

Projects for Accessibility and “Sustainable” Planning Alexandria (Egypt): A Case Study

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Abstract: From a project oriented view point the concept of sustainability concerns a variety of themes. The evolution of any single city brings to light the fact that architecture and town planning have often expressed more than a merely stereotyped conception of “style”, wherever its most significant achievements have responded to structural needs. For “sustainable urban development” we may assume the necessity of a “priority vision”, according to which economic, ecologic and social potentials should be valued. This paper questions the notion of urban sustainability considering the port of Alexandria and its region at various levels. Today extending for many miles along the sea coast, the city entered a period of crisis in the 1950s when a mass exodus of foreigners followed transfer of the main activities to Cairo, while the surrounding area was subject to reclamation work as part of a plan for national development. An important event occurred in 1989 with the rebuilding of Alexandria’s world-famous library, bringing with it a hope for revival of the city’s ecumenical tradition and of the place it formerly held in world culture. While most of its five million inhabitants survive in a variety of unauthorised settlements and the rural areas have suffered severely from the pollution of Lake Maryut Alexandria is expanding by creation of “gated communities”, paralleled by intensive building for tourism along the western coast. This growing trend towards the “American way of life” is destroying any identity of place. Criticizing the unsustainability of the Alexandria of today, this paper focuses on potentials for polycentric development of the city as a vital part of its region and the Nile Delta, also considering that debate is in progress on the accomplishment of important infrastructural projects that may offer fresh opportunities for involving the topography and centuries-old life of the metropolis in designing the future city.

Key words: Alexandria, Egypt, port, urban development, accessibility.

1. The “Library” Effect

Since the mid-1980s, when the project for rebuilding Ptolomy’s legendary library was presented to Unesco, Alexandria has emerged from a period of oblivion, becoming once more the happy hunting ground for archaeological missions, for architectural and urban historians, writers and journalists inspired by the magic of its cosmopolitan past. *Alexandrie entre deux mondes*, *Colonial Bridgehead*, *City of Memory* are three titles of important works on the legendary history of 19th and 20th century Alexandria, “a transitory model of conviviality.”

On 26 June 1988 President Hosni Mubarak laid the first stone of the new Library in Chatby. The plot

overlooking the sea, probably that of the ancient library, was to be partly devoted to a new congress centre close to the university’s humanistic departments. In a prominent position on the Grand Corniche facing the Selselah peninsula — extending outwards to the Fort built on the ruins of the ancient lighthouse — the Library was to overlook the shades of one of the wonders of antiquity. In exploiting such an evocative potential, the Library project put aside the complex problems of the city which, according to the Italian architect Franco Zagari, recalled “days of colonial and commercial splendour, isolated by the Delta and the desert, but now as if abandoned, existing only in its inhabitants, a lively, industrious, kindly people though seeming to have just arrived, as if camping out before taking possession.”

In the Alexandria of today the Library fulfils a vital role, visited in the daytime by school children, tourists

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and even by ordinary people as a meeting place. No other place in Alexandria seems to express such significance, at the same time appearing alien to the throb of city life. So would the contrast with ordinary people strike the onlooker; the crowds meeting at sundown in the centre, decadent with its flavour of dust and sand blown by gusts of wind from the sea or from the south, places of daily toil, business, haste. The men sitting at their tables, smoking narghile, indolent, deep in thought or merely absent-minded, look just like those who climb into the blue tramcars at Ramleh Station. The contrast between these men of Alexandria and the tourists who visit the new Library contributes to its decadent fascination, and though hindered by problems congestion, Alexandria has once more resumed its role as an attraction for international tourism.

2. New Building Sites: A Tour of Alexandria and Its Region

A tour of Alexandria and its region gives some idea of the large amount of building activity under way, showing that the models adopted for the new settlements are those of Dubai’s great hotels or the gated communities of Arizona. Extensive forms of construction, following projects mention of which shall be made here, are endangering all territorial resources, whose preservation is vital for a sustainable development. The natural features of the region — Lake Maryut and along the coast from Alexandria out to El Alamein and beyond - are already at stake.

2.1 *San Stefano Gran Plaza*

San Stefano Gran Plaza (Fig. 1) can be reached following the Corniche, opened in 1930 and widened between 1999 and 2005 to take five lanes of traffic in each direction, at the same time improving the image of city with new pedestrian promenade, plazas and seating areas. Half-way between the centre of Alexandria and the former Royal Residence of Montazah stands the San Stefano Grand Plaza, replacing the old Hotel San Stefano and aspiring to rekindle the splendour of earlier



Fig. 1 San Stefano Gran Plaza.

days. Opened in 2006, the colossal San Stefano Grand Plaza consists of two tower blocks 35 floors high on a semicircular plan — one tower facing the sea, the other towards the city. Only a few minutes from the Nouzha airport, and equipped with a private harbour and a beach, new San Stefano offers the highest standards of privacy and comfort, a rarefied atmosphere in no way related to real Alexandria.

2.2 *Leaving Alexandria for Alex West (Fig. 2)*

Joining the city centre to the major regional and national roads Moharrem Bey Bridge, has steered rapid development of large shopping malls on a strip of land stretching across Lake Maryut, once an “inland sea” for transportation, irrigation and supplies of fresh water, now shrinking and polluted. Further reclamation works are required for the “New Alexandria” project: three

large areas for housing, commercial and mixed uses. A series of semi-detached houses under construction can be seen (with a large hoarding for each letter of the name ALEX WEST) along the new road on northern shore of the lake. Alex West is gated community, where ten models of two-family houses stand along wide tree-lined avenues, and the ground has been shaped to form artificial levels for golf courses and tended lawns. Edged by a five-star hotel, a business and conference centre, shopping malls, Central Park will be the heart of Alex West. A visit, and material available on the internet, gives us a preview of the townscape as it will be. The varied styles of the main public buildings evoke the eclectic architectural tradition so much of which is to be found in the historical part of Alexandria, whose dust and chaos future inhabitants of Alex West will be able to ignore.

2.3 El Alamein and Porto Marina (Fig. 3)

The old coastal road leading on to the Libyan border passes Agami, Bianchi, Hannoville, all prestigious holiday resorts until half way through the 1980s but



Fig. 2 Alex West.

now little more than residential suburbs. Still further west, well beyond the SuMed oil pipeline, is a seemingly endless succession of tourist villages built during the last thirty years by the Government or by professional associations. At last here is El Alamein 106 km west of Alexandria; a better climate, a bright blue sea, cleaner beaches, the Museum of the Second World War and the great military cemeteries recalling the hard-fought battles of July and October 1943. Before the turning to the Italian cemetery there is the new motorway across the desert to Cairo; opposite lies Porto Marina, a tourist metropolis that, dead in the winter, comes to life at the end of May with its rich clientele. Extending for eleven kilometres Porto Marina has recently been enlarged and equipped with a large shopping mall. Its artificial lakes and lagoons are ideal for water sports, its colossal architecture recalls that of Las Vegas, with the Venice Canal Mall built along an artificial canal complete with gondolas and gondoliers.



Fig. 3 Porto Marina.

2.4 The Sahel and Its New Tourist Resorts

For three months every summer, Egyptians flock to the string of holiday villages along the Mediterranean coastline for 450 km from Alexandria to the Libyan border. European tourists — accustomed to a chilly climate — are likely to find these beaches ideal even in the winter season. A new private-public partnership has emerged with the intent of developing sections of the North Coast into a year-round holiday destination. The further west you go, the better are the buildings and the beaches. We will therefore continue as far as Hacienda Bay (Fig. 4). This smaller still-unfinished village is quieter and more exclusive; its houses are in Mexican style with luxuriant displays of bougainvilleas. After Sidi Abdel Rahman we come to Marassi, where another large all-year round tourist estate is going up: several districts, each named after one of the most picturesque localities in the Mediterranean: Santorini, Safi Sands, Port Zarsis, Valencia, Altea, Marina, Riviera. One architectural style after another, a diorama of the entire Mediterranean.

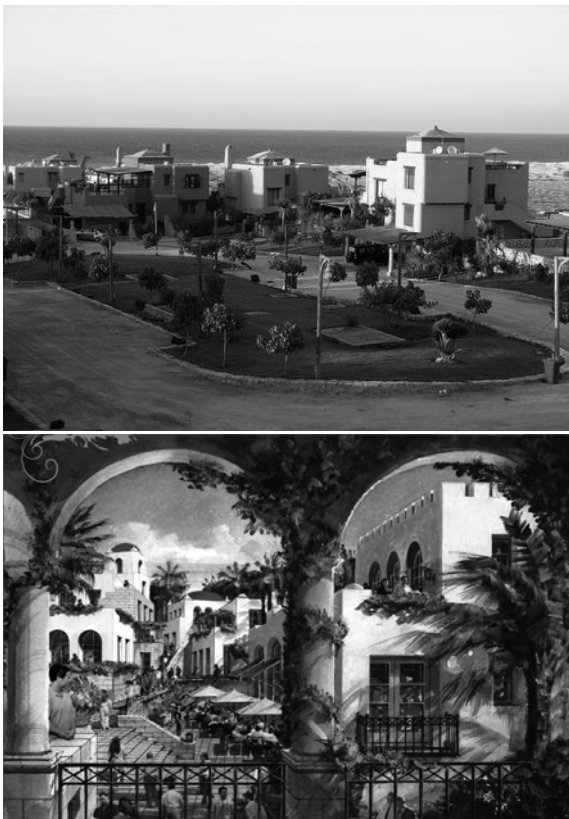


Fig. 4 Hacienda Bay and Porto Marina.

2.5 Along the Desert Road to Cairo

A new road links El Alamein to Wadi El Natroun on the Desert Road from Alexandria to Cairo, now fast becoming a major axis of urbanization. On the Desert Road, at a 35 minutes drive from central Cairo, we come to CASA, as yet only one fifth built-up. A little further on, 64 km from Cairo, lies Cascada, including plots for detached houses ranging from 190 to 705 sq. meters with large gardens, pools and lakes, tennis courts, football fields. At km 49 is Palm Hills Botanica, offering homes with a wide choice of modern architectural designs and sizes. On approaching the Cairo, there is Westown Cairo under construction to become a new “urban hub” outside the historical city. Big signs at km 38 — near the satellite cities of Sheykh Zayed and 6 October — advertise Autoville, the largest automobile showroom in Egypt, and Designopolis, a shopping centre for home and office furniture.

2.6 On the Way to Rosetta

The landscape is totally different leaving Alexandria eastwards, along the new International Road completed a few years ago in direction of Rosetta and the border with Israel. Here we can still admire a Nilotic landscape of palm groves, banana trees, mango and gawafa fields, inland lakes and agricultural villages some of which have become dormitories for people working in Alexandria.

3. City, Region, Accessibility: Polycentric Development as A Sustainable Scenario

More than forty years ago Peter Hall brought to the fore the potential of polycentric settlements vis-à-vis



Fig. 5 Rendering of a house at Palm Hills Botanica.

the unsustainable growth of many world cities. Following John Maynard Keynes’ macroeconomic theory and studying the Randstad Holland and the Rhur area, Hall also clarified the importance of a macro town-planning approach.

The Nobel prize Arthur Lewis, in his book entitled *The Evolution of the International Economic Order*, wrote that uncontrolled urban development deeply affects the structural subordination of developing countries, undermining all kind of financial and human resources.

Since the 1999 Potsdam Conference polycentrism has become the target of EU official documents, presented as a virtuous form for “balanced and durable spatial development” in large urban settlements, so much so many subsequent studies have been focused on potentials for polycentric development.

In opposition to the imitation of “alien” town planning models, which is precisely the case in Alexandria, the idea of polycentrism is based on the individual features of a given context discovered in the *longue durée* (one long enough to identify which geographical, and political factors have fostered the variety of activities as well as economic and cultural progress).

Along this line of thoughts, the problem of a sustainable urban development for Alexandria should be approached taking into account her age-old relationship with the Nile Delta, a “paleo-polycentric” region including large cities like Rosetta, Damietta, Port Said, Damanhur, Mansura, Tanta, Zieta, Zagazig, Benha. A fundamental resource for its rich agriculture, since completion of the Aswan High Dam (1970) the Delta has faced a dramatic change, its soils have become poorer and large amounts of fertilizers have been used ever since. Environmental problems are rendered even more critical from erosion and from the presence of about half of Egypt’s population.

Presevation of the individual features of a given territory is the key for a sustainable development. For the revival of this unique polycentric settlement

preserving the stamp of history, a macro town-planning approach complemented by a patient work of interpretation is mandatory, in view of gaining the necessary “priority vision”.

At the western edge of the Delta, Alexandria has been a focal point throughout her history, for both external and internal economies. With its large population and multiple activities, comprising many forms of income produced and distributed, the Alexandria of the future — where the most attractive conditions of employment were to be found — should seek to play a leading role for this region. In this scenario, the unsustainability of the Alexandria of today becomes even more evident. A traveller who leaves early in the morning heading to Cairo by car passed the alienating and featureless landscape of Lake Maryut with its dark and dense water, among brightly-lit factories, the flames of oil-refineries, the dim and distant lights of villages lost in the sandy horizon: such today are the vast and chaotic industrial outskirts of Alexandria, interspersed by the new gated communities built “to de-clutter the historical city”.

In view of forecasting a sustainable scenario for Alexandria and the Delta region the age-old supporting structure can be identified in the network of canals, railways and agricultural roads. Accessibility may thus play a crucial role, providing the combination of different modes of transport and, most of all, favouring as much as possible rail transport of people and goods.

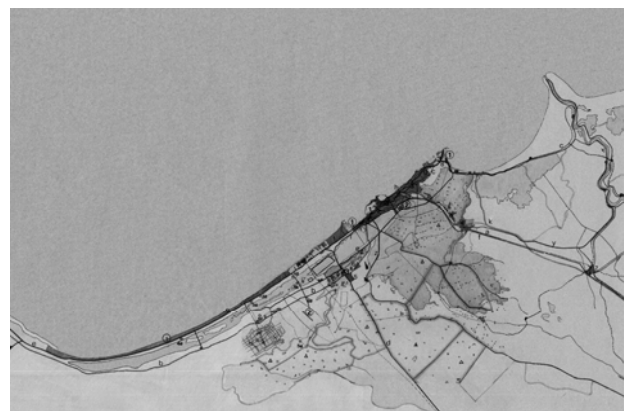


Fig. 6 Alexandria and its region.

What follows is a proposal for the city’s strategic areas and functions, the port in the first place. In other words, we propose a “priority vision” to decide which parts of the city should become new poles of activities.

4. Alexandria: A Port City

Alexandria today is “the port” of Egypt, wherein the internal dynamics of the country’s development and the indirect effects of world trade could, if properly exploited, strengthen the city’s role and significance in relation to potentially important market areas. The Fordist nature of its industrial development, which directly benefits from the port, must undergo rapid change in order to strengthen its competitive advantages. These would include industrial and commercial administration of the Free Zones, the capacity to import goods for processing and re-export. If applied to non-traditional products in particular, this could help to develop a strong and stable relationship between production and research.

Seen against these possibilities, the unsustainability shown by the city and its organization become sharpened, vis-à-vis problems of population movement and accessibility, for workers and for the public in general, to their places of origin and destination.

While the “Turkish” and “European” towns are undergoing a process of change including a considerable amount of demolition and rebuilding, a debate is in progress on the provision of important infrastructures: widening of the port westward, completion of berths for the larger pleasure cruisers, reshaping of the port-canal area. Other ideas concern adaptation of the Ramleh tramway to a suburban railway and its extension westward, a rail connection (also westward) to serve the port of Dekhela and the manufacturing areas of Amreyah and Burg el Arab, and, finally, building a new underground passenger station and through line under Cairo Central Station. All these projects could create new opportunities for involving the topography and centuries-old life of the city in the metropolis of the future.

What then are the chances of promoting such new development for Alexandria and its surroundings? The most important seem to be those offered by its position in relation to the new shipping routes now used by a growing amount of international trade. Over the last ten years, an increasing flow of trade with China, India and South-East Asia has shifted the economic axis eastward. In this context, the Mediterranean has acquired new importance and the crucial role of the Suez Canal has been confirmed, its volume of traffic having now doubled. Practically all goods of eastern origin pass through the Suez Canal, the undoubted economic advantage of which will last so long as the delays for a passage through it are shorter than the time needed to circumnavigate the Cape of Good Hope.

The Suez Canal at present contributes only 3.3% to Egypt’s gross domestic product (GDP), but calculations show that the country could considerably benefit by retaining part of the value of the goods that pass through the Canal. By retaining 5% of the total annual value of goods passing through Suez, Egypt’s GDP would increase by 15%; by retaining 10% of the same value its GDP would increase by 29%; by retaining 15% of the same value, its GDP would increase by 44%. Though approximate, these figures are of considerable interest and show the cardinal role that Egypt could fulfil within a new order of world economy, partly due to her geographical position and partly to her territorial, economic and human resources.

It should also be considered that 99% of Egypt’s import-export trade is seaborne, a figure that reflects the vital importance to the country’s economy represented by this form of transport. Its main port is Alexandria-Dekhela, both for quantity of goods handled and for the number of ships that call there. Next comes Damietta, more important only for transshipment, then Suez that handles a smaller quantity of goods but deals with the many ships in transit through the Canal. For Alexandria-Dekhela, however, the port together with its infrastructures should be planned in order to direct industrial development in the

most appropriate way. Availability of low-cost labour and of space for expansion, added to the government’s policy of tax relief, are all good reasons for believing that, by taking full advantage of the new Far East-Mediterranean trade axis, Egypt will be able to adopt the necessary and decisive measures for developing its economy, itself in turn becoming a centre of production, processing and export of goods.

The quantity of imported goods (284 million tons in 2005) and the number of TEUs (734,000 in 2005, equivalent to 30.3% of the Egyptian quota), undoubtedly prove the essential role of the port of Alexandria-Dekhela in Egyptian economy, a port through which to supply the whole country, due partly to its proximity with the capital, Cairo, and partly to the efficiency of the infrastructures linking the two cities.

Dekhela’s hinterland, one of the country’s duty-free zones, is however still under-exploited, contrary to that of other Egyptian ports. Its export trade is in fact smaller than that through Damietta, Egypt’s first port of transhipment. For the most part, therefore, the goods

that arrive at Alexandria serve the internal economy though, as mentioned above, Alexandria, and its surrounding area could become an important centre of manufacturing, processing and export.

It is therefore reasonable to presume that, geographically situated as it is, Egypt would be able to derive considerable benefit from this new state of affairs. The difference in labour costs, compared with those prevailing in Europe, indicates the advisability of carrying out locally the first stages of processing on imported goods.

An analysis of the most important types of goods exported by Far Eastern countries would therefore be useful for deciding which branches of Egypt’s industry could be developed for this purpose. Eminently suitable among these are electronic components which could be processed, prior to being mounted and re-exported, benefiting from the presence of skilled labour already historically famous for its precision work in the case of textiles.

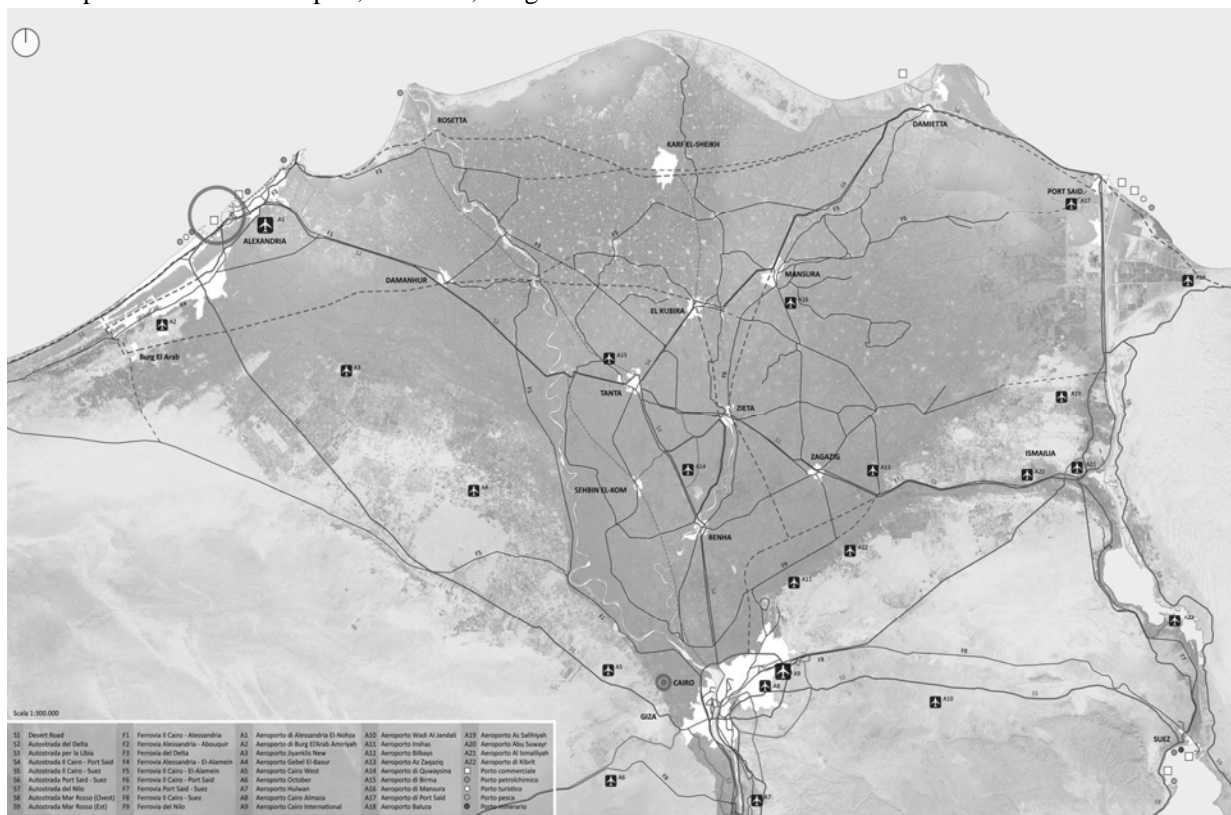


Fig. 7 An outline of the new transport system for the Delta region.

5. A “Priority Vision” for the New Port of Alexandria

Alexandria *ad Ægyptum*, as the Romans said, sufficiently near Egypt to benefit by its riches, sufficiently distant for independence. The city and its region are still in fact an essential force for growth and progress of the country as a whole.

Today, Alexandria handles about 70% of the Egypt’s maritime trade. It is a second-generation port that serves a large number of industrial enterprises, mainly petrochemical, iron and steel, situated in its vast hinterland, among other things a duty-free zone. Further west is the vast protected harbour of Dekhela, a third-generation port built in 1980 to create adequate space for loading and manoeuvring operations, no longer possible at the old port; it also provides the greater bathymetric depth for the post-Panama and post-Cape ships that require greater draft.

After studying the Port Authority’s preliminary plan (and following the debates held during the workshop in Alexandria of November 2007) we have developed an alternative proposal, as regards organization and the positions assigned to the various functions. Our project proposing creation of a single port unit joining Alexandria and Dekhela has been parameterized in relation to tentative forecasts on the increase in maritime traffic. These forecasts are based on the continuous and growing development of trade: for some time past, trade and particularly seaborne trade has shown a higher rate of activity and percentage of growth at macroeconomic level in world economy.

The basin of Alexandria-Dekhela port is amply suited for material and spatial development to cope with its new functions. This port possesses all the commercial, industrial, and civil features needed to make it a completely efficient port of call, with space available for enlargement and, compared with other North African ports, offering the further advantage of deep water enabling it to receive vessels of the dimensions expected in the future.

The reasons underlying these possibilities of development and increased importance, the need to allocate resources and investments, lie not only in the evolution of Egypt’s internal economy, but also in the need to avoid loss of time in consolidating its level on the international scene in the face of possible competition from other Mediterranean ports. Egypt’s potential advantage is partly due to the position of its ports in relation to the markets to which goods passing through Suez are destined, and partly to the size and dynamic nature of the country’s internal market. In recent years both these factors have led to measures for increasing the capacity and efficiency of Egyptian ports, to some extent in line with world growth in seaborne trade. Some ports, such as Damietta, are seeking business and becoming more competitive in container transshipment to compete with trends in other countries. Among the Egyptian ports, Alexandria in particular with its industrialized hinterland, must equip itself for the competitive role it deserves.

The dimensions to be given to the various areas of the port have been calculated taking the organization of Rotterdam as a reference for efficiency. We consider reasonable to increase the potential of Ro-Ro traffic, seen as a possible key to development of the Alexandria area, but in any case investing in transshipment essential to a modern port; although this means heavy and carefully chosen technical investments, Ro-Ro activity requires quite as much in terms of personnel. The Port Authority’s preliminary plan was considered not merely from its technical, though complex, aspects but rather as a means for favouring Alexandria’s economic system as a whole, fulfilling a directly social function able to provide sources of income and wellbeing for the local population.

5.1 The Proposed Road and Rail Network

Increasing the potential of a port infrastructure implies designing new rail and road connections, including branches to serve the port area sufficient for



Fig. 8 Proposed Master Plan for the Port of Alexandria-Dekhela.

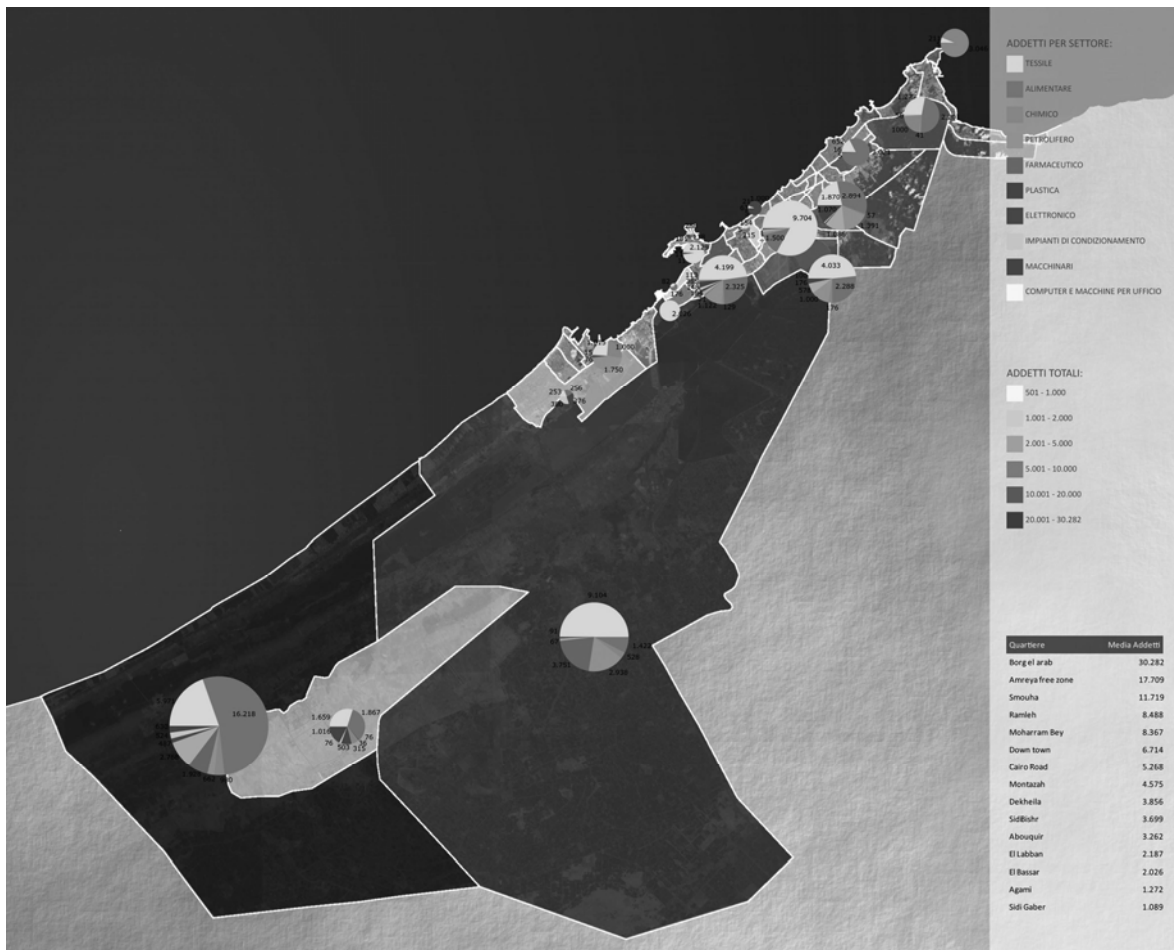


Fig. 9 Personnel employed in Alexandria divided by districts.

handling the increased work load, especially that depending on incoming and outgoing Ro-Ro traffic.

Conditions for road traffic will presumably improve to ensure fast connections in the required directions. Widening on roads for fast traffic is fundamental, and could then be extended to provide uniformity in the transport network. Particularly noteworthy is the road widening on routes crossing Lake Maryut, aimed at reducing traffic on the motorway below linking Alexandria with the industrial area and duty-free zone of Burg el Arab.

The dimensions given to the local suburban railway line are such as to unify it with the national network to create an integrated transport system for the whole metropolitan area. Cairo Station at Alexandria is at present a terminus, which could be transformed into a through station by laying a double line underground (below the present station), thereby greatly increasing its potential capacity as a passenger line to serve the towns that have rapidly grown up towards the west; this line should be continued farther, passing south of the gulf of Dekhela and the port, and again westward for

many miles over the strip of land facing onto the sea. Improvements will be made to an existing line destined for goods transport serving the industrial areas and the port. The railway network could thus fulfil a double role: a continuous and efficient public service able to satisfy the future demand of a growing population and an infrastructure to serve industry and the area around the port.

In view of a sustainable urban development, it must be clearly understood that an infrastructure can also considerably alter a landscape. On this basis consideration had been given first and foremost to rail and tram connections, and secondly to roads, realizing that a city of the third millennium cannot effectively fulfil its rightful role of promoting Mediterranean culture without adequate infrastructures able to provide internal and external accessibility for developing relationships throughout the entire urban area. In addition to becoming a cultural centre for a territory of vast proportions, Alexandria must create a close network of transport connections with its immediate surroundings.

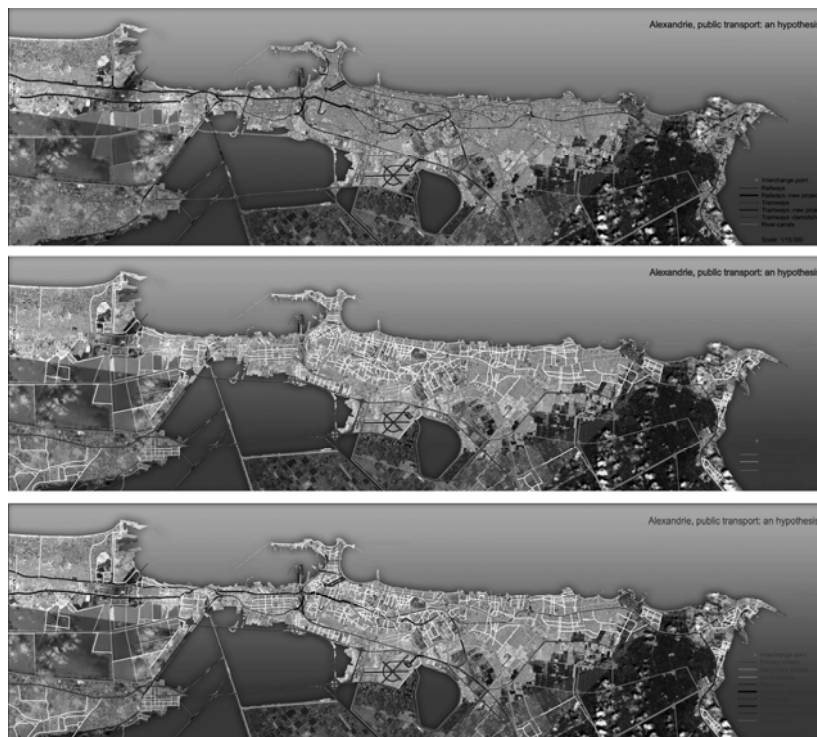


Fig. 10 Master Plan for the road and rail network in the area from Aboukir to the harbour of Dekhela.

It must be clearly understood that an infrastructure, of whatever kind it may be, not only connects places and people but can also considerably alter a landscape. On this basis consideration had been given first and foremost to rail and tram connections, and secondly to roads, realizing that a city of the third millennium cannot effectively fulfil its rightful role of promoting Mediterranean culture without adequate infrastructures able to provide internal and external accessibility for developing relationships throughout the entire urban area. In addition to becoming a cultural centre for a territory of vast proportions, Alexandria must create a close network of transport connections with its immediate surroundings.

6. Concluding Remarks — The Enigma of Alexandria

Which future for Alexandria? The question put by the geographer Jac Smit in 1997 is still valid, in spite of the great success enjoyed by the Library. His article is timely, explaining as it does the possible alternatives for Alexandria, in the late Seventies. In those days the inhabitants of Alexandria numbered about 2,500,000 — roughly half the figure of today, then equivalent to the population of fourteen lower-ranking towns — while in the preceding decade its rate of growth had been slower than the average for the larger Egyptian towns. Although lacking any clear definition of its role at national level, Smit believed that the city’s chances of development depended on a strategic geographical position for the port with roads, railways and canals, on availability of vast desert areas ideal for urban expansion and miles of beach perfect for increasing the tourist trade. Smit wondered whether Alexandria should be encouraged to develop or, like Cairo, to be decongested: “a primary candidate for industrial and trade growth like Singapore, or a decaying seaside, post-colonial, port city like Rangoon?”

It should be remembered that the heritage of Alexandria depends not only on its literary myth, nor even on its archaeological remains and the fine

buildings aligned along its dusty streets, but rather because its urban structure has preserved the stamp of its foundation, of its roots planted in a strategic position. The port stands where routes from the Nile and the Sahara oases meet the Maghreb-Syria route, crossing others from Europe to the Red Sea and on to Arabia, India and the Far East.

To use Jac Smit’s words, the “enigma of Alexandria” evinces a periodical need to reinvent an *ad Aegyptum* geographical role for the city: close enough to Egypt to benefit from the country’s resources; far enough to preserve its independent identity. It is just the recurring nature of this problem — a “priority” (we may say strategic) project for the city, for its infrastructures, resources for industry, its trading relations and social cohesion — that makes of Alexandria such an important point of observation for research on sustainable urban development, showing as it does the need to work out an overall project for the city in all its complexity, both for strategic areas and functions as well as for transport facilities.

Along this line of thoughts, the “sustainability problem” may reverse the function of planning, which has often been reduced to an increasingly subordinate role. This attitude appears in the handling of a number of planning projects when the planners are facing problems of a sociological nature without due consideration of what a city’s history can teach.

Acknowledgements

Contributions to our studies have been received from Dr. R. Pugno, economist, lecturer in Economic Evaluation of Planning at the Faculty of Civil Architecture, Politecnico di Milano, and from Dr. E. Sacchi, expert in port organization and planning. A. Alpini, G. Boni, Viola Bertini, E. Ciapparelli and C. Taddei, students at the Urban Planning Workshop II have carried out research and prepared some of the maps included in the text. Apart from the many documents consulted, most of the statistical data used was taken from the following sources:

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