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

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Statistics

Appendix 1- Statistics

Number of Visitor Arrivals by Areas

Number of Visitor Arrivals

	1992	1993	1994	1995	1996	1997	1998
Middle East	924,897 (28.8%)	767,841 (30.6%)	819,142 (31.7%)	741,581 (23.7%)	828,727 (21.3%)	893,351 (22.6%)	985,947 (28.5%)
Africa	204,138 (6.4%)	186,614 (7.4%)	152,872 (5.9%)	130,485 (4.2%)	115,808 (3.0%)	120,145 (3.0%)	130,671 (3.8%)
Americas	224,479 (7.0%)	187,476 (7.5%)	182,378 (7.1%)	228,896 (7.3%)	259,057 (6.6%)	256,668 (6.5%)	217,403 (6.3%)
Europe	1,664,906 (51.9%)	1,205,740 (48.1%)	1,243,629 (48.2%)	1,811,000 (57.8%)	2,342,709 (60.1%)	2,394,414 (60.4%)	1,956,833 (56.7%)
Asia & Pacific	187,304 (5.8%)	157,854 (6.3%)	180,952 (7.0%)	219,464 (7.0%)	288,328 (7.4%)	260,318 (6.6%)	161,028 (4.7%)
Others	1,216 (0.0%)	2,237 (0.1%)	3,015 (0.1%)	2,035 (0.1%)	61,313 (1.6%)	36,520 (0.9%)	1,984 (0.1%)
Total	3,206,940	2,507,762	2,581,988	3,133,461	3,895,942	3,961,416	3,453,866

Number of bed nights

	1992	1993	1994	1995	1996	1997	1998
Middle East	6,991,113 (32.0%)	4,999,671 (33.1%)	5,716,096 (37.0%)	5,789,150 (28.3%)	5,649,882 (23.8%)	5,645,915 (21.2%)	5,412,164 (26.9%)
Africa	1,474,847 (6.8%)	1,058,576 (7.0%)	1,072,644 (7.0%)	1,051,385 (5.1%)	814,985 (3.4%)	868,201 (3.3%)	844,819 (4.2%)
Americas	1,314,294 (6.0%)	1,009,626 (6.7%)	1,003,198 (6.5%)	1,462,502 (7.2%)	1,470,667 (6.2%)	1,693,623 (6.4%)	1,297,238 (6.4%)
Europe	10,972,747 (50.3%)	7,202,822 (47.7%)	6,650,676 (43.1%)	10,744,418 (52.5%)	14,375,407 (60.5%)	16,827,259 (63.3%)	11,730,001 (58.2%)
Asia & Pacific	1,073,536 (4.9%)	806,110 (5.3%)	967,066 (6.3%)	1,380,073 (6.7%)	1,433,260 (6.0%)	1,523,618 (5.7%)	849,966 (4.2%)
Others	9,168 (0.0%)	12,212 (0.1%)	23,073 (0.1%)	23,836 (0.1%)	20,440 (0.1%)	20,214 (0.1%)	16,332 (0.1%)
Total	21,835,705	15,089,017	15,432,753	20,451,364	23,764,641	26,578,830	20,150,520

Length of Stay

	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 & Pacific	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
Total	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

Main generating countries

Number of Visitor Arrivals

	1992	1993	1994	1995	1996	1997	1998
Italy	169,962	116,684	145,705	257,272	366,320	389,081	373,067
Germany	356,178	261,630	242,109	319,312	436,809	438,372	273,838
United Kingdom	316,803	282,148	231,757	292,208	328,235	333,978	239,902
France	213,376	117,491	77,163	122,224	242,238	259,016	175,279
Switzerland	57,415	39,830	45,200	72,181	98,329	113,215	30,966
Benelux	89,949	50,091	53,071	84,375	133,070	141,838	115,872
Israel	110,212	123,985	213,214	295,933	321,053	292,537	372,130
Saudi Arabia	234,906	193,449	234,796	179,463	216,185	207,695	233,630
Palestine	61,778	93,465	137,969	99,272	143,025	181,056	195,878
Libya	273,411	205,997	146,770	156,882	150,947	175,311	186,005
Syria	102,729	76,951	67,730	72,622	68,509	68,052	74,150
Kuwait	95,818	58,879	75,664	70,752	76,223	67,587	69,806
Sudan	117,307	87,985	73,042	46,063	27,118	31,951	40,878
USA	167,934	135,979	125,542	154,841	174,709	176,346	153,630
Japan	68,076	45,767	58,728	69,253	89,807	91,413	22,779

Number of bed nights

	1992	1993	1994	1995	1996	1997	1998
Italy	1,235,155	751,947	923,401	1,929,932	2,551,390	3,141,237	2,833,273
Germany	3,015,543	2,114,733	1,846,494	2,472,277	3,093,702	3,834,912	1,938,525
United Kingdom	1,568,524	1,394,756	1,055,116	1,640,970	1,868,797	2,187,014	1,235,398
France	1,569,501	898,209	495,665	895,678	1,685,603	2,008,538	1,132,566
Benelux	663,685	288,210	321,037	538,670	886,877	1,055,829	838,425
Switzerland	383,151	230,608	242,076	506,158	685,781	868,843	207,522
Israel	540,809	461,818	717,840	796,677	1,406,952	1,256,832	1,573,431
Saudi Arabia	2,055,783	1,655,713	2,089,135	1,846,796	1,852,230	1,774,969	1,755,456
Palestine	322,712	506,888	715,059	328,757	364,628	505,419	554,186
Libya	1,975,160	1,124,621	597,367	799,277	751,445	655,875	577,787
Syria	362,126	247,859	326,166	413,663	377,386	383,089	382,598
Kuwait	888,068	450,155	661,340	730,766	634,651	638,760	608,046
Sudan	1,005,742	680,594	660,218	550,706	331,236	346,426	379,973
USA	1,006,098	762,209	711,033	1,025,121	1,081,205	1,238,241	959,375
Japan	280,104	194,369	259,515	356,677	445,192	505,108	96,094

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

Hotel guests and bed nights in selected governorates

Total of origin regions

Hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	1,233,476	1,180,764	1,109,227	1,203,471	1,246,187	1,317,015
Alexandria	329,672	317,957	363,610	454,098	460,838	392,255
Luxor	542,513	264,200	189,747	230,697	355,526	387,607
Aswan	294,526	141,977	87,958	110,466	171,886	322,365
South Sinai	235,802	212,221	209,191	573,092	574,518	743,832
Red Sea	280,911	222,263	254,774	629,145	777,660	996,427
	2,916,900	2,339,382	2,214,507	3,200,969	3,586,615	4,159,501

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	2,081,344	2,291,345	2,205,950	2,396,344	4,060,783	6,231,763
Alexandria	745,328	682,412	724,336	823,440	941,012	1,990,051
Luxor	1,326,571	779,161	547,222	655,579	1,052,322	1,936,116
Aswan	538,056	252,788	173,424	218,395	344,265	1,634,501
South Sinai	1,207,886	1,086,760	1,095,816	2,864,360	3,103,232	2,751,918
Red Sea	1,557,756	1,248,387	1,537,010	3,472,395	4,714,448	5,457,806
	7,456,941	6,340,853	6,283,758	10,430,513	14,216,062	20,002,155

Length of stay

	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
Total	2.6	2.7	2.8	3.3	4.0	4.8

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

Hotel guests and bed nights in selected governorates

EGYPT

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	145,772	124,930	137,628	156,895	163,236	172,089
Alexandria	183,541	218,090	239,266	257,290	245,698	209,911
Luxor	33,957	28,474	30,904	36,503	48,521	55,945
Aswan	34,092	26,234	22,522	23,298	36,782	64,998
South Sinai	-	-	-	116,487	115,372	168,095
Red Sea	68,219	-	83,551	116,304	104,385	135,864
Total	-	-	-	-	713,994	806,902

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	216,142	239,005	276,210	304,044	531,329	802,701
Alexandria	398,042	436,881	455,131	398,101	497,762	1,054,949
Luxor	68,145	61,251	65,013	93,777	100,696	263,169
Aswan	71,596	52,193	55,754	43,754	79,675	331,644
South Sinai	-	-	-	534,620	664,474	625,635
Red Sea	239,633	-	332,324	421,827	406,588	513,718
Total	-	-	-	1,796,123	2,280,524	3,591,816

Length of Stay

	1992	1993	1994	1995	1996	1997
Cairo	1.5	1.9	2.0	1.9	3.3	4.7
Alexandria	2.2	2.0	1.9	1.5	2.0	5.0
Luxor	2.0	2.2	2.1	2.6	2.1	4.7
Aswan	2.1	2.0	2.5	1.9	2.2	5.1
South Sinai	-	-	-	4.6	5.8	3.7
Red Sea	3.5	-	4.0	3.6	3.9	3.8
Total	-	-	-	-	3.2	4.5

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

Hotel guests and bed nights in selected governorates

Arab countries

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	211,661	233,975	260,680	229,296	236,638	245,492
Alexandria	44,704	36,811	55,999	72,593	73,270	62,543
Luxor	2,474	1,237	3,729	9,142	20,276	29,398
Aswan	1,700	1,368	1,453	4,621	3,288	20,129
South Sinai	-	-	-	-	8,861	22,893
Red Sea	-	-	11,096	45,294	10,349	8,381
Total	-	-	-	-	352,682	388,836

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	490,439	476,648	497,683	459,524	751,890	1,023,263
Alexandria	119,346	81,858	105,718	142,188	150,712	319,864
Luxor	3,709	3,557	11,278	30,710	62,639	186,115
Aswan	2,840	1,639	2,467	9,724	6,576	100,480
South Sinai	-	-	-	-	52,260	85,811
Red Sea	-	-	75,529	258,824	35,259	31,842
Total	-	-	-	-	1,059,336	1,747,375

Length of Stay

	1992	1993	1994	1995	1996	1997
Cairo	2.3	2.0	1.9	2.0	3.2	4.2
Alexandria	2.7	2.2	1.9	2.0	2.1	5.1
Luxor	1.5	2.9	3.0	3.4	3.1	6.3
Aswan	1.7	1.2	1.7	2.1	2.0	5.0
South Sinai	-	-	-	-	5.9	3.7
Red Sea	-	-	6.8	5.7	3.4	3.8
Total	-	-	-	-	3.0	4.5

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

Hotel guests and bed nights in selected governorates

Eastern Europe

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	30,967	37,972	97,369	290,940	309,097	317,951
Alexandria	11,827	18,245	15,546	31,553	33,589	28,588
Luxor	7,583	5,276	6,360	9,420	21,222	26,107
Aswan	12,839	8,150	3,482	6,696	8,408	20,094
South Sinai	-	-	-	-	124,928	174,770
Red Sea	-	-	24,646	86,594	225,231	303,704
Total	-	-	-	-	722,475	871,214

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	50,896	84,639	202,621	176,101	293,149	564,521
Alexandria	25,054	47,751	37,686	72,318	67,592	142,484
Luxor	16,473	6,701	19,328	30,297	77,252	184,723
Aswan	22,188	11,597	6,361	13,117	16,645	102,091
South Sinai	-	-	-	-	600,020	644,480
Red Sea	-	-	158,419	508,730	1,359,152	1,901,806
Total	-	-	-	-	2,413,810	3,540,105

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	1.6	2.2	2.1	0.6	0.9	1.8
Alexandria	2.1	2.6	2.4	2.3	2.0	5.0
Luxor	2.2	1.3	3.0	3.2	3.6	7.1
Aswan	1.7	1.4	1.8	2.0	2.0	5.1
South Sinai	-	-	-	-	4.8	3.7
Red Sea	-	-	6.4	5.9	6.0	6.3
Total	-	-	-	-	3.3	4.1

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

Hotel guests and bed nights in selected governorates

Western Europe

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	639,889	480,014	290,682	290,940	309,097	317,951
Alexandria	37,204	19,587	22,682	41,212	48,975	41,697
Luxor	415,768	178,386	71,551	80,344	106,822	103,176
Aswan	188,386	72,692	26,639	29,224	55,691	81,750
South Sinai	-	-	-	-	281,330	308,131
Red Sea	-	-	117,934	231,969	428,276	535,979
Total	-	-	-	-	1,230,191	1,388,684

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	923,953	780,945	548,480	548,990	1,041,791	1,313,164
Alexandria	85,472	60,073	66,904	90,504	100,673	211,507
Luxor	1,106,703	623,935	218,107	215,742	463,734	491,211
Aswan	354,567	140,407	52,941	59,157	111,641	414,638
South Sinai	-	-	-	-	1,564,588	1,135,683
Red Sea	-	-	877,575	1,323,596	2,874,225	2,964,066
Total	-	-	-	-	6,156,652	6,530,269

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	1.4	1.6	1.9	1.9	3.4	4.1
Alexandria	2.3	3.1	2.9	2.2	2.1	5.1
Luxor	2.7	3.5	3.0	2.7	4.3	4.8
Aswan	1.9	1.9	2.0	2.0	2.0	5.1
South Sinai	-	-	-	-	5.6	3.7
Red Sea	-	-	7.4	5.7	6.7	5.5
Total	-	-	-	-	5.0	4.7

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

Hotel guests and bed nights in selected governorates

North America

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	88,984	156,407	103,051	138,403	151,887	160,740
Alexandria	20,760	7,703	9,089	18,626	25,356	21,616
Luxor	29,860	14,463	24,487	32,396	50,131	55,193
Aswan	17,240	9,106	5,992	9,246	12,985	47,339
South Sinai	-	-	-	-	40,533	57,235
Red Sea	-	-	5,568	37,730	5,465	5,155
Total	-	-	-	-	286,357	347,278

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	174,741	305,713	221,780	268,674	512,794	784,166
Alexandria	26,942	18,636	21,070	41,715	51,285	107,546
Luxor	60,055	27,362	81,601	92,762	109,186	233,657
Aswan	29,271	13,659	10,782	18,676	25,791	237,990
South Sinai	-	-	-	-	203,757	211,888
Red Sea	-	-	32,492	240,590	23,560	19,451
Total	-	-	-	-	926,373	1,594,698

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	2.0	2.0	2.2	1.9	3.4	4.9
Alexandria	1.3	2.4	2.3	2.2	2.0	5.0
Luxor	2.0	1.9	3.3	2.9	2.2	4.2
Aswan	1.7	1.5	1.8	2.0	2.0	5.0
South Sinai	-	-	-	-	5.0	3.7
Red Sea	-	-	5.8	6.4	4.3	3.8
Total	-	-	-	-	3.2	4.6

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

Hotel guests and bed nights in selected governorates

South America

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	7,155	30,229	52,015	72,361	75,701	84,555
Alexandria	1,846	242	697	1,404	2,335	1,984
Luxor	9,748	5,411	11,499	14,854	34,372	39,350
Aswan	5,363	3,197	2,429	5,748	7,051	17,196
South Sinai	-	-	-	-	1,468	5,543
Red Sea	-	-	1,009	36,728	1,584	1,145
Total	-	-	-	-	122,511	149,773

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	15,049	59,212	102,431	147,777	244,660	516,033
Alexandria	1,973	715	2,190	6,660	4,823	10,075
Luxor	10,868	10,264	32,165	45,626	72,734	193,990
Aswan	8,310	5,486	3,956	11,386	14,191	87,012
South Sinai	-	-	-	-	7,695	20,597
Red Sea	-	-	6,399	237,335	6,335	5,194
Total	-	-	-	-	350,438	832,901

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	2.1	2.0	2.0	2.0	3.2	6.1
Alexandria	1.1	3.0	3.1	4.7	2.1	5.1
Luxor	1.1	1.9	2.8	3.1	2.1	4.9
Aswan	1.5	1.7	1.6	2.0	2.0	5.1
South Sinai	-	-	-	-	5.2	3.7
Red Sea	-	-	6.3	6.5	4.0	4.5
Total	-	-	-	-	2.9	5.6

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

Hotel guests and bed nights in selected governorates

Africa

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	28,009	34,124	57,997	83,864	86,205	95,058
Alexandria	14,583	9,589	11,872	16,497	15,516	13,208
Luxor	4,420	1,336	4,179	7,575	19,781	25,013
Aswan	2,224	1,412	1,555	4,926	5,898	14,997
South Sinai	-	-	-	-	924	3,758
Red Sea	-	-	1,199	36,569	1,031	1,135
Total	-	-	-	-	129,355	153,169

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	60,568	75,754	126,322	190,862	275,355	546,727
Alexandria	21,913	18,339	17,718	36,119	30,924	65,124
Luxor	6,460	3,448	13,158	27,615	45,011	159,680
Aswan	3,404	2,269	2,903	9,708	11,732	75,947
South Sinai	-	-	-	-	4,992	13,952
Red Sea	-	-	8,277	238,976	4,175	4,516
Total	-	-	-	-	372,189	865,946

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	2.2	2.2	2.2	2.3	3.2	5.8
Alexandria	1.5	1.9	1.5	2.2	2.0	4.9
Luxor	1.5	2.6	3.1	3.6	2.3	6.4
Aswan	1.5	1.6	1.9	2.0	2.0	5.1
South Sinai	-	-	-	-	5.4	3.7
Red Sea	-	-	6.9	6.5	4.0	4.0
Total	-	-	-	-	2.9	5.7

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

Hotel guests and bed nights in selected governorates

ASIA & Pacific

Number of hotel guests

	1992	1993	1994	1995	1996	1997
Cairo	81,039	83,113	109,805	144,740	131,109	139,963
Alexandria	15,207	7,690	8,459	14,923	16,099	13,708
Luxor	38,703	29,617	37,038	40,463	54,440	53,425
Aswan	32,682	19,818	23,886	26,707	41,783	55,862
South Sinai	-	-	-	-	1,102	3,407
Red Sea	-	-	9,771	37,957	1,339	5,064
Total	-	-	-	-	245,872	271,429

Number of bed nights

	1992	1993	1994	1995	1996	1997
Cairo	150,156	269,429	230,423	300,372	409,815	681,188
Alexandria	66,586	18,159	17,919	35,835	37,241	78,502
Luxor	54,158	42,643	106,572	119,050	121,070	223,571
Aswan	45,880	25,538	38,260	52,873	78,014	284,699
South Sinai	-	-	-	-	5,446	13,872
Red Sea	-	-	45,995	242,517	5,154	17,203
Total	-	-	-	-	656,740	1,299,035

Length of stay

	1992	1993	1994	1995	1996	1997
Cairo	1.9	3.2	2.1	2.1	3.1	4.9
Alexandria	4.4	2.4	2.1	2.4	2.3	5.7
Luxor	1.4	1.4	2.9	2.9	2.2	4.2
Aswan	1.4	1.3	1.6	2.0	1.9	5.1
South Sinai	-	-	-	-	4.9	4.1
Red Sea	-	-	4.7	6.4	3.8	3.4
Total	-	-	-	-	2.7	4.8

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

Hotel guests and bed nights by tourist region

Cairo

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	145,772	124,930	137,628	156,895	163,236	172,089
Arabs	211,661	233,975	260,680	229,296	236,638	245,492
East Europe	30,967	37,972	97,369	86,972	92,314	101,167
N.S.W. Europe	639,889	480,014	290,682	290,940	309,097	317,951
North America	88,984	156,407	103,051	138,403	151,887	160,740
South America	7,155	30,229	52,015	72,361	75,701	84,555
Africa	28,009	34,124	57,997	83,864	86,205	95,058
Asia & Pacific	81,039	83,113	109,805	144,740	131,109	139,963
Total	1,233,476	1,180,764	1,109,227	1,203,471	1,246,187	1,317,015

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	216,142	239,005	276,210	304,044	531,329	802,701
Arabs	490,439	476,648	497,683	459,524	751,890	1,023,263
East Europe	50,896	84,639	202,621	176,101	293,149	564,521
N.S.W. Europe	923,953	780,945	548,480	548,990	1,041,791	1,313,164
North America	174,741	305,713	221,780	268,674	512,794	784,166
South America	15,049	59,212	102,431	147,777	244,660	516,033
Africa	60,568	75,754	126,322	190,862	275,355	546,727
Asia & Pacific	150,156	269,429	230,423	300,372	409,815	681,188
Total	2,081,944	2,291,345	2,205,950	2,396,344	4,060,783	6,231,763

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

Hotel guests and bed nights by tourist region

Alexandria

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	183,541	218,090	239,266	257,290	245,698	209,911
Arabs	44,704	36,811	55,999	72,593	73,270	62,543
East Europe	11,827	18,245	15,546	31,553	33,589	28,588
N.S.W. Europe	37,204	19,587	22,682	41,212	48,975	41,697
North America	20,760	7,703	9,089	18,626	25,356	21,616
South America	1,846	242	697	1,404	2,335	1,984
Africa	14,583	9,589	11,872	16,497	15,516	13,208
Asia & Pacific	15,207	7,690	8,459	14,923	16,099	13,708
Total	329,672	317,957	363,610	454,098	460,838	393,255

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	398,042	436,881	455,131	398,101	497,762	1,054,949
Arabs	119,346	81,858	105,718	142,188	150,712	319,864
East Europe	25,054	47,751	37,686	72,318	67,592	142,484
N.S.W. Europe	85,472	60,073	66,904	90,504	100,673	211,507
North America	26,942	18,636	21,070	41,715	51,285	107,546
South America	1,973	715	2,190	6,660	4,823	10,075
Africa	21,913	18,339	17,718	36,119	30,924	65,124
Asia & Pacific	66,586	18,159	17,919	35,835	37,241	78,502
Total	745,328	682,412	724,336	823,440	941,012	1,990,051

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

Hotel guests and bed nights by tourist region

Luxor

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	33,957	28,474	30,904	36,503	48,521	55,945
Arabs	2,474	1,237	3,729	9,142	20,276	29,398
East Europe	7,583	5,276	6,360	9,420	21,222	26,107
N.S.W. Europe	415,768	178,386	71,551	80,344	106,822	103,176
North America	29,860	14,463	24,487	32,396	50,131	55,193
South America	9,748	5,411	11,499	14,854	34,372	39,350
Africa	4,420	1,336	4,179	7,575	19,781	25,013
Asia & Pacific	38,703	29,617	37,038	40,463	54,440	53,425
Total	542,513	264,200	189,747	230,697	355,565	387,607

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	68,145	61,251	65,013	93,777	100,696	263,169
Arabs	3,709	3,557	11,278	30,710	62,639	186,115
East Europe	16,473	6,701	19,328	30,297	77,252	184,723
N.S.W. Europe	1,106,703	623,935	218,107	215,742	463,734	491,211
North America	60,055	27,362	81,601	92,762	109,186	233,657
South America	10,868	10,264	32,165	45,626	72,734	193,990
Africa	6,460	3,448	13,158	27,615	45,011	159,680
Asia & Pacific	54,158	42,643	106,572	119,050	121,070	223,571
Total	1,326,571	779,161	547,222	655,579	1,052,322	1,936,116

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

Hotel guests and bed nights by tourist region

Aswan

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	34,092	26,234	22,522	23,298	36,782	64,998
Arabs	1,700	1,368	1,453	4,621	3,288	20,129
East Europe	12,839	8,150	3,482	6,696	8,408	20,094
N.S.W. Europe	188,386	72,692	26,639	29,224	55,691	81,750
North America	17,240	9,106	5,992	9,246	12,985	47,339
South America	5,363	3,197	2,429	5,748	7,051	17,196
Africa	2,224	1,412	1,555	4,926	5,898	14,997
Asia & Pacific	32,682	19,818	23,886	26,707	41,783	55,862
Total	294,526	141,977	87,958	110,466	171,886	322,365

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	71,596	52,193	55,754	43,754	79,675	331,644
Arabs	2,840	1,639	2,467	9,724	6,576	100,480
East Europe	22,188	11,597	6,361	13,117	16,645	102,091
N.S.W. Europe	354,567	140,407	52,941	59,157	111,641	414,638
North America	29,271	13,659	10,782	18,676	25,791	237,990
South America	8,310	5,486	3,956	11,386	14,191	87,012
Africa	3,404	2,269	2,903	9,708	11,732	75,947
Asia & Pacific	45,880	25,538	38,260	52,873	78,014	284,699
Total	538,056	252,788	173,424	218,395	344,265	1,634,501

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

Hotel guests and bed nights by tourist region

South Sinai

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	-	-	-	116,487	115,372	168,095
Arabs	-	-	-	-	8,861	22,893
East Europe	-	-	-	-	124,928	174,770
N.S.W. Europe	-	-	-	-	281,330	308,131
North America	-	-	-	-	40,533	57,235
South America	-	-	-	-	1,468	5,543
Africa	-	-	-	-	924	3,758
Asia & Pacific	-	-	-	-	1,102	3,407
Others	-	-	-	456,605	-	-
Total	-	-	-	573,092	574,518	743,832

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	-	-	-	534,620	664,474	625,635
Arabs	-	-	-	-	52,260	85,811
East Europe	-	-	-	-	600,020	644,480
N.S.W. Europe	-	-	-	-	1,564,588	1,135,683
North America	-	-	-	-	203,757	211,888
South America	-	-	-	-	7,695	20,597
Africa	-	-	-	-	4,992	13,952
Asia & Pacific	-	-	-	-	5,446	13,872
Foreigners total	-	-	-	2,329,740	-	-
Total	-	-	-	2,864,360	3,103,232	2,751,918

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

Hotel guests and bed nights by tourist region

Red Sea

Number of hotel guests

Origin	1992	1993	1994	1995	1996	1997
Egyptian	68,219	-	83,551	116,304	104,385	135,864
Arabs	-	-	11,096	45,294	10,349	8,381
East Europe	-	-	24,646	86,594	225,231	303,704
N.S.W. Europe	-	-	117,934	231,969	428,276	535,979
North America	-	-	5,568	37,730	5,465	5,155
South America	-	-	1,009	36,728	1,584	1,145
Africa	-	-	1,199	36,569	1,031	1,135
Asia & Pacific	-	-	9,771	37,957	1,339	5,064
Foreigners total	212,692	-	-	-	-	-
Total	280,911	-	254,774	629,145	777,660	996,427

Number of bed nights

Origin	1992	1993	1994	1995	1996	1997
Egyptian	239,633	-	332,324	421,827	406,588	513,718
Arabs	-	-	75,529	258,824	35,259	31,842
East Europe	-	-	158,419	508,730	1,359,152	1,901,806
N.S.W. Europe	-	-	877,575	1,323,596	2,874,225	2,964,066
North America	-	-	32,492	240,590	23,560	19,451
South America	-	-	6,399	237,335	6,335	5,194
Africa	-	-	8,277	238,976	4,175	4,516
Asia & Pacific	-	-	45,995	242,517	5,154	17,203
Foreigners total	1,318,123	-	-	-	-	-
Total	1,557,756	-	1,537,010	3,472,395	4,714,448	5,457,796

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

Accommodation capacity in each Tourism Region

Number of existing hotel rooms in 1998

Governorates	5-star	4-star	3-star	2-star	1-star	Unclassified	Total
Cairo	9,668	3,880	4,090	2,140	851	536	21,165
Upper Nile	10,170	3,790	2,108	983	714	474	18,239
South Sinai	2,780	1,468	1,873	1,004	171	4,502	11,798
Red Sea	2,426	3,765	4,709	1,177	605	4,920	17,602
Mediterranean Sea	1,118	1,207	3,134	1,698	1,205	1,038	9,400
Desert	0	0	0	96	69	127	292
Total	26,162	14,110	15,914	7,098	3,615	11,597	78,496

Source: Tourism in Figure annual issues by Ministry of Tourism

Existing hotel rooms and projects in 1999

		Existing rooms in 1999	Under construction	Total Rooms
Mediterranean Region		9,634	2,329	11,963
Cairo Region		6,617	29,027	22,410
Nile Region	Middle	0	524	524
	Upper	7,927	26,965	19,038
	Total	7,927	27,489	19,562
Red Sea Region	South Sinai	21,577	35,064	13,487
	Red Sea	13,534	35,565	22,031
	Total	35,111	70,629	35,518
Desert & Oasis		95	355	260
Grand Total		52,079	139,463	87,384

Note: Under construction including planning

Source: Ministry of Tourism, Governorate Net

Key figures of accommodation capacity

Past trend of basic figures for accommodation

		Hotel Guest	1992	1993	1994	1995	1996	1997
Average Length of Stay	Foreign Tourist		6.8	6.0	6.0	6.5	6.1	6.7
	Domestic Tourist		2.1	2.0	2.3	2.5	3.2	4.5
Bed-Nights share	Foreign Tourist share		96	95	93	92	91	88
	Domestic Tourist share		4	5	7	8	9	12
Occupancy Rate	All accommodation			55	57	63	62	47

Source: Tourism in Figure 1997 by Ministry of Tourism

Tourist Expenditure

A Research on estimating the Tourist Expenditure in the Arab Republic of Egypt
(Tourist Sample Survey for 1994)

1. Sample

Nationality	Number of tourists in the sample	%	Total number of departing tourists	%	Percentage of sample
Arabs	11,545	50%	931,730	36%	1.24%
Europeans	7,578	32%	1,030,415	40%	0.74%
Americans	1,850	8%	182,378	7%	1.01%
others	2,348	10%	437,465	17%	0.54%
Total	23,321	100%	2,581,988	100%	0.90%

2. Number of tourists and tourist nights

Nationality	Number of tourists in the sample	Total number of tourists nights	Average tourists nights per tourist	Tourists/ less than 15 days	Tourists/ 15 - 44 days	Tourists/ more than 45 days
Arabs	11,545	189,093	16.4	46%	28%	26%
Europeans	7,578	82,005	10.8	60%	35%	6%
Americans	1,850	19,172	10.4	67%	28%	5%
others	2,348	19,245	8.2	67%	27%	7%
Total	23,321	309,515	13.3	54%	30%	16%

3. Number of tourists and tourist nights

Nationality	Tourists				Tourist nights			
	Individuals		Groups		Individuals		Groups	
	No.	%	No.	%	No.	%	No.	%
Arabs	11,545	100%	0	0%	189,093	100%	0	0%
Europeans	3,154	42%	4,424	58%	38,799	47%	43,206	53%
Americans	1,346	73%	504	27%	15,873	83%	3,299	17%
others	1,391	59%	957	41%	13,830	72%	5,415	28%
Total	17,436	75%	5,885	25%	257,595	83%	51,920	17%

4. Frequency of visit of individual tourists

Nationality	Frequency of visit			
	1st time	2nd time	third time	more than 4th
Arabs	8.4%	10.2%	13.2%	68.2%
Europeans	44.2%	21.0%	12.2%	22.6%
Americans	50.0%	15.2%	11.9%	22.8%
others	52.1%	26.9%	7.6%	13.5%
Total				

5. Accompanying persons

Nationality	Number of tourists in the sample	Unaccompanied	Accompanied by family	Accompanied by friend
Arabs	11,545	57%	21%	22%
Europeans	7,578	32%	27%	40%
Americans	1,850	42%	23%	35%
others	2,348	34%	19%	47%
Total	23,321	45%	23%	31%

6. Sex

Nationality	Number of tourists in the sample	Male	Female
Arabs	11,545	94%	6%
Europeans	7,578	77%	23%
Americans	1,850	75%	25%
others	2,348	73%	27%
Total	23,321	85%	15%

7. Age

Nationality	Number of tourists in the sample	less than 30	30-	40-	50-	60-	70-	not stated
Arabs	11,545	2.0%	30.9%	32.8%	20.7%	10.2%	3.0%	0.5%
Europeans	7,578	1.3%	12.5%	12.5%	64.3%	7.6%	1.5%	0.3%
Americans	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%

8. Distribution of tourists night

Nationality	Number of tourists nights in the sample	Cairo and Giza	Luxor	Aswan	Alexandria and Northcoast	Red Sea	North Sinai	South Sinai	Other regions
Arabs	189,093	85.1%	0.1%	0.3%	12.5%	0.6%	0.2%	0.1%	1.1%
Europeans	82,005	39.6%	16.6%	6.6%	5.7%	25.3%	0.6%	3.8%	1.8%
Americans	19,172	70.1%	8.4%	4.8%	8.7%	2.5%	0.4%	4.2%	1.0%
others	19,245	62.6%	10.7%	7.5%	6.4%	3.7%	6.3%	5.9%	2.0%
Total	309,515	70.7%	5.6%	2.7%	10.1%	7.5%	0.7%	1.7%	1.3%

9. Tourist expenditure per night

Nationality	Number of tourists in the sample	USD200+	US\$100+	Less than US\$100
Arabs	189,093	29%	28%	43%
Europeans	82,005	18%	42%	40%
Americans	19,172	50%	35%	15%
others	19,245	43%	43%	24%
Total	309,515	28%	33%	40%

US\$

Nationality	Individuals	Groups	Total
Arabs	94		94
Europeans	110	108	109
Americans	169	177	170
others	138	173	148
Total	103	119	106

Tourist Expenditure

A Research on estimating the Tourist Expenditure in the Arab Republic of Egypt
(Tourist Sample Survey for 1997)

1. Sample

Nationality	Number of tourists in the sample	%	Total number of departing tourists	%	Percentage of sample
Arabs	8,764	31%	898,682	27%	0.98%
Europeans	14,123	50%	1,971,704	58%	0.72%
Americans	1,858	7%	215,549	6%	0.86%
Africans	416	1%	44,732	1%	0.93%
Asians	2,426	9%	243,270	7%	1.00%
others	505	2%	1,304	0%	38.73%
Total	28,092	100%	3,375,241	100%	0.83%

2. Number of tourists and tourist nights

Nationality	Number of tourists in the sample	Total number of tourists nights	Average tourists nights per tourist	Tourists/ less than 15 days	Tourists/ 15 - 44 days	Tourists/ more than 45 days
Arabs	8,764	137,456	15.7			
Europeans	14,123	139,951	9.9			
Americans	1,858	17,938	9.7			
Africans	416	3,270	7.9			
Asians	2,426	14,917	6.1			
others	505	5,219	10.3			
Total	28,092	318,751	11.3	0%	0%	0%

3. Number of tourists and tourist nights

Nationality	Tourists				Tourist nights			
	Individuals		Groups		Individuals		Groups	
	No.	%	No.	%	No.	%	No.	%
Arabs	11,545	100%	0	0%	189,093	100%	0	0%
Europeans	3,154	42%	4,424	58%	38,799	47%	43,206	53%
Americans	1,346	73%	504	27%	15,873	83%	3,299	17%
Africans								
Asians								
others	1,391	59%	957	41%	13,830	72%	5,415	28%
Total	17,436	75%	5,885	25%	257,595	83%	51,920	17%

4. Frequency of visit of individual tourists

Nationality	Frequency of visit			
	1st time	2nd time	third time	more than 4th
Arabs	8.4%	10.2%	13.2%	68.2%
Europeans	44.2%	21.0%	12.2%	22.6%
Americans	50.0%	15.2%	11.9%	22.8%
Africans				
Asians				
others	52.1%	26.9%	7.6%	13.5%
Total				

5. Accompanying persons

Nationality	Number of tourists in the sample	Unaccompanied	Accompanied by family	Accompanied by friend
Arabs	11,545	57%	21%	22%
Europeans	7,578	32%	27%	40%
Americans	1,850	42%	23%	35%
Africans				
Asians				
others	2,348	34%	19%	47%
Total	23,321	45%	23%	31%

6. Sex

Nationality	Number of tourists in the sample	Male	Female
Arabs	11,545	94%	6%
Europeans	7,578	77%	23%
Americans	1,850	75%	25%
Africans			
Asians			
others	2,348	73%	27%
Total	23,321	85%	15%

7. Age

Nationality	Number of tourists in the sample	less than 30	30-	40-	50-	60-	70-	not stated
Arabs	11,545	2.0%	30.9%	32.8%	20.7%	10.2%	3.0%	0.5%
Europeans	7,578	1.3%	12.5%	12.5%	64.3%	7.6%	1.5%	0.3%
Americans	1,850	1.9%	11.0%	18.2%	48.1%	14.6%	5.4%	0.8%
Africans	2,348	2.2%	26.5%	26.5%	44.2%	6.8%	2.3%	0.7%
Asians								
others								
Total	23,321	1.8%	22.9%	24.4%	39.4%	9.4%	2.6%	0.5%

8. Distribution of tourists night

Nationality	Number of tourists nights in the sample	Cairo and Giza	Luxor	Aswan	Alexandria and Northcoast	Red Sea	North Sinai	South Sinai	Other regions
Arabs	189,093	85.1%	0.1%	0.3%	12.5%	0.6%	0.2%	0.1%	1.1%
Europeans	82,005	39.6%	16.6%	6.6%	5.7%	25.3%	0.6%	3.8%	1.8%
Americans	19,172	70.1%	8.4%	4.8%	8.7%	2.5%	0.4%	4.2%	1.0%
Africans									
Asians									
others	19,245	62.6%	10.7%	7.5%	6.4%	3.7%	6.3%	5.9%	2.0%
Total	309,515	70.7%	5.6%	2.7%	10.1%	7.5%	0.7%	1.7%	1.3%

9. Tourist expenditure per night

Nationality	Number of tourists in the sample	USD200+	US\$100+	Less than US\$100
Arabs	189,093	29%	28%	43%
Europeans	82,005	18%	42%	40%
Americans	19,172	50%	35%	15%
Africans				
Asians				
others	19,245	43%	43%	24%
Total	309,515	28%	33%	40%

US\$

Nationality	Individuals	Groups	Total
Arabs	94		94
Europeans	110	108	109
Americans	169	177	170
Africans			
Asians			
others	138	173	148
Total	103	119	106

Tourism Products & Resources

Appendix 2 Tourism Products & Resources

The List of Main Tourism Resources in Egypt (1)

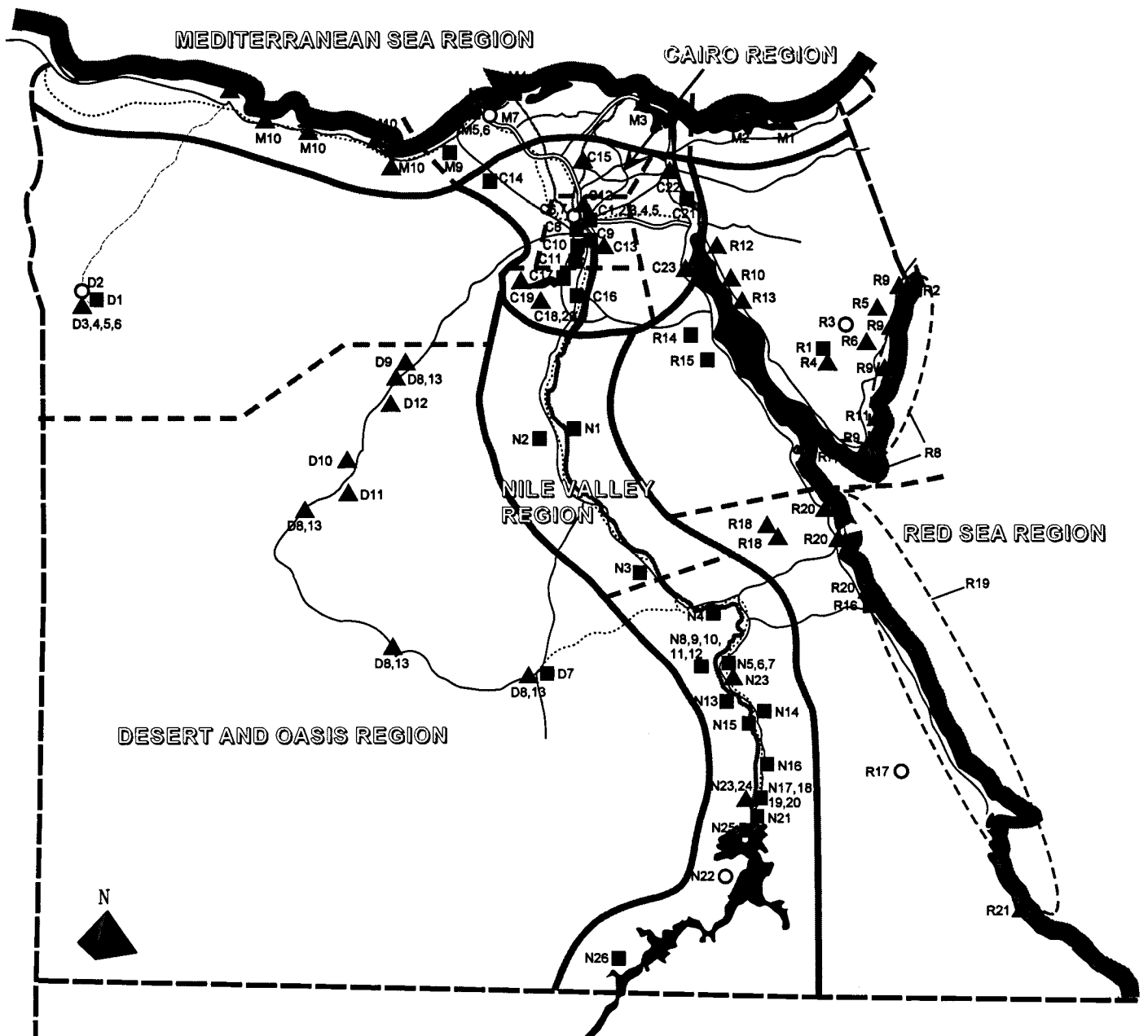
No.	Name of Resource	Type	Region/Sub-region	Location
C1	Egyptian Museum	Historical (Ancient)	Cairo/Cairo	Cairo
C2	Old Cairo	Historical (Coptic)	Cairo/Cairo	Cairo
C3	Coptic Museum	Historical (Coptic)	Cairo/Cairo	Cairo
C4	Islamic Cairo	Historical (Islamic)	Cairo/Cairo	Cairo
C5	Islamic Art Museum	Historical (Islamic)	Cairo/Cairo	Cairo
C6	Cairo City	Cultural (City Life)	Cairo/Cairo	Cairo
C7	Arabian folklore	Cultural (Folklore)	Cairo/Cairo	Cairo
C8	Pyramids of Giza	Historical (Ancient)	Cairo/Cairo	Giza
C9	Ruin of Memphis	Historical (Ancient)	Cairo/Cairo	Memphis
C10	Pyramid complex of Saqqara	Historical (Ancient)	Cairo/Cairo	Saqqara
C11	Pyramids of Dahshur	Historical (Ancient)	Cairo/Cairo	Dahshur
C12	Cairo Nile Banks	Natural (Landscape)	Cairo/Cairo	Cairo
C13	Hot Spring in Helwan	Natural (Spa)	Cairo/Cairo	Helwan
C14	Monasteries of Wadi Natrun	Historical (Coptic)	Cairo/Nile Delta	Wadi Natrun
C15	Nile Delta & Nile Banks	Natural (Landscape)	Cairo/Nile Delta	Nile Delta
C16	Meidum Pyramid	Historical (Ancient)	Cairo/Faiyum	Faiyum
C17	Ruin of Karanis	Historical (Ancient)	Cairo/Faiyum	Faiyum
C18	Agricultural field in Faiyum Oasis	Natural (Landscape)	Cairo/Faiyum	Faiyum
C19	Lake Qarun	Natural (Landscape)	Cairo/Faiyum	Faiyum
C20	Variety of water birds in Faiyum Oasis	Natural (Fauna&Flora)	Cairo/Faiyum	Faiyum
C21	Suez Canal	Historical (Modern)	Cairo/Suez	Suez, Port Said
C22	Lake Timsah	Natural (Landscape)	Cairo/Suez	Ismailia
C23	Beach in Ain Sukhna	Natural (Marine)	Cairo/Suez	Ain Sukhna
N1	Tombs of Beni Hassan	Historical (Ancient)	Nile Valley/Middle Nile	Beni Hassan
N2	Tuna El-Gebel	Historical (Ancient)	Nile Valley/Middle Nile	Ashmunein
N3	Temple of Seti I	Historical (Ancient)	Nile Valley/Middle Nile	Abydos
N4	Temple of Hathor	Historical (Ancient)	Nile Valley/Upper Nile	Dendera
N5	Karnak Temple Complex	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N6	Luxor Temple	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N7	Luxor Museum	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N8	Deir El Bahri	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N9	Ramesum	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N10	Meinet Habu	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N11	Valley of the Kings	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N12	Valley of the Queens	Historical (Ancient)	Nile Valley/Upper Nile	Luxor
N13	Temple of Khum	Historical (Ancient)	Nile Valley/Upper Nile	Esna
N14	Temple of Nekhbet/Thoth	Historical (Ancient)	Nile Valley/Upper Nile	El Kab
N15	Temple of Horus	Historical (Ancient)	Nile Valley/Upper Nile	Edfu
N16	Temple of Haroeris and Sobek	Historical (Ancient)	Nile Valley/Upper Nile	Kom Ombo
N17	Elephantine Island	Historical (Ancient)	Nile Valley/Upper Nile	Aswan
N18	Temple of Isis	Historical (Ancient)	Nile Valley/Upper Nile	Aswan
N19	Nubia Museum	Historical (Ancient)	Nile Valley/Upper Nile	Aswan
N20	Aswan Dam	Historical (Modern)	Nile Valley/Upper Nile	Aswan
N21	Aswan High Dam	Historical (Modern)	Nile Valley/Upper Nile	Aswan
N22	Nubian folklore	Cultural (Folklore)	Nile Valley/Upper Nile	Aswan
N23	Nile Cruise/Felucca rides on Nile River	Natural (Landscape)	Nile Valley/Upper Nile	Luxor/Aswan
N24	Riverine forest and bird species; Saluga, Ghazal Island, etc.	Natural (Fauna&Flora)	Nile Valley/Upper Nile	Aswan
N25	Temple of Kalabsha	Historical (Ancient)	Nile Valley/Upper Nile	Aswan
N26	Temple of Abu Simbel	Historical (Ancient)	Nile Valley/Upper Nile	Abu Simbel

Source: JICA Study Team

The List of Main Tourism Resources in Egypt (2)

No.	Name of Resource	Type	Region/Sub-region	Location
R1	Monastery of St. Catherine	Historical (Coptic)	Red Sea/South Sinai	Mt.Sinai
R2	Faraun Island (Faraoun Fort)	Historical (Islamic)	Red Sea/South Sinai	Taba
R3	Bedouin Folklore in Sinai	Cultural (Folklore)	Red Sea/South Sinai	Sinai
R4	Mt. Sinai	Natural (Landscape)	Red Sea/South Sinai	Mt.Sinai
R5	Colored Canyon	Natural (Landscape)	Red Sea/South Sinai	Nuweiba
R6	Ain Khudra Oasis	Natural (Landscape)	Red Sea/South Sinai	Nuweiba
R7	Ras Muhammed National Park	Natural (Marine)	Red Sea/South Sinai	Sharm el Sheikh
R8	Numbers of Dive sites in Gulf of Aqaba & Strait of Gubal	Natural (Marine)	Red Sea/South Sinai	Gulf of Aqaba & Strait of Gubal
R9	Beaches on Gulf of Aqaba Coast	Natural (Marine)	Red Sea/South Sinai	Gulf of Aqaba
R10	Beaches on Gulf of Suez Coast	Natural (Marine)	Red Sea/South Sinai	Ras Sidr
R11	Mangroves in Ras Mohmmmed & Nabq	Natural (Fauna&Flora)	Red Sea/South Sinai	Ras Mohmmmed & Nabq
R12	Ain Musa (springs of Moses)	Natural (spa)	Red Sea/South Sinai	Ain Musa
R13	Hamman Farun Hot springs	Natural (spa)	Red Sea/South Sinai	Hamman Farun
R14	Monastery of St. Anthony	Historical (Coptic)	Red Sea/South Sinai	Galala Plateau
R15	Monastery of St. Paul	Historical (Coptic)	Red Sea/South Sinai	Galala Plateau
R16	Ancient port of El-Quseir	Historical (Ancient)	Red Sea/Red Sea	El-Quseir
R17	Moulid of Sheikh El Shazli (Islamic festival)	Cultural (Folklore)	Red Sea/Red Sea	Hamata
R18	Red Sea Mountains of Eastern Desert	Natural (Landscape)	Red Sea/Red Sea	Eastern Desert
R19	Numbers of dive sites in Red Sea	Natural (Marine)	Red Sea/Red Sea	Red Sea
R20	Beaches on Red Sea Coast	Natural (Marine)	Red Sea/Red Sea	Red Sea Coast
R21	Mangroves in Elba	Natural (Fauna&Flora)	Red Sea/Red Sea	Elba
M1	Beach in Arish	Natural (Marine)	Mediterranean/North Sinai	Arish
M2	Wetland site around Lake Bardawil for migrant birds	Natural (Fauna&Flora)	Mediterranean/North Sinai	Al Arish, Bir el Abd
M3	Wetland site around Lake el Manzalah for migrant birds	Natural (Fauna&Flora)	Mediterranean/Alexandria	Dumyat, Al Manzalah
M4	Ottoman-era buildings in Rosetta	Historical (Ancient)	Mediterranean/Alexandria	Resetta
M5	Alexandria Roman Ruin	Historical (Ancient)	Mediterranean/Alexandria	Alexadria
M6	Greco-Roman Museum	Historical (Ancient)	Mediterranean/Alexandria	Alexadria
M7	Alexandria City	Cultural (City Life)	Mediterranean/Alexandria	Alexadria
M8	Beaches in Alexandria City	Natural (Marine)	Mediterranean/Alexandria	Alexadria
M9	Monastery of Abu Mena	Historical (Coptic)	Mediterranean/Alexandria	Abu Mena
M10	Beaches on Mediterranean Coast (West of Alexandria)	Natural (Marine)	Mediterranean/Matruh	El Alamein, Ras Hakma, Marsa Matruh, etc.
D1	Temple of Amun	Historical (Ancient)	Desert & Oasis/Siwa	Siwa Oasis
D2	Festival of Siwa	Cultural (Folklore)	Desert & Oasis/Siwa	Siwa Oasis
D3	Agricultural fields (Palm & olive trees) in Siwa Oasis	Natural (Landscape)	Desert & Oasis/Siwa	Siwa Oasis
D4	Lake Siwa/Lake Zeitun	Natural (Landscape)	Desert & Oasis/Siwa	Siwa Oasis
D5	Vegetation/Birdlife in Siwa Oasis	Natural (Fauna&Flora)	Desert & Oasis/Siwa	Siwa Oasis
D6	Hot & Cold springs in Siwa	Natural (Spa)	Desert & Oasis/Siwa	Siwa Oasis
D7	Temple of Hibis	Historical (Ancient)	Desert & Oasis/New Valley	Kharga Oasis
D8	Agricultural fields in Oases, etc.	Natural (Landscape)	Desert & Oasis/New Valley	Oases
D9	Black Mountain	Natural (Landscape)	Desert & Oasis/New Valley	Bahariyya Oasis
D10	Crystal Mountain	Natural (Landscape)	Desert & Oasis/New Valley	Farafra Oasis
D11	White Desert	Natural (Landscape)	Desert & Oasis/New Valley	Farafra Oasis
D12	Black Desert	Natural (Landscape)	Desert & Oasis/New Valley	Bahariyya Oasis
D13	Hot & cold springs in Western Desert	Natural (Spa)	Desert & Oasis/New Valley	Oases

Source: JICA Study Team



LEGEND

- Historical Resource
- Cultural Resource
- ▲ Natural Resource
- (dashed) Unlabeled Resource

Tourism Resource in Egypt

List of Historical Resources

Region	Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Temple	Type	Ref/ / Printing	Others	Date	Open	Potential	Necessity of Entrance Restriction	Rating for Visit	Supposed Time for Visit (hour)	Excavation / Restoration
NILE	Upper Nile (Oena - Luxor - Aswan)	Hiv	Ruin of Roman Temples Cemeteries			T	R		O					B	2	
	El-Qasr, Wal-Saiyad		Rock-cut Tombs			F	R							B		
	Dendera		Temple of Dendera			T	R							B		
			Temple of Hathor			T	R							B		
			Temple of Isis			T	R							B		
			Roman Birth House			T	R							B		
			Coptic Church			T	R							B		
			Sanatorium			T	R							B		
	Qift		Temple of Min			T	R							B		
			Temple of Min at El-Qala			T	R							B		
	Qus		Temple of Haroeris			T	R							B		
			Al-Anmri Mosque			T	R							B		
	Naqada		Cemeteries			F	P							B		
			Pyramid			F	P							B		
	Tukh		Step Pyramid of Tukh			F	P							B		
	Nag el-Madamed					T	R							B		
			Temple of Mintu			T	R							B		
	Luxor		Luxor Temple (Amun)			T	R							B		
			Karnak Temple			T	R							B		
			Temple of Amun			T	R							B		
			Temple of Montu			T	R							B		
			Temple of Mut			T	R							B		
			Sound and Light Show			T	R							B		
			Sphinx Avenue			T	R							B		
			Luxor Museum			T	R							B		
			Winter Palace Hotel			T	R							B		
	Thebe (West bank)		Deir El-Babri			T	R							B		
			Temple of Montuhotep I			T	R							B		
			Temple of Hashepsut			T	R							B		
			Tomb of Senmut			T	R							B		
			Temple of Thutmose III			T	R							B		
			Tombs of the Assasif			T	R							B		
			Colossi of Memnon			T	R							B		
			Temple of Seti I			T	R							B		
			Ramesseum			T	R							B		
			Medinet Habu			T	R							B		
			Temple of Amun			T	R							B		
			Temple of Ramesses III			T	R							B		
			Deir El Medjha			T	R							B		

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Temple	Type	Date	Open to the public (mass tourists)	Open / Controlled / Limited	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supposed Time for Visit (hour)	Excavation / Restoration
Aswan	Korn Ombo	Tomb of Persephi			F	R						A	1-3	E
		Valley of the Kings			F	R								
		Tomb of Tutankhamun			F	R								
		Tomb of Ramesses VI			F	R								
		Tomb of Ramesses IX			F	R								
		Tomb of Merneptah			F	R								
		Tomb of Seti II			F	R								
		Tomb of Ramesses I			F	R								
		Tomb of Ramesses III			F	R								
		Tomb of Ramesses IV			F	R								
		Tomb of Horemheb			F	R								
		Tomb of Amenophis II			F	R								
		Tomb of Taweret			F	R								
		Tomb of Tutankhamun			F	R								
		Valley of the Queens			F	R								
Tomb of Nefertari			F	R										
Tomb of Khaemweset			F	R										
Tomb of Tihi			F	R										
Tomb of Amur-Hir-Khopshef			F	R										
Tombs of the Nobles			F	R										
Tomb of Ramose			F	R										
Tombs of Userhat, Khaemhat			F	R										
Tombs of Rekhmire, Senofer			F	R										
Tombs of Nakhti, Menna			F	R										
Tombs of Khonsu, Useret, Benia			F	R										
Palace of Malkata			F	R										
Temple of Montu			T											
Temple of Montu			T											
Gebelein			T											
El-Moalla			T											
Esna			T											
El-Kab			T											
Korn El-Ahmar (Nekhen) [Hieraconpolis]			T											
Edfu			T											
Gebel El-Silsila			T											
Sandstone quarries			T											
Rock-cut chapel etc.			T											
Temple of Harweris and Sobek			T											

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Temple	Type	Date	Open to the public (mass tourists)	Open / Controlled / Limited	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supposed Time for Visit (hour)	Excavation / Restoration
Aswan	Aswan	Palace of Amenophis III etc. under excavation			F	R								
		Mostly destroyed, west bank			F	R								
		east bank			F	R								
		west bank, colored wall paintings			F	R								
		east bank			F	R								
		Well preserved Roman hypostyle hall			F	R								
		west bank via bridge			F	R								
		east bank			F	R								
		colored paintings			F	R								
		west bank			F	R								
		twin town with El-Kab			F	R								
		emergency measures to protect selected tombs			F	R								
		Most complete and best preserved large temple			F	R								
		east bank			F	R								
		65km - Aswan			F	R								
		40km - Aswan			F	R								
		east bank			F	R								
		Impressive location facing on Nile and good hypostyle hall			F	R								

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Temple	Tomb / Funerary	Relief / Painting	Others	Pre/Early-dynastic	Old Kingdom	Middle Kingdom	New Kingdom	Date	Greco-Roman	Optic	Islamic	Modern	Open to the public (mass tourists)	Controlled / Limited	Closed / Control required	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supported Time for Visit (hour)	Excavation / Restoration
Red Sea and South Sinai Red Sea	Elephantine Island	Ruin of Yebu		M	T		U										AD19-20	O			A	A	1-2	E	
		Temple of Khnum		M	T													AD7-	O			A	A	1-2	E
		Temple of Hetayib		M	T													AD4-	O			A	A	1-2	E
		Temple of Kalabsha		M	T													AD4-AD4	O			A	A	1-2	E
		Nilometer		M	T													BC11-4	O			A	A	1-2	E
		Aswan Museum		M	T													BC16-11	O			A	A	1-2	E
		Nubia Museum		M	T													BC21-17	O			A	A	1-2	E
		Unfinished obelisk at quarry		M	T														O			A	A	1-2	E
		Old Cataract Hotel		M	T														O			A	A	1-2	E
		Fort of Aswan		M	T														O			A	A	1-2	E
		Qubet El-Hawwa Tombs		M	T														O			A	A	1-2	E
		Tomb of Sirenpit I		M	T														O			A	A	1-2	E
		Tomb of Pepi-Nekht, Harkhuf		M	T														O			A	A	1-2	E
		Tomb of Sirenpit II		M	T														O			A	A	1-2	E
		Tomb of Mekhu, Sabni		M	T														O			A	A	1-2	E
		Qubet El-Hawa		M	T														O			A	A	1-2	E
		Museum of Aga Khan		M	T														O			A	A	1-2	E
		Monastery of St. Simeon		M	T														O			A	A	1-2	E
		Tombs of Sabel Island		M	T														O			A	A	1-2	E
Southern Quarries		M	T														O			A	A	1-2	E		
Philae (relocated in Agilkia island)		M	T														O			A	A	1-2	E		
Temple of Isis		M	T														O			A	A	1-2	E		
Colonnade		M	T														O			A	A	1-2	E		
Kiosk of Trajan		M	T														O			A	A	1-2	E		
Light and Sound Show		M	T														O			A	A	1-2	E		
Aswan Dam		M	T														O			A	A	1-2	E		
Aswan High Dam & Monument		M	T														O			A	A	1-2	E		
New Kalabsha		M	T														O			A	A	1-2	E		
Temple of Kalabsha		M	T														O			A	A	1-2	E		
Beit El-Wali Temple		M	T														O			A	A	1-2	E		
Qertassi Kiosk		M	T														O			A	A	1-2	E		
Pre-historic reliefs		M	T														O			A	A	1-2	E		
Naser Lake		M	T														O			A	A	1-2	E		
El-Sebua		M	T														O			A	A	1-2	E		
Amada		M	T														O			A	A	1-2	E		
Qasr Ibrim		M	T														O			A	A	1-2	E		
Abu Simbel		M	T														O			A	A	1-2	E		

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Temple	Tomb / Funerary	Relief / Painting	Others	Pre/Early-dynastic	Old Kingdom	Middle Kingdom	New Kingdom	Date	Greco-Roman	Optic	Islamic	Modern	Open to the public (mass tourists)	Controlled / Limited	Closed / Control required	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supported Time for Visit (hour)	Excavation / Restoration
Red Sea and South Sinai Red Sea	Elephantine Island	Ruin of Yebu		M	T		U										AD19-20	O			A	A	1-2	E	
		Temple of Khnum		M	T													AD7-	O			A	A	1-2	E
		Temple of Hetayib		M	T													AD4-	O			A	A	1-2	E
		Temple of Kalabsha		M	T													AD4-AD4	O			A	A	1-2	E
		Nilometer		M	T													BC11-4	O			A	A	1-2	E
		Aswan Museum		M	T													BC16-11	O			A	A	1-2	E
		Nubia Museum		M	T													BC21-17	O			A	A	1-2	E
		Unfinished obelisk at quarry		M	T													O			A	A	1-2	E	
		Old Cataract Hotel		M	T													O			A	A	1-2	E	
		Fort of Aswan		M	T													O			A	A	1-2	E	
		Qubet El-Hawwa Tombs		M	T														O			A	A	1-2	E
		Tomb of Sirenpit I		M	T														O			A	A	1-2	E
		Tomb of Pepi-Nekht, Harkhuf		M	T														O			A	A	1-2	E
		Tomb of Sirenpit II		M	T														O			A	A	1-2	E
		Tomb of Mekhu, Sabni		M	T														O			A	A	1-2	E
		Qubet El-Hawa		M	T														O			A	A	1-2	E
		Museum of Aga Khan		M	T														O			A	A	1-2	E
		Monastery of St. Simeon		M	T														O			A	A	1-2	E
		Tombs of Sabel Island		M	T														O			A	A	1-2	E
Southern Quarries		M	T														O			A	A	1-2	E		
Philae (relocated in Agilkia island)		M	T														O			A	A	1-2	E		
Temple of Isis		M	T														O			A	A	1-2	E		
Colonnade		M	T														O			A	A	1-2	E		
Kiosk of Trajan		M	T														O			A	A	1-2	E		
Light and Sound Show		M	T														O			A	A	1-2	E		
Aswan Dam		M	T														O			A	A	1-2	E		
Aswan High Dam & Monument		M	T														O			A	A	1-2	E		
New Kalabsha		M	T														O			A	A	1-2	E		
Temple of Kalabsha		M	T														O			A	A	1-2	E		
Beit El-Wali Temple		M	T														O			A	A	1-2	E		
Qertassi Kiosk		M	T														O			A	A	1-2	E		
Pre-historic reliefs		M	T														O			A	A	1-2	E		
Naser Lake		M	T														O			A	A	1-2	E		
El-Sebua		M	T														O			A	A	1-2	E		
Amada		M	T														O			A	A	1-2	E		
Qasr Ibrim		M	T														O			A	A	1-2	E		
Abu Simbel		M	T														O			A	A	1-2	E		

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Type	Date	Open	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supported Time for Visit (hour)	Excavation / Restoration
Red Sea Mountains		Mons Porphyrites			Temple	Pre/Farly-dynastic	BC26					
		Mons Claudinaus			Temple	Pre/Farly-dynastic	BC26					
Red Sea Coast	El-Quseir	Bir Hammamat			Relief / Painting	Old Kingdom	BC26-22					
		Bir Umm Fawakhir			Relief / Painting	Middle Kingdom	BC21-17					
		El Kanays Temple			Relief / Painting	New Kingdom	BC16-11					
Berenice		Roman Citadel near Safaga			Temple	Intermediate/Late Period	BC11-4					
		El-Quseir Port			Temple	Intermediate/Late Period	BC11-4					
		Quseir El-Qadim			Temple	Intermediate/Late Period	BC11-4					

Region Sub-Region	Place	Asset	UNESCO World Heritage	SCA Monument	Type	Date	Open	Potential Destination	Necessity of Entrance Restriction	Rating for Visit	Supported Time for Visit (hour)	Excavation / Restoration
Red Sea Coast	El-Quseir	Mosque of Quseir			Temple	Pre/Farly-dynastic	BC26					
		Sheikh Tawfik House			Temple	Pre/Farly-dynastic	BC26					
Berenice		Temple of Serpis and Isis			Temple	Pre/Farly-dynastic	BC26					
		Emerald Mines of Wadi Sakait			Temple	Pre/Farly-dynastic	BC26					

Rating for visit: A:Must, B:Recommended, C:Archaeological importance, D:Worth to visit, E:Destination variety
Q: Quarry, F: Fort, C:Citadel, U: Town, H: House, O: Others

Visitors and income of Historical/cultural facilities in 1996

		Visitors (1000)	(%)	(%)	Income (1000LE)
Pharaonic monuments	SubTotal	8,357	100	33	122,330
Cairo		10	0	0	10
Giza		3,201	38	13	40,633
Fayoum		32	0	0	218
Sohag - Ashut		29	0	0	291
Luxor - Aswan		5,085	61	20	81,178
Islamic and Coptic monuments	SubTotal	1,567	100	6	8,722
Castle		1,064	68	4	6,820
South Cairo		128	8	1	930
North Cairo		39	2	0	160
Old Cairo		28	2	0	145
Delta		286	18	1	442
New Valley		3	0	0	23
South Sinai		19	1	0	202
Museum	SubTotal	15,340	100	61	27,852
History and Art		5,249	34	21	22,295
Natural Science		769	5	3	164
Animal and Fish		9,322	61	37	5,393
	Total	25,264		100	158,904

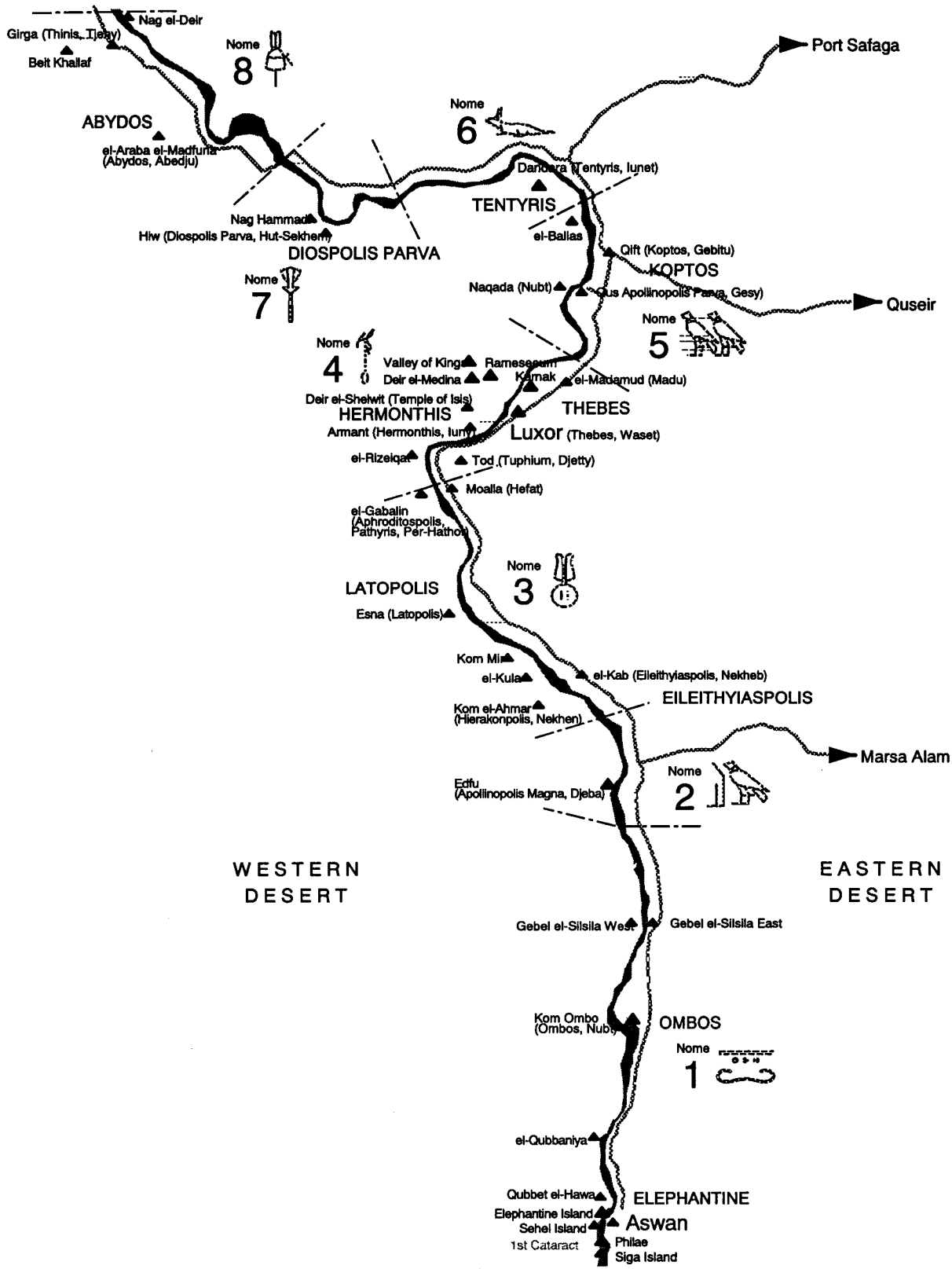
(CAPMAS, 1997)

Visitors, Income and Staff of Museum in 1996

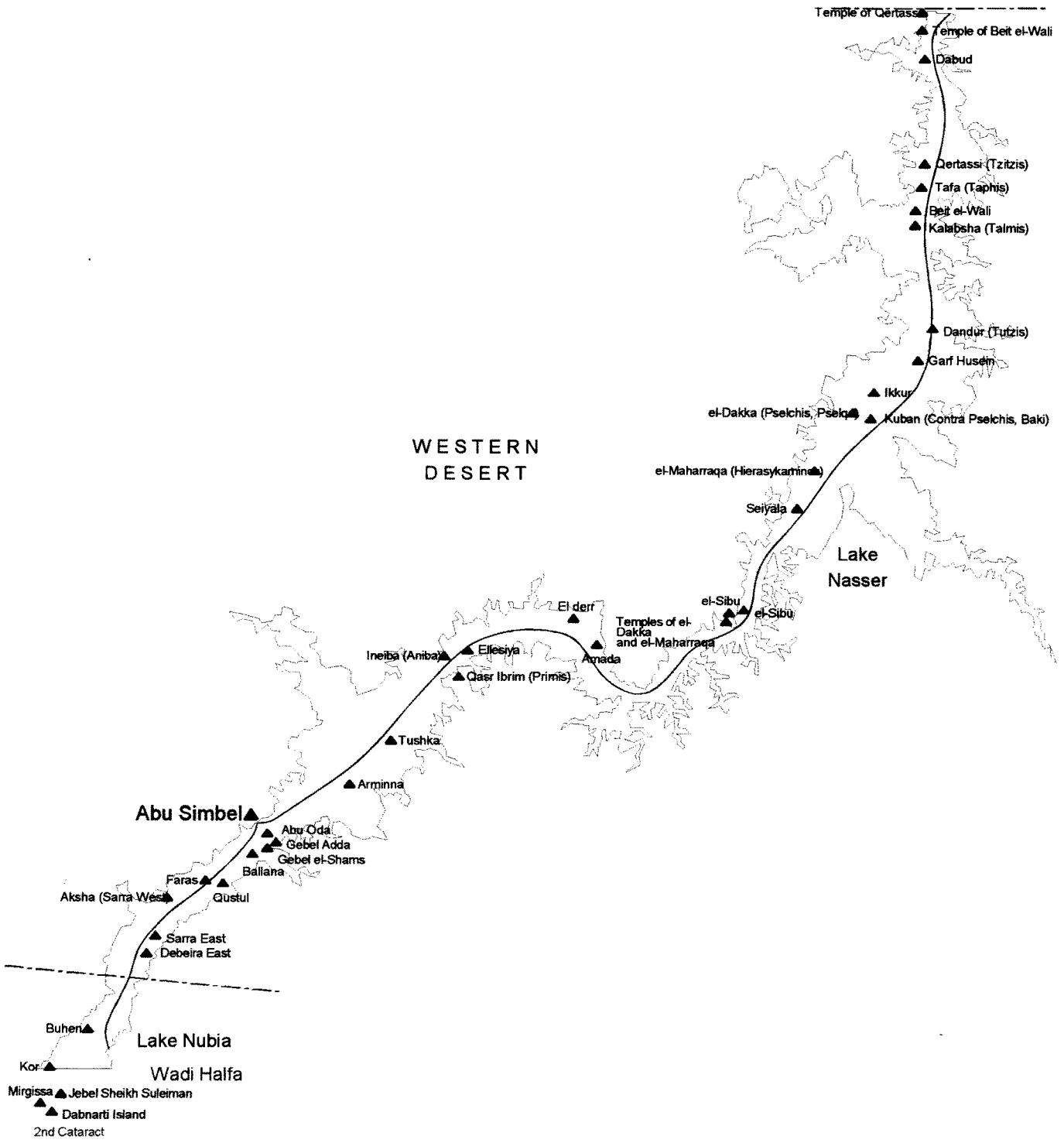
Type of Museum	Number	Visitors (1000)	Income (1000LE)	Staff
History and Art	38	5,249	22,295	1,463
Natural Science	11	769	164	542
Animal and Fish	18	9,322	5,393	1,785
Total	67	15,340	27,852	3,790

(CAPMAS, 1997)

		Visitors (1000)	Income (1000LE)
Islamic and Coptic	SubTotal	1,567	8,722
Castle		1,064	6,820
South Cairo		128	930
North Cairo		39	160
Old Cairo		28	145
Delta		286	442
New Valley		3	23
South Sinai		19	202
Pharaonic	SubTotal	8,357	122,330
Cairo		10	10
Giza		3,201	40,633
Fayoum		32	218
Sohag - Ashut		29	291
Luxor - Aswan		5,085	81,178
	Total	9,924	131,052



Historical and Archeological Sites in the Nile River



Historical and Archeological Sites in Lake Nasser

Cruise Ship Analysis in Upper Nile

1. Existing Condition

1-1 Number of Cruise Ships and cabins by year

	1991	1992	1993	1994	1995	1996	1997	1998
Cruise Ships	169	181	188	205	206	215	214	224
Cabins	8,584	9,297	9,763	10,339	10,532	11,184	11,322	10,830

Source: Tourism in Figure/ Ministry of Tourism

Note: Total number includes areas of Cairo, Luxor, Aswan, Nasser Lake, and Red Sea

1-2 Number of Cabins of Cruise Ships by year

Destination	1991	1992	1993	1994	1995	1996	1997
Cairo-Luxor-Aswan	—	—	—	—	—	—	11,088
Nasser Lake	—	—	—	—	—	—	155
Sub-total	—	—	—	—	—	—	11,243
Red Sea	—	—	—	—	—	—	79
Total	8,584	9,297	9,763	10,339	10,532	11,184	11,322

Source: Tourism in Figure/ Ministry of Tourism

1-3 Number of Cruise Ships by category

Category	1992	1993	1994	1995	1996	1997
5 Stars	92	94	84	82	111	—
4 Stars	37	37	41	40	44	—
3 Stars	30	30	21	20	24	—
2 Stars	14	14	15	13	13	—
Unclassified	9	13	44	51	23	—
Total	181	188	205	206	215	214
under construct	23	32	21	51	22	62

1-4 Number of cabins by category

Category	1992	1993	1994	1995	1996	1997
5 Stars	5,830	6,065	5,291	5,186	7,069	—
4 Stars	1,747	1,747	1,909	1,831	2,072	—
3 Stars	992	992	642	607	871	—
2 Stars	265	265	286	249	251	—
unclassified	463	694	2,211	2,859	921	—
Total	9,297	9,763	10,339	10,532	11,184	11,322

1-5 Number of beds by category 1996

Category	1992	1993	1994	1995	1996	1997
5 Stars	11,763	12,229	10,524	10,212	14,188	—
4 Stars	3,513	3,513	3,794	3,642	4,106	—
3 Stars	1,967	1,967	1,277	1,209	1,732	—
2 Stars	533	533	558	488	422	—
unclassified	943	1,405	4,380	5,267	1,815	—
Total	18,719	19,647	20,533	20,918	22,333	22,625

(15 cabin should be limits (Cairo University, scientist))

2. Cruising Facilities

2-1 Berthing facilities Operational Condition 1999

Destination	Number of Existing Berth				Winter operation	Future Demand
	Public	Private	Other*	Total		
Quena	1	0	0	1	1	
Dendera	1	1	0	1	1	24
Luxor	18(28)	14	0	40	21(52%)	90
Esna	7	2	0	9	6(67%)	38
Eduf	4	2	2	8	7(87%)	38
Kom Ombo	7	0	1	8	6(75%)	42
Aswan	0	34	0	34	24(70%)	80
Total	38(48)*	53	3	101	66(65%)	312

Ref: other = berthing on river embankment

:(28) = future numbers

Report demand projection = Priority Action Plan for Infrastructure and Tourism Development Phase III 1991

2-2 Berthing facilities Operation 1999

Destination	Number of Existing Berth			Main berth	Anchor berth	Ordinal berth	Waiting berth	Service berth	Ferry berth	Under construct
	Public	Private	Total							
Quena	2	0	2	0	0	1	0	0	0	1
Luxor	37	17	54	41	5	0	0	1	3	4
Esna	13	1	14	0	8	0	6	0	0	0
Eduf	3	1	4	0	4	0	0	0	0	0
Kom Ombo	6	0	6	0	0	6	0	0	0	0
Aswan	4*	38*	42	16	19	0	0	1	2	0
Total	65	57	122	57	36	7	6	2	5	5

Source: Indicative Plan for the Nile Cruise Berth between Aswan and Cairo, TDA-Cairo University

: * This figure based on field survey in August 1999

2-3 Proposed Berth facilities

Destination	Proposed Berth	Type of Berth	
		Parallel	Vertical
Quena	10	10	0
Luxor	50	50	0
Esna	15	15	0
Eduf	20	20	0
Kom Ombo	15	15	0
Aswan	120	60	60
Total	230	170	60

Source: Indicative Plan for the Nile Cruise Berth between Aswan and Cairo, TDA-Cairo University

2-4 Berthing facilities and surroundings for Cruising Ship 1999

Category	Facilities	Quena Gov.		Lux.Gov.	Q.Gov.	Aswan Gov.		
		Dandera	Quena	Luxor	Esna	Eduf	K.Ombo	Aswan
Basic Facilities	Embankment (km)	0.1	1.2	3.5	1.3	0.8	0.5	3.0
	Lighting							
	Steps	1	-	4	4	4	3	
	Pier for local ship	-	-	5	-	-	-	-
Utilities Services Supply	Water Intake	1	-	4	-	2	-	
	Sewerage Intake	-	-		-	-	-	-
	Waste Disposal System	-	-		-	-	-	
	Fuel Supply	1	-		-	-	-	
Security Services	Police Station	-	-	1	-	1	-	-
	Police Allocation(person)	-	14	13	8	8	6	
	Fire Hydrant	-	-	6	-	2	-	
Tourist Services Facilities	International Telephone	-	-	2	-	-	2	
	Park or Rest Place	-			-	-	-	-
	Public Toilet	-	-	4	-	-	-	-
	Information Center	-	-	-	-	-	-	-
	Souvenir Shops/Kiosk	-	-	9(68)	-	-	1	
	Coffee Shops/Restaurant	-	-	-	-	-	-	
Transportation	Transportation (Coach)	-	-			-	-	-
	Bus/Taxi Parking site	-	-		-	-	-	-
	Transport Terminal	-	-	-	-	-	-	-
Plan & Project	Berthing Expansion (km)	-	0.5	5.0			-	
	Utilities Supply	-					-	
Note	Development Status	closed/private	Gov.	Gov.	Gov.	Gov.	Gov.	Private

Source: JICA Study Team

3. Related Facilities in Nile River

3-1 Attraction Sites Conditions 1991

Destination	Road condition			Note
	access-km	width-m	surface	
Dendera	2.0	3.0-4.0	paved	from Nile
(Naqada -pyramid)	31.0	3.0-4.0	paved	from Dendera
(Dier el Marek-Tukh)	49.0	3.0-4.0	paved	from Naqada
Esna	0.28	3.0-4.0	paved	town street, Nile
El Kab(Tomb)	0.5	3.0	paved	along route 44
El Kab (temple)	0.0	-	no road	from Nile
Eduf	1.2	7.0-13.5	paved	from Nile
Gebel el Silsila	0.2	-	no road	from Nile
Kom Ombo	0.1	4.0	paved	from Nile
Kalabsha/B.Wadi	boat access	-	lake	Lake Nasser

3-2 Floating Vessel Standard 1990

Category	Dimension (m)				Number of beds
	Length	Beam/w	Height/h	Draft/d	
Average	60.13	10.70	9.44	1.37	101
Maximum	73.00	14.40	12.50	1.75	250
Minimum	27.53	7.00	3.50	0.95	17
Frequent	70-75	11-12	10-11	1.3-1.4	

Source: Priority Action Plan for Infrastructure and Tourism Development Phase III 1991

3-3 Time spent by the cruising 1991

Destination	Night	Day time	Average
Quena	-	-	-
Dendera	5.7	2.9	4.2
Luxor	33.6	26.3	29.7
Esna	8.9	6.6	7.6
Eduf	10.9	5.5	8.0
Kom Ombo	7.6	5.3	6.3
Aswan	25.8	23.0	24.3
sailing/out of	7.5	30.4	19.9
total	100.0%	100.0%	100.0%

4. Conditions for Tour Programme

4-1 Time Distance: Nile Valley

Destination	River/km	hour*1	Road/km	hour*2	Visiting	Staying
Dendera					1.0	-
Dendera Luxor(pyramid)	36	1.8	30	0.8	-	-
Naqada					0.25	-
Naqada Luxor	28	1.4	33	0.8	-	-
Luxor					48.0	
Luxor New Marina City	11	0.6	15	0.4		
NMC						
NMC Esna	51	2.5	54	1.4		
Esna						
Esna El Kab	29	1.5	36	0.9		
El Kab						
El Kab Edfu	18	0.9	37	0.9		
Edfu						
Edfu Speos	34	1.7	45	1.1		
Speos Harem						
Speos Harem KomOmbo	28	1.4	22	0.6		
Kom Ombo						
KomOmbo Aswan New City	31	1.6	29	0.7		
Aswan New City						
Aswan New City Aswan	13	0.7	14	0.4		
Aswan						
total	279	14.1	315	8.0		

Reference: *1= Cruising ship average 10knot(1.852km-h/knot)=20km/h

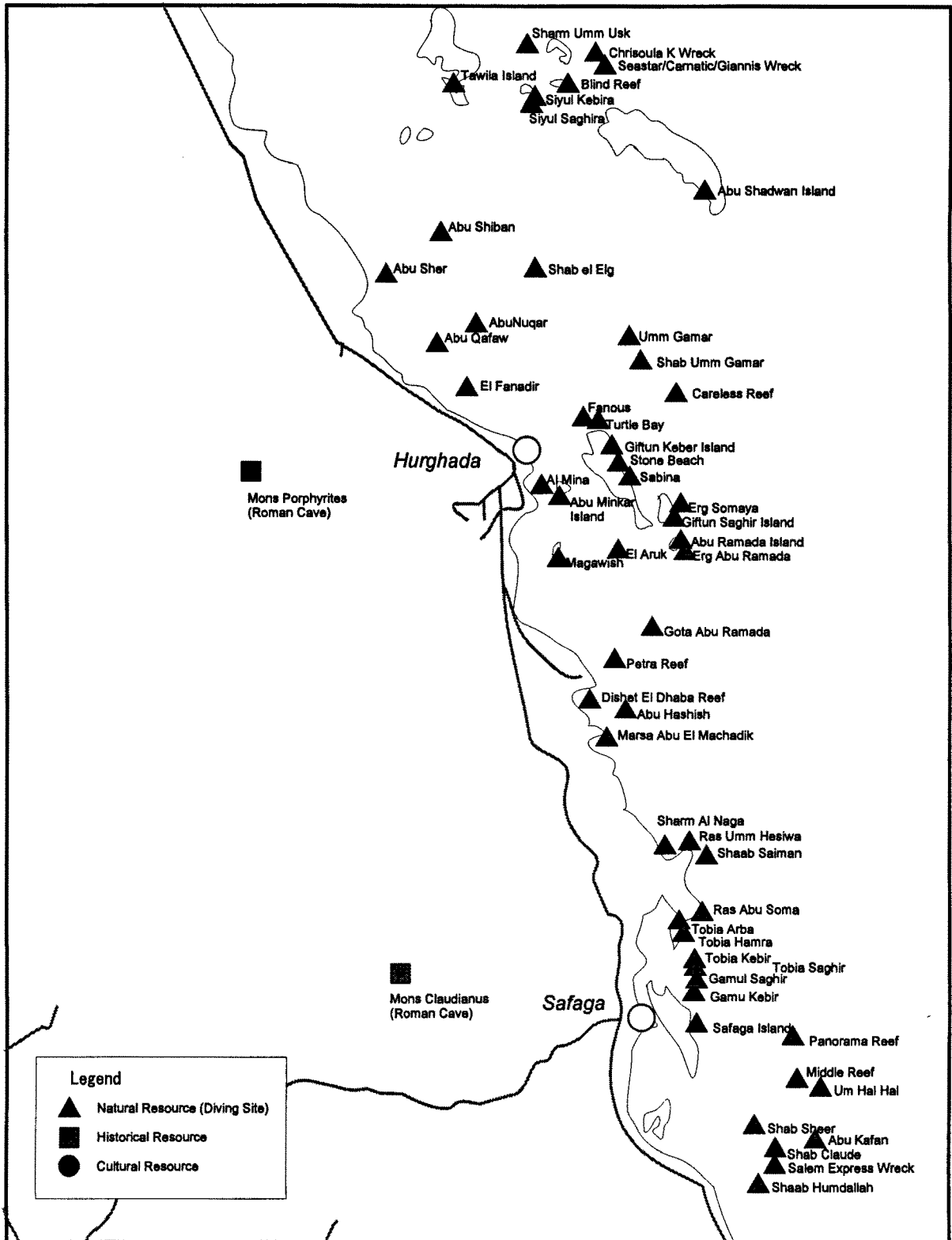
*2= Land car average 40km/h

4-2 Time Distance: Lake Nasser

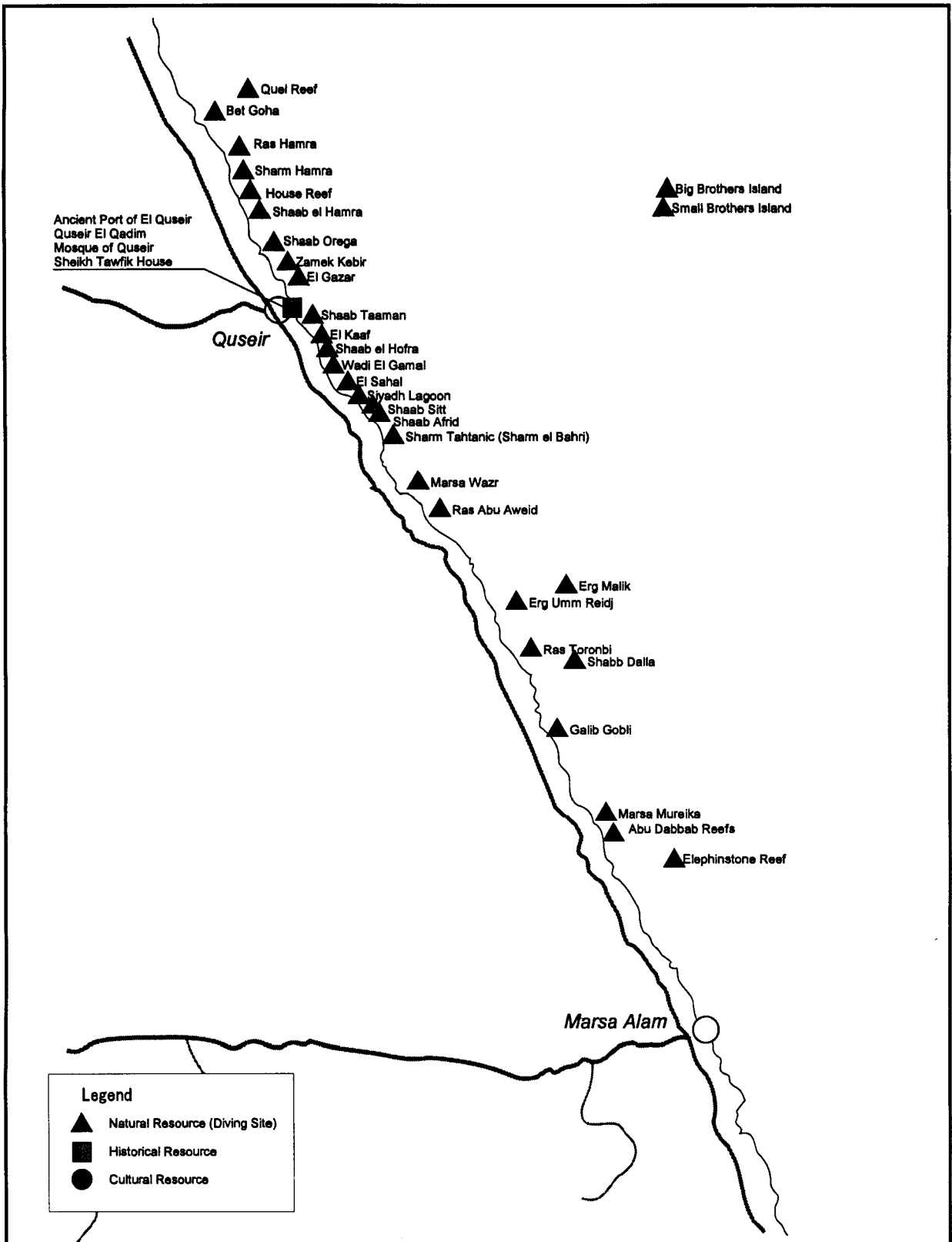
Destination	Lake/km	time*1	Road/km	time*2	Visiting	Staying
Aswan						
Aswan Kalab / BEW	23	0.8	30	0.8		
Kalabsha / Beit el Wadi						
Kalab / BEW Dak / WES	145	5.2	199	8.0		
Dakkka / Wadi el Sebua						
Dak / WES Amada	50	1.8	30	1.2		
Amada						
Amada Qasir Ibrim	41	1.5	54	2.2		
Qasir Ibrim			from Amada			
Qasir Ibrim N. K. Touthka	17	0.6	143	5.7		
North Kohr Touthka						
N. Kohr Touthka N.AB	44	1.6	81	2.5		
North Abu Simbel						
North Abu Simbel AB	18	0.7	26	0.7		
Abu Simbel						
total	338	12.2	563	21.1		

Reference *1= Cruising ship average 15knot(1.852km-h/knot)=28km/h

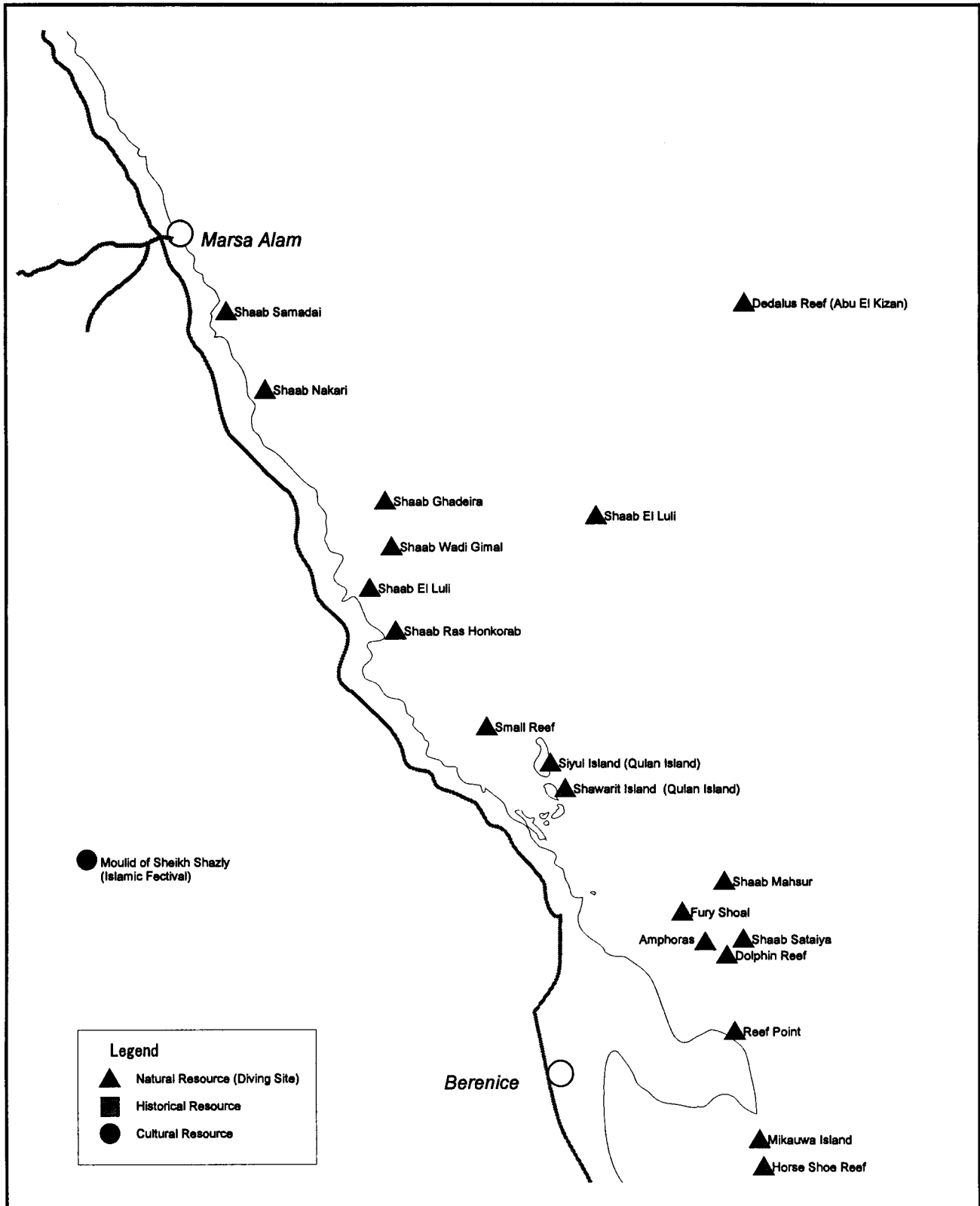
*2= Land car average 40 km/h (paved), 25 km/h (non-paved) in future



Diving Spot in the Northern Red Sea



Diving Spot in the Mid Red Sea (1)



Diving Spot in the Mid Red Sea (2)

Organization

Appendix 3 Organization

Tourism-related Public Organizations

Ministry of Interior: *whose activities are vital for overall tourists security*

- *State Security *these branches are staffed by plain clothes officers who are
- *General Investigations responsible for identifying potential dangers
- Public Security - uniformed officers at police stations
- Guards
- Special Forces - acts like army and marines when necessitated, enforce police blockades
- Central Security - "ditto"
- Traffic Police
- Civilian Documents
- Tourism and Antiquities Police** - after the Luxor incident in November 1997 both police units are united by Presidential order
- Communications and Transport
- Prison Affairs
- Officer Affairs
- Administrative Affairs

Egypt Air (IATA airlines code: MS)

Being under jurisdiction of Minister of Transport, communication, maritime transport and civil aviation; in the past 15 years civil aviation investment hit L.E. 10 billion of which L.E. 8 billion spent on modernization of Egypt Air incl. equipment (the rest L.E. 2 billion for developing local airports turning domestic airport to international ones and construction of new airports); Subsidiary Company: Shorouk Air (Joint Stock company under investment law: Egypt Air 51%, Kuwait Airways 49%), Egyptian Aeronautic Services, Karnak Travel Agency; Business Sector: Public Enterprise, being subject to the Government's privatization policy

General Organization For International Exhibition & Fairs (GOIEF)

Subsidiary organization of Ministry of Supply, GOIEF holds international exhibitions and fairs in Cairo, but exceeds it to touristic promotional aspects in collaboration with Ministry of Tourism (e.g. "Tourism and Shopping Festival" June 20 – August 20 1999).

Misr Travel

Established in 1934, this public enterprise used to be owned and managed by Public Tourism

Authority under MOT supervision till 1992 when PTA became a holding company. Currently this travel company is owned by Housing, Tourism & Cinema Holding Public; subsidiary companies: some floating hotels and some hotels; Number of employees: 29000; Business Sector: Public Enterprise, being subject to the Government's privatization policy

Egyptian Organization for Tourism & Hotel (EGOTH)

Used to be owned and managed by Public Tourism Authority of MOT till 1992 when PTA became a holding company. Shareholder being Housing, Tourism & Cinema Holding Public. EGOTH's subsidiary companies: Cairo Marriott, Mena House Oberoi Hotel, Manial Palace Hotel, Aswan Oberoi Hotel, Egotel Luxor Hotel, Egotel Alexander Hotel, etc. Number of employees: 900; Business Sector: Public Enterprise, being subject to the Government's privatization policy.

Tourism Professional Organizations

The Egyptian Federation of Tourist Chambers

Being in coordination with MOT; top organization for the Egyptian tourism business sector, enacted by Law No. 85, 1968

Chamber of Tourists Establishments

Being in coordination with MOT; promoting association-members' restaurants, publishing yearly directory, grading up members' catering industry status; branches: Alexandria, Port Said

Egyptian Hotel Association

Being in coordination with MOT; promoting hotels in Egypt and abroad, publishing yearly directory, suggesting modification of laws and sanctions related to hotels, fostering spirit of cooperation and integration between members, etc.

Egyptian Travel Agents Association

Being in coordination with MOT; members being from travel agents

Egyptian Chamber of Tourist Commodities

Being in coordination with MOT; members being from retailing or manufacturing services as souvenir items for tourists

The Tourism Investors Association (TIA)

A group of 100 investors has recently formed TIA, in coordination with TDA, to initiate environmentally sustainable tourism. TIA holds a series of workshops tackling various environmental issues. Full TIA members must have an investment of any size in tourism.

The Egyptian Chefs Association (ECA)

Under the honorary chairmanship of Minister of Tourism, ECA dedicates to promoting the art and science of cooking, increasing culinary knowledge and promoting the idea of healthy dining.

The Hurghada Environment Protection and Conservation Association (HEPCA)

The leading environmental NGO in the Red Sea; being formed by local diving centers to fight further damage to the marine environment; has 50 hotel and dive shop members

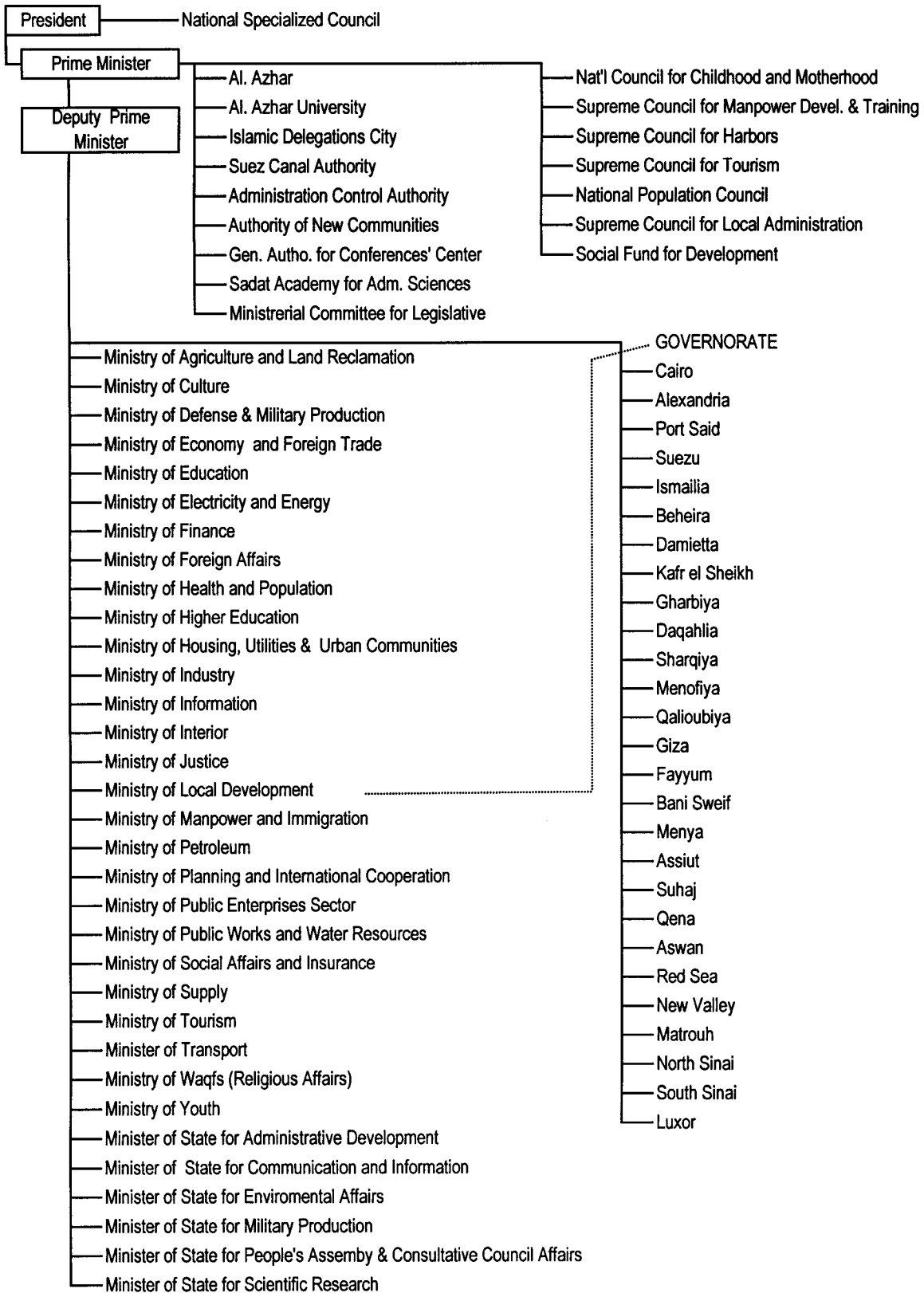
The Hurghada Hotel General Manager's Association

Contributing to environmental programs as to cooperate with HEPCA such in as sponsoring periodic beach/shallow water trash clean-ups.

The Egyptian Travel Writers Press Club

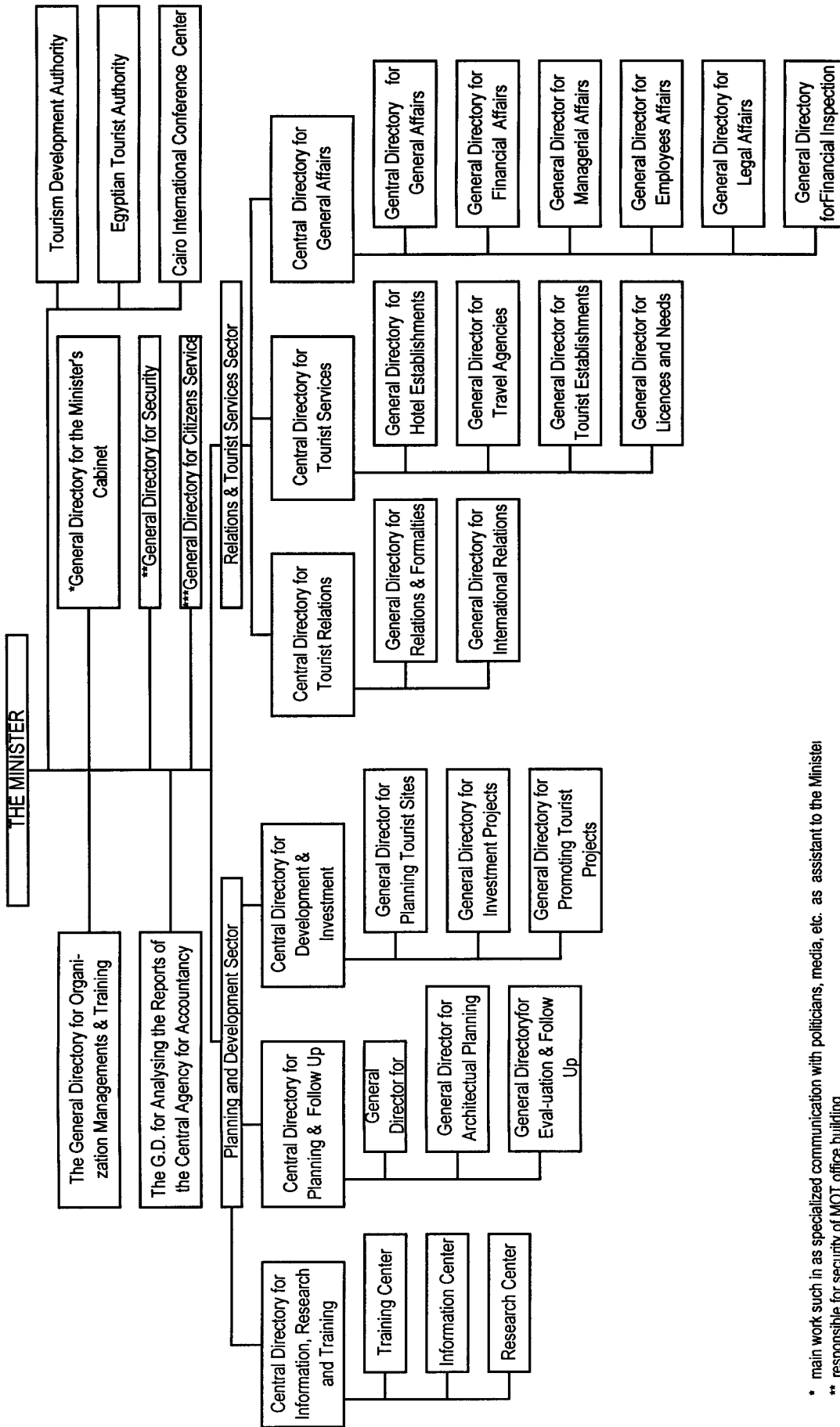
Membered by travel editors in chief of media (newspapers, magazines, etc.), public relation executives of leading hotels, etc. In the Club's meeting in December 1997, Minister of Tourism was the guest speaker, and the meeting was convened to discuss ways of increasing tourism in Egypt after the Luxor incident crisis (incurred in November 1997).

Organization Chart of Arab Republic of Egypt Government



Source: JICA Study Team

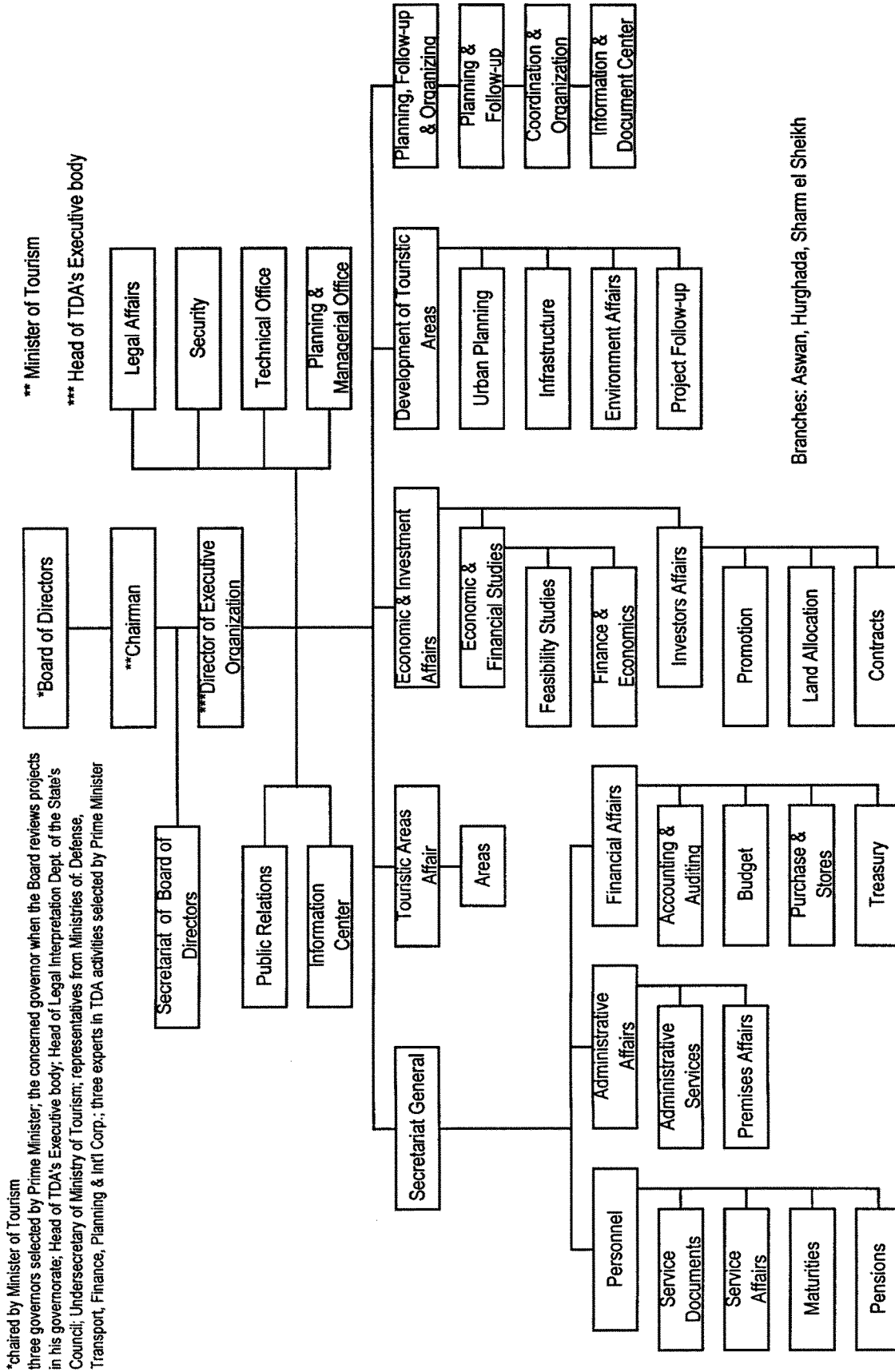
MINISTRY OF TOURISM - Organizational Structure



* main work such in as specialized communication with politicians, media, etc. as assistant to the Minister
 ** responsible for security of MOT office building
 *** responsible for domestic tourism

Source: Egyptian Ministry of Tourism 1999

Organizational Structure of Tourism Development Authority



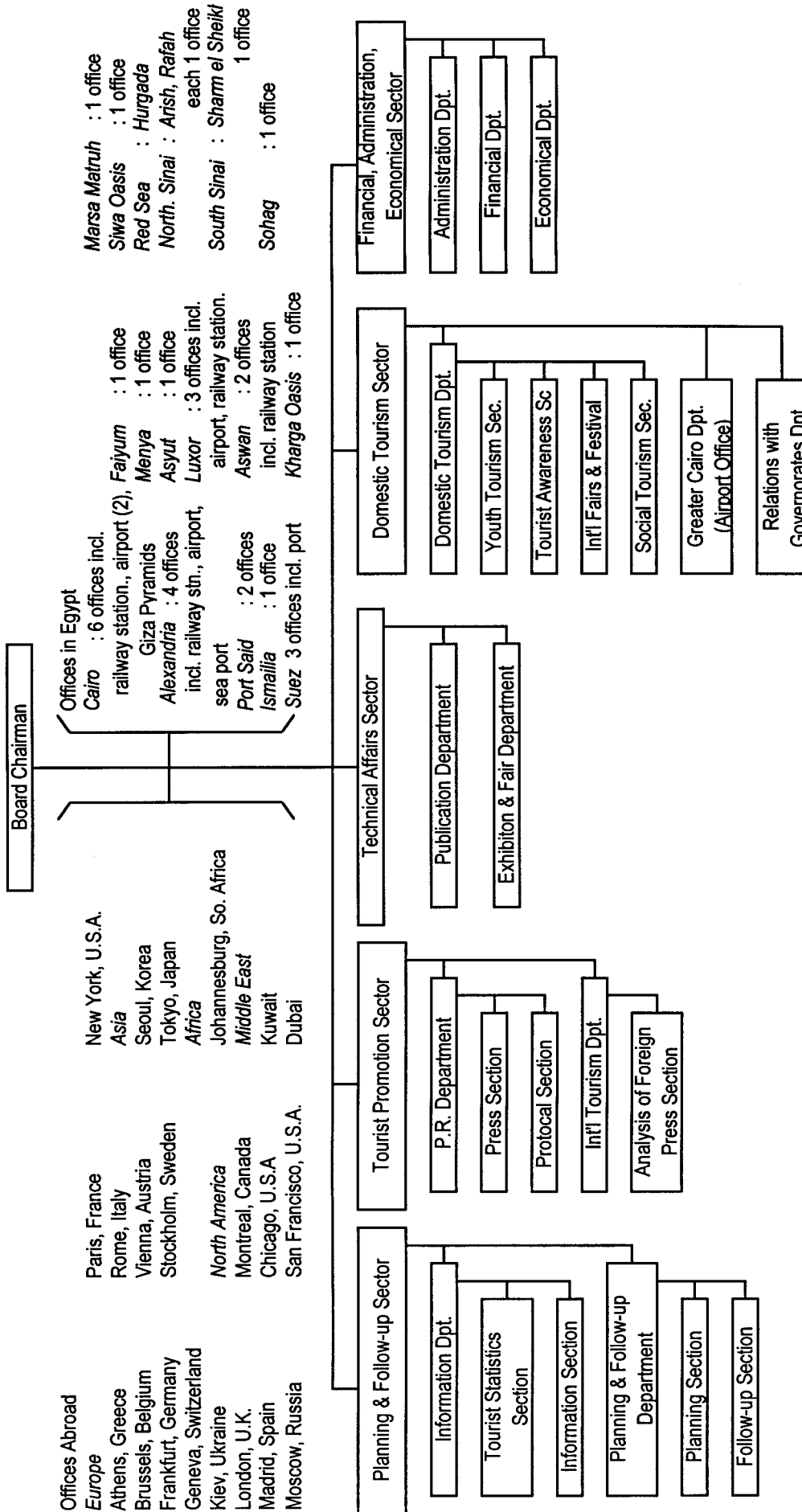
*chaired by Minister of Tourism
 three governors selected by Prime Minister; the concerned governor when the Board reviews projects in his governorate; Head of TDA's Executive body; Head of Legal Interpretation Dept. of the State's Council; Undersecretary of Ministry of Tourism; representatives from Ministries of Defense, Transport, Finance, Planning & Int'l Corp.; three experts in TDA activities selected by Prime Minister

** Minister of Tourism
 *** Head of TDA's Executive body

Branches: Aswan, Hurghada, Sharm el Sheikh

Source: Tourism Development Authority 1999

Organizational Structure of Egyptian Tourist Authority



Source: Egyptian Tourist Authority

Payments to TDA in the Integrated and Limited Tourism Development

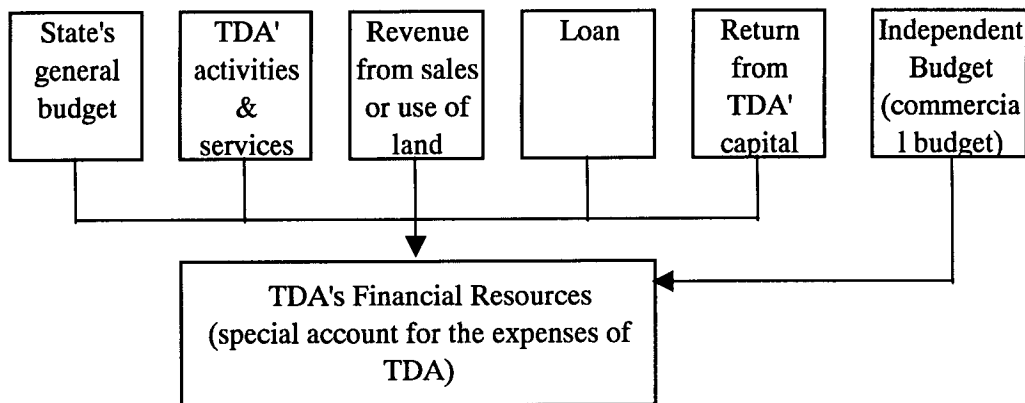
I Payment of Service Charge to TDA

	Expense	Stage	Value	Payment period
1.	Allocation expenses (preliminary reservation)	First Stage	2 % of the gross value of the site	within 15 days from the date of notification of approval
2.	Preliminary review expense of the submitted document	First Stage	0.1 % of the gross value of expenses of the project	not later than 9 months (5 months *) from the date of application
3.	Contract expenses	Third Stage	5 % of the gross value of the location	in return for cadastral survey, cadastral map & documents
4.	Review expenses of executive documents	Third Stage	0.25 % of the gross investment expenses	50 %: when submitting the documents 50 %: after one year of authorizing the documents (100% when submitting documents *)

Note: (*) for the Limited Tourism Development

II Payment Schedule of the Cost of the Land

1.	Deposit	Second Stage	20 % of the cost price of the location	within 30 days from the receipt of the final allocation
2.	Equal annual payment (1)		80 % / 7 and interest (5% per year)	after three (3) years from the contract date
3.	Equal annual payment (2)		80 % / 7 and interest (5% per year)	after four (4) years from the contract date
4.	Equal annual payment (3)		80 % / 7 and interest (5% per year)	after five (5) years from the contract date
5.	Equal annual payment (4)		80 % / 7 and interest (5% per year)	after six (6) years from the contract date
6.	Equal annual payment (5)		80 % / 7 and interest (5% per year)	after seven (7) years from the contract date
7.	Equal annual payment (6)		80 % / 7 and interest (5% per year)	after eight (8) years from the contract date
8.	Equal annual payment (7)		80 % / 7 and interest (5% per year)	after nine (9) years from the contract date



Income Statement (1997/98)

			Budget	Modified	Modified Budget	Actual
Current Revenue						
1	6	Land Sale	12,000,000	6,333	12,006,333	17,652,247
1	15	Land Lent	3,000,000	531,470	3,531,470	548,422
		Total current income	15,000,000	537,803	15,537,803	18,200,668
Service & Activities Revenue						
		Allocation expenses (2% of the gross value of land)	1,619,000	3,120	1,622,120	3,226,393
		Contract expenses (5% of the gross value of land)	882,000	4,107,960	4,989,960	6,355,540
		Preliminary review expenses & Review expenses of executive documents	2,704,000	10,273,200	12,977,200	10,529,212
		Interest income	3,660,000	2,412,370	6,072,370	2,811,410
		Total service income	8,865,000	16,796,650	25,661,650	22,922,555
Total Current Revenue			23,865,000	17,334,453	41,199,453	41,123,223
 						
			Budget	Modified	Modified Budget	Actual
			1,140,000	1,140,000	2,280,000	1,226,612
			60,000	60,000	120,000	6,755
			1,200,000	1,200,000	2,400,000	7,396,707
			35,000	35,000	70,000	161,626
			2,435,000	2,435,000	4,870,000	8,791,699
Total Revenue			26,300,000	19,769,453	46,069,453	49,914,922

TDA Budget of for Fiscal Year 1998/99 (1998.7.1 - 1999.6.30)

Unit: LE thousand

	1998/99 budget		1998/99 budget
1. Current Income		1. Current Expenditure	
1) Current Activity Income		1) Salaries	1,697
(1) Land Income		2) Expenditure and Current Transfers	10,016
Land sale	11,000	3) Government Surplus	15,000
Land rent	2,000		
Total current land income	13,000	Total Current Expenditure	26,713
(2) Service & Activities Income		2. Capital Expenditure	
Allotment expenses	3,500	1) Investment Expenditure	
(2% of the gross value of land)		(1) Infrastructure Project	
Contract expenses	3,500	Buiding not for residential purposes	4,620
(5% of the gross value of land)		Construction	1,500
Preliminary review expenses &	1,500	Machines & Tools	187
Review expenses of executive		Transportation Method	102
(0.35% of the investment cost)		Office Furniture	170
Interest income	2,613	Deferred Expenditure	2,606
Total current servive income	11,113		
Total Current Activity Income	24,113		9,185
2) Transfer Income		(2) Area Development	
Debit interest	1,200	Buiding not for residential purposes	1,200
Recompensation	100	Transportation Method	400
Previous year's income	1,100	Office Furniture	400
Others	200		
Total Transfer Income	2,600		2,000
Total Current Income	26,713	(3) Improvement Program	780
2. Capital Income		(4) National Project of Sinai Development	3,400
1) Foreign Grants and Aids (GEF)	6,853	Total Investment Expenditure	15,365
2) Loans from the National Investment Bank	8,512	2) Capital Transfer	2,525
3) Self Financing	2,525		
Total Capital Income	17,890	Total Capital Expenditure	17,890
Total Income	44,603	Total Income	44,603

Market

Appendix 4 Market

Tourism Market Survey

1. Objectives

This Survey aims to analyze tourism market source potential of Egypt, defining present conditions and trend of tourism market for Egypt tourism including international and domestic market sources, through questionnaire and interview survey for the following tourism related companies in Egypt;

A-Scheduled Airlines/Chartered companies

B-Travel Agents/Tour Operators companies companies

2. Study Area

Scheduled air lines offices; charter companies local representative offices and travel agents offices allocated in Cairo

3. Methodology

3-1 Contents of questionnaire survey

The questionnaire asks about the followings briefly.

- Constraints and opportunities on Egyptian tourism
- Opinions and views on the future of Egyptian tourism
- Company's profile

3-2 Samples of survey

Companies to be interviewed was selected from fifty tourism related companies in Egypt, which deal in customers who are tourists form major market source countries or potential market countries to Egypt tourism destinations, such as travel agents, land operators and airline companies both of international and domestic.

(1) Travel agents and land operators 30 samples (companies)

(2) Airline companies 31 samples (companies)

3-3 Period of survey

29 th August – 16th October 1999

3-4 Method of survey

The survey was conducted through the following method:

- (1) Questionnaire survey by facsimile
- (2) Supplemental interview survey on the selected companies

4. Result of Survey

4-1 Reply of the questionnaire

- (1) Travel agents and land operators 21 samples / 30 universe (70%)
- (2) Airline companies 14 samples / 31 universe (58%)

4-2 Summary of the result of questionnaire

(1) Travel Agents

A. Result of questionnaire

Favorite products for international customers

The major Egyptian tourism products are the classical historical tours with Nile cruises. Other important tours are the Cairo historical tours, and beach resort tours in the coast areas.

The biggest deal in tour duration product

The major tour duration for the international customer is 7-10 days.

Figure-1 Favorite product

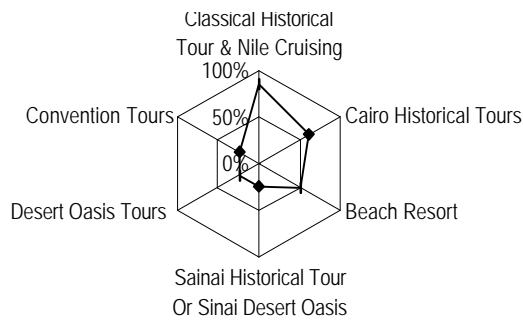
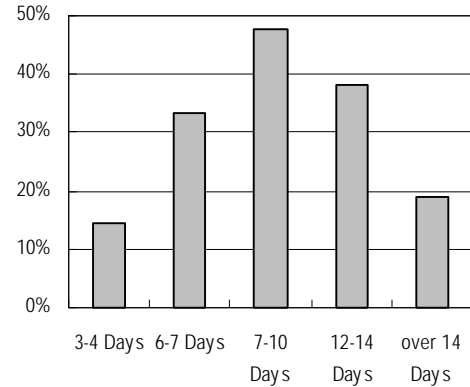


Figure-2 The biggest deal duration



Share of Nile cruising tourism customers in Luxor and Aswan

An average of 75% of the customers in Luxor & Aswan has Nile Cruising tours in their tour in Luxor and Aswan.

Share of diving tourism customers in beach resort tours

An average of 25% of the customers in Luxor & Aswan has diving tour in their tour in Red Sea.

Figure-3 Share of Cruise tourism

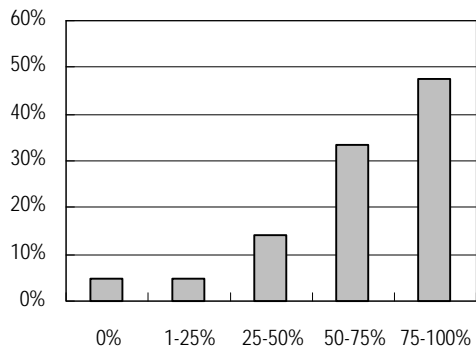
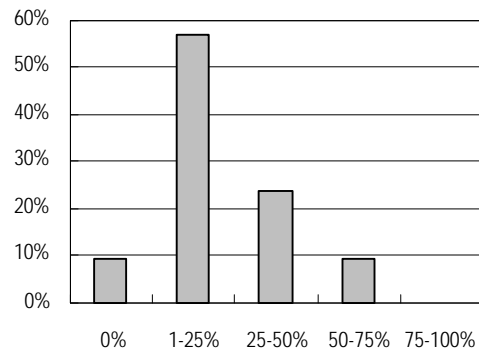


Figure-4 Share of Diving tourism



Major customers' complaints

The major constraints are the delay and scheduled changes of transportation. There are additional constraints, which are not major constraints such as hygiene problems, quality of services, tourism facilities, accommodation and tour guides.

Constraints for FIT (Foreign Independent Tourist) activities in Egypt

The major reasons that are constraining FIT market to Egypt are the expensive tour cost and difficulty of accommodation and transportation, reservation and information access.

Figure-3 Customers' complaints

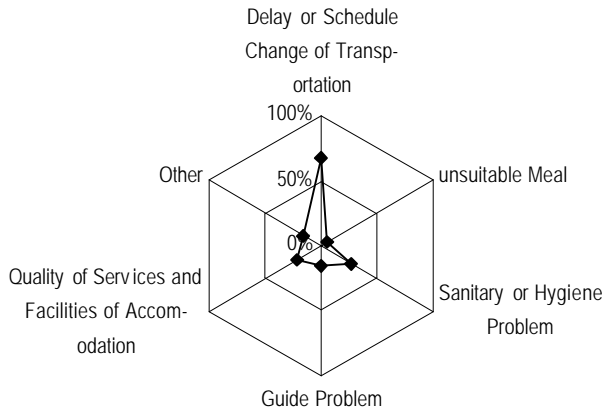
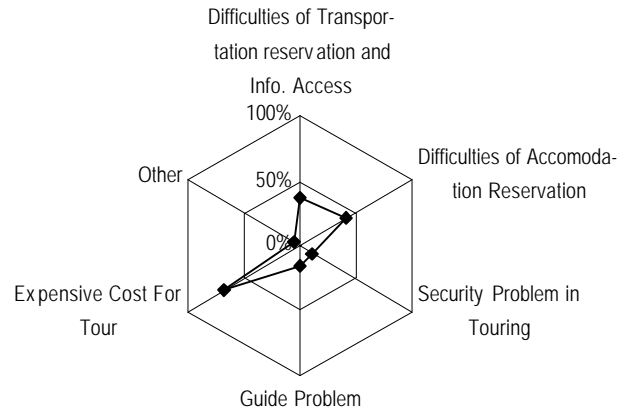


Figure-4 Constraints of FIT



Access in Egyptian destinations

The International air access to Egypt, cruising, and land transportation access in Egypt is good, the domestic air access is less than modest.

Required improvement in Egyptian tourism product

Transportation is the major element in the Egyptian tourism industry that should be improved. Other important elements that need improvement are quality of accommodation, hospitality of tourism services, hygiene and sanitary.

Figure-5 Access constraints

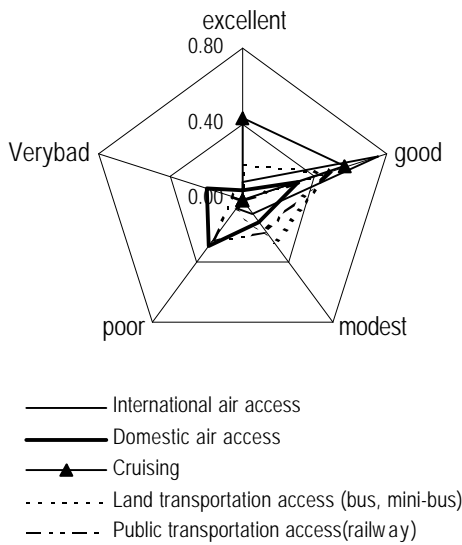
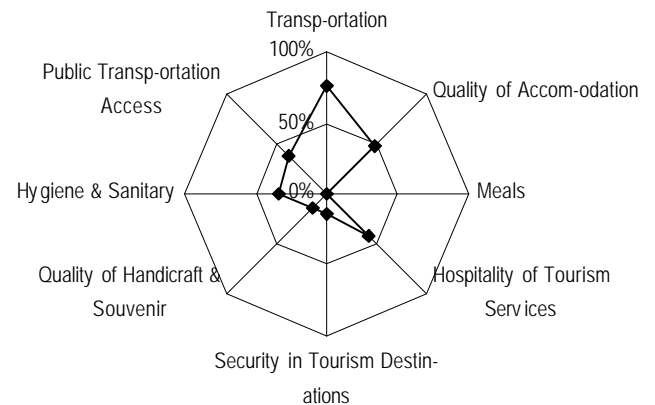


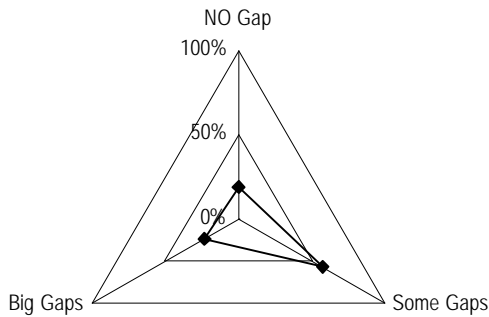
Figure-6 Required improvement



Gaps between customer's needs and Egyptian promotion for Upper Egypt

It is more Agents who think that there are some gaps than agents who do not think.

Figure-7 Gaps between customer's needs and Egyptian promotion



Future of dominant tourism products for international tourist

There is high expectations from the travel companies that beach resort will be dominant strongly as a major products in the future, where these second product will be the cruising tourism.

Future of dominant tourism product for domestic tourist

There are high expectations that beach resort will be dominant as a major product in summer holiday for domestic tourists. There are weak expectations for other products to be dominated.

Future potential on "MICE" in Egypt

There is high expectation that there will be high potential in future for MICE in Egypt for Middle East, Europe countries.

Figure-8/9 Dominant tourism product

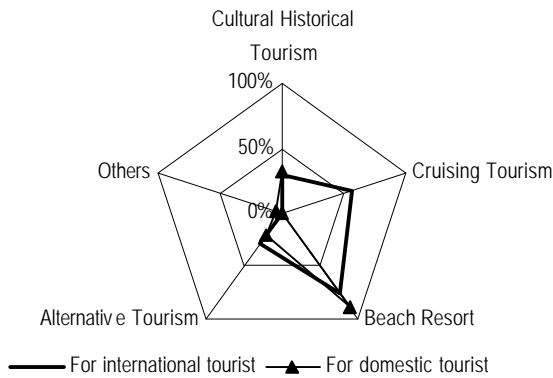
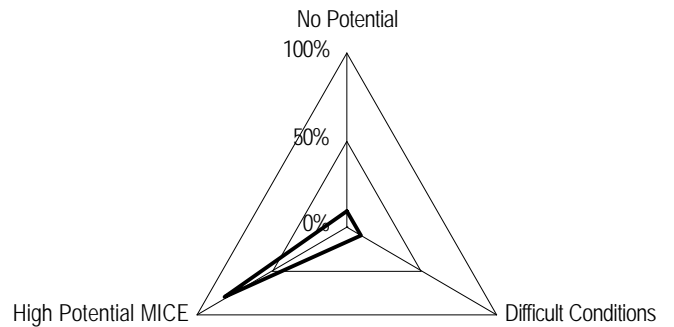


Figure-10 MICE potential



B. Reference

The following result of questionnaires is added supplementaly, which can be only the reference to see the Egyptian tourism trend without any statistical meanings though.

Figure-11 Product image to the customers

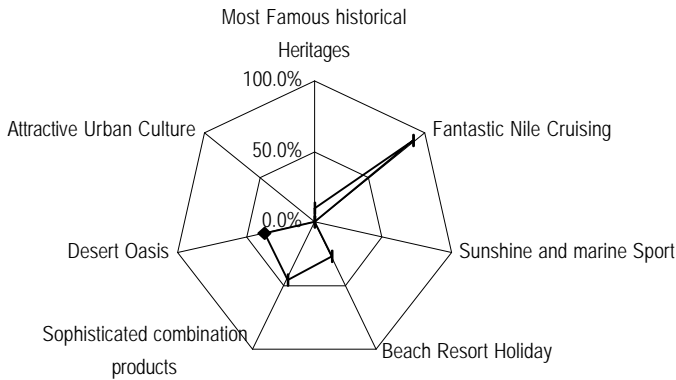


Figure-12 Necessary action competitively

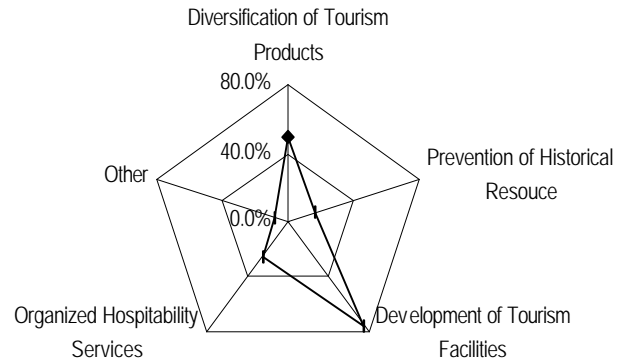


Figure-13 Customers' characteristic change after the Luxor incident

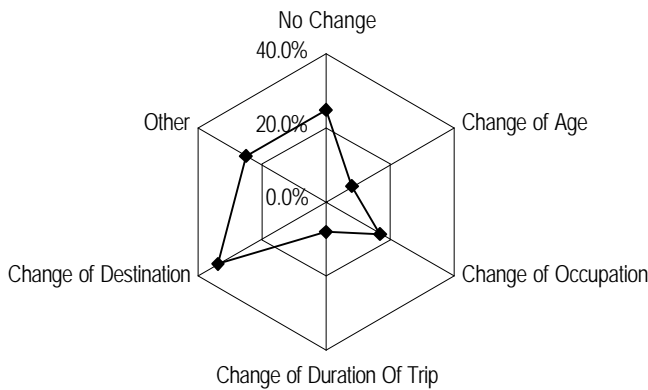


Figure-14 Potential category alternative tourism in future of Egypt

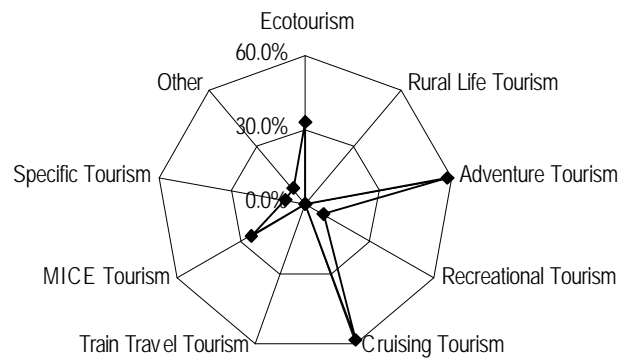


Figure-13 Necessary conditions in Upper Nile tourism development

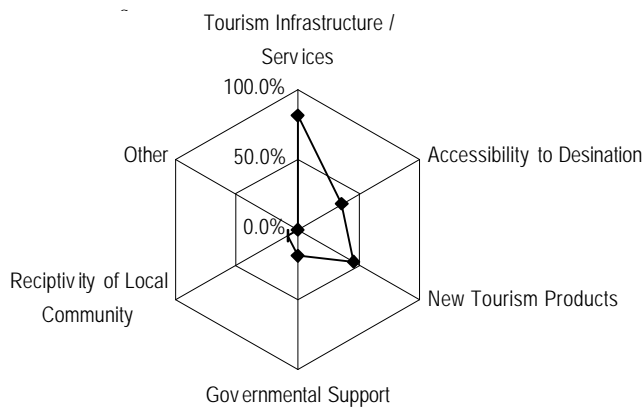
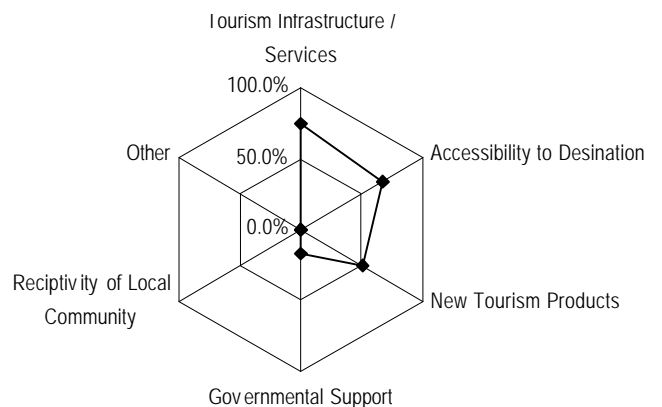


Figure-14 Necessary conditions in Red Sea tourism development



C. Comments and opinions by the travel agents and operators

The following comments and opinions from travel agents and tour operators in our questionnaire are useful as references to see the Egyptian tourism situation.

General:

Five Continents Travel

- To improve the Egyptian tourism product, there is need to improve the quality of the 4 star hotels. There is no enough four stars hotels of high quality for mid-class people.
- One of the reasons that are decreasing the FIT (Foreign Independent Tourist) activity in Egypt that there are too many different rate levels for accommodation.
- The most frequent complaint of the clients is the disturbance in the scheduled flights.

PNC Travel

- The most frequent complaint of the clients is the disturbance in the scheduled flights.

Moon River Tours

- The beach tourism and sport tourism both has a promising future, especially with domestic tourist.

Itta Tours

- Egypt Air should not be the sole carrier for domestic travel.

Trans Egypt Travel

- The customers have frequent complaint from the Egypt Air company.

El Naggar Travel

- What Egypt needs is to have more communication facilities, increase the availability of recreational facilities, improve the high ways, improve the security, and reduce the routine steps in the airports.
- Egypt has the most important historical areas in the world, and nice beaches.
- Egypt has to keep the security, and to control the international and local flights cost.
- Egypt has a great chance to develop and benefit from tourism industry.

Travco Travel

- Increasing the technical and vocational training level for the citizens.
- Establishing school for tourism, hotel and vocational training.
- Develop strong public awareness activities about tourism for the local communities and citizens.

Memphis Travel

- The most important step for protecting the tourism industry in Egypt is the protection of the travel companies and travel agents, there must be a market role as well as a regulatory role through official travel agents to protect the tourism industry.

Mediterranean for Travel and Tourism

- Tourism is a work which deals with humans and the new trend for treating tourists as machines is not of great quality and the way the Egyptians deal with the tourists in a humanistic way must be kept, and developed in good way.

Blue Sky Travel

- Tourism is a promising industry in Egypt, where the current number of tourists is less than Egypt capability and should be increased. The number of tourists increased in the last 5 years, where the market trend indicate that number of tourists will increase in the future.

Sakkara Travel

- There is need to use the mass media for marketing the tourism.
- Egyptian tourism is a promised industry for Egypt, where there are many advantages for this industry in Egypt. The governmental should support this sector, especially to do the following:

Conduct an international marketing plan and present direct aid for the promotion and advertisement activities all over the international markets.

Two- Develop supporting procedures to reduce the cost of the Egyptian tourism products.

Opinion about Upper Egypt:

El Naggar Travel

- For increasing tourism in Upper Egypt, there is need to improve security with more advertising efforts from the government, with no increase for the charges of visiting the tourist destinations or the internal flight prices.

Travco Travel

- Tourism is a service industry and Egyptians need to know how to serve a tourist, the Egyptians idea about tourism have to be changed and the citizen awareness must increase.
- Tourism as a service must be studied from the preparatory level of school education so as to have generations aiming to develop tourism.

City First

- Hotel workers need continuous training to be conducted by tourism and hotel experts.
- Provide public awareness for the Egyptian about the importance of tourism industry.

Memphis Travel

- There is a need to develop the current product itself as well as all other related services.
- Preparation of the general environment at the public level to deal with the tourist.
- Upper Egypt needs development almost in everything either building of new hotels, improving of temples, roads, as well as other transportation facilities, and development of tourism awareness

Mediterranean for Travel and Tourism

- There must be a organization for monuments – not under the control of the ministry of culture - to protect and control the monuments.
- Provide continuous training for those working in the field of monuments practically as well as scientifically.
- Develop and improve the new destinations as it is the future of Egypt, with special regard to human development in these new communities.
- Invest the new monuments discoveries of El -Wahat El –Bahria.
- Protect and develop the architectural buildings as it represents different civilization eras till the modern civilization.

Sakkara Travel

- There is no enough international marketing as well as governmental support for the area (Aswan & Abu Sembel).
- There is no direct roads between Red Sea and Aswan to integrate the culture and Nile cruise tourism programs / tours in upper Egypt with the Red sea recreational, beach and diving tours. The new direct roads will help and encourage tourists to go to the Red sea destination upon the completion of their Nile cruise tour in Aswan, instead of spend long time and more effort to return back to Luxor/Qena to use the current road to Red sea.
- Develop more recreational and cultural programs.

Opinion about Red Sea:

El Naggar Travel

The main for developing the Red Sea is the need to develop new roads and provide utilities such as water & Electricity.

Travco Travel

- Building of a good transportation and communication network for Upper Egypt and Red Sea.

City First

- Building of good roads, transportation and communication network for Red Sea.

Memphis Travel

- Red Sea need a definite improvement regarding the transportation level, also increasing the non traditional tourism projects.
- Low prices problem is a result of the absence of price control.
- One of the important problem is that anybody can work in the field of tourism without knowledge or license.

Sakkara Travel

- One of the most important constrains for developing this destination is the unavailability of international airports in the south of the Red sea destination. There is a need for international Airports.
- The area from Marsa –Alam up to Sudan is very promising destination and a good plane must be developed for it to avoid the mistakes of Hurghada, especially the environmental issues. There is need to establish high quality roads networks, especially to Aswan.

Blue Sky Travel

- There must be a development in the airport, cleaning and the roads networks.

(2) Scheduled Airlines

A. Result of questionnaire

Major markets on the airlines flights to Egyptian destinations in the last year

Tourist Market and business market both currently are major markets for Egypt, where there is expectations that tourism market will continue as a potential market for Egypt in the future. Other markets such as visit friend / relative has low potential.

Major tour type on the airlines flights to Egyptian destinations in the last year

Inclusive tour package (groups or individuals packages) is major tour type to Egypt for both the scheduled airlines and chartered flights. However, the foreign independent tourist is also a major tour type for the scheduled airlines. There are high expectations for the expansion of demand on the group incentive tour package more than other tour types if the tourism market will expand in future.

Figure-15 Major market in the last year

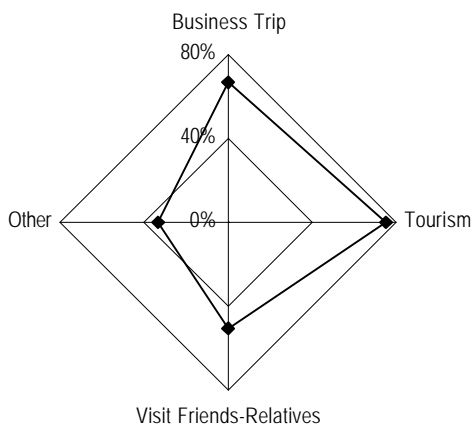
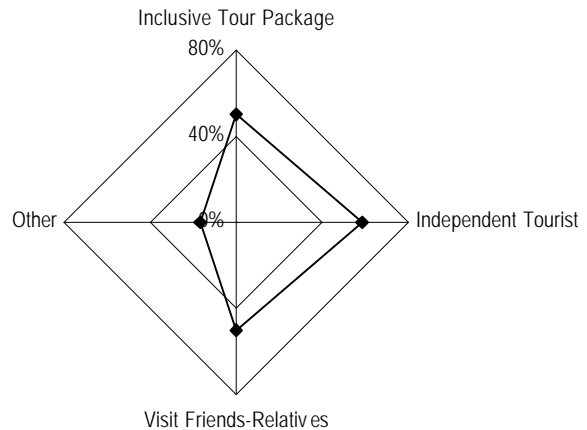


Figure-16 Major tour type



Promotional fare to Egyptian destinations

Most of the scheduled airlines have new promotional fares in addition to GIT & IIT such as Excursion fare and APEX.

Constraints of air transportation in Egypt

The major constraints are the weakness of airport facilities capacity and the operational problems. Other constraints are also important such as the level of airport services is poor, the tourism infrastructure in existing destinations need to be developed.

Figure-17 Promotional fare

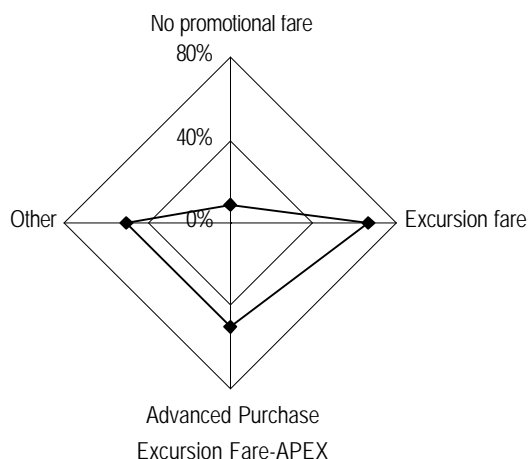
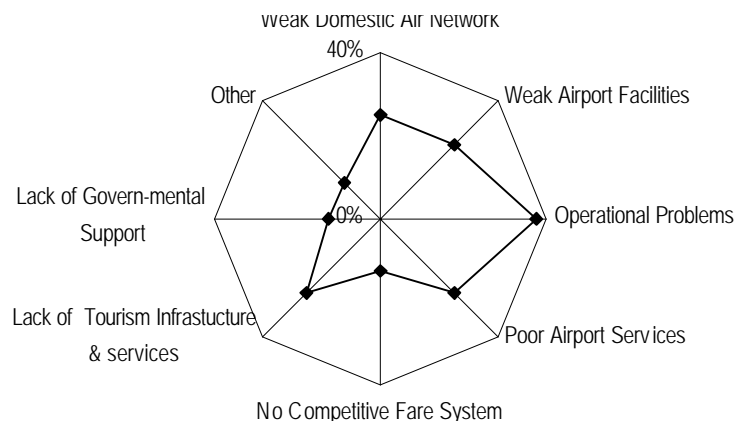


Figure-18 Constraints of air transportation



Major customers' complaints

In the case of scheduled airlines, most of the customers complains are related to the services provided by the scheduled airlines itself such as expensive air fare, which is the major complaint, canceling the ticket for not confirming it, flight delay, unknown flight cancellation or strikes. In the case of chartered flights, the major complaint is that airport services are poor and airport customs are inefficient.

Future demand to Egypt in the next 5 years

There is good expectation that growth of demand on Egypt will be constant growth in the next five years.

Figure-19 Customers' complaints

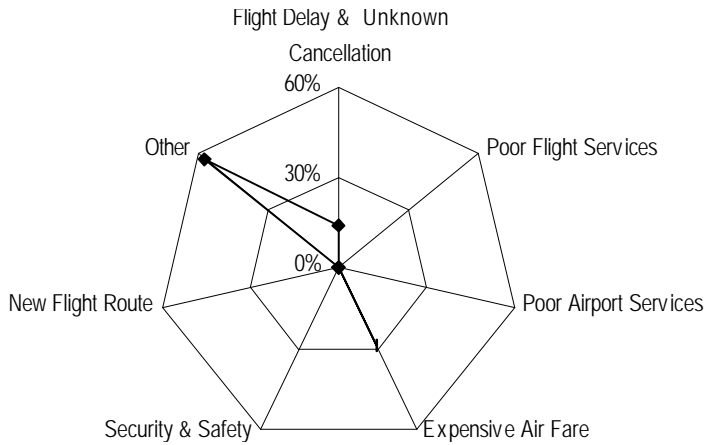
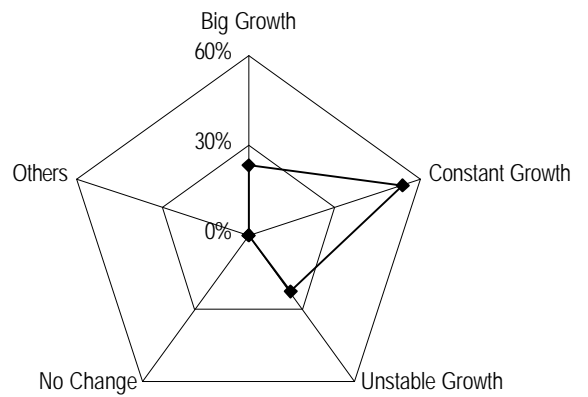


Figure-20 Future demand in the next 5 years



Potential market in future

Airlines see the possibilities to expand both of tourism and business passengers in future, on the other hand, they expect that the group incentive tour package will expand among tourist passengers.

Figure-21 Potential market passenger

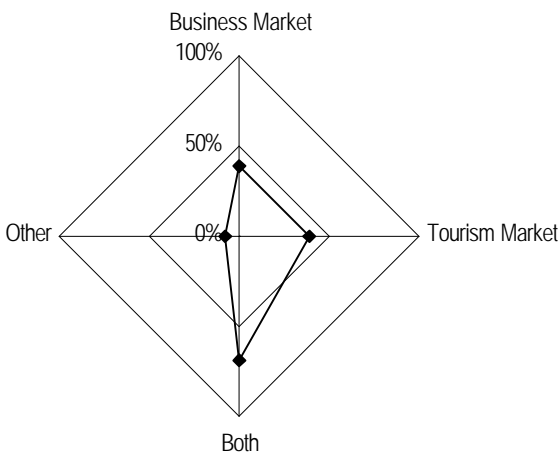
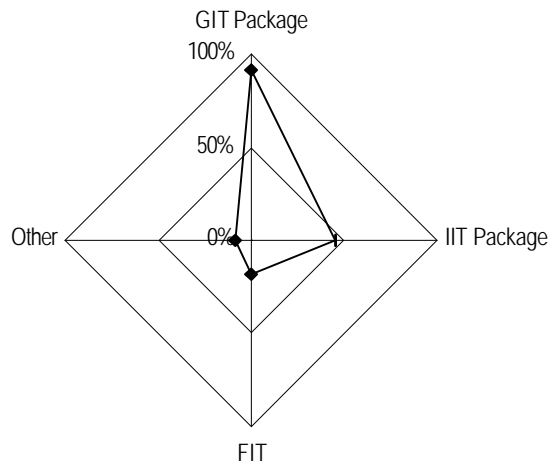


Figure-22 Type of tourist passenger



Plan to consolidate scheduled airlines business in Egypt

Several scheduled airlines or chartered flights companies have plans to increase their flights enlarge their aircraft or develop new direct flight routes to Egypt. Most of scheduled air lines are not able to develop a consolidate business plan in Upper Egypt or Red Sea, because they have not the right to arrange direct flights to these destinations or to arrange air domestic flights.

The reason for no consolidation plan

Many companies indicated that the reason for no plan of consolidation plan is for the limited market demand and others such as enough flights or company's policy, etc.

Figure-23 Plan to consolidate

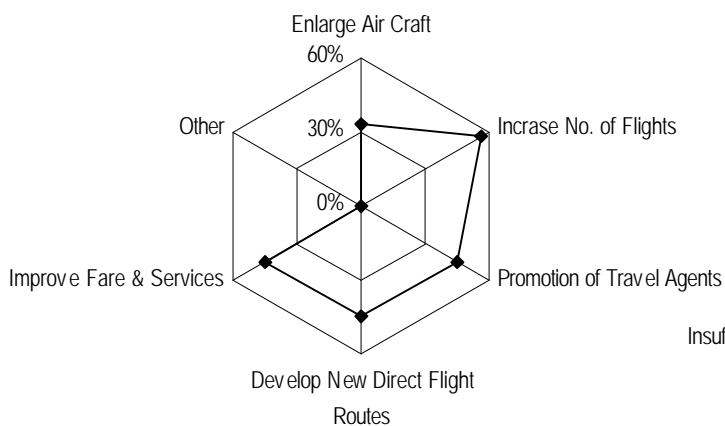
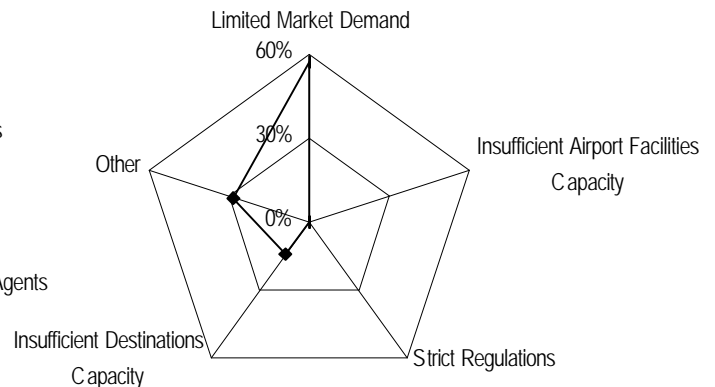


Figure-24 Reason for no consolidation



B. Comments and opinions by the scheduled airlines

The following comments and opinions from scheduled airlines in our questionnaire are useful as references to see the Egyptian tourism situation.

General:

Saudi Arabia

- The Majority market for their flights to / from Egypt is the religion tourist market (Hagg (Pilgrimage) & Umrah).

Air Singapore

- Air Singapore offer Promotional for only (Independent, Group) IT fare on their flights to Egypt.

Korean Airlines

- The first major market for their flights to Egypt is the tourist market and the second one is the business market.
- The first major tour type for their flights to Egypt is the IIT (Independent Inclusive Tour) Package, and the second one is the GIT (Group Inclusive Tour) Package.

Japan Airlines

- Japan Airlines stopped operations in Egypt since the Gulf war crisis.
- Opinions about Egypt tourism:
 - Opening of new international Airport.
 - Expansion of Domestic Airports
 - Increase Airport Facilities, especially the Domestic Airports.
- There is need to shift from Government management to private management.
- Japanese citizens started to negotiate prices and go to cheaper offers from other non-Japanese Airline companies.

Air France

- Security is the first issue.
- Air France has the potential to target every possible market in France.
- The French people think of Egypt as a , but provide security first.
- Air France used to have flights to Alex Airport but it was not profitable, therefore it cancelled.
- The only reason for scheduled flights not to reach upper Egypt and Red Sea destinations is that the scheduled airlines except Egypt air are not allowed to reach there. Only charters and Egypt Air have this right.
- More than 60 % of Air France work is concerned with Tourist Groups.

Austrian Airlines

- Shifting to “Star Alliance” starting April 2000.
- Lost Luggage is the most complains of their customers.

KLM

- There is no reason for expands the tourism demand strongly except in the case of any terror incident occur again.
- KLM think that a consolidation plan could be one of the following business relations:
 - Partnership with other Airline Companies
 - Cooperation with regional carriers.
- Improve the behavior of authority especially immigration officers, since they are not tourists oriented.
- How to improve the behavior & Attitude of authorities towards the visitors in general.

SAS

- SAS is off line (presently)
- SAS is a member of Star Alliance.

Air Malta

- Presently Air Malta is off line.
- The clients of Air Malta are as follows:
 - Tourists (40%)
 - Libyans (40%) - since the beginning of the embargo

Opinion about Upper Egypt:

KLM

- Establish strong Regional Network that can be connected with international routes to / from Cairo.

Swiss Air

- One- Upper Egypt is still a tourist destination served by charters & domestic carriers. Swiss Air cannot compete with them for the time being.
- Monopolizing domestic routes is in direct contradiction with the development of Upper Egypt traffic.

(2) Chartered airlines as reference data

A. Result of questionnaire

The following result of questionnaires is added supplementally, which can be only the reference to see the Egyptian tourism trend without any statistical meanings though because of insufficient answers.

Figure-25 Peak season

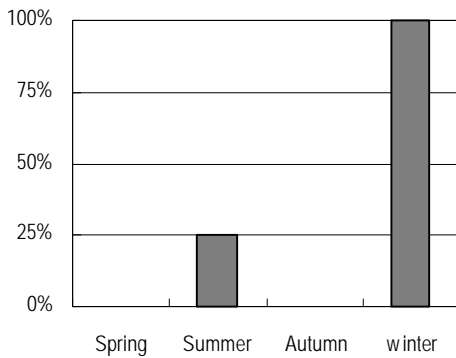


Figure-26 Constraints of Egyptian air transport

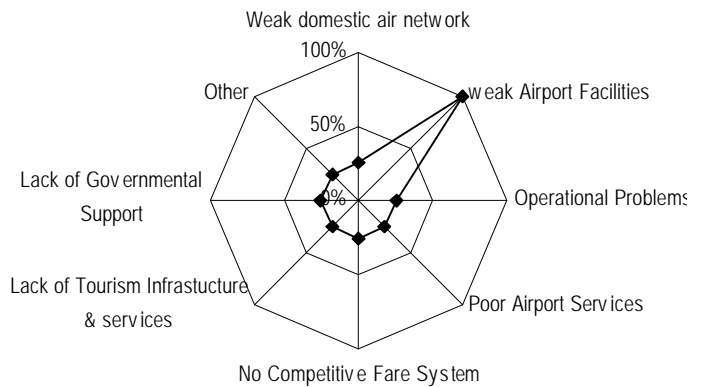


Figure-27 Dominant flight route to Egypt

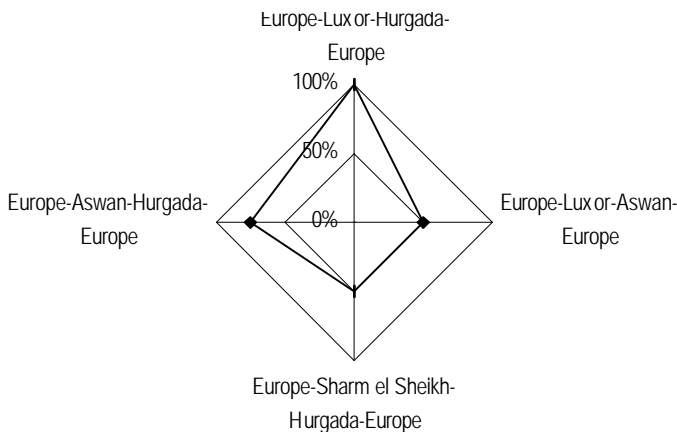
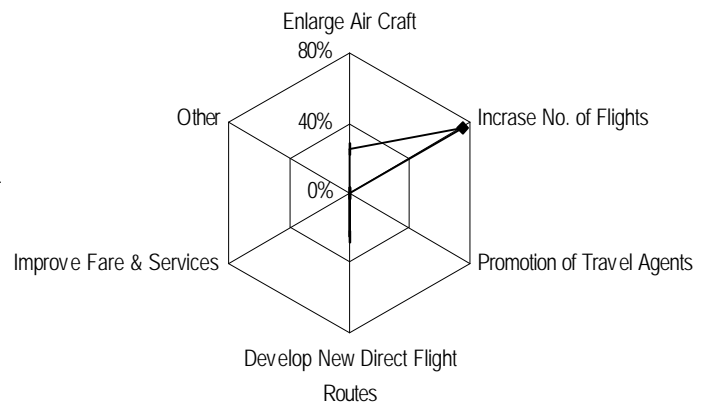


Figure-28 Consolidation plan



B. Comments and opinions by the chartered airlines

The following comments and opinions from chartered airlines in our questionnaire are useful as references to see the Egyptian tourism situation.

Air one / Local Representative : Spring Tours

- Agents for “ Air one” since 1998

Britannia Airways / Local Representative : Nile Valley Aviation

- Local Airports needs enlargements, since the current capacity is not sufficient, the current traffic.
- Local services of Egypt Air are very expensive.
- The Monopoly of Egypt Air over the domestic Aviation services, plus very high prices compared to very poor service quality.
- The following table is showing a comparison cost for sample of service in Egypt airports and other region and international airports

Location	Aircraft Handling / Landing Costs US\$
Riyadh	703
Dubai	660
Dhahran	637
Jeddah	644
Cairo	1190
Hurghada	1175
Luton	794
Heathrow	806
Paris	504

- Nile Valley said that they are the oldest chartered agent in Egypt since 17-20 years and used to serve many of the charter flights reaching Egypt such as:
 - Air Europe - Italy,
 - Blue Panorama - Italy
 - AOM - France,
 - Swiss Air – charter

Condor Air, Transavia / Local Representative : Link Aerotrading

- Link Aerotrading said, that they are the strongest agents of charters in Egypt.
- Link Aerotrading is serving the following chartered companies:
 - Condor Air – Germany , FTI – Germany , Germania – Germany
 - Transavia – Holland , Azzurra Air – Italy , Laudo – Italy
 - Finnair , Premier – Denmark , Air Tours – England
 - Nikilaude - Austria , Cors Air - France
 - Air Belgium – Belgium , Belgium Express – Belgium
 - The first major tour type for their flights to Egypt is the IIT (Independent Inclusive Tour)
 - Package, and the second one is the GIT (Group Inclusive Tour) Package.

Characteristics of Japanese Tourists

A. Japanese Tourist Market in 1996

Data source: JTB "Factual Survey of the Overseas Travel Situation 96/97", The Executive Program on Corporate Management

1. Number of overseas travelers by destination in 1996

(Unit: thousand)

1	Hong Kong	2,383
2	Hawaii	2,090
3	U.S. Mainland	1,929
4	China	1,549
5	Korea	1,527
6	Singapore	1,172
7	Guam	1,029
8	Thailand	940
9	Taiwan	918
10	France	830
Sub Total of Top Ten		1,4367 (86%)
Total		1,6695 (100%)

Asia	7,515 (45%)
North and Central America	5,589 (33.5%)
Europe	2,031 (12.2%)
Oceania/South Pacific Islads.	1,401 (8.4%)
Africa	96 (0.6%)
South America	63 (0.3%)
Total	16,695 (100%)

2. Market segment size

(Unit: %)

Middle-Aged Group (45-59 years old)	29.4
Eldery-Group (60 -)	17.3
Single, working women (18 - 29)	13.0
Married Men (18 - 44)	12.2
Single Men (18 - 44)	5.6
Working Married Women (18 - 44)	5.3
Female Students	4.1
Single Working Women (30 - 44)	4.0
Housewives	4.0
Male Student	2.2
Children (15 - 17)	1.5
N/A	1.4

3. Market segment and size - Middle East and Africa

(Unit: %)

Middle-Aged Group (45 - 59)	28.6
Single, Working Women (18 - 29)	22.4
Eldery Group (60 -)	20.4
Single, Working Women (30 - 44)	6.1
Married Men (18 - 44)	6.1
Single Men (18 - 44)	4.1
Female Student	4.1
Male Student	4.1
Housewives	2.0
Working Married Women (18 - 44)	2.0

4. Travel duration by destination

(Unit: %)

	1-4 days	5-7 days	8-14 days	15 days or more	N/A
Overall Average	19.9	36.9	32.9	8.5	1.5
East Asia	69.5	23.2	5.3	0.9	1.2
China	21.4	45.1	25.0	4.9	3.6
South East Asia	12.3	55.6	21.4	8.4	2.2
U.S. Mainland	1.5	37.9	44.2	15.5	0.8
Canada	2.3	20.9	60.5	14.7	1.6
Hawaii	2.2	68.8	24.3	3.9	0.8
Guam/Saipan	59.3	36.3	2.0	0.6	1.7
South Pacific Islands	-	59.6	34.0	6.4	-
Oceania	2.8	41.4	41.4	12.7	1.6
Europe/Russia	0.4	12.4	69.6	16.4	1.2
Central & South America	1.7	6.8	67.8	23.7	-
Middle East/ Africa	-	9.8	78.4	11.8	-

5. Travel companions by destination

(Unit: %)

	Husband or wife	Family Relatives	Friends Acquaintances	Fellow Employees	Alone	Others	N/A
Overall Average	13.3	20.9	29.4	14.5	12.1	6.3	3.5
East Asia	8.4	18.8	31.6	22.6	9.2	5.3	4.1
China	9.4	9.8	25.4	24.6	17.9	10.3	2.7
So. East Asia	10.0	16.0	32.5	16.2	16.0	4.4	4.9
United States	11.9	15.7	26.5	13.4	20.7	9.0	2.8
Canada	22.5	20.2	24.8	3.9	15.5	8.5	4.7
Hawaii	16.8	36.1	30.0	9.1	2.7	2.8	2.5
Guam/Saipan	8.7	29.7	31.7	21.2	0.6	6.1	2.0
South Pacific Islands	19.1	23.4	40.4	8.5	6.4	-	2.1
Oceania	15.5	25.5	26.3	7.6	7.6	13.1	4.4
Europe/Russia	18.2	18.2	27.5	9.8	16.1	7.0	3.2
Central & South America	27.1	13.6	15.3	11.9	23.7	6.8	1.7
Middle East/Africa	22.5	15.7	38.2	7.8	7.8	3.9	3.9

6. Main activities undertaken at destination by market segment

Refer to the attachment list I.

7. Main activities undertaken at destination by destination

Refer to the attachment list II.

8. Number of overseas trips previously made

(Unit: Times, %)

	Once	2-3	4-5	6-9	10 or more	N/A
Overall Average	6.8	18.5	14.7	17.4	40.6	2.0
East Asia	6.1	18.5	16.0	15.8	41.4	2.2
China	3.6	11.2	16.1	12.9	54.0	2.2
So. East Asia	5.1	17.1	11.6	18.2	44.9	3.1
U.S.Mainland	7.8	17.2	12.2	14.5	46.1	2.2
Canada	12.4	17.1	24.0	14.0	31.8	0.8
Hawaii	8.3	19.9	15.1	21.5	33.0	2.2
Guam/Saipan	9.6	26.2	18.0	17.4	27.3	1.5
So. Pacific Islands	4.3	17.0	6.4	21.3	48.9	2.1
Oceania	11.6	27.1	15.5	13.1	31.9	0.8
Europe/Russia	5.2	18.6	15.5	19.8	39.8	1.2
Central & South America	5.1	8.5	11.9	13.6	59.3	1.7
Middle East/Africa	2.0	7.8	14.7	20.6	52.0	2.9

9. Factors hindering overseas travel by sex, age and marital status

Refer to the attachment list III.

10. Preferred purpose of travel by sex, age, and marital status

(Unit: %)

	Overall Average	Single		Married(18-39)		Married (40 & over)	
		men	women	men	women	men	women
Nature and Scenery	71.3	52.9	68.9	61.8	70.2	75.1	80.1
Historical sites and Architecture	45.1	41.2	43.7	32.9	44.2	47.9	49.5
Local cuisine or favorite foods	39.0	29.4	38.8	28.9	39.4	43.8	41.7
Rest and relaxation	34.9	21.2	27.2	55.3	49.0	36.9	27.8
Shopping	31.8	25.9	45.6	30.3	49.0	22.1	29.2
Art galleries and Museums	27.9	20.0	27.2	19.7	20.2	28.6	37.5
Experience different Cultures	26.2	27.1	38.8	19.7	26.9	27.2	20.8
Meet local people	20.2	22.4	28.2	11.8	14.4	22.6	19.0
Water sports (scuba diving etc)	11.8	21.2	17.5	15.8	18.3	9.7	3.2
Stay at famous hotels	11.0	4.7	12.6	7.9	16.3	9.7	12.5
Concert or other musical events	6.7	10.6	12.6	3.9	7.7	3.7	6.0
Absorb foreign language, Experience knowledge	6.7	15.3	15.5	5.3	1.9	4.6	4.2
Sports (golf, tennis, etc)	5.9	8.2	4.9	10.5	4.8	8.3	1.9
Experience latest Fashion/trends	5.9	9.4	12.6	3.9	6.7	2.3	5.1
International sports Events, carnivals, etc.	5.1	7.1	5.8	7.9	6.7	4.1	3.2
Gambling, Shows	4.2	7.1	4.9	6.6	4.8	4.1	1.9
Skiing or other sports	4.0	5.9	2.9	7.9	4.8	4.1	1.9

11. Preferred destination

(Unit: %)

	1995		1996		1997	
Australia	1	53.8	1	57.6	1	57.2
Hawaii	2	46.9	2	49.3	2	48.4
Canada	5	36.7	4	47.5	3	47.6
Switzerland	3	44.4	2	49.3	4	45.6
Italy	9	30.3	6	36.6	5	39.3
France	4	42.1	5	43.0	6	39.2
UK	7	31.5	8	34.7	7	33.4
New Zealand	8	30.8	9	33.5	8	32.2
West Coast, U.S.A.	6	33.6	7	34.8	9	31.4
Greece	10	29.4	12	30.2	10	31.3
Egypt	19	19.4	12	30.2	11	29.7
Singapore	14	23.8	10	32.2	12	29.2
Spain	16	23.7	15	28.4	13	26.8
Netherlands	11	28.4	17	26.3	14	25.6
Austria	18	20.2	14	29.2	15	25.1
China	17	23.0	16	26.4	16	23.7
Germany	13	26.7	18	25.7	17	23.6
New Caledonia	19	19.4	22	19.0	18	22.7
Hong Kong	12	27.0	11	30.7	19	21.9
Guam	14	23.8	19	23.1	20	20.7

Attachment I

6. Main activities undertaken at destination by market segment

(Unit: %)

	Overall Average	Male students	Female students	Single women I	Single Women II	Working house wives	House wives	Single men	Married men	Middle aged men	Middle aged women	Elderly men	Elderly women
Shopping	64.0	54.1	86.5	79.4	70.9	75.4	76.4	54.5	69.7	49.2	63.5	39.4	50.0
Natural & scenic Attractions	59.5	74.1	64.7	48.9	57.3	54.9	49.1	35.7	48.6	62.7	70.8	74.2	79.8
Historic and Cultural attractions	41.3	55.3	49.4	33.4	39.8	29.1	24.2	33.5	28.8	41.7	50.3	59.1	56.6
Gourmet sampling	32.7	37.6	45.5	34.9	41.3	34.9	25.5	34.8	35.0	35.5	32.5	18.3	22.7
Rest and relaxation	29.6	38.8	29.5	34.5	29.6	38.9	53.4	30.4	45.5	28.0	18.0	13.6	14.5
Visiting art galleries and Museums	27.2	29.4	34.0	22.4	36.4	19.4	18.6	19.6	16.1	25.9	30.7	37.3	41.7
Swimming	16.5	22.4	18.6	15.3	14.1	30.3	37.9	17.4	28.5	15.0	9.4	6.8	3.3
Night Tour	9.1	4.7	10.9	10.4	9.2	9.1	3.7	9.4	10.5	9.1	12.5	4.3	7.4
Theater/Performances/Concerts/Movies	8.0	16.5	9.6	7.8	17.0	5.1	6.2	10.3	6.8	5.4	6.2	5.7	9.5
Playing golf	7.8	2.4	1.9	2.9	4.4	6.9	7.5	8.5	14.6	18.7	5.6	11.8	1.2
Visiting family/Friends	7.7	12.9	14.1	7.7	12.6	7.4	6.8	5.8	8.0	7.0	6.5	7.2	3.7
Other sports	7.0	12.9	8.3	10.9	4.4	12.6	9.9	0.7	10.5	5.2	2.4	1.1	0.8
Scuba diving	6.5	9.4	3.2	10.8	3.9	9.7	6.2	5.6	9.6	2.8	4.5	1.4	1.2
Driving	5.7	17.6	5.8	6.0	3.9	9.1	5.6	0.3	8.4	5.7	2.7	1.4	2.1
Gambling	4.1	3.5	1.9	2.9	5.8	5.7	2.5	9.4	6.5	4.7	3.1	1.8	1.7
Hiking/Mountaineering	2.7	9.4	4.5	1.5	4.9	3.4	3.1	0.9	4.3	0.8	2.7	2.9	1.7
Tennis	2.0	3.5	2.6	0.9	1.0	5.7	4.3	-	3.7	3.6	1.1	0.7	0.4
Fishing	1.2	4.7	-	0.5	-	2.3	1.2	4.5	3.1	1.0	0.4	-	-
Wedding Ceremony	1.2	-	-	0.7	2.4	3.4	-	1.3	2.5	1.8	0.4	0.4	0.8
Skiing	0.7	2.4	-	0.9	1.9	0.6	0.6	1.3	0.9	0.8	0.4	-	-
Others	7.0	10.6	13.5	8.8	10.2	9.7	8.1	10.7	7.7	3.9	4.2	3.6	1.7

Attachment II

7. Main activities undertaken at destination by destination

	Overall Average	East Asia	China	South East Asia	US	Canada	Hawaii	Guam/Saipan	South Pacific Island	Oceania	Europe/Russia	Central & South America	Middle East/Africa
Shopping	64.0	77.5	30.5	54.4	69.7	46.2	78.1	66.7	42.4	55.6	62.0	44.1	25.6
Natural & scenic Attractions	59.5	44.2	68.6	59.2	53.9	88.2	58.9	40.4	51.5	77.0	74.2	85.3	70.9
Historic and Cultural attractions	41.3	41.2	84.8	46.2	22.5	30.1	13.2	11.8	18.2	27.0	81.5	61.8	79.1
Gourmet sampling	32.7	66.0	32.4	37.8	23.6	16.1	26.9	13.5	15.2	21.3	27.6	17.6	7.0
Rest and relaxation	29.6	12.1	4.8	45.2	21.0	15.1	53.6	51.2	66.7	32.0	9.3	41.2	19.8
Visiting art galleries and Museums	27.2	18.3	42.9	17.6	21.8	18.3	5.4	0.3	15.2	12.4	81.3	47.1	53.5
Swimming	16.5	1.1	-	23.7	5.5	-	37.4	48.1	33.3	15.2	1.3	23.5	10.5
Night Tour	9.1	8.3	1.0	13.4	13.3	1.1	10.0	8.4	-	9.6	7.1	5.9	5.8
Theater/Performances/Concerts/Movies	8.0	3.2	5.7	5.3	26.6	5.4	3.5	3.7	3.0	3.9	15.3	17.6	2.3
Playing golf	7.8	3.5	-	5.9	4.8	5.4	16.9	23.9	9.1	12.4	-	8.8	-
Visiting family/Friends	7.7	5.3	6.7	8.2	21.8	9.7	5.2	1.7	-	9.0	8.9	5.9	1.2
Other sports	7.0	0.7	1.0	9.2	4.8	2.2	11.1	19.5	21.2	15.7	0.9	5.9	2.3
Scuba diving	6.5	-	-	11.1	0.7	2.2	9.2	18.2	33.3	12.9	-	14.7	12.8
Driving	5.7	0.9	1.0	2.7	12.2	5.4	13.1	9.1	9.1	4.5	3.3	5.9	-
Gambling	4.1	7.2	1.0	0.4	18.1	1.1	1.3	2.0	3.0	6.2	0.9	11.8	-
Hiking/Mountaineering	2.7	0.4	1.0	1.7	3.0	5.4	5.2	-	3.0	7.3	3.8	2.9	1.9
Tennis	2.0	0.2	1.0	2.3	1.1	-	4.2	4.4	12.1	3.9	-	5.9	1.2
Fishing	1.2	-	-	2.5	-	1.1	1.7	4.7	3.0	-	-	-	1.2
Wedding Ceremony	1.2	0.4	-	1.1	2.2	1.1	3.6	1.3	-	0.6	0.2	-	-
Skiing	0.7	0.2	-	-	1.5	12.9	-	-	-	-	0.9	-	-
Others	7.0	4.4	4.8	5.9	29.2	4.3	5.0	4.4	3.0	5.6	4.5	8.8	7.0

(Unit: %)

Attachment III

9. Factors hindering overseas travel by sex, age and marital status

(Unit: %)

	Overall Average	Single		Married (18-39)		Married (40 and over)	
		Men	Women	Men	Women	Men	Women
		Do not like foreign food	31.6	45.5	54.5	29.4	34.8
Language concerns	36.8	27.3	45.5	47.1	31.1	39.4	
Security concern	36.8	45.5	36.4	58.8	33.3	28.4	
Costs too much	42.1	18.2	27.3	41.2	31.8	27.1	
Fear of flying	15.8	36.4	18.2	41.2	28.0	31.6	
Anxiety about health	15.8	36.4	9.1	11.8	30.3	31.6	
Dislike foreign travel	17.6	26.3	9.1	11.8	15.9	20.0	
Cannot take time off	14.5	36.8	9.1	11.8	15.2	9.0	
Tiresome travel application and procedures	12.7	52.6	18.2	17.6	6.8	11.0	
Don't agree with foreign customs like tipping	11.6	21.1	9.1	29.4	10.6	8.4	
Need to care for family, Animals &/or plants	10.1	5.3	9.1	17.6	9.1	10.3	
Overseas travel is Extravagant	8.1	5.3	9.1	5.9	6.8	10.3	
Take too long to get to Airport	6.9	26.3	-	11.8	5.3	5.2	
No acceptable tour schedule/itinerary/ price	3.2	10.5	-	5.9	3.0	2.3	
No one to go with/No one invites me	2.3	10.3	9.1	-	0.8	2.6	
No parental permission	0.3	-	-	-	-	0.6	

Tourism Services

Appendix 5 Tourism Services

1 Introduction

The essential factors that affect tourism, in general, are (1) accommodation, (2) transportation, (3) amenities, and (4) communication with the local culture. A combination of these factors determines the quality of tourism services or the level of tourist satisfaction. In fact, quality is the key in international tourist market which has more than 170 competing destinations. Tourist services, promotion and development constitute the three sides of the triangle of tourism as well. A harmonious and balanced development through coordination among these different elements is needed to attain an optimum and effective development of tourism sector in one country. The promotion and development are discussed in the relevant chapters of this report. The tourism services are discussed particularly in this chapter.

Tourism services include those extended to international tourists from the time they start arranging their overseas trip to the time of their departure from the destination country. The providers of these services are classified into two broad types - public sector and private sector. It is expected that the services provided by the private sector is better than those of the public sector in terms of quality and level, since the former must continuously improve their service to meet client needs and compete with others for survival and for profit in a free-market economy. The competition among private entities is the source of innovation, progress, development, and improvement of quality and level of any kind of economic activity, particularly in tourism, since the services provided directly affect the end user. Client satisfaction, or dissatisfaction, is so apparent that the effect on business is immediate and sharper than on other economic sector.

The public sector's role, on the other hand, is to support the private sector. The infrastructure for tourism, such as transport, utilities, environment protection and conservation, human resource development, health care, and others, are to be provided sufficiently and maintained properly by the public sector in general. The degree of involvement of the public sector, however, differs by country depending on its economic system. At present, Egypt undergoing a gradual transition from centralized economy to market economy since the middle of 1970's for over 25 years. A harmonious relationship between the public and private sectors concerned with tourism, therefore, is essential for it to develop and improve continuously.

2 Evaluation of Tourism Services

The level or quality of tourism services can be measured by the obstacles or problems facing tourists. Their evaluation of these services is therefore highly subjective, individual and attributable to the region, nationality and culture to which tourists belong. Thus, such evaluation should be collective and intensive. The evaluation of the level and quality of tourism services of one country, therefore, depends on a tourist sample survey. Most countries belonging to the World Trade Organization, conduct such a survey annually or once in two years. Results are analyzed and utilized to formulate strategic or specific tourism development plans on various terms and to improve or maintain the level of services to satisfy tourists. The reasons for exerting effort toward this end may not be limited to the improvement of the foreign currency earnings of a country or the development of its economy or the increase of employment opportunities, but more importantly to ensure increased and constant tourist arrivals as well as net economic earnings in the future.

The elimination of obstacles would thus encourage tourists to visit a country again, in this particular case, Egypt, or paint a good image of it in their own circle: In fact, the source of information for tourists in choosing Egypt as their destination has been their friends and relatives, according to past tourism sample surveys. Tourists themselves have become a very essential and less expensive instrument of publicity for Egypt's tourism.

The Ministry of Tourism has conducted tourist sample surveys continuously especially in the past decade. As the survey period for this particular Study is limited, the evaluation of tourism services depended on the analysis and results of the past three consecutive tourist sample surveys in 1990, 1992, 1994 and 1996. The combined analysis of these sample surveys is described in the next section.

3 Tourist Sample Survey

The Central Agency for Public Mobilization and Statistics (CAPMAS), in consultation with the Ministry of Tourism has conducted Tourism Sample Survey in 1990, 1992, 1994, and 1996. Entitled "Estimation of the Tourist's Expenditure", the survey focused on tourism in Egypt, tourists' demographic characteristics, accompanying relatives, distribution of tourist nights among the different regions, tourist expenditure patterns, and the factors that affect tourist movement. It was conducted four times a year by season and at airport terminals in Cairo, Luxor, Taba, Alexandria, and Hurgada.

The number of samples collected were approximately 21,000 in 1992 (3.2 million arrivals)

23,300 in 1994 (2.5 million arrivals) and 28,000 in 1996 (3.4 million arrivals), representing almost 1% of total tourist arrivals. The analysis and changes over the past decade are summarized below by factor:

(a) Tourists' Evaluation of Tourism Services

Tourists' evaluation of tourism services is one of the important factors that make tourists choose Egypt as travel destination. Being the end user, a tourist is the most qualified person to assess the quality of these services. The evaluation on each type of tourism service has four grades: excellent, good, fair, and poor. The more excellent-mentions and the less poor-mentions a service gets, the higher its quality is. Five ratings were identified and arranged in descending order, as follows:

Rating	Criteria of Rating
First	Over 30 % excellent and less than 10 % poor
Second	Over 20 % excellent and less than 15 % poor
Third	Over 15 % excellent and less than 20 % poor
Fourth	Over 10 % excellent and less than 25 % poor
Fifth	10 % and less excellent and over 25 % poor

The ratings of each service in the three consecutive surveys from 1992 to 1996 are shown in Table 2. The combined rating of all types of tourism service shows that the number of first-rate tourism service has not changed, while that of second-rate service increased from 4 to 7. Services rated third, fourth and fifth decreased in 1996.

Even as the results reveal a gradual increase in the quality of tourism services, they also indicate the need for drastic changes as well as simple improvements in the sector. In particular, Egypt needs to attend to the cleanliness of its surroundings. It is noted that the image survey conducted for the "National Plan of Tourism" by the German Agency for Technical Cooperation (GTZ) in 1978 emphasized the low standards of hygiene in the country.

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

(b) Tourist's Views on Returning to Egypt

The survey also asked the tourists whether they would return to Egypt or not. Their opinions are summarized in the table below.

Table 3 Tourists' View on Returning to Egypt

(Unit: %)

Year	Total	Arab	Western Europe	Eastern Europe	Australia and NZ	America	Africa	Asia
1992	91.0	95.0	87.0	88.0	74.0	85.0	93.0	91.0
1994	93.5	95.0	93.6	92.5	71.2	91.6	93.3	91.1
1995	91.7	93.7	90.4	95.1	71.2	86.3	89.2	89.9
Average	92.1	94.6	90.3	91.9	72.1	87.6	91.8	90.7

Source: Tourist Sample Survey 1992, 1994 and 1996

Averaging the results of the past three survey years, 92.1 % of total tourists would want to visit Egypt again. However the actual percentage of repeaters is not known from the sample survey. The reason for the relatively lower percentage registered by tourists from Australia/New Zealand and the United States might be the rather long-haul air flight.

(c) Complaints and Suggestions of Tourists regarding Services

The complaints and suggestions of non -Arab tourists interviewed for the tourist survey are summarized below in order of importance, as follows:

A. Taxi

Complaints against taxi services represented a majority of the complaints listed by Arab and non-Arab tourists alike. These include grave exploitation of tourists by taxi drivers failure to use taxi meters, non-application of taxi fare tariff, and higher rates of limousine taxi.

B. Cleanliness and Environment

Non-Arab tourists generally complained about the following:

- Acute shortage of public rest rooms and poor level of cleanliness in some tourist areas;
- The low hygiene standard that can spread disease;
- Water pollution;
- Noise, especially at night;
- Disregard of the no-smoking rule in buses and enclosed areas;
- Absence of non-smoking areas;
- Littering on the streets and the Nile bank; and
- High level of ecological damage.

C. Prices, Exploitation and Tip-seekers

- Most non-Arab tourists complain about being asked to pay for services paid in

advance and about being served based on the amount they pay;

- Exploitation of tourists by owners of shops and bazaars;
- Absence of fixed rates for services and higher commission;
- High prices in some hotels and restaurants;
- High charges tourists are asked to pay;
- Tour guides who collect commission from the purchases of tourists they escort; and
- Lower prices for Egyptians and higher prices for tourists for the same commodity.

D. Traffic

- Reckless driving and neglect of traffic rules;
- High congestion;
- The number of buses not written in Roman alphabet;
- Lack of transportation between two tourism sites; and
- Lack of asphalt roads in certain governorates.

E. Airport Services and Flights

- Failure to adhere to flight schedule;
- Slow customs procedure and services;
- No prominent signs inside the airport; and
- Difficult identification of baggage.

F. Hotels

- High rates but poor and slow service and
- Misrepresentation of hotel classification.

G. Language

- Difficulty in communicating with Egyptians who are generally not proficient in English;
- Tourism workers speaking English only and not any other language.

H. Other Complaints

- Lack of telephone services, especially international lines, and where available, the high rates charged for such services;
- Unavailability of alcoholic beverages; and
- Lack of information on tourist sites.

(d) Factors Influencing A Tourist's Choice

The influential factors that made tourists choose Egypt as their destination were ranked in Table 4. The ranking has not changed significantly in the past decade for tourists from Arab, European, American, and other countries.

However, all tourists except Arabs revealed that a travel pamphlet is the first influencing factor

in making them choose Egypt. Second is friends and relatives (FAR), for all nationalities, confirming the belief that a tourist is still the best instrument of tourism promotion.

4 Changes in Tourism Services

The character of tourism services has been changing rapidly in Egypt. For a long time the government took care of tourist services including hotels, travel agents, domestic airlines, transport companies, etc. Since the eighties, however, when President Sadat adopted an open-door policy, the centralized economic system has given way to a private sector-led market economy. The socioeconomic system in Egypt must therefore be considered amid this transition. Moreover, the increasing tourist arrivals and improved quality or level of tourism services have to be understood in conjunction with the changes in the economic system to enable planning for the continuous improvement of tourism services. Table 5 shows a brief modern history of Egypt, including parallel events related to tourism. It would be observed that the country's recent history has been one of political struggle for independence, of economic struggle, and of social struggle for equality of opportunity.

(a) The Transition to a Market Economy

Even though the country only briefly experimented with socialism in the 1960s, the legacy of the period was evident until the mid-1970s in the country's heavy reliance on centralized administration, public sector dominance on economic activities, import-substituting growth strategies, and an excessively generous social contract providing open-ended subsidies and automatic employment for the educated labor force. Over the past 40 years, successive governments focused on various targets.

- In the fifties, Egypt managed to overcome its major problem of social inequity and reduced the disparities in income and wealth which had long prevailed;
- In the sixties, significant expansion was made in the provision of education and health services and in guaranteed jobs in the public sector;
- In the seventies, subsidies became an important tool for providing a social safety net. A major drive was also started to make better use of the desert and help reduce urban spread and industrial pollution.
- In the eighties, the focus was on upgrading and expansion of the country's infrastructure. Another achievement was to bring down runaway population growth to acceptable levels by adopting a new population policy and giving priority to basic health care for mother and child.
- In the nineties, promotion and expansion of foreign investment were emphasized. Changes of economic structure gradually taking shapes and privatization of public sector entities are to be progressed further.

Yet, a number of the policies adopted have proved too costly and have been thoroughly revised with the Open-door Policy. The Macro-economy has undergone three distinct phases of development since the adoption of the Open-door Policy in 1974. The first decade was one of unprecedented growth, at a sustained 10 % per year, led by the exploitation of Egypt's petroleum reserves, along with large new inflows of foreign capital, foreign aid and the rapid growth of service exports from tourism, the Suez Canal and worker's remittances. By 1985, the petroleum sector accounted for 15.3 % of GDP and 70 % of merchandise exports, dwarfing the contributions of agriculture and industry. Investment levels averaged 30 % of GDP, with significant expansion of the production and service sectors. From the beginning of 1990, a comprehensive reform program to bring about a deep-level transformation in the economic structure and performance has taken place.

Three major shifts are transforming the structure of the economy in the current decade. The first is the reduced reliance on petroleum and related incomes and an increase in the share of other commodities and production and service sectors. The second is a fast catching-up of non-oil merchandise exports which can hopefully reach 20 % of domestic output within 10 years, up from less than 10 % in 1995. The third is the rapid decline in the share of the public sector in the economy to half its former level.

Every sector of economic activity has responded positively to the decade-long process of realigning domestic with world prices, retrenching public sector activity, reducing tariff and non-tariff protection, removing barriers to the entry of new firms, revising regulatory frameworks and eliminating bureaucratic red tape. Since 1995 heralded the start of a renewed boom year, all players in the economy adjusted to the rules of market forces and have changed gear to exploit the vast and untapped potential of both the domestic and international markets. In line with this trend, the tourism sector is increasingly taking initiatives to exploit virgin locations with larger and bolder projects.

(b) Private Investments

The salient feature of Egypt's new-decade growth is the accent on private investment that no longer feeds on public initiatives, public contracts, or heavy protection. Egypt's entrepreneurial class has graduated to become a large and dynamic force capable of leading rapid growth into the future. It has accumulated vast capital resources and earned the self-confidence of two decades of demonstrated success in carrying out small, medium and large-scale ventures, alone or in alliance with Arab and foreign partners. This has been the major achievement of the state's

Open door Policy-the promotion of hundreds of private enterprises capable of confronting an increasingly competitive global environment.

(c) Tourism Boom Centuries

Tourism industry has been growing fast over the past decade. Table - X.6 shows the record of tourist arrivals. The total number of tourists has increased 2.5 times more, from 1.5 million in 1985 to 3.9 million in 1996. The number of non-Arab tourists increased more than three times, from one million in 1985 to three million in 1996. The compound average annual growth rate (CAGR) for five years between 1993 and 1997 was 13.6 %, one of the highest rates registered in the world. The number of hotels has also increased from 300 in 1985 to 761 in 1996, up by 154 %, with an increase of 168 % in the number of hotel rooms to 68,000 in 1996. The revenue received from the tourism industry has grown fifteen -fold from US\$ 206 million in 1985 to close to US\$ 3.1 billion in 1996.

Tourism is not only a foreign exchange earner but it also has substantial impact on employment in other sectors such as transport, food processing, textiles, crafts, and the small -scale informal sector in manufacturing and services, which are particularly labor-intensive. Direct and indirect employment in the tourism sector is estimated at around one million, a quarter of which is in the hotel industry and tourist establishments. The number of travel agents, for example, increased from 371 in 1985 to 675 in 1996 as shown in Table 7.

Traditionally, Egypt has relied on cultural tourism promoting attractions, such as the pyramid and museums in Cairo, the centers of antiquities in the Upper Egypt (Luxor, Abu Simble, and Aswan). But a lack of growth potential in this area has shifted development plans toward leisure tourism with a focus on the coastal regions of the Red Sea and Sinai.

5 Suggestions on Improvement of Tourism Services

In line with the economic transition and the tourism boom as discussed above, the role and function of the private sector has become an important and a leading factor since the beginning of the 1990s. The establishments considered satisfactory by tourists, such as hotels, tourist villages, floating hotels, 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 only tourism element under the public sector evaluated as satisfactory by tourists is the passport and customs service at the airport. The public sector has exerted effort to improve this, since it is the first tourism service tourists directly experience upon arrival in Egypt. The composition of international tourist might be a reason to evaluate such establishment and

services are satisfactory. Packaged or group tourist arranged by international travel agents in collaboration with local travel agent dominates the market, therefore, all obstacles or troubles are handled and solved professionally. In addition to this composition of tourists, a major portion of such non-Arab group tourist use international charter flight services. Thus, these tourists are virtually free from any substantial and direct obstacles or troubles.

All the other elements evaluated as fair and unsatisfactory are under the responsibility of the private sector without any direct foreign involvement. The analysis of the tourist sample survey shows that the reason for a tourist's dissatisfaction with these elements can be traced to two factors. First is the exploitative manner of local business people towards foreign tourists in restaurants (except those in hotels managed by foreigners), souvenir shops, antique shops, bazaars, taxi, 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 toilet; low hygiene standard; and garbage. Improvement on the attitude of local business people and cleanliness of the environment cannot be realized easily because these require cooperation 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.

The suggestions on the improvement of services in order of identified places or occasions listed in Table 1 is as follows:

(a) Passport and Customs

Although tourist rating for this service is either first-rate or satisfactory, the service level has to be checked regularly especially during times of increased tourist arrivals. The passport control desk or waiting area should be able to absorb the number of arriving tourist especially when large-size aircraft land within minutes of each other. The average daily processing capacity is not as important as the capacity of the facilities and passport or customs staff during peak moments. The introduction of electronically automated passport-number readers at embassies, tourist agencies and passport control desks at airports may improve the speed of processing passports without increasing the area or the number of airport immigration staff.

(b) Hotel and Tourist Village

Hotels that are part of an international chain are given first rate by the tourists since they have an international standard for design, building, interiors, facilities, and services that must be maintained. Well-known international hotel operation and management companies such as Hilton, Inter-Continental, Marriot, Meridien, Movenpick, Novotel, Oberoi, Raddison-SAS,

Sheraton, Sofitel, etc. operates numerous 5-star class hotels and resorts at premier tourism and resort destinations throughout Egypt. The level of service in hotels owned by Egyptian nationals is not clearly known. Nonetheless, however, the quality of services in such hotels must be improved as their number will increase due to the expected expansion of the tourism industry. The issue on human resource development in hotels and tourism establishments is discussed in another chapter of this report.

(c) Floating Hotels

The floating hotels operating under international management were also judged as first-rate by the tourists. Their number has increased dramatically since mid-1980s. Those operating between Luxor and Aswan reached to 216 in 1999. The number of floating hotels operate on the Nile River is around 260. Although no accidents, such as sinking due to fire, collision with other ships or pillar, running aground, and stoppage due to mechanical failure, have fortunately occurred yet, these may happen in the future due to a lack of preventive measures. Once an accident happens, it will irrevocably damage Egypt's tourism industry, because floating-hotel operations here are tremendous. Hence it is necessary to adopt preventive measures, such as improved navigational aids and berthing facilities, periodic and legal ship inspection, and sailors training, among others. It is to be noted that two floating hotels were lost due to fire in 1999 in Luxor. Fortunately, these are lost when they vacant and moored at quay along the bank of the Nile.

(d) Restaurants

Restaurants other than those in hotels are given second rating by tourists. Most restaurants outside hotels serve Egyptian food or Middle Eastern cuisine. The quality of local alcoholic beverages and soft drinks has improved due to competition. Since food tastes vary its evaluation was deemed not crucial. What needs urgent and immediate government attention is the tourists' concern of the low hygiene standard in the country. The way of serving food and drinks and the staff's attitude need constant improvement.

(e) Tourist Guide

Tourists gave second rating to tourist guides, who are concerned only with non-Arab tourists because Arab tourists visit Egypt not for sight-seeing or leisure. The number of tourist guides in proportion to non-Arab tourists has not increased, remaining at one guide per 10,000 tourists. Table 7 lists the increase of non-Arab tourist arrivals and tourist agents.

Non-English-speaking tourists also complained that generally the guides only know English,

which has traditionally been the major foreign language spoken and taught in schools in Egypt. This is a valid concern since the total number of tourists from English-speaking countries accounts for almost 25 % only of the total non-Arab tourists, while that of German, Italian and French-speaking tourists combined is much higher. It is thus necessary for tour guides to learn other major foreign language, thus match the needs in the tourism sector.

Attention to tourist guide in museum is to be drawn for improvement. Tourist interest to see the objects exhibited carefully and to know their historic background other than from brief explanation presented beside such objects. The tourist guides explain historic background and content of objects in details, however, if such explanation is done by different languages and by loud voice, tourist cannot concentrate their interest to objects. The atmosphere of museum is better to be calm and academic as well. It is recommended to provide electronic audio system which gives explanation to individual tourist by specially designed ear-phones.

(f) Railway

Railway service, which is under the public sector, was graded second-rate by tourists. In Egypt, tourists use a special express train designated for business and tourism use. Covering a limited network of routes, trains are best used for long hauls between major cities. They offer a more comfortable alternative to buses and taxis. First-class trains have air-condition, waiters, reclining armchairs, and accept passengers at seating capacity.

Improvement of railway operation and management has been underway and intensive. Although trips have become on time, railway operations will become more complex with the increasing demand. The history of Egyptian railway dates far. The Cairo-Alexandria railway track was designed and constructed under the supervision of British engineer Stevenson's son, inventor of the steam-driven locomotive. The Cairo-Aswan route has double track, which has been rehabilitated as well as several stations along the route, thus improving operations. The increase in the number of special express trains for tourists may encourage them to use the train more. Only two drawbacks remain: The connecting points between road and railway transport still require a new design while terminals outside railway stations must be expanded to avoid traffic congestion.

(g) Domestic Flight

Domestic flight is graded fourth-rate by tourists. This is the only service whose rating worsened based on the survey results of 1992 to 1996. Egypt Air, the national airline, has enjoyed a monopoly since the demise of its smaller rival, ZAS, which was the first private airline

company established in Egypt. Another airline, Air Sinai, was especially created to serve Sinai and Israel and protect Egypt Air from the adverse impacts of the withdrawal of its landing rights in other Arab countries, but it is just the same outfit under another name. Domestic airline networks have been added, and a new connection between the Nile Valley and the Red Sea is in operation.

The discount rate of Egypt Air's domestic flight fare is higher than that when it was connected with Egypt Air's international flight to and from Cairo. This system ups the price of package tours using other international airlines, since long-haul passengers must transfer at Cairo International Airport to reach their final destinations. This airport has three passenger terminals for Egypt Air, other international and domestic airlines. These terminals are located far from each other without convenient means of connection. The third passenger terminal will be built in the near future. Until then, the connection between international and domestic flights will remain inconvenient for transit passengers.

A number of airline companies have established for international and domestic charter flight services, such as Lotus, Midwest, Heliopolis, Shorouk, Pharana, Raslan, Cairo Charter, Orcar, Luxor, Scorpion, etc., many of which are operated and managed by the former staff of the ZAS Airline. Some of these charter companies operate outdated aircraft. Hence intensive inspections should be conducted periodically to ensure safe air travel.

Further, the number of airline check-in counters at passenger terminals of airports is not sufficient to cope with the increased daily peak passenger trip. In addition to passengers of scheduled flights of Egypt Air and Sinai Air, passengers of charter flights aggravate the congestion at check-in counters and boarding lounges. This and the absence of mechanical indicator convenient for passengers who want to board aircraft and the lack of announcement to guide passengers properly might be the reasons flight schedules are often not adhered to.

(h) Rented Vehicles

The rent-a-car system is graded second-rate by tourists. Because of the traffic congestion and the reckless driving of most drivers who neglect traffic rules in Cairo, tourists are discouraged from driving the city's streets. Traffic signals and enforcement of driving rules should thus be improved.

(i) Bus

Bus service is graded second-rate by tourists. Its rating has been continuously improving since

the 1992 sample survey. The bus service referred here is the bus used by the travel agent for group tours. Most buses are air-conditioned and their quality has been improving rapidly. Large number of brand-new buses are imported from Europe such as Mercedes Benz, Scania, Renault, Volvo, etc. A number of tourist buses are made or assembled in Egypt as well. Most tourists use these specially -designed tourist buses operated by private travel agents or Misr Travel, the sole public -sector travel agent in Egypt. It was observed that with private sector participation in this service, the comfort and safety of tourists seem guaranteed.

The connecting points between tourist buses and floating hotels need to be improved. Further, there is not enough bus parking space alongside floating hotels along the Nile River at major tourist cities, such as Luxor and Aswan. In such areas, however, park spaces along the road hinder the smooth and safe traffic.

(j) Taxi

Taxi service is graded fourth-rate by tourists. Most four-seater taxis, which often pick up other passengers heading in the same direction, are old and dirty, sometimes carrying fleas, lice, ticks, etc. Moreover, as meters are rarely used or broken, the trick is to know the fare on arrival at the destination rather than ask or haggle at the beginning of the trip. Group tourists do not use these taxis in cities or going to tourist sites, but individual tourists often do especially for inter-city travel. For the individual tourist, improvement of taxi service is needed. Registration, licensing, periodic inspection of cars and meters, driver reeducation and examination, etc., must be improved or conducted. Relevant law enforcement measures must be imposed gradually but strictly. Further, by checking a taxi's engine and gas emission periodically, the air pollution problem in big cities might lessen.

(k) Shopping

Shopping areas, such as souvenir shops, antique shops and bazaars, are graded third -rate by tourists. Complaints regarding exploitation of tourists by shopkeepers are significant. Although some tourists enjoy bargaining, a traditional way of doing business not only in Egypt but in the entire Middle East, most tourists do not like doing it. However, a haggling is a common practice in the market in Egypt, education and awareness program to shop keepers in dealing with tourists is recommended to be carried out by relevant authority.

(l) Cleanliness of the Environment

Cleanliness of the environment is graded fifth-rate or poor by tourists since the 1992 sample survey. This low rating has been consistent since the 1978 image survey conducted by the

German consultants. It has, in fact, even “improved” with the programs initiated by local and municipal governments in the past decade due to the increased consciousness about the environment.

In Luxor and Aswan, for example, beautification of city centers, through color unification, application of similar designs of decorations for new and old buildings as well as street walls, and greening the streets, parks, gardens, and pedestrians, among others, have been underway. Roads and major streets are cleaned by sweepers daily. Besides, public toilet have been recently built and installed especially in places where tourists gather. Therefore, a rating on this item might improve if a sample survey is done now.

Another problem is the collection and treatment of solid and liquid waste generated by cities. Although a number of litter bins are installed in tourist spots and on the streets, it is insufficient in achieving the desired level of cleanliness. Nevertheless the costs of cleaning the surroundings should be regularly earmarked and its funding source planned to be sustainable for a long-term benefit.

Environment

Appendix 6 Environment

1. Natural Environment

The characteristics of the natural environmental of the study area in the Egypt can be summarized as follows.

1.1 Meteorological Conditions

The meteorological conditions in the each study area shall be summarized as following Table 1.

Meteorological Conditions in the Study Area

	Qena and Luxor	Aswan	Red Sea
Temperature	Max of 42.8° C during the months of July-August and part of September and Min. of 6.1° C during the months January through March.	Max 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.	Max. of 40-41°C at Ras Benas (south) and 32-34 °C at North of Hurghada and Al-Quesseir . July and August are the warmest months of the year. Min. of 8-10°C at south and 9-10°C at Hurghada and 16-18 °C at Al-Quessier with January and February are the coldest months of the year
Rain Falls	The rainfalls is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking and other uses usually from the Nile River.	The rainfalls is minimum (0.1 mm/day) to none during the year. The main source of irrigation/drinking and other uses usually from the Nile River	The minimum rainfall is in October and November. Some record shows 68.1 mm in the south and 62 mm in north as highest rain fall
Relative Humidity	Ranged between 47-55% during the winter December-February and 27-40% during the summer	Ranged between 34-43% during the winter months; December-February and 17-27% during the summer.	Ranged between 50-60% during November-December in south and 40-50% in north with months June-August are the moths of the year
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

1.2 Geology and Topology

1.2.1 Geology

The geological formation of the study area can be divided into two main geological characteristics as shown in followings and is illustrated in Figure 1.

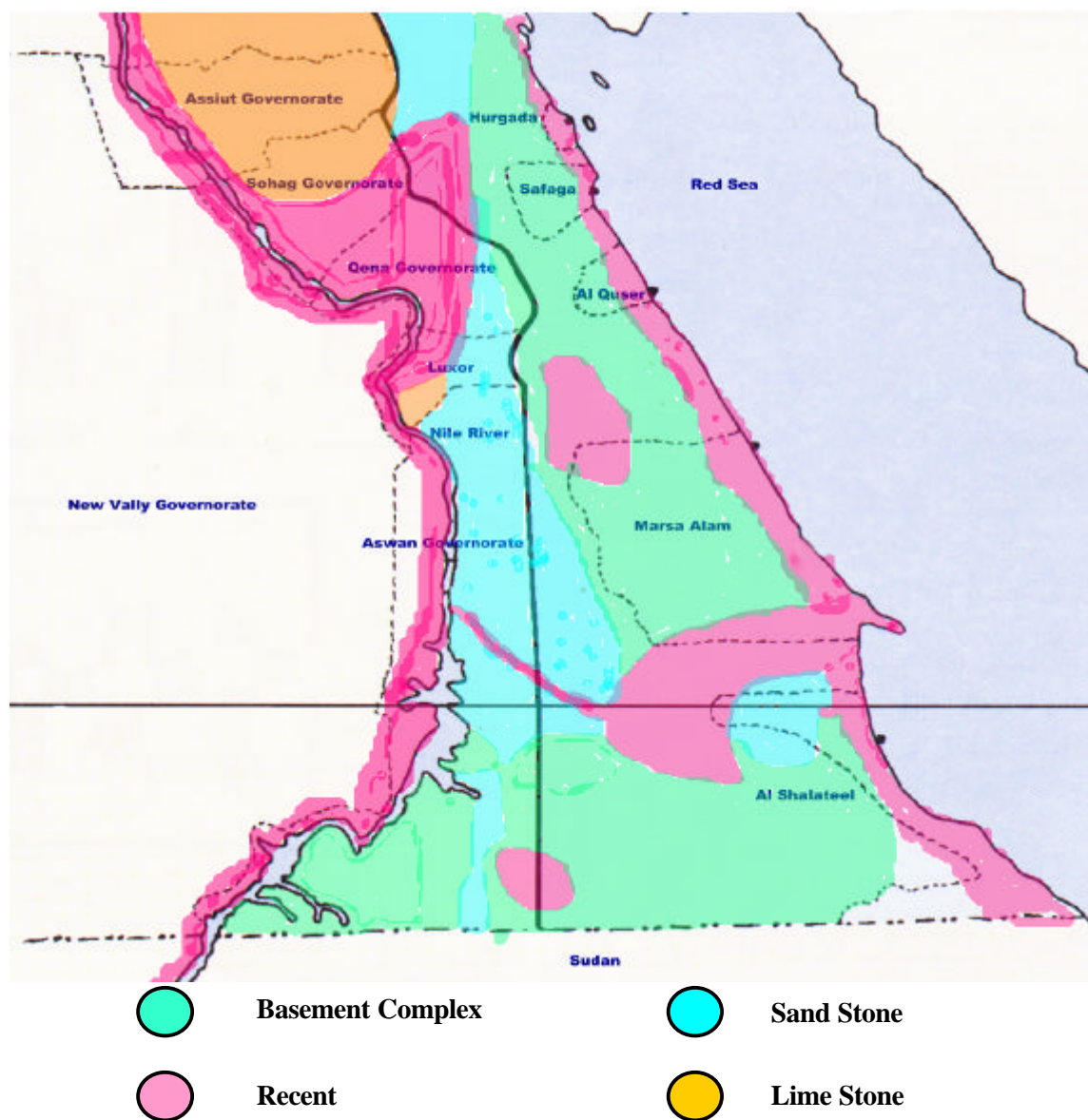
(1) The Nile valley basin (Qena, Luxor and Aswan)

The geological formation of the Nile valley of upper Egypt is called 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 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 Nubian sandstone aquifer (El-Shazly & El-Hady, 1977).

The minerals in the basin are summarized as follows;

- a. Qena and Luxor: According to “Qena book for Investment Guide” published by Qena Information and Decision Support Center, 1999, minerals in Qena and Luxor are summarized as shown in Table 2.

Geological Formation of the Study Area



Source: Ecological Studies Faculty of since of Aswan, Asyut University, 1990

Mineral Resources in Qena and Luxor

Minerals	Sites
Kaolin & limestone	Wadi Qena, Shagheb, Abo Lila, El-Sayia, Ors and El-Geer
Sands	Ors, Armant, Matana, Kaft, Madamoon, and Wadi El-mayaat
Phosphate	Abo Had, El-Geer, El-Shagheb, Wadi El-Saryia and Wadi Hamama
Gold	East Wadi Mamama

Source: Qena book for investment Guide" published by Qena Information and Decision Support Center, 1999

- b. Aswan region: According to Mohommed and Mekki (1998), the most important minerals in Aswan are summarized as shown in Table 3.

Mineral Resources in Aswan Region

Minerals	Sites
Iron (Hematite)	Wadi Abu Agag
Phosphate	Sibaiya and Mahamid north of Edfu
Kaolin	Kalabsha SW Aswan
Gold	Barramiya Sukkari, Hotit, Umm El-Tuyur Gebal
Barite	Hudi wadi ElTom Hebal
Talcum	Derheib and Atshan E of Aswan
Copper	Abu Suweil
Chromite	Abu Daher
Asbestos & Vermiculite	E and S of Aswan
Illuminate	Ghalaqa and Abu Dahr
Lead as galena	Abu Suweil
Graphite	Wadi Haimur

Source; Mohammed H E and Mekki A H 1988 Mineral resources in Aswan region and possibilities for the Development of its exploitation. In Sym Env Dev Aswan Governorate Desert, Faculty of Science Aswan and F Ebert Stift, Aswan611-620

(2) Eastern desert and Red Sea mountain chains (Red Sea)

Ggeology of eastern desert and Red Sea mountain chains is a rocky plateau dissected by a number of drainage systems which have main channel and numrous tributaries. The chain of the Red Sea mountains forms the wartershed (divide) which parts the drainage eastword to the Red Sea and wastward to the Nile river. Almost 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 is rugged surface with high mountain peaks rising to 1,350 m above sea level (not including the Red Sea mountains). The average elevation of the Wadis range between 350 m and 546 m above sea level.

Almost basement is consisted of the complex of the Precambrian. The rocks are dominated by geosynclinal metasediments (schist-mudstone-graywacke series), gneiss, amphybolite, diorite, granodiorite complex, old and younger granite.

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

1.2.2 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 deserts extend on the eastern side to Red Sea mountain chain are dissected by a number of large and small Wadis. On the western side, another desert extend and of which 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 500km west from the Nile of Aswan region, the mountain massif of Oweinat rises.

1.3 Natural Hazards

According to Shata (1988), natural hazards in Aswan region are identified following three types;

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

1.4 Soil Condition, Erosions and Landscape in the Study Area

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

1.4.1 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 and rock debris' slopes that lead up to a rock plateau. The plateau exists in approximately 100 m above the valley of the Nubian sandstone. The valley opens quite abruptly into the Kom Ombo plateau. In Paleolithic era, the Kom Ombo plain was a swamp site in where sedimentation of silt had occurred. The sediments at the edge of the plain are sandier.

1.4.2 East of Kom Ombo Plain

A hill complex forms the eastern limit of the Kom Ombo plain. The hills are a terrace remnant 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 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 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 rather rugged appearances, and the alluvium contains silt or less loam and is less suitable for agricultural development.

1.4.3 Edfu-Esna-Gebelein

In the east of the Nile, the processes of erosion have carved the rock land into 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 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 the main road, which no longer follows the Nile valley, and containing some phosphate mines. The harder lower Eocene limestone still survives as a capping at some of the highest points, Gebel Bakhmanya 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 either presents 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.

1.4.4 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 to which, at an altitude of about 148m 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 interspace 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, for 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 somewhat 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 and 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.

1.4.5 Qena-Nag' hammad

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. Secondly, 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 extend a long slope of outwash material, relatively flat and consisting of fine textured sands.

1.5 Hydrology and Groundwater

The Nubian sandstone formation is 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 occurred during its deposition (El-Ramly, 1973).

1.5.1 Water Flow

Water has been recharged from the Nile to the aquifer (Mitwally 1953 and Sheta 1962). Geoistrazivanja (1965) estimated the seepage of 6 million m³/annum with the average permeability of 3×10^{-3} cm/sec. At Lake Nasser, seepage of the level of 180 m was expected as

73.5 million m³/annum.

The save discharge from the Nubian aquifer is estimated to sum of 257 million m³/annum and the extraction average could be 800 million m³/km²/annum. (Soilman. 1987)

1.5.2 Lake Nasser and Liver Nile

It can be said that the hydrology of the Egypt is represented by the Lake Nasser and liver Nile. The Lake Nasser is located within the latitudes of 22 ° N and 23 ° 58' N in Egypt and 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 m³. 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 depending on both erosion and sedimentation.

Total shoreline length of these Khors is 969.9 km. The most important factor, which affects the shoreline morphology, is the sedimentation of the 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 Nile River in Aswan region forms following three separate water bodies;

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

In the Lake Nasser, there is an annual cycle of water level change related to the seasonal flood pattern of the Nile River, together with a long-term pattern of net rise and fall of the mean lake level. During the drought years of mid of 1980s', the mean monthly level of the Lake Nasser dropped to 157.37 m above mean sea level.

The Lake Nasser has following several environment features;

- It is considered that the lake is one of the cleannest artificial lake according to the results of the periodic analyses of the water and the soil.
- Limited number of residential areas around the lake.
- Agricultural development is limited along the shoreline of the lake.
- 5,500 farmers are planting 25,000 Feddans which represent 2% of total shoreline of the lake.
- There are no any pollution-generating activities on the lake except one factory for fish preparation and freezing.
- Totall number of floating hotels are 6.
- There are no any disposal activity from industry, agricultural nor sewage into the lake.

As for the water quality of the Nile River, Table 4 shows an anaylitical data of the river water quaity from Awan to Esna in1993/94.

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 Nile River Research, WRPW

1.5.3 Groundwater

(3) Groundwater Quality

Table 5 shows analytical data of groundwater samples from reference wells in eastern side of the Nile valley (4 locations) and western side of the Nile valley (9 locations);

Quality of Groundwater (1993)

Location	TDS (ppm)	Cations (ppm)				Anions (ppm)				pH	
		Ca ⁺⁺	Mg ⁺⁺	Na ⁺	K ⁺	HCO ₃ ⁻	CO ₃ ⁻	Cl ⁻	SO ₄ ⁻		
East Desert	Hehmiet	1,338	91	53	279	10	372	-	231	320	7.6
	Qustol	1,376	123	54	243	13	251	-	302	390	7.4
	Allaqi	796	71	29	120	11	182	-	71	312	8.1
	Adindan East	372	41	15	42	6	178	-	53	37	7.8
West Side	Kurkur	1,511	131	71	248	16	348	-	883	314	7.0
	Kalabsha	854	163	9	87	6	281	-	174	125	7.3
	Abu Simbel	242	42	11	13	4	134	-	28	10	8.2
	Tushka (1)	6,990	145	44	2,440	-	183	9	1,810	301	8.4
	Tushka (2)	1,652	27	5	592	-	256	24	553	33	8.3
	Tushka (3)	948	18	8	330	-	220	18	248	224	8.1
Tushka (4)	3,962	34	20	46	-	342	30	1,868	312	8.6	
Tushka (5)	3,202	19	10	109	-	299	15	1,242	425	9.3	
Tushka (6)	3,698	9	7	1,383	-	284	7	1,775	214	9.0	

Source: Ground water of Upper Egypt, Master Thesis, 1994, Faculty of Engineering, Cairo University

(4) Groundwater Fluctuation

According to officials of Luxor and Aswan, rising of the ground water level in each governorate is the remarkable in recent years.

Table 6 shows groundwater fluctuation in shallow boreholes around the Lake Nasser. Most of the data were taken from 1965 and 1991.

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, Master thesis, 1994 Faculty Engineering, Cairo University.

1.6 Flora & Fauna

1.6.1 Flora

Profile of the flora in the Egyptian ecosystem has a structure as shown in Table 7.

Profile of Flora in Egypt

Flora	Number of the 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 Red Sea areas have been studied by Aswan Faculty of Science as well as other institutions since 1978. Table 8 is a list of Flora in the study area.

List of Flora in the Study Area

Qena - Luxor -Aswan	Red Sea
Glinus totoides L., Robbairia delileana milne -Red h, Salasola bayosma (Roemer etschultes) Dandy, Morettia phileana (Del.) DC, Zilla Spinosa (turra)prantl, Acacia ehrenbergiana Hayne, A.raddiana sani, Astragalus vogelu (Webb) Bornm, A.hamosus L., Cassia italica (Mill.) Lam.ex stend, Crotalaria aegyptiaca Benth, Lotonmis platicarpa (viv.) pichi-serm, Psoralea plicata del, Fayonia indica Burm.f, F.bruguieri DC, Tribulus pentandrus forsskal, T.terrestris.L., Zygophyllum simplex. L., Euphorbia granulata forsskal, Haplophyllum tuberculatum (forsskal) A.juss, Tamanix nilatica (Ehrenb)., Bunge Citrillus colocynthis (L.)Schrad, Calotropis procera(Ait.) Ait.f, Pergularia tomentosal, Arnebia hispidissium (Lehm) DC, Heliotropium bacciferum forsskal, Trichodesma africanum (L.) R. Br., Orobanche sp., Cotula Cineria Del., Pulicaria Crispa (forsskal) Benth. Et Hook.f., Pincisa Lam. DC, Sonchus oleraceus L., Asphodelus Tennifalius cav., Panicum turgidum forsskal, Stipagrostis sp., Perennials	Acacia raddiana, Acacia ehenbergiana, Balanites aegyptiaca, Maerua crassifolia, Acacia tortilis, Pulicaria crispa, Zilla spinosa, Cassia spp, Aerva persica, Fagonia indica, Panicum turgidum, Aerva javanica, Cassia italica, Cleome droserifolia Salvadora persica, Leptadonia pyrotechnica, Ephemerals

Source: Faculty of Science-Aswan, Asyut University, 1990

Table 9 shows a list of indigenous flora species in the study area and their utilizing. In the tables, asterisk mark identifies the principal utilization of each flora.

Indigenous Flora Species in the Study Areas and the Utilization (1)

	Indigenous Flora Species	Medical use	Timber	Grazing	Eating	Fire Cook	Charcoal
1	Forsskalea tenacissima						
2	Glinus lotoides	*					
3	Aizoon canariense				*		
4	Portulaca oleracea						
5	Polycarpaea repens			*			
6	Salsola baryosma						
7	Cornulaca mohocantha						
8	Aerva javanica						
9	Amaranthus blitoides						
10	Cocculus pendulus	*					
11	Capparis decidua				*		
12	Maerua crassifolia		*				
13	Cleome droserifolia	*					
14	C. amblyocarpa	*					
15	C. africana						
16	Morettia philaeana			*			
17	Schouwia thebaica						
18	Zilla Spinosa						
19	Dipterygium glaucum						
20	Ochradenus baccatus					*	
21	Caylusea hexagyna						
22	Crotalaria aegyptiaca			*			
23	C.thebaica			*			
24	Lotononis platycarpa			*			
25	Psoralea plicata			*			
26	Tephrosia apollinea			*			
27	Sesbania sesban			*		*	
28	Astragalus ereinophilus			*			
29	A. vogelii			*			
30	Alhagi graecorum			*			
31	Indigofera argentea						
32	I. hoehstetteri						
33	Cassia italica						
34	Cassia senna	*					
35	Acacia albida		*	*	*		
36	A.tortilis			*		*	*
37	A.raddiana		*	*		*	*
38	A.nilotica		*	*		*	*
39	A.ehrenbergiana			*		*	
40	Monsonia nivea						
41	Fagonia Indica						
42	Zygophyllum sirriplex						
43	Tribulus mollis						
44	T. pentandrus						
45	Balanites aegyptiaca	*	*		*		
46	Chrozophora obliqua						
47	C. tinctoria						
48	Euphorbia granulata						
49	Ricinus communis	*					
50	Haplophyllum tuberculatum	*					
51	Salvadora persica	*					
52	Ziziphus spina-christi		*		*		
53	Abutilon pannosum						
54	Tamarix nilotica			*		*	
55	Citrullus colocynthis	*					
56	Cucumis prophetarum	*					
57	Solenostemma argel	*					
58	Calotropis procera	*					
59	Pergularia tomentosa	*					
60	Leptadenia pyrotechnica					*	
61	Convolvulus prostratum			*			
62	C. austro-aegyptiacus			*			
63	Echiurn rauwolfii						
64	Heliotropium supinum						
65	H. bacciferum						
66	Trichodesma ehrenbergij						
67	T. africana						

Source: Faculty of Science-Aswan, Asyut University, 1990

Indigenous Flora Species in the Study Area and the Utilization (2)

	Indigenous Flora Species	Medical use	Timber	Grazing	Eating	Fire Cook	Charcoal
68	<i>Lycium shawii</i>					*	
69	<i>Hyoscyamus muticus</i>	*					
70	<i>Anticharis glandulosa</i>						
71	<i>Cistanche phelypaea</i>						
72	<i>Senecio flavus</i>						
73	<i>Pulicaria incisa</i>	*					
74	<i>Pulicaria crispa</i>						
75	<i>Cotula cineria</i>						
76	<i>Asphodelus tenuifolius</i>						
77	<i>Dichanthium foevilatum</i>						
78	<i>Cynbopogon proximus</i>	*		*			
79	<i>Aristida mutabilis</i>			*			
80	<i>Stipagrostis plumosa</i>			*			
81	<i>Eragrostis aegyptiaca</i>			*			
82	<i>Cynodon dactylon</i>			*			
83	<i>Panicum turgidum</i>			*			
84	<i>Imperata cylindrica</i>			*	*		
85	<i>Phragmites australis</i>						
86	<i>Cyperus schoenoides</i>			*			
87	<i>Hyphaene thebaica</i>		*		*		
88	<i>Cyperus pygmaeus</i>						
89	<i>Fimbristylis bis-umbellata</i>						

Source: Faculty of Science-Aswan, Asyut University, 1990

A survey of vegetation at Wadi El-alaqi of a basin at southeast of Aswan provides baseline data for further development and study of the impact of changing environment, relation between ground water level and flora (vegetation) as well soil conditions. Table 10 shows a summary of a survey that was conducted in cooperation between Asyut University and Department of Botany, University of Glasgow.

Zone of Vegetation in the Eastern Side of the Aswan Area

Zone	Groundwater level	Soil Conditions	Dominant vegetation
I	0.10 m - 0.15 m	Recent alluvial silt	<i>Glinus lotoides</i> , <i>Portulaca oleracea</i> , <i>Heliotropium supinum</i> , <i>Amaranthus blitoides</i> , <i>Eragrostis aegyptiaca</i> , <i>Fimbristylis bis-umbellata</i> , <i>Cyperus schoenoides</i>
II	1.00 m - 4.00 m	Surface Nile silts deposits coarse and fine layers. Low content of soluble salt.	<i>Glinus lotoides</i> , <i>Tamarix nilotica</i>
III	4.00 m - 6.00 m	Recent silt deposits with high fine silt content. High total soluble salt content.	<i>Tamarix nilotica</i>
IV	6.00 m - 7.00 m	Thin layer of recent alluvial deposit overlaying the old Wadi coarse alluvial material.	<i>Pulicaria crispa</i> , <i>Tamarix nilotica</i>
V	7.00 m - over	Very little new deposition of silt. The soil was mainly ancient Wadi bed deposits comprising alternative layers of fine and coarse deposits.	<i>Pulicaria crispa</i> , <i>Tamarix nilotica</i>

Source: Asyut University and Department of Botany, University of Glasgow

1.6.2 Fauna

Table 11 is a list of fauna in the study area, which include mammals, birds, soil fauna and others.

List of Fauna in the Study Area

	Qena - Aswan - Luxor	Red Sea
Mammals	Leaser Rat - Tailed Bat, Rhinopomahardwickei, Egyptianslit - Foced Bat, Nycteris Thebaica E., Nile Rat - Field Rat, Arvicanthis Niloticus, Hargenorth African Dipadil., Felis chaus Guldenstaedt, Lepus capensis isabellinus "hare-arnab jabaly", Lepus copensis P. Pyramidum "greater gerbil-demsey", Gerbillus G. sudanensis "Sudan Lesser Gerbil", Dipodillus mackilligini (E) "Mackilligin's dipodil", Arvicanthis'n niloticus "Nile Kusu, grass rat", Rattus rattus "house rat, Plakrat", Rattus norvegicus "Norway rat, brown rat,sewer rat", Mus musculus praetextus "housemouse - 'far-sisi' ", Acomys C. cahirinus "Egyptian spiny mouse - 'Abushoka' ", Acomys cahirinus hunteri "Hunter's spiny mouse ", Jaculus J. butleri "Butler's Lesser Jerboa -'Jarboo", Vulpes vulpes aegyptiaca "Red fox, Nile fox-atoolo, abuhussein", Vulpes r. rueppelli "Rueppell's sand fox, taalab - abuhussein", Hyaena h. dubbah. "stripped hyaena - 'dubboh, dab' ", Felis sylvestris.Pybica "wild cat - 'qot jabali' ", Ammotragus lervia ornatus "Borbory shop - 'Aouded, Kebshel Jabal, waddan, arwi"	Ethiarien Hedgehog, Paraechimus acthiapicus, horse, shoe Bat, Rhimolaphus clivarsus, Cretzschmar, Egyptian free - Tailed Bat, Tadarida aegyptiala, Cape Hare, Leups copensis, Lesser Egyptian Gerbil, Gerbillus Gerbillus, Greater Egyptian Gerbil, Gerbillus Pyramidun., Geaffray, Bushy - tailed Dipodil, Sekeetamys colourus, Sunderall's jird, Meriones crassus sunderall, Genet, Genetta Genetta., Aaard Wolf "Deeb", Osbar, Prateles Cristotus, Nubiaa Wildass, Equasasimus limmaeus, Nubianibex, Capraibex linnaeus
Birds	Ardeola ralloides "squaco heron", Bubulcus ibis "cattle egret", Egretta Gerzetta "Little egret", Larus marinus "Great Balck-backed Gull", Merops orientalis "Little Green Bee-eater", Ardea cinerea "Grey Heron", Alopochen aegyptiacus "Egyptian Goose", Elanus caeruleus "black-winged kite", Milvus migrans "black kites", Neophron pecnopterus "Egyptian vulture", Falco tinnunculus "kestrel", Falco biarmicus "lanner", Falco pelegrinoides "Barbary falcon", Gallinula chloropus "moorhen", Porphyrio prthyrio "purple gallinule", Burhinus Senegalensis "Senegal thick-knee", Haplopterus spinosus "spur-winged plover", Pterocles senegalensis "spotted sand grouse", Columbia livia "rock dove", Streptopelia turtur "turtle dove", Streptopelia senegalensis "palm dove", Clamator glandarius "great spotted cuckoo", Tyto alba "barn owl", Bubo bubo "eagle owl", Athene noctua "little owl", Ceryle rudius " pied kingfisher", Merops orientalis "little green bee-eater", Upupa epops "hoopoe", Ammomanes cincturus "bar tailed desert lark", Ammomanes deserti "desert lark", Galerida cristata "crested lark", Riparia riparia " sand martin", Ptyonoprogn fuligula "African rock martin", Hirundo rustica "swallow", Motacilla flava "yellow wagtail", Pycnonotus barbatus "common bulbul", Cercotrichus galactotes "rufous bush robin", Oenanthe lugens "mourning wheatear", Oenanthe leucopygea "white crowned black wheatear", Cysticola juncidis "fan tailed warbler", Prinia gracillis "graceful warbler", Arcocephalus stentorius "clamorous reed warbler", Hippolais pallida "olivaceous warbler", Anthreptes metallicus "Nile Valley sunbird", Lanius Excubitor "great grey shrike", Corvus corone "hooded crow", Corvus ruficollis "brown necked raven", Passer domesticus "house sparrow", Carduelis carduelis "goldfinch", Bucanetes githagineus "trumpeter finch"	Puffinus Puffinus "Manx Shearwater", Emberiza pusilla " Little Bunting", Stercerarius maccermicki "South Polar Skua", Larus marinus "Great Balck-backed Gull", Merops orientalis "Little Green Bee-eater", Phylloscopus fuscatus "Dusty Warbler", Anthreptes platurus "Nile Valley Sunbird", Passer montanus "Tree Sparrou", Emberiza cineracea "Cinereous Bunting", Emeriza schoeniclus " Reed Bunting", Emeriza aureola "Yellow-breasted Bunting"
Soil fauna	Diptera, Camponotus, Monomortum, Adesmia, Pimelia, Tentebionid, Spider, Tick, Coleoptera, Ants, Thysonura, Odonata, Mollusca, Scorpians, Lepidoptera Reptiles	N/A

Source: Courser, No. 3, The Ornithological Society of Egypt, 1992 and Faculty of Science, Asyut University, 1990

1.6.3 Rare, endanger and protected Fauna

Table 12 shows the number of endangered fauna, and Table 13 shows a list of endangered mammals in Egypt identified by EEAA.

Total and Endangered Fauna in Egypt

Fauna	Total Number of the Species	Number of Endanger Species
Mammals	103	35
Birds	450	16
Reptiles	100	15
Invertebrate	1,422	N/A
Fish	755	70

Sources: Environmental Quality Report of 1996 Published 1997, EEAA.

Endangered Fauna (mammals)

English Name	Scientific Name	Habitat Area
Nubian Ibex	<i>Capra ibex</i>	South of Eastern desert
Nubian wild Ass (Donkey)	<i>Equus asinus</i>	South of Eastern desert
Jungle cat	<i>Felis chaus</i>	Nile Valley at Aswan
Aard wolf "Deeb Osbar"	<i>Proteles cristatus</i>	Alba Mountain south of Red Sea
Genat	<i>Genetta genetta</i>	Alba Mountain , Red Sea
Sunderalls	<i>Meriones crassus</i>	South of Eastern Desert
Burhy Tailed Dipadil	<i>Sekeetamys calurus</i>	Res Sea, Wadi Genbata
Large North African Dipadil	<i>Dipodillus campestris</i>	Kalabsha, Aswan
Greater Egyptian Gerbil	<i>Gerbillus pyramidum</i>	Red Sea, South
Fesser Egyptian Gerbil	<i>Gerbillus girbillus</i>	Red Sea, South
Nile Field Rat	<i>Arvicanthis niloticus</i>	Nile Valley at Aswan and Nubia
Cape Hare	<i>Lepus capensis</i>	Red Sea, Eastern Desert
Egyptian Free-tailed Bat	<i>Tardarida aegyptiaca</i>	Koser and Hurgada, at Red Sea
Horse-shoe Bat	<i>Rhinolophis clivosus</i>	Wadi ElAlaqi, Aswan
Egyptian Slit faced Bat	<i>Nycteris thebica</i>	Luxor and Aswan
Feasser Rat Tailed bat	<i>Rhinopoma hardwickei</i>	Qena, Luxor and Aswan
Ethiopian Hedgahag	<i>Paraechinus aethiopicus</i>	Wadi El Alaqi, Aswan, Gabal Elba
Long-cared Hehgehog	<i>Hemiechinus</i>	North of Eastern Desert
South Sinai Hedgeho	<i>Paraechinus dorsalis</i>	Sinai
Leaf-nosed Trident Bat	<i>Asellia tridens</i>	Upper Egypt
Lesser Egyptian Jarboa	<i>Jaculus jaculus</i>	South Eastern Desert
Ruppell's Fox	<i>Vulpes rueppelli</i>	Eastern Desert
Striped Hayaena	<i>Hyarna hyaena</i>	Eastern Desert
Dorcas Gazella	<i>Gazella dorcas</i>	Eastern Desert

Source: Egyptian Fauna, EEAA,1995

In addition to the above, Minister of Agriculture issued Decree No. 28/1967 to specify endangered animals in Egypt and prevent hunting, trading or exporting all of species as shown in Table 14.

Rare, Endangered and Protected Fauna

Sturnus sp.	Erythropterygia sp	Apus sp	Ardeola sp
Oriolus sp	Scotocerca sp	Caprimulgus sp	Columba sp
Alaudidae sp	Prinia sp	Merops sp	Burhinus sp
Anthus sp	Crateropus sp	Upupa sp	Pluvianus sp
Motacilla sp	Turdus sp	Coracias sp	Cursorius sp
Regulus sp	Monticola sp	Jynx sp	Gruidae sp
Lanius sp	Oenanthe sp	Phoenecopterus ruber	Vanellus sp
Pycnonotus sp	Cercomela sp	antiquorum	Hoplopterus sp
Muscicapa sp	Saxicola sp	Clamator sp	Glareola sp
Phylloscopus sp	Phoenicurus sp	Cuculus sp	Ammortragus L. larvia
Locustella sp	Luscinia sp	Centropus sp	Capra nubiana
Lociniola sp	Erithacus sp	Ciconia sp	Gazella leptoceros
Hypolais sp	Hirundo sp	Plegadis sp	Gazella dorcas
Acrocephalus sp	Delichon sp	Ardea sp	Acinonyx jubatus
Sylvia sp	Riparia sp	Egretta sp	Felis pardus

Source; Minister of Agriculture

1.6.4 Costal Area

The Red Sea is one of richest coral habitat sea in the earth, and has very diverse ecosystem including specially cyanophyceae and tropical fishes and so on.

Several natural communities of mangrove forest to be protected are observed in the surrounding of Marsa Alam, south of the Sinai Peninsula and etc.

1.7 National Parks and Natural Reservation

As mentioned already, the Egyptian Government has established totally 21 Natural Protectorates (national Parks and Natural Reservations) in accordance with the Law 102/1983 to protect the natural resources and endanger bio-diversity as shown in Table 15.

List of the National Parks and Natural Reservations

Name of Park or Reservation	Governorate	Total Area (km ²)	Protection Decree /Year
Ras Mohamed	South Sinai	850	No. 102/1983
El Zaranik	North Sinai	230	Presidential Decree No.1429/1985
Elba	Red Sea	36,500	No. 450/1986
Al Amid	Matrouh	700	No. 671/1986
Saloga & Gazall	Aswan	13	No. 928/1986
Ashtoum & Teniese	Portsaid	160+10	No. 459/1988
Saint Kathrine	South Sinai	5,750	No. 613/1988
El Alaki Valley	Aswan	275	No. 945/1989
Rock Forests	Cairo	6.6	No. 944/1989
El Assiouty Valley	Assuit	24	No. 942/1989
El Rayan Valley	Fayoum	1,225	No. 943/1989
Karron Lake	Fayoum	250	No. 943/1989
El Hasana Doom	Giza	1	No. 946/1989
Sanor Valley Cave	Bani swaif	9	No. 1204/1992
Nabk	South Sinai	600	No. 1511/1992
Abu Galoum	South Sinai	500	No. 1511/1992
El Brolos	Kafr El Shiekh	460	No. 1444/1998
Nile River Island	Nile River	8,775	No. 928/1986
Taba	South Sinai	3,590	No. 316/1998
El Ahrash	North Sinai	4	No. 1429/1985

Source; EEAA Natural Reservations Guide for Egypt, 1994

Attractions of ecosystems and others identified in each Natural Protectorate can be summarized as shown in Table 16. In the table, columns filled with oblique line identify principal attraction of each park and reservation.

Attraction of National Parks and natural Reservations

Natural Protectorate	Year of Establishment	Type of unique ecosystem					
		Bird	Flora	Fauna	Wild life	Marine	Geology
Ras Mohamed	1983						
El-Zaranik	1985						
Elba	1986						
Al-Amid	1986						
Saloga& Gazal	1986						
Ashtoum & Teniese	1988						
Saint Kathrine	1988						
El Alaki Valley	1989						
Rock Forest	1989						
El Assioouty Valley	1989						
El Rayan Valley	1989						
Karron Lake	1989						
El Hasana Doom	1989						
Sanor Valley Cave	1992						
Nabk	1992						
Abu Galoum	1992						
El Brolos	-						
Nile River Islands	-						
Taba	1998						
El Ahrash	1997						

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

1.8 Pollution

1.8.1 Air Quality

It consider that the other sources of air pollution are mostly from industrial establishments (sugar industry and textile mills in Qena; Chemical industry 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).

Recently, the EEAA in cooperation with Danish International Development Authority (DANIDA) of Danish Governmental organization have started to setup an air monitoring stations in Qena (Kom Ombo), Luxor and Aswan governorates as shown in Figure 2. The stations have operated from July 1999. Table 17 shows the data of SO₂ and O₃ obtained from such stations.

Air Quality (August 1999)

(Average concentration of 24hour Monitoring)

Monitoring Position	SO ₂ (g/m ³)		O ₃ (g/m ³)	
	Min.	Max.	Min.	Max.
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 Study Team, October 3, 1999.

The data of O₃ concentration in the air in these areas show less than the maximum limit recommended by WHO (World Health Organization) which suggests that the maximum concentration of O₃ should be in the range of 150-200 g/m³ for every exposure hour.

In the Red Sea area, less information regarding air pollution is available at present. However, the Red Sea Governorate covers 130,000 km² of which only 0.05% is occupied with human/commercial activities. Therefore, it can be considered that 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 lead to boost increase in total quantity of air pollutants SPM , Benzene (C_6H_6) and so on will make easily surrounding air quality and human health worse.

1.8.2 Water Pollution

(1) Water supply and its consumption

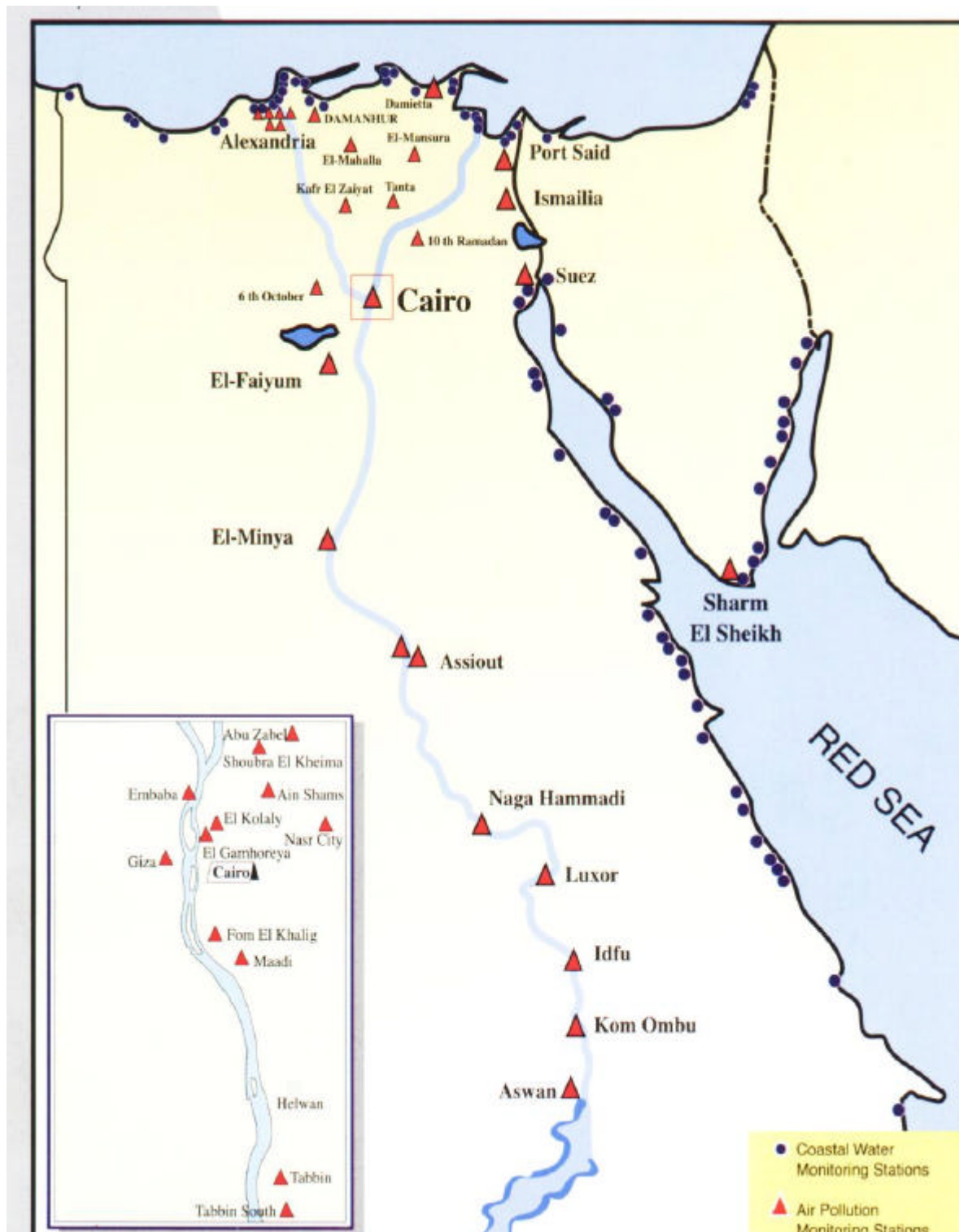
The Nile River is the main source of water in Egypt. It supplies about 97% of the water requirements of Egypt. According to the Nile Water Agreement, the Nile supplies 55.5 billion m^3 of the water. In addition to the river, 4.7 billion m^3 of groundwater and 19 million m^3 of water made from desalination plants are supplying the water respectively. There is also an additional of 3.9 billion m^3 of agricultural drainage water and 600 million m^3 of house-use water are recycled for irrigation. Out of the water used for irrigation, it is estimated that almost 70% of it will be lost to the drainage channel and to the underground water reservoir. Table 18 shows the water consumption ratio by the sectors in Egypt.

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

Monitoring Stations



Source: EEAA

(2) Sources of water pollution

The sources of water pollution in Upper Egypt are summarized as shown in following Table 19.

Sources of Water Pollution in Upper Egypt

Source	Drainage	Industry	Sewage
%	58.2	32.1	9.7

Source: Environmental Quality Report of 1996, EEAA

(3) Drainage Channels

From Aswan to near Cairo there are 67 drainage channels pouring into the Nile River directly or indirectly with a total of 4 million m³ per year from agriculture activities and some sewage sources (treated or semi-treated). It is considered to agriculture drainage water is contaminated by several kind of pollutants such as nutrients, pesticides and etc.

(4) Industrial Waste Water

Industrial wastewater is critical sources of pollutants in the Upper Egypt and the Gulf of Suez (i.e. north of the Red Sea coast). The present situation of the industrial waste water in the study are summarized as follows;

c. Upper Nile area (Quna, Luxor and Aswan)

Around 190 million m³ of industrial wastewater have been detected to be disposed into the drainage channels in Upper Egypt every year. The industrial waste water increases in the salinity of the Nile River from 130mg/l at Aswan to 250mg/l near Cairo (Source; Environmental Quality Report of 1996, published 1997 by EEAA).

In Qena, industrial wastewater is coming from the aluminum complex, sugar industry, plastic, textile mills, and some food industry. In Aswan the industrial wastewater are coming from sugar and chemical industry. However, Luxor has no such sources of industrial wastewater. To comply with the environmental law No. 4, industrial facilities have to set up a suitable wastewater treatment facility. An aluminum industrial complex has set up a precipitation tanks for suspended materials. A sugar industry has set up facilities for recycling of organic waste water.

d. Red Sea area

In Red Sea, especially the north part of the Red Sea area is remarkably active in oil industry and shipping activities. In the area, the EEAA newly established coastal water quality monitoring stations, in cooperation with Danish International Development Authority (DANIDA). From the stations several data on the coastal water quality are obtained as shown in Table 20. All parameters represent an average of 13 data of thirteen 13 monitoring stations located along the Red Sea coast.

Eutrophication in Red Sea Coastal Surface Water (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 Study Team, October 3, 1999.

(5) Sewage

e. Upper Nile area (Quna, Luxor and Aswan)

According to officials in Aswan and Luxor, trickling filter and oxidation pond is major treatment facility of wastewater in these governorates.

Sewage system of the city of Luxor does not cover all its resident areas. The collected sewage is treated in open oxidation bond and trickling filter facility. The treated sewage discharge to the Nile River. The rest of the residential areas have been encouraged to use septic tank disposal, which contributed significantly to the contamination of the ground water. Sewage of the cruise boats is also disposed to Nile River. In Qena only 15% of the residential areas are covered by sewage disposal system. Leaching pit is the most common facility to collect sewage. In Aswan only 40% of the governorate covered by sewage disposal system.

f. Red Sea area

In the Red Sea coastal area, some of resort hotels operate individual sea water desalination plant for getting own water consumption, and waste water treatment plant for their sewage water. The treated sewage is utilizing for agricultural including their golf course maintenance and the treatment process sludge is used as the soil conditioner. Increase in these operations and act in large scale has a potential threat to the ecological balance of the surroundings. As a matter of course, discharge of wastewater to the Red Sea is being prohibited by the related laws for conservation of the marine natural resources and the environment.

Based on the above, the sources of water pollution in the study area can be briefly summarized as shown in following Table 21.

Sources of Water Pollutants in the Study Area

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 Industry, Textile Mills, Aluminum Complex	Only 15% of the area are 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	Harugada and surrounding tourism area	None	Hotels, related facilities, and desalination plants

1.8.3 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. Therefore, no data have been released from any accredited organizations in Egypt regarding measurement of noise and vibration status of the study area.

1.8.4 Solid Waste

(1) Solid waste management in each study area

Present condition of the solid waste management in each study area can be summarized as follows;

a. Upper Nile area (Qena, Luxor and Aswan)

In Qena, domestic solid waste being collected through governmental, private waste collectors and NGO by a door-to-door collection. With total of 535 employees, the solid wastes are being collected using handcarts and open tractors. Another 179 employees are in charge of transportation to 12 public landfills area. 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 agriculture solid waste into animal feeds, and composting factories to produce organic fertilizer and so on.

The situation in Luxor and Aswan are almost similar to Qena. In Luxor, there is no large industry as a source of 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.

b. Red Sea area

The Red Sea area has been divided into 7 sectors and 22 development touristic centers along the coastal sea. The solid wastes generated from these centers are collected and disposed daily by the each owner of the tourism facility. The segregation and separate collection are not implemented in this area. However, lots of them are transported to a city compost facility. 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.

(2) Generation Amount

Table 22 shows that average generation 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.

Average Generation of Municipal Solid Waste in each Study Area

(Average amount/day, wet base)

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 summarized as shown in the Table 23.

Unit Amount of Solid Waste in the Study Area

Governorate	Urban (kg/capita/day)	Rural (kg/capita/day)
Qena	0.6	0.25
Luxor	0.6	0.00
Aswan	0.6	0.25
Red Sea	0.4	0.3

Source; Solid Waste Survey, EEAA 1999

2. Environmental Protection

2.1 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 at 11th September 1971 and modified in 1980, does not refer directly to the environment. However, it obligates the Government to protect the people rights to live in good conditions and to provide the Egyptian population with services on welfare.

(2) Decrees, Laws and Regulations

Decree No. 631/1982

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

Law 4 /1994

In 1994, Egyptian Government promulgated the Public Law No.4 to strength activities of environmental administration, protection and development in Egypt. This is Egypt's first modern and comprehensive law regulating the environment as a whole including air, water, earth, living creatures and activities of human. This law consists of several articles as shown in Table 1.

List of Articles in the Environmental Law No. 4/1994

No. of the Article	Contents
1	General Provisions
2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13	Environmental Affairs Agency
14, 15 and 16	Environment Protection Fund
17 and 18	Incentives
19, 20, 21, 22, 23, 24, 25, 26, 27 and 28	Development & Environment
29, 30, 31, 32 and 33	Hazardous Materials & Wastes
34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46 and 47	Protecting of Air Pollution
48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58 and 59	Protection of Water Pollution
60, 61, 62, 63, 64 and 65	Pollution with Harmful Materials
66, 67 and 68	Pollution with wastes of Sanitary Drainage & Garbage
69, 70, 71, 72, 73, 74 and 75	Pollution from Land Sources
76 and 77	International Certificates
78, 79, 80, 81, 82 and 83	Administrative And Judiciary Procedures
84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 and 101	Penalties
102, 103 and 104	Conclusive Provisions

Source: Official Journal Issue 5, Feb 3, 1994

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

Decree No. 338/1995

The law 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.

Law No. 102

In 1983, the Egyptian Government enacted Law No.102 concerning the establishment and management of natural protectorates. At present, totally 21 natural protectorates exist and 10 protectorates have been proposed in whole Egypt territory as shown in Figure 2.8.1.

Others

Following Table 2 is a list of other laws, decrees and regulations related to environment in Egypt.

List other environmental laws, decrees and regulations

Laws, Decrees and Regulations	Contents
Decree No. 8/1983	Protection of the river Nile & waterways against pollution
Decree No. 106/1983	Implementing some provisions of Law No. 102/1983 concerning the natural reserves
Decree No. 338/1995	The executive statutes of Law on Environment as enacted by Law No. 4/1994
Decree No. 349/1979 (Ministry of Agriculture)	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 suits for drink & human use
Law No. 48/1982	Re-protection of the River Nile & waterways against pollution
Law No. 53/1966(Ministry of Agriculture)	Protection of birds and wild life (Article 3)
Law No. 93/1962	Liquid wastes disposal
Law No. 101/1985	Fund for environmental and touristic development
Law No. 571/1978	On getting rid of pools and swamps and prevention of digging works

Source: Information and Decision Support Center of the Cabinets,1999

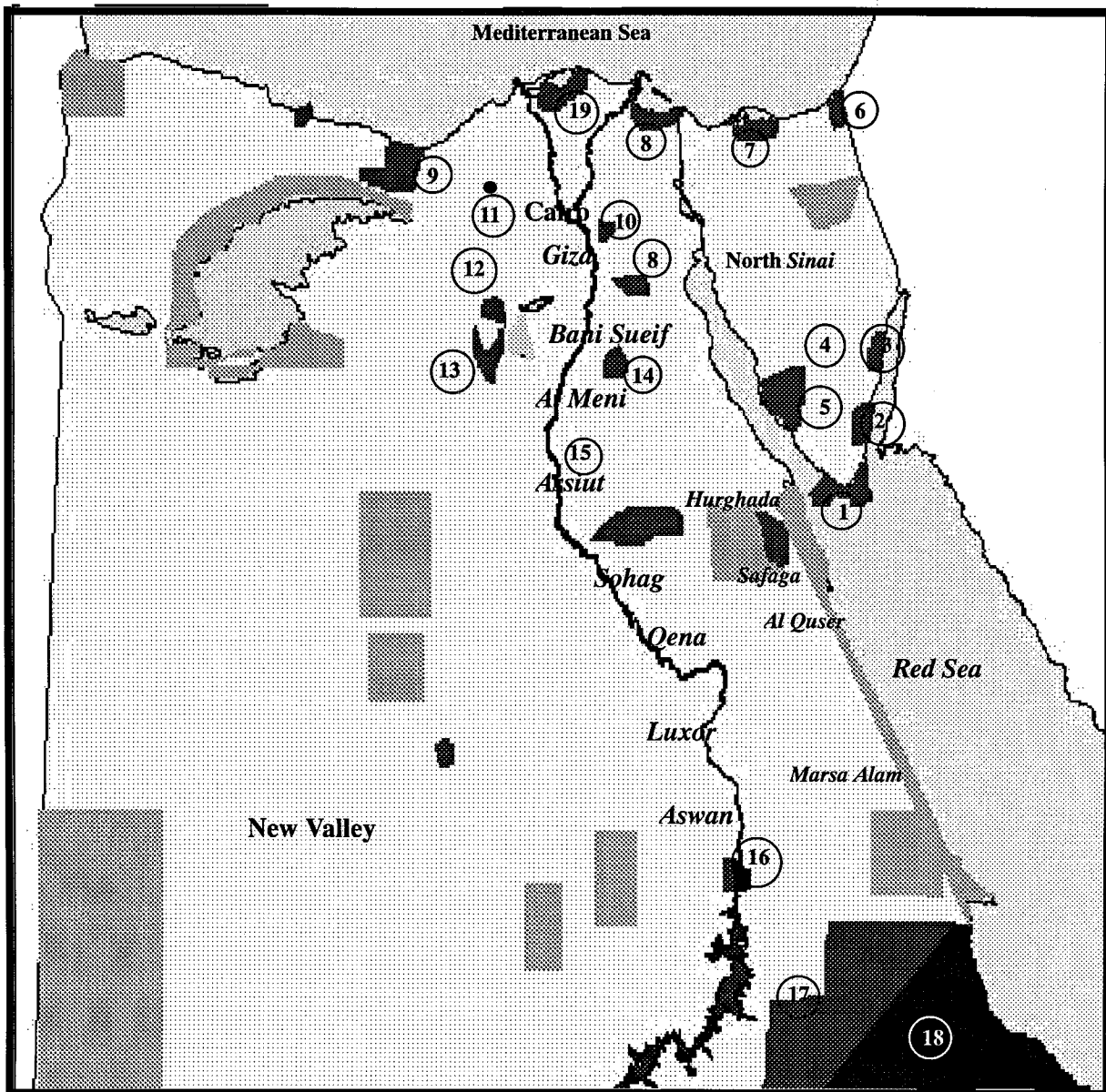
(3) International Conventions, Treaties and Agreements

Principal international and/or regional conventions, treaties and agreements concerning environmental conservation ratified or signed by the Egyptian Government are shown in Table 3.

List of International and/or Regional Conventions, Treaties and Agreements

International Convention and Treaty	Ratification Year
Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal	1993
Vienna Convention on Protection of Ozone Layer	1988
Montreal Protocol (Ozone Layer Protection Treaty)	1988
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)	1978
Convention on Wetlands of International Importance Especially as Waterfowl Habitats, Ramsar Convention	1988
United Nations Convention on Biological Diversity, Conference on the Environment and Development	1992
United Nations Convention on Climatic Change Conference on the Environment and Development	1992
Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)	1974
United Nations Convention on Law of the Sea (Montego Bay)	1983
Regional Convention of the Conservation of the Red Sea and Aden Environment	1990
Convention on Prohibiting Marine Pollution by dumping of Wastes and Other Matter	1992
Protocol of year 1978 related to the International convention for the prevention of pollution from ships	1986
International Convention for the Prevention of Pollution of the Sea by Oil	1963
Convention on Prevention of Fauna and Flora in the Natural State	1936
International Convention for the Regulation of Whaling	1981
Agreement of the Establishment of a General Fisheries Council for the Mediterranean Sea	1952
International Plants Protection Convention	1958
African Convention on the Conservation of Nature & Natural Resources	1969
Convention on the Conservation of Migratory Species of Wild Animals	1983
International Tropical Timber Agreement	1986
Protocol concerning regional cooperation in combating pollution by oil and other Harmful substances.	1990

Source: Arabian Environment Protection Experts Group (AEPEG) Published Survey, 1997 and Study Team 1999



Existing Protectorate
 Proposed Protectorate

Existing Protectorate		
1- <i>Ras Mohamed</i> Protectorate	8- <i>Ashum Elgamil</i> Protectorate	15- <i>Wadi Asyuty</i> Protectorate
2- <i>Nabq</i> Protectorate	9- <i>Omayed</i> Protectorate	16- <i>Saluga Ghasal</i> Protectorate
3- <i>Abu Galum</i> Protectorate	10- <i>El Maasi Petrified</i> Protectorate	17- <i>Wadi Alaqi</i> Protectorate
4- <i>Talia</i> Protectorate	11- <i>Hassana Dome</i> National Monument	18- <i>Elba</i> Protectorate
5- <i>Sant Cathrine</i> Protectorate	12- <i>Qarun</i> Protectorate	19- <i>Borollos</i> Protectorate
6- <i>Al Ahrash</i> Protectorate	13- <i>Wadi Alrayan</i> Protectorate	20- <i>All River Nile</i> Islands
7- <i>Zaranik</i> Protectorate	14- <i>Wadi Sannur</i> Cave	21- <i>Wadi Deola</i> Protectorate

Natural Protectorate

(4) Environmental Impact Assessment (EIA) of Egypt

Legislative Background of EIA system

Legislative background of environmental impact assessment (EIA) system of Egypt is summarized as shown in Table 4.

Legislative Background of the EIA System	
Law and Decree of EIA	Contents
Law No. 4/ 1994	- Protection of land & environment from pollution - Protecting Air Environment from pollution - Protection of water environment from pollution penalties - Conclusive provisions
Decree No. 338/1995	- Protecting land & environment from pollution - Protecting air & environment from pollution - Protecting of water environment from pollution - Final provisions

Source: Annual Book EEAA

The Law No.4/1994 has formulated official procedures of the EIA system of 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 have 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 any other projects which would have an impact on the environment. Also included on this list are all establishments or facilities to be constructed on the banks of Nile river, its branches and canals; in touristic and historical monument areas; in high population density areas, on sea and lake shores, in protected areas and etc.

The Egyptian Environmental Affairs Authority (EEAA) has prepared guideline of the EIA procedure. Establishments and projects that are required to conduct the EIA are listed in the guideline as well. Fig. 2.8.2 shows brief flow of the EIA procedure. As for the coastal area, specially, the EEAA has prepared "Environmental Guidelines for Development in the Coastal Areas" in 1996, "Environmental Impact Assessment, Guidelines for Development of Ports, Harbors and Marines (SEAM Project) and etc.

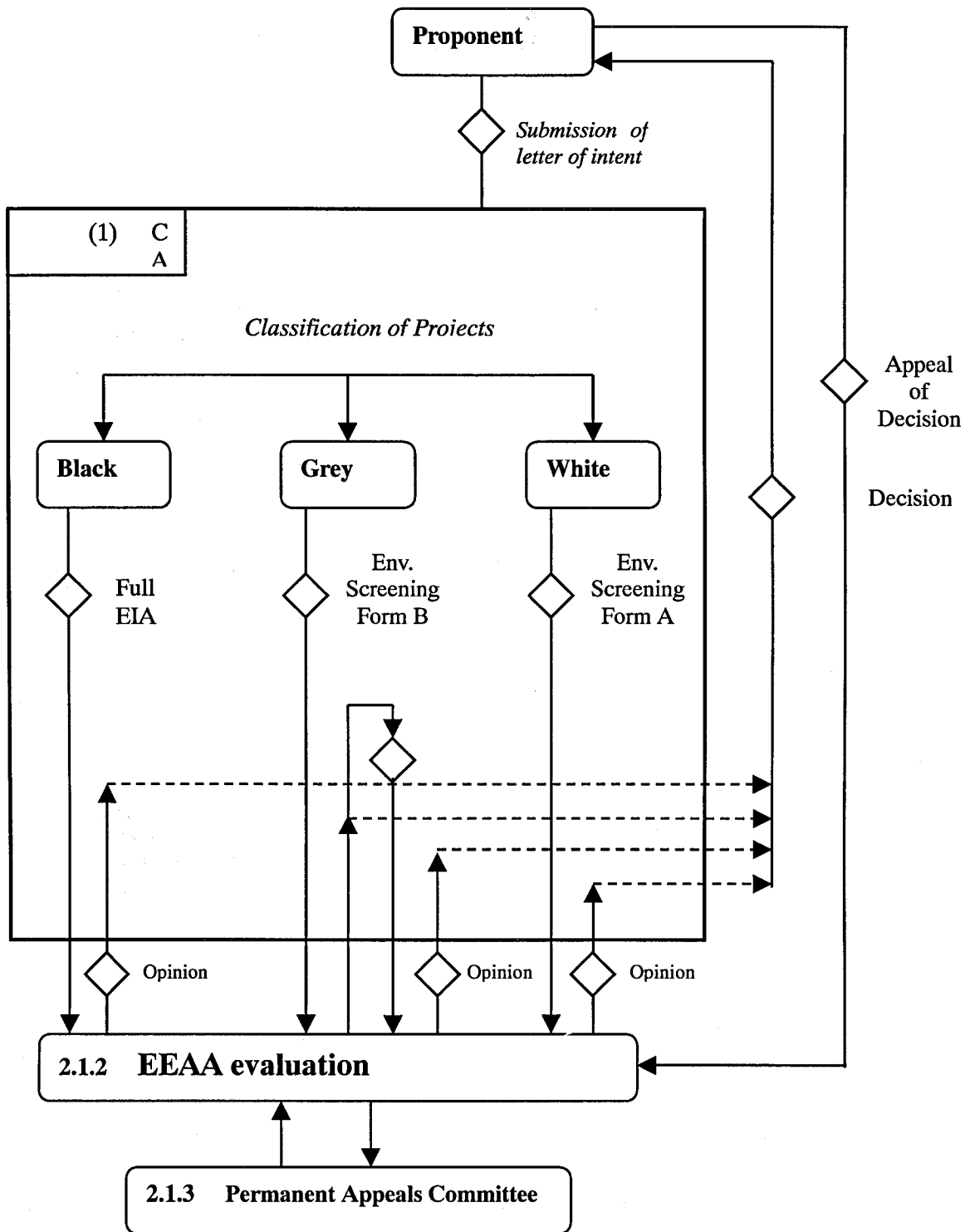
Institutional Framework of the EIA

Egyptian Environmental Affairs Authority (EEAA): As mentioned already in the above, the 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 following two Sectors;

- Environmental Quality Sector
- 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 the Law No.4/1994, for all-new project or extensions of existing project, an EIA report must be prepared and submitted with an application to the licensing authority. Usually, authorities, ministries and other governmental entities (i.e.; Tourism Development Authority,



◇ Action to be performed
 All decision will be copied to EEAA for inclusion in the EIA register.

(Source; EIA Guideline, EEAA)

EIA Procedure

Ministry of Industry, Ministry of Agriculture, General Authority of Investment, General Authority for Agricultural Development, and others) which are dealing 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 constructively with Tourism Development Authority (TDA), developers and design professionals at an early concept stage of each new tourism development in order to influence and provide technical input to design and environmental protection measures.

In the TDA, Environmental Department has been organized under the Directorate of Tourist Area Development. This department has responsible to let proponent of the each specific project conduct EIA study, and to submit the EIA report to EEAA for the permission. And it has launched a tourism development with following roles (Source; Environmental Department of TDA);

- Environmental survey and inventory work for tourism development regions (site analysis).
- Environmental assessment of conceptual tourism development plans (environmental screen).
- Conserving unique cultural and natural resources for development.
- Developing the urban and touristic work from a socio-environmental point of view, TDA, has planed, construct and monitor two major projects in Gulf of Aqaba; the “Bedouin” Center and the Environmental Center.
- TDA cooperates with the USAID in special studies on the local and immigrated birds ecology and (spa) tourism to verify the touristic products.
- TDA cooperates with the EEAA in preparation of environmental guidelines, regulations and management plans for tourism development areas.
- TDA cooperates with the EEAA in reviewing and evaluating of EIA of private projects submitted to the TDA approval.
- TDA cooperates with the EEAA in the environmental awareness for the investors (conferences, publications, discussions and etc.).
- Flood studies and protection works in Gulf of Aqaba (South of Sinai) and the Red Sea region to help the investors in the developing process.

(5) Other Official Entities related to Environmental Issues and Protections

Different organizations and Miniseries in Egypt are obliged to enforce the Environmental Law depending on the type, site of violation;

- Open soft Water courses violations are enforced through Ministry of Interior (Open-Water Police Department)
- Monitoring vehicle exhaust emissions, traffic and noise violations are enforced through Ministry of Interior (Traffic Police Department).
- Violation of Nile river and northern lakes are enforced through Ministry of Water Resources and Public Works
- Solid and liquids municipal waste violations are enforced through local Governorate
- Health-related violation (food handling, work environment, staff hygiene, drinking water standard, monitoring water quality) are enforced by Ministry of Public Health
- Ministry of Industry and Mineral Resources (safety of the work place, ISO14000 information and guide lines)

(6) Local NGO concerned with Environment

Non-governmental organizations are very active in Egypt. Law No. 153 and its regulations have been issued in 1999 that is restructuring all NGO (Non-Governmental Organization) activities in Egypt. The new regulations allow NGO to receive supporting fund from international organization or any other sources as long as there is a governmental permission to receive such a fund. The Minister of Social Affairs is the responsible governmental official to give acceptance for setting up any new NGO and accept their areas of the activity. Environmental activities are very supportive and government is encouraging interested groups to setup NGOs to legalize their activity and be able to receive a support from both abroad and from internal sources. In order to give more support to the Environmental NGOs, the EEAA is conducting the followings:

- Representative of one of the NGO should be member of the EEAA Board.
- The EEAA set up a National Committee of Environmental NGOs with a cooperation of Minister of Social Affairs.
- Most of the work and activities of the NGOs are in the area of awareness through seminars and workshop and school education.

Following are the major international funding agencies, which give support to NGOs for specific projects;

- DANIDA (Denmark) in cooperation with local NGO of Aswan and Qena is supporting projects to improve the public perception of some environmental issues.
- USAID (USA) is supporting school project of GLOBAL
- CIDA (Canada) is supporting a project to improve the resources management through cooperation between NGO and private sector.

The following Table 5 is a list of major NGOs in the field of Environment in Egypt.

List of Egyptian NGOs in the field of Environment (1)

Local NGO	Activity Area	Roles and Responsibilities
Trees Lovers Society	Cairo	To preserve trees. To advocate forestation activities
The Egyptian Chemical Society	Cairo	To upgrade the academics standards of workers in the fields. To coordinate with other agencies in the fields of development & the environment
The Productive Cooperative of Basaisa	Zagazig	To improve the economic social & environmental conditions of the local community
The Society for beautification & Improvement in the Marqaz & City of Tanta	Tanta	To develop local communities. To coordinate efforts to create public awareness of the city's problems and enhance their implementation
Friends of The People Society	Cairo	To upgrade the living standards of the local community of Sayeda Zeinab
El Fath Society for Environmental Development	Suez	To increase the level of awareness of environment preservation, protection of arable land & forestation. To promote social activities
The Egyptian Red Crescent Society	Cairo	To extend aid to victims of natural disasters. To train young people to create awareness of public & environment
The Society for Development of Services in Zamalek District	Cairo	To remove /garbage & waste from Zamalek. To follow up in lighting services & trees planting
The Heliopolis Service Development Society	Cairo	To upgrade the living standards of the district of heliopolis
The Shabrawy Mosque Charity Society	Cairo	To promote scientific, cultural, & religious awareness
The Society for Environmental Protection against Pollution	Cairo	To provide social, cultural & developmental services to community members. To define the important role of recycling
The community Service Society in Azbakia	Cairo	To upgrade local community services in Azbakia
The Integrated Rural Technology Center for training & Production	Zagazig	To conduct studies & research on rural environment To provide services to increase production & improve quality
The Urban Development Society of Islamic Cairo	Cairo	To preserve the popular heritage & architectural structure
The Arts & Islamic Monuments Society	Cairo	To protect Islamic heritage & how environmental factors affect it
The Egyptian Society for Earth Sciences	Qualiubia	To preserve agricultural & ensure its proper utilization To cooperate with research centers & industrial institutions in the field of research. To promote national awareness of the importance of renewable energy
The Civil Society for Environmental Protection, "Friends of the Environment" Society	Cairo	To mobilize local efforts & resources toward environmental protection
The National Society for Environmental Protection	Giza	To identify pollution problems in Egypt & propose appropriate solutions. To create public awareness of environmental issues

Source: Directory for the NGO in the field of Environment, EEAA, Office Technical Cooperation for Environment

List of Egyptian NGOs in the field of Environment (2)

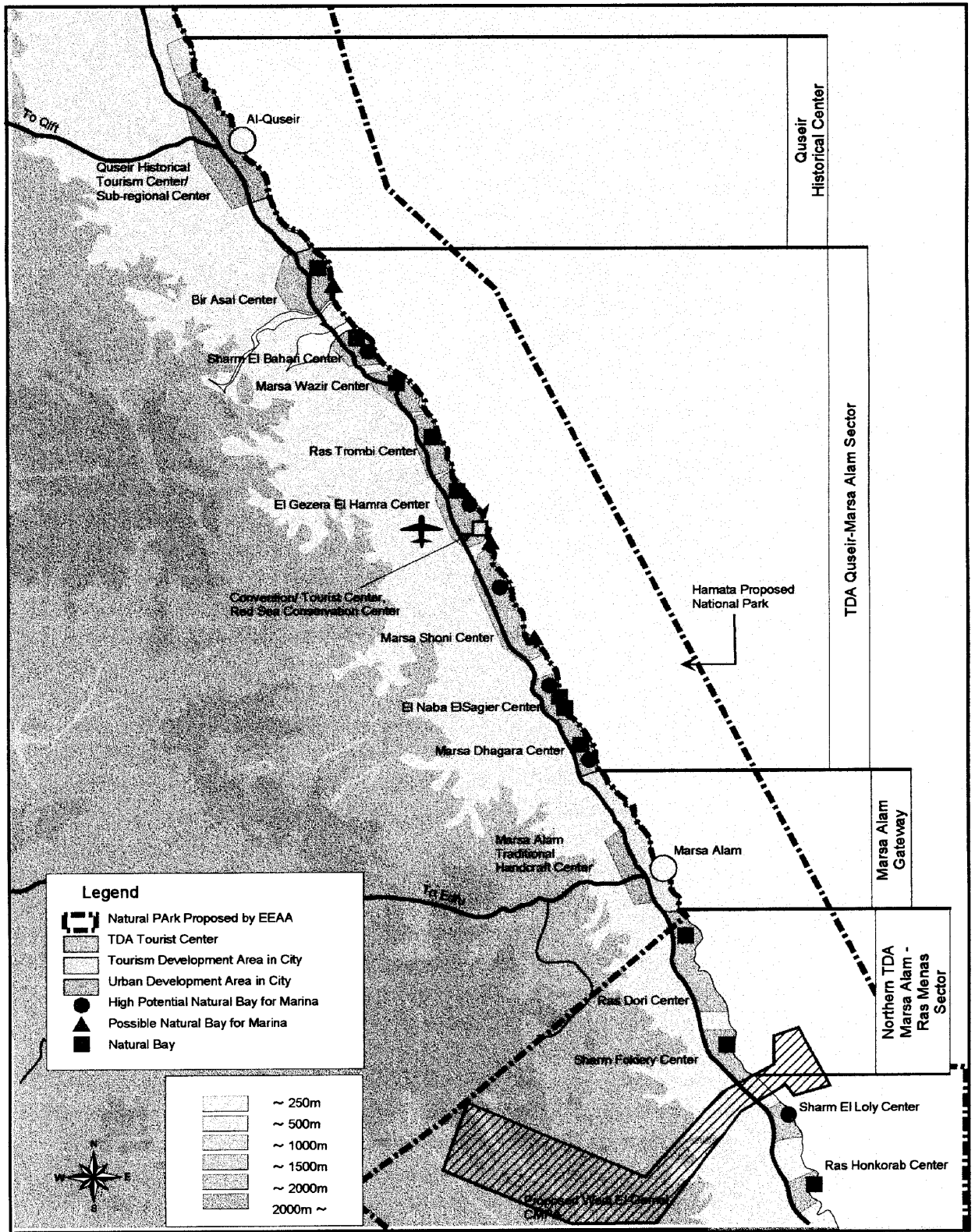
Local NGO	Activity Area	Roles and Responsibilities
The Central Society for Environmental protection	Qalubia	To increase awareness in relation to environmental issues. To safeguard against water pollution. To develop, protect & reutilize natural resources
The Arab Office for youth & Environment	Cairo	To promote environmental awareness in order to introduce behavioral changes especially among young generations. To maintain links with decision makers in order to set priorities
"Friends of the Environment" Society in Alexandria	Alexandria	To protect, maintain, & improve the environment in the Governorate of Alexandria
Friends of Environment & Development Society (FEDA)	Alexandria	To undertake activities that are necessary for realizing sustainable development especially in desert areas
Environment Preservation Society	Giza	To prevent environmental degradation & improve environmental conditions
The Society for the Protection of nature	Fayoum	To enhance environmental protection
Baladi Society	Cairo	To heighten public awareness of cleanliness
The Society for the Protection of the Environment	Cairo	To increase the level of environment awareness
The Society for The Protection of The Environment & Resources	Assiut	To introduce sound environmental models & offer technical consultation
Khadra Society for the Development of the Environment & its Protection	Suez	To upgrade & protect the environment
The Egyptian Youth Society for Development & the Environment	Cairo	To promote environmental awareness among youth
The Egyptian Society for Health & Environmental Legislation	Cairo	To enhance the development of resources & communities
The society for Health & Environmental Development	Cairo	To support & coordinate efforts in the fields of health, environment & development
The Egyptian Society for The Development of Packaging & Wrapping	Cairo	To develop packaging & wrapping methods in a way that would ensure the safety of the consumer, product, environment & national economy
The Egyptian Society for industrial Medicine	Cairo	To undertake scientific & training activities in the fields of industrial medicine & environmental health
The Egyptian Society for Industry & Environment	Alexandria	To increase the level of environmental awareness among industrialists. To enhance the development of industrial technology & promote the use of clean technologies
The African Society for Environmental Mutagens	Cairo	To promote research on the effects of environmental pollution on heredity in African countries
The Clinical Society- Ain Shams Faculty of Medicine	Cairo	To conduct medical research & to develop medical studies
The General Society for Prevention of Bilharzias & Endemic Diseases	Cairo	To combat Bilharziasis & Endemic diseases
The Egyptian Society for Community Medicine	Cairo	To upgrade the standards of community medicine
The Egyptian Society for Tropical Diseases	Cairo	To promote awareness and provide consultation on the combat of tropical diseases
The Egyptian Society for Toxicology	Cairo	To upgrade the academic & professional standards for those working in the field of toxicology
The Egyptian Society for Behavioral Medicine	Cairo	To promote scientific activities to maintain links between the parties involved in the field of basic medical sciences
The Egyptian Society for Medical Information Systems	Cairo	To integrate theoretical & practical aspects into medical & health information systems. To promote awareness of the most recent scientific & practical developments in relation to medical information systems
The Egyptian Society for Marine Science & Technology	Cairo	To enhance the development of marine technology
The Egyptian Society for Preservation of Natural Resources	Cairo	To conduct research on natural resources & means of its preservation. To elaborate on the importance of wildlife. To advocate the utilization of some desert areas for tourism. To study underlying causes of environmental pollution
The Egyptian Wild Life Society	Giza	To increase awareness on wild life related issues. To contribute to the preservation of endangered species through a program that aims at the establishment of educational & breeding centers. To enhance foreign assistance & increase international cooperation in the preservation of wild life. To assist in an integrated survey of wildlife including an evaluation of critical environments. To extend technical assistance to governmental & non-governmental authorities
The Egyptian Nutrition Society	Cairo	To enhance scientific cooperation between parties interested in the field of nutrition. To promote research in nutritional science. To participate in upgrading health standards through improved nutrition

Source: Directory for the NGO in the field of Environment, EEA, Office Technical Cooperation for Environment

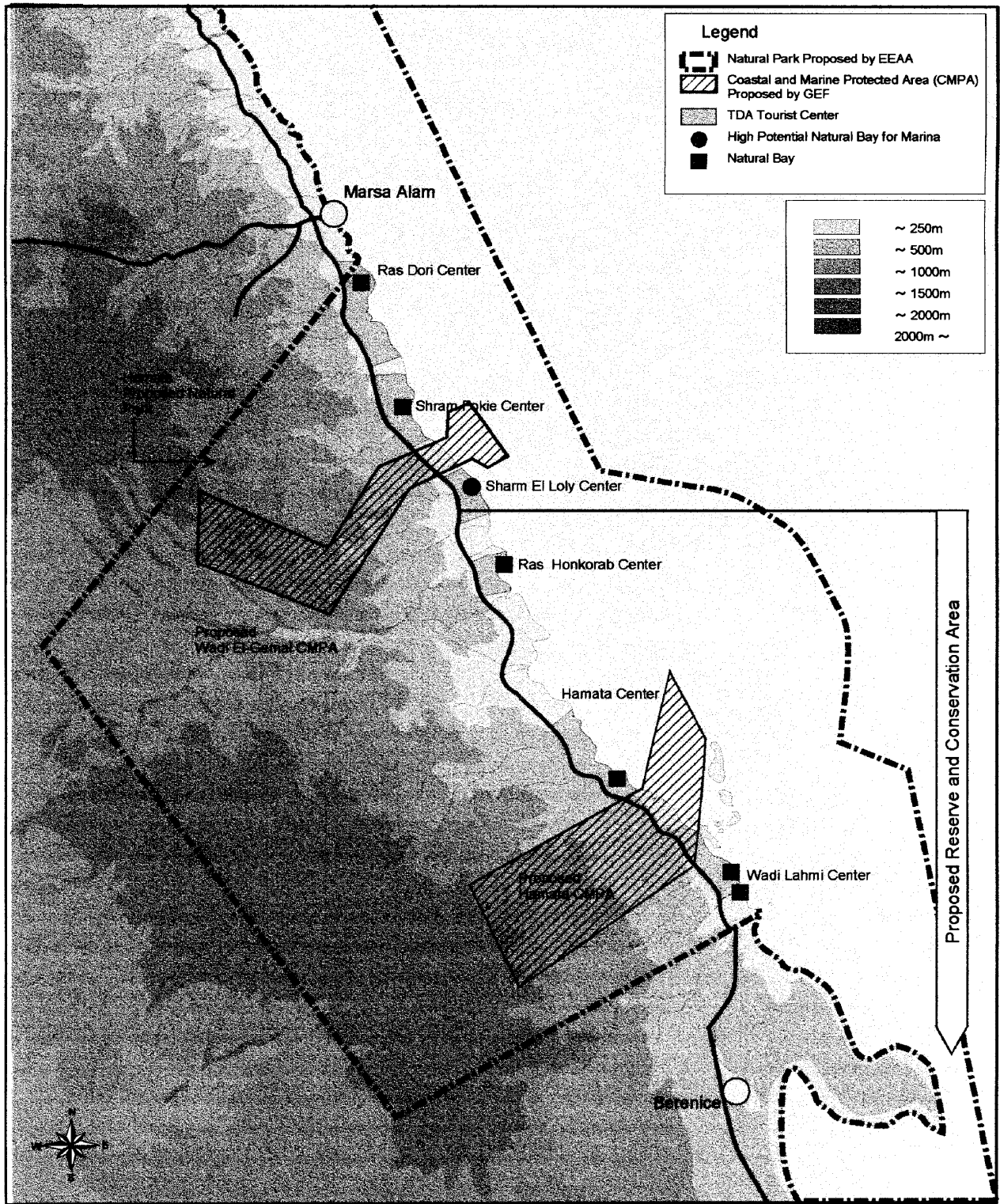
List of Egyptian NGOs in the field of Environment (3)

Local NGO	Activity Area	Roles and Responsibilities
The Society for Nutritional Science & Technology	Cairo	To enhance the progress of nutritional studies & technology. To promote research activities & facilitate information transfer & communication between society members, research members & institutions worldwide
The Arab Society for the History of Pharmacology	Cairo	To study the side effects of chemically-based medicines. To enhance the cultivation & export of medicinal & aromatic plants
The Egyptian Society for Genetics & Heredity Sciences	Giza	To encourage information transfer & cooperation between those working in the field
The Egyptian Society for Pest Control & Environmental Protection	Alexandria	To publish a journal focusing mainly on the study of pesticides
The Egyptian Botanical Society	Giza	To develop the academic standards in botany
The Society for Plant Diseases	Giza	To support research on plant diseases. To create channels of communication between those working in the field of plant diseases. To maintain links of scientific cooperation with other organizations
The Egyptian Society for Zoonoses	Giza	To improve health standards for cattle production. To study & treat diseases & epidemics. To provide medical consultation & disseminate information. To enhance medical performance in the management of cattle diseases
The Egyptian Society for Entomology	Cairo	To promote the study of entomology
The Egyptian Society for Zoology	Giza	To increase level of awareness of care & protection of animals
The Egyptian Society for Poultry Science	Alexandria	To promote research in poultry science
"Friends of Marine" Society	Cairo	To increase the level of awareness of marine protectorates & marine life
The African Society	Cairo	To care for African Student affairs
The Arab Organization for Human Rights	Giza	To support human rights by creating awareness of those including the right to a clean environment. To defend human rights against violation
The National Society for Technological & Economic Development	Cairo	To coordinate the effort of experts & specialists in various fields to realize the objectives of technological & economic dev.
The Egyptian Compendium for Scientific Culture	Cairo	To enhance the standards of scientific culture
The Scientific Organization for Arab Women	Giza	To enhance the role of women in the field of scientific research
The Art & Society Group	Cairo	To increase the level of public awareness. To develop & preserve the society from an environmental & cultural prospective
Hurghada Environmental Protection and Conservation Association (HEPCA).	Red Sea	The protection conservation of coral reefs and other marine ecosystems in the Red Sea area.
Safaga Oceanic Society (SOS)	Red Sea	Make Safaga a prototype of environmentally sound development along the Red Sea Coast.

Source: Directory for the NGO in the field of Environment, EEAA, Office Technical Cooperation for Environment



Tourism Development in the Mid Red Sea (1)



Tourism Development in the Mid Red Sea (2)

Social Condition

Appendix 7 Social Condition

(1) General

1) Qena Governorate

Qena is one of upper Egypt Governorates which extends for 240 km along the *Nile* river to the north of *Aswan* Governorate, south of *Sohag* Governorate, west of *Red Sea* Governorate, and east of *WadiEl Gadid* (New Valley) Governorate. *Qena* Governorate consists of 11 districts, 11 cities and 51 local village units with 135 villages and 1,637 *hamlets*¹⁾. Total area of *Qena* is 10,265.4 km², and of which inhabited area is 1,609.65 km² (namely 15.68 % of the total area). The population is estimated as 2,545,030 at the beginning of 1999.

As an agro-industrial governorate, *Qena* cultivates sugar cane, tomatoes, banana, sesame, and *karkadaih*. The governorate has sugar, aluminum, spinning and weaving industries. It is also rich in historical and archeological attractions from different periods of Pharaonic, Christian and Islamic civilizations.

For future development of the governorate, following two industrial zones have been established.

- **Kallaheen industrial zone in Qeft city**; about 7 km from *Cairo - Aswan* road and extends over an area of 595 *feddans*²⁾. In this zone, six factories have been established and started the operations and 13 factories are under construction.
- **Hoo industrial zone in Naja Hammadi city**; about 15 km from *Naja Hammadi* City and extends over 636 *feddans*. Development of this zone is underway to complete its infrastructure.

Also, two new cities are being planned, New *Qena* and New *Naja Hammadi* which are expected to construct many roads and avenues for urban and economic development and job opportunities, specially for young generation.

2) Luxor City

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. The city is the capital of *Luxor* District and located on the eastern bank of the *Nile* river, 665 km south of *Cairo* and 60 km south of *Qena* City. Total area of the City is 90.76 km².

Luxor City is the most famous tourism attraction in Egypt, as it contains about one sixth of the world's monuments. Consequently, economy of the city depends largely on tourism sectors, and investment in tourism projects is being encouraged, in addition to other sectors such as land reclamation, garments industry, maintenance and catering of tourist ships, etc.

3) Aswan Governorate

Aswan Governorate is in southern part of Egypt. The governorate is bordered by the Republic of *Sudan* from the south, *Red Sea* Governorate from the east, and *Qena* Governorate from the north. The governorate has a total area of 34,608 km², and consists of five districts (*Aswan, Edfu, Kom Ombo, Daraw* and *Nasr El Nuba*), 10 cities, 30 local village units, 102 villages and 429 *hamlets*. The population of *Aswan* Governorate is estimated as 1,013,790 at the beginning of 1999.

Economy of *Aswan* is based upon agriculture, industry and tourism. Main crops of *Aswan* are sugar cane, *karkadaih*, wheat, henna, and date palms. The governorate has sugar, chemical fertilizers, phosphate, fish processing and canning, and dates packing industries.

Aswan is well connected to the rest of Egypt and abroad through modern transportation networks and communications, which include two airports, one river port, railways and roads.

Because of the existence of many Pharaonic, Christian, Islamic and modern attractions in the governorate, tourism sector has been for many years one of the major activities in *Aswan*.

4) *Red Sea* Governorate

Red Sea Governorate is one of the coastal, frontier governorates in Egypt. The governorate consists of 6 cities, 11 local village units, and 19 villages. The total area is 130,000 km², which represents one eighth (1/8) of total area of Egypt. It extends for 1,080 km along *Red Sea* and is bordered by the sea coast from the East, governorates of *Beni Suef*, *Mina*, *Asuit*, *Sohag*, *Qena*, and *Aswan* from the west, governorates of *Suez* and *Giza* from the north and the Republic of *Sudan* from the south. Due to characteristics of location, the governorate is strategically important to the national security. The population of *Red Sea* Governorate is estimated as 162,633 in 1998.

Economy of the governorate is based upon mineral and natural resources. It has most of natural oil, gold, iron, marble, phosphate and precious stones in Egypt in addition to many tourism attractions, including Pharaonic, Christian and Islamic monuments, safari areas, marine sports, entertainment and medical treatment areas for rheumatoid and other illnesses.

Note:

1) *Feddan* is a unit stands for area in Egypt. One *feddan* is approximately $4,200\text{m}^2 = 0.42$ ha.

2) Definition of Local administration units;

According to the Law of Local Administration System (No.43/1979), local administration units include governorates, districts (*markaz*), cities, quarters (*hayy*), and villages. These units are established according to the following legal identities:

- Governorates: by a presidential decree.
- Districts, Cities and Quarters: by a decree of the Prime Minister, after approval of the People's Council of the governorate.
- Villages: by a decree of the Governor, upon a proposal of the People's Council of the district concerned and approval of the People's Council of the governorate.

The law defines the functions and responsibilities of each of these units, and the administrative system applied at each level. Thus, a governorate consists of districts, and a district includes cities and villages. A city consists of quarters, and a village includes a number of adjacent smaller villages and *hamlets*.

(2) Demography and Community

1) Population

Total population, population density, and urban population ratio in the study areas are summarized as following. Each figure of year of 2001 is the forecasting data. Every forecast was carried out by use of each method as mentioned in following *notes*.

Total Population, Population Density, and Urban Population Ratio

Year	Total population (persons)				Population density (persons/ km ²)				Urban population ratio (%)			
	Qena	Luxor	Aswan	Red Sea	Qena	Luxor	Aswan	Red Sea	Qena	Luxor	Aswan	Red Sea
1994	2,814,167	152,770	978,812	107,472	1,480	1,683	1,495	n.a	24.4	n.a	38.3	86.4
1995	2,718,612	158,895	944,720	157,315	1,520	1,751	1,533	2,148	25.4	83.20	42.8	72.6
1996	2,442,016	361,138	974,068	157,315	1,320	1,730	1,549	2,216	21.2	83.20	42.62	74.7
1997	2,480,086	155,858	984,582	159,224	1,340	1,752	1,437	2,243	21.2	n.a	42.6	72.8
1998	2,541,422	161,450	1,003,870	162,633	1,356	1,779	1,464	2,291	21.2	100	42.6	72.8
2001	3,184,000	171,080	1,132,000	175,398	1,978	1,885	1,204	2,457	21.3	100	42.0	75.0

Source:

1) Qena

- 1994, 1995, 1997, 1998 data from CAPMAS Births and Deaths Statistics. Different Issues.
- 1996, data from The Annual Statistics Yearbook (1992-98), CAPMAS, June 1999.

Note:

- Data 1994 and 1995 was of July.
- Forecast for 2001 population is from the National Institute of Planning, Human Resources Development Report, 1996.
- Forecast for 2001 pop. density is calculated by dividing the population figure by the inhabited area of Qena (1,609.66 Km²)
- Forecast for 2001 urban pop. ratio is consultants' estimation on the basis of 1998 figure and the expected increase in urbanization in the governorate, during the period 1998-2001.
- The decrease in population figure in 1996 is due to the separation of Luxor from Qena Governorate.

2) Luxor

- Total population data from CAPMAS Births and Deaths Statistics. 1994, 95, 97 and 1998 Issues.
- The figure for 1996 is taken from CAPMAS Annual Statistics Yearbook, June 1999 and includes Bayyadia City and eight Local Village Units, which explain the increase in population in 1996

Note:

- 1997 and 1998 population figures are for Luxor city only.
- 2001/2002 forecasts are based on an average annual population growth rate of 1.95.
- Population density data are calculated by dividing total population by the inhabited area (90.76 Km² for all years except 1996 for which an area of 208.8km² was used due to the inclusion of Bayyadia city and eight local village units Household

3) Aswan

- 1994, 95, 97, and 1998 data from: CAPMAS, Births and Deaths Statistics, 1994, 95, 97 & 1998 Issues.
- 1996, data from: CAPMAS, The Annual Statistics Yearbook (1992-98), June 1999. (census data).
- 2001 population forecast is taken from: National Planning Institute, Human Resources Development Report, 1996. The population density forecast is calculated by dividing the population forecast by the inhabited area of Aswan (939.57 km²)

Note:

- Data 1994 and 1995 was of July, and 1996 of January

4) Red Sea

- 1994, 1995, 1997, 1998 data from CAPMAS, Births and Deaths Statistics. 1994, 95, 97 and 98 Issues.
- 1996, data from CAPMAS, The Annual Statistics Yearbook, June 1999.

Note:

- Data 1994 and 1995 was of July.
- Population density figures are calculated by dividing total population by 71 km² (the inhabited area).
- Forecast for 2001 is based on an average annual population growth rate of 2.2 % during 1994-2001 given in Institute of Planning. Human Resources Development Report, 1996.
- The base year for forecast is 1996
- (n.a): not available.

2) Household

The following table shows total number of households and family structures in each study area and Egypt.

Total Number of Households and Family Structure

year	Total number of households					Average number of family members (person / household)				
	Qena	Luxor	Aswan	Red Sea	Egypt	Qena	Luxor	Aswan	Red Sea	Egypt
1986	448,487	n.a	155,753	17,703	9,718,663	5.0	5.0	5.1	4.8	4.9
1995	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1996	2,702,600	78,477	201,134	29,404	12,702,600	5.13	4.57	4.8	4.56	4.7
1997	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1998	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a

Source:

1) Qena

- 1986 data from 1986 Census, CAPMAS, December 1989.
- 1996 data from 1996 Census (Household Conditions), Final Results. CAPMAS. April 1999.
- Data for Egypt are from CPMS 1996 census.

Note:

- Censuses are carried out every 10 years. The last two were conducted in 1986 and 1996.

2) Luxor

- CAPMAS. The Annual Statistics Yearbook. June 1999.
- Data for Egypt are from CAPMAS 1996 census.

Note:

- Censuses are carried out every 10 years. The last two were conducted in 1986 and 1996.

3) Aswan

- 1986 Census data, December 1989.
- 1996 Census of Population, Housing and Establishments. Households Conditions, Final Results, CAPMAS, April 1999.

Note:

- Household statistics are available only for census years.
- Censuses are carried out every 10 years. The last two were conducted in 1986 and 1996.
- Data for Egypt are from CAPMAS, 1996 census.

4) Red Sea

- 1986 data from CAPMAS, 1986 Census, Dec. 1989.
- 1996 data from CAPMAS, 1996 Census, Household Conditions, Final Results, April 1999.
- Data for Egypt are from CAPMAS 1996 census.

Note:

- Censuses are carried out every ten years. The last two were conducted in 1986 and 1996.

n.a: not available

3) Illegal Settlement

The following table shows Illegal settlements and their population in each study area.

Number of Illegal Settlements and Population

year	Total number of illegal settlements (Areas)				Total number of population in illegal settlements (persons)			
	Qena	Luxor	Aswan	Red Sea	Qena	Luxor	Aswan	Red Sea
1993	n.a	n.a	n.a	26	n.a	n.a	n.a	50,000
1994	n.a	7	n.a	n.a	n.a	n.a	n.a	n.a
1995	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1996	57	3	40	n.a	493,616	12,550	412,162	n.a
1997	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
1998	63	n.a	33	n.a	208,200	n.a	390,280	n.a

Source:

1) Qena

- 1996 data from CAPMAS, 1996 Census
- 1998 data from IDSC book on Qena Governorate, 1999 Issue,

2) Luxor

- 1996 data from CAPMAS, the Annual Statistics Yearbook, June 1999.
- 1994 data from: the National Institute of Planning. Human Resources Development Report, 1996.
- 1986 Census data show that Luxor city had 9 illegal settlement areas of which two were to be removed and seven to be developed. They had a total population of 41,000 (9percent of the city population) who live on an area of 3 km². Cost of developing these areas was estimated at LE.115 million (see: Wali, Mamdouh, Inhabitants of Slum Areas and Illegal Settlements- The Housing Map of Governorates, Engineers Syndicate, 1993).

3) Aswan

- 1996 data from CAPMAS, 1996 Census.
- 1998 data from Information and Decision Support Center (IDSC), Aswan Governorate Description, 1999 Issue.

4) Red Sea

- The National Institute of Planning, Human Resources Development Report, 1996.

Note n.a: not available.

In addition to the above data, according to *Wali, Mamdouh "Inhabitants of Slum Areas and Illegal Settlements. The Housing Map of Governorates, July 1993, Engineers Syndicate"*, illegal settlements in *Qena, Aswan* and *Red Sea* governorate were identified as follow.

- a. *Qena*: As of 1986 Census data, illegal settlements in *Qena* were 50 areas with population of 241,000 (40% of urban population). Their distributions were as shown in the following table .

Number of Illegal Settlement Ares (*Qena*)

City	<i>Qena</i>	<i>Deshna</i>	<i>Aramant</i>	<i>Forshout</i>	<i>Wakf</i>	<i>Naggada</i>	<i>Naja Hammadi</i>	<i>Qous</i>	<i>Qeft</i>	<i>Abu Tesht</i>	<i>Bayyadiyah</i>
Areas	6	5	11	7	6	4	2	2	2	2	3

Source; *Wali, Mamdouh "Inhabitants of Slum Areas and Illegal Settlements. The Housing Map of Governorates", Engineers Syndicate, July 1993*

- b. *Aswan* :The illegal settlement areas in *Aswan* is reported through this study as follows:

Number of Illegal Settlement Ares (*Aswan*)

City	<i>Aswan</i>	<i>Kom Ombo</i>	<i>Daraw</i>	<i>Edfu</i>	<i>Abu Simbel</i>	<i>Sebaiyah</i>	<i>Nasr Nuba</i>
Areas	11	10	6	2	2	1	1

Source; *Wali, Mamdouh "Inhabitants of Slum Areas and Illegal Settlements. The Housing Map of Governorates", Engineers Syndicate, July 1993*

- c. *Red Sea* : The report identified that *Red Sea* Governorate has 20 of these areas as shown in the following table.

Number of Illegal Settlement Ares (*Red Sea*)

City	<i>Hurghada</i>	<i>Qouseir</i>	<i>Shlatin</i>	<i>Ras Gharib</i>	<i>Safaga</i>	<i>Om El Howaitat</i>
Areas	7	6	4	1	1	1

Source; *Wali, Mamdouh "Inhabitants of Slum Areas and Illegal Settlements. The Housing Map of Governorates", Engineers Syndicate, July 1993*

4) Minority Races and Communities

- a. *Qena* Governorate

Nomad called "*Bedouin*" in Egypt lives in frontier governorates, particularly north and south of *Sinai, Matrouh, Red Sea* and Western Desert. They had been considered as nomads in the population censuses until 1960. However, through the censuses, it was identified that the majority has settled in permanent communities and are not considered nomads anymore.

The population of *Qena* Governorate is predominantly living in rural area (78.8 % rural in 1998). They constitute a homogenous group sharing the same tradition and cultural traits with the rest of southern Egypt population. Their family structure was 4.7 persons per household in 1996 as shown in table blow, in a total of 474,376 households. It is considered that there are no nomads nor distinctive ethnic groups in *Qena*.

- b. *Luxor* City

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

- c. *Aswan* Governorate

Bedouins in Egypt are found in frontier governorates, particularly north and south of *Sinai, Matrouh, Red Sea* and western desert. They had been considered as nomads in the population censuses until 1960. However, through the censuses, it was identified that the majority has settled in permanent communities and are not considered nomads anymore.

However, there are few sub-groups of the Egyptian population which have distinctive sub-cultures within the overall, homogenous Egyptian culture rooted in Islamic, Arab and old Egypt traditions. At present, following five of these sub-groups live in *Aswan*;

a. *Al-Kunouz: Nubian* tribe: had lived north of old *Nubia* (south of *Aswan City*), and moved to an area of north of *Kom Ombo* city after the establishment of the High Dam and formation of *Nasser Lake*. This tribe speaks its own dialect language in addition to *Arabic* language, and use their dialect in singing, which is accompanied by drum and *tanboura* music. They celebrate marriages and birth of children in a collective way.

b. *Al-Fajeka: another Nubian* tribe: had lived south of old *Nubia* to wards *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 *Al Kunouz*, in addition to the *Arabic* language. Their folkloric music and songs are similar to those of *Al Kunouz*, but have their special dances such as *Arajid*.

c. *Bashariya and Abaddah* tribe: lives 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*.

d. *Arab* tribe: had lived in the middle of old *Nubia* between *Al-Kunouz* and *Al-Fajika* tribes, and currently live in the area east of *Kom Ombo*. They speak *Arabic* language only.

e. *Al-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.

As the case with the nomads of Egypt, population censuses do not collect data on these sub-groups. However, the distinctiveness of the *Nubian* sub culture has been recently recognized by the establishment of the *Nuba* Museum in *Aswan City*. The museum exhibits *Nubian* antiquities and folkloric materials. It also depicts the relationships between *Nubian* and Pheronic civilizations.

It should be noted that, despite their relatively low economic standards, these subgroups share norms of generosity, hospitality and respect of guests. They are peaceful, and willing to participate in efforts directed to development of their communities. They also share, with the rest of the population of *Aswan* Governorate, the same family structure with an average of 4.8 members per household in a total of 201,134 households.

d. *Red Sea* Governorate

There are few sub-groups of the population of *Beduine* 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 of children. 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 south east corner of *Red Sea* governorate close to the *Sudanese* borders.

These tribes live on camel and sheep pasturing and some work in indigenous jobs in tourist villages, oil fields, mines and fisheries in the area. They are peaceful and share the hospitable attributes of tribesmen in *Aswan*. They also share, with the rest of the population of *Red Sea* Governorate, the same family structure with an average of 4.56 members per household in a total of 29,404 households.

(3) Economic Activities

1) General

a. *Qena* Governorate

Agriculture is the major economic sector in *Qena*. The sector contributes approximately 30% of its GRDP as shown in the Tabel 1.3.5. Also industry, electricity, housing, trade, and transportation are important sectors in the governorate.

The current Five Year Plan (1997/98-2001/2002) has allocates *LE* 1,659,588 thousands to investment in *Qena*. Approximately 38.5% of this allocation is planned to be invested in public utilities. The shares of irrigation and drainage, education, electricity, and transportation sectors in that allocation are about 17.4%, 11.1%, 8.7%, and 8% respectively.

The expected private investments amount to *LE* 12,015,000 thousand. “*Developing Southern Egypt during the period 1994-2017*” project shows that approximately *LE* 50,388 millions shall be invested in *Qena*. The Industrial sector is getting 39%, of this sum, followed by housing and urban development (about 34%), then human resources development (8.1%) of this sum. These figures indicate that developing human resources is a basic goal and is a prerequisite to developing the industrial sector.

b. *Luxor* City

The Five Year Plan (1996/97-2001/2002) allocates *LE* 327,797 thousand for public investment in *Luxor*. Approximately 31% of the allocation will be invested in public utilities projects, whereas about 20% of the total investment is allocated for health and education sector. The expected private investments is estimated to *LE* 8,100,000 thousand.

It is also planned that about *LE* 8,020 million will be allocated for investment in *Luxor* during the period 1994-2017, of which, about one third will be allocated for housing and urban development, about 22% for transportation and communication, 19% for tourism, 7% for human resources development, about 5% for industry and about 5% for drinking water and sewage projects.

The cultivation area of *Luxor* City is 8,453 *feddans* in 1998, in addition to 6,790 *feddan* planned to be reclaimed. The major agricultural crops in *Luxor* are wheat, corn, beans, and tomatoes.

c. *Aswan* Governorate

GRDP of *Aswan* Governorate, is estimated at *LE* 1,973.9 million in 1993/94. Based on this estimate and the planned average annual growth rate for every sector, the consultants estimate the GRDP as *LE* 2,262 and *LE* 3,136 million in 1996/97 and 2001/2002 respectively. Agricultur is the largest sector followed by trade sector.

Fourth Five Year Plan allocates *LE* 4,607,898 thousand for public investment in *Aswan*. Shares of the allocation are that irrigation and drainage is 60%, transportation and communication is 10.26%, public utilities is 9.55% and electricity is 5.43% respectively. It is expected that private investments amount to *LE* 9,919,000 thousand.

According to “*Development of Southern Egypt*” project, total amount of investment during the period 1994-2017 in *Aswan* will be *LE* 53,782 million, of which industry s share is 19.66%, and housing and urban development share is 41.5%. These figures show that the government is paying great attention to develop industry and infrastructure in *Aswan*, which is reflected in allocating about 9% for human resources development. At the same time, the agricultural sector is allocated apporximately 13% of the total, mainly for establishing new rural communities.

Transportation and communication sector is expected to develop, since about 7.4% of the total of investment is allocated to this sector.

The existence of the High Dam, which supplies electricity to *Aswan* and other regions in Egypt and many kinds of mines.

d. *Red Sea Governorate*

GRDP in *Red Sea Governorate* is estimated in 1993/94 as *LE* 592 million. Tourism is the major economic sector in this region. The governorate is also rich in mineral resource. These two sectors contribute about 80% of the GRDP.

According to current Five Year Plan (1997/98 - 2002), *LE* 1,817,767 thousands are allocated for public investment in the Governorate during these years. Of this amount, about 24%, 23%, 18%, 12%, and 6% are allocated for public transportation and communication, electricity, oil, and trade sectors respectively. These figures indicate that the government is giving great consideration to develop infrastructure in the governorate. These investments encourage establishing new private investment in the region. The expected private investments amount to *LE* 19,097,000 thousand.

“*Development of Southern Egypt*” project allocates about *LE* 67,240 million for investment in the governorate during 1994 - 2017. About 67% of this amount is planned to be invested in the tourism sector. Industry, transportation, and housing sectors’ shares of that amount are about 11%, 7%, and 6% respectively. Therefore, it is expected that tourism will play a major economic role in *Red Sea Governorate*.

At the same time, oil and mining will continue to expand in the future to satisfy domestic and foreign demand.

2) Economic Activities by Sector

a. *Qena Governorate*

The following table shows that agriculture is major sector in *Qena*. It is one of the large governorates in terms of cultivation area which amounts to 333,556 *feddans*. As major crops, sugar cane on 146,930 *feddans* (44 % in Egypt), tomato on 31,197 *feddans*, sesame on 7,493 *feddans*, bananas and *Karkadaik* are cultivated in *Qena*.

GRDP and Economic Activities by Sector (*Qena*; including *Luxor*)

	1993/ 1994	1996/ 1997	2001/ 2002	National average annual sectoral growth rate	
				3 rd Plan	4 th Plan
GRDP (<i>LE</i> million)	4,207	4,797	6,761		
Egypt Total	162,967	239,500	335,000	-	-
Agriculture (% of total)	31.48	30.25	26.37	3.1	4.2
Egypt (%)	16.87	17.67	15.5		
Industry & Mining (% of Total)	6.63	6.95	8.23	6.1	10.8
Egypt %	25.42	24.73	26.6		
Electricity (% of Total)	5.85	5.94	6.16	5.0	7.9
Egypt (%)	2.12	1.76	1.9		
Housing & Construction (% of Total)	7.12	17.18	20.54	4.6	11.0
Egypt (%)	5.21	5.32	6.4		
Transportation, Storage & Communications (% of Total)	5.11	5.26	5.58	5.5	8.4
Egypt (%)	10.78	9.48	9.2		
Trade (% of Total)	9.71	9.83	9.97	4.9	7.4
Egypt (%)	20.17	21.31	21.9		
Finance, Insurance (% of Total)	2.47	2.68	2.78	7.3	7.9
Egypt %					
Tourism (% of Total)	2.84	2.78	3.62	4.1	12.9
Egypt (%)	1.4	1.6	2.1		
Public Utilities (% of Total)	0.25	0.26	0.30	7.5	10.2
Egypt (%)	0.35	0.38	0.4		
Public & Private Services (% of Total)	18.58	18.86	16.44	5.0	4.2
Egypt (%)	17.68	17.75	16.0		

Source: Kilani, Al Sayyed Mohammed, Estimation of Regional Income in Egypt. National Planning Institute, 1998. Table (1).
Data for Egypt from: Ministry of Economy, Monthly Bulletin, Aug.1999.

Notes: (1) Data on GDP are available for the national level. Regional data are not routinely published except in special studies. The above study is the only one that could be obtained.

(2) 1996/97 estimates are based on 1993/94 data given in the table and the average annual sectoral growth rate of the 3rd. Five Year Plan (1992/93-1996/97).

(3) Forecast for 2001/2002 is based on 1996/1997 estimate and the average annual sectoral growth rate of the 4th. Five Year Plan (1997/98 – 2001/2001).

Under the current investment law No.45, following several factories and companies have been founded in *Qena* by the end of June 1999;

Factories & Companies founded by the end of 1999 (*Qena*)

Factory	Number	Factory	Number	Company	Number
Food Processing	13	Spinning and Weaving	3	Agricultur	3
Building Material	8	Chemical	3	Tourism	1
Engineering	5	Wood	2	Services	1
Metal	4	Pharmaceutical	2		

Source: Authority of Investment and Free-Zone

b. *Luxor* City

At present, GRDP data of *Luxor* City are not available. The data obtained for *Qena* Governorate includes *Luxor* City.

c. *Aswan* Governorate

In 1996-97, it was estimated that the agricultural sector would contribute about 24% of the GRDP in *Aswan*. Trade is also an important sector, as it contributes about 19% of the GRDP.

The major agricultural crops in *Aswan* are sugar cane, *karkadaih*, wheat, henna, and date palms. Sugar cane is cultivated in more than 50 % of the total cultivated area (146,886 *feddans*). Date palms come next in importance followed by *karkadaih*.

GRDP and Economic Activities by Sector (Aswan)

	1993/ 1994	1996/ 1997	2001/ 2002	National average annual sectoral growth rate	
				3 rd Plan	4 th Plan
GRDP (LE million)	1,973.9	2,262.03	3,136.32		
Egypt Total	162,967	239,500	335,000	-	-
Agriculture (% of total)	25.48	24.37	21.59		
Egypt (%)	16.87	17.67	15.5	3.1	4.2
Industry & Mining (% of Total)	6.39	6.66	8.03		
Egypt %	25.42	24.73	26.6	6.1	10.8
Electricity (% of Total)	8.18	8.26	8.72		
Egypt (%)	2.12	1.76	1.9	5.0	7.9
Housing & Construction (% of Total)	6.5	6.50	7.90		
Egypt (%)	5.21	5.32	6.4	4.6	11.0
Transportation, Storage & Communications (% of Total)	4.96	5.09	5.49		
Egypt (%)	10.78	9.48	9.2	5.5	8.4
Trade (% of Total)	18.75	18.88	19.46		
Egypt (%)	20.17	21.31	21.9	4.9	7.4
Finance, Insurance (% of Total)	3.93	4.23	4.46		
Egypt %				7.3	7.9
Tourism (% of Total)	2.91	2.86	3.79		
Egypt (%)	1.4	1.6	2.1	4.1	12.9
Public Utilities (% of Total)	0.21	0.23	0.26		
Egypt (%)	0.35	0.38	0.4	7.5	10.2
Public & Private Services (% of Total)	22.69	22.92	20.30		
Egypt (%)	17.68	17.75	16.0	5.0	4.2

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

- Data for Egypt from: Ministry of Economy, Monthly Bulletin, August, 1999.

Note - Data on GRDP are available for the national level. Regional data are not routinely published except in special studies. The above study is the only one that could be obtained.

- 1996/97 estimates are based on 1993/94 data given in the table and the average annual sectoral growth rate of the 3rd. Five Year Plan (1992/93-1996/97).

- Forecast for 2001/2002 is based on 1996/97 estimate and the average annual sectoral growth rate of the 4th, Five Year Plan (1997/98-2001/2002)

In recent years, and under the open door policy in Egypt, following 50 companies have been founded in Aswan by the end of June 1999.

Companies founded by the end of 1999 (Aswan)

Industrial Company	Number	Other Company	Number
Mining	} total 20	Agricultur	8
Metal		Tourim	21
Bbuilding materials		Service	1
Chemicals			
Weaving and spinning industries			

Source: Authority for Investment and Free Zones

d. Red Sea Governorate

The following table shows that tourism is the largest sector in Red Sea Governorate. Industry and mining are also important sectors in the governorate.

Agriculture does not represent major economic sector of the governorate since it has 80 *feddans* only. However, 11,850 *feddans* are planned for reclamation to increase cultivation in the future.

GRDP and Economic Activities by Sector (Red Sea)

	1993/ 1994	1996/ 1997	2001/ 2002 Forecast	National average annual sectoral growth rate	
				3 rd Plan	4 th Plan
GRDP millions (Million L.E)	592.0	678.4	1,145.94		
Egypt Total	162,967	239,500	335,000	-	-
Agriculture (% of total)	8.58	8.21	5.97		
Egypt %	16.87	17.67	15.5	3.1	4.2
Industry & Mining (% of total)	25.29	26.36	26.05		
Egypt %	25.42	24.73	26.6	6.1	10.8
Electricity (% of total)	1.33	1.35	1.17		
Egypt %	2.12	1.76	1.9	5.0	7.9
Housing & Construction (% of total)	1.13	1.13	1.13		
Egypt %	5.21	5.32	6.4	4.6	11.0
Transportation, Storage & Communicators (% of total)	1.34	1.37	1.21		
Egypt %	10.78	9.48	9.2	5.5	8.4
Trade (% of total)	0.0	0.0	0.0		
Egypt %	20.17	21.31	21.9	4.9	7.4
Finance, Insurance & Soc. Insurance (% of total)	0.0	0.0	0.0		
Egypt %				7.3	7.9
Tourism (% of total)	55.27	54.41	59.8		
Egypt %	1.4	1.6	2.1	4.1	12.9
Public Utilities (% of total)	0.64	0.69	0.67		
Egypt %	0.35	0.38	0.4	7.5	10.2
Public & Private Services (% of total)	6.42	6.48	4.72		
Egypt %	17.68	17.75	16.0	5.0	4.2

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

- Data for Egypt from: Ministry of Economy, Monthly Bulletin, Aug. 1999.

Notes: - Data on GDP are available for the national level. Regional data are not routinely published except in special studies. The above study is the only one that could be obtained.

- 1996/97 estimates are based on 1993/94 data given in the table and the average annual sectoral growth rate of the 3rd Five year plan (1992/99-1996/97).

- Forecast for 2001/2002 is based on 1996/97 estimates and the average annual sectoral growth rate of the 4th, Five Year Plan (1997/98-2001/2002).

Under the current investment laws which encourage private investment, following companies have been founded in Red Sea Governorate by the end of June 1999 as shown in the following table. In this table, industrial companies consist of 1 spinning and weaving factory, 8 food, 2 chemical, 2 wood, 4 engineering, 4 building materials, and 7 mining factories.

Companies founded by the end of 1999 (Red Sea)

Company	Number	Company	Number
Tourism	280	Agricultural	3
Cconstruction	13	Industrial company	28
Service	9		

Source: Authority for Investment and Free Zones

3) GRDP per Capita in the Study Areas

The following table shows GRDP per capita in recent years and forecast data in 2001/2002 of the Study Areas. These forecasts are based on 1996/97 estimates and the average annual growth rate of the Fourth Five Year Plan (1997/98-2001/2002).

GRDP per Capita in the Study Areas (LE)

	1993/94	1996/1997	2001/2002 (forecast)
Qena (including Luxor)	1,547.8	1,711.3	2,015.2
Luxor	n.a	n.a	n.a
Aswan	2,030.8	2,322.0	2,770.6
Red Sea	5,481.5	4,312.4	6,568.7
Egypt Total	LE 3,461 (1994 / 95)		

Source: - 1993/94 data from: Kilani, al-Sayed Mohammed, 1998, opcit.

- 1996/97 data: estimate based on data from Table 1.3.1 and 1.3.5 for Qena and Luxor by dividing the GRDP (Table 1.3.5) by population of Qena and Luxor (Table 1.3.1).

- 2001/2002 forecasts are based on 1996/97 estimates and the average annual growth rate of the Fourth Five Year Plan (1997/98-2001/2002).

- Egypt data from National Institute of Planning, Human Resources Development Report, 1996.

4) Labor Force and Unemployment

a. Qena Governorate

The following table is a list of labor Force and unemployment in *Qena*.

Labor Force Total and By Sector (Qena)

	1994	1995	1996	1997	1998	2000/2001 Forecast
Labor Force (Persons)	n.a	n.a	566,977	n.a	574,870	712,855
Egypt total (1000)	14,879	15,340	15,825	16,344	16,896	18,786
Agriculture (% of Total)	69.6	51.1	42.06	n.a	n.a	34.88
Egypt %	31.9	31.4	30.0	29.5	29.0	27.4
Industry (excluding manufacturing), (% of total)	0.1	0.1	13.31	n.a	n.a	27.97
Egypt %	21.7	21.9	21.1	21.8	22.4	25.2
Manufacturing (% of total)	4.5	6.5	6.44	n.a	n.a	
Tourism (% of total)	2.8	8.4	0.84	n.a	n.a	1.1
Egypt %	0.9	0.9	0.9	0.9	0.9	1.3
Services (excluding tourism) (% of total)	23.0	33.9	36.88	n.a	n.a	36.05
Egypt %	45.5	45.8	48.0	47.8	47.7	46.1
Unemployment Rate (%)	n.a	6.9	10.91	10.80	10.86	10.00
Egypt %	9.8	9.6	9.2	8.8	8.3	n.a

Source: - 1994, 1995 and 1996 data from Labor Surveys, CAPMAS.

- 1998 data from Information and Decision Support Center (IDSC), Qena Governorate Description, 1999 Issue.

- 2001/2002 Forecast is based on 1996 data and the planned average annual sectoral growth rate given in "MOP, Developing Southern Egypt Project till 2017" April 1996.

- National data from Ministry of Economy, Monthly Bulletin, Aug.1999.

Note: - n.a: (not available).

b. Luxor City

The following table is a list of labor Force and unemployment in *Luxor*.

Labor Force Total and By Sector (Luxor)

	1994	1995	1996	1997	1998	2000/2001 Forecast
Labor Force (Persons)	n.a	n.a	95,779	n.a	n.a	n.a
Egypt total (1000)			15,825			
Agriculture (% of Total)	n.a	n.a	n.a	n.a	n.a	n.a
Egypt %			30.0			
Industry (excluding manufacturing), (% of total)	n.a	n.a	n.a	n.a	n.a	n.a
Egypt %			21.1			
Manufacturing (% of total)	n.a	n.a	n.a	n.a	n.a	n.a
Tourism (% of total)	n.a	n.a	n.a	n.a	n.a	n.a
Egypt %			0.9			
Services (excluding tourism) (% of total)	n.a	n.a	n.a	n.a	n.a	n.a
Egypt %			48.0			
Unemployment Rate (%)	n.a	n.a	12.68	n.a	n.a	n.a
Egypt %			9.2			

Source: - Information and Decision Support Center (IDSC), Egypt Description – Annual Book, August 1997. P. 241.

- Forecasts for 2001/2002 could not be done because the percent distribution of labor force among sectors is not available.

- National data from: Ministry of Economy, Monthly Bulletin, Aug. 1999.

Note: n.a: not available.

c. Aswan Governorate

The following table is a list of labor Force and unemployment in *Aswan*.

Labor Force Total and By Sector (Aswan)

	1994	1995	1996	1997	1998	2000/2001 Forecast
Labor Force (Persons)	n.a	n.a	268,153	n.a	274,910	404,665
Egypt total (1000)	14,879	15,340	15,825	16,344	16,869	18,786
Agriculture (% of Total)	54.4	25.5	29.14	n.a	n.a	27.17
Egypt %	31.9	31.4	30.0	29.5	29.0	27.4
Industry (excluding manufacturing), (% of total)	0.1	0.2	12.88	n.a	n.a	27.46
Egypt %	21.7	21.9	21.1	21.8	22.4	25.2
Manufacturing (% of total)	6.3	3.7	8.33	n.a	n.a	
Tourism (% of total)	7.1	11.1	2.65	n.a	n.a	2.22
Egypt %	0.9	0.9	0.9	0.9	0.9	1.3
Services (excluding tourism) (% of total)	32.1	59.5	47.0	n.a	n.a	43.15
Egypt %	45.5	45.8	48.0	47.8	47.7	46.1
Unemployment Rate (%)	n.a	28.6	20.57	19.82	19.63	18.00
Egypt %	9.8	9.6	9.2	8.8	8.3	n.a

Source: - 1994, 1995 data from CAMPAS, Labor Survey of the two years.

- 1996 data from CAPMAS, Labor Survey, 1996.

- 1998 data from Information and Decision support Center (IDSC) Aswan Governorate Description, 1999.

- National data from: Ministry of Economy, Monthly Bulletin, August 1999.

Note: - 2001/2002 forecast is based on an average annual growth of job opportunities (National Project for Developing Southern Egypt till the Year 2017. Ministry of Planning, 1996).

- n.a. not available.

d. Red Sea Governorate

The following table is a list of labor Force and unemployment in Red Sea.

Labor Force Total and By Sector (Red Sea)

	1994	1995	1996	1997	1998	2000/2001 Forecast
Labor Force (Persons)	n.a	n.a	55,846	n.a	n.a	156,931
Egypt Total (1000)	14,879	15,340	15,829	16,344	16,869	18,786
Agriculture (% of Total)	19.8	20.3	n.a	n.a	n.a	7.78
Egypt %	31.9	31.4	30.0	29.5	29.0	27.4
Industry (excluding manufacturing) (% of total)	38.3	18.9	n.a	n.a	n.a	15.59
Egypt %	21.7	21.9	21.1	21.8	22.4	25.02
Manufacturing (% of total)	5.9	n.a	n.a	n.a	n.a	
Tourism (% of total)	1.2	4.1	n.a	n.a	n.a	46.75
Egypt %	0.9	0.9	0.9	0.9	0.9	1.3
Services (excluding tourism) (% of total)	34.8	56.7	n.a	n.a	n.a	29.88
Egypt %	45.5	45.8	48.0	47.8	47.7	46.1
Unemployment Rate (%)	19.8	6.5	6.66	n.a	n.a	
Egypt %	9.8	9.6	9.2	8.8	8.3	n.a

Source: - 1994, 1995 data from Labor Survey CAPMAS.

- 1998 data from Information and Decision Support Center (IDSC) Red Sea Gov. 1997 Issue. Frontier governorates were not included in CAPMAS Labor Survey.

- 2001/2002 forecasts are based on an average annual growth of job opportunities (National Project for Developing Southern Egypt till the year 2017. Ministry of Planning, 1996).

- National data from: Ministry of Economy, Monthly Bulletin, August 1999.

5) Condition of Recruitment

Conditions of recruitment and employment in general are governed by national laws. There is a special law for government employees (Law No. 47/1978), another for public sector employees (Law No. 48/1978), and a third for private sector employees (Law No.137/1981). Each law contains extensive provisions for all aspects of employment, including conditions of appointment, employment contract, wages, grade system, promotion to higher positions, annual vacations, sick leaves, termination of service, retirement, penalties system, rules of secondment; loaning and transfer of employees, and many other provisions.

Also, social insurance which covers pensions for retirement and compensations for injuries occurring during and because of work, and long sick leaves are governed by the Social Insurance Law No. 79/1975.

These laws are universal and applied in all parts of the country. Local variations may exist in terms of better work conditions, higher wages or special privileges to encourage workers to join a certain establishment, particularly in remote areas, such as *Red Sea*, *Aswan Qena* and *Luxor*.

6) Average Income

The following table is a list of average income on 1994/1995 of the study area.

Average Income in the Study Area	
Area (1994/1995)	Average Income (LE)
<i>Qena</i> (Including <i>Luxor</i>)	2,853
<i>Luxor</i>	n.a
<i>Aswan</i>	3,344
<i>Red Sea</i>	4,247
Egypt Total	3,461

Source: The National Institute of Planning, Human Resources Development Report, 96.

Note: (n.a); not available

(4) Land Use

1) Land Use

Land use of each study area can be summarized as shown in the following table.

Current Use	Current Land Use					
	<i>Qena</i> (km ²)	<i>Luxor</i> (km ²)	<i>Aswan</i>		<i>Red Sea</i>	
			Governorate (km ²)	City (km ²)	Governorate (km ²)	City (km ²)
Residential	91.56	5.65	77.94	16.21	71.0	26.0
Utilities	112.42	19.92	52.02	3.18	0.0	0.0
Swamps and Unable	22.54	0.98	46.30	16.81	0.0	0.0
Agricultural	1,383.14	64.21	763.31	19.22	0.34	0.07
Inhabited Area	1,609.66	90.76	939.57	55.42	71.34	26.07
Total Area	10,265.5	56	34,608	22,649	130,000	460.5

Source: - Information and Decision Support Center (IDSC) Book on *Qena* Governorate, 1999 Issue.

- Information and Decision Support Center (IDSC), Egypt Description – Annual Book, 1999 issue.

- Information and Decision Support Center (IDSC) ,*Aswan* Governorate, Description, 1999 Issue.

- Information and Decision Support Center (IDSC), *Red Sea* Governorate Description. November 1997. P.31.

Note: The inhabited area in *Luxor* is 162.07 % of the total area of the city, because of the size of agricultural land within city limits. This area includes residential, utilities and tombs, swamps and unable land and agricultural land inside city limits.

1) Land Ownership System

Currently, there are no restrictions or maximum limits on land ownership. However, a foreign investor who wishes to buy land for agricultural purposes has to undergo certain procedures with the Central Administration of Ownership of the Authority of Reclamation and Land Reform in the Ministry of Agriculture. This agency is responsible for processing such requests until approval of the Council of Ministers is secured.

a. *Qena* Governorate

Agricultural land in *Qena* Governorate represents 85.93% of the inhabited area and 13.47 % of the total area. Most of this land is privately owned by individuals and/or agricultural companies.

Table 1.3.18 shows that land distribution is uneven, since 97.28 % of the owners have 71.86 % of the land, with an average of 0.93 *feddens* per owner. It also shows that 2.61 % of them have 20.37 % of the land, and 0.1 % of them have 7.77 % of the land.

b. *Luxor* City

Agricultural land in *Luxor* is 70.75 % of the inhabited area of the city. Most of this land is privately owned by individuals and/or agricultural companies.

c. *Aswan* Governorate

Agricultural land in *Aswan* Governorate represents 81.24 % of the inhabited area, and 2.21 % of the total area. Most of this land is privately owned by individuals and/or agricultural companies.

Table 1.3.18 shows that land ownership is uneven in *Aswan*, as majority of owners (94.67%) own about 65 % of the area, with an average of 1.61 *feddans* per owner. The table also shows that 5.26 % of the owners own 23.5 % of the area, and 0.06 % of them (34 persons) own 11.31 % of the area.

d. *Red Sea* Governorate

Agricultural land in *Red Sea* Governorate represents less than 0.47 % of the inhabited area, which is mainly residential. This is due to the natural formation of the land, consisting of a coastal line, a large area of desert and some mountains. All tourism establishments, ports, airports, fisheries and mining activities are concentrated along coastal line of *Red Sea*.

Distribution of Agricultural Land in *Qena* and *Aswan* Governorate

	<i>Qena</i> Governorat		<i>Aswan</i> Governorat	
	Area (in <i>feddans</i>)	Total Number of Owners	Area (in <i>feddans</i>)	Total Number of Owners
Less than 1 <i>feddans</i>	100,841	180,564	15,825	26,365
1- Less than 2 <i>feddans</i>	41,806	33,728	8,663	6,621
2- Less than 3 <i>feddans</i>	35,928	15,566	21,494	8,370
3- Less than 4 <i>feddans</i>	25,264	7,200	22,285	6,250
4- Less than 5 <i>feddans</i>	21,108	4,788	13,342	2,883
5- Less than 10 <i>feddans</i>	30,722	4,472	14,512	2,001
10- Less than 20 <i>feddans</i>	19,297	1,534	6,849	511
20- Less than 50 <i>feddans</i>	13,736	489	7,974	293
50- Less than 100 <i>feddans</i>	10,933	162	1,818	24
100 <i>feddans</i> and above	13,396	95	12,326	10
Total of Each Governorate	313,031	248,598	125,088	53,328
Total / Egypt	5,886,808	3,907,471	5,886,808	3,907,471

Source: CAPMAS, *The Annual Statistics Yearbook*, June 1999, P.74-76

(5) Water Rights and Rights of Common

1) Water Rights and Rights of Common

In general, there are no restrictions on the use of *Nile* water or underground water for agricultural or other purposes. Water is a common property. However, its use is organized by law. Both the Law of Irrigation and the Law of Local Administration and their executive statutes address the issues related to water rights and rights of common, such as:

- Cleaning and maintenance of water and drainage canals;
- Operation and maintenance of irrigation and drainage pumping stations;
- Utilization of underground water, including the digging of wells, erection of pumps and maintenance works;
- Cleaning and maintenance of private canals of water and drainage;
- Supervising the implementation of water shifts; and
- Law enforcement in all matters related to irrigation and drainage.

It should be noted that many factors determine the amount of irrigation water allocated for particular areas. The most important of which are the natures of the land (reclaimed desert land or

old Nile valley land) and the cultivated crops (e.g.: sugar cane in *Qena* needs large quantities of water, and the same case with rice in the Nile delta).

Also, the digging of wells and erection of pumps for underground water are subject to approval from the concerned authority in the Ministry of Irrigation.

2) Fishing Rights

Fishing, whether on Nile river, sea, lakes (*Bardawil, Manzalah, Borollos, Edko, Maryot, Nasser* lake) is controlled by Law No. 124/1983, which was issued in August 25, 1983. Authority of Fishing Resources in the Ministry of Agriculture is the government agency which has the responsibility for the implementation of this law. The Law deals with all matters of fishing in all Egyptian waters including *Red Sea*. The Law has four chapters which deal with various issues as follows;

- Chapter One: is concerned with the organization of fishing and includes three sections;
 - Section 1 : gives definitions of the terms used in the law, use of fishing boats, fishing methods and other provisions.
 - Section 2 : includes provision for the control of pollution of fishing waters, the protection of fisheries, introducing foreign fish into Egyptian waters and other rules.
 - Section 3 : is concerned with the organization of scientific research and statistical in the field of fishing and fisheries.
- Chapter Two: is concerned with fishing licenses, fees and water resources. And has following three sections;
 - Section 1 : is about rules concerning licensing and fees
 - Section 2 : includes other matters related to issuing and renewal of fishing licenses.
 - Section 3 : deals with organizing the processes of offering fishing rights and investment in fisheries.
- Chapter Three: includes the penalties for violations of the provisions of the law of fishing and fisheries.
- Chapter Four: is the final chapter and includes provisions concerned with maintaining the country's safety and military security.

3) Community Associations

The following table shows community associations in the study area.

Community Associations in the Study Area

Area	Community Associations	Activities and Others
<i>Qena</i> Governorate	364 (212 urban and 152 rural)	This number is approximately divided evenly among community development associations and social/health care/family planning associations.
<i>Luxor</i> City	63 (in 1998)	These associations undertake various activities including community development, social and health care services, and family planning services.
<i>Aswan</i> Governorate	534 (362 urban and 172 rural)	This number is approximately divided evenly among community development associations and social/health care/family planning associations.
<i>Red Sea</i> Governorate	102 (in 1996)	These associations play an important role in community development, provision of social and health service, and family planning activities.

Source: Information and Decision Support Center (IDSC) of each governorate

4) Regional Regulation and Restriction

In addition to the above mentioned regulations of irrigation and fishing, there are other regulations of Egypt which are concerned with the establishment of natural protectorates to protect living natural resources and maintain the ecological system and so on. These protectorates are established by Law No.102/1983. (see item 4.2.5 National Parks and Natural Reservations)

(6) Transportation

1) Trunk Roads

The following table is a list of trunk roads in the study area.

Trunk Roads in the Study Area							
	Name of Road (as of 1999)	Length (km)	Width (m)	Road Lane	Traffic car/day	Pavement Condition	From - To
Qena	Ruzaiqat – Kharja	240	11.5	double	200	very good	Ruzaiqat – Kharja
	Qena – Al Qanatir	78	10.5	single	3,500	very good	Qena – Al Qanatir
	Abou Shoushah - Naja Hammadi	30	7.5	single	4,000	very good	Abou Shoushah – Naja Hammadi
	Qena – Naja Hammadi	47.5	7.5	single	5,000	very good	Qena – Naja Hammadi
	Qena – Safaga	85	11.5	single	5,000	very good	Qena – Safaga
	Qena – Luxor	60	10.5	single	4,500	very good	Qena – Luxor
	Qeft – Qousair	90	7.5	single	3,000	very good	Qeft – Qousair
	Al Makhzan – Qous	3.5	7.5	single	3,000	reasonable	Al Makhzan – Qous
	Esna – Edfu (East of Nile)	55	10.5	single	4,000	reasonable	Esna – Edfu
	Qena – Luxor (West of Nile)	57	9.0	single	4,500	very good	Qena – Luxor
	Faw – Sakulta	22	7.5	single	3,000	good	Faw – Sakulta
	Ekhmin – Al Hawawish	6	7.5	single	3,000	reasonable	Ekhmin – Al Hawawish
Al-Hawawish – Naja Hammadi	67	7.5	single	3,000	very good	Al Hawawish – Naja Hammadi	
Luxor	Luxor – Qena	60	10.5	single	4,500	very good	Luxor – Qena
	Luxor – Airport	6	10.5	single	6,000	very good	Luxor – Airport
	Luxor – Esna East	55	7.5	single	3,000	reasonable	Luxor – Esna East
	Luxor – Qena (West of Nile)	57	9.0	single	4,500	very good	Luxor – Qena
	Luxor – Bridge	7.5	6.0	double	5,000	very good	Luxor – Bridge
	Luxor – Sebaiyah	77	10.5	single	5,000	very good	Luxor – Sebaiyah
Aswan	Aswan – Kom Ombo	45	11.0	single	5,000	good	Aswan – Kom Ombo
	Kom Imbo – Sebaiyah	90	7.5	single	4,500	reasonable	Kom Imbo – Sebaiyah
	Aswan – Abu Simbel	265	11.5	single	2,000	very good	Aswan – Abu Simbel
	Toshka – Sudan Border	105	7.5	single	200	reasonable	Toshka – Sudan Border
	Toshka – East Owainat	226	7.5	single	500	very good	Toshka – East Owainat
	East Owainat – Paris	284	7.5	single	100	reasonable	East Owainat – Paris
	East Owainat – Dakhalah	110	7.5	single	100	very good	East Owainat – Dakhalah
	Al Ein – East Owainat Airport	26	7.5	single	300	very good	Al Ein – East Owainat Airport
	East Owainat Airport - Dakhlah	360	7.5	single	100	very good	East Owainat Airport – Dakhlah
	Aswan – High Dam	16	6.5	single	N/A	n/a	Aswan – High Dam
	Edfu – Kom Ombo	60	10.5	single	4,000	good	Edfu – Kom Ombo
	Edfu – Isna (East of Nile)	52	11.5	single	3,500	reasonable	Edfu – Isna
	Kom Imbo – Tahgir Ring Road	50	7.5	single	4,000	reasonable	Kom Imbo – Tahgir Ring Road
	Kom Imbo – Naser	10	6.0	single	4,200	good	Kom Imbo – Naser
	Sebaiyah – Karabla	56	6.0	single	4,000	reasonable	Sebaiyah – Karabla
	Edfu – Marsa Alam	115	6.0	single	500	very good	Edfu – Marsa Alam
	Benyan – Raqaba	10	6.0	single	500	reasonable	Benyan – Raqaba
	Kom Imbo – Raghamah	25	6.0	single	500	good	Kom Imbo – Raghamah
Toshka – Abu Simbel	50	7.5	single	1,500	very good	Toshka – Abu Simbel	
Aswan – Toshka	215	10.0	single	2,000	good	Aswan – Toshka	
Khazan – Airport	10	15.0	double	5,000	good	Khazan – Airport	
Aswan – Iron Mines	58	6.0	single	300	good	Aswan – Iron Mines	
Darb Al Arbaen – East Owainat	142	7.5	single	200	very good	Darb Al Arbaen – East Owainat	
Red Sea	Suez – Sokhna	60	9.5	double	6,000	very good	Suez – Ein Sokhana
	Sokhna – Zaafaranah	80	11.5	single	3,000	very good	Sokhna – Zaafaranah
	Zaafaranah – Raas Ghareb	110	9.5	single	3,000	very good	Zaafaranah – Raas Ghareb
	Ras Ghareb – Hurghada	150	11.5	single	3,000	very good	Ras Ghareb – Hurghada
	Hurghadah – Safaga	60	11.5	single	2,000	very good	Hurghadah – Safaga
	Safaga – Qousair	80	11.5	single	1,500	very good	Safaga – Qousair
	Qousair – Marsa Alam	133	11.5	single	1,000	very good	Qousair – Marsa Alam
	Marsa Alam – Barnis	142	7.5	single	500	very good	Marsa Alam – Barnis
	Barnis – Halayeb	225	7.5	single	500	very good	Barnis – Halayeb
	Qatamiyah – Ein Sokhna	120	11.5	single	5,000	very good	Qatamiyah – Ein Sokhna
	Kuraimat – Zaafaranah	164	7.5	single	2,000	reasonable	Kuraimat – Zaafaranah
	Sheikh Fadl – Ras Ghareb	140	7.5	single	1,500	good	Sheikh Fadl – Ras Ghareb
	Safaga – Qena	165	7.5	single	1,500	very good	Safaga – Qena
	Qousair – Qeft	90	7.5	single	1,000	good	Qousair – Qeft
	Barnis – Shalatin	105	7.5	single	400	good	Barnis – Shalatin
	Shalatin – Abu Ramad	135	7.5	single	300	good	Shalatin – Abu Ramad
	Abu Ramad – Halayeb	65	7.5	single	200	good	Abu Ramad – Halayeb (Line 22)

Source: Ministry of Transportation. Unpublished data.

4/9/1: mapping of Major Transportation Network(See Section Five)

2) Ports and Airports

As of 1997, principal ports and airports in the study area excluding *Qena* Governorate are summarized as shown in the following table. *Qena* does not have any ports or airports.

Ports and Airports, Capacity and Actual Volumes of Passengers and Freight

	Port /Airport (as of 1997)	Passenger capacities (passenger/ hour)	Volume of Passengers	Capacity of Freight	Actual Volume of Freight (tons)	Major Handling Goods in Freight
<i>Luxor</i>	<i>Luxor</i> Airport	1,500	2,003,485	n.a	5,079	n.a
<i>Aswan</i>	<i>Aswan</i> Airport	3,100	825,315	n.a	21	n.a
	<i>Abu Simbel</i> Airport	750	324,000	n.a	n.a	n.a
	High Dam / River Port	n.a	5,169	n.a	21,497	n.a
<i>Red Sea</i>	<i>Safaga</i> Port	500,000	527,861	4.19	49,408	Imports: grain, corn, cement & gypsum, raw aluminum and scrap.
	<i>Hurghada</i> Port	Small port	n.a	n.a	n.a	
	<i>Kousair</i> Port	Small port	n.a	n.a	n.a	Exports: petrol, fertilizers, salts, Phosphate & molasses (1997)
	<i>Abu Ghaisoon</i> Port	Small port	n.a	n.a	n.a	
	<i>Barnis</i> Port	Small port	n.a	n.a	n.a	
	<i>Hurghada</i> International Airport	1,200	1,473,993	n.a	269	

Source: - Ministry of Maritime Transport, Annual Report, Jan 1999.

- Egyptian Authority for Civil Aviation. Airports Sector. Data obtained in interviews with the Head of Airports Sector.

- Information and Decision Support Center (IDSC). Aswan Governorate Description, 1999 Issue.

- Ministry of Transportation, Egyptian Authority for Civil Aviation. Information obtained in interviews with the Head of Airport Affairs Sector.

3) Vehicles

The following table shows total number of vehicles by type registered in the study area. Since a traffic department has been established for *Luxor* yet, however, vehicles in *Luxor* City are registered in *Qena* Traffic Department at present.

Registered Vehicle Number

Vehicle Type	<i>Qena</i>		<i>Aswan</i>		<i>Red Sea</i>	
	1998	1999	1998	1999	1998	1999
Total Vehicles	39,658	40,424	27,151	27,755	10,373	10,710
Private Cars	5,983	6,139	4,842	5,002	2,552	2,621
Public Vehicles	2,740	2,800	2,679	2,699	827	822
Taxis	8,813	8,989	6,944	7,135	1,594	1,596
Caravans	0	0	3	3	2	2
Buses	412	422	475	480	396	456
Trailers	633	642	87	89	286	299
Trucks	10,522	10,621	5,807	6,000	3,041	3,131
Tractors	661	660	120	120	38	32
Motorcycles	9,280	9,603	6,011	6,044	1,071	1,093
Temporary Plates*	614	548	183	183	566	658

Source: - 1998 data from: CAPMAS, The Annual Statistics Year Book, 1999 Issue.

- 1999 data from: Ministry of Interior, Traffic Department, Unpublished data.

* Note: Temporary plates are issued to imported vehicles until customs clearance is secured.

(7) Infrastructures and Public Facilities

Urban infrastructures and public facilities in the study area is summarized as shown in the following table. As for transportation infrastructures including road, port and airport, more information are available in the previous section.

Infrastructure and Public Utilities

Name of Facility	Area	Capacity	Specification	Others
Schools	<i>Qena</i>	670,317 students	1,474 schools	20.7 students/teacher
	<i>Luxor</i>	53,992 students	112 schools	18.16 students/teacher
	<i>Aswan</i>	283,651 students	868 schools	18.59 students/teacher
	<i>Red Sea</i>	38,359 students	188 schools	12.79 students/teacher
Hospitals	<i>Qena</i>	3,015 beds	55 hospitals	844.12 patients/bed
	<i>Luxor</i>	289 beds	5 hospitals	558.64 patients/bed
	<i>Aswan</i>	1,973 beds	40 hospitals	513.83 patients/bed
	<i>Red Sea</i>	326 beds	8 hospitals	478 patients/bed
Roads	<i>Qena</i>	1,707 km	Paved roads	1,491.1 pop./km
	<i>Luxor</i>			
	<i>Aswan</i>	1,691 km	Paved roads	599.7 pop./km
	<i>Red Sea</i>	2,044 km	Paved roads	76 pop./km
Urban Drainage Facility	<i>Qena</i>	14,000 cm ³ /day	4 stations	5.5 l. / person/daily
	<i>Luxor</i>	26,000 cm ³ /day	1 station	161.04 l. / person/ day
	<i>Aswan</i>	47,000 cm ³ /day	5 stations	46.36 l./day/person
	<i>Red Sea</i>			
Electricity	<i>Qena</i>	945kwh	2 stations	270.59 kWh/person/year
	<i>Luxor</i>	200.8 million kWh	n/a	1243.96 kWh/person/year
	<i>Aswan</i>	628 million kWh	4 stations	520.8 kWh/person/year
	<i>Red Sea</i>			
Water	<i>Qena</i>	276.870 cm ³ /day	193 stations	108.79 l./ person/day
	<i>Luxor</i>	5,300 cm ³ /day	2 stations	322.09 l./ person/day
	<i>Aswan</i>	211,900 cm ³ /day	97 stations	209.02 l./ person/day
	<i>Red Sea</i>	21,000 cm ³ /day	n/a	134 l./ person/day
Telephone	<i>Qena</i>	87,954 lines	69 centrals	3.46 lines /100 persons
	<i>Luxor</i>	21,900 lines	2 centrals	13.56 lines/100 persons
	<i>Aswan</i>	54,728 lines	32 centrals	5.4 lines/100 persons
	<i>Red Sea</i>	21,125 lines	n/a	13.57 lines/100 persons
Post Offices	<i>Qena</i>	n/a	221 offices	11.52 offices/1,000 pop.
	<i>Luxor</i>	n/a	14 offices	11,530 pop/office
	<i>Aswan</i>	n/a	129 offices	786 persons/office
	<i>Red Sea</i>	n/a	18 post offices	8,650 pop/office
Vocational Training	<i>Qena</i>	99 trainees	5 centers	114,970 work force pop/center
	<i>Luxor</i>	463 trainees	2 centers	Capacity 250 trainees
	<i>Aswan</i>	2,587 trainees	15 centers	14,470 labor force/center
	<i>Red Sea</i>	300 trainees	3 centers	28,000 labor force/center

Source: - Information and Decision Support Center, (IDSC), *Book on Qena Governorate, 1999 Issue.*
- Information and Decision Support Center, (IDSC), *Description of Luxor City, 1999 Issue.*
- Information and Decision Support Center (IDSC), *Book on Aswan Governorate Description, 1999 Issue.*
- Information and Decision Support Center (IDSC), *Red Sea Governorate Description. November 1997.*

(8) Cultural Aspects

1) Archeological and Cultural Assets

Archeological and cultural assets of each study areas can be summarized as shown in the following table.

As for the registration of all antiquities, monuments and archeological assets is done centrally by Supreme Council for Antiquities in the Ministry of Culture, immediately after discovery, an asset is photographed, described and registered by the Regional Antiquities Authority and kept in its stores. High value assets are transferred to a national museum where it is registered again and kept in the museum. Few years ago, the Supreme Council for Antiquities has started a review of all monuments and archeological assets in Egypt.

Archeological and Cultural Assets

	Assets	Brief Description
<i>Qena</i>	<i>Dandarah Temple</i>	On the West bank of the <i>Nile</i> . Founded during King <i>Bibi</i> First and completed by the <i>Romans</i> . It was dedicated to Goddess <i>Hathor</i> . It has drawings and writings from <i>Cleopatra</i> and <i>Greek</i> periods.
	<i>Esna Temple</i>	A <i>Graeco-Roman</i> Temple (180 B.C - 250 A.C). Dedicated to God <i>Khnom</i> (ram-headed). On the West bank of the <i>Nile</i> . Founded during King <i>Tohotmus</i> 3 rd , and completed during <i>Roman</i> rule. Contains the 24 column hall.
	<i>Tod Temple</i>	Dates to the middle, new Kingdoms and <i>Graeco-Roman</i> periods. Dedicated to God <i>Montu</i> .
	<i>Naqqada Monasteries</i>	Near <i>Qous</i> . A group of monasteries, the most important of which is <i>Deir El Malak</i> which dates to the 4 th century.
	<i>Sidi Abdel Reheim Mosque</i>	Contains the tomb of one of the famous <i>Sufis</i> who spent his life educating people in <i>Qena</i> about Islamic teachings. His birthday is celebrated every year and attended by many visitors.
	<i>Al –Amri Mosque</i>	An old mosque which dates back to the <i>Fatimide</i> rule of Egypt. Founded by Prince <i>Mohammed</i> , leader of armies. Contains one of the oldest three pulpits in Egypt.
<i>Luxor</i>	<i>Luxor Temple</i>	Built by King <i>Amenophis III</i> (1425-1417 B.C) and <i>Ramses II</i> (1304-1237 BC) added to it.
	<i>Karnak Temple</i>	The world largest columned temple. Constructed over a period of 2000 years, and has 8 temples dedicated to different gods, mainly, <i>Amon Re</i> .
	<i>Hatchepsut Temple</i>	The Mortuary temple of Queen <i>Hatchepsut</i> , the first woman to claim the title of <i>Pharoh</i> . The columns in the shrine of <i>Hathor</i> bearing her face are of particular note
	<i>Habu City</i>	This site is dominated by the Mortuary Temple of <i>Ramses III</i> on the West bank of <i>Nile</i> . Has many fine paintings and relief
	<i>Valley of the Kings</i>	The burial site of the pharaohs of the 18 th , 19 th , and 20 th , dynasties, such as <i>Amenhotep II</i> , <i>Ramses III</i> , <i>Ramses IV</i> , <i>Horemoheb</i> and <i>Tutankhamun</i> .
	<i>Valley of the Queens</i>	Contains over 70 tombs of which the following are open to the public: <i>Amun-Hir-Khopshef</i> , <i>Khaemweset</i> , Queen <i>Titi</i> and Queen <i>Nefertari</i> .
	<i>Coptic Monuments</i>	Some monasteries built inside the pharaonic ruins as in <i>Luxor Temple</i> and <i>Dir El-Medinah</i> .
	<i>Abu Al Haggag Mosque</i>	Was built above the ruins of <i>Luxor Temple</i> during the 13 th Century.
	<i>Dir El –Medinah</i>	Ancient Egyptian pharaonic workers village, which include their settlements and tombs.
	<i>Abu Simbel Temples</i>	The greatest of Egypt, made by <i>Ramses II</i> for himself and his wife <i>Nefertari</i> . Dedicated to <i>Amon</i> , <i>Rohorachty</i> , <i>Ptah</i> and himself
<i>Aswan</i>	<i>Unfinished Obelisk</i>	South of <i>Aswan</i> in the ancient granite quarries. It was left unfinished as a crack developed in the stone.
	<i>Sebon Valley</i>	Dedicated to gods <i>Amun Re</i> , <i>Re- Harakte</i> and <i>Ramses</i> . Named after the avenue of the sphinxes leading to temple of <i>Ramses</i> .
	<i>Beit Wali Temple</i>	Northwest of <i>Kalabsha</i> . Was erected by <i>Ramses II</i> and has religious and military decorations.
	<i>Nobles Tombs</i>	West bank of the <i>Nile</i> . Contains tombs of <i>Aswan</i> governors during the old Kingdom (2600-2300 B.C)
	<i>Kom Ombo Temple</i>	Dedicated to the gods of <i>Sobek</i> and <i>Haroeris</i> . holds some of the mummified crocodiles which were sacred to <i>Sobeck</i> .
	<i>Temple of Kalabsha</i>	A Roman temple, dedicated to God <i>Mandulis</i> . The Kiosk of <i>Kertassi</i> lies to the South.
	<i>San Simon Monastery (Deir Anba Samaan)</i>	Founded at the 7 th century. One of the most intact Coptic Monasteries. Has paintings of <i>Christ</i> and <i>Saint Simon</i> .
	<i>High Dam</i>	7 km south of old <i>Aswan</i> Dam. A modern marvel of engineering. Completed in 1971 and its size is 17 items the volume of the <i>Pyramid</i> of <i>Cheops</i> .
	<i>Agha-Khan Tomb</i>	Built on the western bank of the Nile according to the wishes of the 3 rd <i>Agha-Khan</i> . It is a simple sandstone structure, which houses a solid marble tomb.
	<i>Philae Temple</i>	Transferred to an island in the <i>Nile</i> to save it from the floods. Complex of temples dedicated to <i>Isis</i> and date to the late <i>Graeco Roman</i> period.
	<i>Edfu Temple</i>	110 km South of <i>Luxor</i> . An example of Ptolemaic architecture. Includes an account of the war between <i>Horus</i> and his enemy <i>Seth</i> .
	<i>Red Sea</i>	
	<i>Roman Fortresses of Badia and Belih</i>	Two refuges for early Christians who hid from Roman persecutors. The chapels date back to the 3 rd and 4 th centuries.
<i>Saint Antoni Monastery</i>	Oldest in Egypt which mark the beginning of monasticism. It is about 125 km from <i>Cairo</i> on the <i>Red Sea</i> coast. Founded by <i>Saint Antony's</i> disciples at the end of the 4 th century on <i>Galala Plateau</i> .	
<i>Saint Paul. Monastery</i>	Originally built during the 5 th century and rebuilt during the middle ages. on <i>Galala Plateau</i> .	
<i>Elba Mountain (Mangroves)</i>	Southeast of the Eastern desert on the borders with <i>Sudan</i> on the <i>Red Sea</i> . Considered a reservation as it has many types of plants, animals and marine birds.	
<i>Sultan Selim Fort</i>	Built in the 16 th century and rebuilt by the French in 1798. It dominates the harbor of <i>Qusseir</i> , 80 km south of <i>Safage</i> .	
<i>Old Port of Philotera</i>	Built by King <i>Ptolemy I</i> (283 B.C-246 B.C). Currently the city of <i>Safaga</i> stands on the ruins of this old port.	
<i>Red Sea Mountains</i>	<i>Mons Porphyrites</i> , <i>Mons Claudianos</i> , <i>Bir Hamata</i> , <i>Bir Umm El-Fawakhir</i> ,	

Source:(Qena) - Information and Decision Support Center, (IDSC) Qena Governorate Description, 1999 issue.

Source:(Luxor) - The descriptions are summarized from data provided in interviews with the Director of Culture in Qena.

Source:(Luxor) - The Ministry of Planning, The National Project for Development of Southern Egypt, April 1996.

- The descriptions are summarized from data provided in interviews with the Director of Culture in Luxor City.

Source:(Aswan) - The National Project for Development of Southern Egypt. Ministry of Planning, April 1996, P.51.

- The descriptions are summarized from data provided in interviews with the Director of Culture in Aswan Governorate.

Source:(Red Sea)-The National Project for Development of Southern Egypt. Ministry of Planning. April.1996.

-The descriptions are summarized from data provided in interviews with the Director of Culture in the Red Sea Governorate.

2) Traditional Culture, Folklore Art and Attraction

Culture is internationally known as a combination of characteristics within a certain human environments, including traditions, norms, religious and spiritual values, social systems, public institutions, folklore and regulatory legislation. These characteristics are indented and attained and affect human behavior of people living together in one geographical location during a certain period of time. Accordingly, one can conclude that the content of Egypt culture is almost the same in all its regions where spiritual believes are almost common, social and political institutions are completely regulated by one unified legislative system. The majority of Egyptians are Moslems practicing the same rituals, and the same can be said concerning Christian Egyptians.

However, there are some minor sub-cultures and specific community sensitive traditions and norms in some regions, such as Southern, Upper Egypt governorates. These differences may appear in clothes fashion, work and leisure, social events, and accent.

a. *Qena* Governorate

Qena Governorate is one of the most traditional, poor, and conservative communities in Egypt. It has some *Greco-Roman* temples, *Coptic Monasteries*, and a modern barrage in *Esna*. Also, clay and alabaster works are widespread handcrafts, in addition to palm branch wooden works.

Traditional popular male songs and dances associated with primitive musical instruments such as *Rababa* and exhibited mostly in religious ceremonies.

It should be noted that *Qena* has been a population - pushing region for a long time due to its limited resources. People from *Qena* used to migrate to large cities such as *Cairo* and *Alexandria*, but currently they seek job opportunities in *Aswan*, *Luxor* and *Red Sea*.

b. Luxor City

Luxor City is characterized with its wealth of monuments and cultural heritage, pharaonic and *Graeco-Roman* temples, and Islamic Mosques. It is famous for its traditional handcrafts and marble.

The city is open to visitors and tourists from all parts of the world, who bring with them their own culture, language and traditions, and who have various needs and expectations during their stay in *Luxor*. The city people has managed for long years to respond in a positive attitude to these various needs and expectations. They learned new skills and professions, acquired knowledge of several languages and entered into new lines of trade and hand crafts. Popular arts and folklore flourished and found various channels to express themselves including festivals and religious celebrations.

During these occasions, exhibitions of plastic arts are held. Popular songs and dances horse riding, sword playing, and other forms of popular arts are exhibited, accompanied with music played on traditional instruments.

People living outside the city continued to lead their traditional way of life far from foreign influences of visitors and tourists.

c. *Aswan* Governorate

Aswan Governorate is similar to luxor in its major cultural traits. However, it has less Islamic and more Christian and modern monumental resources. The later include the High-Dam and Aswan Dam. Many *Nubian* cultural activities are practiced in *Aswan*, including dances, songs, music, handcrafts and pottery. Due to some cultural differences *Nubian* groups in *Aswan*, especially in

terms of dialect and manner of speaking, marriage ceremonies, festival songs and music, constitute one ethnic group.

d. *Red Sea* Governorate

Red Sea Governorate represents eastern frontiers of Egypt where harbors, fishing and marine activities exist. Due to its desert nature, there exist some *Roman* mines and *Coptic* monasteries. *Red Sea* Governorate is a population pulling area where migrants, especially males of young generation find new jobs and employment opportunities in tourist activities. They bring their own sub culture and interact to constitute a modern society, which is opened to international tourists with their universal culture.

The original population of *Red Sea* area are of *Arabian* tribes. They live in small areas in *Safaga*, *Kosair* and *Ras Ghareb* and have benefited from the new developments in the tourism sector in the governorate. Cultural activities are associated with tourism as some popular arts bands are brought from *Aswan* and *Luxor* to present their dances and music before tourists. There is not a distinct culture or handcrafts. However, the area has large potential for tourism development

(9) Public Health

1) Health Condition of Egypt

a. Health Index

Health status of Egypt is summarized in terms of a health index as shown in the following table.

Health Index		%	Year
Total population with access to	Health care	100	1980
		99	1993
	Safe water	90	1980
		84	1994/95
	Sanitation	70	1980
Infant mortality rate (per 1,000 live births)*		120*	1980
		56*	1995
Malnutrition (under five years old)		9	1998-1995
Contraceptive prevalence rate		48	1998-1995
Total birth (fertility) rate		5.1	1980
		3.4	1995

Source: World Development Report 1997

b. Maternal and Child Health (MCH)

As for Maternal and Child Health (MCH) of Egypt, the following table shows average of the infant mortality and child mortality rates for ten years. Between 1980 and 1993, the mortality under five years old decreased from 157 to 81‰ (per 1,000 births).

Area	Infant Mortality Rate	Child Mortality Rate
Urban governorates	42.9	14.6
Lower Egypt	Whole	60.9
	Urban	38.5
	Rural	68.3
Upper Egypt	Whole	97.7
	Urban	76.1
	Rural	105.2
Frontier governorates	53.8	9.7
Egypt total	72.9	24.8

Source: Egypt Demographic and Health Survey, 1995, P. 125

According to five years preceding the survey (1995), births attended by medical personal are as shown in the following table.

Area	Doctor	Nurse/Midwife	Total
Urban governorates	63.1	6.1	69.2
	Whole		
Lower Egypt	42.3	9.1	51.4
	Urban	68.4	6.7
	Rural	34.0	9.9
	Whole		
Upper Egypt	26.0	6.2	32.2
	Urban	48.8	10.8
	Rural	18.2	4.7
Frontier governorates	46.3	13.0	59.3
Egypt total	39.9	7.4	46.3

Source: Egypt Demographic and Health Survey, 1995, P. 140

c. Immunization coverage

Immunization coverage among infant of (12-23) months old are shown in the following table.

Area	BCG	DPT	Polio	Hepatitis	Measles	All	None
Urban governorates	98.1	88.9	88.9	64.2	93.7	87.4	1.4
	Whole						
Lower Egypt	96.1	84.8	85.8	60.1	92.8	81.9	1.4
	Urban	99.0	93.1	93.9	65.4	96.3	91.7
	Rural	95.1	81.9	83.1	58.3	91.6	78.5
	Whole						
Upper Egypt	91.8	78.5	80.4	50.3	85.7	72.4	4.0
	Urban	94.5	86.8	88.8	59.8	90.3	79.9
	Rural	90.8	75.6	77.4	46.9	81.3	69.7
Frontier governorates	89.0	78.8	78.9	53.4	84.1	74.1	6.7
Egypt total	94.7	83.0	84.2	56.9	89.2	79.1	2.5

Source: Egypt Demographic and Health Survey, 1995, P. 147

2) Heath Condition of Study Area

a. Qena Governorate

In Qena Governorate, indicators of infant and child mortality have shown similar improvements of national level. Between 1976-85 and 1986-95 infant mortality dropped from 88.9 to 43.3 per 1,000 live births, and child mortality dropped from 121.7 to 60.1 per 1,000 live births as shown in the following table (Source: CAPMAS, Sample Survey of Demographic Characteristics, 1996).

Also, health service availability, coverage and accessibility have shown improvements as can be seen from the following table.

Moreover, according to the leading ten causes of mortality as shown in the following table, the mortality rate shows a decreasing trend between 1994 and 1997.

1) Luxor City

In Luxor City, infant and child mortality are expected to be lower than their level in urban upper Egypt region (76.1 and 15.4 per 1,000 live births respectively). Also, health services index have shown improvement as can be seen from the following table.

2) Aswan Governorate

In Aswan governorate, estimation of infant and child mortality between 1976-80 to 1991-95 have shown decreasing trend from 138.0 to 69.6 per 1,000 live births for infant mortality and from 194.8 to 85.3 per 1,000 live births for child mortality as shown in Tabel 4.2.52. (Source; CAPMAS, Sample Survey of Demographic Characteristics, 1996).

Also, health services of *Aswan* have increased as shown in the following table. Moreover, according to the leading ten causes of mortality as shown in the following table, the mortality rate shows a decreasing trend between 1994 and 1997.

3) *Red Sea* Governorate

In *Red Sea* Governorate, which is one of the frontier governorates, infant mortality rate of 53.8 per 1,000 live births is next to the level of urban governorates (42.9 per 1,000 live birth) and better than both lower Egypt and upper Egypt levels (60.9 and 97.7 per 1,000 live birth respectively).

Child mortality rate of 9.7 per 1,000 live births of the Governorate is the lowest among all regions of Egypt.

Health services index such as the population per hospital bed ratio has improved from 610 per bed in 1995 to 478 per bed in 1998.

Infant & Child mortality (*Qena & Aswan*)

	<i>Qena</i>		<i>Aswan</i>	
	1976-85	1986-95	1976-80	1991-95
Infant mortality (1,000 births)	88.9	43.3	138.0	69.6
Child mortality (1,000 births)	121.7	60.1	194.8	85.3

Source: CAPMAS, Sample Survey of Demographic Characteristics, 1996

Health Service Index in the Study Area

	<i>Qena</i>		<i>Luxor</i>		<i>Aswan</i>		<i>Red Sea</i>	
	1996	1998	1996	1998	1996	1998	1995	1998
Population /physician	1,542.27	1,602.66	908.15	907.01	2,130.57	1,328.69	-	-
Population /nurse	1,962.56	1,425.79	1,008.4	990.46	951.78	662.17	-	-
Population /bed	933.98	844.12	776.47	558.64	784.59	513.83	610	478
Population /health facility	87.19	84.83	-	-	-	-	-	-
Population / rural health unit	-	-	-	-	13,160	11,140	-	-

Source: World Development Report 1997, Egypt Demographic and Health Survey 1995

3) Leading Ten Causes of Mortality of Study Area

a. Qena Governorate

Leading Ten Causes of Mortality (Qena)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Cardiovascular Diseases 6,521	Cardiovascular Diseases 6,732	Cardiovascular Diseases 6,233	Cardiovascular Diseases 6,126	n.a
2	Gastro-intestinal 1,795	Gastro-intestinal 1,562	Gastro-intestinal 1,432	Gastro-intestinal 1,157	
3	Pneumonia 1,407	Pneumonia 1,401	Pneumonia 1,242	Pneumonia 1,230	n.a
4	High Blood Pressure 810	High Blood Pressure 886	Cerebrovascular Diseases 634	Cerebrovascular Diseases 639	n.a
5	Urinary Tract Infections 605	Cerebrovascular Diseases 662	High Blood Pressure 483	High Blood Pressure 483	n.a
6	Cerebrovascular Diseases 602	Urinary Tract Infections 523	Urinary Tract Infections 418	Urinary Tract Infections 391	n.a
7	Chronic Emphysematous Bronchitis 430	Chronic Emphysematous Bronchitis 440	Chronic Emphysematous Bronchitis 334	Chronic Emphysematous Bronchitis 307	n.a
8	Malignant Tumors 314	Malignant Tumors 309	Malignant Tumors 304	Malignant Tumors 277	n.a
9	Undefined Causes 2,005	Undefined Causes 3,517	Undefined Causes 2,822	Undefined Causes 3,007	n.a
10	Other 1,494	Other 1,658	Other 1,354	Other 1,474	n.a

Source: CAPMAS, Births and Deaths Statistics, 1994-1997.

b. Luxor City

Leading Ten Causes of Mortality (Luxor)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Cardiovascular diseases n.a	Cardiovascular diseases n.a	Cardiovascular diseases 647	Cardiovascular diseases 641	Cardiovascular diseases n.a
2	Cerebrovascular Diseases n.a	Cerebrovascular Diseases n.a	Cerebrovascular Diseases 138	Cerebrovascular Diseases 110	Cerebrovascular Diseases n.a
3	High Blood Pressure n.a	High Blood Pressure n.a	High Blood Pressure 132	High Blood Pressure 164	High Blood Pressure n.a
4	Pneumonia n.a	Pneumonia n.a	Pneumonia 105	Pneumonia 113	Pneumonia n.a
5	Gastrointestinal n.a	Gastrointestinal n.a	Gastrointestinal 46	Gastrointestinal 53	Gastrointestinal n.a
6	Urinary Tract Infections n.a	Urinary Tract Infections n.a	Urinary Tract Infections 43	Urinary Tract Infections 68	Urinary Tract Infections n.a
7	Other heart Diseases n.a	Other heart Diseases n.a	Other heart Diseases 35	Other heart Diseases 18	Other heart Diseases 35
8	Malignant Tumors n.a	Malignant Tumors n.a	Malignant Tumors 22	Malignant Tumors 31	Malignant Tumors n.a
9	Undefined Causes n.a	Undefined Causes n.a	Undefined Causes 268	Undefined Causes 339	Undefined Causes n.a
10	Other n.a	Other n.a	Other 129	Other 152	Other n.a

Source: - CAPMAS, Births and Deaths Statistics, 1996-1997.

Note: 1994, 1995 data are included in Qena Governorate.

c. Aswan Governorate

Leading Ten Causes of Mortality (Aswan)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Cardiovascular diseases 2,795	Cardiovascular diseases 2,683	Cardiovascular diseases 2,741	Cardiovascular diseases 3,065	Cardiovascular diseases n.a
2	Gastrointestinal 612	Pneumonia 401	Pneumonia 382	Pneumonia 397	Gastrointestinal n.a
3	Pneumonia 413	Gastrointestinal 394	Gastrointestinal 342	Gastrointestinal 370	Pneumonia n.a
4	Urinary Tract Infections 229	Urinary Tract Infections 166	Cerebrovascular Diseases 177	Cerebrovascular Diseases 195	Urinary Tract Infections n.a
5	Cerebrovascular Diseases 225	Cerebrovascular Diseases 151	Urinary Tract Infections 139	Urinary Tract Infections 131	Cerebrovascular Diseases n.a
6	High Blood Pressure 144	High Blood Pressure 120	High Blood Pressure 102	High Blood Pressure 96	High Blood Pressure n.a
7	Chronic Emphysematous Bronchitis 112	Chronic Emphysematous Bronchitis 92	Chronic Emphysematous Bronchitis 87	Chronic Emphysematous Bronchitis 54	Chronic Emphysematous Bronchitis n.a
8	Diabetes 89	Diabetes 82	Diabetes 44	Diabetes 48	Diabetes n.a
9	Undefined Causes 700	Undefined Causes 947	Undefined Causes 833	Undefined Causes 743	Undefined Causes n.a
10	Other 506	Other 188	Other 347	Other 440	Other n.a

Source: CAPMAS, Births and Deaths Statistics, 1994, 1995, 1996 and 1997 issues.

d. Red Sea Governorate

Leading Ten Causes of Mortality (Red Sea)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Cardiovascular diseases 176	Cardiovascular diseases 204	Cardiovascular diseases 177	Cardiovascular diseases 206	Cardiovascular diseases n.a
2	Cerebrovascular Diseases 41	High Blood Pressure 34	Cerebrovascular Diseases 27	Cerebrovascular Diseases 32	Cerebrovascular Diseases n.a
3	Pneumonia 27	Pneumonia 27	High Blood Pressure 20	Urinary Tract Infections 17	Pneumonia n.a
4	High Blood Pressure 23	Urinary Tract Infections 20	Pneumonia 19	Pneumonia 16	High Blood Pressure n.a
5	Gastrointestinal 23	Gastrointestinal 13	Gastrointestinal 14	High Blood Pressure 13	Gastrointestinal n.a
6	Urinary Tract Infections 17	Cerebrovascular Diseases 12	Urinary Tract Infections 11	Gastrointestinal 10	Urinary Tract Infections n.a
7	Malignant Tumors 13	Malignant Tumors 10	Malignant Tumors 11	Malignant Tumors 15	Malignant Tumors n.a
8	Congenital Abnormalities 10	Congenital Abnormalities 12	Congenital Abnormalities 10	Congenital Abnormalities 11	Congenital Abnormalities n.a
9	Undefined Causes 24	Undefined Causes 40	Undefined Causes 35	Undefined Causes 46	Undefined Causes n.a
10	Other 36	Other 38	Other 66	Other 58	Other n.a

Source: CAPMAS, Births and Deaths Statistics, 1994-1997.

4) Leading Ten Causes of Morbidity of Study Area

a. Qena Governorate

Leading Ten Causes of Morbidity (Qena)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Pneumonia 3,304	T.B 414	Pneumonia 2,564	Pneumonia 3,081	Pneumonia 3,478
2	Hepatitis 1,113	Pneumonia 378	Hepatitis 616	Hepatitis 507	Hepatitis 660
3	T.B 434	Hepatitis 137	Typhoid 266	Measles 348	T.B 364
4	Encephalitis 260	Encephalitis 60	Measles 263	Encephalitis 212	Encephalitis 257
5	Typhoid 212	Tetanus 41	Encephalitis 213	Typhoid 211	Typhoid 253
6	Tetanus 188	Typhoid 17	T.B 168	T.B 170	Measles 281
7	Puerperal fever 75	Measles 14	Tetanus 95	Tetanus 123	Gastrointestinal & Dysentery 194
8	Measles 65	Myelitis 8	Puerperal fever 84	Myelitis 61	Tetanus 103
9	Myelitis 40	Puerperal fever 6	Myelitis 40	Puerperal fever 56	Puerperal fever 84
10	Gastrointestinal & Dysentery 1	Gastrointestinal & Dysentery 1	Gastrointestinal & Dysentery 4	Gastrointestinal & Dysentery 5	Myelitis 63

Source : Ministry of Health and Population (MOHP), Information Center, Unpublished data, obtained by permission.

b. Luxor City

Leading Ten Causes of Morbidity (Luxor)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Bronchitis n.a	Bronchitis n.a	Bronchitis 315	Bronchitis 424	Bronchitis 368
2	Hepatitis n.a	Hepatitis n.a	Hepatitis 191	Hepatitis 158	Hepatitis 171
3	Measles n.a	Measles n.a	T.B 36	Measles 108	Measles 107
4	Typhoid n.a	Typhoid n.a	Typhoid 5	T.B 59	Typhoid 46
5	Myelitis n.a	Myelitis n.a	Measles 13	Typhoid 6	T.B 24
6	T.B n.a	T.B n.a	Myelitis 8	Myelitis 4	Tetanus 11
7	Tetanus n.a	Tetanus n.a	Encephalitis 7	Tetanus 3	Encephalitis 4
8	Meningitis n.a	Meningitis n.a	Tetanus 2	Meningitis 1	Myelitis 3
9	Encephalitis n.a	Encephalitis n.a	Meningitis 0	Encephalitis 1	Meningitis 3
10	n.a	n.a	n.a	n.a	n.a

Source: - Ministry of Health and Population (MOHP), Information Center. Unpublished data obtained by permission.

- 1994, 1995 data for Luxor were included in Qena Governorate.

c. Aswan Governorate

Leading Ten Causes of Morbidity (Aswan)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Hepatitis 733	Hepatitis 407	Hepatitis 263	Hepatitis 252	Hepatitis 389
2	T.B 530	T.B 361	T.B 317	Measles 86	T.B 362
3	Puerperal fever 61	Puerperal fever 22	Measles 24	Tetanus 17	Measles 249
4	Tetanus 24	Tetanus 12	Puerperal fever 17	T.B 15	Myelitis 18
5	Myelitis 21	Measles 10	Myelitis 10	Myelitis 11	Tetanus 8
6	Measles 11	Myelitis 10	Tetanus 6	Typhoid 8	Meningitis 4
7	Typhoid 0	Meningitis 0	Rabies (hydrophobia) 1	Puerperal fever 5	Rabies (hydrophobia) 2
8	Rabies (hydrophobia) 0	Rabies (hydrophobia) 0	Meningitis 0	Meningitis 5	Puerperal fever 0
9	Chickenpox 0	Chickenpox 0	Chickenpox 0	Chickenpox 2	Chickenpox 0
10	Meningitis 0	Typhoid 0	Typhoid 0	Rabies (hydrophobia) 0	Typhoid 0

Source: Ministry of Health and Population(MOHP), Information Center, Unpublished data, obtained by permission

d. Red Sea Governorate

Leading Ten Causes of Morbidity (Red Sea)

No	1994 Causes Deaths	1995 Causes Deaths	1996 Causes Deaths	1997 Causes Deaths	1998 Causes Deaths
1	Hepatitis 50	Hepatitis 20	Typhoid 5	Typhoid 7	Typhoid 62
2	Typhoid 24	T.B 20	Measles 3	T.B 6	Measles 51
3	Pneumonia 9	Typhoid 7	Hepatitis 3	Hepatitis 6	Hepatitis 21
4	Myelitis 9	Encephalitis 4	Pneumonia 2	Measles 5	T.B 6
5	T.B 2	Pneumonia 1	T.B 1	Pneumonia 2	Meningitis 3
6	Measles 0	Myelitis 1	Myelitis 0	Encephalitis 1	Myelitis 3
7	Encephalitis 0	Meningitis 0	Encephalitis 0	Myelitis 0	Encephalitis 2
8	Meningitis 0	Measles 0	Meningitis 0	Meningitis 0	Pneumonia 1
9	Bronchitis 0	Bronchitis 0	Bronchitis 0	Bronchitis 0	Bronchitis 1
10	n.a	n.a	n.a	n.a	n.a

Source: Ministry of Health and Population (MOHP), Information Center. Unpublished data obtained by permission.

5) Leading Five of Communicable Diseases Study Area

a. *Qena* Governorate

Leading Five of Communicable Diseases (*Qena*)

No	1994 Diseases Persons	1995 Diseases Persons	1996 Diseases Persons	1997 Diseases Persons	1998 Diseases Persons
1	Acute Pneumonia 1,407	Acute Pneumonia 1,401	Acute Pneumonia 1,242	Acute Pneumonia 1,007	Acute Pneumonia n.a
2	T.B 94	T.B 109	T.B 60	T.B 70	T.B n.a
3	Tetanus 24	Tetanus 20	Tetanus 17	Tetanus 0	Tetanus n.a
4	Puerperal Sepsis 23	Puerperal Sepsis 17	Puerperal Sepsis 12	Puerperal Sepsis 0	Puerperal Sepsis n.a
5	Measles 8	Measles 8	Measles 1	Measles 0	Measles n.a

Source: CAPMAS, Births and Deaths Statistics, 1994-1997

b. *Luxor* City

Leading Five of Communicable Diseases (*Luxor*)

No	1994 Diseases Persons	1995 Diseases Persons	1996 Diseases Persons	1997 Diseases Persons	1998 Diseases Persons
1	Acute Pneumonia n.a	Acute Pneumonia n.a	Acute Pneumonia n.a	n.a	Acute Pneumonia 52
2	T.B n.a	T.B n.a	T.B n.a	n.a	T.B 5
3	Tetanus n.a	Tetanus n.a	Tetanus n.a	n.a	Tetanus 2
4	n.a	n.a	n.a	n.a	n.a
5	n.a	n.a	n.a	n.a	n.a

Source: CAPMAS, Births and Deaths Statistics, 1997.

c. *Aswan* Governorate

Leading Five of Communicable Diseases (*Aswan*)

No	1994 Diseases Persons	1995 Diseases Persons	1996 Diseases Persons	1997 Diseases Persons	1998 Diseases Persons
1	Acute Pneumonia 413	Acute Pneumonia 401	Acute Pneumonia 382	Acute Pneumonia 158	Acute Pneumonia n.a
2	T.B 13	T.B 14	T.B 7	T.B 2	T.B n.a
3	Typhoid 2	Typhoid 9	Typhoid 6	Typhoid 0	Typhoid n.a
4	Hepatitis 2	Hepatitis 2	Tetanus 2	Hepatitis 0	Hepatitis n.a
5	Tetanus 2	Tetanus 1	Hepatitis 1	Tetanus 0	Tetanus n.a

Source: CAPMAS, Births and Deaths Statistics, 1994-1997.

d. *Red Sea* Governorate

Leading Five of Communicable Diseases (*Red Sea*)

No	1994 Diseases Persons	1995 Diseases Persons	1996 Diseases Persons	1997 Diseases Persons	1998 Diseases Persons
1	Acute Pneumonia 27	Acute Pneumonia 27	Acute Pneumonia 19	Acute Pneumonia 16	Acute Pneumonia n.a
2	Food Poisoning 2	Food Poisoning 2	Food Poisoning 0	Food Poisoning 0	Food Poisoning n.a
3	T.B 1	T.B 4	T.B 1	T.B 6	T.B n.a
4	Flu 0	Flu 2	Flu 0	Tetanus 2	Flu n.a
5	Tetanus 0	Tetanus 0	Tetanus 0	Flu 0	Tetanus n.a

Source: CAPMAS, *Births and Deaths Statistics, 1994-1997*.

6) Leading Five of Parasitic Diseases

Data of parasitic diseases are not available in the study area.

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