

Socioeconomic conditions in coastal areas: a comparative analysis

Mohamed A. ABDRABO

Centre for Environment and Development for the Arab Region and Europe (CEDARE), 2 Hegaz St., Heliopolis, Cairo - Egypt
E-mail: mabdrabo@cedare.int and mabdrabo@hotmail.com

Abstract. Coastal areas, at the global level, hold a major proportion of population and economic activities, which depend mostly on the environment and its natural resources such as agriculture, fishing, tourism and industry. Such conditions reflect the importance of coastal areas and their natural resources to the welfare of the communities living in these areas. Human activities, meanwhile, usually involve a wide range of negative impacts on the environment. Such conditions, accordingly, require proper management that integrates human activities within a coherent setting of planning policies that address environmental carrying capacity. It is usually argued that great similarities do exist between different coastal areas of the Mediterranean region, not only in terms of environmental conditions, but also socioeconomic conditions. Such similarities, and despite possible differences, have promoted calls for developing common guidelines for coastal zone management in the region. This paper intends to conduct a comparative analysis of socioeconomic conditions in two southern Mediterranean sites; namely Rosetta area (Egypt) and Oued Laou area (Morocco). This analysis intends to pinpoint the main similarities as well as differences between both sites. The work conducted, which involved significant field work, showed that great socioeconomic similarities do exist in the two sites and that deteriorating environmental conditions have adversely affected those communities, especially the poor, and the vicious circle between environmental deterioration and poverty does exist.

Key words: Socioeconomic, coastal areas, Mediterranean, Egypt, Morocco

Conditions socio-économiques dans les zones côtières: analyse comparative.

Résumé. Dans les zones côtières, d'une manière générale, une grande partie de la population et des activités économiques dépendent de l'environnement et des ressources naturelles, comme l'agriculture, le tourisme, la pêche ou l'industrie. Ses conditions reflètent l'importance de ces zones et leurs ressources pour le bien être des communautés qui y vivent. Les activités humaines génèrent souvent des impacts négatifs sur l'environnement, d'où la nécessité d'intégrer les activités humaines dans des plans de gestion en tenant compte des capacités de l'environnement. L'existence de grandes similitudes, aussi bien au niveau environnemental qu'au niveau socio économique, est bien admise dans les zones méditerranéennes. Ces ressemblances malgré quelques différences peuvent servir pour l'élaboration de guides communs pour l'aménagement de ces zones. Dans cet article, une analyse comparative des conditions socioéconomiques est menée dans deux sites sud méditerranéens, Rosetta en Egypte et Oued Laou au Maroc. Cette analyse met en évidence les similarités et les différences entre les deux zones. La présente étude se base sur un travail de terrain et montre de grandes similitudes socioéconomiques, une détérioration des conditions environnementales qui affectent les communautés et spécialement les pauvres d'entre elles et l'existence d'un cercle vicieux entre la détérioration de l'environnement et la pauvreté.

Mots clés : Socio-économie, zones côtières, Méditerranée, Egypte, Maroc

INTRODUCTION

Coastal areas are usually rich in their natural resources that provide great opportunities for economic activities, especially resource-based economic activities such as agriculture, fisheries, tourism, oil and gas extraction, and maritime transport that tend to locate in these areas. Moreover, coastal areas represent major pooling areas, which attract large number of immigrants, who have increasing demand for housing, energy, goods and services. Such conditions means on one hand over-exploitation of natural resources in these areas and the generation of considerable quantities of wastes, which are disposed of in the environment, on the other. Consequently, coastal areas are facing increasing pressure that threatens their important economic and social roles in upholding the welfare of current and future generations (UNEP Undated).

Such conditions, accordingly, require proper management of the coastal areas, in an integrated manner, in order to attain sustainable development (Solaris-Leal & Alvarez-Gil

2003). This development need to integrate human activities within a coherent framework of policies that integrates socioeconomic and environmental conditions (Selman 1992). For such management to be effective, various socioeconomic, as well as environmental conditions, prevailing in coastal areas need to be related together in order to have solid grounds for comprehensive and integrated management and planning. It was argued in this respect that the essence of an overall socioeconomic evaluation is to determine the effects of ecosystem functions on society and how changes in these functions might affect society (Turner *et al.* 2000) (see figure 1).

There is usually some form of consensus that Mediterranean countries enjoy, among themselves, great similarities, not only in terms of environmental conditions, but also in socioeconomic conditions. Such similarities, and despite existing differences especially between the north and south, have promoted calls for developing a common guidelines for coastal zone management in the region.

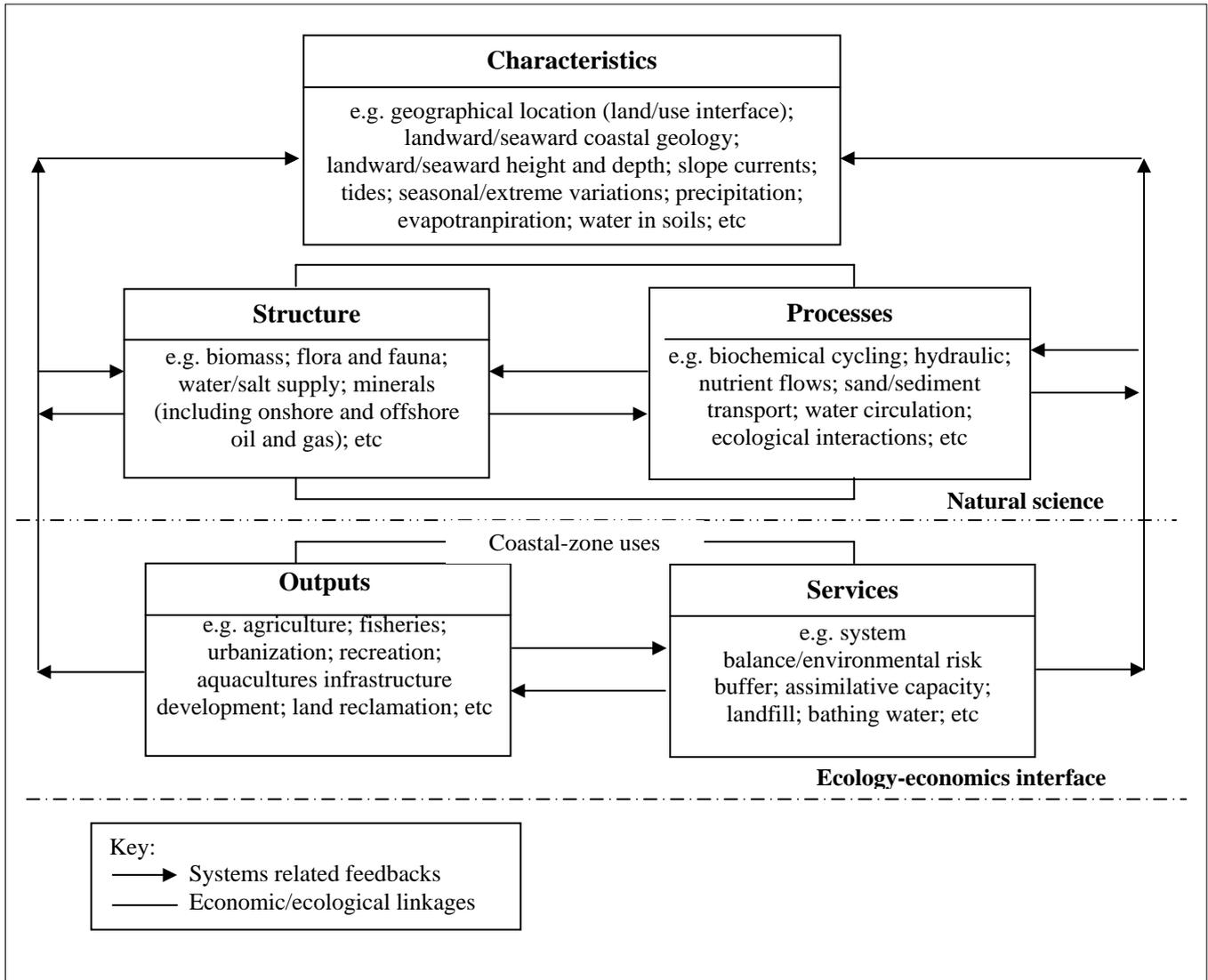


Figure 1: Ecological and economics interface in coastal areas (Source: Adopted from Turner 1999)

The purpose of this paper is to conduct a comparative analysis of socioeconomic conditions in two southern Mediterranean sites; namely Rosetta area (Egypt) and Oued Laou area (Morocco). This analysis intends to pinpoint the main similarities as well as differences between both sites, in order to assess the potential for setting broad guidelines to attain sustainable development in selected study sites.

SOCIOECONOMIC CONTEXT

Socioeconomic context refers to a wide range of interrelated and diverse aspects relating to or involving a combination of social and economic factors. These aspects could, in general, be categorized into several categories including, economic, demographic, public services, fiscal and social (Rau & David 1980). The social aspects may, for instance, involve community life as well as social and cultural attitude and values. Community services may meanwhile be concerned with housing and requirements for public services such as water, sanitation, communications, police and fire protection facilities, solid waste disposal as well as health and educational services. Demographic

aspects may include population growth structures, distribution and density. Similarly, economic factors may include general characteristics, structures and changes various economic activities and employment (Muddock *et al.* 1986).

A socioeconomic assessment is thus a way to learn about the social, cultural, economic and political conditions of stakeholders including individuals, groups, communities and organizations. However, it should be noted that socioeconomic conditions are usually hard to identify and assess, as they are related to the human beings and their characteristics, which usually differ widely within the same community and from one community to another. Moreover, as socioeconomic assessment deals with dynamic variables, no comprehensive list of areas of concern could be developed to fit socioeconomic assessment in all cases. However, there is a number of broad sets of socioeconomic impacts could be developed including economic impacts, demography; employment, health, and community resources including political, social, economic and cultural conditions (Tabl. I).

Table I: Indicators for socioeconomic impacts (Source: Abdrabo & Hassaan 2003).

Impact area	Indicators
Economic conditions	<ul style="list-style-type: none"> • Economic structure • Income levels • Job opportunities
Community structure, institution and infrastructure	<ul style="list-style-type: none"> • Health and social services in study area, including health, workforce, law enforcement, fire protection, water supply, wastewater treatment facilities, solid waste collection and disposal, and utilities. • Transportation systems in study area, including highway, rail, air, and motorway. • Tourism and recreational opportunities in the study site. • Tax levels and patterns in the study area, including land, sales, and income taxes. • Institutional structure. • Community cohesion, including organized community groups. • Social orders including community attitudes, lifestyle and history of the community. • Distinct settlements of ethnic groups.
Demographic conditions	<ul style="list-style-type: none"> • General trends in population size for study site. • Migration trends in the study area. • Population characteristics in the study area including distribution by age, gender, ethnic groups, educational level and family size. • poverty and wealth distribution.
Employment	<ul style="list-style-type: none"> • Employment composition. • Unemployment rate. • Availability of job opportunities and their nature.

METHODOLOGY

Attaining the overall goal of such socioeconomic assessment, socioeconomic work had to be organized and conducted properly and in a systematic way that allows for consistent comparison and reasoned judgment. Thus, the first step was to develop a detailed socioeconomic profile in the two sites, through data and information acquired from secondary sources. Extensive fieldwork was planned to fill the gap and acquire on a wide range of issues; including residents' views, priorities and problems. The fieldwork relied on:

- Conducting field surveys, using stratus-sampling technique, which are based mainly on personal interviews with the residents in the two sites. The employment of such a technique was intended to ensure high rate of response and the seriousness of the answers given by the interviewees. A total number of 516 and 40 cases were interviewed in Rosetta and Oued Laou, respectively, reflecting population size in each area.
- Conducting interviews with local officials, in the two study sites, to discuss existing conditions and planned actions in the area. For example, a meeting was held with "Qaed" or the head of the executive authorities in Oued Laou in April-May 2004. Several meetings were also held with a number of officials in Rosetta.
- Recording general observation in the two sites.

COMPARATIVE ANALYSIS

According to recent estimation, Rosetta area had a population size of 95514 in 2003, distributed mainly in

three human settlements; Rosetta city and Burg Rashed and El Gediah villages (Beheira Governorate 2003). According the 1994 Census, Oued Laou, meanwhile, had a population of about 25000 inhabitants, with Oued Laou village representing the main population centre in the area with about 30% of the population (7500 inhabitants). The remaining part of population was distributed in a number of hamlets scattered in the area. This means that the human settings in Rosetta were characterized by clustering; in contrast to that in Oued Laou, which tended to be dispersed.

The age structure of the two samples was somewhat different, with the average age of the sample in Oued Laou reaching 51 years. This was due to the fact the about one-third of the cases were 60 years old or over. The average age of Rosetta sample was 41 years, which was due to the large proportion of the interviewees in the 30-50 years age group (Fig. 2).

The illiteracy rate within the sample in Oued Laou was found to be 50%, which was around the national rate in Morocco of 52%. Similarly, the illiteracy rate in Rosetta sample was found to be about 47.9%, which was slightly higher compared to the average national for Egypt, which was 45.4%.

Concerning family size, it was found that the average family size was about 5.7 persons in Oued Laou sample, compared with 4.7 in Rosetta sample. Such a difference in family sizes between the two areas could be attributed to the age structure of the samples, which tended to be younger in the case of Rosetta. Concerning living conditions, in terms of housing conditions and

infrastructure and services, very limited number of cases in Oued Laou area indicated that they had problems related to their residences. Furthermore, despite that educational services for different levels were available in the area, health services seemed to be inadequate as the area had only one public clinic. There was no problem with water and electricity as they were provided widely in the area, yet the fees charged was considered by the majority of the cases to be high. Low accessibility was, meanwhile, an issue of great concern for the residents as the main access to Oued Laou depended on one narrow road, which was partially damaged in some of its sections, connecting the village with Tetouan city. Still, a project was being planned for doubling and improving this road.

Living conditions were worse in the case of Rosetta area, with the majority of cases (82.4%) complaining from a number of problems in their residence and surrounding area due to lack of basic services and infrastructure. Despite the high percentage of access to basic services and infrastructure found in Rosetta area, the quality and quantity of provided services was an issue of concern. For

example, 44.6% (201 cases) complained of the limited quantity and/or quality of potable water.

Primary economic activities were found to be the main dominant activities of the economic structure in the two sites, with 47.5% and 42.4% of the Oued Laou and Rosetta samples were engaged in primary activities, respectively. These primary activities, including agriculture and fishing, meant that the residents in the two sites were highly dependent on the environment and its natural resources to earn their livelihood (Fig. 3). It also means that they would be susceptible to risks and possible changes in the environmental conditions.

Industrial activities were found to be totally absent in the case of Oued Laou area, while in the case of Rosetta area though some industrial activities were present, they were very limited. These industrial activities, which included 31 small brick factories, were also resource-based and caused air pollution and contributed to traffic congestion due to the movement of heavy trucks transporting raw material and products to and from these factories.

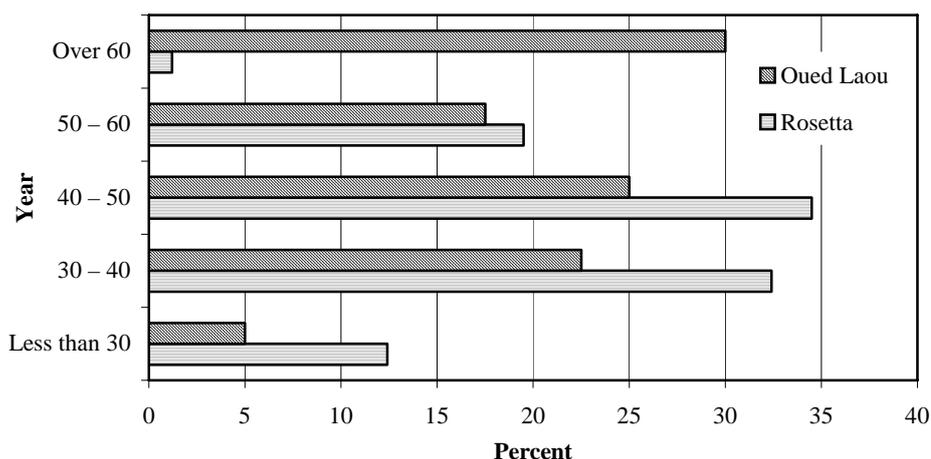


Figure 2: Age structure of the sample in Rosetta and Oued Laou

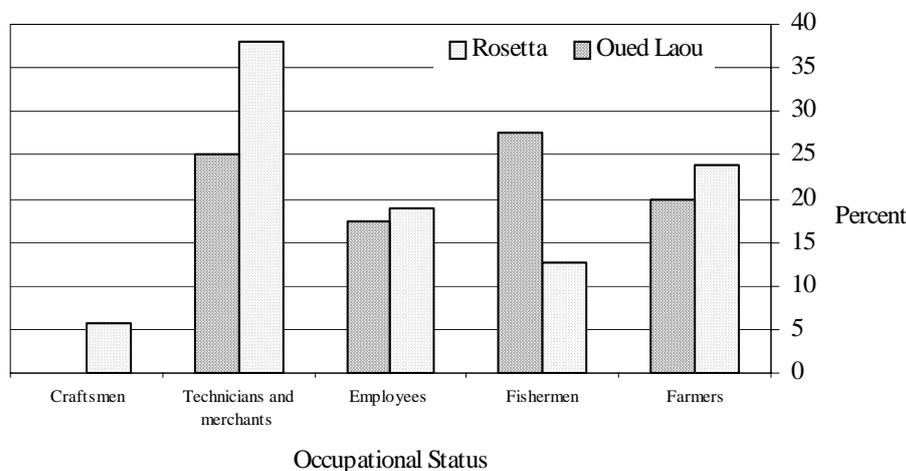


Figure 3: Occupational status of the sample in Rosetta and Oued Laou

Tourism activities, in Oued Laou, were seasonal and mainly local and contributed largely to the promotion of the area in summer. The impacts of tourism activities concentrated in the coastal strip and decreased gradually inward. Despite that Rosetta area has considerable tourism assets including a number of historical sites and large beach areas, tourism activities was significantly limited and thus had marginal benefits for the area. Such limited tourism activities could be attributed to deteriorated environmental quality in the area, and lack of tourism infrastructure such as hotels, especially with the tough competition from other nearby summer resorts; namely Alexandria.

The low income levels found in Oued Laou and Rosetta, expected with the nature of economic activities and prevailing living conditions, led to more pressure on the environment and out migration from these areas. However, the destination of migration in the former case was towards Europe, where 65% of the sample individuals suggested that they had relatives working in Europe. It was found that about 57.5% of the cases received financial support from their relatives working abroad. Out migration movement in the case of Rosetta was of local nature to other areas within Egypt, which could be due to the limited opportunities to travel abroad. It was found therefore that the financial support received by relatives in Rosetta was quite limited.

About 40% and 14% of the cases in Oued Laou and Rosetta areas respectively indicated that they had problems related to their work in general and a decline in productivity in particular. The majority of those who complained from problems in their work (68.7%), in Oued Laou attributed that to inefficient old irrigation system. Meanwhile, about one-third (33.3%) of those who complained from work problems in Rosetta area suggested that they were suffering from production decline.

To assess the environmental awareness of population and their perception of environmental problems in Rosetta area, individuals were asked about the three most significant environmental issues prevailing there and their potential impacts. They suggested that these issues included the aquacultures (fish farms) in the Nile, the brick factories, and retreating coastline due to coastal erosion. Generally, no significant difference between rural and urban areas was found in terms of environmental awareness.

To assess the population's perception of environmental problems in Oued Laou, the interviewed individuals were asked about the prevailing activities in the area and their impacts on the environment. 85% of the respondents thought that tourism activities, mainly in summer, had positive impacts on the area in terms of income generation and trade promotion and that they did not have any adverse impacts on the environment in the area. They also claimed that agricultural and fishing activities had no adverse impacts on the local environment. It could be suggested that such a response reflect their concern about income earning activities, as they did not want to associate such activities with any adverse impacts, especially with prevailing low income levels.

Concerning governmental efforts to protect the environment, the only government obvious action in the case of Oued Laou was an attempt to protect some of the threatened fish species because of over fishing activities. The government, in this respect, stopped issuing permits for new fishermen or boats. In Rosetta, no significant government efforts existed to protect the environment, except for a failed attempt to remove the aquacultures in the Nile.

In order to assess the potentials for public participation, interviewees were asked about their willingness to participate in solving the problems that they suffer from. The willingness to participate in solving the problems at work was found to be very low; with only 13.6% of those who had problems at their work expressed their willingness to participate in solving their problems at work through efforts only.

Meanwhile, the potentials for participation in solving the problems in residence were found to be relatively high, where about one third only (34.5%) of those having problems in the area where they live, expressed their willingness to participate in any schemes or programs for solving their problems. Concerning the methods by which they can participate in these schemes, 36.7% of them stated that they can devote time and efforts, and 63.3% stated that they can provide financial support to such programs.

Meanwhile, 28% of those who were unwilling to participate in any program to solve their problems stated that they are not responsible for take an action towards their problems and the action should be undertaken by the government and local authorities. Moreover, 8.8% and 3.0% of those unwilling to participate indicated that was due to their low income levels and mistrust of the government, especially when considering the very limited government efforts in the area, respectively. The remaining 60.2% did not indicate the reason underlying their unwillingness to participate in solving their problems.

It could be argued that public participation and the role of NGO were completely missing in Oued Laou. The main communal activities were provided by a number of cooperatives, which were considered by the interviewees to be inefficient. In Rosetta, it was found that only 5.1% of the sample stated that there was a NGO in the area where they live, of which 34.8% suggested that they benefited from the services provided by the NGO. This can be taken as an indication of limited role of NGOs in Rosetta area, which were only present in Rosetta city.

CONCLUSION AND RECOMMENDATIONS

The study in hand started with a notion that great similarities do exist between different coastal areas of the Mediterranean region, in terms of not only environmental conditions, but also socioeconomic conditions. It could be suggested that the comparison conducted in this study showed that considerable similarities, in terms of environmental as well as socioeconomic conditions do exist

between the two study sites. Such similarities could be summarized in:

- Dependence of the economic structure on natural resources.
- Dominance of rural context of socioeconomic and cultural conditions.
- Insufficient infrastructure and services.
- Low level of environmental perception accompanied by limited or absence of public participation and role of NGOs.
- The stress on the environment and the resulted declining productivity leading to out migration movements either to Europe in the case of Oued Laou and other parts of Egypt in the case of Rosetta.

Such conditions would strongly support the argument that attaining sustainability in these areas and similar ones in the Mediterranean regions is questionable. Therefore, in the light of the similarities found in environmental and socioeconomic conditions, concerted and well-organized efforts need to be undertaken at the regional level to provide technical and financial support at the local level to promote sustainable development. Such support has to provide institutional support to local authorities, while promoting the role of public participation and efforts of the NGOs.

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