

THE EGYPTIAN NEW CITIES PROGRAM

A critical review

Dr. A. Barrada , professor of urban planning and former dean
Faculty of Regional & Urban Planning – Cairo university

Introduction :

The importance of reviewing the Egyptian new cities program stems mainly from some of its characteristics, namely; an extended 27 years of experience in a developing country context, a fairly large program (19 towns built), varied in size and function (satellite, independent ...) and above all, the assumptions, objectives and paradigms on which it was based were clearly stated and documented and thus the program could now be judged against them.

The present paper have five sections.

The first section starts by highlighting the motivations behind that program , which were, to save the limited arable land from being consumed by the massive and rapid urban and rural non agricultural uses .

Initially , a number of alternative policies were proposed to cope with that problem . (National Urban Policy - Consultant , Padco Int.) . After discussing and comparing those alternatives (in section II), both the recommended strategy and the adopted policy will be explained . That policy stemmed from the paradigm of "Independent cities " : .Cities that have their own economic base and house the working force and their families, and supply them with their required services..

The third section is a review of the development of that program including a Discussion of the principles on which the 19 new cities were planned (location , size , economic base ...) . The fourth section illustrates the current status . The fifth section will end by evaluating the program : population settlement, industrial development , relations with existing cities , regional impact ...etc.

I- The Egyptian Urban Scene :

Egyptians, are living pre-dominantly in the cultivated Nile valley , which forms only 5% of the one million square kilometers which are the area of Egypt .The remaining 95 % are either desert or mountainous lands.

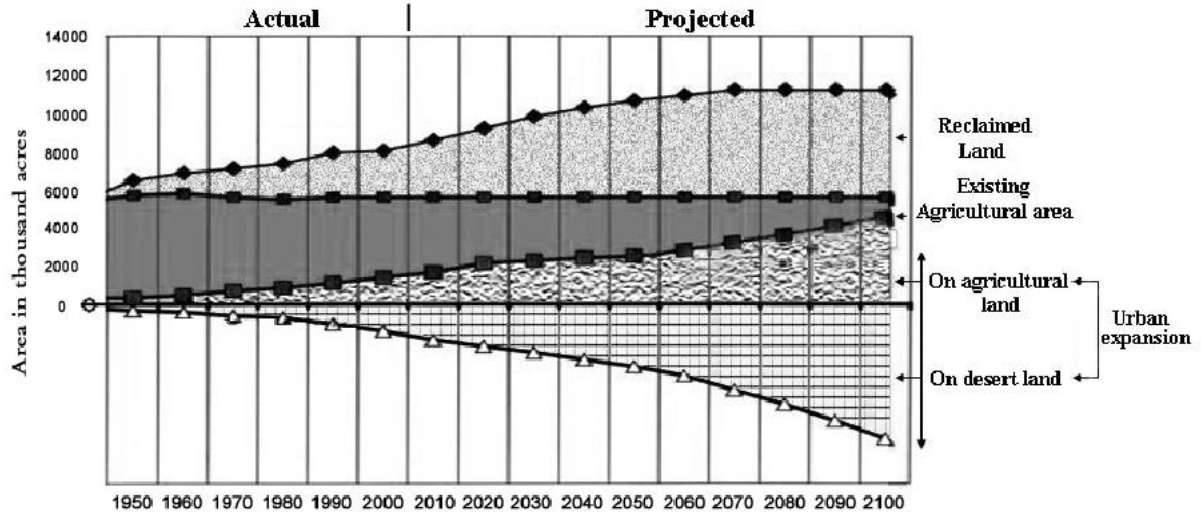
The rapid population increase in the second half of the twentieth century was tremendous. Only between the years 1982 and 2005, population rose from 40 to 70 millions inhabitants . The increase was largely accommodated in unplanned expansions of urban and rural settlements , consuming 1.2 million acres of the 6 millions acres of the arable land.

This has happened parallel with a massive new cities program and the reclamation of about 2 millions acres of desert lands (rate is now slowing down) .

If current trends continue , it was projected in a recent study¹ , that the old agriculture lands may be totally consumed between 2070 – 2100, or shifted to a later date,. depending on how the new cities program is directed and managed.

¹ - National specialized councils of Egypt –“Urban expansions on Agriculture lands” – May 2004

Figure (1) Projected Area of Urban & Rural Expansion on Agricultural Land



This trend will not only deprive Egypt from its major source of food supplies , but also from its largest employment sector . More over; that unplanned expansion of settlements have caused a very high level of densities and degraded environmental conditions . That phenomena was coupled by the usual phenomena of unbalanced distribution of settlements and polarization where more than 45 % of the urban population is living in metropolitan Cairo (25 % of total population of Egypt) with a very high primacy ratio (3.2). As early as 1979 the government has depicted those phenomena and their possible implications . It has commissioned a large consortium of consultants (led by PADCO Int.) to study and propose a national urban policy. It is important to briefly review parts of that study as it forms an essential background to the Egyptian new cities program.

II- The National Urban policy Study (NUPS) 1979 –82

The national objectives stated as a frame work for that study were :

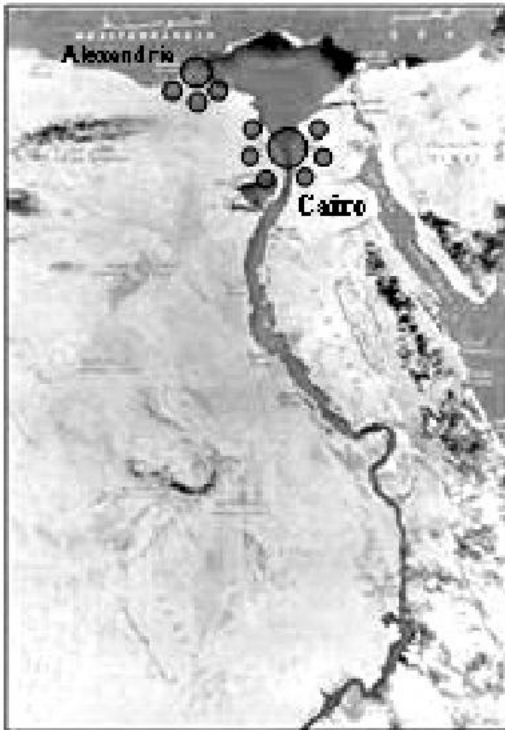
1. Achieving a high rate of economic growth and improvement of living standards.
2. Minimizing urban and rural growth on agriculture lands.
3. Reducing inequalities between individuals and among regions.
4. Reducing densities in urban areas, particularly Cairo and controlling its rate of spatial growth.

With those objectives, the government has correctly emphasized that a national spatial urban policy is only a mean to achieve higher national objectives and not an objective by itself .

The study comprised detailed and extensive analytical studies covering also sectorial plans (industry , services, transportationetc.) and developed a number of alternative policies:-

- A- Concentrating development in a number of satellite towns around Cairo and Alexandria.
- A\)- Creating one major counter-development pole in Suez.
- B- Developing a number of regional development poles, centered around existing regional capitals (Suez, Alex., Asiout, Quena & Aswan)
- C-Developing Remote areas.
- D- New towns (this alternative was accompanied with a number of reservations)

Figure (2) The four alternative strategies



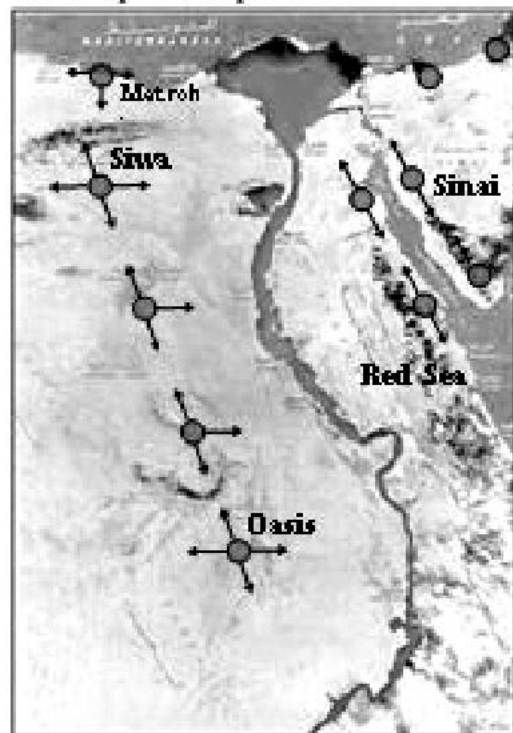
Alternativ (A)
Expansion of Metropolitan areas with satellites



Alternativ (A\')
Suez as a counter development pole



Alternativ (B)
Secondary regional development poles



Alternativ (C)
Remote areas development

Those alternative policies were thoroughly costed, together with their expected implications on the various above mentioned objectives. The following table shows (a rather over simplified) comparison of those policies . (Table 1)

Table (1) comparison between alternative urban policies

| Alternatives Criteria | A Expansion of large cities & satellites | A\ One counter development pole, 'Suez' | B Development poles existing cities | C Development poles remote areas | D New towns ' (self contained) |
|--|--|--|---|---|---|
| cost | x | X +10% | X +14% | X +33 % | X +22% |
| Rate of achieving objectives | Highest | High | High | Very slow | Slow |
| Preservation of agriculture land | + | + | ++ | + | + |
| Reducing concentration in capital and large cities | (-) | ++ | ++ | + | ++ |
| Achieving a higher rate of national economic growth | +++ | ++ | ++ | (-) | (-) |
| Improving inequality between individuals | ++ | + | + | (-) | (-) |
| Improving inequality among regions | (-) | + | +++ | + | + |

The recommended strategy has built on some international experiences and theory ²; namely :

- 1- No single alternative is sufficient .
- 2- Following all strategies in the same time is infeasible.
- 3- Urban patterns that are more concentrated are more efficient in achieving most national objective at least in the short and medium terms ³ .
- 4- The higher the rate with which the population is spread the greater the required per capita urban investment, and the higher the risk of slower economic growth rate .

The preferred strategy was centered on evolving development poles around some existing cities that have economic potential (Alt. B) + satellites around Cairo and Alexandria (Alt. A). However, the government opted for new cities program which has already started with 3 new cities. This option was politically more attractive . It was also thought that such a policy would initiate cultural and social changes and help in building a new society with new values and aspirations (to conquer the desert) .

² Kiochi Mera , economic development and cultural change on the urban agglomeration and economic efficiency (vol 21)

³ Sea also Harry Richardson , ' city and national spatial strategies in developing countries , World bank , marking paper no. 252 p. 13

III The Egyptian New Cities program, 1979-2005:

The program started in the wake of 1973 war with Israel by the three new cities, mentioned earlier. It is of importance to mention that the objective (before NUPS) was to enable the creation of better environmental conditions and a 'model of the future for Egyptian cities', and to reduce pressures and spatial concentrations of the two metropolitan areas of Cairo and Alexandria. (The later objective was similar to that adopted in the British & French new towns programs).

Also the program was clearly based on the paradigm of economic self containment (the city will have its own economic base and people working in it predominately live and find necessary services in it).

Locations of the first two large new cities of that type (10th of Ramadan and Sadat) were chosen half way between Cairo and Suez canal region (50 km from each) for the first and Cairo and Alexandria for the second (90km). So as to avoid their development as satellites for those large agglomerations , And in the same time to rely on them as markets and export-import relations with the outer world. In the same time the locations were at about 25 kms from the arable land and concentrations of the rural settlements in order to enable those new cities to draw labor and population from those areas, as well as agriculture produce and supply of water .(As things developed , those assumptions have proven to be mostly correct).

The location of the third large independent city was planned 50 kms west of Alexandria. The locations of the 4th (and last) independent city (Badr) and the 5th (Alamal - not built) had almost the same relationships with both the Suez canal cities and Cairo

The sizes of those five cities were predetermined at 500000 inhabitants each. That size was thought to be the economic size and that which also allowed the new city to act as a development pole.

In 1979 the General Organization of New Communities was established and 3 satellite towns with industrial areas were started near Cairo. They were at a much shorter distance (8,23 and 15 kilometers) and in smaller sizes (150000 and 250000 inhabitants) . For the following 5 years large amount of investment were poured in those 3 satellites and the earlier 4 new cities There were reasonable industrial development in the 6 settlements due to tax incentives , however population was almost nil as residential plots were sold to middle and high income groups who can afford it and tend to speculate on it.

By that time (1982) NUPS study was completed, and during that elapsed period ,the sprawl of large informal settlements around Cairo reached unexpected levels . A new greater Cairo master plan was drafted proposing 10 new totally residential settlements around Cairo, intended solely for low-income groups with the objective of reducing the rate of informal sprawl on scarce agricultural lands .(they were started in 1986 –1990).

The remaining new towns and cities of that era were satellites to Cairo with sizes ranging from 70 – 100 thousand inhabitants..

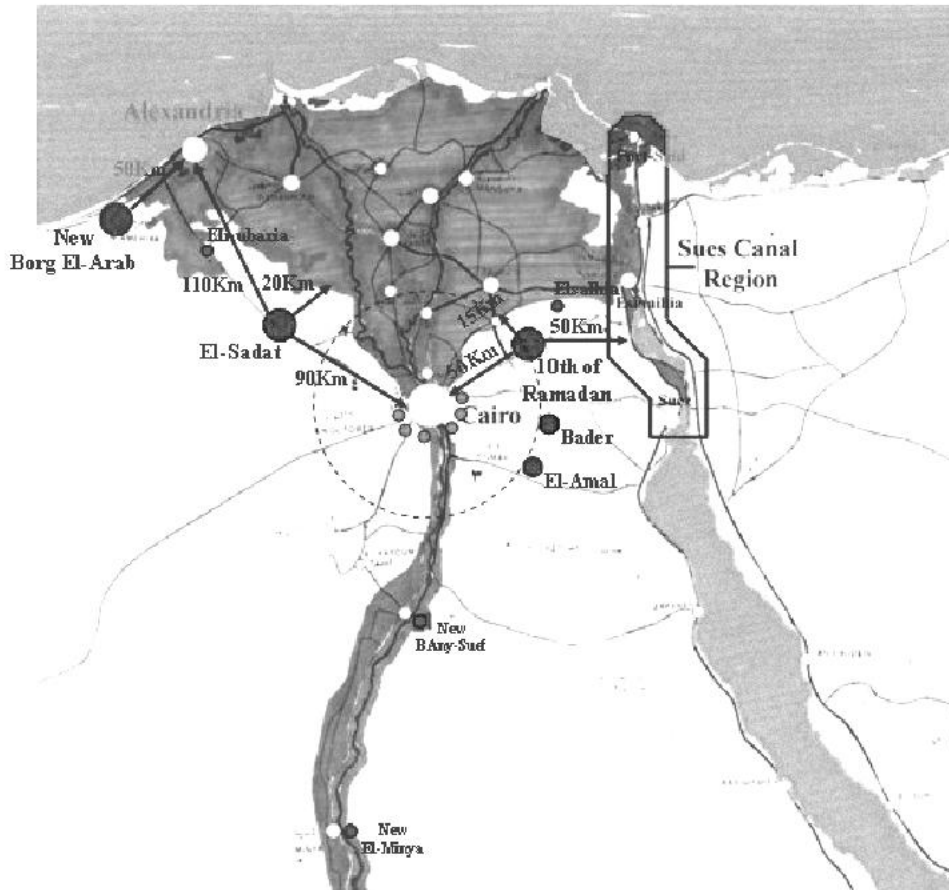
The location of the later group of new towns (1995 and after) were chosen to serve the needs of other regions.

It is interesting to notice that two of them (Alsalehia & Elnobaria with projected population of 100000 & 50000 inhabitants), were located at the fringes of two large agricultural reclamation areas to the west and the east of the Delta , so as to act as service centers as well as to develop agro –industries. The rate of development of those two cities is extremely slow, both in attracting population and industry. It seems that the

relatively low yield of the newly reclaimed land has limited the needs of population to within their villages and thus reducing their reliance on regional centers.

Nine new towns followed, they were planned adjacent to regional capitals with target population sizes ranging from 35000 to 120000 inhabitants

Figure (3) stages of development of the new towns programs



If compared to the British and French experiences, three things could be noticed.

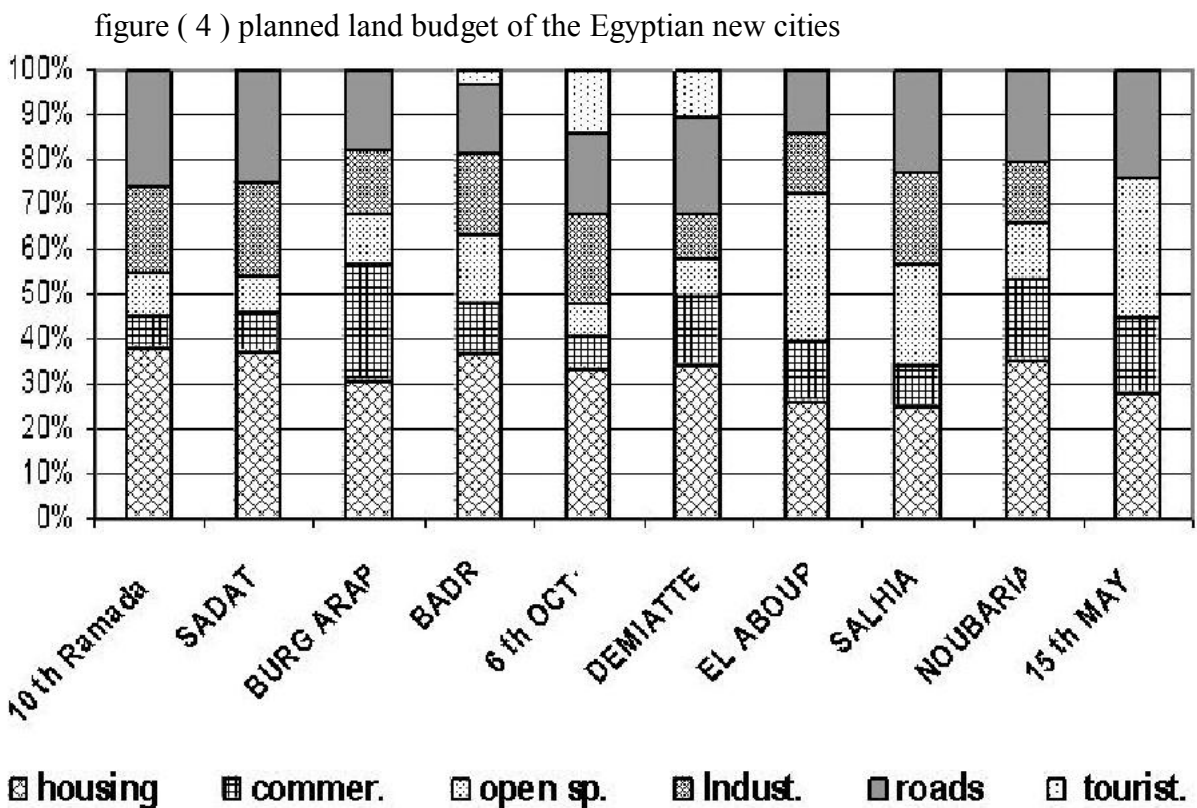
- Distance from the capitals was quite similar for satellites (10 – 20 kms) and 50 – 60 kms for larger cities.
- Sizes were tremendously larger, 500000 inhabitants in the case of Egypt(against 50-100 thousand in other experiences). This was due to the fact that Egypt has a much higher rate of population growth, higher polarization and more critical environmental and traffic problems.
- It may be noticed that the Egyptian planning studies relied on rank size distribution theory in an attempt to balance the primacy of the capital and to correct (according to that theory) the pattern of Egyptian urban system (which in fact required a size of over 2 millions to achieve such a balance according to that theory).
- The sites of the Egyptian new towns were chosen in uninhabited desert land and were not based on existing small settlements as their nuclei (cases of Britain & France).
- The separation between the new towns in France and Britain and the capital was attained by the use of green belts. In the case of Egypt, as the area in between was desert, a green belt around the new towns was planned with a width of around one kilometer. (in reality it was left vacant).
- Egyptian new cities were managed centrally and not by partially independent local bodies for each new town in those other European experiences.

Planning approaches and methodologies :

All Egyptian new towns & cities have adopted the master planning approach and followed almost the same methodology, which was run briefly as follows :

- a- Site investigations (topography, hazards of floods, climate,), local and regional resources .
 - b- study of possible sources of supplying the new towns with infra structure.
 - c- Economic base studies were performed exploiting the various location potentialities within the context of regional & national needs & resources.
 - d- Employment projections were carried out for the various sectors, including the service sector.
 - e- Sizes of the various income groups determined & their housing & other needs determined.
 - f- Using international standards of services, densities, modified at adhoc bases, land budgets were determined for the various uses (figure 4)
 - g- A number of alternative structural plans proposed. The chosen alternative is then developed into a master plan.
 - h- Finally the plan is costed, phased and implementation processes recommended.
- e- All those stages as well as execution and land allocation sales as well as management centrally by the general organization of new communities.
The plans.

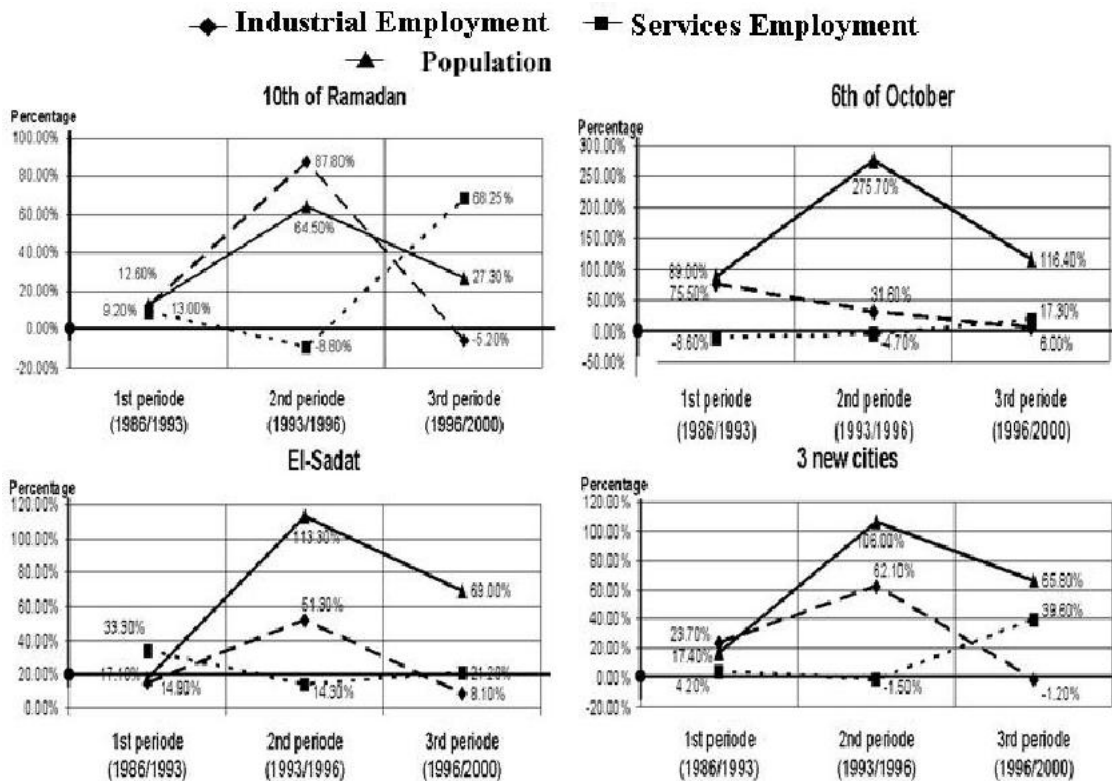
Most plans adopted a linear urban form that allows, growth for all elements of the city in proportionate & linear manner.



IV – Current status :

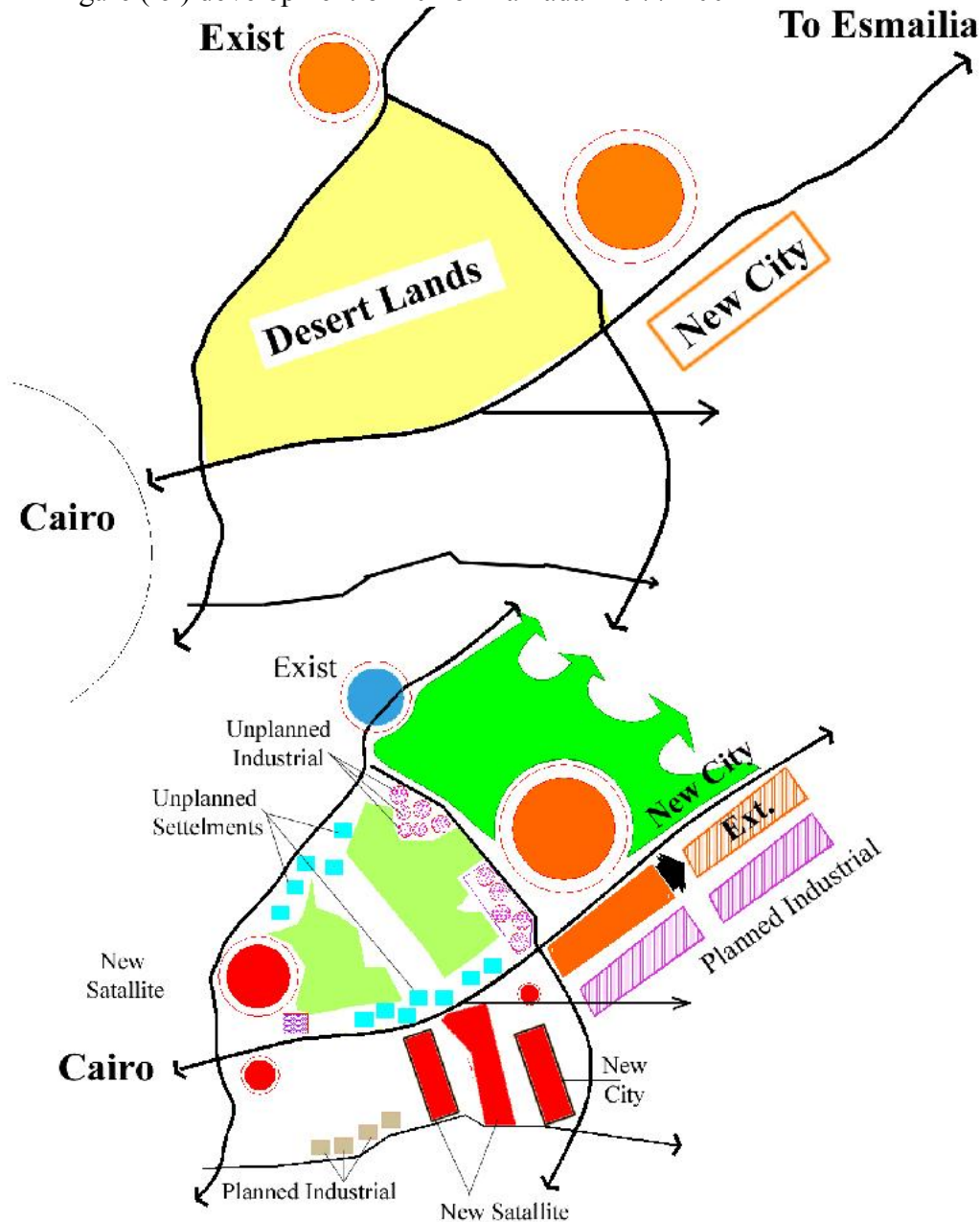
- Although the total target population of the 22 towns and cities built or currently under construction was projected to reach 9.6 million inhabitants by 2005, current official population estimates (March 2005) is only 1.7 million inh. (actual figure is believed to be less than 1 million).
- Total area of the 22 new towns and cities according to the original plan was 120000 acres (500 kilometer 2). One third of those town were re-planned with extended areas. Today the area totals 283000 acres (i.e. more than doubled. with over all final gross density of 35 p \ acres . and net density in housing areas of 70 P \ acres.
- Gross area supplied with infrastructure exceed 100000 acres. This is almost 80% of the original plan.
- Total government investment up to end of 2004 mounted to 21 billion Egyptian pounds (about 3.5 billions US \$) 75 % of which on infrastructure and 25% on housing. (345.000 thousand housing units were built).
- Individuals and other corporations & companiesetc have built another 245000 units – thus total number of available housing units is 590000units.
- More than 60% of those housing units are vacant, and 80% of the serviced housing plots are still un-built .
- On the brighter side , however; industrial development was successful (due to subsidized land and exemptions from custom duties and taxes for 10 years).2935 factories are in operation , total investment reached 23 billion LE with 285000 jobs. Extra 1740 factories are under construction with proportionate investment and employments opportunities
- Almost 10 new universities are in operation in the satellites around Cairo together with a number of large recreational projects.
- The rate of growth of employment in the industrial sector, service sector and population (see figures 5) which shows the higher rate of the first and the slower rate of the later two.

Figure (5) annual rates of growth of industrial and service employment and population



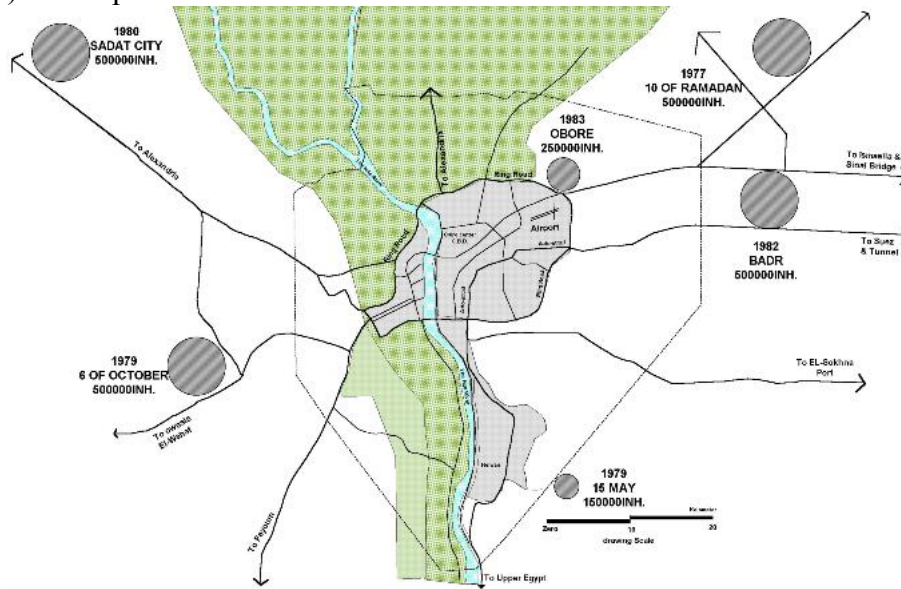
- Workers living in new towns and cities are less than 10% of the labor force employed and the rest commute daily to near-by urban centers . On other hand ,residents of the new towns and cities (medium and high income groups) commute in the opposite direction as they work and use the services of the nearby urban centers.
- It may also be noticed that un-planned developments occurred, both public and private ,in the areas between most new towns and existing inhabited land and near by cities ⁴, as illustrated in the cases of 10th of Ramadan city (figs 6).
- Also growth around Cairo has been dramatic the addition of new satellites, and expansion of existing one was lastly and hastily followed with a government decision to amalgamate those settlements together or with earlier satellites to form three huge agglomerations on the east, south and west of greater Cairo with target population of more than 3 millions each .

Figure (6) development of 10th of Ramadan 1977-2004

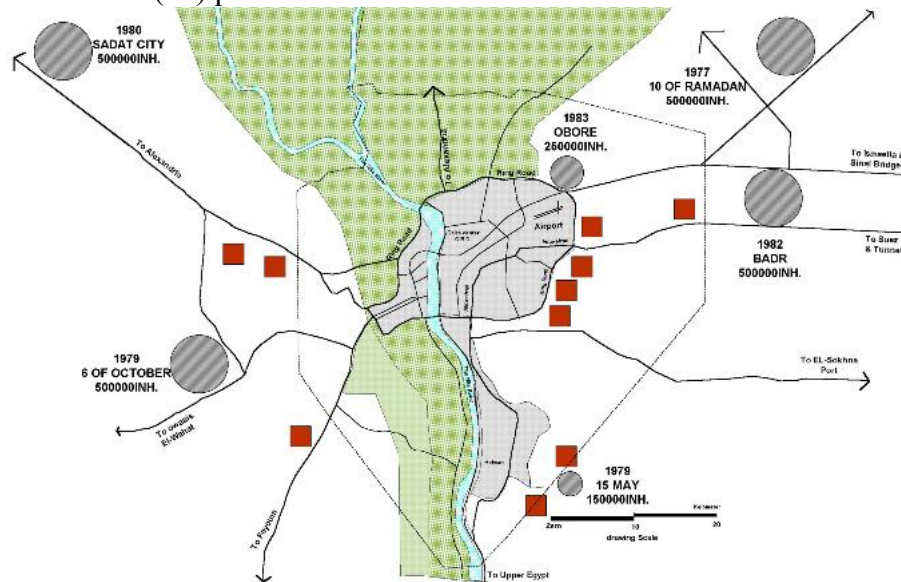


⁴ Wadia, Hala , M.P. Thesis “ urban expansion around new cities” – Faculty of Regional and Urban Planning – Cairo university - 2001

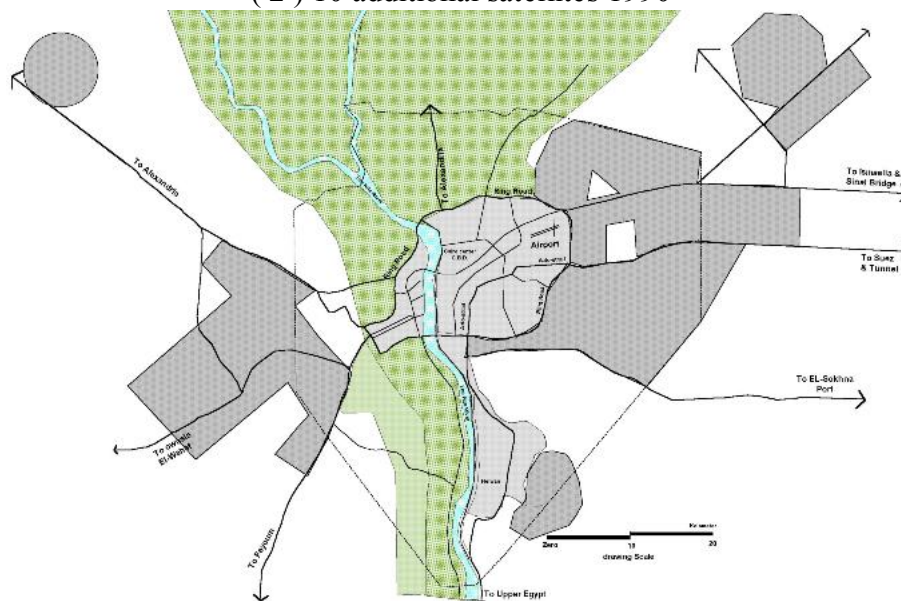
Figure (7) development of new towns around Cairo



(1) planned new cities and towns around Cairo



(2) 10 additional satellites 1990



(3) Huge cities 2000 – 2005

VI-Evaluation:

First a brief evaluation of the performance of the program is carried out against its declared objectives of 1982 (refer to sec II of this paper):

:-

- 1- *Saving agriculture lands*; with 21 cities built over 25 years of the program there has been negligible effects on saving agriculture lands. As mentioned earlier , the country lost 20% of its arable lands for informal sprawl in the same period. The saved land may be equal to less than 1 to 2% of the agricultural land, which would have other wise been used for the industry and other operating facilities in new cities.
- 2- *Reducing the pressures on Cairo and its primacy*. With the increased integration of new towns in Cairo built-up area the opposite has occurred . Cairo population has increased at a higher rate and also its primacy index. The magnitude of the environmental, traffic problems.... Etc. has increased.
- 3- *Economic Growth rate*; The huge unutilized public investment in infrastructure & housing together with the tied down, unutilized private investment (land and housing units) had definitely negative effects on the rate of growth of the economy .In spite of fact that 25% of the industrial production of Egypt is coming today from the new cities
- 4- *Inequalities among regions* has not been reduced.

Those results were due to two groups of factors , as have been indicated in a number of recent studies .

- **Implementation factors**, namely management and incorrect decisions.⁵ The management of the program was performed and controlled by the General Authority Of New Communities , a body dominated by engineers & physical planners and financed by loans from the central bank of investment which the Authority has to repay (with law interest rate). The concern to repay concern has obliged that Authority to become a real estate developer ,pursuing profitable demand sectors. Land was developed nearer to Cairo where it would be easier to sell to speculators . The Authority has also spread its limited resources simultaneously on a larger number of new cities in response to political decisions.
- **Factors related to theories and spatial planning approaches**: It must be stated right away that certain simple paradigm of the 1980th and earlier seem to be valid in the case of Egypt :-
 - the shorter the distance .(other things being equal) of the new settlements to the large city the higher the probability of successful and rabid development.
 - Concentration , offers more opportunity of economic success and is more efficient for industry and development in general. Or as Mera has found as early as 1973 in his study of 46 developing nations , that there is a direct correlation between the rate of development and the relative size of the primate city
 - There is a high element of risk of absorbing new satellites in the urban built up area of larger cities of developing countries.
 - The paradigm of cities with economic self containment; The Egyptian experience has shown clearly that this is un-attainable. As suggested by many scholars that the complication of the industrial processes, its vertical and horizontal linkages and in a

⁵ - Dediery , Dalia ‘ New cities and urban management in Egypt – 2004 – Al-Ahram book (197)

globalize world, it requires larger markets and agglomerations of people , industries, ... for a city to compete with similar cities⁶.

- The second assumption that may be discussed here, is that stated in the preferred strategy of NUPS study (mentioned earlier). “It is possible to achieve more efficient spatial distribution of population and activities around existing cities by creating a number of satellites separated by open green belts from the main city.”. This solution assumes a high level of ability to control and manage urban development (as the case of Britain and France). An assumption that did not take neither the realities of management abilities nor the political conditions of Egypt .
- It seems now that the proposal of NUPS at the early 1980’s to create a counter development pole (Suez as its nuclei) would have had a higher opportunity of success and would have posed lower level of threats to the spatial and economic scenes of Egypt.

CONCLUDING REMARKS:

After reviewing the Egyptian experience of new cities, few conclusions may be drawn:

- Although satellite towns are more relevant and less costly, they have to be organized and their growth managed & controlled properly together with those areas separating them from the cities they serve . New forms of spatial relationships are needed to combine efficiency and orderly development. Could it be a continuous form of settlements arranged in a corridor ?
- Independent cities are highly unattainable, smaller new towns that have existing settlements as their nucleus are likely to be more suitable for a developing country such as Egypt
- Adopting more rational approaches to planning and infrastructure standards is a must if the new cities programme to continue within the context of developing countries.
- Adopting ‘strategic’ or ‘incremental planning’ approaches and methodologies instead of master plans may be more efficient in meeting the ever changing conditions of developing countries.
- Lastly, and indeed most crucial , is to have a more efficient management and for planners to properly estimate the threats of both possible poor management and the interference of political decisions when proposing strategies and plans for new towns.

⁶ - Abu Zekry, Tarek – Ahmed Yousry – Elkholy- (Various separate papers)