THE EGYPTIAN NEW SETTLEMENTS, A CRITICAL REVIEW WITH SPECIAL REFERENCE TO ADOPTED HOUSING POLICIES.

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INTRODUCTION
The development of new settlements on desert land outside the Nile Valley occupied a prime place in the Egyptian Government's Key policies and priority list since the mid-seventies until now. The new settlement policy was thought of as an effective measure to control the unprecedented sprawl of existing cities encroaching the invaluable agricultural land on one hand, and to restore balance to the ailing urban structure on the other.

Extensive comprehensive studies, covering the various aspects of development were carried out and completed for each of the new settlements by Egyptian or joint teams (local & foreign), under the auspices of the Ministry of Development and New Communities, Egypt. The New Settlements varied in size, location, roles & functions and economic bases. The settlements are currently in different phases of development. The initial growth stages of some are completed while others are at earlier phases of implementation. This provides an excellent opportunity for critical review and assessment and in turn allows for developing and improving adopted policies.

The comparative analysis of the completed stages of development and the Master Planning proposals clearly indicates many deviations and discrepancies including the following:

- The development of industrial areas in most of the new settlements has been effectively implemented according to the planned schedules (and in some cases ahead of the programmes). Furthermore the development has not been confined to the completion of building fabrics and infrastructure but also comprises mobilisation and actual production.
- The labour force in the completed factories, who were thought of as the early settlers, are still commuting to the new settlements from neighbouring existing and rural areas.
- Thousands of completed housing units, built by the government agencies, are still vacant to date.
- In general the development of housing areas is lagging behind schedule.

This calls for a careful and in-depth investigation. It is justifiable to point out the fact that there exists an imbalance between industrial development and the provision of job opportunities on one hand and the effective settling of workers in newly developed housing areas in new settlements, on the other.

This paper will address the indicated imbalance in new settlement development through an attempt to point out the likely causes, means of restoring balance and approaches to modify and readjust adopted policies.

The paper falls into three consecutive sections, progressively allowing the achievement of the stated purpose, these are:

Section 1: An overview of Egyptian new settlements and Communities experience, highlighting its features and accomplishments.

Section 2: Focuses on the oldest of the new settlements: the 10th of Ramadan, where the initial phase of development is almost complete and hence serves as a suitable case study combining the merits and shortcomings of adopted housing policies.

Section 3: Puts forward a set of guidelines for housing policies in new settlements.

1. THE EGYPTIAN NEW SETTLEMENTS EXPERIENCE - AN OVERVIEW
The Egyptian New Settlements experience is among the most ambitious in Third World countries in terms of numbers, size and implementation programme, (at the present time some twelve major settlements with population targets of the order of 250,000 to 500,000 are simultaneously developed outside the densely populated Nile Valley - these do not include ten new settlements in G. Cairo Region with a total population target of 2.5 million).

The goals and objectives behind the development of the new Egyptian settlements may be summarised as follows:-
(see also M.O.D., Egypt (5))
- To create new effective growth poles to alleviate the burdens on the existing urban structure and its components.
- To support and enhance the national economy through the development of effective economic bases, boosting production and providing job opportunities.
- To effectively solve the complex problem of urbanisation and population explosion.
- To improve the living standards in urban areas, existing and new.
- To encourage development outside the traditionally inhabited fertile strip.
- To protect the limited agricultural land from the unrestricted growth of urban areas and related land uses.

The Egyptian new settlements were developed according to a comprehensive scenario defining the role, conception and objective for each of the new communities. Accordingly these may be broadly classified into four groups, namely: (Figure 1 shows the spatial organisation of New Communities.)

- Independent (autonomous) cities, i.e. 10th Ramadan, Sadat New City & New Ameriyah city.
- Greater Cairo Region new cities, i.e. 6th October N.C., 15th May N.C., El Obour N.C. & Badr N.C.
- Satellite Cities (integrated settlements), i.e. New Menia City & New BeniSweef City.
- Special Nature Cities, i.e. New Damietta city, New Salehiya City & Noubariya N.C.

Table 1. summarises key information of the most important of the Egyptian new settlements. It comprises vital data on: target and first stage population, economic base mix, present status as regards development and implementation together with its designation according to the conception objectives classification presented above.

Figures 1 & 2, jointly complete the synoptic presentation of the major new settlements in Egypt.

Fig. 1 shows the location of the key new settlements while Figure 2 highlights the main features of the physical plans for some of the new communities.

Now the scale and the implementation of the new settlements policy has been outlined it is necessary to look more closely into one of the new settlements in order to define the related development problems and the effectiveness of the adopted policies with an emphasis on housing.

The 10th of Ramadan new city is the best suited for the purpose, being the oldest and the most advanced in terms of implementation and development activities. The initial growth phase is completed and work in the second phase is underway. Another justification for its selection is the availability of two monitoring studies covering the major features of the development experience and pointing out shortcomings as well as merits, (10) & (3).

<table>
<thead>
<tr>
<th>SETTLEMENT</th>
<th>Designation</th>
<th>Economic Base</th>
<th>Present Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th RAMADAN CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAZAT NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW AMERIYAH CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th OCTOBER NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15th MAY NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW SALEHIYA CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRAO NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAMIETTA NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOUBARIYA NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MENIA NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BANI SWEF NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EL-OBOUR NEW CITY</td>
<td>Autonomous</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. New settlements, Egypt - selected features
Fig. 1. New settlements, Egypt - spatial distribution
<table>
<thead>
<tr>
<th>10th Ramadan Location</th>
<th>10th Ramadan Master Plan</th>
<th>10th Ramadan 1st Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAHAT NEW CITY</strong></td>
<td><strong>NEW AMERIYAH CITY</strong></td>
<td><strong>6TH OCTOBER NEW CITY</strong></td>
</tr>
<tr>
<td><strong>BODA NEW CITY</strong></td>
<td><strong>EL-DOOOUR NEW CITY</strong></td>
<td><strong>MENIA NEW CITY</strong></td>
</tr>
<tr>
<td><strong>DAMIEH NEW CITY</strong></td>
<td><strong>NOUBARIYA NEW CITY</strong></td>
<td><strong>NEW SAEHIAH NEW CITY</strong></td>
</tr>
</tbody>
</table>

Fig. 2. New settlements, Egypt - physical plan concepts and selected features
2. THE TENTH OF RAMADAN - AN EGYPTIAN NEW SETTLEMENT - A PROFILE WITH EMPHASIS ON HOUSING POLICIES

The 10th of Ramadan New City is located on Cairo-Ismailia desert road, some 60 km from Cairo, Fig. 2. The city’s target population is of the order of half a million. The envisaged economic base is mainly industrial (as well as the inevitable service sector). Implementation started in 1977, concentrating on the industrial areas and the first phase of the city which is to accommodate 150,000. The plans and related studies of the city were jointly completed by Egyptian and Swedish consulting teams, COPA (1). The Swedish group (SWECO) was later commissioned to undertake a critical investigation of the development programme and implementation of the plan of 10th Ramadan. The final report was completed in 1982, (10). It comprised existing conditions, growth rates and features together with proposals for effective development.

The 10th of Ramadan together with another three pioneering settlements were also the subject of another critical investigation (3), that was published four years later, January, 1987. The purpose of the comparative study was to analyse the development plans and to point out problems and deviations.

The two studies reached similar conclusions and agreed on key problem areas, in the remaining part of this section.

2.1 10th Ramadan, Development Plan, 1982

- The “SWECO” Investigation & Report (10).

The evaluation and monitoring study, SWECO (10), commended the rate and efficiency of development of the new settlement and highlighted the following facets of the project:

- In 1982, 23 factories providing 1800 job opportunities were operating - with 50 more factories (10,000 job opportunities) under construction. The industrial development was in line with the proposed schedules and implementation plans.
- Only 3200 persons settled in 10th Ramadan (in 1982).
- A mere 30% of the industrial workers settled while the rest were commuting.
- The house units built by the government totalled 3600 units - 30% of which are for rent, 30% for sale/ownership the rest had yet to be allocated. Forty percent of the sold units were vacant.
- The sold housing land (plots) was mostly undeveloped, at the time of the survey.

The report suggested the following reasons for the indicated deficiencies in housing development:

- The government built housing units are mostly beyond the ability to pay of the concerned socio-income demand groups, i.e. industrial workers.
- Very few core houses were built and site and service projects were frozen. In spite of the proposals of the Master plan, housing study, stressing the importance of adopting the development of site and service together with core-housing schemes.
- The completed housing units as well as housing parcels were auctioned nationwide, and hence sold to those who had cash rather than the actual or prospective settlers. A situation that allows land speculation and hinders effective development of housing and general urban areas.

2.2 10th RAMADAN “1986” The Proposed Versus Implemented

As indicated earlier, the 10th of Ramadan settlement was the focus of another investigation (3) into new settlement implementation with emphasis on the gap between proposals and development plans on one hand and their realisation on the other hand. The study, which was also sponsored by the Ministry of Development and New Communities looked into three new settlements together with 10th Ramadan and pointed out problems, shortcomings and potentials for effective development, (3).

The 10th of Ramadan the Study also pinpointed similar findings to those outlined in the earlier monitoring study by SWECO (10), topmost among these are the following:

- The operating factories totalled some 193 providing 16500 job opportunities.
- The permanent settlers reached a mere 8111 persons, instead of the planned target of 100,000 persons.
- The completed housing units were of the order of 6265, another 770 housing units were at the final stages of completion and a huge stock of 4857 units were under construction (providing ready accommodation for nearly 60,000 population).

The study reiterated the causes pointed out in the preceding investigation, including the affordability gap between the supplied units’ rents or costs and the potential demand group’s ability to pay.

The study also stressed the inadequacy of the allocation policy manifested in the large number of vacant housing units (yet to be allocated). The added problem of closed and unused housing units owned by non settlers was also pinpointed.

Some positive changes regarding allocation policies were indicated, these include favouring the local labour force in the allocation procedure and the provision of subsidised rents and cooperative loans for the limited income demand groups.

2.3 Adopted Housing Related Problems

It is justifiable at this stage to conclude that the distorted growth of the new settlements is mainly due to two sets of problems; economic and organisational.

The economic problems are related to the gap separating the provided units (costs and features) from the prospective users and demand groups (ability to pay and real needs).

The organisational problems are the product of poor information systems (in terms of adequacy, comprehensiveness and updating mechanism) on one hand and the Organisational and Managerial structure and procedures of the development agencies. Means of facing the above problems, bearing in mind the development context and its limitations were proposed by the authors in a number of pub-
of published studies and planning reports, (2), (7), (9). In the concluding section of this work a set of selected proposals to combat the indicated deficiencies in housing development in Egyptian (and arguably, Third World) new settlements, are briefly outlined.

3 SELECTED GUIDELINES FOR APPROPRIATE HOUSING POLICIES IN NEW SETTLEMENTS.

3.1 On Economic Aspects
The adopted and implemented housing policies in Egyptian new settlements were based on the belief and conception of the housing units as a "product" and the government and its agencies as "producers". This resulted in a stereotypical scenario of: completed and finished flats organised in walk-ups (apartment blocks). Cost reduction in this scenario was achieved through: the reduction of the areas of the housing units (regardless of the number of occupants or family size) and/or lowering the standards of the house units and environs. Both means were of limited effect on cost reduction. Cost reduction can be achieved more effectively through other scenarios of development that combine minimum initial costs and flexible and incremental growth - which may be applied in parcellisation as well as public housing schemes. Such scenarios accept the effective roles of the users which is manifested in the informal sector's developments as well as in housing areas in existing Egyptian cities, Nasamat (7).

Gradual completion of house units may be achieved through the following two scenarios:

- Externally finished apartment blocks with internally unfinished flats (this may result in reducing the per square metre cost by up to 30% or more).
  
  (This approach was adopted by the Ministry of Development and New Communities, Egypt since mid 1987; as a result of a pilot study and design manual by the authors. (6)).

- Externally finished ground floor (two floors or part of) of row houses developed on separate plots, and unfinished interiors.

The understanding of the delicate relations between the costs of dwellings, the users income and affordability to pay in housing and the financial determinants is crucial for the effective implementation of the above scenarios.

Figure 3: comprising a chart (8) and a three segmented table, effectively highlights the details of the approach to closely and effectively links: the annual family income, government loans related to family income (the Egyptian Government provides cooperative loans for low income families of up to 8000 - 10000 Egyptian pounds, 20-30 years duration and a 4% interest rate), the annual repayments and the loans as a multiple of the annual family income.

Figure 3, also shows the case of a low income family with 1500 Egyptian pounds annual income as an example (a typical case from the 10th Ramadan N.C. monitoring study (10)).

The example clearly indicates that, with the help of limited family savings and the Government loan a number of options as regard the type and conditions of affordable dwellings are open to the family within the stated annual income.

The options range from semi finished to finished flats in walkups to incrementally developed single family dwellings on separate plots.

3.2 Organisational Aspects
Organisational aspects represent by far the most serious challenge as in essence it means the efficient management and dynamic manipulation of resources to achieve the declared objectives.

In the Egyptians new settlements development activities and implementation responsibilities are shared between three bodies in a hierarchal structure, i.e. the Ministry of Development, the Organisation for New Communities and the new settlement development agency.

Though the latter enjoys reasonable autonomy, most of the decisions are made at the higher levels (with housing development scenarios included). The effective organisation of housing development thus depends in the first place on decentralisation and the efficiency of the development agency in managing the housing process.

Means of improving the vitality and efficiency of the development agencies were pointed out in many reports, see for example El Obour Study (2) & (4). These include the following:

- The availability of a comprehensive and dynamic information system covering the various aspects of development, e.g. population profiles labour force, settlers, commuters, etc. on one hand and details of housing stock of the other.

- Effective use of the updated information in monitoring and readjustment of housing development policies and supply strategies.

- Dissemination of information towards prospective settlers within and outside the settlement.

- Effective publicity, local and nationwide, as regard: housing supply, allocation scenarios, incentives, loans, technical support and assistance for house owners... etc.

AN EPILOGUE
The Egyptian new settlements experience is ambitious and resourceful. Its fruits, in spite of the context's limitations, began to show and to effectively play a positive role in the country's development drive. The deficiencies and shortcomings of some of its aspects should always be evaluated within the framework of the colossal plan to reshape the country's socio-economic and physical structures.

Monitoring development is as critical to the process as plan formulation and the definition of appropriate policies, accordingly, is by far the most serious task facing developing nations in their drive to achieve development goals.
**Fig. 3. Relationship between family income, possible loan and dwelling cost**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Plot Area</th>
<th>7.2x21</th>
<th>7.2x18</th>
<th>6x21</th>
<th>6x18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of plot</td>
<td></td>
<td>3020</td>
<td>2600</td>
<td>2520</td>
<td>2160</td>
</tr>
<tr>
<td>Plot + unfinished ground fl.</td>
<td></td>
<td>10520</td>
<td>9100</td>
<td>8820</td>
<td>7560</td>
</tr>
<tr>
<td>Plot + finished ground floor</td>
<td></td>
<td>14270</td>
<td>12350</td>
<td>11970</td>
<td>10260</td>
</tr>
<tr>
<td>Plot + two unfinished floors</td>
<td></td>
<td>18020</td>
<td>15600</td>
<td>15120</td>
<td>12960</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Condition</th>
<th>Flat Area</th>
<th>90 m²</th>
<th>75 m²</th>
<th>60 m²</th>
<th>45 m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi finished flat</td>
<td></td>
<td>10800</td>
<td>9000</td>
<td>7200</td>
<td>5400</td>
</tr>
<tr>
<td>Finished flat</td>
<td></td>
<td>15300</td>
<td>12750</td>
<td>10200</td>
<td>7990</td>
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<table>
<thead>
<tr>
<th>Annual Income</th>
<th>Loan</th>
<th>Savings</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>1000 to 2000 LE</td>
<td>6750</td>
<td>.........</td>
<td>6750</td>
</tr>
<tr>
<td>(average 1500 LE)</td>
<td>6750</td>
<td>1500</td>
<td>8250</td>
</tr>
<tr>
<td>Loan = 1500x4.5 = 6750 LE</td>
<td>6750</td>
<td>3000</td>
<td>9750</td>
</tr>
<tr>
<td></td>
<td>6750</td>
<td>4500</td>
<td>11250</td>
</tr>
</tbody>
</table>

Capital cost as a multiple of annual household income