Tourism Development and Sharing of Coastal Resources, Aqaba Town, Jordan

By: Dr. Magdy M. El-Bastawsiy
Associate Professor, Department of Architecture and Urban Planning,
Faculty of Engineering in Port-Said, Suez Canal University

1. Abstract

Sharing coastal resources and tourism development in Aqaba Town, Jordan is the main concern of this paper. The investigation of the environmental characteristics was used to define the importance of enhancing tourism in Aqaba town. The analysis of the existing coastal resources and land-use was investigated to define the opportunity of land-use compromise. The experience of other countries of was investigated to provide background experiences of enhancing tourism development for sharing coastal resources, and land-use and environmental issues. The assessment of the potentials and constraints of tourism development was conducted to outline the criteria and guidelines for initiating tourism development in Aqaba Town. Alternative approaches were proposed for tourism development strategy. Finally, criteria and standards for the preferred tourism development approach were proposed, which could contribute to the sharing coastal resources and, in turn, environmental conservation in Aqaba.

2. Introduction

Aqaba town is located on the southeast area of Jordan, at the northeast part, end part, of the Gulf of Aqaba, Fig. 1. It is the sole Jordanian port with direct access to the Red Sea, through the Gulf of Aqaba. It is the base for importing essential materials and food, and exporting phosphate rock, potash and fertilizer etc. The primary function of Aqaba, therefore, is the port; the second function is the Phosphate Company and railway. In addition, Aqaba is being primed as one of Jordan's primary industrial centers, with several key heavy industries planned for the south and the desert northeast of the city and light manufacturing, assembly and processing plants for the northwest section, near the airport. The Aqaba sea and airports comprise focal points for the development a major regional and international logistic center. Fig. 2 shows the general land-use map of Aqaba area. [1]

The population of Aqaba Region is 95355 in 1998, including 81740 live in Aqaba town itself. The total labor force is about 10000. Approximately 5000 are employed by the Aqaba Port Corporation, nearly 1400 by the Aqaba Railway Company, over 1000 in the hotel sector and much of the remaining by the Phosphate Company and related industries. [2]

Aqaba is also a popular winter and summer seaside resort. The climate of Jordan is characterized by hot dry summers and cool winters. Aqaba and the Jordan Valley are the hottest areas. Rain falls only during winter and spring. Aqaba's mild climate makes it an ideal location for year-round scuba diving. The water temperature averages 22.5 C, 80 F. [3]

Tourism is a significant but currently minor activity. The Aqaba coastal area lies along the Gulf of Aqaba north of the Kingdom of Saudi Arabia border for approximately 27 km and bounded on the East and North by mountains. What increase tourism development potential in Aqaba, in addition, is its location 40 kilometers away from one of the world's most spectacular desert of Wadi Rum, and some 150 kilometers from the jewel of Jordan, the Rose Red city of Petra makes it part of the so-called Jordan's Golden Tourism Triangle. [4]

While Aqaba presently offers more than 1754 hotel rooms, in 1999, plans are underway to increase the city's tourist facilities. Jordan has major development plans for tourism in Aqaba, particularly in the area south of the city center. Jordan also plans to enhance tourism capacity and products in Petra and Wadi Rum to the north of Aqaba. [5]

There is no large-scale industry in Aqaba Town. Therefore, enhancing economic activity in three target sectors is essential to Aqaba, which include: enhancing the capacity and capability of the ports as a national asset; developing and broadening the industrial and economic activities; and developing tourism locally, nationally and internationally. Aqaba has been settled as a Free Port and Special Economic Zone. Aqaba Special Economic Zone Authority (ASEZA) is responsible for running the town.

Development in all three sectors is currently constrained by land use conflict. The conflict between the current industrial use and location of the main port, adjacent Hafayer tourism area, Aqaba historical area and the expansion of Aqaba town, Fig. 2, has become of major concern. Such conflict limits expansion and further development of the current Aqaba urban area and main port, and prevents the introduction of new tourism facilities. Moreover, a particular example of conflict is the environmental impact created by the port distribution pattern and related activities.

ASEZA, as a result, believes that industry; tourism and port-related activities can be developed in a manner that is complementary rather than hostile to one another. It could be concluded that some development conflict inevitably arises. For example, question of whether the phosphate loading facility should be re-located together with other port installations, the implications and impact on tourism resources, and whether a proposed new oil refinery should be built in the south industrial zone near an area designated for tourist development. [6]

To overcome the land-use and environmental issues, the Jordanian Government defined general objectives for the master plan of Aqaba Town. These general objectives are: evacuation and relocation of existing main port facilities and activities, including phosphate and break bulk general cargo handling facilities to a new port location and within the industrial zone in the south; redevelopment of evacuated main port for tourism and recreational activities; and relocation of existing passenger terminal within the new tourism physical development. [7]

Therefore, the purpose of this research is to investigate tourism development policy enhanced for sharing coastal resources and, in turn, environmental conservation in Aqaba town, Jordan. To achieve this purpose, the study will investigate: 1) importance of enhancing tourism for current land-use issues in Aqaba town; 2) analyzing potential and constraints of tourism development in Aqaba; 3) investigating international cases of similar experience of sharing coastal resources; 4) outline criteria and guidelines for initiating tourism development in Aqaba town; 5) proposing alternative approaches for tourism development strategy; 6) defining the preferred tourism development approach, which could contribute to the environmental conservation in Aqaba Town.

3. Background

Aqaba port, since at least 1000 BC, has existed continuously on the site to handle trade between Palestine and Syria. Aqaba stands on or near the biblical Elath (Elat). The Roman military post of Aelana later occupied the site. A great road built under Emperor Trajan linked the area with Damascus and Egypt. Occupied and fortified by the Crusaders in 1115. In 1187, Aqaba was retaken by Saladin. Since the beginning of the 16th century, the Ottoman Empire ruled Aqaba. During the 19th century, the town

became a staging point on the pilgrim route to Mecca. The port's reputation as burgeoning city of trade and transit, which began to deteriorate during the Abbasid Empire, now shrunk to simple fishing village of little significance that was to remain so for 400 years.
In 1869, the neighboring Suez Canal became operational and the construction of the Hijaz Railway (1906-1908) provided alternative communication routes for pilgrims heading south to Mecca and Medina stole much of Aqaba's commercial importance and status. [8]
During World War 1, the Arab Army of Sharif Hussein bin Ali, the Hashemite leader of the Great Arab Revolt, with T.E. Lawrence, Lawrence of Arabia, attacked the Ottomans, who then withdrew. T. E. Lawrence captured Aqaba for the Allies in World War I. Later, Aqaba became part of the Hejaz but was ceded to Trans-Jordan in 1924. By mid 1950's, Aqaba flourished yet again as Jordan's only outlet to the sea, and by the 1980's the port gained a growing regional dimension as a transit point. Today, with the transformation of Aqaba into a special economic zone, the city is recapturing its historical role as a regional hub for trade, tourism, and culture. [9]
The population of Jordan is over four million. About 70 % of the inhabitants live in urban areas. The country is 88,946 sq. kilometers. 80 % of total land is semi-desert or wilderness and only 6 % is cultivated. Aqaba region is one of the least populated regions of Jordan. The population of Aqaba Region is 2% of Jordan total population and 11.2% of the total population of Irbid government. In comparison, this is only equivalent to 5.26% of the population of Amman. The average density of Aqaba region is 14 persons per sq km. The labor force of Aqaba region is estimated at 9,807 of which Aqaba Corporation employs 4,930. In addition, 1363 are employed by Aqaba Railway Company. [10] & [11]
Jordan enjoyed high growth during 1973-1984 but is highly dependent on the regional economic situation of the Gulf Area. Growth reduced in the mid-eighties owing to the rapid decline in the price of oil, slowdown in adjacent regional economies and UN sanctions on Iraq. This is because land transport, particularly road and maritime, play an important role in international trade. A distinctive feature of Jordanian transport is the large volume of transit cargo passing through Jordan to neighboring countries. [12]

4. Importance of Enhancing Tourism in the Main Port Area

Although tourism in Aqaba constitutes a potential main economic role, it is not one of the major functions of Aqaba because it hires only 10% of total labor force of Aqaba. As mentioned above, the main function of Aqaba is port activities. In addition, there is little commercial fishing activity in Aqaba except for some artisan fishing with small out-board-engine boats and about 40 of small municipal fishing boats based in a small fishing port at the north part of the main port. Aqaba does not include large-scale industry. Huge power plant and chemical plants are located within the hinterland of the industrial port. These include a power plant of Jordan Electricity Authority, a power plant for the fertilizer complex, a sulfuric acid plant, a phosphoric acid plant, a granulation plant, and an aluminum florid plant. Expansion programs have commenced for both the power plant and fertilizer plant. [13]
Aqaba currently lacks a clear vision of its future economic role at the national level. Consequently, people are rarely willing to re-locate to this region. Enhancing the economic activity is essential for the sake of developing the Aqaba region. Several studies have been conducted for the economic development of Aqaba, such as developing the port of Aqaba, by JICCA; developing Aqaba as a special economic free zone; tourism development in Hafayer and South Coast; and extending the railway to

the industrial zone. [14]
The Ports of Aqaba also have a unique character. Physically, they are distributed along the 27 km of Jordan's only coastline. To the north, the main port is located along a 2km stretch of coastline. The rice port and cement berth are located south the main port and beyond that is the container port and passenger terminal. Further to the south, there is the oil berth, adjacent to the south tourism area, timber and industrial berths attached to the industrial zone which is 5 km from Saudi Arabian border. Other new industrial berths will be constructed in the near future adjacent the industrial area.
It is apparent that land-use conflicts do exist in Aqaba, particularly along the coast line area where port and industrial facilities have been spot-located rather than confined to the southern industrial zone. The attractiveness of the central coastline area for tourism development has been adversely affected by the spread of port and industrial facilities here in close proximity to Aqaba town particularly, at the north part of the proposed north and south coast tourist areas. This has resulted in conflict between port, phosphate loading, industrial, trucking and current and potential tourist facilities. Of particular concern is the land-use conflict adjacent to the proposed development site; i.e., the use of the main port, the Hafayer tourism and historical area at the north edge of the main port and the expansion of Aqaba town, which located 1.0 km north of the port, Fig. 3. This conflict of land-use has discouraged investors, from achieving any development plans in Aqaba.
A particular example of conflict is the environmental pollution created at the main port by the considerable dust emission from the phosphate berth. The dust is generated at both the loading and storage facilities even after installation of the dust collecting system at the loaders. Phosphate dust deteriorates the working conditions for workers, contaminates the grain bulk cargoes handled at berth number 1 next to phosphate berth, and pollutes Aqaba town with high levels of suspended particulate in the atmosphere throughout the year. After installation of the dust collecting system of the loaders, the dust emission reportedly decreased to 10%. But this is relative only and the amount of dust still emitted is considerable.
In addition, at the industrial port where the power plant and fertilizer complex are operated, gas emissions, including NH3, CO and SO2, are observed leeward of the plants. Moreover, the current truck route passes southeast from Aqaba town towards the main port and coastline. The trucks can also use another route called the back road. Unfortunately, trucks currently have difficulty using the back road because of its sharp slopes. As a result, trucks have to pass within Aqaba Town to avoid any driving difficulties, particularly when they are loaded. The town is already congested by the amount of trucks going through. In 1998 the numbers of trucks of loaded cargo via Aqaba port was 234824 and the number trucks of discharged phosphate in ports stores was 51164. [16]
The land-use conflict has constrained the expansion of the different uses. E.g., the natural expansion direction of northern tourist area is toward the south, but this expansion cannot take place because of the existing main port. This conflict prevents the establishment of any significant comprehensive tourism development along the coastline and adjacent areas. Although the coastline and mountains offer an attractive valuable location, they remain largely uninhabited or developed.
The Jordan Industrial Estates Corporation (JIEC) was established by the government in 1980 to plan, develop and manage fully serviced industrial parks throughout Jordan. The JIEC is planning the development of nine industrial estates by 2002, including one in Aqaba which is programmed for completion by June 2002. Moreover, Aqaba Special Economic Zone Authority (ASEZA) had five major strategic land use policies:

concentrate residential land uses within and around the existing urban area; create a new tourist zone in the center of the south coast area; concentrate major industries in the South Industrial Area, particularly in Wadi I and II areas and adjacent to the Back Road; establishing an industrial port in Wadi II, mainly for the bulk cargo handling; and locate small scale and town related industries to the north of the town. [17]

Therefore, restructuring the Aqaba ports became an essential economic and environmental perquisite. The major element of this restructure process is relocating the main port and its facilities to the South Industrial Zone. Within this context, Tourism forms a priority sector for economic growth. Tourism can be an environmentally friendly and appropriate activity if managed correctly. There is evidence that tourism is an important stimulus encouraging conservation in developing areas if the level, type and management of tourism are appropriate. Many countries in the Mediterranean and Red Sea area are pursuing their own national tourism plans whilst also working together to develop a coordinated tourism management framework to ensure long-term sustainable development of the area.

In addition, the growth trend in tourism is unbroken all over the world. Holiday travel has become an integral and almost crucial element of leisure time for a majority of the industrialized nations. Worldwide activities directly or indirectly related to tourism contributed around 10% to the world GDP and to employment opportunities. The World Travel and Tourism Council, in 1996, estimates are even higher at 10.9%. World tourism grew by 260% between 1970 and 1990, with annual world growth estimated at 2% to 4.5% with projections for certain areas being considerably higher. [18] The World Bank estimate for Jordan is over 15% per annum. This is well above the growth rates for other parts of the Jordanian economy. Even if tourism growth rates stabilized in future, tourism will remain one of the countries most dynamic economic activities. In Jordan tourism generated a major source of income accounting for nearly 13% of GNP (1999). [19]

Tourism is Jordan's second largest generator of foreign exchange after remittances. This is clearly demonstrated in that foreign receipts from tourism amounted to $US 389 million in 1997, up from $US 271 million. By 2010, it is expected that approximately 2.4 million tourists will visit Jordan, increasing from 1.3 million in 1998. In 1998, 16% of tourists stayed for an average of 2.3 nights in Aqaba. Aqaba should focus on two elements: attracting more tourists and lengthening there period of stay. [20]

Moreover, tourism activities can: serve as a self-financing mechanism and hence as a tool of conservation; assist and encourage conservation directly; and provide both incentive and economic means by which conservation measures can be carried out. E.g., in Britain, many historic houses, villages, old churches, etc. could not be kept in proper state of repair without tourist money. Most of the environmental issues associated with tourism development standards and criteria include the impact of developing tourist facilities such as resorts, caravan parks, golf courses, marinas and offshore structures. If they are not properly managed, tourist facilities may alter the natural landscape, disturb natural areas and themselves become a source of pollution. Coastal resorts are often established with little consideration of environmental issues such as sewage and waste disposal. These matters must be addressed when developing, the detailed design tourism in Aqaba. [21] & [22]

5. Potentials of Tourism Development in Aqaba

Climate is a significant tourism factor with the prospect of 365 days of sunshine being particularly appealing to the North European tourist market. Where the climate of Jordan is characterized by hot dry summers and cool winters, Aqaba and the Jordan

Valley are the hottest areas. Aqaba is considerably warmer in the winter months than Amman, which could be helpful in promoting the local Jordanian tourist market. Surrounded by rugged purple mountains which subtly change in shape and color as the day unfolds, Aqaba enjoys a year-round moderate climate, never dropping below 25°C, even in winters which more harshly affect the rest of the Kingdom. In summer, high temperatures, which sometimes reach 40°C, are alleviated by the fresh and cooling sea breezes which waft in from the Gulf.

Rain falls only during winter and spring. The average precipitation in Aqaba is less than 50 mm p a. The prevailing wind is north 10-20 knots. South wind is only occasionally. Gale force wind is seldom. The water temperature averages 22.5 C, 80 F. The prevailing north wind is from Wadi Araba keep the water surface shimmering clean, while the flows within the Gulf ensure water that is always transparent. Aqaba bay is usually calm. Heavy south storms rarely occur more than 2 to 4 times a year. Aqaba's mild climate makes it an ideal location for year-round scuba diving.

Nevertheless, climate cannot be the sole attraction. A location must have character, comfort, leisure and good communications. The existing pattern of tourism to Aqaba peaks in the spring when the climate is particularly appealing but it is also related to religious/national holidays. Tourism in Aqaba combines two forms of leisure–nature tourism, based on the gulf waters, the coral reefs, the desert and the mountains, and heritage tourism based on the Aqaba's history, cultural appeal and archaeology including in particular, its close proximity to Petra. Both forms of tourism have shown rapid increases worldwide in recent years. The present tourist area of Aqaba town consists of an old castle with a museum, various tourist shops, and various quality hotels, nice planted roads, beautiful natural vegetarian and an attractive mountain backdrop. The hotels offer swimming and diving facilities along with a variety of water sports. There are good potentials for the further development and enhancement of tourist facilities and associated environmental improvements, particularly around the public beach areas and fishing harbor. [23]

In addition, Jordan contains a wealth of archaeological and historical sights offering a great variety to tourists. Aqaba's one of its main assets is its location for day trips excursions to Petra, Wadi Rum and to neighboring countries. Aqaba could become an important and attractive international tourism region within Jordan given the correct development, good marketing and promotion. A combination of demographics, technology and consumer awareness and preferences leads to the development of growing lucrative niche markets such as resort and eco-tourism. For example, those people engaged in diving, snorkeling and sailing doubled last year in Germany. These factors provide the basis for a wide range of tourism opportunities which Jordan, and especially Aqaba, could offer diversified target groups. Aqaba could become one of the main gates to nearby Petra which is unique in both its history and beauty. Petra was the Capital Town of the Nabateans, immediately before the advent of Roman rule, 2000 year ago. It is distinct in its rose – colored gigantic tombs and monuments carved from the cliffs. The trip from Aqaba to Petra takes 90 minutes by car. At Wadi Rum the moonscape–like area of ancient wadis and weathered sandstone mountains that rise sheer out of the white and pink colored sands, is indeed very special and has a significant tourism potential. The travel time by car between Aqaba and Wadi Rum is about 50 minutes on good paved roads.

Moreover, Aqaba's additional main asset is the location of the Red Sea with its coral. The Red Sea is a very special natural resource and is considered to have the best coral reefs in the world along with Kenya and the Australian Barrier Reef. The Gulf of Aqaba is a semi-isolated basin connected to the Red Sea by a narrow channel some 400 m deep. The Gulf of Aqaba is about 170 km long and only 5 km wide at its narrowest point; nowhere does it exceed 26 km. The steeper slopes tend to be dominated by sea-grasses that help stabilize the substrate. Aqaba has two significant ethnic natural marine flora and funa, both of which contribute to the overall natural beauty of the region; these are coral reefs and sea-grass beds. Furthermore, a proportion of the species found near Aqaba do not occur in the Red Sea proper. Although same of the species have counterparts in the Indian Ocean, many are unique to the Gulf. Such species are called endemic, and these give added value to conserving marine life in Aqaba. The coral reefs are the most northerly-developed reefs in the world. They form a discontinuous belt on the coastline; interrupted by sandy associated with extensive wadi systems, and by large-scale industrial developments. In response to changing sea levels over the geological times, reef organisms have repeatedly recolonized the same locations along the coast, which correspond to outcrops of fossil coral on some of the more exposed headlands. Each recolonization is represented by a thin narrow reef development over an older reef flat or sloop. The Coral reef of Aqaba bay attracts many tourists and divers. The most beautiful and largest coral reefs exist near Marine Science Station, north and south of the station. [25]

6. Constraints of Tourism Development in Aqaba

In 1998 Jordan received about 468,496 tourists who stayed approximately 106,9512 nights. Aqaba attracted 76,340 tourists who spent 174,172 nights with average length of stay of 2.28 days. Tables 1 and 2 show the number of tourists within package tours and the average length of stay.

Currently, Aqaba has 31 classified hotels comprising, 2 four-star, 7 three-star, 7 two-star, and 15 one-star Hotels. The total number of rooms in 1999 was 1,754 with 3,571 bed spaces. In addition, the hotel Movenpick was opened in 2001 with 200 bedrooms. Some of the hotel classifications are optimistic by international standards. Table 3 provides the details of the classification and number of beds and employees, Jordanian and non-Jordanian, for the existing hotels.

The occupancy rates of the town's hotels catering for tourists are between about 30 and 40 percent, with some hotels having a much lower rate. This low rate appears to be the result of uncompetitive prices, lack of suitable entertainment facilities and mainly due to the highly seasonal fluctuation of tourists. Tourists to Aqaba have very short average length of stay and are concentrated during springtime, March, April and May, and fall/autumn time, October and November. The percentages of guests per month are highest in April and October. This can be explained as much by the timing of religious and school holidays as by climatic conditions. Table 4 explains the number and percentage room occupancy rate for classified hotels in Aqaba.

In 1998, it is reported that 64 cruise ships arrived to Aqaba bringing approximately 14,867 tourists. Table 5 shows the number of ships and number of tourists arrived to Aqaba during the 1995-1998 period. There are other factors which plays against tourism development in Aqaba. The following sections provide further analysis for cnstraints of tourism development in Aqaba, reagrading of competition with other destinations at: 6.1. national level of Jordan, 6.2. regional level of the Middle East and 6.3. International Level. [26]

6.1. Attraction of Aqaba at the National level

National interest in Aqaba is limited with most Jordanians preferring overseas holidays rather than national holidays. The following constraints currently prevent Aqaba from playing a significant role in national tourism: Relatively high cost of spending a few days in Aqaba encourages people to divert towards cheaper equivalent places like

Cyprus and Sharm El-Sheikh; airfares are quite high and air travel unpopular; apparent negative attitude of Aqaba's local inhabitants; lack of activities including evening entertainment, nice restaurants, children's activities, variety of sports, etc.; lack of easy access to the beaches; absence of cheap three-star hotels; and poor public transportation facilities.

Some Jordanian families own flats in Spain, Cyprus and Rhodes. Others go through organized tours, or choose independent holidays. In additions, many prefer tours and trips for culture and shopping to Europe and the US. The most popular destination is actually Cairo, but these visits are mostly short trips. The length of main Jordanian summer family holiday is on average two weeks to one month. Jordanians seem to be equally split in their preference for hotels or self-catering accommodation. This factor depends on ages of children, and the financial position of the family. Most Jordanians go for holidays in family groups and not individually. A major item in Jordanian's holidays is shopping. However, touring is not a popular, Jordanians prefer to spend their holiday in one place. [27]

6.2. Attraction of Aqaba at the Regional level

At the regional level, competing tourist destinations include resorts along the Mediterranean and Red Sea coast, and locations within Europe. The Mediterranean countries offers tourists a wide variety of holiday destinations including Cyprus, Greece, Turkey, parts of Spain and the North African coast, offering attractive harbors, pretty tourist spots, sailing, sunshine, good beaches, pleasant tourist hospitality and good value for money value.

There are resort locations comparable to Aqaba in the Gulf of Aqaba, Red Sea and the Gulf of Suez.. Egypt currently offers a range of seaside attractions. Hurghada is 385 km south of Suez City connected to Cairo by air and bus. It is a famous deep sea fishing location for shark, barracuda, swordfish and tuna. The area has all the benefits of the Red Sea coral reef with water based activities. Accommodation is offered through hotels, resorts and tourism villages. Sharm El-Sheikh, is an international winter and summer resort. The town depends upon fishing and tourism. It is particularly popular for diving holidays. There is also an ecological research institute. Currently, hotels, resorts and tourism village provides attractive accommodation for tourists. Dahab is an attractive fine sandy beach. It is 81 km from Sharm El Sheikh. Its accommodation includes a tourist village, diving center, camping areas and full water sports equipment. Nuweiba is situated 87 km from Dahab overlooking the Gulf of Aqaba and has good quality fine sand beaches with scattered palm trees. Its Tourism facilities are hotels, diving, and fishing and under water photography centers, tourist villages, etc. A fishing village is located 6 km south of Nuweiba.

Currently, tourism development in Egypt is of a limited scale providing approximately 1,570 hotel rooms in 1997, of which 370 rooms were in Taba and 1,200 rooms in Nuweiba. These figures exclude various tourist camps along the coast which offer low cost basic accommodation for travelers. The Egyptian Government is planning major long-term developments to provide tourist accommodation in South Sinai. Under the Sinai development plan, tourism development will take place in five areas along the Gulf of Aqaba coast: Taba, Nuweiba, Dahab, Wadi Kid and Sharm El-Sheikh. Each sector, in turn, is divided into a number of priority development centers. These centers will be separated from each other by buffer zones to prevent linear sprawl. Each center will consist of a combination of hotels, casinos, holiday villages and marinas clustered around a town center containing all necessary support services. In Taba and Nuweiba unlike Sharm and Dahab, the bulk of the new hotel rooms will be located in areas being developed outside the municipal boundaries. The environmental absorptive capacity of Taba-Neweiba, including municipal areas, is estimated at around 27,000 rooms.

Within the Gulf of Aqaba itself, Eilat is the second comparable destination. Eilat in 1997 offered about 8,187 rooms and associated facilities. The number of hotel rooms is projected to increase to 12,000 in 2000 and, according to the Ministry of Environment, most of the increase is expected to occur in the deluxe and super deluxe categories. Eilat receives charter flights from many major European origins. In 1996, it attracted 1.3 million overnight visitors of whom 0.9 million, 69 percent were Israelis. The great majority of the longer stay visitors are from Western Europe. The average length of stay in 1996 was 3.1 nights for Israelis and 4.2 nights for the foreign visitors. The average year round room occupancy was 76 percent in 1996. [28]

6.3. Attraction of Aqaba at the International Level

In Aqaba, there are less than a few hundred beds in hotels of an acceptable international tourist standard and occupancy rates in hotels remain low. Many of the hotels are not well run. The result is below acceptable standard. The tourist facilities offered are well below the threshold needed to attract the major developers, management groups and tour operators who could make the industry a success at a much more significant level. Aqaba, therefore, requires a strong accommodation-led drive to break into the important European sun, sea and sand market and attract international tourists.

7. Experience of other Countries

Many countries have adapted, restructured or developed their ports to increase port efficiency or added new services for containers, cruise liners ferries etc. In Europe many of ports have a similar character and followed similar solution for expansion and redevelopment. The original port was close to the city, which has required the development of a master plan for the port and adjacent areas. The general approach has been to increase the capacity of the port by expanding out to sea through extending or constructing new breakwaters. Owing to the constraints of adjacent urban development ports also have to expand away from the city or be relocated completely. In most cases the old harbor, or major parts of it, are converted and redeveloped for recreational purposes to enhance the city tourist development, environment and character.

Barcelona Port, Spain: The objectives of the port development were first, to increase the present port capacity; second, to improve the quality of the environment, and third; providing additional terminals. The development implementation includes: Converting 3 old warehouses to cruise terminals; providing 3 new cruise liner terminals, providing 2 new ferry terminals; and serving the 8 passenger terminals and with up to nine permanent berths for combined size international cruise vessels and full equipped services. The port provides a complete range of services ranging from ship repairs to passenger terminal. The passenger terminals are conveniently located at a dock near the city and tourist areas. The enhancement of the new port development has resulted in Barcelona becoming one of the most popular Mediterranean ports in 1998. [29]

Malaga Port, Spain: For developing Malaga port two challenges were considered: expansion of the port and special plans for environmental improvements. The objective of the first expansion plan is to double its present size. The construction work consists of increasing the length of the eastern breakwater, incorporating a berthing line and other facilities, and dock on the west. The facilities will provide the port with a much greater operating capacity and the means to provide service to new types of traffic. The special plan represents the efforts of the port and the city of Malaga to create an environment of long term mutual benefit to the city, port and visitors. To achieve this purpose, Malaga port Authority has ceded a part of its space to the city for new recreational and cultural facilities. [30]

Genoa Port, Italy: The motivation for development of Genoa Port was to meet the increased requirements of cruise traffic that had more than doubled since 1992. In fact cruises increased by 145% during the first 6 months of 1996 alone compared with the first 6-month of 1995. The objectives are as of following: privatization of the management of the port; promoting Genoa; expanding the Cruise line facilities; and providing modern, efficient terminals for cruise liners and ferryboats. The action taken included: Designing the cruise terminal of Ponte die Millie similar to an airport terminal, in terms of equipment, passenger circulation, loading and unloading and safety standards; providing supplies, technical assistance, spare parts, maintenance and repair facilities and services for all types of ships including luxury cruise liners; form a new cruise organization for Genoa, under which public and private parties jointly promote the Genoa region for tourism to cruise liner operators, agents and passengers; increasing number of quays to 18; and building two cruise passenger terminals to serve 5 vessels at the same time. [31]

8. Criteria and Guidelines for Tourism Development in Aqaba Town

According to the Jordanian Government general objectives for the master plan of Aqaba Town, the evacuation and relocation of existing main port facilities is one of its main objectives. Relocating the main port facilities will significantly enhance the environment of the development area and Aqaba town by reducing the industrial activities, number of cargo vessels, and expanding the Aqaba shore line and beach areas.

For tourists visiting Jordan, Aqaba has been a short stopover with average length of stay 2.28 nights. Yet the current resources of the Aqaba area offer the prospect of a much more significant; sun, sea and sand; trade based on reliable year round sunshine. The key development of a successful market in Aqaba is a holiday “product”. This development will attract and maintain major tour operators, which, in turn, will require many more beds. The standards of these must be more appropriate than presently exist in Aqaba. In addition, a full range of attractions and facilities at the same standards will be required. Moreover, the development of the appropriate type of accommodation and other product aspects in the Aqaba region could succeed in attracting a proportion of the traditional culture-seeking visitors to spend time in the region. The objective is to extend average length of stay from the present two nights to more than four.

Tourists are keen to try new products but only a minority can afford the more exotic or distant destinations of the Indian Ocean Islands, East Africa or the Caribbean. Aqaba should target the higher spending Mediterranean tourists. This could be achieved by marketing a different product with an exotic touch. Accordingly, Aqaba could create a significant demand. When Aqaba succeeds in attracting European, Asian and African tourists, Jordanians may also prefer to spend their holidays in Aqaba rather than traveling abroad. This domestic market, in fact, has considerably longer average lengths of stay than the culture market. Aqaba should target for more than four days stay. This could be accomplished when region develops and offers the requisite product variety. This, moreover, will require different kind of recreational and tourist facilities.

Aqaba also is still endowed with a sufficient natural resource base for the development of a tourism industry. Nevertheless, any further developments must be accompanied by serious and effective environmental controls in order to protect the beautiful natural setting, and maintain it. A program for tourism development must include: First, Aqaba must develop an “ethnic” character, style or theme. Aqaba will need to rediscover, or even invent, local styles, events and attractions firmly based on the regions pre-industrialized history and traditional Arabic culture. Such an approach would encompass architecture and town planning, involving housing, new buildings, refurbishment, etc., to emphasize Arab styles and forms, presenting history in its various aspects. Second, the natural resources of the land and sea must be protected, enhanced and managed to allow a degree of commercial exploitation diving, walking, etc. without degradation of the resource. These resources include the mountains, desert, general landscape, gulf waters, beaches and coral reefs. Third, a program of environmental improvements should be implemented including reducing industrial pollution, improving and enhancing soft and hard landscaping, improvements to the infrastructure, power, drainage, and waste collection and disposal. Fourth, special recreational activities, which are currently rare to the region, must be provided such as health spa center, sports center and an extensive range of day and night entertainment facilities. Fifth, Aqaba cannot be fully autonomous but must also extend its tourism base by building upon historic Jordan through creating strong links to the nearby attractions of the Dead Sea, Petra, Wadi Rum and the Egyptian coast.

Aqaba is in the south of Jordan but easily accessible to and from alternative tourist attractions. Despite the strength of these nearby historic and natural resources of Petra, Wadi Rum and Dead Sea area, the tourism potential of Aqaba has yet to be fully realized. It has been constrained not only by the lack of supporting tourist amenities and facilities but also by the sometimes incompatible development of port, transportation and industrial facilities which are also of high national importance for Jordan. With an appropriate expanded infrastructure, combined with improved tourism sector management as well as increasing marketing activities, Jordan and Aqaba itself will certainly increase its percentage of the existing and future tourism market.

Aqaba can compete for a share of the tourism market, not by competing directly with other resort locations region such as Hurghada, Nuweiba and Eilat, but by offering a different experience. That is, combining the sun, sea and sand found in the Mediterranean resorts with the special attractions of the Arab world. The aim, therefore, should be for Aqaba to compete for a share of the international tourism market not by competing directly with other locations but by differentiating itself. Aqaba could provide all of the components of the offer and more. Other competitors, in the Gulf have developed without any reference to culture or tradition of the location. They focused on the international style. Therefore, the opportunity is available for Aqaba to focus on special interest aspects of the Arab culture. At this stage efficient promotion and publicity, competitive prices, a long season and providing consumers with what they want – a relaxed atmosphere with a variety of entertainment. It should be stressed that Aqaba has always been promoted as a winter, spring and autumn destination wheras other regional destinations, were market themselves as year round destinations with no reservations about the extreme summer heat. Aqaba must correct the impression that it is not suitable as a summer destination.

Appropriate specialist supporting tourist facilities are required in Aqaba catering for the various specialist markets. This can be a vital component of the tourism industry. These markets can extend the season and make an important contribution to occupancy rates. The list of the appropriate activities is quite long. It may include sports, health, education, horse and camel racing, business, cruising, etc. E.g., the diving market is well established. The Red Sea is the nearest coral reef to the European population and both Israel and Egypt are now benefiting from this. Sea temperatures remain relatively stable and diving is good at all times. Diving holidays can be priced to ensure a trade all year.

The knowledge and information market, currently, will be the most future demand by many countries. In the Arab world, there is a lack of educational institutions which can afford meeting the requirement of this market. Establishing an Arab Academy for knowledge and information in Aqaba with appropriate staff housing and student dormitories will increase the demand for Aqaba all year long. During the summer, the student dormitories can provide low cost accommodation for young people.

Aqaba could eventually look to the international conference trade to fill beds in the off season. Many countries are now investigating the viability of this trade. Aqaba would be well placed for this. Distance from Europe may be a problem for the incentive trade, holidays and mini-conferences organized and paid for by major companies for their customers, salesmen etc.; but the destination may be of interest to companies with major Middle East markets.

It is not easy to precisely define the share of the major European market that Aqaba can hope to attract. The assumptions would depend upon several aspects such as: First, Aqaba has to have a tourism development plan. This study provides a tourist development and urban design alternatives that includes proposals for different types of projects. The range of projects varies from entertainment, recreational facilities, sports, theme tourist, housing, etc. The concept of these projects is to provide Aqaba with a wide range of attractive activities at the international level all year. The tourist development plan, to some extent, is compatible with the development of the tourist north area of Hafayer and the south coast. Second, forecasting tourist numbers to Aqaba, in this study, is depended upon implementing these study proposals to enhance tourist attractiveness of Aqaba to tourist. The implementation of the proposal requires phasing namely: relocation of the main port to the industrial zone. It is expected that this plan may require up to 3 years; and the development of tourist facilities and recreational activities. This scheme is expected to take 5 years in parallel with the evacuation of the main port. Consequently, tourist facilities and recreational activities will not be active for a period of 3 to 4 years. Therefore, the number of tourists to Aqaba is expected to grow normally during the first 4 to 5 years. Then, this number is expected to increase dramatically. The rate of increase should follow the international standards for the same case of tourist development. The rate of increase will last for few years, and then, it will return to a normal rate of increase. Since the international standards of annual rate of increase are from 2 to 4.5 %, the expected rate of increase is 2 % starting from the third year of implementation of tourist facilities and activities and for 3 years. Then, the annual rate of increase is expected to reach 4.5 % for 5 additional years. Finally, the annual rate of increase will be gradually stable at 2 %. Accordingly, the required number of rooms, by the year 2025, is estimated at 3,700 in 5, 4 and 3-star hotels. The existing number of rooms of the same category is 1,200, including Movenpick Hotel. Therefore, an additional 2,500 rooms are required by the year 2025. Another study estimated the required number of rooms by the year 2010 at 4500.

9. Tourism Development Strategy

The development objectives of the planning strategy are to plan tourist development in the proposed development area, evacuated main port and its adjacent areas. This is to accelerate the role of Aqaba in the economic development of Jordan; enhance Aqaba town for local initiatives in the provision of tourist facilities, recreational activities and enhancement of its environmental characteristics. The planning strategy for tourist development encompasses:

- Enhance Aqaba tourist development potentials, in a sustainable manner, taking advantage of its location, environment, landscape characteristics: mountains, desert and sea; and natural resources: coral reefs, beaches, etc., and implementing a program to improve its existing facilities and utilities.

- Providing Aqaba with adequate and varied facilities and recreational activities to meet the demands of, and attract first class tourists and visitors throughout the year. These include for example, providing 4 and 5-star hotels, theme tourist hotels, apartments, bungalows, chalets and special tourist housing; Providing recreational activities such as cafes, restaurants, theaters, cinemas, auditoriums, amphitheaters, leisure activities such as aqua park, dolphin show and great adventures, beaches, sports center with training facilities and possibly a wind surfing lake near the mountain top by pumping seawater to the existing depression; Providing essential infrastructure and communications and transportation links.
- Meet the demands of, and attract, special target tourist markets by providing facilities such as: Tourist self-catering housing for people who seek warm climate for long stays; provision of a health SPA and retreat medical center for very special medical and body fitness.
- Develop the existing main port to facilitate cruise ships to attract cruise liners from Europe and facilitate shuttle services between Aqaba and other tourist destinations in the same region such as Taba and Sharm El-Sheikh such as ferry passenger.
- Enhancing the environment by increasing the natural and urban landscape through planting etc; provide inland water pools and streams integrated with open spaces; minimizing the ratio percentage of built area to land area; provide sewage water network and water reuse systems within the development area to avoid any environmental hazards may be occurred; and upgrading the environment to preserve and enhance the sandy beach and coral formations. Generally improve the character of the town and region.
- Initiating physical treatment to establish a characterized architectural and urban design language by creating: views, open public spaces, landmarks and pattern of activities throughout the development area; and visual treatments and settings for the area's development and surrounding town. Integrate buildings, shade and landscaping to ameliorate the affect of the high summer temperature in Aqaba.
- Provide opportunities for the development of cultural and educational facilities in Aqaba which are both serve the people and are sympathetic to the principle aims. For example, an Arab Academy for Knowledge, Information and Technology would serve both a regional need whilst the staff housing and student dormitories may be useful as hostels for youth tourists from different parts of the world.
- Provide for and encourage private business development such as through the mechanism of a business center and allow off-shore business companies who could play a great role for enhancing the development through financial initiatives.
- An international three-day conference should be held in Aqaba to advertise and encourage investment in the tourism sector. Interested parties should be invited including hotel operators, real estate personnel, travel agencies, cruise companies, commercial investors and associated people in sports and health. It may be called "Launching Aqaba resort, health, entertainment, water sports and recreational opportunities". The purpose of the conference will be to investigate and ascertain the requirements and interests of investors. The outcome should define the demand for various tourist and recreational activities and facilities.
- Market investigations should also be conducted. These may include determining: The market potential (Jordanian and international) to invest in Aqaba; opportunities for time share investment; the types of activities most likely to increase tourism to Aqaba; and selling and market prices for tourism development.

- Aqaba, in 1998, received 14,867 tourists through 64 ships. Cruising is a growth sector, internationally that Aqaba should target and capitalize upon. The current cruise ship capacity is 1,000 to 1,400 passengers. This capacity is expected to increase to 1,800-2,200 passengers by the year 2005. The Association of Mediterranean cruises ports, Medcruise, is planning to increase the number its cruise ships through the Suez Canal to the warm water and climate. About 2000 trips are expected to pass through the Suez Canal. The number of members of Midcruise is 48. Currently, Eilat is a member and Egypt is registering three resorts, Sharm El-Sheikh being one of them. Therefore, Aqaba should target and capitalize upon the cruising sector. [32]

9.1. General land Use Considerations

The integration between economic development, the environment and recreation is crucial to the success of the development. The tourist development area, in terms of exiting land-use, includes: the Main port; the mountains east of the main port; and the wadi. The adjacent areas to extend eastward to ½-¾ km from the main road; the northern limit of the area adjacent to the main port to be defined by the north boundary of the port employees housing; the south boundary to be extended down to the northern limits of the container port; and the total area of the current development is about 248 Hectares; 2,480,000 sq m, Fig. 2 and 3.
Moreover, the main port consists of platforms, dolphins, berths, a tug berth and port buildings. The north and west area of the port is about 150–200m wide and comprises mainly of platforms and main port berths. It has a continuous natural shoreline with a number of mooring dolphins. The southeast area rises gently to the southeast towards the main road, which forms the east boundary. The hills are actually a large desert area cut by wadis. They provide attractive silt stone cliffs and a dramatic backdrop to the development area. Contour maps indicate the level of the main port platform area to be +5m, the wadi rising to +75m and the hills rising to +200m. From the upper hill areas are good views especially towards the sea. From the sea to the development area are good views of the desert area and the ridges and hills. Primary road access to the development area is by the Aqaba coastal road. This road runs south from Aqaba town to the border with Saudi Arabia. There are 5 port entrance gates from Aqaba coastal road.

9.1.1. Existing Main Port

Major developments considered include providing a marina at the tug area, cruise and ferry passenger services at berths number 2-7 and a fishing marina at berth No.1. Keeping and refurbishing the berths for recreational and cruise facilities could have positive and advantage impact on the environment at the development area and enhance the character of Aqaba city providing an anchor attraction to visitors.
Consideration has been given to reshaping the form of the existing port by extending seaward but this would be more expensive and possibly environmentally damaging to the sensitive local coral reefs and adjacent beaches during and after construction by affecting the water circulation and wave patterns.
The existing main port area is eminently suitable for the development of recreational and entertainment activities: adjacent to the town and sea front, almost flat in a region short of level building ground, thus reducing construction costs, and well served by main public utilities which will reduce the infrastructure costs.
The main port currently comprises of various buildings, structures, berths and infrastructure facilities. Some of these major assets if suitably refurbished could form the basis for a tourist zone. It is advantageously located immediately south of the town

and therefore would form a natural extension of the Aqaba urban fabric, Fig. 3.

9.1.2. Mountain and Hill Areas

The mountain and hill area forms the east part of the area extending southwards to the container port. The character of the hills is of an almost regular connected ridge. Their main potentials of this area to be exploited are the dramatic effect they impose on the landscape and the commanding views over the coast.

In addition, a huge depression lies within the mountains just south east of the port. This depression could play a great part in the landscape development and, in turn, on the environment at this area. Whilst they should largely remain in there "natural" state some parts are suitable for urban or theme housing development, taking advantage of the views over the coast, particularly during sunset, Fig 3.

Part of the hill area to the immediate north east of the main port, is currently used to house port employees. The area slopes gently towards the west, providing good view across the Gulf. In the long term this area could be redeveloped but is not considered available in the short term.

9.1.3. Wadi Area

To the east of the main port, cutting through the hill is a wadi as indicated in. It gently slopes down towards the main port. It is recommended that this area should remain in its natural state but be enhanced by additional planting and made accessible for walking, horse riding and possibly camping. It is not considered suitable for urban development owing to it being enclosed by the hill and without dramatic views.

9.2. Development Proposals

Three general development proposals and a preferred solution are proposed for consideration. Within this context and for comprehensive explanation, the paper will concentrate on the preferred solution. The main principle of designing these proposals is developing the area at the national and international levels.

The term "national" level is used in respect of catering mainly for the local domestic market whereas the term "international" is used in respect of the provision for local and foreign visitors but at a larger scale of investment, in terms of size of land and budget, than the local. The main concept of development at the national level is based on making available the purchase of buildings and real estate by individuals, particularly Jordanian investors. This is a central issue in the development. Purchase funds could be made available through the medium of mortgage loans, covering a substantial proportion of the individual unit of development.

The investment concept of development, at the international level, depends mainly on leasing the whole area or major part of it through the build operate transfer (BOT) or build operate, owned transfer (BOOT), development concept. The Jordanian Government within this context will only be responsible for providing main infrastructure to the development area such as water, electricity, roads, telecommunications, etc. The leases will be for a period to be determined. The period of the lease depends on the value of the land and the amount of investment to the area to low for a compatible tourist facilities and recreation, in terms of size and activities worldwide investment. The boundary of the development area, therefore, is wider. The kind of activities and their sizes widely differ from the first proposal. The main principle of the development of the area at the international level, in addition, is providing Aqaba with very special tourist recreational activities and facilities which unique to make Aqaba attractive high class tourists.

Consequently, the development at the international level is based on providing more open spaces, and larger plots, for recreation and related facilities. The development proposal at the international level has two options, in terms of boundaries of development areas and size of each activity.

9.2.1. Preferred Solution

The boundary of the preferred solution was extended to include other areas adjacent to the main port. The purpose is to provide the area with maximum benefits of the potentials of the area, in accordance with the kind of activity. Therefore, the boundary is expanded to include the evacuated main port; the mountains, and wadi and hills to the east of the main port and toward the south up to the container port. Accordingly, it is proposed to provide the evacuated main port area with recreational activities; central park at the hill area, and tourist facilities to the mountains and hill areas, Fig. 4. [33]

10 Conclusion

The study has discussed the experience of possible sharing of coastal resources and tourism development in Aqaba Town, Jordan. Urban planning is used for developing tourism, by which Aqaba will be able to facilitate sharing coastal resources and overcome land-use and environmental issues. The results obtained from the above analysis, background and tourism development potentials and constraints, provide strong evidence that there is significant land-use and environmental issues exist in Aqaba, particularly coastal areas. The impact of land-use conflict on resources of Aqaba, if not pre-considered, will adversely affect its environment, natural resources and, in turn, tourist attraction to the town. In addition, the findings of the above investigation of potentials and constraints of tourism development define that Aqaba posses nationally significant natural and recreational resources. These potentials have some limitations, which should be considered during tourism development process.

The outcomes of the analysis also provide strong evidence that tourism development could constitute a major part of the preservation policy of Aqaba. Tourism could be a developing tool for the sake of environmental conservation. It exhibits a relationship with the environment through the spatial reorganization, preservation of natural, historical and cultural resources, and infrastructure improvements.

The procedure developed will have a wide application to other areas in Jordan such as Wadi Rum, Petra and Dead Sea, areas northeast Aqaba, and Zarka City located north Amman. Similar development requirements will face other countries, which experience land-use and resources conflict. Their physical development will face urban and environmental issues due to conflicts between different land-uses and development process. Therefore, the findings of this study could be directly applicable in the formulation of the planning policy and legislation. It could guide the reconsideration and implementation of the economic development policy in other locations in Jordan or other countries.

Future directions for further research on impact of development on urban environment, finally, can include procedure for public participation during the process of preparation of its planning concept and master plan. In our work, public participation has focused only on public concerns regarding the character of urban design and architecture of the development areas. This public participation achieved through interviews with inhabitants, authorities and visitors to Aqaba. To accomplish the preservation of urban environment in the area, further research is needed. This research may include urban development of Aqaba Town and its coastal areas, which could be achieved through analyzing master plan of Aqaba Town and its coastal area during and after the process of port restructure and tourism development take place. The purpose is to define the environmental impact on the historical, cultural and natural resources of Aqaba.

11. References

[1] Fisher, W.B., "Jordan: Physical and Social Geography." Pages 491-519 in The Middle East and North Africa, 1988. (34th ed.) London: Europa, 1987.
[2] Hashimety Kingdom of Jordan, Depart. of Statistics; Statistical Year Book, (1999).
[3] Schliephake, K., "Jordan, The Economic and Geographic Potential".
[4] Schliephake, K., "Jordan, The Economic and Geographic Potential".
[5] Hashimety Kingdom of Jordan, Depart. of Statistics; "Statistical Year Book, 1999".
[6] Aqaba Special Economic Zone, ASEZA, "Master Plan of Aqaba", www.aqabazone.com.
[7] Jordan. Ministry of Planning, "Jordan: Five-Year Plan for Economic and Social Development", 1996-2000, Amman, 1996.
[8] Whitcomb, D., "The Aqaba Project, 1993-1994 Annual Report", Oriental Institute, University of Chicago, http://oi.uchicago.edu/OI/AR/93-94/93-94_Aqaba.html.
[9] Atlas Tours.Net, "Aqaba History and Sites", www.atlasnet/jordan/aqaba_history.
[10] Hashimety Kingdom of Jordan, Depart. of Statistics; "Statistical Year Book, 1999".
[11] The Ports Corporation, "Ports Information", www.aqabaport.com/port_info2.html
[12] Bichara, K. and Badran, A., (eds.), The Economic Development of Jordan. London: Croom Helm, 1987.
[13] The Ports Corporation, "About Aqaba- General Information", http://www.aqabaport.com/
[14] Aqaba Special Economic Zone, ASEZA, "Master Plan of Aqaba", www.aqabazone.com.
[15] The Ports Corporation, "Ports Corporation", www.nic.gov.jo/portscorp/doc1.html
[16] Hashimety Kingdom of Jordan, Depart. of Statistics; "Statistical Year Book, 1999".
[17] Aqaba Special Economic Zone, ASEZA, "Master Plan of Aqaba- Port Areas", www.aqabazone.com.
[18] World Travel and Tourism Council, World Tourism Organization and the Earth Council, "Towards Environmentally Sustainable Development, 1996", Agenda 21 for the Travel & Tourism Industry, http://www.wttc.org/stratdev/agenda21.asp
[19] The World Bank, "World Development Report, 1999/2000", The World Bank Publications, USA 1999.
[20] Hashimety Kingdom of Jordan. Jordan Central Bank, "Annual Report, 1999".
[21] Mothieson, A., and Wall, F. "Tourism: Economics, Physical and Social Impacts", 1982, New York, Longman.
[22] Fletcher, JE., "The Management of International Tourism", Witt, SF., Brooke, MZ., Buckley, PJ. Book Review: Journal of Management Studies, Nov., 1992, V29 N6:825-827.
[23] Oriental Institute, "Aqaba Work Defies Mother Nature", 1997, University of Chicago, http://oi.uchicago.edu/OI/PROJ/AQA/NN_Spr96/NN_Spr96.html.
[24] Fisher, W.B., "Jordan: Physical and Social Geography." Pages 491-519 in The Middle East and North Africa, 1988. (34th ed.) London: Europa, 1987.
[25] Atlas Tours.Net, "Aqaba History and Sites", www.atlasnet/jordan/aqaba_history.
[26] Hashimety Kingdom of Jordan, Depart. of Statistics; "Statistical Year Book, 1999".
[27] Hashimety Kingdom of Jordan, Department of Statistics; "Statistical Year Book, 1999".
[33] Joint Venture: A.D.E, J.C.E and H.A., "Technical Feasibility Study to Restructure and Update the Master Plan of Aqaba", Volumes 3 and 4.

Table 1
Tourist Arrival to Jordan 1989- 1998

Year	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**P. C.**
Region	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	Arrivals	98-97
American Countries	48257	38538	23978	39250	51512	69878	103346	107960	107676	108612	0.87%
European Countries	127793	117874	58379	121525	152533	192176	255496	251820	239411	219445	-8.34%
Others	15336	16467	8908	17858	23820	31739	48067	49119	50215	36683	26.95%
Sub. Total	191386	172879	91265	178633	227865	293793	406909	408899	397302	364740	-8.20%
Gulf Countries	452559	404567	348216	490629	547006	55050	566561	572657	604101	772427	27.86%
Isral	0	0	0	0	0	10767	100079	121196	125625	119261	-5.07%
Total Tourist	**643945**	**577446**	**439481**	**669262**	**774871**	**857610**	**1073549**	**1102752**	**1127028**	**1256428**	**11.48%**
Other:											
Noting That:											
G. Total Arrival	2278126	2633262	2227688	3242985	3098938	3224752	3277211	3163592	3067892	3303115	7.67%

Table 2
Distribution of Package Tours by Place of Stay 1998

PLACE OF STAY	TOURIST	NIGHTS	A.L.S
Amman	228306	613399	2.69
Petra	144992	246340	1.70
Aqaba	76340	174172	2.28
Wadi Rum	7986	14261	1.79
Dead Sea	3621	10628	2.94
Karak	2408	2791	1.16
Irbid	1035	1172	1.13
Ma'an Spa	991	1241	1.25
Azraq	491	599	1.22
Ajlun	198	810	4.09
Madaba	37	114	3.08
Jarash	36	36	1.00
Munt Nepo	2	2	1.00
Others	2053	3947	1.92
A.L.S./AV. Length of Stay (TOTAL)	**468496**	**1069512**	**27.25**

Table 3
Hotels Classifications in Aqaba

No. of Stars	No.	Items	Rooms	Beds	Employees		Total
					Jord.	Non Jord.	
****	1	Aqaba Gulf	192	360	90	26	116
	2	Radisson Sas Aqaba	235	466	141	19	160
	TOTAL		**427**	**826**	**231**	**45**	**276**
***	1	Coral Beach	92	184	9	45	54
	2	Aquamarina 1	64	153	80	18	98
	3	Aquamarina 2	154	346	20	15	35
	4	Aquamarina 3	58	136	20	4	24
	5	Crestal International	63	116	25	17	42
	6	Miramar	140	260	19	20	39
	7	Betra International	55	130	21	13	34
	TOTAL		**626**	**1325**	**194**	**132**	**326**
**	1	Al-Cazar	132	270	48	34	82
	2	Aqaba	93	183	75	12	87
	3	Nairoukh 2	72	110	15	10	25
	4	Al Shulah	25	100	55	45	100
	5	Al Showaliky	32	54	3	9	12
	6	Al-Zitoneh	32	64	10	7	17
	7	Al-Zatri	65	120	25	---	25
	TOTAL		**451**	**901**	**231**	**117**	**348**

Table 3 (Cont.)

No. of Stars	No.	Items	Rooms	Beds	Employees		Total
					Jord.	Non Jord.	
*	1	Al Najr Khaled	18	36	2	2	4
	2	Al Jameel	18	45	2	1	3
	3	Al Khoule	12	24	1	3	4
	4	Al Yamamah	14	30	1	3	4
	5	Al Dawek	18	33	1	2	3
	6	Red Sea	25	53	2	2	4
	7	Zahrat Alurdon	30	72	2	2	4
	8	Int. Hotels	25	50	5	1	6
	9	Al Nouman	18	36	2	2	4
	10	Al Manara	11	19	1	1	2
	11	Al Nairoukh 1	15	29	2	4	6
	12	Al Amereh	12	27	2	2	4
	13	Al-Sabla	12	19	6	0	6
	14	Al-Siq	---	---	---	---	---
	15	Aqaba Star	22	46	4	3	7
	Total		**250**	**519**	**33**	**28**	**61**
TOTAL IN AQABA			**1754**	**3571**	**689**	**322**	**1011**

Table 4 ABLE 3.4
Number and Perecentage of Room Occupancy and Rates for Calssified Hotels in Aqaba 1999

City	Class	No. of Hotels	Jan.	Feb.	Mar.	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov.	Dec.	G.Total
Aqaba	4 Star	2	3958	4102	5905	7817	6951	3835	3687	5513	4737	9034	6954	4196	**67581**
		%	28.37	32.56	42.34	64.57	49.83	28.41	26.43	39.52	35.09	64.76	51.14	30.08	**41.15**
	3 Star	7	4978	5393	6402	9966	6141	5522	4059	5665	4778	7837	6348	3557	**70646**
		%	25.65	30.77	32.99	53.07	31.64	29.40	20.92	29.19	25.44	40.38	33.00	18.33	**30.92**
	2 Star	7	2721	3557	4531	7961	5043	3742	6137	6255	5043	7044	6748	3227	**62010**
		%	22.11	32.00	36.82	66.84	35.21	27.00	42.85	43.68	36.39	49.18	48.69	22.53	**36.77**
	1 Star	14	1977	2006	2240	2745	1945	1733	1830	2119	1666	1819	1728	1430	**23238**
		%	25.41	28.54	28.79	36.45	25.00	23.01	23.52	27.23	22.12	23.38	22.95	18.38	**25.36**
	Total	**30**	**13634**	**15058**	**19079**	**29389**	**20080**	**14832**	**15713**	**19553**	**16224**	**25734**	**21769**	**12410**	**223475**
	Total	**%**	**25.51**	**31.19**	**35.70**	**56.82**	**36.21**	**27.64**	**28.33**	**32.26**	**30.23**	**46.40**	**40.56**	**22.38**	**34.22**

Table 5
Number of Tourists, Passengers and Ships (Arrival & Departures) 1995–1998

Years	Passenger Ships	Tourist Ships	Passenger Arrived	Passenger Departure	Tourist Arrived	Tourist Departure	Total Passengers Tourists Leaving	
							Arrivals	Leaving
1998	1086	64	339741	363728	14867	14899	354608	378627
1997	1408	144	384244	444376	17432	17513	401676	361889
1996	1246	111	524105	550741	16271	16226	540376	566967
1995	948	61	570055	586079	9716	9612	579771	595691

Figure 1: Aqaba Location

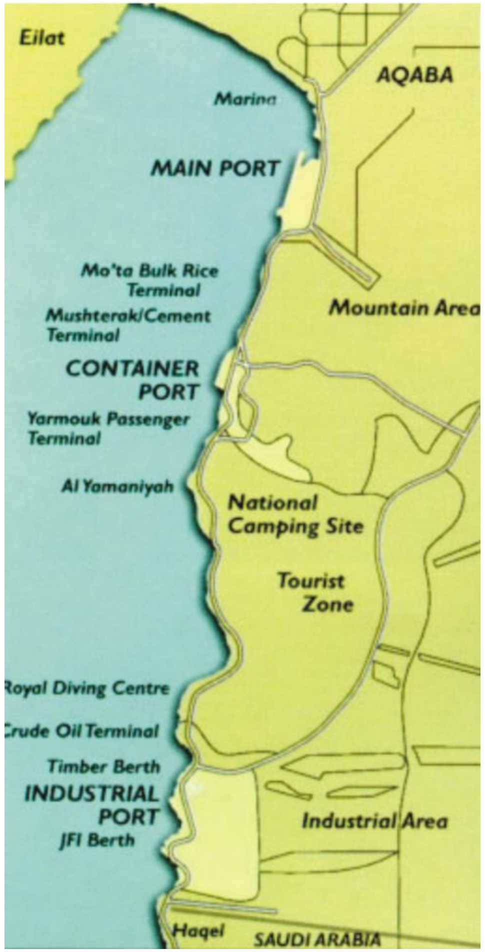

Figure 2: Aqaba General Land-use and Ports Distribution

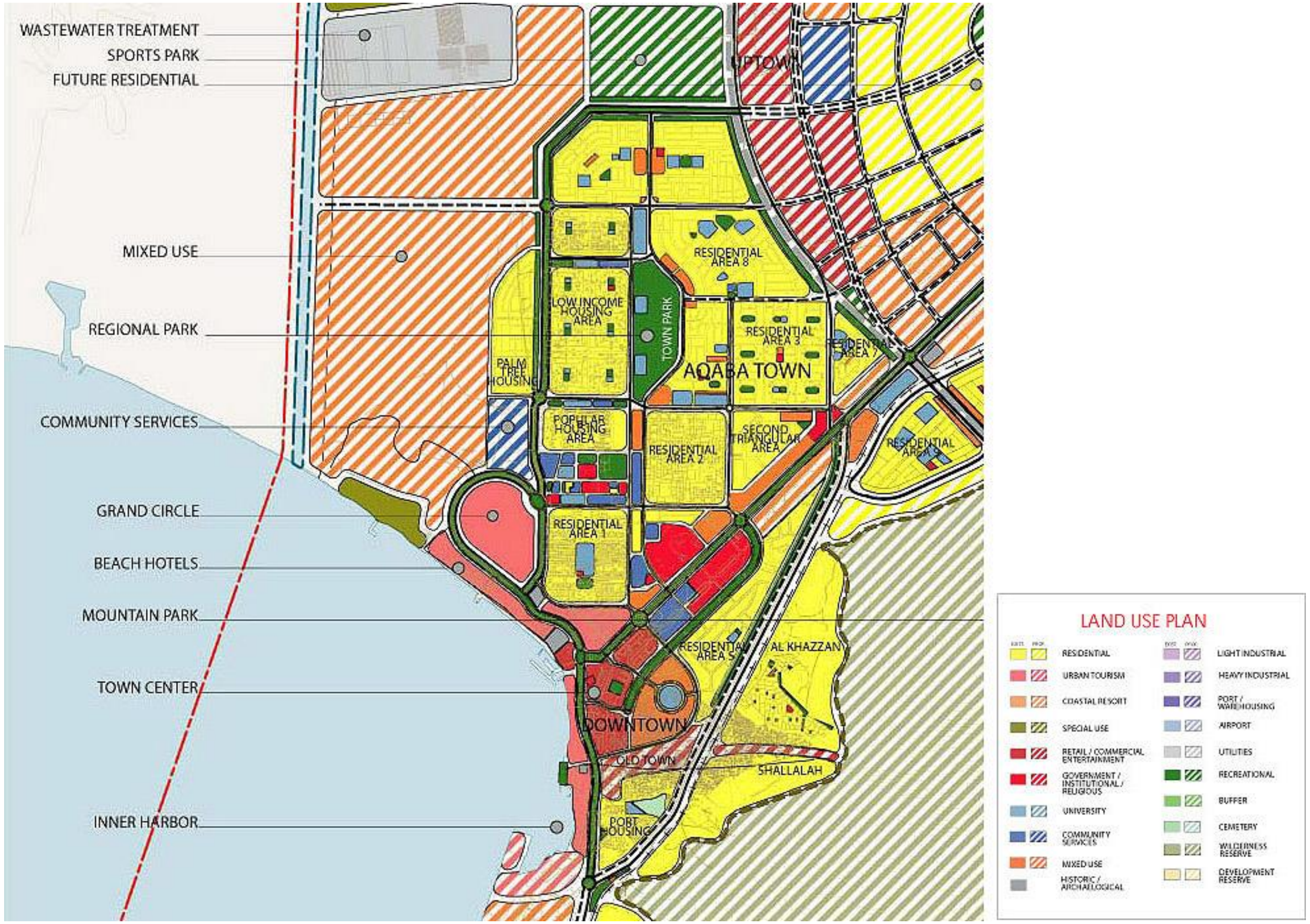

Figure 3
Source: Aqaba Special Economic Zone, ASEZA, "Master Plan of Aqaba", www.aqabazone.com

Figure 4: Tourism Development: Preferred Solution
Source: Joint Venture: A.D.E, J.C.E and H.A., "Technical Feasibility Study to Restructure and Update the Master Plan of Aqaba", Volumes 3 and 4.