

## INTRODUCTION

The total population of Egypt now amounts to approximately 23 millions. Of this total 70% live in the rural areas and of these 70% are engaged in agriculture.

During the last half century the population has doubled having increased at the rate of about 400,000 per year. The area of the cultivated land, on the other hand, has been increased only by about 20%. The present total area of cultivated land is about 5.5 million feddans <sup>(1)</sup>, and the possibilities of reclaiming land are strictly limited being dependant on the water resources of the Nile.

The out-put per worker from the cultivated land is still far less than that in many other countries <sup>(2)</sup>. On the other hand, the yield per feddan is high in the Nile Delta, but in view of the large numbers engaged, (by reason of the population pressure and dependence on primitive agricultural methods), the per capita production is low. The rural density of population in the Nile Delta is about 1,400 persons to the square mile. This great and continuously increasing pressure on the land is the major obstacle to attain the high productivity which could be achieved by the application of mechanization to agriculture and the consolidation of the fragmented holdings of the cultivated land. (See appendix 2).

In addition to the basic problem, the rural areas are beset by other problems of <sup>a</sup> social nature - illiteracy and ill-health. Many proposals and schemes are now being implemented to deal with these problems both in <sup>the</sup> educational and <sup>i</sup>hygienic spheres, as well as in the main field of economic development. These schemes however, have been conceived on a somewhat piecemeal basis, in the absence of

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- (1) A feddan approximates closely to the English acre being 1.038 acres. *See Appx 1.*
- (2) The average out-put per head amounts to one third of a ton of wheat as compared with an average out-put of 2 tons per head in Western Europe and one ton per head in the countries of East Europe. The productivity of the British Farmer is 2.66 times that of the Egyptian.

any overall regional plan of the area. The need for such a plan is becoming increasingly apparent, and it is the purpose of this thesis to examine the foundations on which such a plan should be established in order to secure the maximum benefit.

From the point of view of rural life generally, there are no major differences between the various rural parts of the country; therefore, any conclusion drawn from a study of the Delta area would be, to a very large extent, also valid in other rural parts of the country. The Delta area, however, being the largest of Egypt's agricultural regions and the most intensively developed, offers the greatest scope for examining the common problems at their maximum intensity.

The major rural problem of the Nile Delta is not the poor housing conditions nor the low standard of living so much as the great pressure being put on the cultivated land through overpopulation. Any projects for combating disease, illiteracy or poverty will be in the end defeated if the problem of overpopulation is not overcome.

The solution of the problem is made especially difficult by reason of the fact that, in attempting to remove certain consequent social ills, a vicious circle can be established all too readily. The successful combating of poverty disease and illiteracy will reduce the rate of mortality and consequently increase the number of population which is the main problem. This might be offset to some extent by a reduction in the birth rate as a result of consequent changes in social standards, but in its turn - in the case of Egypt - the value of any such slowing down of population growth would be insufficient to enable the expansion of cultivated land to keep pace even with the reduced rate of growth <sup>(1)</sup>. Consequently other measures are necessary if the population is to survive.

It has been thought that industrialization together with agricultural expansion to the limits possible through control of the Nile waters might solve the problem. But will this really suffice to meet this problem which is daily becoming more acute?

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(1) The rate of growth of the cultivated land is about  $\frac{1}{3}\%$  and of the cropped area is about  $\frac{1}{4}\%$  of the rate of growth in population and which is about 2.5%

And even if these two policies were sufficient to meet population growth, would they, in themselves, bring about an adequate reformation of rural life and of rural settlement pattern and structure? These are the questions to be answered before a unified and comprehensive policy for the rural parts of the country can be framed. Furthermore, in attempting to frame such a policy it must be remembered that the present rural structure in the Nile Delta has continued almost unchanged for thousands of years and is based on age-old traditions, many of which are even now still passionately cherished. Any future changes must, therefore, be conceived in this context with all the care and consideration of the human side of the problem which the conditions demand.

The present limitations on agricultural production in Egypt today coupled with the pressure of population on the economic resources of the country are giving rise to a problem which is becoming daily more acute. Besides horizontal expansion in the cultivated land, it is essential at the same time to start on some vertical schemes (1) for increasing the productivity of the present cultivated area to produce the most it can yield in the most economical manner. Such vertical reform generally gives quick results at relatively low cost particularly if it is applied not only to the existing cultivated land but also to any land reclaimed under a horizontal scheme.

Combination of crops, fertilization, and irrigation are the main characteristics of Egyptian cultivation. The yield of the land is very high in spite of methods which are uneconomical as compared with European standards; the implements are out-of-date, and the human labour is wasted on an incredible scale. But these very primitive methods have produced a very stable kind of cultivation and have contributed considerably towards keeping great numbers of the rural population in the villages. This is a fact which mechanization cannot easily challenge.

Rural industries, on the other hand are in a very poor state and need immediate reconstruction. They are of special importance because they constitute the focal points in the process of the changing structure of rural settlements. In spite of their primitive methods they introduce a new spirit into the village;

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(1) By means of improving soil qualities, using selected seeds, improving drainage, and consolidating the fragmented holdings which dominates the rural areas.

the spirit of the machine, of modern commerce, and of co-operation on a broad basis. Yet this problem can be solved only within the larger framework of rebirth of the whole country. 'It is especially closely linked up with the rejuvenation of agriculture and village life, so much that a separate development is not feasible.' (1)

The population problem remains a very acute danger for Egypt. It is not only one of reducing but of gradually redistributing the population if any new reclaimed land becomes available. It has been suggested that the problem can best be met by some form of population control (e.g. birth control) as raising land productivity will be a mere palliative if the population continues to grow. Another measure which has been considered is that of immigration to such countries as the underpopulated neighbouring Arab states. But such a measure involves social as well as political implications which cannot be resolved unless greater unity between the Arab nations is achieved. It seems that the only refuge for the excess in population are the great Egyptian deserts.

Although the problems of rural Egypt are cultural and hygienic as well as economical, the economic problem must always be given prior consideration. The procedure of development must be run on parallel lines representing the three aspects of (a) economy, (b) culture and (c) health, drawn against time and resources.

The Egyptian Region of the United Arab Republic now embarked upon an important phase of economic reconstruction under three major schemes. The first is that of industrialization which will absorb half a million workers over a period of five years and is to be followed up by a second five year industrialization plan starting in 1963. The second main scheme is that of the High Dam near Aswan, which is due to be completed in ten years time from now. This project will help in the reclamation of about two million feddans in the Nile Deltas as well as providing perennial irrigation for another 700,000 feddans in Upper Egypt. The third scheme is that of the 'New Valley' which is designed

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(1) E.A. Gutkind: 'The Revolution of Environment.' London 1946. page 266.

to link up the existing oases in the Western Desert as starting points towards creating another valley starting from a point about 300 kilometres west of Aswan the various oases serving as radiating points from which an area of some 3 million feddans could be cultivated from underground waters. These long-term schemes and others in the field of rural reconstruction will eventually affect the rural structure of the country, and the Nile Delta in particular. Owing to the present lack of any organised surveying and planning activities on a regional bases in the areas, it has been necessary to collate all available information on existing conditions in the Delta and its implications, in order to discover the foundations on which a regional planning system might be built.

The approach to this study is based on a general outline of the country as a whole from the physical and the economic points of view. The rural land uses in the Nile Delta are then examined together with the physical social and the economic determinants. This is followed by a brief account of the national policy for rural reconstruction particularly the agricultural policy and the Land Reform measures. The effects of mechanization and the limitation of its application <sup>to</sup> ~~in the~~ Egyptian agriculture are also discussed. The present scheme for industrialization is examined with regard to its effects on the rural structure of the country. The problems resulting from the existing land tenure system and the effects of land fragmentation on agricultural production are also given relatively detailed consideration in this study. It was also found necessary to examine the question of the consolidation of holdings together with the possibilities of its application and its implications in regard to the rural structure.

It was impossible to examine in detail the existing conditions in the whole of the Nile Delta region, but a comprehensive regional survey has been carried out in a typical rural district in the Delta in order to secure a representative picture of the rural conditions. In the course of the study it was found necessary to divide this district into several planning units as a suitable basis for a planning system in the rural area. A typical rural settlement together with its cultivated land was then examined in further detail to get to the roots of the problem. The possibility of applying a new planning method, derived from these studies is then demonstrated.

Naturally, this is not the end but the beginning of a new approach towards planning rural land uses in the Nile Delta. More is still to be learned from research not only in the economic and the social fields, but also in other fields such as rural housing and building materials. Only when such studies are completed will it be possible to put forward proposals for a comprehensive planning system and the establishment of reliable standards for the future development of the rural areas of Egypt.