

# Profile of sustainability in some Mediterranean tourist destinations



**Summary: Tipaza, Algeria**  
**Based on the case study by Samir GRIMES**

Loïc BOURSE



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## Introduction

The case study by Samir Grimes on Tipaza (Algeria) is part of the Plan Bleu project “Sustainability profiles 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), taking into account environmental, social and economic issues in the destinations studied. A “profile of sustainability” has been produced for eleven tourist destinations<sup>1</sup> across eight Mediterranean countries using the DPSIR approach (Drivers – Pressures – State – Impacts – Responses).

First 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 was used to examine the destination, which is the basic unit of tourism development, as well as taking into account several different levels (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.

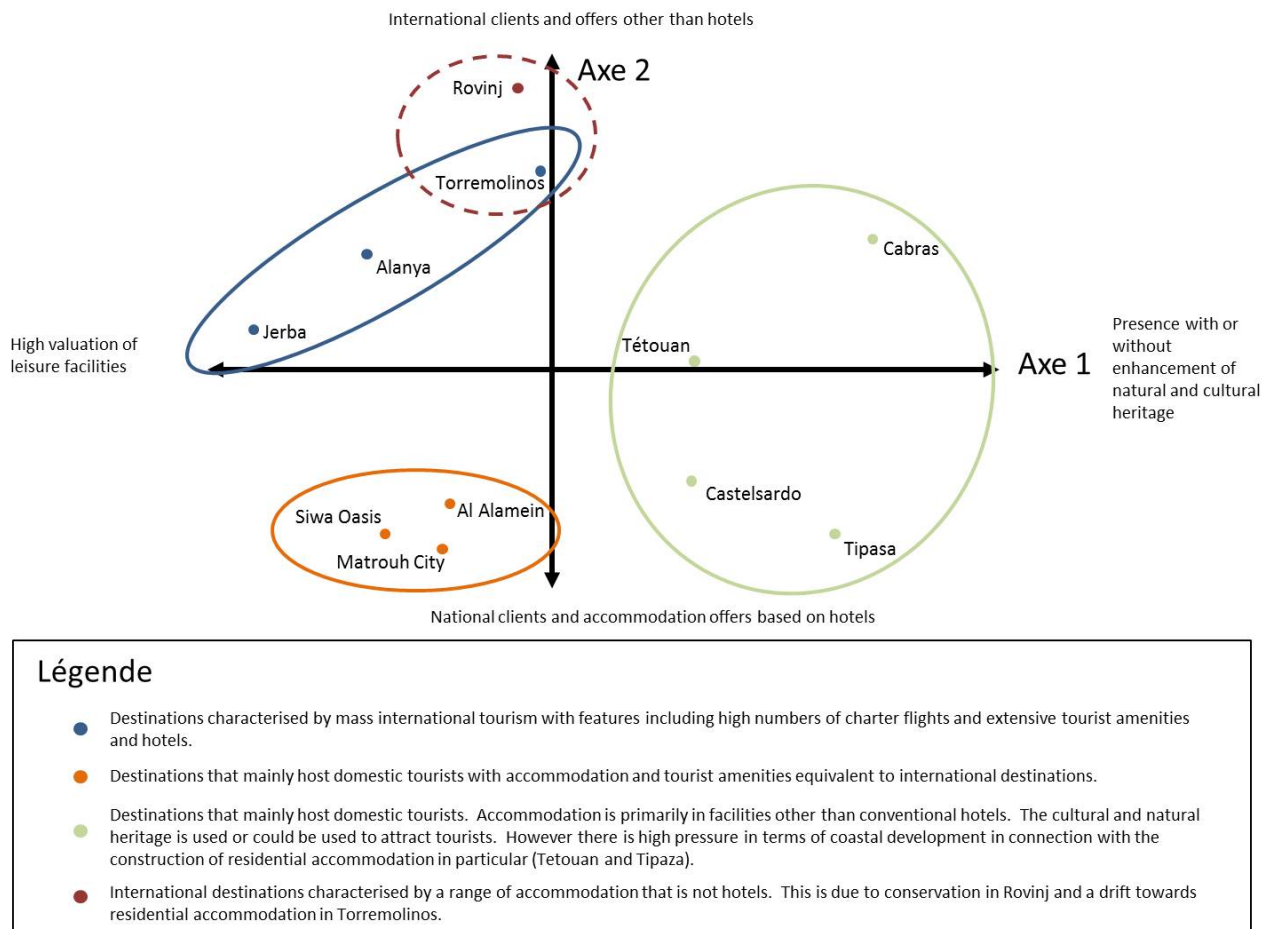
In selecting the destinations to be studied, Plan Bleu defined a methodology requiring that each destination studied should be an administrative unit on the Mediterranean coast with significant international and/or domestic tourism, that is also home to a permanent population but is not a major city. Based on variables informed by the data supplied by the experts who 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 (4 and 5 stars) with luxury amenities (health spas, marinas, golf courses, casinos, etc.) and a significant range of cultural centres, 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 destinations attracting domestic tourists who mainly stay in accommodation other than hotels (residential accommodation, bed and breakfasts, camp sites, etc.). Other factors that attract tourists to these destinations are their significant cultural and natural heritage (markets selling local products, nature reserves, etc.).
- Type four (Rovinj in Croatia) are destinations that are in rejuvenation phase, and represent destinations with primarily international customers, where Tour Operators play a significant role and whose accommodation options are primarily facilities other than hotels.

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<sup>1</sup> 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).

**Figure 1: Graph showing the types of tourist destinations studied**



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

Guide (see also Figure 15 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 (less than 0), 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 higher side it represents tourism characterised by international visitors using accommodation other than hotels;
- on the lower side, it represents tourism with extensively equipped hotels with historical sites and primarily domestic visitors.

Tipaza is a tourist destination “that mainly hosts domestic tourists”, with high levels of accommodation other than hotels, significant cultural and natural heritage and demand primarily from within Algeria. Given the lack of long-term data on tourism in terms of overnight stays, we have not been able to position Tipaza on the Butler life cycle model (BUTLER 1980). However, the qualitative data supplied by Grimes shows that Tipaza is in development phase, like other destinations of the same type, i.e. Tetouan Coast (Morocco), Cabras and Castelsardo (Italy). Tipaza Wilaya (province) is therefore not a top-class tourist destination unlike Algiers, Oran, Sétif or some of the wilayas in southern Algeria. It is, however, increasingly sought after by foreign investors from the Gulf who want to develop international tourism, although for the moment, the majority of hotels in Tipaza belong to the Algerian Government.

Despite the fact that Tipaza was first launched as a tourist destination in the 1960s and that it is one of the main tourist destinations in northern Algeria, it is still in take-off phase. Tourist amenities here have developed in two stages. Between 1962 and 1999, it grew under centralised Government administration. This was then followed with a transition phase marked by two phenomena: the Government's gradual withdrawal from its position as prime investor, and institutional and financial reforms to encourage private

investment. The Algerian authorities now want to develop tourism in this region (16 Tourist Expansion Zones have been marked out along the coast at Tipaza) and encourage “nature” tourism (sandy beaches and rocky coves, coastal forests, mountains and hills, etc.) and “cultural” tourism (picturesque villages, roman ruins, a royal mausoleum, other cultural and natural treasures).

On the basis of these observations, and with a view to presenting the profile of sustainability for Tipaza, the case study is structured in 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 state of sustainability at the destination, then we will present Grimes’s proposals for “policy measures” with regard to the improvement of sustainability in Tipaza.

## I. Tourism and economic development

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

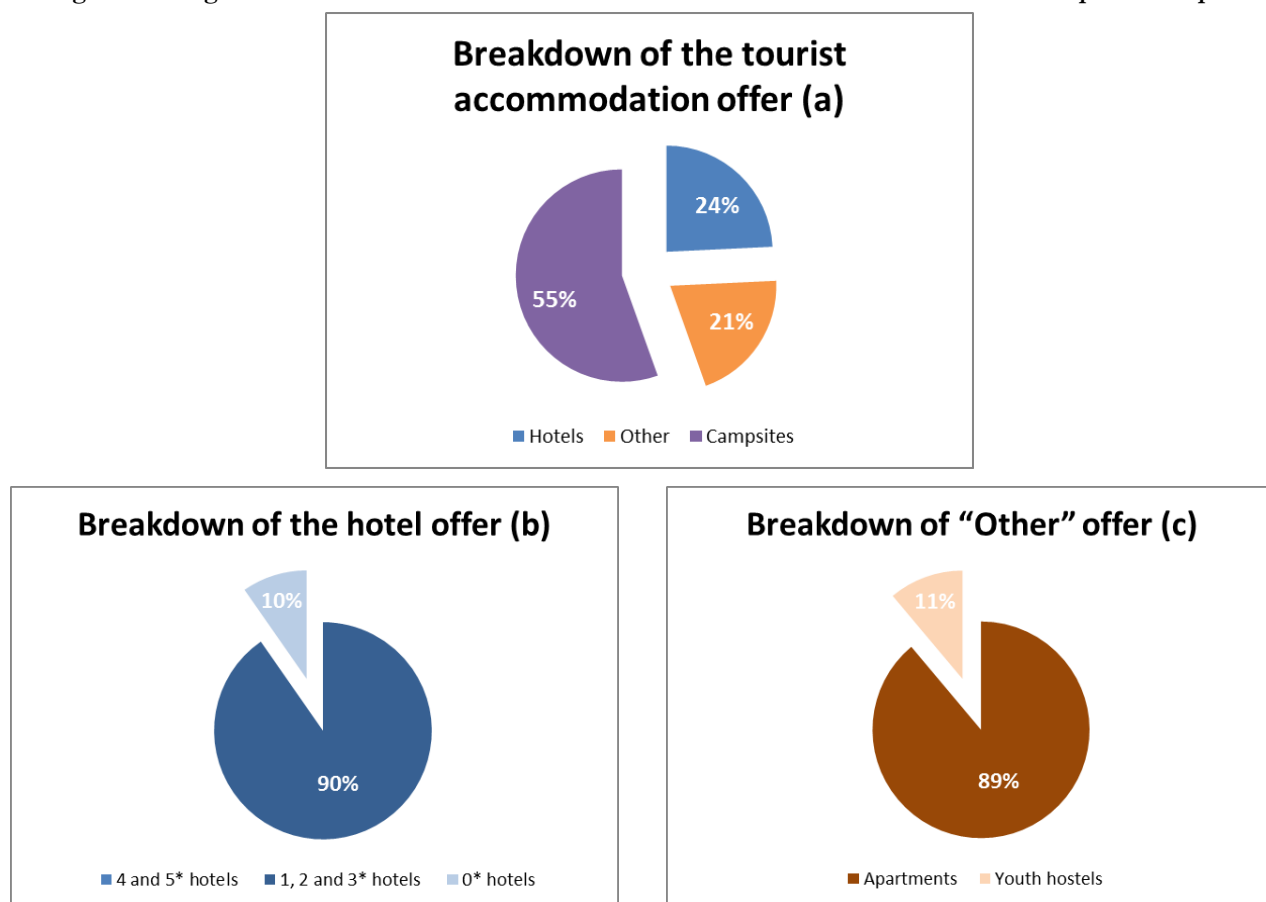
### 1. Changes in the tourism offer and demand

With respect to changes in the tourism product, the accommodation offer must first be examined. Figure 2 (a) shows that it breaks down as follows: half of accommodation is categorised as campsites (55%), a quarter hotels and another quarter is labelled “other”. The majority (90%) of the hotel offer is made up of entry-level hotels i.e. 1, 2 and 3 stars, while bottom-of-the range hotels (no star rating) account for 10% (Figure 2 (b)). 90% of the “other” category consists of residential accommodation for rent (apartments and villas), while just 10% are youth hostels (Figure 2 (c)).

We will now examine the mechanical aspect of tourism through the question of seasonality. We used two observations to calculate the occupancy rate from the available data: the fact that tourism is centred around the three-and-a-half month summer period and the number of annual overnight stays for 2007. On the basis of these findings and assuming that the low season occupancy rate is 0% - i.e. January, February, March, April, May, November and December - we obtained an occupancy rate of 70% for June, July, and August, and 43% for September (Figure 3). A number of factors explain this seasonality and high occupancy rate:

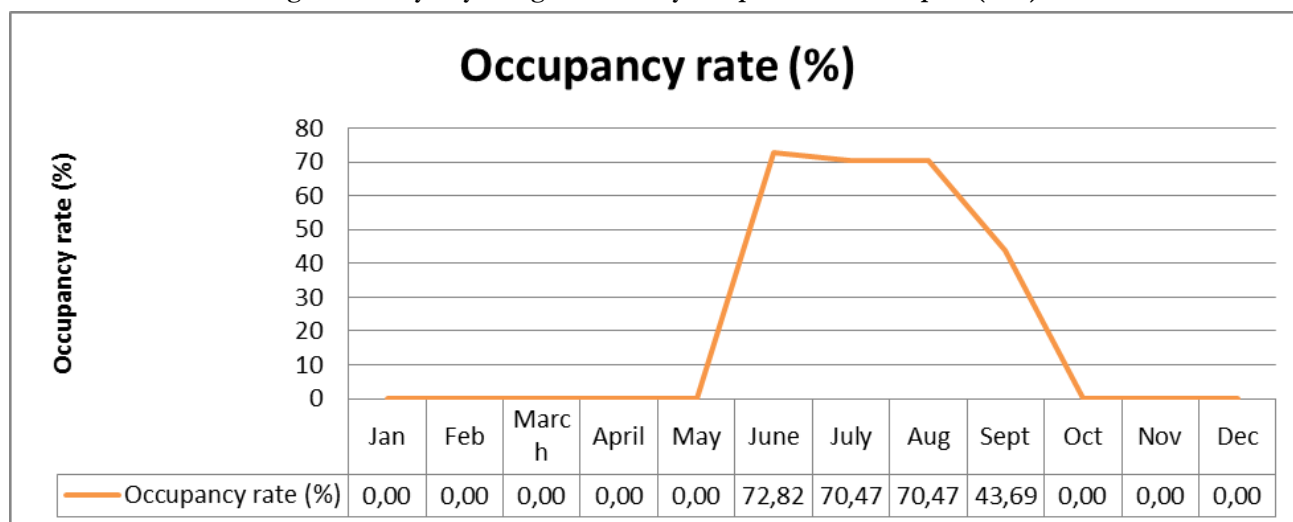
- Factors contributing to seasonality are the dominant accommodation type (camping), the fact that domestic tourism, which tends to take place during the summer, is primary, and the lack of travel agency and tour operator marketing which results in virtually non-existent international demand;
- Factors contributing to the occupancy rate are the average length of stay (5 days) and customer loyalty, e.g. the “La Corne d'Or” hotel, which manages to extend the average length of stay to 12 days and maintain a constant occupancy rate from one year to another.

Figure 2: Changes in the structure of tourist accommodation on the basis of the number of beds and places in Tipaza



Source: Data from Grimes, 2011

Figure 3: Five-yearly changes in monthly occupation rates for Tipaza (2007)

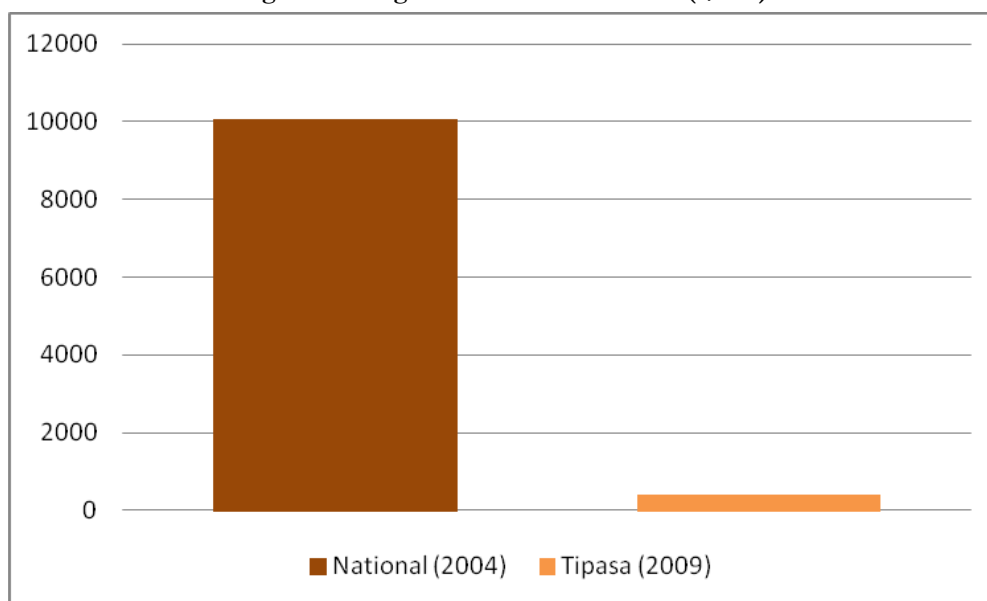


Source: Data from Grimes, 2011

## 2. Revenue from tourism

Tourism-related GDP rose from €2,900,007 in 2005 to €4,508,907 in 2009. That is growth of 55% in four years, which suggests that there is still room for expansion. However, these good results need to be tempered with more equivocal data directly associated with the tourism offer developing in Tipaza. Revenue generated per bed is still very low compared with the national average: €400 per bed in Tipaza for a national average of €10,000 per bed (Figure 4). Daily spending by tourists is at an average of just €40, which is low compared with international destinations, but high for the lower end of Algerian incomes (€117 per month). In addition, the economic activities associated with tourism during the summer tend to be informal (transport, activities and leisure, sale of agricultural products, food, crafts, etc.) which escape local taxation and cannot therefore be assessed.

Figure 4: Changes in revenue from tourism (€/bed)



Source: Data from Algerian Office of Statistics and Grimes, 2011.

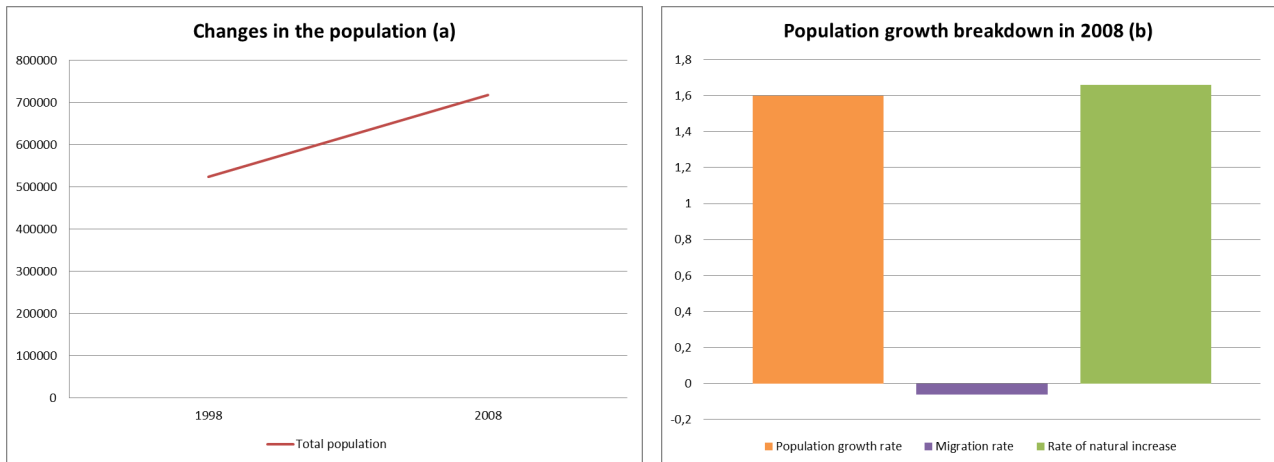
## II. Tourism and socio-territorial development

Tipaza Wilaya experienced strong urban population growth over the last ten years or so, caused by three phenomena:

- migration, as people left isolated villages to move to towns as a result of security issues throughout the 1990s;
- its proximity to Algiers makes it an accessible destination;
- a high rate of natural increase and the improvement of medical care.

Population growth in the wilaya is characterised by migration towards urban areas (the urban population in Tipaza Wilaya grew from 47% in 1987 to 56% in 1998), although these migratory movements are balanced by emigration (the 2008 migration rate is negative at -0.6%) and a high rate of natural increase (the natural rate of increase for 2008 was 1.66%) (Figure 5 (b)). So, can we say that tourism is increasing the socio-economic pull of the area?

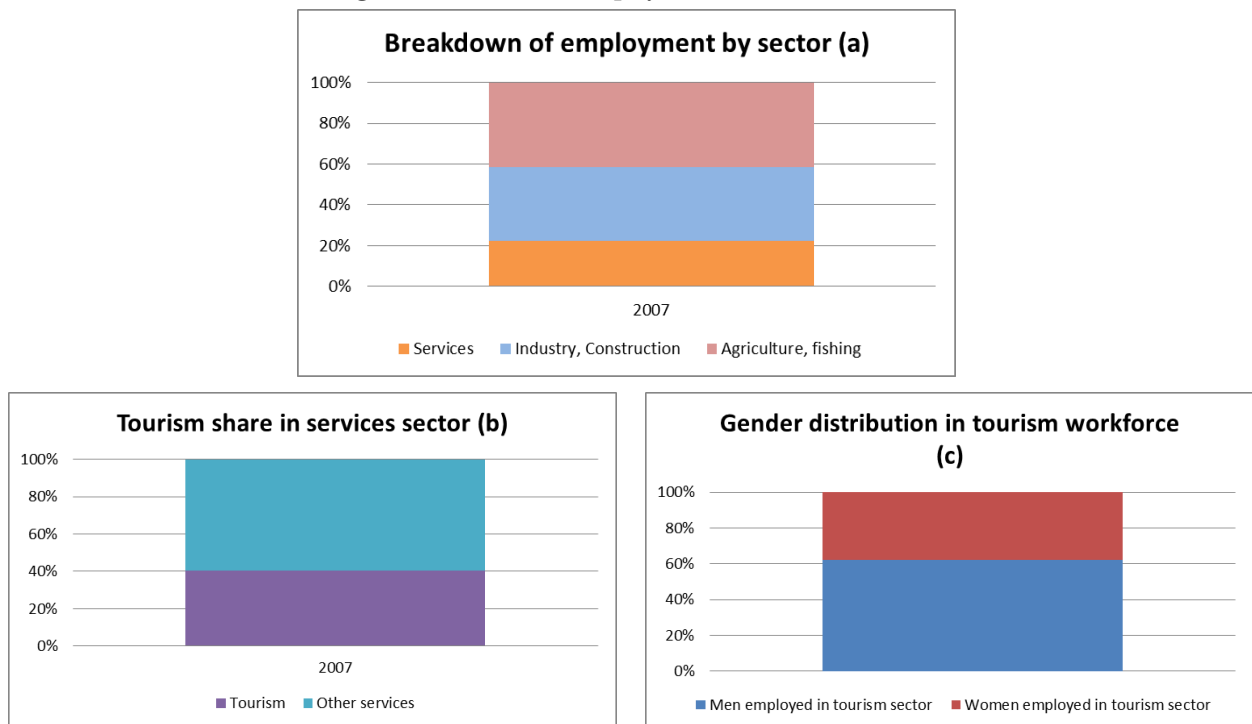
Figure 5: Demographic changes in Tipaza



Source: Data from “General census of the population and habitat” (RGPH) 2008.

Grimes’s data suggests not. We propose that the first reason for this is the vitality of the two sectors that provide the most employment: agriculture and fishing (41% of jobs are in this sector) and industry/construction (36%). The services sector represents just 22% of jobs (Figure 6 (a)). We can therefore assume that people moving from the Algerian capital to Tipaza Wilaya are doing so primarily for reasons of accommodation and not for employment. It is well-attested in the literature that the workforce in these sectors is primarily made up of low-skilled individuals from surrounding rural areas. Migration from the agglomeration, which is based on the need for accommodation, therefore needs to be distinguished from migration from rural areas, based on the attraction of jobs in fishing, industry and construction. In addition, tourism only accounts for 9% of employment in the wilaya, or 40% of the service sector workforce (Figure 6 (b)).

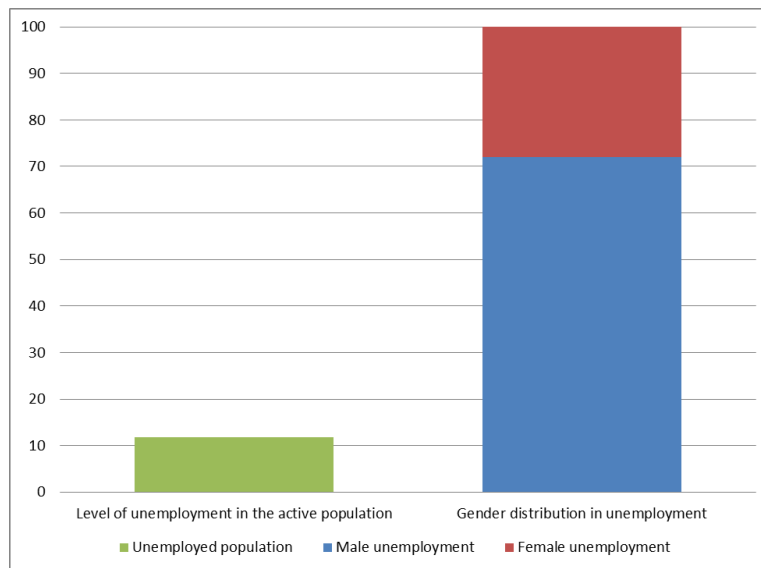
Figure 6: Breakdown of employment in the tourism sector



Source: Data from Grimes, 2011

With regard to gender distribution in tourism jobs, it is important to note that men are over-represented, since 62 out of 100 people employed in tourism are men, over against 38 women (Figure 6 (c)). These gender inequalities in tourism employment are also indicative of the general employment situation in Tipaza. Female employment is significantly under-estimated since officially, few women are looking for work. This explains the over-representation of men in unemployment figures: Figure 7 shows that 72 out of 100 people officially looking for work are men, over against 28 women. As a result, the employment situation is extremely precarious in Tipaza, because unemployment is around 10% (Figure 7), 39% of the population is dependent, there are few jobs available (only 4,200 jobs are available for 15,714 people looking for work, i.e. 26%) and those jobs available are primarily temporary ones (91% of jobs offered). This supports our assumption above, as it shows that the reasons for population growth in Tipaza Wilaya are not primarily down to economic pull.

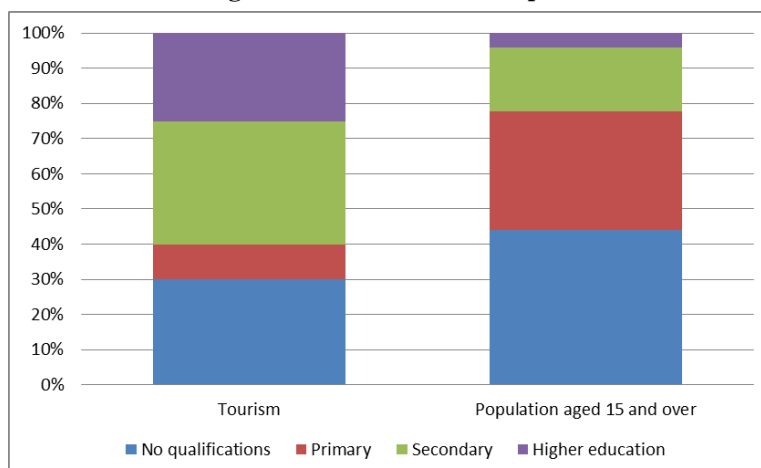
**Figure 7: Employment conditions (%)**



Source: Data from Grimes and RGPH 2008.

However, although the number of individuals employed in the tourism sector is low in relation to the rest of the employed population, it is notable that the education level of the tourism workforce is not coherent with the workforce available, which remains largely under-qualified for sector requirements (Figure 8). Tourism could, therefore, attract qualified candidates from outside Tipaza. However, as noted above, this is a hypothetical point for the time being, because the low numbers of tourist jobs mean that residents of Tipaza Wilaya can easily fill tourism requirements.

**Figure 8: Education levels in Tipaza**



Source: Data from Grimes and RGPH 2008

### III. Tourism and the environment

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

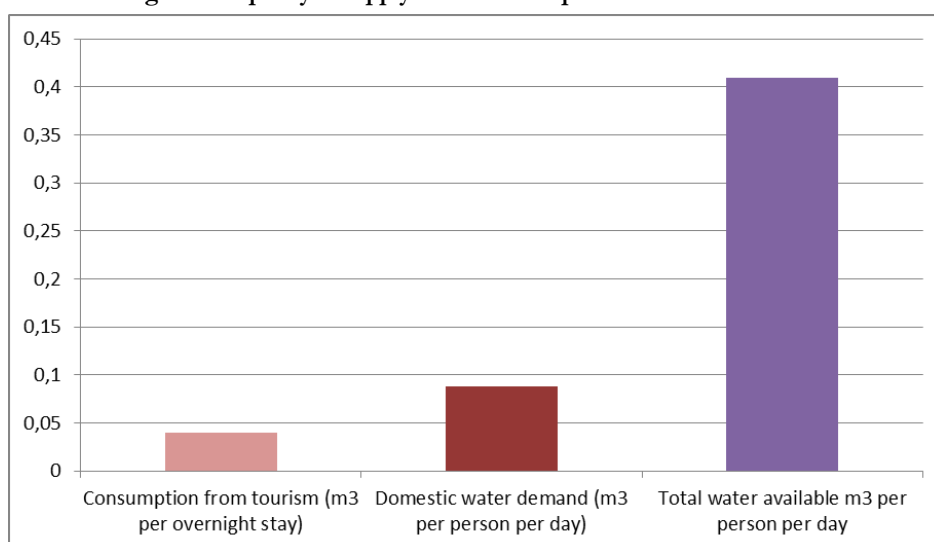
- the population in the coastal towns rose from 186,691 in 1987 to 301,710 in 2007. Life expectancy has also risen (mean 73);
- land pressure is high due to increased residential accommodation;

These various observations will be used to examine the consequences of tourism on the environment through three components: water and energy consumption and the production and treatment of solid and liquid waste; the footprint of tourism in terms of land use; the state of biodiversity in Tipaza.

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

There seem to be no major issues with water supply in Tipaza. According to Grimes' estimates, water consumption from the tourist industry is 40 litres per overnight stay. This is an extremely low figure, since it is equivalent to the water consumption of people living in insecure housing areas in the large urban areas in the Southern Mediterranean. However, if we put these estimates together with the daily water consumption of Tipaza Wilaya residents (90 litres per person per day), we get a total consumption of 130 litres per person per day. Compared with the amount of water available in the region (400 litres per person per day), the use of this resource is sustainable for the time being (Figure 9). These are very positive results made possible by significant Government investment in infrastructure such as a dam and desalination plants. However, there is room for improvement in terms of local residents' access to drinking water. 87% of Tipaza Wilaya's population have access to drinking water, but only 65% of the population have their homes connected to the mains. The rest of the population collect water from wells (12%), tankers (4%) or springs (6%).

Figure 9: Capacity to supply water consumption in the tourism sector



Source: Data from Grimes and Algerian Coastal Area Management Plan (CAMP).

There is no reliable data available for electricity consumption. However, gas bills have increased (see bill paid by "La Corne d'Or" hotel which rose from 123,000 Algerian dinars to 255,000). Despite the lack of data, the fact that Algeria produces oil and gas means there should be no problem finding energy sources, if we ignore infrastructure problems such as the construction of thermal power plants to ensure adequate electricity supply.

Solid waste production due to tourism is at a mean value of 0.68 per kg per tourist per day. Grimes believes that these figures have been significantly under-estimated, and they do not take into account waste produced by consumers in beach and entertainment areas. This waste accounts for 40 tonnes per day, which gives us a total value for production of solid waste due to tourism of around 80 tonnes per day. Solid waste treatment is handled by municipal services who collect rubbish and take it to the Sidi Rached inter-municipal landfill site.

Wastewater produced by tourism is proportionally consistent with water consumption, at around 77 m<sup>3</sup> per day. This is a low volume but it still causes environmental problems because wastewater from tourist facilities is disposed of directly into the sea. Wastewater is carried by the same network used for rainwater drainage and there is only one sewage treatment plant with capacity for 30,000 people in Tipaza Wilaya (10 times less than the number of people living in the region). In addition, there is no evidence of hotels or other accommodation facilities seeking to install septic tanks or cesspits.

**Table 1 : Water consumption and production of waste in Tipaza**

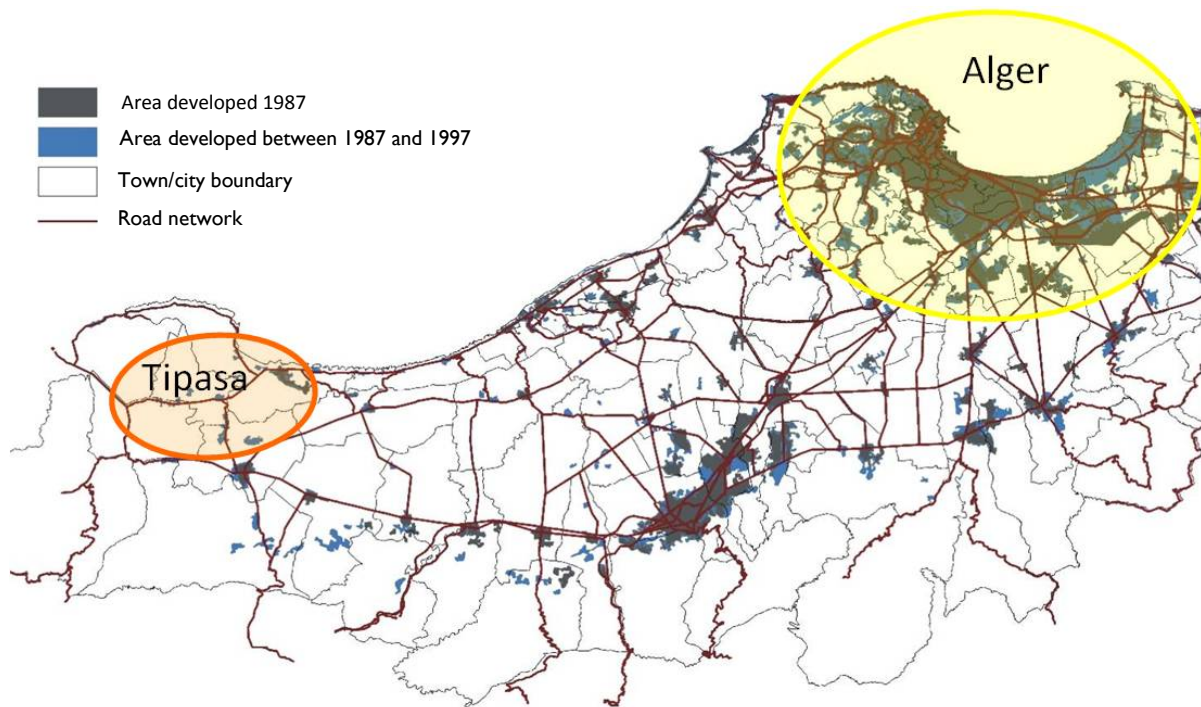
	Unit	Value
Water consumption	m3 per overnight stay	0.04
Waste production	kg per tourist per day	0.68
Wastewater production	m3 per day	77

Source: Data from Grimes, 2011

## 2. Land pressure associated with tourism

Urban development is definitely the most direct and obvious manifestation of the focus of development on the coast (Figure 10). This is seen in both the length of the coastline that has now been developed, and the surface area of the coastal zone that has been used for the construction of housing or coastal infrastructure (roads, harbours, desalination plants, tourist amenities and establishments, etc.) The current trend at the moment is for continued use of space without a predetermined plan, which involves, in particular: (i) illicit removal of sand from the beach; (ii) the continued and intensive use of sand from wadis; (iii) the construction of sea defence structures; (iv) construction in the coastal zone up to the edge of the sediment balance area. This tendency is endangering any chance of preserving the dune ridges that are still present in Tipaza Wilaya (Zéralda Ouest, Chenoua, Larhat, etc.) If this continues unchecked, the last dune ridges in the area will have disappeared by 2025.

**Figure 10: Process of coastal development in Algiers and Tipaza wilayas between 1987 and 1997**

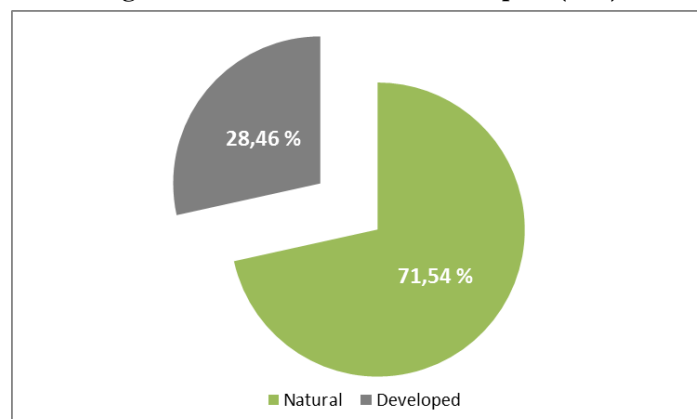


Source: Map showing urban development between 1987 and 1997 produced using Landsat satellite images as part of the CAMP study (original scale - 1:500,000)

In addition, the land-use distribution in Tipaza Wilaya (Figure 11) shows that only 28% of the total surface area of the administrative region has been developed in comparison with 72% of “natural” areas including forests and agricultural areas. However, it is important to underline two phenomena:

- There is a trend towards increased concentration of the population in the wilaya’s big urban centres where larger amounts of insecure housing around agglomerations close to Algiers have been observed, in Bou Ismail, Douaouda and especially Fouka.
- The speed at which this environment is succumbing to man-made pressures which reduce forest areas (the surface area of forest habitats dropped from 6,110 ha in 1980 to 5,441 ha in 2001 and in density by the growth in the surface area of forest clearings) and agricultural areas (overuse of water resources, urban pollution associated with the disposal of untreated sewage, etc. which has created an imbalance between the East and West of the wilaya, with more rapidly increasing urbanisation in the East).

**Figure 11: Distribution of land use in Tipaza (2007)**



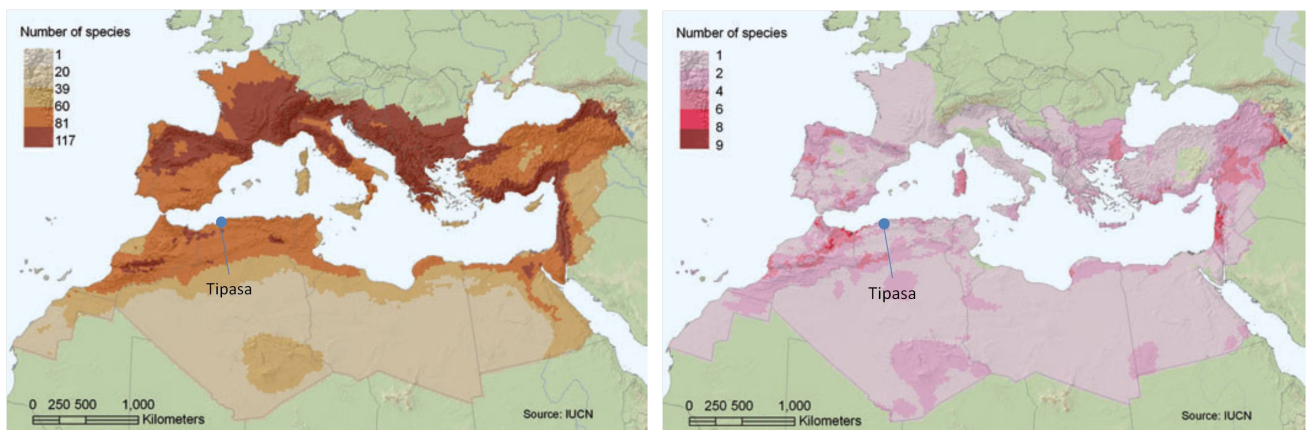
Source: Data from Grimes, 2011

This negative trend is not related to tourism but rather to planning problems. However, the planned development of tourism in the Chenoua zone could speed up the process of deterioration if it is not accompanied with the necessary measures for managing the movement of people, especially in the summer. The Tourism Expansion Zones (ZET) also use up land along the coastline because they are located close to the sea. The majority of them include a section of the public maritime or coastal zone. The only way of curbing this negative trend is to change the current management approach, which is completely ineffectual, and to give this area protected status whilst undertaking a range of actions for restoring and preserving the environment. This would also encourage the development of more balanced forms of tourism.

### 3. Biodiversity

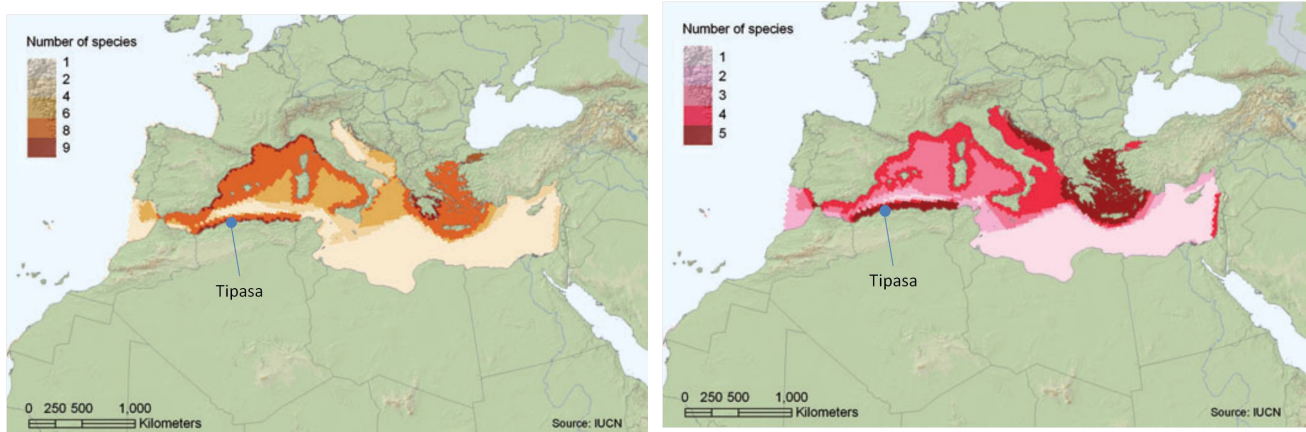
The inventory produced by various projects carried out in the study area show that it is home to an extremely rich diversity of terrestrial and marine fauna and flora (Figure 12 (a) and (c)) that are protected under Mediterranean and/or international regulations. This inventory shows that 97 species are protected by national laws, 80 of which are unevenly distributed in some areas, although they are not necessarily near extinction in the project zone or across Algeria. However, the 13 species found in the study area that feature on the IUCN list are experiencing sometimes significant disruption in either density or their geographical distribution on a national scale (Figure 12 (b) and (d)).

**Figure 12: Geographical representation of Tipaza and Mediterranean biodiversity, as defined by the IUCN (CUTTELOD et al. 2008)**



**a. Species richness of terrestrial amphibians, mammals, dragonflies and reptiles in the Mediterranean basin.**

**b. Species richness of threatened terrestrial amphibians, mammals, dragonflies and reptiles in the Mediterranean basin.**



**c. Species richness of marine mammals in the Mediterranean Sea**

**d. Species richness of threatened marine mammals in the Mediterranean Sea**

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

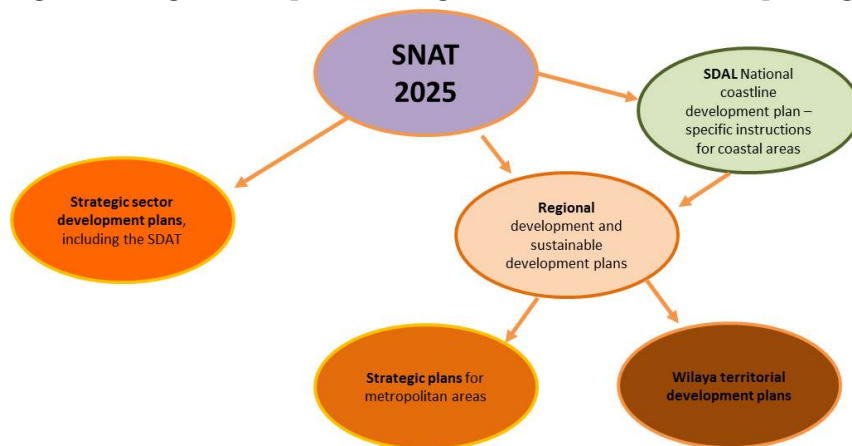
The impact of tourism and the summer overcrowding of beaches and coastline in general are leading to the destruction of the dune ridges (vehicles are parked at the top of beaches and visitors walk across them) and encouraging coastal erosion. Simulations and forecasts carried out on this area show that this phenomenon will tend to continue and get worse if aggressive measures are not taken in the short- to medium-term, especially with regard to the illicit and illegal extraction of sand from beaches and coastal wadi beds, as well as unplanned development along the coastline.

## IV. Tourism and governance

Governance of tourism in Tipaza relates to two spheres of activity: land-use planning and protection of natural heritage. It primarily concerns the national authorities in Algeria, but nevertheless involves three levels of territorial governance – international, national and local.

Governance of land-use planning involves the three territorial levels plus international institutions which function as commissioning bodies. National authorities and decentralised departments operate as planners and local tourist boards execute policy. The Algerian national authorities define the Strategic Tourism Development Plan (SDAT) in parallel with the National Territorial Development Plan (SNAT). This provides the national framework for the organisation of tourism development. Under the influence of the international institutions which are forcing the Algerian Government to include sustainable development priorities in their national policy, the authorities have set up a legal and regulatory framework which can be used to adjust things such as: hotel building and planning regulations; terms and conditions for the sale or lease of land located in the Expansion Zones and Tourism Sites (ZEST); terms and conditions for the authorisation of use and operation of thermal spring waters.

**Figure 13: Diagram showing the sector plans including the SDAT and other land-use planning instruments**



Source: Grimes, 2011

According to the SDAT, the competitiveness and excellence of an area are determined by the components that make up the “zones of tourist appeal”. These zones of tourist appeal include a combination of characteristics based on the tourism products and activities associated with a tourism plan for a given geographical area. Zones of tourist appeal must meet the needs of a specific market and have sufficient autonomy to stand out on a national or international scale. They can have a number of dimensions since they can include ZESTs, thermal springs and handicrafts. These zones are intended to become genuine “model shop windows” for an emerging sustainable tourism destination with underlying principles of competitiveness, innovation, originality and quality. Two zone categories have been identified in Algeria: zones of excellence which provide a shop window for tourism in Algeria; additional zones that support the centres of excellence.

The execution of this territorial and economic tourism plan involves the exercise of national-level governance through local governance using two decision-making instruments in particular: the Local Tourist Board (OLT) and the Wilaya Tourism Development Council. The OLT functions as an information

centre while the Wilaya Tourism Development Council plays a proper political role. This council tends to be a decision-making body:

- because of the way it is organised, bringing together representatives from the authorities (technical departments, consular departments and elected representatives), the business sector (tour operators, hotel and restaurant owners) and associations (for the protection of sites);
- because the mission of the Wilaya Tourism Development Council is: (i) to keep information up to date; (ii) to accept as many tourism development projects as possible; (iii) to promote the wilaya as a tourist destination; (iv) to co-ordinate the activities of the various stakeholders (bringing parties together and overseeing organisation); (v) to manage competing interests and bring them together in an overall approach (land use, water resources, use of private land, management of competing projects, etc.).

Governance for the protection of natural heritage primarily involves international and national players. The *Commissariat National du Littoral* (the Algerian Government's decentralised decision-making body) is working with the *Conservatoire Français du Littoral* (public institution under the authority of the French Ministry for the Environment) to try and maintain the natural condition of tourism sites in Tipaza Wilaya. Actions carried out under this partnership involve increasing the powers of managers of natural areas, organising pilot sites in Kouali-Tipaza-Chenoua through the setting up of a steering committee, overseeing the tourist season and partitioning of the coastline. They also interact with the Coastal Area Management Plan (CAMP) and the Algiers Metropolitan Area Development Plan.

## V. Proposal of policy measures

Given these two observations on the state of sustainability in Tipaza, it seems appropriate to focus on the policy measures proposed by Grimes. We will base the structure of these proposals on an observation agreed upon by the group of experts who worked together on this project: tourism should be seen as a means to develop an area and not as an end in itself. Consequently, tourism must be rooted in the territory, such that the tourism offer can be developed through encouraging a focus on quality rather than quantity by mobilising economic and social forces in the area. So Grimes's proposals concerning integrated and sustainable territorial development are set out as follows: proposals for policy measures in the economic sector, policy measures in the socio-territorial sector, and policy measures in the environmental sector.

### 1. Policy measures in the economic sector

First Grimes puts forward the idea that the Tipaza offer should be redefined as a destination focused on high-quality integrated local tourism. To this end, all administrative and financial restrictions associated with the implementation of the Tourist Villages of Excellence (VET)<sup>2</sup> project should be removed in order to increase the destination's number of beds and the quality of accommodation facilities. Second, he raises the issue of the certification process for Tipaza tourist facilities through the Tourism Quality Plan (PQT). Although a number of initiatives are already in place (e.g. the Matares-Tipaza complexes), not all the conditions are currently appropriate for the setting up of an eco-label. However, an eco-label trial has been carried out with the support of CAR PAP at a pilot hotel in Tipaza Wilaya, "La Corne d'Or", as part of the DESTINATIONS project. Experiments like this need to be encouraged, supported and seen through to completion because they will have significant medium- to long-term impacts on the sustainability of the accommodation facility and the destination. The PQT aims to improve the quality and relevance of the tourism offer<sup>3</sup>, increase its profile among tourism professionals, encourage stakeholders in tourism to commit to a quality approach, market Algeria and promote it as a quality destination and win a place among

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<sup>2</sup> Four VETs are situated to the west of Tipaza Wilaya (Tipaza VET, Colonel Abbas VET, Bouharoun VET and Oued Bellah CESAREE VET) and five others to the east, on the edge of Algiers wilaya (Zeralda – Ouest VET, Sidi Fredj VET, Sahel VET, Forum El Djazair / Moretti 1 VET and EIIC / Moretti 2 VET). The Colonel Abbas VET is set to have a total capacity of 1,240 beds and Zeralda-Ouest VET will have a total of 6,885 beds.

<sup>3</sup> The PQT plans for a Permanent System for Tourist Observation and Assessment (SPOET). This type of monitoring system makes it possible to follow tourist activities using a genuine tourism resource and market centre.

international tourist destinations. Third, he proposes integrating the Tipaza tourism offer into a local development strategy. Priority should be given to skills that are no longer in use or are on the way to becoming non-existent, by promoting products from activities that have become economically unprofitable because they are competing with lower quality cheap goods and services. These priority handicrafts include pottery, the construction of furniture out of clay, wood crafts, wicker and rattan work, traditional food and intangible heritage. The promotion of local know-how would make it possible to: (i) develop tourism around agricultural biodiversity and; (ii) preserve a natural area from unbridled tourism. The development strategy therefore needs to include integrated development that makes the most of the nearby towns and cities where national tourists stay, especially Algiers to the east of Tipaza Wilaya, as well as Blida and other towns.

Grimes suggests two approaches to funding for this proposal. The first relies on investment funds and agencies and various financial mechanisms. The PPDRI, ANSEJ, ANJEM and APSI<sup>4</sup> can therefore act as a support for the development of micro-enterprise, especially handicraft and/or family businesses. These funding mechanisms that have already had a positive impact on other economic segments (fishing, agriculture, services) and other kinds of regions may meet the expectations of those, especially young people, who are aiming to develop mountain tourism in the Mount Chenoua area with walking routes, agencies, cultural services, hiking, leisure activities, transport, agriculture, processing of agricultural and fishing products. This type of investment also needs to be closely monitored by the authorities, especially from assessment and inspection bodies during the technical and economic feasibility study and land-use planning impact study phase. PPDRI may be the right framework for this type of investment. International funding, especially for NGO's with micro-projects running handicraft activities associated with tourism, could provide additional support. To access this, these NGOs need support in terms of project management and oversight training. This funding source could meet the demand of projects that are focussed around areas such as the preservation of natural resources and the promotion of the heritage of the Chenoua region and its surroundings. Grimes's second approach relates to funding via Public-Private Partnerships (PPP). Roles in a PPP could be structured with the private sector responsible for the promotion and sale of goods and services made available by the Government, which is responsible for organising a regulatory, legislative, tax and social framework.

To promote and sell this new product, it would be appropriate to increase online marketing, which is currently virtually non-existent, and introduce electronic management systems that do more than simply handle bookings. They should be able to be used to manage journeys, as well as hotel and restaurant services online. It would also be a good idea to market Tipaza Wilaya through travel and tourist agencies. These organisations have the capacity to increase Tipaza's profile, but they are yet to succeed in including the Tipaza offer amongst the list of other destinations apart from the South of Algeria. There are also other issues that do not depend directly on travel and tourist agencies that complicate their job, including the lack of new communication technologies used in tourism, management methods that are not adapted to the requirements of today's tourists (e.g. problems with credit card payments) and the lack of trained professionals in some areas (e.g. guides).

## 2. Policy measures in the socio-territorial sector

It is essential that the promotion of this new tourism offer follows a strict development plan so as to avoid irreparable damage to the environment. Grimes recommends locating tourism activities in the West of Tipaza Wilaya, through the development of new sites and tourist areas, in order to reduce pressure on sites that have already been developed in the East. There may be a number of tourism projects in progress, but it is imperative that the ZETs are not developed to the detriment of sites' natural features, especially the most sensitive ones in the wilaya. The development designs planned for this purpose must take into account the visitor capacity of sites and their potential impact on the environment. The national commission set up to monitor tourism investment has a central role to play in monitoring the relevance of the specifications for

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<sup>4</sup> Rural Renewal Support Programme (PPDRI), Algerian National Youth Employment Support Agency (ANSEJ), Algerian National Micro-credit Agency (ANJEM) and Investment Promotion, Support and Monitoring Agency (APSI)

the ZET development designs. It is worth recalling that all amenities associated with tourism in sensitive environmental sites must be supervised in accordance with Article 11 of Algerian Act no. 02-02 dated 5 February 2002 pertaining to coastline protection and development.

### 3. Policy measures in the environmental sector

With regard to policy measures in the environmental sector, Grimes makes recommendations for the various different fields. For energy, surveys carried out in Tipaza have all shown an evident lack of strategy and work to reduce energy consumption. Significant effort needs to be put in, probably in terms of raising awareness at both management and employee levels. Obviously, a campaign to raise awareness among clients of these establishments also needs to be organised. In addition, there is as yet no initiative among tourist establishments in Tipaza Wilaya to trial renewable energies. No tourism facility has begun work on this kind of project. There is therefore a great deal of room for improvement in this area. Objectives that could be set include developing a strategy for reducing consumption, developing a programme for sustainable energy management and developing mechanisms for encouraging the use of renewable energies.

In practice, these sustainability objectives could take the form of a number of simple actions:

- promote the use of low-energy bulbs;
- reduce the use of hot water (kitchens, showers, laundry);
- increase the number of buildings using materials and designs that reduce energy consumption;
- fit tourist establishments with solar power equipment;
- ensure that water pipes have the correct dimensions;
- reduce the use of hot water;
- prioritise construction materials that reduce energy consumption;
- carry out detailed impact studies for desalination plants and power stations.

For water, residents who are not yet connected to the drinking water network (AEP) should be connected with the sustainable implementation of the balanced tourism development strategy in mind. The forthcoming action plan must focus on areas along the coastline that are not connected to the AEP network and deserve priority in plans to extend the current network. These areas are primarily located in the western part of the wilaya. The launch of tourism in the area would make it possible to speed up the process of connecting it to the AEP network, which would be a good thing for the people living along the coast in this area. Grimes also makes other recommendations for encouraging the sustainability of Tipaza:

- Set up mechanisms for arbitrating between water resource users (AEP, agriculture and industry) as part of an integrated water management approach bringing together all stakeholders (ANRH, ADE, OPIM, DHW, DSA,<sup>5</sup> etc.) co-ordinated by local water agencies and committees (institutional instruments for water management).
- Give new responsibility to local water agencies.
- Reduce losses from infrastructure by the renovation of water distribution networks, especially in towns that are not managed by the Tipaza “Algérienne des Eaux” water company. In Tipaza Wilaya, there are 787 km of water distribution networks in need of renovation, at an estimated cost of €25 million. Renovation of water networks at the destination will have a strong impact on the overall environmental performance of the area and significantly reduce waste.
- Implement a pricing structure that encourages water saving and reflects its real cost.

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<sup>5</sup> Algerian National Water Resource Agency (ANRH), Algérienne des Eaux water company (ADE), Mitidja Plain Irrigated Area Office (OPIM), Wilaya Water Department (DHW), Agricultural Service Department (DSA)

- Raise awareness among local residents and tourists of the need for careful use of water. Encourage water saving and waste prevention.

For the solid waste sector, it is essential to complement the production of the three new landfill sites (CET) promised by the Government and local authorities in two ways. The first would involve a commitment on the part of the Government to gradually remove, rehabilitate, and decontaminate the 12 unofficial dumps as the CET are constructed, focusing first on those located on the edge of the Tipaza Wilaya wadis at Sidi Rached, Douaouda, Khemisti, El Hachem, Imekraz and Hattatba. The second involves setting up a system called “ECO-JEM” for salvage and recycling run by micro-enterprises with the support of the ANDI and ANSEJ incentive mechanisms. As part of the implementation of the sustainable tourism development strategy, the Algerian national waste agency (AND)<sup>6</sup> and the Algerian national centre for cleaner production technologies (CNTPP)<sup>7</sup> will both have an increasingly important role to play in the integrated management of solid waste.

For sanitation, the planned installation of five sewage treatment plants (STEP)<sup>8</sup> in Tipaza and its immediate surroundings will contribute to the improvement in quality of the areas where the sewage flows into the sea and thus contribute to the sustainability of the destination. However, to increase the number and length of beaches approved for swimming, it is important to raise the number of residences connected to the sewage system, wastewater treatment capacity, management and technical skills of staff at the STEPs, capacity for moving and storing water and improve the quality of water and protection of the primarily marine environment used for disposal.

Marine and coastline areas (beaches) are a sensitive area from an environmental standpoint because they provide habitat for a wealth of animal and plant species but are also under threat because they are used for the disposal of solid and liquid waste. Several steps need to be taken. With regard to inspection of bathing water, the large items of waste on the sea floor need to be removed first. Next, the monitoring and analysis of bathing water quality by Algérienne des Eaux should be extended to all beaches in the destination and Tipaza Wilaya in general. A beach quality classification, like the “Blue Flag” system, should be set up. This could involve the proposal of a national classification system with a preliminary pilot phase on Tipaza beaches before extension to all the country’s beaches. With regard to beaches, the application of the Executive Decree which sets the terms and conditions for the use of bathing beaches for tourism<sup>9</sup> (No. 04-274 dated 5 September 2004) must be carefully applied. Beach concessions are granted in accordance with specifications that define the obligations of concession holders, in particular with regard to maintaining impeccable beach quality. However, it became clear during the many visits we made to the area that concession holders are not following these specifications and the coastal towns who are supposed, in theory, to be monitoring the application of these contractual terms with the concession holders are not properly fulfilling their role.

## Conclusion

In order to summarise the profile of sustainability for Tipaza, we compared it with the other destinations studied in the “Profiles of Sustainability - Mediterranean Destinations” project: a second Principal Component Analysis (Figure 14) compares the sustainability of each destination with the mean and standard

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<sup>6</sup> The mission of the AND is (i) to promote, raise awareness and popularise the concept of developing cleaner production technologies; (ii) to assist and support investment in cleaner production technologies; (iii) to provide companies with information associated with its remit as they seek to improve production processes using cleaner technologies and obtain the relevant certifications, if necessary, (iv) to develop international co-operation in the area of cleaner production technologies.

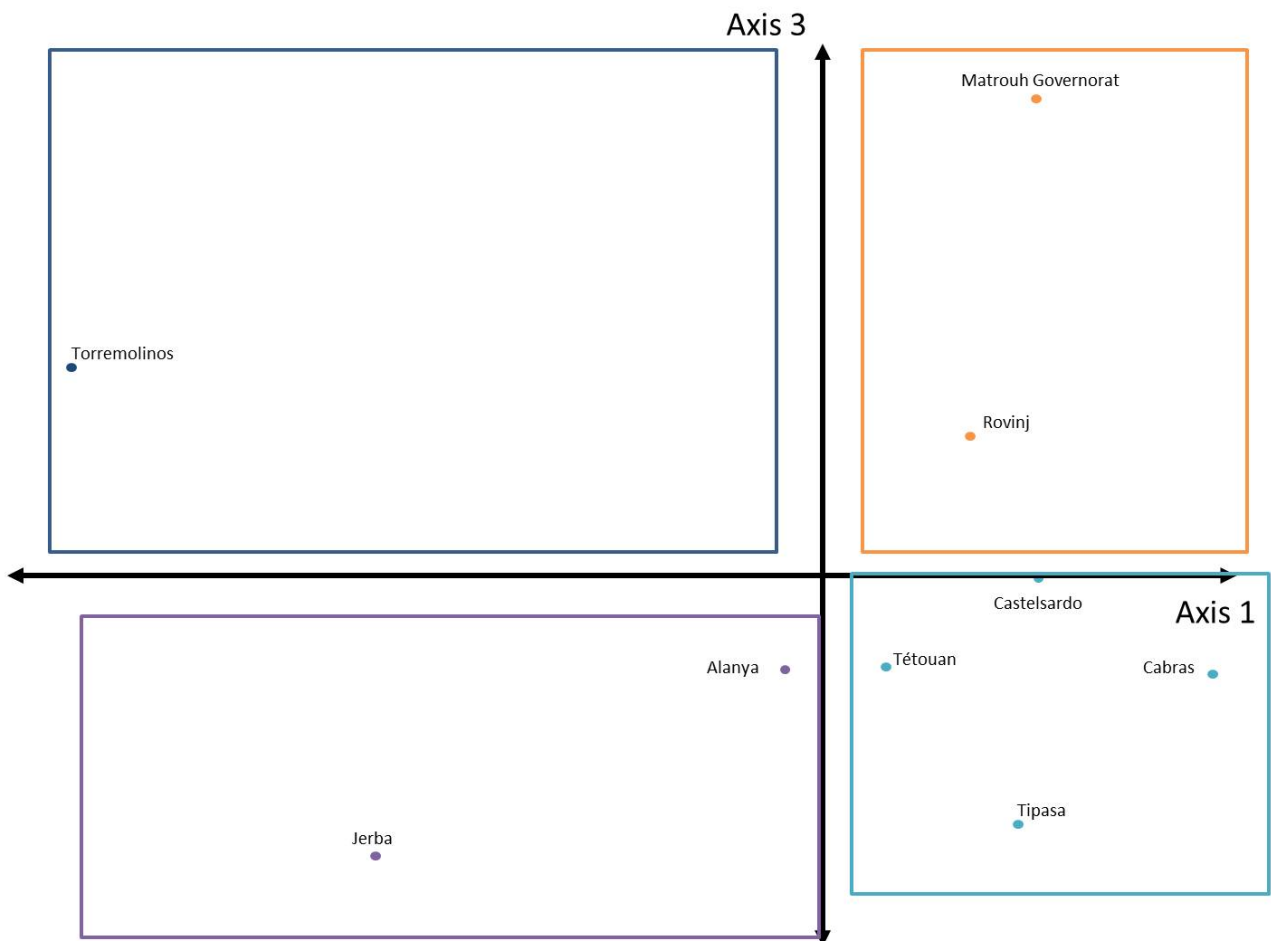
<sup>7</sup> The mission of the CNTPP covers training programmes in the following areas: (i) industrial waste treatment and management, (ii) techniques for reducing waste at source, (iii) re-use and recycling of waste, (iv) management of waste incineration facilities, (v) management of landfill sites and (vi) decontamination of polluted sites.

<sup>8</sup> Cherchell (70,000 equivalent people), Bou Ismail (150,000 equivalent people), Sahel (70,000 equivalent people), Gouraya (25 000 equivalent people) and Damous (20 000 equivalent people).

<sup>9</sup> This decree applies the provisions of Article 28 of Act 03-02, dated 17 February 2003, which sets the general rules for the use and operation of beaches for tourism. It sets the procedures and terms for granting bathing beach concessions. It also defines the conditions for the operation of beaches for tourism.

deviation<sup>10</sup> 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.

**Figure 14: Graph showing the profiles of sustainability for the tourist destinations studied**



Source: Principal Component Analysis by Loïc Bourse, 2011.

Guide (see also Figure 16 in the Appendix):

Axes 1 and 2 explain 61% of the data variance.

Axis 1 alone explains 53% of the information:

- 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 information:

- 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.

<sup>10</sup> Standard deviation is the difference between the largest value and the smallest value in a sample.

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, Tipaza and the Tétouan Coast).

Tipaza is primarily a domestic tourist destination with significant national and cultural heritage. Its sustainability results are similar to destinations of the same type, i.e. the Tétouan Coast in Morocco, Cabras and Castelsardo in Italy. Destinations “that mainly host domestic tourists” have lower economic and social results than international destinations, but tourism has less environmental impact than mass tourism at the seaside resorts. Tipaza achieves the lowest economic and social results of the domestic tourist destinations, which is why it is positioned very low on Axis 3 in comparison with the Tétouan Coast, Cabras and Castelsardo. However both the attempt to promote its cultural and natural potential and the desire of the Algerian authorities to promote tourism as a way of stimulating the economy will increase the attraction of the destination and results of tourism activities in Tipaza.

## Bibliography

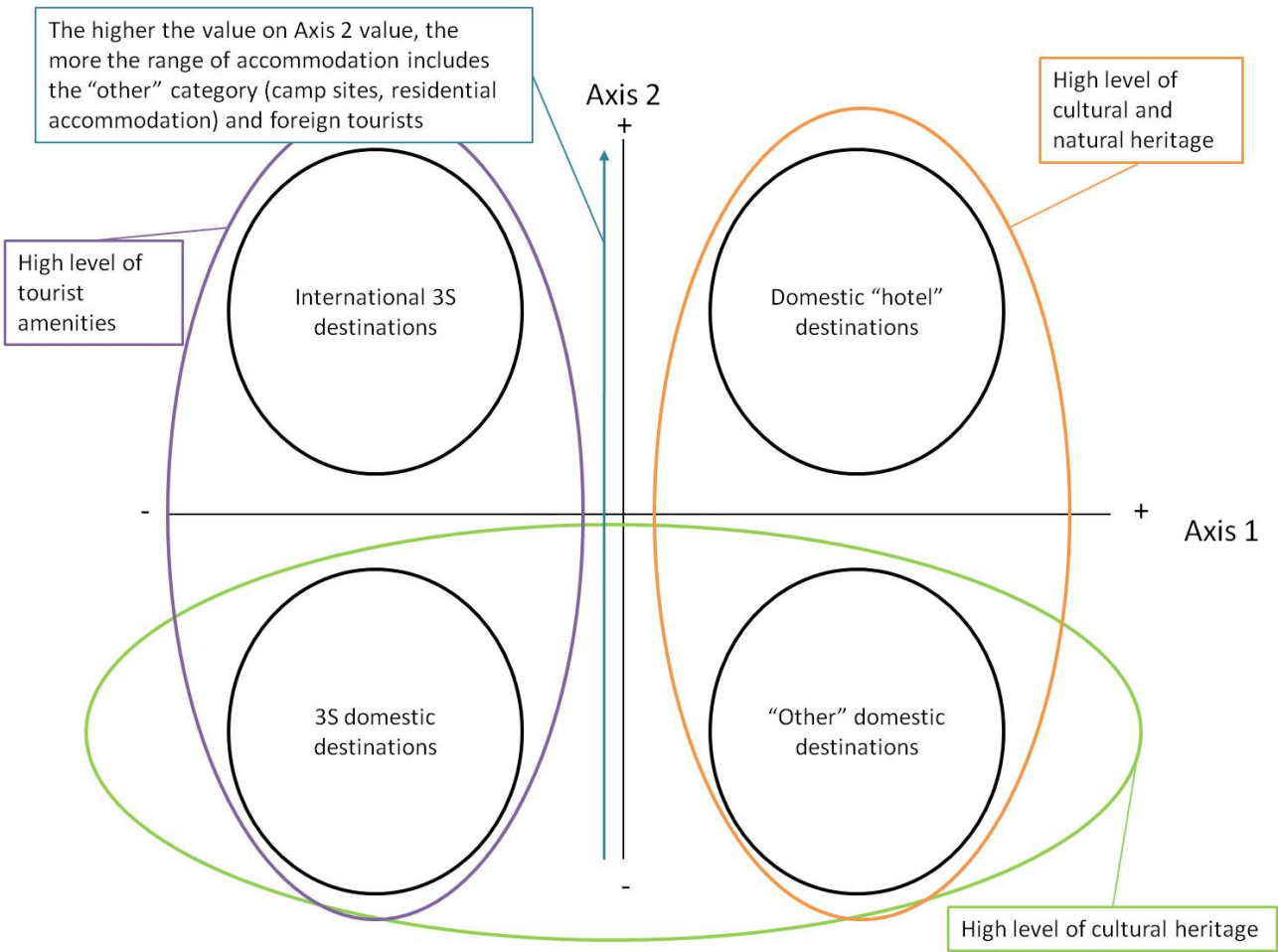
- BUTLER, R.W., 1980. The concept of a tourist area cycle of evolution: implications for management of resources. *Canadian Geographer / Le Géographe canadien*, 24(1), p.5-12.
- CUTTELOD, A. et al., 2008. The Mediterranean/: a Biodiversity Hotspot under Threat. *The IUCN Red List of Threatened Species*.
- GRIMES, S., 2002a. Perspectives des aires marines protégées en Algérie. PNUD/GEF ALG 31.
- GRIMES, S., 2002b. Plan d'action national pour l'inventaire et la mise en place d'aires marines protégées en Algérie. Contrat PNUE/CAR ASP, 120 p.
- GRIMES, S., 2002. Espaces marins d'Algérie d'intérêt écologique. In Atlas de l'Environnement de l'Algérie: espace côtier. Symbiose-Burlington ressources Edition: 51-51.
- GRIMES, S., 2002. Pêche et aquaculture. In Atlas de l'Environnement de l'Algérie: espace côtier. Eds Symbiose-Burlington ressources: 52-53.
- GRIMES, S., 2002. Perspectives des aires marines protégées en Algérie. PNUD/GEF ALG 31.
- GRIMES, S., 2002. Plan d'action national pour l'inventaire et la mise en place d'aires marines protégées en Algérie. Contrat PNUE/CAR ASP, 120 p.
- GRIMES, S., 2008a. Interaction des changements climatiques et la zone côtière algérienne: Deuxième communication nationale de l'Algérie. PNUD, 2008.
- GRIMES, S., 2008b. Impact des changements climatiques sur la biodiversité marine et côtière en Algérie. CAR ASP/PNUE, 2008.
- GRIMES, S. & AL., 2004. Biodiversité marine et littorale algérienne. Sonatrach-LRSE. Eds. Sonatrach. 362p.
- GRIMES, S., 2009. *Algérie: Stratégie de développement du tourisme durable*, Split: CAR-PAP.
- GRIMES, S., 2011. *Profil de durabilité de destination touristique pilote en Algérie: la zone côtière de Tipasa*, Sophia Antipolis: Plan Bleu.
- HADJI, T. et al., 2004. *Programme d'Aménagement Côtier (PAC) « Zone côtière algéroise »*, Split: CAR-PAP.
- PLAN BLEU, 2009. *Etat de l'environnement et du développement en Méditerranée*, Sophia Antipolis: Plan Bleu, PNUE/PAM.
- SPILANIS, I. & VAYANNI, H., 2011. *Tourism results and impacts to the destinations' sustainability*, Sophia Antipolis: Plan Bleu.

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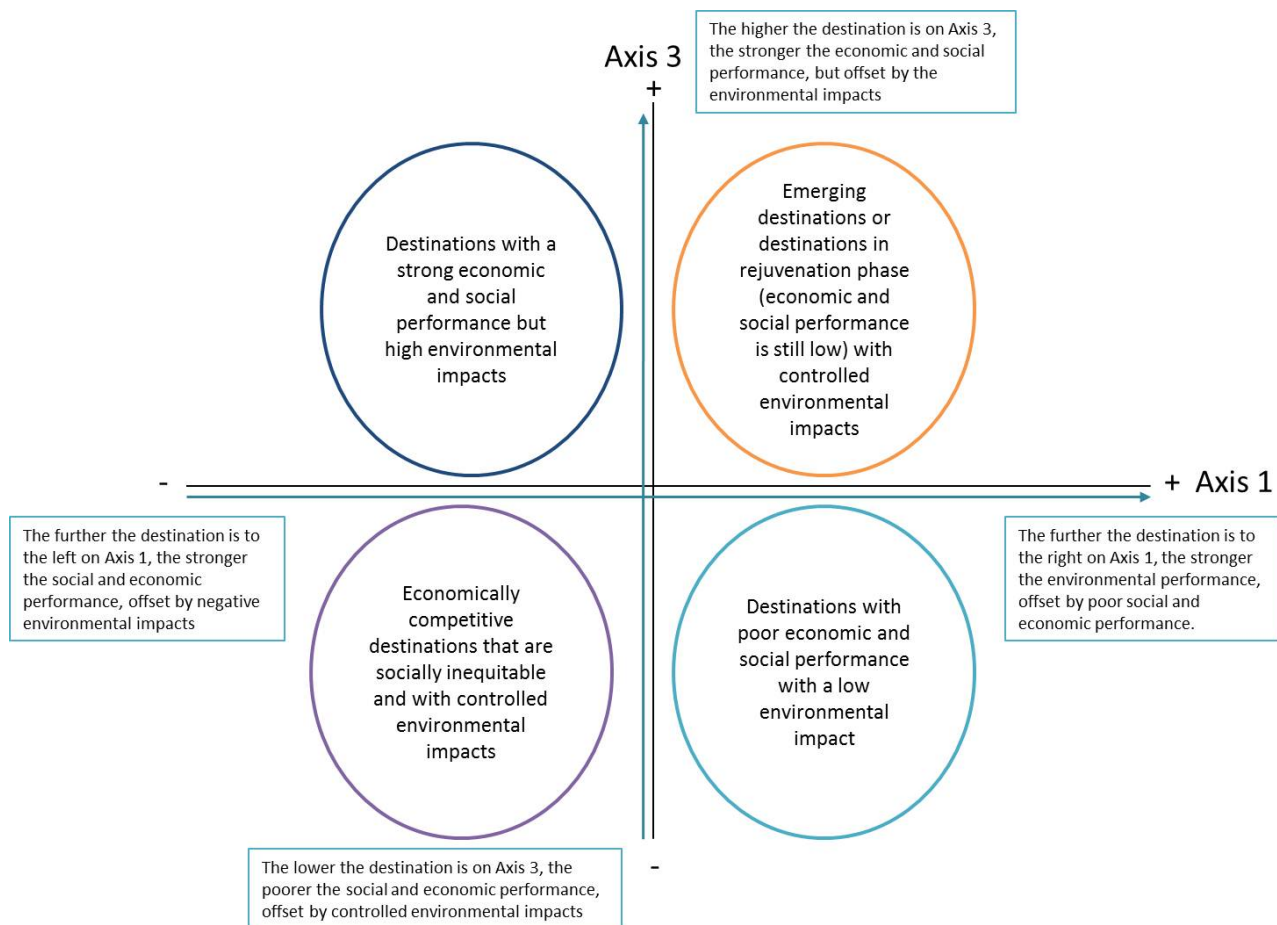
# Appendices

Figure 15: Schematic representation of the classification based on a Principal Component Analysis



Source: Loïc Bourse, 2011

Figure 16: Schematic representation of the Principal Component Analysis of the sustainability profiles



Source: Loïc Bourse, 2011

Table 2 : Tipaza Destination Datasheet

	Year	Value (1: yes; 0: no)
<b>Demand</b>		
Residents	2007	99%
Non-residents	2007	1%
Charter passengers/total passengers	2007	0%
Airport	2011	1
Harbour	2011	0
<b>Accommodation offer</b>		
Number of beds	2007	4,880
Hotel beds / total number of beds	2007	24.24%
Holiday village beds	2007	0
Other beds	2007	20.29%
Campsite spaces	2007	55.47%
<b>Leisure amenities</b>		
Spas / health clubs	2011	0
Sports amenities	2011	0
Casino	2011	0
Golf courses	2011	0
Leisure parks	2011	0
Marinas	2011	0
Conference and exhibition centres	2011	0
Beaches	2011	1
<b>Natural and cultural heritage</b>		
Historic monuments	2011	1
Places of worship	2011	1
Museums	2011	0
Cultural events (festivals or traditional events)	2011	0
Nature reserves	2011	1
Places selling local products (craft markets)	2011	0
Cultural activities	2011	0
<b>Economic performance</b>		
Number of overnight stays	2008	872,053
Daily spending per tourist (€)	2009	40
Revenue per bed (€)	2009	407
Revenue per overnight stay (€)	2009	5
<b>Seasonality</b>		
Mean annual occupancy rate	2007	21.46%
<b>Social performance</b>		
Direct employment per bed (number of jobs)	2008	0.18
Unemployment	2008	11.76%
Level of education of employees: higher education	2008	25.03%
Level of education of employees: secondary education	2008	35.02%
Level of education of employees: primary education	2008	9.99%
Level of education of employees: no qualifications	2008	29.97%
<b>Demographic indicators</b>		
Total population	2008	616,468
Dependent population	2008	38.78%
Life expectancy	2008	73.4 years
Population growth rate	2008	1.60%
Migration rate	2008	-0.06%
<b>Environmental performance</b>		
Water consumption	no data	0.04 m <sup>3</sup> per overnight stay
Energy consumption	no data	no data
Waste production	no data	0.68 kg per tourist per day
Wastewater production	no data	77 m <sup>3</sup> per day
Land area of tourist accommodation / total area governed by local authority	no data	25.03