

# Benghazi City, Urban Problem New City! How?

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## Introduction

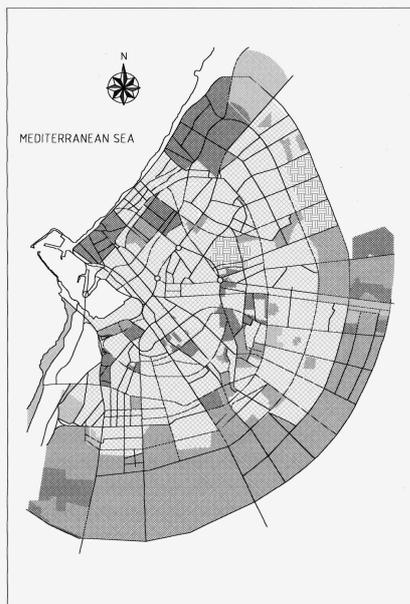
As assigned by Al-Emara Engineering Consultants Office concerning herewith to prepare a physical planning study for Alrajmah area as one of the outskirts of Benghazi City prior to commencement of the required design work for the execution of 15000 residential units project. Such an execution can be comprehended in the framework of remedying the physical and urban problems, which the City has suffered for sometime.

## The problem

Through the review of the following Tables:

- Cities population growth rate selected around the world
- Libya Population future projection
- Comparing rate of development of Cities to Rural areas
- Comparing population growth rate of Cities to Rural areas
- Third world chart for big Cities and world population growth

The conclusion was clear; the developed nations enjoy the immigration of peoples from Cities to Rural areas. This fact is a reflection of the advance level of services and prosperity. Such process is reversed in the underdeveloped nations e.g. Libya. The immigrating process in Libya from Rural areas with no middle-sized Cities has resulted to the inability of Cities to withstand the numbers. This is hence creating many different physical and urban problems as extreme lack of residential units, services, incapacity of infrastructure and facilities in general. In addition Libyan Cities are not economically directed in certain aspects, which in itself resulted in unemployment and lack of job opportunities.



**Master Plan of Benghazi City**

## New City... Why?

The decision for to build a new City is mostly regarded as the optimum long-term solution to remedy acute physical and urban problems. Such decision is usually made due to various

factors many of which economical, urban, administrative or demanded by the tourism industry.

The project for the target area was limited at the beginning to preparing the required design work for the construction of a satellite area within a larger boundary specified for the enlargement of Benghazi City which is considered as the second City in Libya with the population of one million.

Through the project preliminary study, it became clear that the execution of a satellite area would only reduce the existing physical problems but in future will greatly increase them. It became also apparent that the City is suffering from the mentioned problems to an extent that remedy of an old center or renovation of its community houses is no longer useful. Also, the idea of constructing a new functional center within the City boundaries should not be considered. This is due to the fact that the existing roads network and services are not in good shape either.

Furthermore, it is not wise to leave the City develop spontaneously. This fact is one of the reasons causing the problems that are experienced nowadays. The study was then diverted to focus on new strategy concept for the execution of a new City.

### Concept of a new City

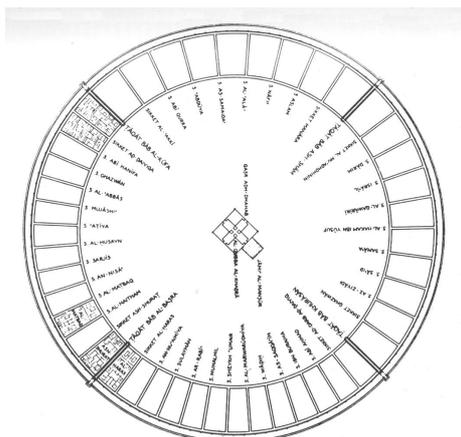
A new City is the production of civilized and organized intervention and direction of mankind to monitor and control its development. Throughout history, new Cities were built by most civilizations to meet their society's needs. Those Cities were built on theoretical and philosophical bases to reflect ideologies and believes of such civilizations. This is particularly apparent in form, size and population concentration and in the City relation to surrounding space.

The new City is defined as:

- 1- One, which is built due to political or economical decision and not as a result of spontaneous development.
- 2- That it is not an extension of already existing City or Cities.
- 3- That it was preplanned before its existence and
- 4- It has an independent entity.

### Philosophical background

The idea of building the utopia had taken an important role in the thinking of ancient ideologists. Many ancient thinkers had presented the theoretical framework and vision that is necessary for the utopia to have. One example, Plato had specified a certain number of people who are allowed to live in his utopia. He also stated that once such number is reached, a new utopia must be built. The Islamic philosopher Alfarabi had also contributed practical ideas concerning the utopia. His ideas had apparent impact on planning and construction of Islamic Cities such as Samara and Baghdad. The most idea, which had the great impact that he, granted the mosque the central life role in his utopia.



The plan of the ancient Bagdad

Later Thomas More ideas had great effect on many modern City theorists such as Ebenezer Howard. Also, the Italian philosopher T. Campanello in his "The Sun City".

The modern time has witnessed the rise of different shape Cities based on various philosophical and theoretical bases. One example is the appearance of Linear Cities for Sorea Mata(1822), Mata explained that all social problems are soured from the modern City; hence it must be constructed to expend linearly in order to combine with Rural areas and enables each family to have its own independent house with its own garden. He also stated that the cost of building new cities is less than renovating old ones.

\* **"City of Tomorrow"** by Theodore Fritsch

He specified 7 land use radial shaped areas where the houses and industrial plants are separated by green areas from external surroundings.

\* **"Garden City"** by Ebenezer Howard

He proposed the erection of public buildings in the City center surrounded by green areas while situated industrial plants, warehouses and markets on ring roads that are surrounding the City though the use of axial and ring roads system.

\* **"Future City"** by Le Corbousier(1922)

One main center is proposed where high-rise buildings are situated and surrounded by green belt areas. The industrial plants and garden Cities are located within these belt areas. He also proposed that the population of each of these Cities must not exceed 3 million people.

### **Past Experience:**

We are convinced that such a large size project with its complicated components needs to be put into a comprehensive plan. The past experiences locally, regionally and internationally were studied for the purpose to find the right strategy in order to achieve the required positive solutions. However, the study concentrated more on local and regional experiences as they are of similar conditions and more modern than that of the international. Libya has various experiences with building a new City. The building of Brega, Ras Lanuf new towns for the oil industry is typical examples. The Saudi experience with Aljebeel and Yinboo was also examined. The Egyptian experience is particularly important nowadays as still progressing. The Egyptian experience was carefully examined.

This study covered many aspects on the subject of building a new City such as conditions for decision taking, project administration, financing, relations between new and old Cities, bases of planning, size, social concentration and finally economical activity.

### **Some selected international experiences**

#### **- The British Experience**

The building Process of new Cities in Britain has witnessed the following historical development:

- In the sixties of the twentieth century, the process started with the execution of 5 new Cities, each with the size of 100 000 inhabitants located in areas at farer distances than other new Cities from London and big size cities.

- In the period between 1967 & 1970, 9 other new Cities were built; each with the size of 250 000 inhabitants. It was estimated that the number of inhabitants would increase to 2.5 million in the year 2000.

All these new Cities had distinguished features from other Cities, such as:

- Built as a result of a political decision
- They were preplanned
- A competent public authority carried out their construction
- The majority of first inhabitants were of young working people and children, and seldom people older than 50 years.

#### **- The French Experience**

- The French had benefited from the earlier developed British experience concerning the formation of competent authority whose assigned to build and develop new Cities.
- Formed authorities in all new Cities similar to those existing in Britain
- Such authorities were working with less power than those granted to their British counterpart.
- The planners were required to produce the optimum level of plans that are legally applicable and fit the criteria set by regional and state authority.

#### **- Administrating the French new Cities**

The following authorities administrated the projects for new Cities:

- Construction and Development of Cities – which is a central authority that supervises all new Cities projects.
- Cities Authorities – with some independent entity but still under the jurisdiction of the central authority.
- A Central Committee operating under the jurisdiction of one particular ministry with members from other ministries and public and private authorities in order to jointly coordinates all works related to the new Cities. Such committee is established to achieve two purposes:
  - Provide required consultations to the state in all fields in order to improve efficiency and productivity of the projects.
  - Setup the expenditure budget and to establish long – term financial stability for developing such Cities.

#### **Financing the projects:**

The Central Committee coordinates the expenditure policy and execution works of the new Cities.

The breakdown of expenditure cost is as follow:

- The central Government covers all costs related to the streets construction.
- The local Government covers all costs related to the sewage systems execution.
- The new Cities authorities finance all services from land sale revenues.

#### **Remarks of the French Experience:**

1. The rate of population increase in the new Cities was much higher than other Cities.
2. The new Cities inhabitants had distinguishably a high rate of small families and children.
3. Most of the inhabitants were from the middle class.
4. Light industries, trade and office services were the main economical activities.

5. Successfulness in providing better environment particularly on the level of satellite community.
6. The most distinguished feature of the French experience that it is connecting between social problems and technical solutions and generating an interactive relation between the two (the inventive idea of Social Animation for all aspects of life was the main idea on which such Cities were built).
7. The growth and development of the French regions new Cities were much slower than that of the new Cities surrounding Paris.

### **- The American Experience:**

Although all American Cities are new, but we rather mean new Cities, which were built according to the type defined in this study consequently, this study was concerned with modern new Cities that were erected after the rise of Ebenezer\_Howard ideas with the beginning of the twentieth century. Based on this concept the development of new Cities in the United States could be divided into three time stages:

From 1900 to 1960: In the beginning of the century a number of models had appeared such as workers Cities, particularly after the Second World War when more than 40-50 new Cities were built according to specific Government specifications, some of which were based on the British experience e.g. the minimum 25 000 inhabitants, the minimum area of 2500 acres.

From 1960-1970: New Cities that appeared as a reaction to the Civil Rights Movement for blacks and low classes in the American Society. Such new Cities were also with various models e.g. independent, located close to Cities with high population growth rate (Inner Cities), expansionistic for existing Cities and within existing Cities. This study was concerned with the first model, which was implemented through a particular vision of the Ministry for Housing and Urban Development. This vision had concentrated on the following aspects: Independent Cities executed through preplanning process, its size between 50 000- 100 000 inhabitants, employment self-sufficiency, balance of society to include different classes and ethnic groups and finally State assistance with projects financing.

After 1975: The small built inner Cities were based on the idea of development without paying much attention to ethnic balance. These inner Cities were smaller in size with only 10-20 % of the previously built new Cities.

### **Lessons of the American Experience**

- 1- Complete preplanning principal
- 2- Specified size of 25 000- 50 000 inhabitants (Min) and 50 000- 100 000 inhabitants (Max)
- 3- Self-sufficiency was a priority for the construction of independent Cities.
- 4- Mostly financed by the private sector. This fact had distinguished the American experience above all others in this field.
- 5- Low population densities when compared with the existing Cities.
- 6- Concentrated at some stage on finding a balanced ethnic and class society.

## The Saudi Experience: Aljebeel and Yinboo Cities

### Strategic Target

Major contribution to:

- 1- Improve industrial development and provide added value to oil industry.
- 2- Enlargement and expansion of petrochemical and oil industries.
- 3- Concentration of population and economical activities on the east west axial.

### Location

Near the seaways and close to the needed energy and raw material sources

### Administration

Issuance of a royal decree for the establishment of the Royal Cooperation for Aljebeel and Yinboo. The cooperation is almost independent body from Government bureaucracy and linked directly to the highest authority.

### Existing Situation

The east west axial which includes three emirates with 83.7 % of industrial plants in Saudi Arabia, 86.7% of jobs opportunities and 70 % of financial capital of which Aljebeel and Yinboo share is 67 % of total financial capital.



The industrial east and west axis

### Financing

Totally from Government sources at the beginning but gradually transforming to private sector.

### Remarks

- \* Weak local participation.
- \* Functional jurisdiction of the Ministry over small and middle size Municipalities.
- \* Weak coordination between the different sectors.

## Libyan Experience with Brega & Ras Lanuf New Towns

### Strategic Target

Easily concluded that the decision for building such Cities at the end of the seventies was a strategy option to develop the area in the middle region of Libya between the two population mass concentrations in the east and west of Libya. This is for the purpose of supporting national unity and enhancing interrelations in the whole country.

Also, it is important for the oil community to reside close to the oil activity in the middle region, as oil industry is the most important source of revenues.

### Location

Middle region of Libya on the Mediterranean sea.

### Administration

Issuance of a decision by the General Peoples Committee to establish the Execution Authority for Berga and Ras Lanuf Projects. Such Authority was granted from the start sufficient powers covering issuance of its Internal Regulations to site selection, approval of the Master Plan, contracting and endorsement of the project estimated budget.

### Financing

Completely from State Budget.

### Cost

\* Average Costs:

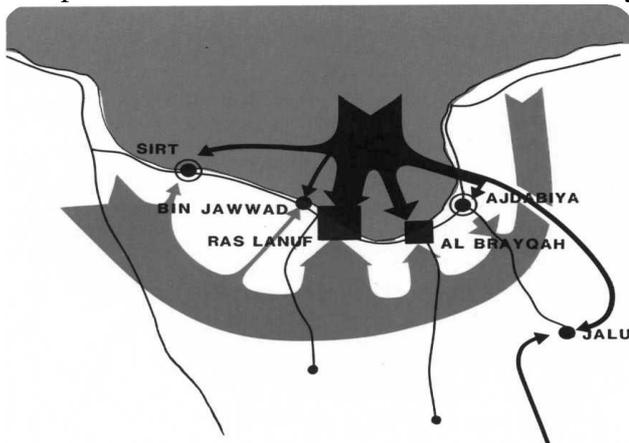
Average cost of single residential unit	<b>30,000 LD</b>
Average cost of single residential unit + Utilities	<b>48,000 LD</b>
Average cost of single residential unit + Utilities + Public buildings	<b>63,000 LD</b>

\* Cost Rates:

Percentage of utilities cost to single residential unit cost	<b>160 %</b>
Percentage of utilities & Public building cost to single residential unit cost	<b>210 %</b>

### Remarks

- Selection of foreign consulting firms with sufficient experience in execution and supervision.
- One single contractor for each phase of execution.
- Selection of Libyan nationals as engineers and technicians for training and participation in the construction work.
- Tax free policy for Brega project.
- Separable residential units. Each with its own yard.



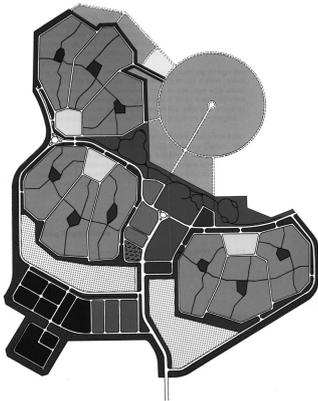
**Map indicating the town location & population**

## The New Serier Town

The targets at the planning stage were not clear and the new Town relation to regional and national physical development plans was not defined. The consultant proposed a number of targets, which include contribution to population redistribution by encouraging immigration and settlement in the new Town area, contribution of the Town in producing strategic products and thus achieving self-sufficiency, varying economical resources, and enhancing desert environment.

Consequently, the following was concluded:

- 1- The strategy and targets were not derived nationally.
- 2- The consultant prepared targets were not defined prior the concerned study but rather prepared for the consultant need to find targets for the Town he was assigned to plan while the appropriate technical method requires that planning starts with identifying the targets.
- 3- The population size was not specified prior the issuance of the decision to build the Town.
- 4- Although the general layout was good but the Town itself was never built for the reasons already stated above.



**Master Plan of the New Serier Town**

## Egypt / New Cities Experience

### Motivations

Egypt is facing two main problems, the first the rapid increase of its population and the second, is their intensive concentration in particular urban areas. Such increase in population is hindering the development efforts while the concentration in urban areas is encouraging immigration from Rural areas to the big Cities which coincides with physical expansion to agricultural lands.

Egypt population has increased dramatically during the last century, from 11 Million inhabitants in 1907 to approximately 50.4 Million in 1986. The concerned studies were pointing out that the number is expected to reach 65-70 Million inhabitants in the year 2000. According to the same studies, this number will double in the next thirty years after the year 2000.

This problem is further complicated by the fact that the population geographical distribution is not the best. 98% of the population resides in approximately 4 % of the total area of Egypt. This also means that the population density is approximately 1250 inhabitant / Km. Such situation is considered extremely dangerous not only for the future development of Egypt but also for the very existence of the Egyptian nation. Furthermore, this situation is decreasing the agricultural land at an annual rate of 50- 70 thousand Acres. It is estimated that 1/5 of

the total agricultural land may be lost in the year 2000. This is of course would result in reducing agricultural products and cause more of food shortage. It is clear that such increase in population must be settled away from the delta and the Nile valley.

### **Strategic Target**

The decision to build new Cities was in response to the rapid increase in population and the inability of the public sector to cope with the increased demand on new houses. The decision was also taken for the purpose to redistribute the population instead of its concentration in the small delta area and the Nile valley. Such concentration resulted in high land sale prices and abstraction of Agricultural lands. The new Cities are to aim for the creation of modern attraction areas outside the existing Cities boundaries exploiting available resources and attracting capitals.

### **Administration**

The New Physical Communities Board supervises all new Cities projects. A chairman with sufficient powers heads each project. Each City has a council made of a number of Secretaries from the concerned Ministry. The private sector has a direct influence on the council policy as its headed each year by one of the investors. The organization cadre of such bodies is conventional. The planning phase is separated from the execution work, which means ineffective management.

### **Type of Cities**

- Independent Cities e.g. Sadat and 10<sup>th</sup> of Ramadan.
- Incorporated Cities to reduce population densities e.g. Bader 7 Alaboob
- Twin Cities e.g. Tebah

### **Financing**

The financing of all infrastructure utilities work is covered by the state, which resulted in budget deficit and interruption in financing. This situation is being remedied with time through the increase of private sector investment.

### **Remarks**

- \*It is proposed an affective Government commitment to build "Sadat" City for the purpose to encourage investment in its infrastructure, gardens and economical activities.
- \* Possibility of employment and training.
- \* Attention is paid to environment conservation means and to overcome desertification.
- \* Release of opportunities for land and modern houses ownerships.
- \* Building an economy with various components such as industry and agriculture.

### **Lessons of the Egyptian Experience:**

- 1- It is necessary for the policy of building new Cities to be established within a comprehensive physical planning and in the same time based on an economical vision.
- 2- The financing process must not depend totally on the central Government support but rather from various sources.
- 3- It is necessary to establish an organized cadre to administrate a new City and possesses sufficient power to take decisions.

- 4- Achieving higher efficiency in administrating the execution authorities for the new Cities through the following:
- Establishment of a cadre that has specific powers and responsibilities
  - Enable the low-level management cadre to take decisions in accordance with the responsibilities.
  - Technical basic standards are adapted for projects management.
  - Coordination between the public and private sectors in the framework of a comprehensive single plan
  - Planning and coordination for investment and financing sources
  - Establishment of an efficient system for monitoring and assessment of performance for the whole project and also for their administrations and personnel
  - Establishment of information exchange systems in order to enable users and decision takers to perform in higher efficiency.
  - Management training is considered as an essential part of the projects, particularly that the real problems are administrative and not technical in this type of projects.

### **The Characteristics of the New Arab Cities**

The principal of the physical planning is a common feature base for all Arab new Cities, which is implemented in the following ways:

- 1- Consideration of natural and surrounding conditions for sites geographical selection
- 2- Built for one function with a sub-function to support development
- 3- Remedy of old Cities planning mistakes and to avoid the consequences of such mistakes.
- 4- The usage of modern construction materials and specifying heights for buildings and structures
- 5- Provision of all social services and necessary public utilities
- 6- Preserve Cities in suitable sizes with low population densities
- 7- Provision of large size land spaces for green areas and creation facilities
- 8- Largely effected by the design of the new Western Europe Cities

### **Some Encountered Difficulties and Problems in the New Cities Projects**

Which include but not limited to the following:

The new inhabitants may encounter difficulties in living in new urban environment particularly if the new City is built in a location with different climate and geographical topography

Longer time is needed for the inhabitants to form social harmony and interrelations  
The building of new Cities has led to the transfer of many economical and administrative activities from the city of origin with the majority of the people still have links to the old City which meant increased traffic between the two Cities

The Cities are built for one single function e.g. industrial, services or military has led to one particular way of life that it is repeatable

The similar architectural designs and layouts for such Cities give uncomfortable feeling of an artificial society

The preservation of high level services on the planning and implementation levels demand high expenses which led to financial difficulties for many new Cities projects

Some new Cities face difficulties with regard to food supplies and services as they are located far from the sources

### **Conclusion: The study has concluded a number of facts and general recommendations:**

#### **Decision**

The initiative for building a new City is mainly dependent on a political decision issued by the State.

#### **Administration**

All successful projects must have an independent administrative authority separated from all other Government bodies. Such authority must be granted sufficient powers and responsibilities for planning, execution and administration of the new City.

#### **Financing**

Financing is one of the most important factors, which could hinder the success of any project. The new Cities projects that were totally dependent on Government financing is not as successful as those financed by the private sector investment.

#### **Economy**

All successful Cities are built on economical industrial bases and within a comprehensive Master Plan that incorporates economical and physical aspects locally, regionally and nationally.

Furthermore, the Cities that were built mainly for one type of industry are not as successful as those built for multi-type industries, which integrate with other operating sectors.

#### **Investment Incentives**

The private sector contribution cannot be achieved without the provision of apparent investment incentives e.g. relief from taxes and customs.

Also, the State execution of required infrastructure and investment in large plants are usually taken as evidence of the State long-term commitment.

#### **Project Duration**

Most of the projects execution plans for new Cities had not correctly judged the needed time duration for completing such Cities or actually considered the projects as short term enterprises. Hence, claiming that the experience is a success or failure is prematurely judged.

#### **Planning**

The most successful projects are the ones which were planned and executed in the framework of a national, regional and local comprehensive planning targeting the execution of new Cities as a strategy option for physical and economical planning for the State and its region.

The building of new Arab Cities must take into consideration many aspects of the Islamic legislations as bases for their planning criteria.

### **Special Conceptions for Benghazi City**

The study has come up with a number of conceptions and recommendations. All of which, must be considered before taking the decision for building a new City for Benghazi, these may include the following:

- 1- City formation: The project consists now of 15 000 residential units included in the first phase. This number may well increase in later phases, which consequently means that the number of inhabitants may increase to 150000. Hence; the envisaged project must be of a middle size City.
- 2- It is necessary to select an appropriate strategy that is formulated on basic principles that include: various economical activities, clear planning conception, location e.g. distance from Benghazi and finally transport and communication means in relation to Benghazi City.
- 3- An independent authority that has sufficient powers similar to those granted in the past to the Execution Authorities for the existing new Cities in Libya must administrate the new City. This independent authority must also be granted additional powers similar to those experienced in Egypt such as local administration with the participation of investors and inhabitants.
- 4 Encouragement of the private sector to finance the project by implementing a clear policy on long-term relief of taxes and customs for building materials and industrial equipment. The easing of financial restrictions and provision of loans are also important means for such an encouragement. Furthermore, the State execution of required infrastructure and investment in large plants are usually taken as evidence of the State long-term commitment.
- 5- All regulations that may hinder investment must be reconsidered. This will enhance the relations between the State and serious investors.

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