

Profile of sustainability in some Mediterranean tourist destinations



Synthesis: Matrouh Governorate, Egypt
Based on the case study by Adel RADY

Loïc BOURSE

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Introduction

The case study written by Adel Rady on the Matrouh Governorate¹ (Egypt) is part of the Plan Bleu project “Profiles of sustainability in some Mediterranean tourist destinations”. It is based on an experimental method and involves measuring and assessing the impacts of tourism from the perspective of the key goals of the Mediterranean Strategy for Sustainable Development (MSSD), and taking into account environmental, social and economic issues in the destinations studied. A “profile of sustainability” has been produced for 11 tourist destinations² across eight Mediterranean countries using the DPSIR³ approach.

Firstly, the sustainability of the destination was studied using economic performance indicators (e.g. accommodation occupancy rates), territorial, demographic and sociological indicators (e.g. the effect of seasonality on employment, income levels of the local population, the quality of essential amenities and services) and environmental indicators (e.g. damage to the landscape associated with coastal development). Secondly, thought was given to political measures that could be taken to improve the sustainability of the destination. This systemic and territorial approach has been used to examine the destination, which is the basic unit of tourism development, as well as taking into account several different scales (local, national and regional) and the various stakeholders across the region, while relating the Mediterranean tourist system with the other priority areas from the MSSD: water, transport, waste, energy, etc.

In selecting the destinations to be studied, Plan Bleu defined a methodology requiring that the destination studied should be an administrative unit on the Mediterranean coast with significant international and/or domestic tourism, that is also home to a permanent population but is not a major city. Based on the variables identified and the data supplied by the experts who have authored the case studies, Plan Bleu proposed a classification of destinations (Figure 1):

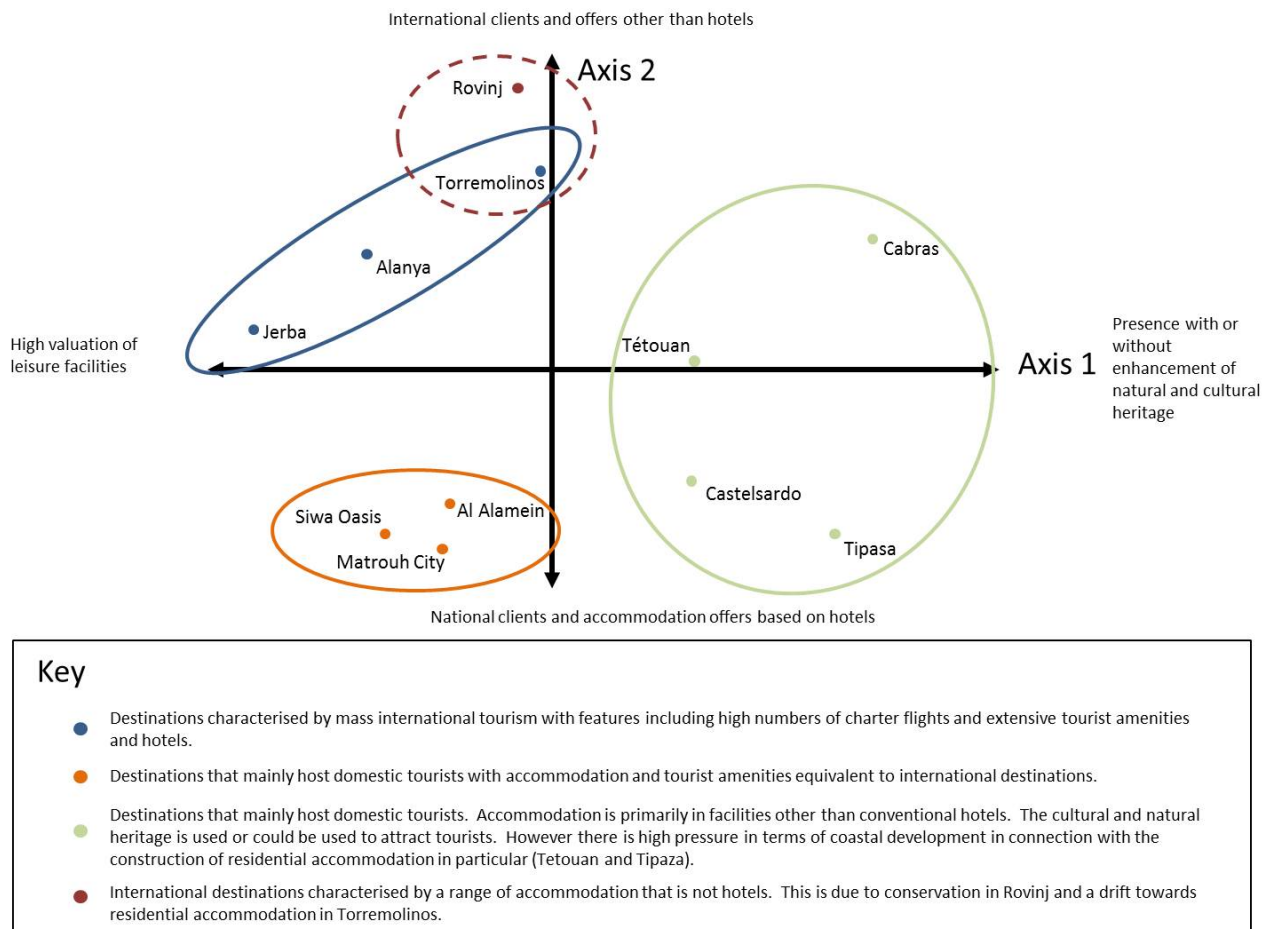
- Type one (Torremolinos, Alanya and Djerba) are international destinations with extensive tourist amenities, and are characterised by a range of hotel accommodation, particularly 4 and 5 star hotels, with a wide selection of leisure activities (health spas, marinas, golf courses, casinos, etc.) and a dependence on tour operators. The sea, beach and associated activities are the main attraction, so these mass tourism destinations are referred to as “3 S” destinations (Sea, Sand and Sun).
- Type two (El Alamein, Siwa Oasis and Marsa Matrouh) are domestic destinations with extensive tourist amenities, and are characterised by mainly hotel accommodation (2, 3, 4 and 5 stars), with luxury amenities in particular in Al Alamein (health spas, marinas, golf courses, casinos, etc.), and a significant range of cultural centres in the three destinations, e.g. historical sites. Type two destinations are distinguished from type one on the basis of the origin of the tourists - internal demand as opposed to foreign tourists.
- Type three (Cabras, Castelsardo, the Tetouan coast and Tipaza) are basically destinations with domestic tourists who mainly stay in accommodation other than hotels (residential accommodation, bed and breakfasts, camp sites, etc.). Factors that attract tourists to these destinations are also their significant cultural and natural heritage (markets selling local products, nature reserves, etc.).
- Type four (Rovinj) are destinations that are in rejuvenation phase, and represent destinations with primarily international customers, where Tour Operators do not play a significant role and whose accommodation options are primarily facilities other than hotels.

¹ “Matrouh Governorate” refers to the three sites covered by Rady’s report: Marsa Matrouh, El Alamein, and Siwa Oasis.

² Torremolinos (Spain), Cabras and Castelsardo (Sardinia, Italy), Rovinj (Croatia), Alanya (Turkey), El Alamein, Marsa Matrouh and Siwa Oasis (Egypt), Djerba (Tunisia), Tipaza (Algeria), the Tetouan Coast (Morocco).

³ Drivers – Pressures – State – Impacts – Responses.

Figure 1: Graph showing the types of tourist destinations studied



Source: Principal Component Analysis by Loïc Bourse based on produced by the experts and processed by Ioannis Spilanis, 2011.

Guide (see Figure 16 in the Appendix):

Axes 1 and 2 explain 64% of the data variance.

Axis 1 alone explains 39% of the information:

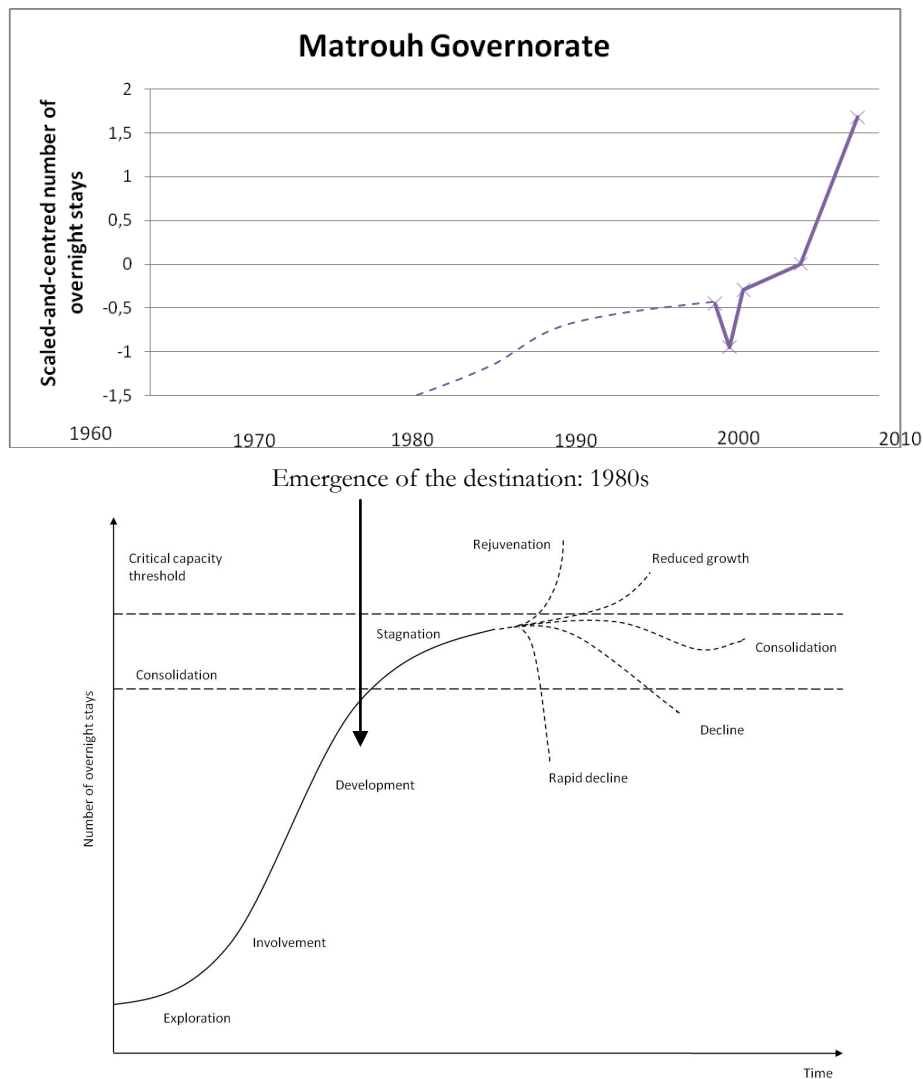
- on the right side, it represents domestic tourism with visitors using accommodation other than hotels (residential accommodation or camping), focusing on cultural products (e.g. markets selling local goods, craft demonstrations, etc.) and/or natural features (e.g. national parks, nature reserves and marine nature reserves);
- on the left side, it represents the international character of tourism characterised by widespread use of charter planes (influence of Tour Operators), extensive tourist amenities and a high density of hotel accommodation in the administrative area.

Axis 2 explains 25% of the information:

- on the top part, it represents tourism characterised by international visitors using accommodation other than hotels;
- on its bottom part, it represents tourism with extensively equipped hotels with historical sites and primarily domestic visitors.

The three sites studied in the Matrouh Governorate fall under the category “domestic destinations with extensive tourist amenities”. During the 1980s, the strategy developed by the Egyptian authorities and the tourism industry was to promote accommodation and tourist amenities for an “elite clientele” comprising domestic visitors largely from the wealthy social classes and an international clientele mainly from the Persian Gulf States. Matrouh Governorate is, therefore, characterised by luxury accommodations and amenities such as 4 and 5 star hotels, a marina, leisure parks, golf courses, health clubs and casinos. Another feature of this destination is its cultural offer: archaeological sites and antiquities, sites and museums retracing battles of the Second World War. This explains why the El Alamein, Marsa Matrouh and Siwa Oasis sites are found in the lower part of Axis 2 of the principal component analysis (Figure 1).

Figure 2: “Domestic destinations with extensive tourist amenities” based on the Butler model (BUTLER 1980)



Source: The data was produced by experts then scaled and centred, Bourse, 2011.

Matrouh Governorate – El Alamein, Marsa Matrouh and Siwa Oasis⁴ – is in development phase (Figure 2). The development of tourism on the three sites is a result of the Egyptian central government’s desire to rebalance the demographic weighting between outlying and desert regions and the Nile delta and valley. In the 1970s, the authorities encouraged the development of tourist amenities in the Matrouh Governorate so that the economic appeal would attract settlement in the region:

- in El Alamein, tourism development took place in three phases: (1) the development of tourism based on its Second World War history⁵; (2) development, in the 1980s, of leisure activities and the construction of Marina El Alamein; (3) luxury hotel development in the 2000s.
- in Marsa Matrouh, which represents 60% of hotel accommodation on the North-West coast of Egypt, tourism started in the 1980s – after preliminary beginnings of eco tourism and sporting clubs camps from the late 1940’s.

⁴ Most of the data used by Adel Rady applies to the Matrouh Governorate administrative area.

⁵ The military cemetery and the museum were developed in the 1950s. In the 1960s, the central government built hotels to meet the needs of the families of soldiers and other visitors.

- in Siwa Oasis, tourism developed in two phases: (1) tourism focused on a clientele seeking adventure and cultural tourism, with accommodation based on small hotels in the town centre; (2) in the 2000s, the hotel Adrere Amellal attracted a new clientele: eco-tourists seeking authenticity.

The sustainability profile for Matrouh Governorate is structured into four sections – corresponding to the four main variables identified in the MSSD (PLAN BLEU 2009) - through which we will discuss various indicators (SPILANIS & VAYANNI 2011), in particular:

- economic indicators: the number of hotel beds, the number and size of accommodation facilities, occupancy rates, the effect of seasonality and revenue per bed;
- socio-territorial indicators: demographic changes, the overall share of tourism in local employment by gender and types of employment contract, and unemployment statistics;
- environmental indicators: natural resource and energy consumption, production and treatment of solid and liquid waste, land pressure and biodiversity;
- governance indicators: implementation of an internationally-defined model of governance, local governance practices and the categories of stakeholders involved in governance.

In the conclusion, we will bring these four variables together in graphic form and assess the sustainability of the destination and Rady's proposals for improving the sustainability of Matrouh Governorate are presented.

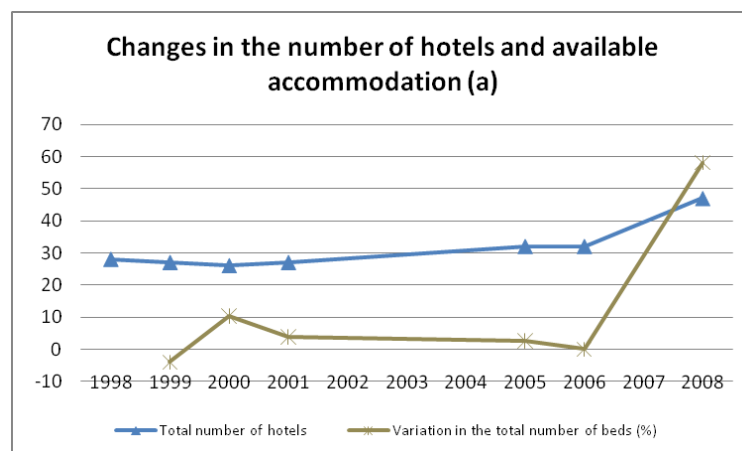
I. Tourism and economic development

The data produced by Rady is presented below in order to summarise the consequences and economic impact of tourism for Matrouh Governance, focusing on changes in the tourism offer and revenue from tourism.

1. Changes in the tourism offer and demand

Figure 3 (a) highlights two phenomena relating to changes in the tourism product and accommodation offer: the reduction in the number of hotels and the number of beds from the end of the 1990s to the middle of the mid 2000; the sharp increase in the number of hotels and the number of beds from 2006 onwards.

Figure 3: Changes in the tourist accommodation offer for Matrouh Governorate and breakdown of the current accommodation offer

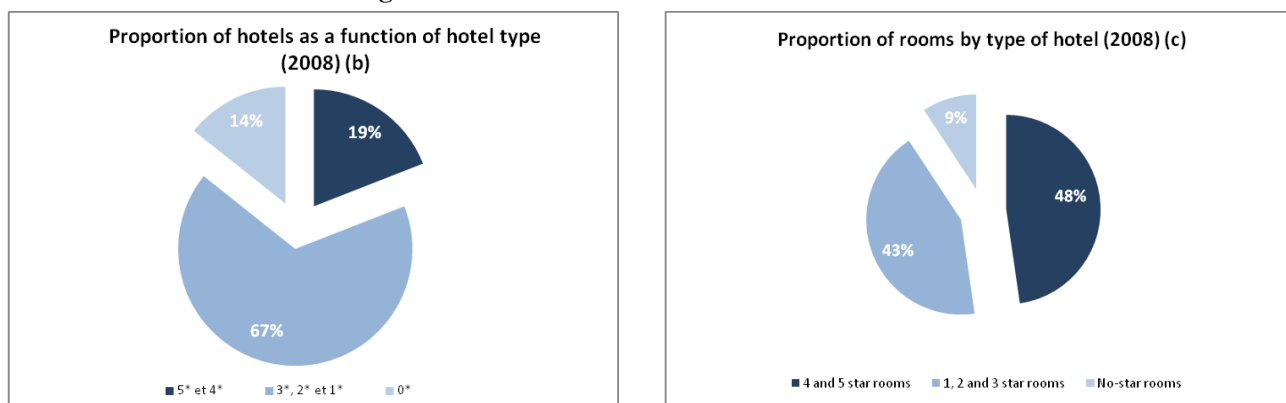


Source: Data collected by Adel Rady, 2011.

An initial observation can be made on changes in the tourism offer: there has been a significant increase in accommodation capacity with only a small increase in the number of hotels, which reflects the tendency for growth via building large hotels.

A second observation regards the type of hotel: there is a large number of small, “entry-level”, 1, 2 and 3 star hotels (67%) which are overrepresented with respect to large, luxury, 4 and 5 star hotels (19%) and bottom-of-the-range hotels (14%) (Figure 4 (b)). However, these 4 and 5 star hotels – while only 19% of the total number – account for 48% of rooms, which is a higher proportion of the total than either of the other categories (Figure 4 (c)). Thus, the top-of-the-range offer represents approximately half of Matrouh Governorate’s hotel capacity.

Figure 4: Breakdown of the current accommodation offer



Source: Data collected by Adel Rady, 2011.

With regard to the way hotel accommodation is distributed across the three sites studied in the Matrouh Governorate, Table 1 shows that Marsa Matrouh accounts for 65% of the rooms for the destination as a whole (compared with 25.5% for El Alamein and 9.5% for Siwa), that 4 and 5 star hotels are found only at the Marsa Matrouh (51.85%) and El Alamein (48.15%) sites and that the accommodation offer in Siwa Oasis is comprised of entry-level or bottom-of-the-range hotels. This diversity in hotel accommodation across the sites relates to the link between the various categories of accommodation and the tourist activities on offer: Marsa Matrouh and El Alamein are essentially seaside resorts, while Siwa Oasis is more of a cultural tourism and eco-tourism site.

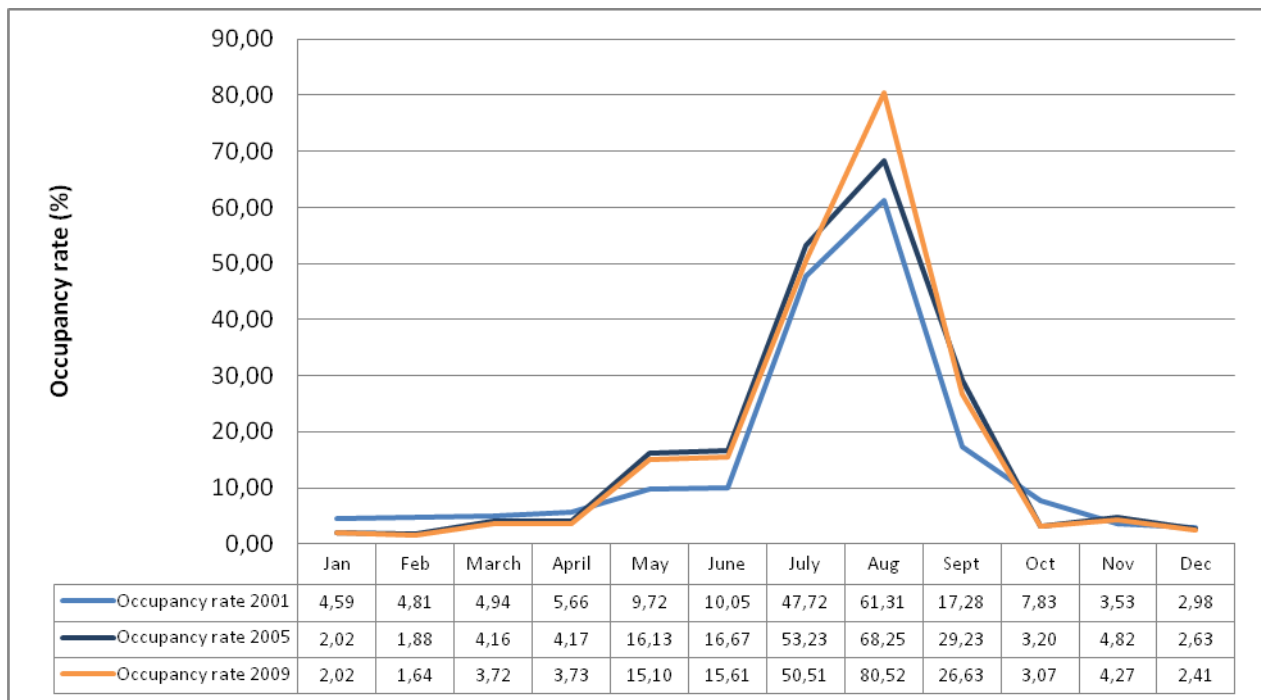
Table 1: Distribution of the various types of hotel accommodation across the sites in the Matrouh Governorate (2008)

	4 and 5 star hotels	4 and 5 star rooms	1, 2 and 3 star hotels	1, 2 and 3 star rooms	No-star hotels	No-star rooms	Total hotels (destination)	Total rooms (destination)
Marsa Matrouh	50	51.85	64.29	81.95	50.00	54.96	59.52	65.08
El Alamein	50	48.15	3.57	3.81	16.67	8.50	14.29	25.39
Siwa	0	0.00	32.14	14.24	33.33	36.54	26.19	9.53
Total	100	100	100	100	100	100	100	100

Source: Data from Adel Rady, 2011.

Furthermore, the Matrouh Governorate destination is highly seasonal in nature (Figure 5): hotels only operate between May and September. While Figure 5 shows an improvement in occupancy rates in May since 2005 (which is counter-balanced by a reduction in occupancy in October), it also shows a slight increase in seasonality overall.

Figure 5: Five-yearly changes in monthly occupation rates for Matrouh Governorate



Source: Data from Adel Rady, 2011.

When the issue of seasonality on each site is considered, it is observed that the high season in Marsa Matrouh and El Alamein extends from June to September; due to favourable weather conditions (water temperature), the peak in activity occurs in July and August. Conversely, for the Siwa Oasis site, the high season occurs between November and March, with a peak in occupancy rates between December and January, which correspond to the months where the temperatures are mildest in the desert.

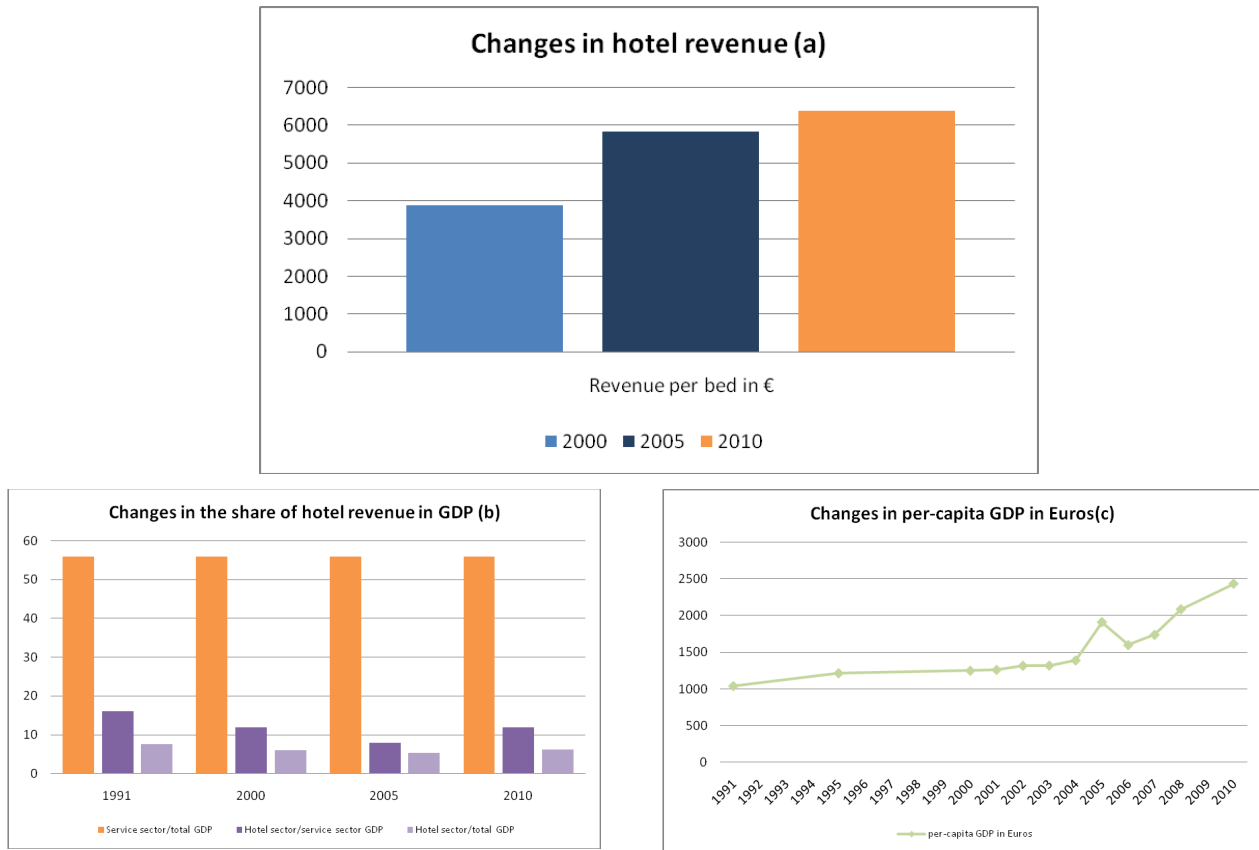
2. Revenue from tourism

Revenues from tourism are directly affected by issues of seasonality and the constraints it brings in terms of income optimisation: the local tourist industry must generate maximum profit as quickly as possible as the season is short.

In Matrouh Governorate, average tourist expenditure is €69.17 per person per day and service industries generate more than 50% of local GDP. Hotels accounted for more than 10% of service-industry GDP between 1991 and 2010 (with a significant drop in 2005) (Figure 6) and varied between 6% and 7.5% of total GDP.

However, according to Rady, the contribution of tourism to the local economy greatly exceeds the statistical estimates and quantitative analyses. According to his calculations, the direct impact of foreign tourist expenditure was approximately \$539M in 2010, i.e. 44% of Matrouh Governorate GDP; concentrating on data supplied by the hotel sector may lead to the exclusion of about 80% of tourist expenditure, which goes directly into other sectors of the economy (such as restaurants and leisure activities).

Figure 6: Changes in tourism-related GDP compared with total GDP and service-sector GDP. Matrouh Governorate



Source: Data from Adel Rady, 2011.

Figure 6 also shows the increase in per-capita GDP, which increased from an average of €1,043 in 1991 to €2,433 in 2010. To assess the distribution of tourism revenues, Rady used a measurement of the degree of inequality in the distribution of family income based on the income distribution index⁶. Rady estimates that for the same period, 1991-2010, private consumption increased by 13% annually, with the following distribution of private consumption for households: 44% for food, 7% for fuel, 3% for healthcare and 17% for education. The wealthiest, which represent 10% of the population in the income distribution index method, represent approximately 25% of household consumption and the poorest approximately 4.4%. In 1996, approximately 23% of the population had an income below the poverty line (RADY 2011).

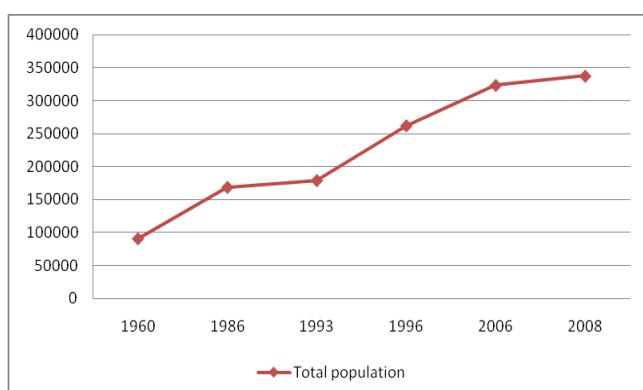
In conclusion, to summarise the economic indicators, it should be noted that the Egyptian government's strategy consists of balancing development levels across Governorates by relying on the development of tourism. In addition, the tourism sector strategy is based on luxury (4 and 5 star) hotels to attract high-income individuals, whether foreign or domestic, for short stays. The contribution of tourism to GDP in the Matrouh Governorate is significant and has meant that per-capita GDP has doubled in ten years. However, Rady highlights the inequalities in terms of distribution of the fruits of this growth, which is related to the socio-territorial indicators.

⁶This index is calculated from the Lorenz curve, where GDP income is plotted as a function of the number of families in each income band from poorest to richest. If the distribution is perfectly equal, the curve follows the straight line (from bottom left to top right), otherwise it lies below this line. The Lorenz curve starts at the origin (0% of the population receives 0% of income) and ends at the point (1; 1) or (100%; 100%). To understand the wealth distribution the Gini coefficient is calculated from the Lorenz curve. This coefficient is a number from 0 to 1 (or from 0 to 100 if the results are multiplied by 100). For perfectly equal distribution the Gini index (G) is zero (because A=0). For total inequality, it is equal to 1, because B=0. Thus, as G increase from 0 to 1, the inequality of the distribution increases.

II. Tourism and socio-territorial development

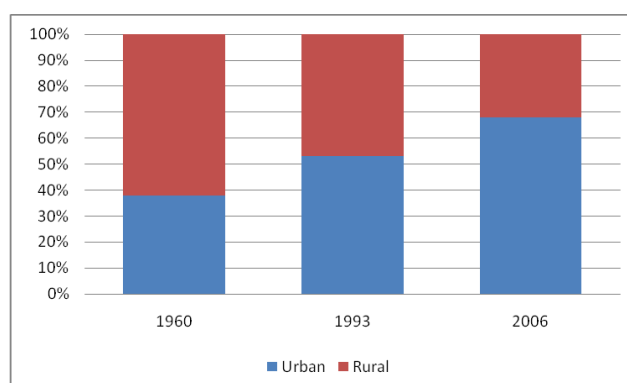
The Matrouh Governorate area has been marked by sharp demographic change: the population has more than tripled in 40 years, rising from 91,142 inhabitants in 1960 to 337,399 in 2008 (Figure 7). This increase has been mainly caused by two effects: a high rate of natural increase (around 2.1% annually between 1993 and 2006) and population growth rate of more than 10% between 1993 and 1996. This illustrates how the tourism industry has made the area attractive: the origin of the larger part of demographic growth is immigration from Cairo and Alexandria.

Figure 7: Demographic changes in Matrouh Governorate



Source: Data from Adel Rady, 2011.

Figure 8: Changes in urbanisation in Matrouh Governorate



The economic appeal of the area has inverted the rural/urban population ratio in Matrouh Governorate: the urban population has risen from 38% of the total in 1960 to 68% in 2006 (Figure 8). Marsa Matrouh and its hinterland account for 47% of the population of the Governorate, while Siwa and El Alamein represent smaller percentages. Thus, the authorities' strategy aiming to rebalance the demographic weight of Egyptian Governorates towards outlying regions via economic attractiveness has worked but mainly for Marsa Matrouh.

However, to measure the social sustainability of the destination, issues regarding the type of employment created by tourism must be addressed. In the Matrouh Governorate, tourism employment is distributed as follows⁷: 44.23% of employees work in hotels, 32.1% for the tourist board, 15.2% in retail, 6.9% with travel agencies and 1.5% are tour guides. The hotel sector alone accounted for 21.75% of the active population of Matrouh Governorate in 2009 (Table 2); of this 21.75%, 74% were men and 26% women.

Table 2: Share of hotel employment in the active population of Matrouh Governorate (%) (2009)

Total tourism employment/Total active population		21.75%
Of these 21.75%:		
Men accounted for		74%
Women accounted for		26%

Source: Data from Adel Rady, 2011.

However, hotel employment is extremely dependent on the rhythm and seasonality of tourism. The figures for employment by month shows the effects of seasonality on the monthly employment structure in the tourism sector: over the period 1999-2009, the median employment rate in low season was around 6%, while in high season it reached 80% (Figure 9).

⁷ Source: The Egyptian Federation of Tourist Chambers. Data collected in 2009 for the hotel and retail figures and in 2004 for the Tourist Board, travel agency and tourist guide figures.

Figure 9: Month-by-month breakdown of employment in the tourism sector in the Matrouh Governorate (%).



Source: Data from Adel Rady, 2011.

With 23% of the population having an income below the poverty line in 1996 and a dependent population of 49.96% (0-15 years and over 65 years) in the Matrouh Governorate in 2006, employment is a means of poverty reduction and can meet the needs for family solidarity associated with the financial dependence of individuals. The issues involved are exacerbated by unemployment, which affected 7.81% of the active population in 2006. Furthermore, 86.60% of unemployed people have never worked. Thus, the problem of access to employment remains significant, in particular with regard to gender issues.

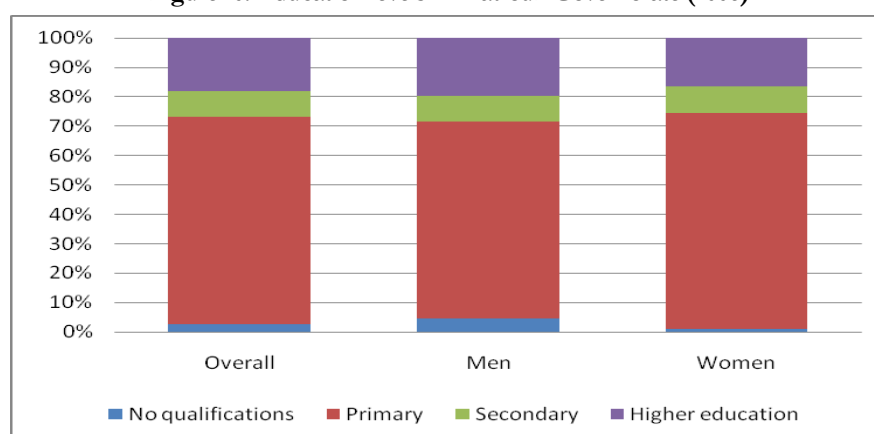
Table 3: Employment conditions (%) in Matrouh Governorate (2006)

Overall unemployment	7.81%				
Of which	Have never worked	86.60%	Of which	Men	80.43%
				Women	19.57%
	Have worked	13.40%	Of which	Men	96.87%
				Women	3.13%

Source: Data from Adel Rady, 2011.

The overrepresentation of the male population among the unemployed is noted (Table 3), although the unemployment figures do not take into account housewives who represent 66.17% of the “inactive” population.

Figure 10: Education levels in Matrouh Governorate (2006)



Source: Data from Adel Rady, 2011.

Figure 10 shows that there are fewer illiterate women than men and that 97% of the population has completed the initial level of education (70.43% have just a primary school certificate). However, two types of constraint weigh against the employability of the available labour force:

- Mismatch between the content of teaching and training programmes and the needs for employment in the tourism sector. This mismatch leads to the “import” of (domestic and international) labour for the Matrouh Governorate tourism sector.
- Social and cultural ideas about women working in general and women working in the tourism sector in particular.

According to Rady, three factors limit women’s employment:

- personal factors related both to family behaviour (the attitude of parents towards unmarried daughters, the attitude of husbands towards their wives’ careers, the juggling of work and family that produces conflicts and career breaks) and to individual behaviour (motivation and career choices);
- organisational factors that relate to public-policy decisions (promotion of work for women, training options, equal opportunities policy) and private decisions (family arrangements, informal systems for professional development);
- cultural factors including religious dogma, customs, gender stereotyping, legislation and government programmes.

Finally, while the economic performance of both tourism and the region has become strong, serious questions must be asked about the social sustainability of the model followed by Matrouh Governorate. Rady highlights the inequalities in terms of the distribution of income and the fruits of growth. In addition to this observation, the following issues remain: the strong seasonality of employment in the tourism sector; the mismatch between education and training and the tourism sector’s labour requirements; the problem of balancing an individual’s access to an income level that reduces their poverty level on the one hand and fulfilling obligations of inter-generational solidarity on the other; significant inequality between men and women in access to employment.

III. Tourism and the environment

On the basis of the economic and socio-territorial indicators used, the following observations can be made:

- high numbers of summer visitors to the Marsa Matrouh and El Alamein sites (approximately 45,000 overnight stays per year).
- a high concentration of the population in urban areas (Marsa Matrouh accounts for 47% of the Governorate's population);
- an increase in the total population residing in the Matrouh Governorate, as well as an increase in life expectancy (72.12 years in 2010).

What are the environmental impacts of the tourist industry? Three aspects will be considered to answer this question in this third section: the consumption of water and energy resources along with the production and treatment of solid and liquid waste; land usage; the state of biodiversity in the destination.

1. Water and energy consumption; production and treatment of solid and liquid waste

Firstly, the fresh water supply for the sites studied is provided by three different means:

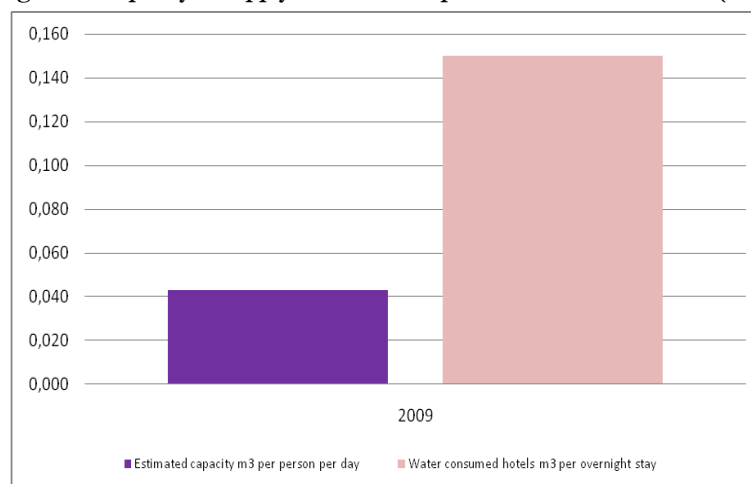
- The first consists of exploiting aquifers on the three sites: Marsa Matrouh, El Alamein and Siwa Oasis. The minimum capacity of these aquifers is estimated to be 5,000 m³/day. Although the salinity is quite low (it varies from 2,000 to 3,000 ppm), the water is brackish and unsuitable for

agricultural use. Furthermore, water quality varies greatly between seasons: it is best in the winter. Additionally, the water from these aquifers contains 20,000 ppm of solid matter which also reduces its quality. However, it would be possible to improve the quality of this water using reverse-osmosis desalination (RADY 2011).

- The second consists of importing water via two pipelines from Alexandria's mains water network. The average capacity is approximately 10,000 m³/day in Autumn and 11,000 m³/day in Summer. However, this is still insufficient to meet the destination's water requirements.
- The third supply route complements these two: water transport by train and tanker (private companies). Private companies serve most tourist amenities, as well as the oil companies and construction sites that do not have a reliable connection to pipelines connected to Alexandria's mains water network.

Combining the drinking-water production capacity of these three means of water supply, gives an average figure of 0.043 m³ per person per day, whereas the drinking-water consumption for the destination's tourism sector is 0.15 m³ per overnight stay (Figure 11).

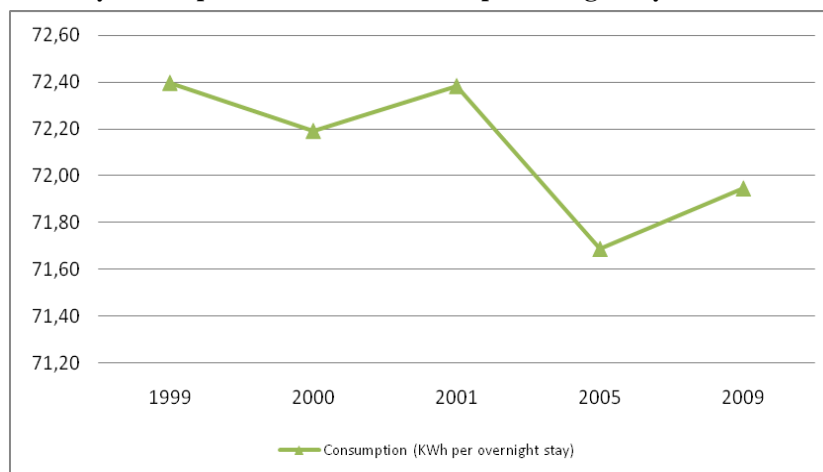
Figure 11: Capacity to supply water consumption in the tourism sector (2009)



Source: Data from Adel Rady, 2011.

The electricity consumption of the hotel sector has also more than doubled between 1999 and 2009, growing from 18,250 MWh to 37,960 MWh, with a growth rate of 11%. However, consumption per overnight stay (around 72 KWh) reduced slightly between 1999 and 2009 (Figure 12).

Figure 12: Mean electricity consumption from tourism in KWh per overnight stay. Matrouh Governorate. 1999-2009



Source: Data from Adel Rady, 2011.

Furthermore, Rady mentions several deficiencies with regard to solid-waste management and suggests how they can be remedied by:

- concentrating solid-waste treatment projects along coastal roads for easy access;
- redrawing the administrative boundaries for collection and treatment zones to incorporate tourist areas;
- increasing coordination between regional and local structures for better planning of waste collection and treatment.

Table 4: Water and electricity consumption in Matrouh Governorate

Type of resource or product consumed	Units	Quantity
Water (2009)	m ³ per overnight stay	0.75
Mean electricity consumption (2009)	KWh/overnight stay	71.95

Source: Data from Adel Rady, 2011.

Finally, concerning the production and treatment of wastewater, certain tourist complexes are not linked to stormwater drains or sewage treatment plants; wastewater is collected in septic tanks or discharged directly onto the sand when it reaches the beach. Wastewater produced in towns is directly discharged into streams. In general, there is no wastewater drainage system except where hotels have invested privately.

2. Land pressure associated with tourism

The population is not uniformly distributed over the Matrouh Governorate: 48% of the population lives close to the coast (less than 5% of the total surface area), 41% in the intermediate zone (between 5 and 15 km inland) and 11% in areas further from the coast. The confinement of tourism to a one-kilometre strip along the coastline has a negative impact on population density which is as high as 5,000 inhabitants per square kilometre on the coast.

Figure 13: Coastal development in Marsa Matrouh

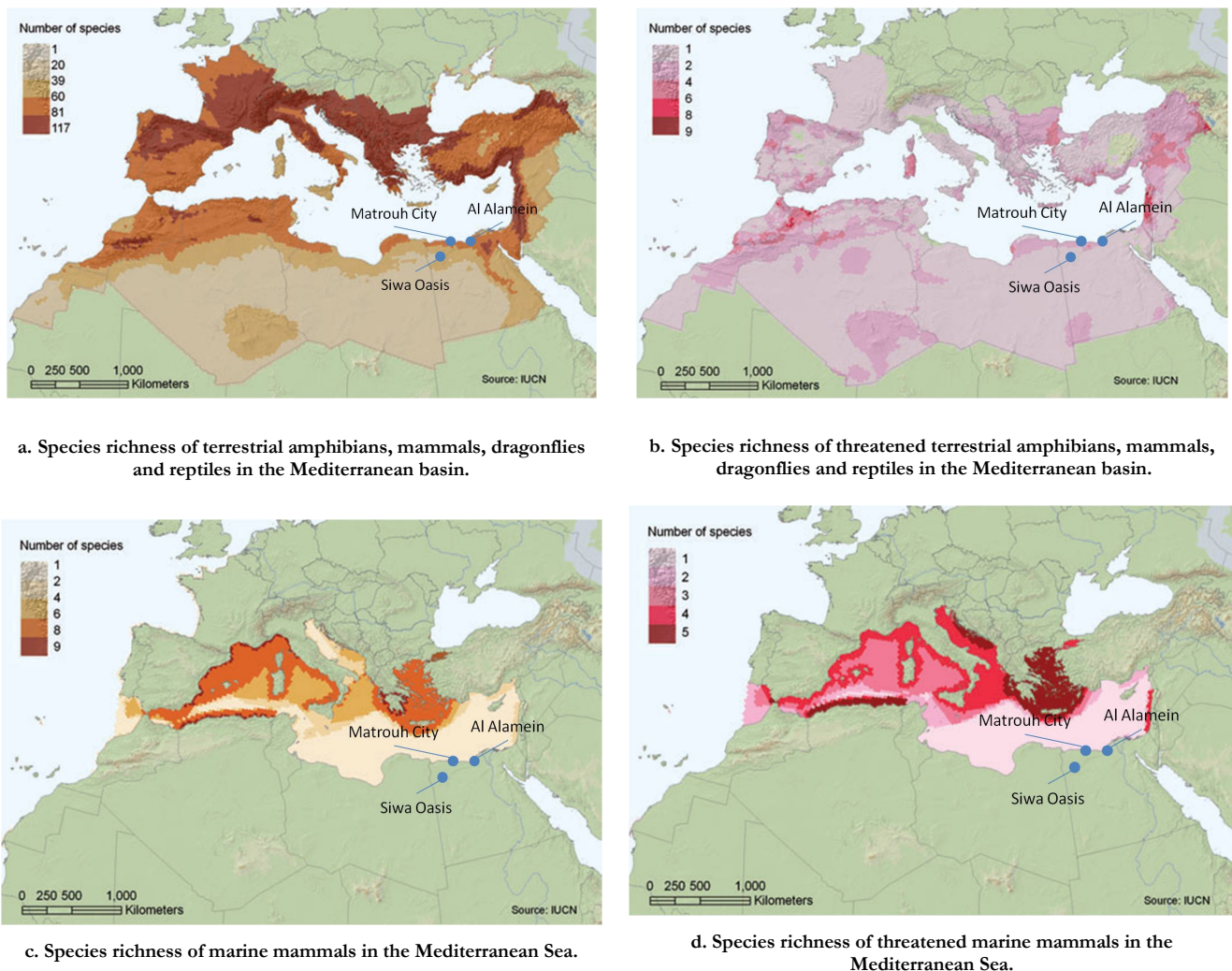


Source: (IDSC) Matrouh Governorate, in Rady (2011).

3. Biodiversity

The Marsa Matrouh and El Alamein sites are located in an area of significant biodiversity with regard to terrestrial fauna (Figure 14 a) including two threatened species (Figure 14 b). The destruction of the habitats of endangered species and of crest and sand-dune flora are negative environmental impacts. These impacts result mainly from artificialisation of the coastline via both the construction of infrastructure and the transformation of local flora. Most tourist villages and hotels have affected the natural landscape by changing the balance of natural species: introducing alien flora to the natural flora of the region (shrubs, turf, lawns and trees). With regard to marine fauna (Figure 14 c and d), the International Union for Conservation of Nature and Natural Resources (IUCN) has not identified any endangered species.

Figure 14: Matrouh Governorate and Mediterranean biodiversity, as defined by the IUCN (CUTTELOD et al. 2008)



Source: CUTTELOD, A. et al., 2008. The Mediterranean: a Biodiversity Hotspot under Threat. The IUCN Red List of Threatened Species.

IV. Tourism and governance

The governance of the tourist industry in Matrouh Governorate is exclusively based on the exercise of national centralised government which may, however, involve public and private sector international bodies. To show how national governance is applied, Rady provides a sector-based interpretation, looking at the economy, culture and environment.

With regard to the economic sector, the tourist industry is regulated by two institutions: the State and the market. State regulation mainly focuses on creating an incentivising legal framework that encourages investment, with the main aim of modernising tourism infrastructures. As tourism was an option adopted by the State to attract private investors to the Matrouh Governorate, the legal framework has been relaxed and made less constraining – although the State still retains a heavy controlling influence over investment in tourism via the Tourism Development Authority (TDA). The TDA's role is to assess tourism projects as they are submitted⁸ and then allocate sites for implementing these projects. Thus, the TDA has power in two areas: firstly the right to inspect the project and secondly the right of reserve, giving it the authority to terminate the contract that links it to the investor if the latter does not keep to its schedule and this without reimbursement of funds already advanced. Regulation of tourism by the markets is largely influenced by the Tour Operators. These are working on the tourism offer to try and extend the season over the longest possible period of activity by attracting segments of the international market interested by cultural tourism in Marsa Matrouh and El Alamein, by adventure tourism in Siwa and by yachting at Marina El Alamein. Efforts by tour operators to work on the tourism offer have extended the tourist season from June to the first week in September in Marsa Matrouh and El Alamein.

With regard to the cultural sector, governance applies mainly to a policy of making inventories and conserving heritage. Inventories are performed by local decentralised structures (the “Information Center of the Supreme Council of Antiquities (SCA)” and the “Center of Information and Decision Making of the Ministries Council”). Since 2011, restoration and development of heritage has been performed under the authority of the Minister of Antiquities. However, with regard to policy for restoring and developing historical and cultural heritage, there is also international involvement. An example of this is the excavations at El Alamein, made possible by joint funding from Polish and US government partnerships. While the main aim of this project is the restoration of an archaeological site, the Egyptian authorities also see in it a significant economic opportunity as Marina El Alamein is considered to be both an open-air archaeological site and a cultural tourism product.

Finally, with regard to the environment, the Egyptian environmental protection law of 1994 makes the Egyptian Environmental Affairs Agency (EEAA) responsible for the preservation of natural parks and reserves. The Agency is highly credible because it works on environmental protection in general via the production of a legal framework and a national plan and it issues building permits for coastal areas in coordination with the Egyptian Public Authority for Shore Protection.

Rady comes to the following conclusion on the question of governance: the local authorities and institutions in the three tourist sites have little or no information on what to expect regarding tourism or how to influence and manage it. As well as the predominant role of central government, local government bodies are also indirectly controlled by international institutions, the tourism industry and tourists. Thus, the local government authorities are not yet sufficiently aware of their responsibilities and the means they can use to influence the behaviour of tourists.

V. Proposals of policy measures

Following the various observations on the sustainability of Matrouh Governorate, this final section focuses on the policy measures put forward by Rady. We will base the structure of these proposals on an observation agreed upon by the group of experts who worked together on the Plan Bleu project “Profiles of sustainability – Mediterranean Destinations”: tourism should be seen as a means to develop an area and not as an end in itself. Tourism must be rooted in the territory, such that the tourism offer can be developed through encouraging on quality rather than quantity by mobilising economic and social forces in the area. Thus, the proposals regarding integrated and sustainable local development are set out as follows: proposals for local governance with regard to decision making, economic proposals, socio-territorial proposals and environmental proposals.

⁸ Investors must supply TDA including an estimate of the demand for the product offered, the finance plan (direct and indirect costs, forecast income, risks of losses etc.) and technical designs (plans and a model of the development).

1. Defining local governance for improved political regulation of tourism

According to Rady, it is important to open up the decision-making process and include local bodies, in particular local authorities and NGOs to increase the sustainability of tourism in the Matrouh Governorate, both to meet the needs for efficient policy (community participation can strengthen the positive effects of tourism and reduce the negative effects) and also of the needs for democratic openness. Thus, Rady suggests the establishment of local and regional tourist offices which would involve people from politics, business and the voluntary sector to promote the principles of integrated and sustainable local development. Furthermore, local authorities should harmonise tourism laws, regulations and standards to promote sustainable tourism in the region.

To facilitate the widening of the decision-making process, Rady suggests establishing a research institute to supply data on the economic, socio-territorial and environmental outcomes and impacts of tourism in the area. In particular, this would enable such knowledge to be distributed to various groups. The research institute could work in collaboration with the EEAA and the TDA to supply tools for informed decision-making and could also launch an awareness-raising campaign about the negative effects of tourism. The research institute would involve representatives of the tourist industry, NGOs and local institutions.

In consequence, the Matrouh Governorate should increase funding for local NGOs to:

- develop their role in supporting social project-management via its public education programmes which encourage responsible consumption, use of natural resources, environmental protection and conservation of the local culture;
- developing their role in technical support, analysis and strategic advice with the aim of gathering useful information for understanding consumer behaviour and positively influencing the behaviour of tourists by establishing information centres on each of the tourist sites.

2. Policy measures in the business sector

To reduce the negative effects of seasonality in terms of economic outcomes and the impact on natural resources, Rady suggests encouraging the private sector and tourists consider a flexible use of the low season. Furthermore, to improve the quality of the tourism offer, the author suggests:

- promoting a sustainable tourism offer by using economic instruments and incentives such as competitions, rewards and quality accreditation that cover both environmental and social sustainability;
- diversifying the accommodation offer in its physical, financial and functional aspects across the three sites (El Alamein, Marsa Matrouh and Siwa Oasis).

From the standpoint of financing the tourist industry, Rady suggests giving priority to investments in Tour Operators to develop their technical abilities and encouraging “social” enterprise in partnership with local banks and other lending institutions, including micro-credit programmes.

3. Policy measures in the socio-territorial sector

There are two aspects to political measures in the socio-territorial sector:

- The first is land-use planning. The overuse of land resources and coastal areas should be addressed, with a view to harmonising tourism and environmental policies. For coastal destinations such as Marsa Matrouh and El Alamein, this means focusing on conserving the coastal strip. For desert destinations such as Siwa Oasis, this means paying attention to fragile ecosystems. Furthermore, the question of clash of cultures and the local population's feeling of invasion should be taken into account in the construction of tourism projects - even though Marsa Matrouh is open to cultural diversity and mixing.

- The second is employment and training. To improve livelihoods and generate sources of income for the local population, it is important that income from tourism remains in the destinations, which means reducing the “economic drain”. With a view to achieving these objectives, Rady suggests motivating local groups to take responsibility for promoting cross-cultural exchanges based around environmental conservation, protection and preservation practices. With regard to training, given that 25% of hotel staff come from outside the region, there is a need to promote literacy and establish local training systems for this sector.

4. Policy measures in the environmental sector

The political measures that Rady suggests in the environmental sector are based on actions for: regulating modes of transport to reduce the traffic associated with tourism and controlling tourist access to areas with fragile ecosystems; promoting renewable energy sources, such as solar power, and reducing the use of non-renewable energy; reducing solid waste production and developing recycling systems; monitoring bathing water quality; regulating drinking water consumption; regulating wastewater treatment.

Conclusion

In order to summarise the profile of sustainability for Djerba, we compared it with the other destinations studied in the “Profiles of sustainability – Mediterranean Destinations” project: a second Principal Component Analysis (Figure 15) compares the sustainability of each destination with the mean and standard deviation⁹ for all sites studied and for each indicator used, based on the MSSD variables. This second Principal Component Analysis (PCA) does not incorporate information regarding governance because the “governance” variable can be considered more as a component used to explain the results and the economic, social, territorial and environmental impact of tourism on the destinations. In other words, the results observed correlate closely with the policy choices implemented in each destination. For instance, in destinations where the availability of water is not a problematic issue, this is due to the fact that the authorities have invested in infrastructure projects such as dams and desalination plants. In contrast, in destinations where, for instance, the land pressure caused by tourist and residential accommodation facilities is high, this is often because of a failure to enforce the regulatory framework or a lack of regulation, as well as because of property-related and financial speculation.

The PCA results are used to distinguish between four types of “sustainability profile” for the destinations:

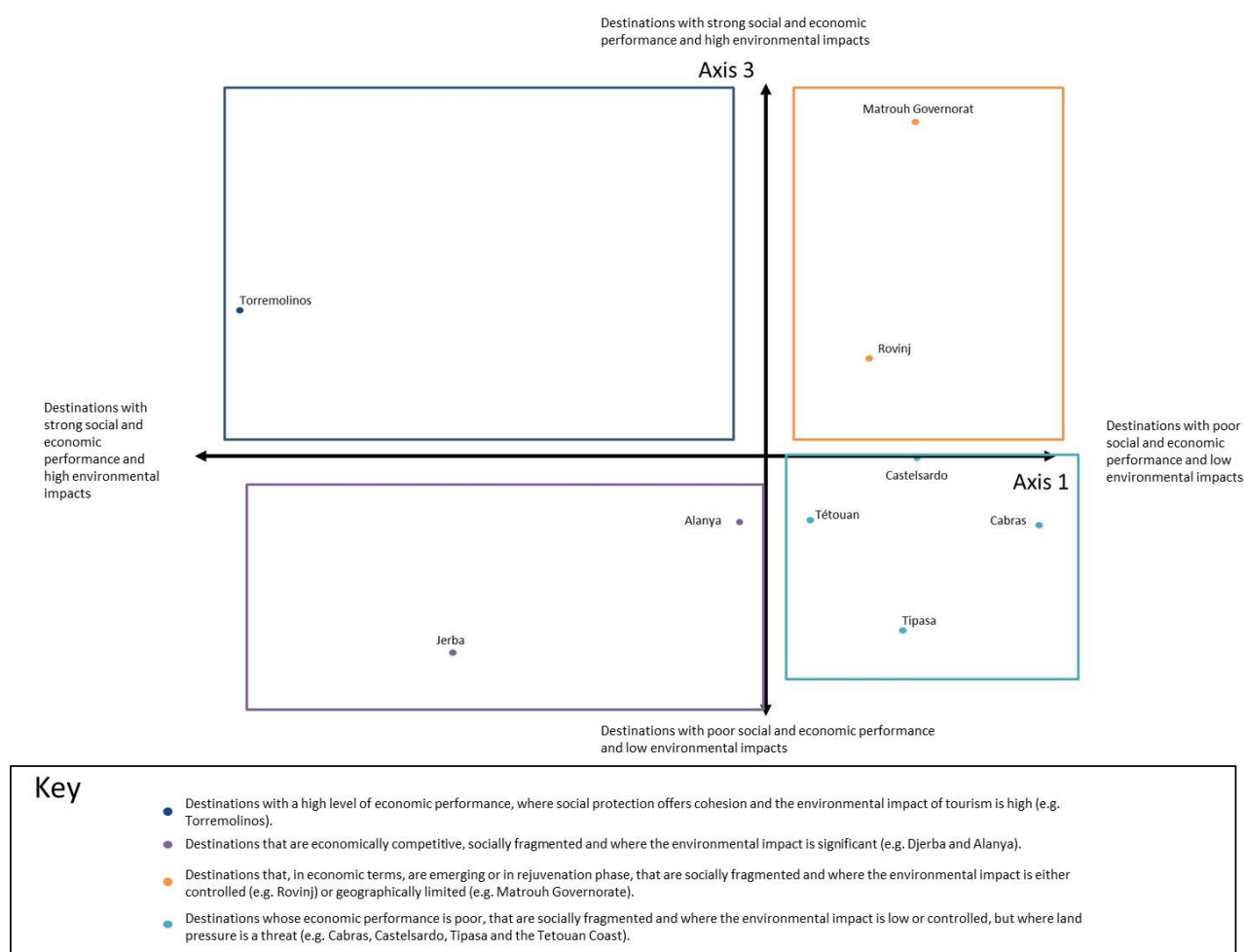
- destinations with a high level of economic performance, where social protection offers cohesion and the environmental impact of tourism is high (e.g. Torremolinos),
- destinations that are economically competitive, socially fragmented and where the environmental impact is significant (e.g. Djerba and Alanya),
- destinations that, in economic terms, are emerging or in rejuvenation phase, that are socially fragmented and where the environmental impact is either controlled (e.g. Rovinj) or geographically limited (e.g. Matrouh Governorate),
- destinations whose economic performance is poor, that are socially fragmented and where the environmental impact is low or controlled, but where land pressure is a threat (e.g. Cabras, Castelsardo, Típassa and the Tétouan Coast).

Matrouh Governorate is a “domestic destination with extensive tourist amenities” and can be considered as an emerging destination with strong economic growth, but with social and environmental impacts that are limited by its geographical location. From an economic standpoint, Matrouh Governorate achieves extremely good results in terms of revenue per bed and daily spending per tourist, which explains the reason for the position of Matrouh Governorate on Axis 1 of Figure 15. However, the excellent economic

⁹ Standard deviation is the difference between the largest value and the smallest value in a sample.

performance is limited to a very short period of the year, because the destination suffers from very high seasonality and a low occupancy rate. In addition, the social performance of the destination is somewhat questionable, in that although the number of jobs created is significantly higher than the mean for the destinations, the labour force is generally unskilled. In addition to the unequal redistribution of tourist revenue, the active population is still too small to meet the needs of the very large inactive/dependent population. With respect to environmental performance, the destination uses relatively little land for tourism, has low water consumption and produces low levels of solid and liquid waste. However, water supply remains a major issue in land-use planning for the development of tourism in Egypt's desert areas. Since water resources are very limited in Matrouh Governorate, water is transported over distances of hundreds of kilometres by tanker trucks, trains and pipelines to meet the needs of local people and tourists.

Figure 15 : Graph showing the profiles of sustainability for the tourist destinations studied



Source: Principal Component Analysis by Loïc Bourse, 2011.

Guide (see also Figure 17 in the Appendix):

Axes 1 and 3 explain 61% of the data variance.

Axis 1 alone explains 53% of the data:

- The further the destination is to the right on Axis 1, the higher the environmental performance and the lower the social and economic performance in the destination,
- The further the destination is to the left on Axis 1, the higher the economic and social performance of the destination, alongside more negative environmental impacts.

Axis 3 explains 8% of the data:

- The higher the destination is on Axis 3, the higher the economic and social performance of the destination, with high environmental impacts,
- The lower the destination is on Axis 3, the lower the social and economic performance in the destination, with controlled or low environmental impacts.

Bibliography

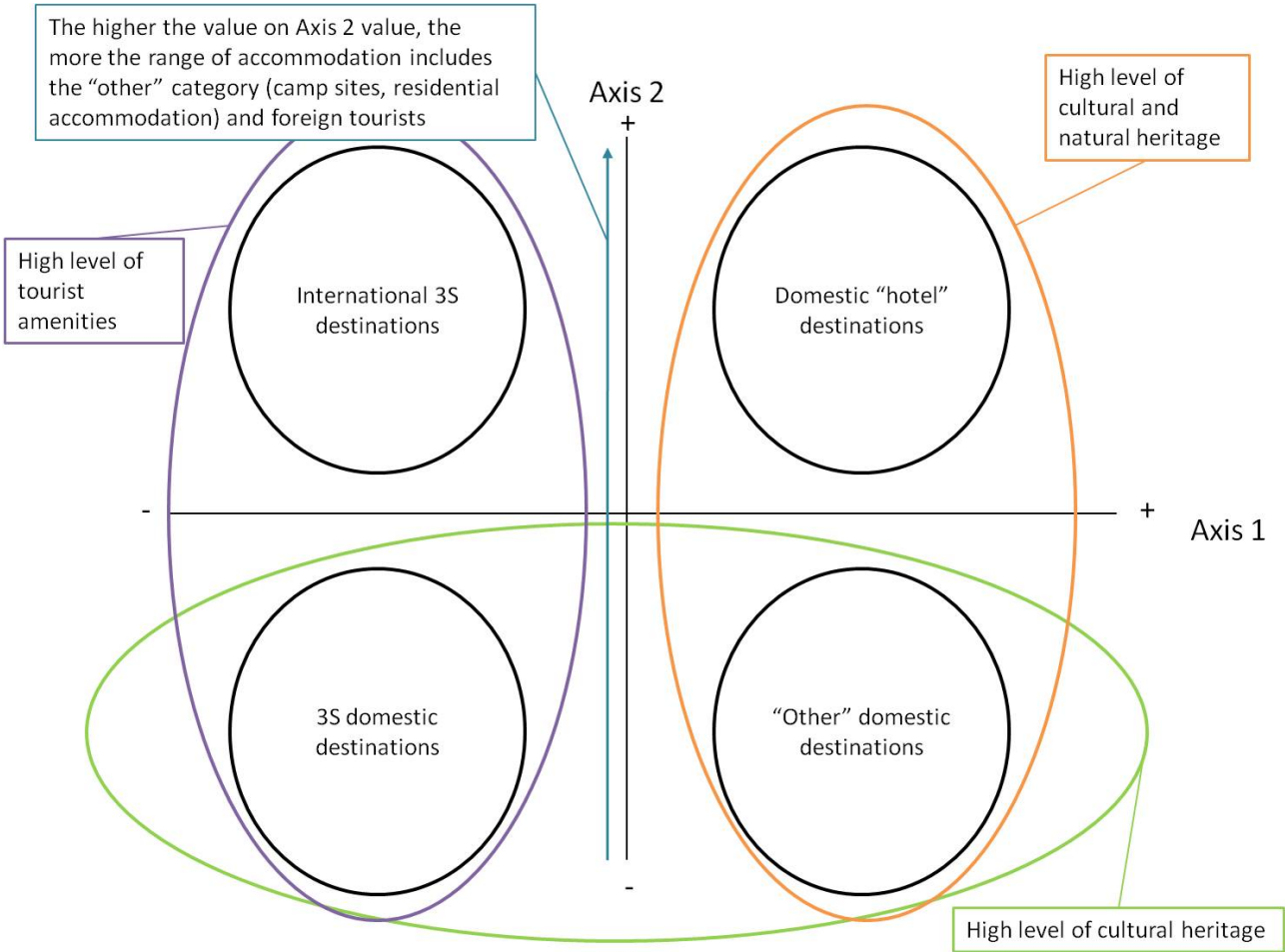
- BUTLER, R.W., 1980. The concept of a tourist area cycle of evolution: implications for management of resources. *Canadian Geographer / Le Géographe canadien*, 24(1), p.5-12. Available at: [Consulted 31 May 2011].
- CUTTELOD, A. et al., 2008. The Mediterranean: a Biodiversity Hotspot under Threat. *The IUCN Red List of Threatened Species*.
- PLAN BLEU, 2009. *Etat de l'environnement et du développement en Méditerranée* (State of the Environment and Development in the Mediterranean), Sophia Antipolis: Plan Bleu, PNUE/PAM.
- RADY, A., 2011. *Profile of Sustainability in some Mediterranean tourism destinations. Case studies in Egypt: Marsa Matrouh, El Alamein, Siwa Oasis*, Sophia Antipolis: Plan Bleu.
- SPILANIS, I. & VAYANNI, H., 2011. *Tourism results and impacts to the destinations' sustainability*, Sophia Antipolis: Plan Bleu.

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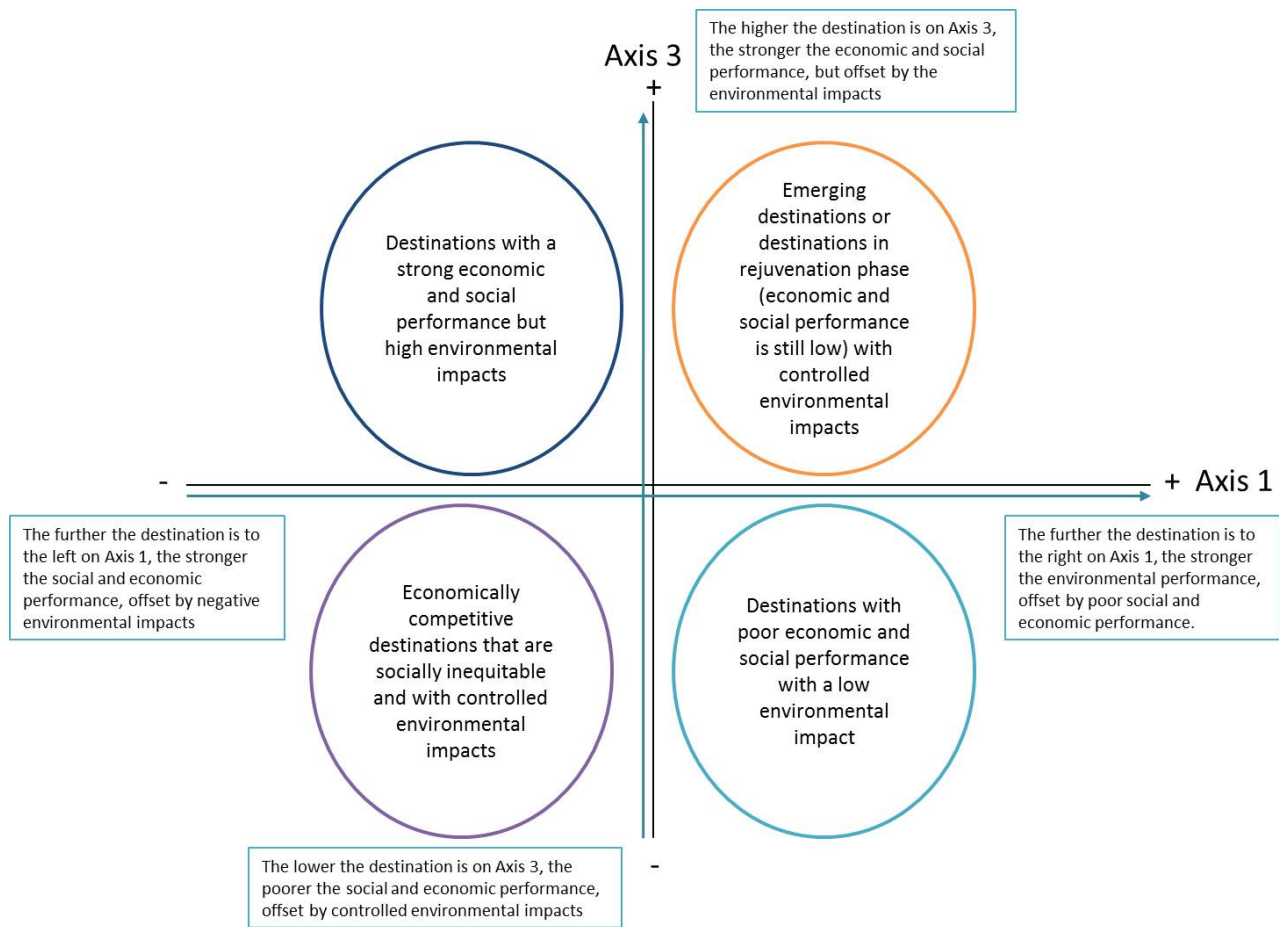
Appendices

Figure 16: Schematic representation of the classification based on a Principal Component Analysis



Source: Loïc Bourse, 2011

Figure 17 : Schematic representation of the Principal Component Analysis of the sustainability profiles



Source : Loïc Bourse, 2011.

Table 5: Destination Datasheet of Matrouh Governorat

	Year	Value (1 : yes ; 0 : no)
Demand		
Residents (%)	2009	45,79%
Non-residents (%)	2009	53,72%
Charter passengers/total passengers	2009	75,93%
Airport	2011	1
Harbour	2011	0
Accommodation offer		
Number of beds	2008	7 750
Hotel beds / total number of beds (%)	2008	100%
Holiday village beds (%)	2008	0%
Other beds (%)	2008	0%
Campsite spaces (%)	2008	0%
Leisure amenities		
Spas / health clubs	2011	1
Sports amenities	2011	1
Casino	2011	1
Golf courses	2011	1
Leisure parks	2011	1
Marinas	2011	1
Conference and exhibition centres	2011	0
Beaches	2011	1
Natural and cultural heritage		
Historic monuments	2011	1
Places of worship	2011	0
Museums	2011	1
Cultural events (festivals or traditional events)	2011	0
Nature reserves	2011	1
Places selling local products (craft markets)	2011	1
Cultural activities	2011	0
Economic performance		
Number of overnight stays	2009	527 611
Daily spending per tourist (€)	2009	69
Revenue per bed (€)	2010	5841
Revenue per overnight stay (€)	2010	97
Seasonality		
Mean annual occupancy rate	2009	17,44%
Social performance		
Direct employment per bed (number of jobs)	2008	1,92
Unemployment	2010	7,81%
Level of education of employees: higher education	2006	18,07%
Level of education of employees: secondary education	2006	8,83%
Level of education of employees: primary education	2006	70,34%
Level of education of employees: no qualifications	2006	2,78%
Demographic indicators		
Total population	2008	182 849
Dependent population	2008	49,96%
Life expectancy	2009	72,1 yrs
Population growth rate	2008	2,10%
Migration rate	2008	0,12%
Environmental performance		
Water consumption	2009	0,15 m3/night spent
Energy consumption	2009	71,95 kwh/night spent
Waste production	2009	0,8 kg/tourist/day
Wastewater production	2009	189 m3/day
Land area of tourist accommodation / total area governed by local authority	2008	79,86