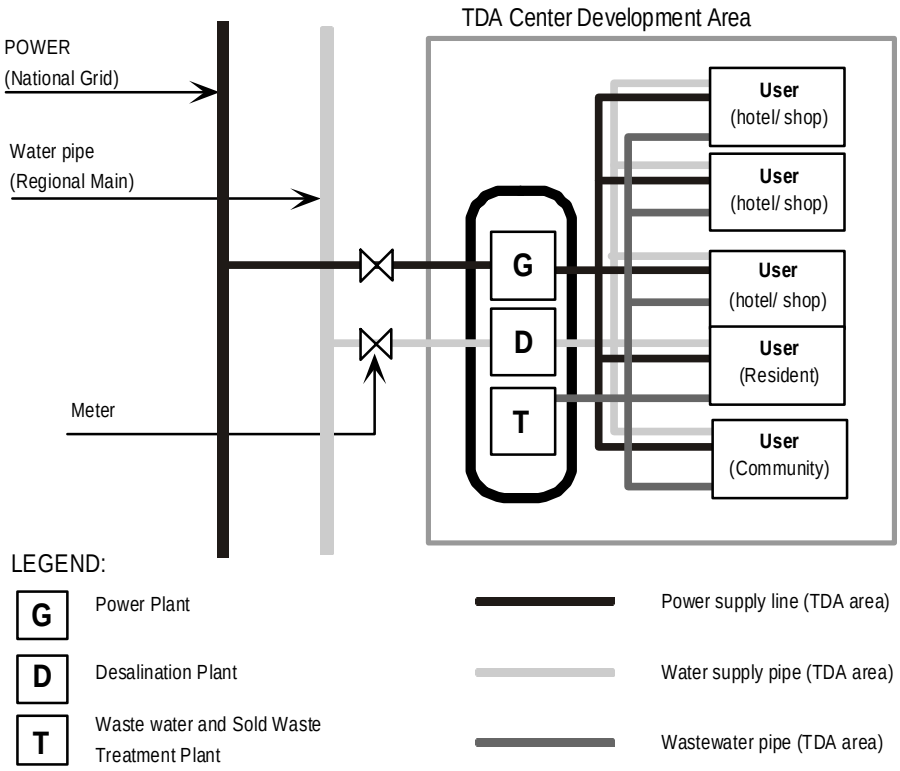


Source: JICA Study Team

(3) Environment facilities utilization and IDC

Each Tourism Center in a TDA development area should form a mother company as an IDC. An IDC is responsible to provide all necessary utilities such as water, power, sewerage treatment and solid waste disposal in the center. To establish a capable and efficient IDC is the most critical issue for the Tourism Center development of a TDA development area. On the other hand, there are many tourism development projects that will be implemented outside of a TDA area. Hotel and tourism facility developers are expected to provide their own utilities in case no utility service can be provided by the public sector. Urban and community development along with the tourism development in the Red Sea is unavoidable. Utilities for the new residents in the region are indispensable to realize an environmentally sustainable development in the region. Figure 2.10.2 shows an example of private and public coordination on IDC in a TDA area.

Figure 2.10.2 Environment Facility Utilization and the IDC



Source: JICA Study Team

At the initial stage, IDC will provide necessary utilities for their facilities and employees; however, public support or cooperation will be provided for further development and improvement of living conditions for the people in the center. IDC will continue to play the role of utility service body even after receiving public support. The public sector should be responsible for community members living in the center and IDC should play an important role for people's welfare, too.

2.10.5 Monitoring and Enforcement

One of the key issues necessary to realize an environmentally sound development is monitoring and enforcement of all activities relating to the Red Sea coastal development in all stages of facility development and operation. The development stages described below should be considered from the viewpoint of regional, national and global benefit:

(1) Planning and design stage

As described above, setting up a clearer and more concrete environmental standard and approval process is indispensable, and the EIA process should be transparent. Survey procedure also has to be clearly set in detail. TDA and EEAA are the responsible agencies.

(2) Facilities construction stage

Specific guidelines on construction method should be established especially the development along *wadis* and natural bays. Establishment of monitoring mechanism and implementation body is required. At the same time, construction guidelines should be established in conjunction with research activity.

(3) Facilities operation

During the operation of facilities (hotel, tourism establishment, housing and all other kinds of

facilities for economic and social activities), there should be continuous monitoring of the quality of environment and activities. Monitoring units or body with research and development functions mentioned above should be established. Monitoring methods and frequency should be set and monitoring units should start operation as soon as possible.

(4) Enforcement and guidance

For realization of sustainable environmental conservation and management of other kinds of economic and recreational activities, there should be appropriate enforcement of laws and guidance given to facilities operators, as well as development of environmental awareness in local people and tourists. Establishment of enforcement system in conjunction with jurisdictional setting and administrative arrangement should be made in coordination with the establishment of a monitoring system.

All of the above activities have been in progress in the study area. Establishment of appropriate execution body and formulation of implementing organization is urgent, especially in the Red Sea region, because of high intensity of development and fragility of the environment.

2.10.6 Environmental Management Center

Setting up a comprehensive and effective environmental management function is one of the most urgent actions to be taken in the Red Sea because rapid and intensive development is being spread over an environmentally fragile coastline. Establishment of an environmental management system should be implemented as soon as possible as described in the above section.

The establishment of an environmental management center is also proposed. Required functions to be attached to the center are the following:

- Monitoring (pollution and degradation/impact analysis) and research (construction method)
- Enforcement (facility inspections, coast guard, guidance to developers and residents)
- Training (diving instructor, coast guard, diving boat operator)
- Awareness (community people, tourist, investors and other stakeholders)

The center will be a multi-functional organization formed by several related agencies and organizations. There will be four units corresponding to the above mentioned functions.

Table 2.10.2 Four Units of Environmental Management Center

Name of unit	Roles & functions	Responsible agency	Coordinating and cooperating agencies
Monitoring & Research	Monitoring activities at, on and off shore Research on marine biology Data and information compilation and processing	EEAA	Marine bio-diversity research center NGOs TDA
Guide & enforcement	Patrol and guide at beach and coastal area Inspection of facilities and its operation	Red sea Governorate	Police department Coast guard Bay patrol unit (new)
Training	Training and education of diving guides, instructors, diving boat operators	EEAA	TDA NGOs Red Sea Governorate
Public awareness	Environmental education and public awareness	EEAA	TDA Ministry of Education NGOs

Source: JICA Study Team

The Environmental Management Center will be located in the International Visitor Center (IVC) which is planned by TDA. The proposed location is in the TDA Center of El Gezera El Hamra, which is located between Marsa Alam and Qusir.

Required and proposed facilities for each unit are the following:

Table 2.10.3 Required and Proposed Facilities of the Center

Name of unit	Proposed Facilities	Remarks
Monitoring & research	Marine bio-diversity research and monitoring center	With aquarium
Guide & enforcement	Administrative office Coast guards and ranger offices	Marina needed
Training	Training center for rangers, diving guides/instructors, diving boat operators and investors	Marina needed
Public awareness	Visitor center with meeting, seminar and public relation facilities	Planned by TDA

Source: JICA Study Team

3. Priority Projects and Programs

3.1 Selection of Projects and Programs

The regional tourism development plan has been formulated in the priority area (Upper Nile and the Red Sea) to achieve tourism development targets and a number of projects and programs have been identified and formulated in the preceding chapters. The prioritization, however, has been considered taking into account the solutions of the five main issues. As shown in Table 3.1.1, 14 priority projects and programs have been selected for transportation development, urban development planning, tourism product development and institutional development. Projects and programs, which are in the process of implementation, are excluded from the list.

Table 3.1.1 Development Issues and Priority Projects and Programs

Issues/strategies / Projects and Programs to settle the issues	Tourism product diversification and integration	Transport capacity expansion and regional integration	Environmental conservation and tourism development	TDA & other agencies coordination	Service improvement and human resource development
TRANSPORTATION					
Service Area Development along Route 77, 88 and 99	○			○	◎
Expansion of Transportation Capacity of Railway from Qena to Aswan	◎	◎		○	
Road Network Improvement		◎		○	
Improvement of Existing Railway Stations and Station Plaza	◎			○	◎
URBAN DEVELOPMENT PLANNING					
Solid Waste Management in Marsa Alam			◎	◎	
Urban Development Planning in the Red Sea Coast			◎	◎	
Water Conveyance from the Nile River to the Red Sea Coastal Area			◎	○	
TOURISM PRODUCT DEVELOPMENT AND CONSERVATION					
Development of Passenger Landing Facility along the Nile/Nile River Environment	◎	○	○	○	○
Beautification of Access and Pedestrian Network	◎			○	
Development of Handicraft Village	◎			○	○
Development of Museums, Site Plaza and Internet Museum	◎			○	
Development of New Cairo Museum	◎			○	
INSTITUTIONAL DEVELOPMENT					
Tourism Institute Development	○			○	◎
Marine Environment Management Program with Development of Marine Environmental Center	○	◎		○	

Note: ◎ Strongly matched, ○ matched

Source: JICA Study Team

The expansion of transport capacity is a matter of great importance to accommodate the targeted number of tourists. For example, expansion of the major airports as well as Cairo Airport is essential. However, they are not included in the list, because detailed designs for the expansion of those airports have been prepared by the Egyptian government. Similarly, the environment management program in the Red Sea area is not in the list, because the management plan has

been formulated and its action plan has already been prepared and is expected to be implemented in due time.

As shown in Table 3.1.1, TDA should be involved in all 14 projects and programs, and coordination between TDA and other relevant agencies is indispensable for the implementation of the projects and programs.

Table 3.1.2 gives the location of the proposed projects and programs.

Table 3.1.2 Location of the Proposed Projects and Programs

Code No.	Location / Projects and Programs	National	Upper Nile	Red Sea
T	**TRANSPORTATION**			
T-1	Service area development along Route 77, 88 and 99			
T-2	Expansion of Transportation Capacity of Railway from Qena to Aswan			
T-3	Road Network Improvement			
T-4	Improvement of Existing Railway Stations and Station Plaza			
U	**URBAN DEVELOPMENT PLANNING**			
U-1	Solid Waste Management in Marsa Alam			
U-2	Urban development planning in the Red Sea coast			
U-3	Water conveyance from the Nile River to the Red Sea coast			
P	**TOURISM PRODUCTS DEVELOPMENT AND CONSERVATION**			
P-1	Development of passenger landing facility along the Nile/Nile River environment			
P-2	Beautification of access and pedestrian network			
P-3	Development of handicraft village			
P-4	Development of museums, site plaza and internet museum			
P-5	Development of New Cairo Museum	Cairo		
I	**INSTITUTIONAL DEVELOPMENT**			
I-1	Tourism institute development	Cairo		
I-2	Marine Environment Management Program with Development of Marine Environmental Center			

Source: JICA Study Team

The list of projects and programs proposed by the Study Team, together with the ministries in charge and implementing bodies for construction and operation and maintenance, is presented in Table 3.1.3.

Table 3.1.3 Projects and Programs

Code No.	Projects and Programs	Further works	Ministry in charge	Construction	Operation & Maintenance
T	**TRANSPORTATION**				
T-1	Service area development along Route. 77, 88 and 99	Preparation of Pre Feasibility Study	Ministry of Transport	Ministry of Transport/TDA	Ministry of Transport/TDA
T-2	Expansion of Transportation Capacity of Railway from Qena to Aswan	-	Ministry of Transport	Egyptian National Railway	Egyptian National Railway
T-3	Road Network Improvement	-	Ministry of Transport	Ministry of Transport	Ministry of Transport
T-4	Improvement of Existing Railway Stations and Station Plaza	-	Ministry of Transport	Egyptian National Railway -	Egyptian National Railway
U	**URBAN DEVELOPMENT PLANNING**				
U-1	Solid Waste Management in Marsa Alam	TOR for a Study	Ministry of Housing, Utilities and Urban Communities	-	-
U-2	Urban development planning in the Red Sea coast	TOR for a Study	Ministry of Housing, Utilities and Urban Communities	-	-
U-3	Water conveyance from the Nile River to the Red Sea coast	Preparation of Re-evaluation	Ministry of Housing, Utilities and Urban Communities	Ministry of Housing, Utilities and Urban Communities	Governorates
P	**TOURISM PRODUCTS DEVELOPMENT AND CONSERVATION**				
P-1	Development of passenger landing facility along the Nile/Nile River environment	Preparation of Pre-feasibility Study	Ministry of Transport	Private/TDA Governorates	Private, Governorates
P-2	Beautification of access and pedestrian network	Preparation of Project Profile	Ministry of Tourism	TDA	Governorate, TDA
P-3	Development of handicraft village	Preparation of Project Profile	Ministry of Tourism	TDA	Governorates, Private
P-4	Development of museums, site plaza and internet museum	Preparation of Project Profile	Ministry of Culture	Supreme Council of Antiquities	Supreme Council of Antiquities
P-5	Development of New Cairo Museum	-	Ministry of Culture	Supreme Council of Antiquities	Supreme Council of Antiquities
I	**INSTITUTIONAL DEVELOPMENT**				
I-1	Tourism institute development	Preparation of Project Profile	Ministry of Public Enterprises	EGOTH	EGOTH
I-2	Marine Environment Management Program with Development of Marine Environmental Center	-	TDA, Ministry of Environment	TDA, EEAA	TDA, EEAA

Source: JICA Study Team

3.2 Selected Projects and Programs for Further Study

Details of the projects and program are discussed in a separate volume entitled "Projects and Programs." Further studies, shown in Table 3.2.1, have been carried out for the projects and programs, considering the following criteria:

- Urgency and necessity of the project or program,
- Importance of role of public sector,
- Social factors, and
- Capability and preparedness of the implementing body.

Table 3.2.1 Further Studies for Proposed Projects and Programs

		Work items
Pre-feasibility Study		
T-1	Service Area Development along Route 77, 88 and 99	Preliminary evaluation for technical, environmental and financial feasibility of projects and programs
P-1	Development of Passenger Landing Facility along the Nile/Nile River Environment	
Implementation Program		
I-1	Tourism Institute Development	Preliminary design and implementation program
TOR		
U-1	Solid Waste Management in Marsa Alam	Preparation of TOR for the studies on solid waste management in Marsa Alam
U-2	Urban Development Planning in the Red Sea Coast	Preparation of TOR for the studies on Urban development planning in the Red Sea coast
Project Profile (Re-evaluation)		
U-3	Water Conveyance from the Nile River to the Red Sea Coast along National Roads	Re-evaluation for technical, environmental and financial feasibility of projects

Source: JICA Study Team

Conclusions

Conclusions

National Tourism Development

The Role of Tourism in the National Development

The importance of tourism industry in Egypt's economy has increased for last 10 years. Tourism sector is expected to contribute to national economic development by increasing employment opportunity and earning foreign exchange in general. In order to promote the population diversification policy, the tourism sector is obliged to play an important role to develop the remote area in particular. A growth rate of tourism has been targeted at 10 % in the national development policy in Egypt. From the review of national tourism development plan, Study team evaluates the socio-economic impact presented in Table 1.

1.1 million new jobs are estimated to generate in tourism sector, and it will account for 14% of total new employment generated all industries in Egypt until 2012.

Tourist expenditure will become LE53,410 million in 2012. Foreign currency earnings will amount to US$15 billion though it was about US$3.6 billion in 1997.

Contribution of tourist expenditure to the GDP is estimated at LE33 billion in the whole of Egypt, accounting for 4.5% of the country's GDP in 2012. On the other hand, government revenue from tourism is limited at the beginning of the development, because of the tax holiday for tourism related sectors for 5 to 10 years.

Recommendations

Main tourism related agencies, such as TDA, MOT and ETA have to take the following actions in order to achieve such a high target and continue a sustainable development in tourism industry.

- TDA, MOT and ETA have to develop, diversify and integrate new tourism products to attract international tourists. It is necessary to collaborate with tourism department in governorates in order to identify new tourism products. And TDA has to coordinate to ETA when they carry out market promotion to domestic/international market. MOT and ETA have to promote domestic tourism,
- It is necessary for TDA, MOT to coordinate with Ministry of Transportation to expand intentional transportation and domestic transportation in order to accept 28 million international and domestic tourists. Expansions and development of airports should be urgently implemented,
- In addition to historical tourism products, marine resort tourism products have to be established as the other main tourism products for last ten years. Environmental conservation management systems, which protect historical heritages and natural environment in the coastal area, have to be developed by the coordination among TDA, MOT, ETA, EEAA and SCA in order to achieve sustainable tourism development.
- TDA, MOT and ETA have to demarcate and cooperate governmental agencies, local governments and private companies. Especially cooperation of TDA and ETA is most important and the basic of cooperation. It is necessary to keep consistency between the development strategy of new tourism products by TDA and market promotion strategy by ETA in terms of the target market, in order to win the competition of acquisition of international tourists in the World. For cooperation and demarcation, Supreme Council of Tourism or Ministry of Tourism should have initiative.
- The National Tourism Development Plan prepared by MOT requires 1,138 thousands of new labor force. Not only generation of new labor force but also improvement of tourism services are needed. The competitive historical tourism products have enabled Egypt to take international tourists there without much effort. But the situation has changed since 1990s when marine tourism products came up with the other main tourism products. Egypt has to compete with the countries which has marine resort destination now.

Regional Tourism Development in the Upper Egypt

Socio-economic impact of the regional tourism development

The regional tourism development in the Upper Egypt will generate the socio-economic

impact presented in Table 1 until 2012. It will contribute to regional development and national policy of distribution of population from the Nile Valley to the remote areas.

Table 1 Contribution of regional tourism development

Items	Amounts
Employment	470 thousand
Tourist expenditures	LE25,051 million
Foreign currency earnings	US$7 billion
Value added	LE15.7 billion

Source: Study team

470 thousands of job opportunity are generated in the Upper Egypt. It consists of 109 thousand in the Upper Nile and 361 thousand in the Red Sea, and 41.4% of new employment generated in tourism related industry in the national level.

The total of tourism expenditures is estimated to LE25,051 million in 2012. The foreign exchange earnings account for US$7 billion. It will occupy about 47% of the whole foreign exchange earnings in Egypt.

Total amount of value added of tourism related industries in the Upper Egypt would be LE15.7 billion in 2012.

Recommendations

To achieve development target set in the Upper Egypt Regional Tourism Development Plan, followings are recommended.

- TDA, ETA and MOT have to develop the new tourism products, which make the best use of the characteristics of the Upper Nile and Red Sea. Product diversification in both area and the combination of tourism products in the both areas also required.
- ETA local offices have to coordinate with tourism departments in governorate/city offices in order to identify a new tourism resource for the future development, to promote rural tourism and to promote tourism related local industry.
- The roles and functions of cities have to be determined and the regional tourism development has to be put into practice in the decision. Study team recommends that Luxor, Aswan, Hurghada and Marsa Alam are placed as Gateway, and Qena, Esna, Edfu, Kom Ombo, Abu Simbel, Safaga and Quseir are placed as Tourist Town.
- TDA and MOT have to coordinate with Ministry of Transport to cope with future traffic demand generated by the regional tourism development. Especially expansion of the airport facilities in Luxor and Hurghada, and development of Marsa Alam Airport are indispensable to accept the huge number of international tourists.
- Study team proposes to improve/develop berth facilities in cities and develops pedestrian network from berthing facilities to historical sites. Increasing attractiveness of Nile Cruise will bring out the increasing attractiveness of various tourism products in the Upper Nile directly because Nile Cruise is one of the favorite tourism products for international tourists.
- TDA and MOT have to coordinate Supreme Council of Antiquities in order to protect and preserve historical antiquities and historical site. They also have to coordinate with EEAA to protect natural environment of the Red Sea and the Nile River. Study team recommends developing sewage/solid waste disposal system in the berthing facilities in coordination with their development. And study team also recommends postponing some tourism development, such as Safaga-Quseir Sector and the shoreline from Hamata to Halaib until 2012.
- TDA have to coordinate with Ministry of Housing, Utilities and Urban Communities, local governments and private companies which do tourism related business in order to cope with population increase in the Red Sea. Study team recommends formulating urban development master plan in order to define the roles of functions of each city in the Red Sea and to clear urban infrastructure to be needed. Study team also recommends the infrastructure development system by demarcation and cooperation of public sector and private sector in the phased urban development.
- TDA and other agencies should promote 14 priority projects & programs proposed by the Study Team. Especially, 3 project, “P-1 Development of Passenger Landing Facility along the Nile/Nile River Environment,” “I-1 Tourism Institute Development of EGOTH,” and “U-1 Solid Waste Management in Marsa

Alam," were highly prioritized by the steering committee members, and they have to be implemented smoothly.