

- 3) The plan for the development of problematic regions ought to be based on policy-orientated forecasts since plans based on present trends would only tend to reinforce existing directions.
- 4) A methodology for the preparation of policy-orientated population targets has been developed during the formulation of the Plan for the Distribution of the Population in Israel. The plan's major strategy is to develop peripheral regions while simultaneously regulating spontaneous growth in the center.

*** Note**

M. Garon : "The Israel Distribution of the Population Plan — a Basic Methodology to Bridge between Reality as against Ideal." Environmental Planning 26, The Israeli Association for Environmental Planning Quarterly December 1979 (Hebrew).

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An Approach To Data-Processing For Agricultural Areas

The common soil classification for agricultural purposes is, essentially, semi-quantitative and quasi-intuitive. The use of computers, as suggested in this paper, causes a breakthrough in the approach. The machine helps in collection and storage of relevant soil and environment data, in their analysis and graphic display. Also, the machine may help in finding decisive, inter-related properties of the soil and ecosystem. Such relationships were found in western Israel, e.g. :

$$AS = 14.17 - 0.24 \times Z - 0.003 \times M + 0.05 \times PR$$

where AS is the rockiness (%)

Z is the depth of the soil (cm)

M is the exposure of the site (north-south, in angles),
and PR is the precipitation (mm)

Use of stable isotopes in soil survey is proposed.

- A map of sub-regions and urban centers, graded according to priorities, to serve as a guideline for development.
- Regionalized statistical data to facilitate planning and monitoring.
- Government agency development plans prepared in coordination with the Population Distribution Plan.
- Regional index to the Annual State Budget.
- District governmental organization headed by an elected or appointed official having its own budget with authority to allocate development funds.

B. Regulations in Central Regions

Policy

- Non-encouragement of public investments in basic economic branches in central regions.
- Continuation and strengthening of the policy of the preservation of agricultural land, especially in the central coastal plain.
- Leasing of government owned lands for development should conform a "map of priorities" which shows areas for development.
- The construction of public housing in the central districts must conform with the population targets of the Population Distribution Plan.

Means and Instruments

- Local Outline Schemes which regulate all buildings and developments are prepared according to the population targets of the Population Distribution Plan and deviating schemes are not approved.
- No agricultural land is to be approved for building housing or industry in the central districts.
- Every outline scheme in the central districts is to include development stages through which certain areas will be frozen for residential building pending the preparation of detailed plans.

Summary

- 1) Population targets as a basis for development are of utmost importance, not only in calculating the need for facilities and infrastructure, but more so for the planning of integrated regional development complexes for employment, housing and social amenities.
- 2) Population targets can be an effective means for coordinating an agreed development strategy and for ensuring a balanced implementation by various bodies working in the area.

which are innovations, at least for Israel. A description of some of the main means of implementation follows.

Ways and Means of Implementing the Population Distribution Plan for Developing Peripheral Regions

The ways and means for the implementation of the Population Distribution Plan were formulated according to the basic strategy that the development of the peripheral regions is conversely linked to the, at least partial regulation of the spontaneous growth of the central regions. The ways and means, therefore, outlined below are arranged into two categories — those that are directly concerned with the development of peripheral regions and those that are concerned with the regulation of unplanned development in the central areas.

A. The Development of Peripheral Regions Policy

- The development of the regional and local infrastructure should be preferred over the improvement of the connection of the region to the center of the country. Attention must be paid to the direction of desired “flows”.
- On the development of industrial infrastructures, there must be an effort to achieve horizontal integration within the region rather than strengthening ties with the dominant center. Therefore, it is not enough to build industrial estates, but the feeder industries and services should be located in the development region as well as to utilize the advantages of proximity. Examples of such services would be banks, communications, commerce, warehouses for spare parts and workshops.
- Housing units, their types and size should be adapted to existing and forecast family size, taking into account the existing stock. Preference must be given to solving the housing problems of the young generation.
- Government sponsored industries should be located almost exclusively in the development regions.
- Public trusts and funds should give preference to development districts.

Means and Instruments

- Agreed upon boundaries of the development districts as a means to coordinate regional development plans.

The Scheme proposed somewhat substantial shifts between the central and peripheral districts which are hoped to be reached principally by reducing the intensity of the net out-migration from the peripheral districts to the central ones. The basic assumption is that by implementing steps of economic, physical and social nature, it would be possible to absorb the natural increase of the periphery — *in situ* and perhaps even attract some migrants from the center. Through this strategy, it would be possible to achieve the plan's population targets. This approach deviates from that of the earlier plans which were implemented by settling new immigrants directly from the ports to the development areas.

As mentioned above, in order to determine population targets which could be both optimistic yet feasible, it was vital to formulate a methodology which could bridge the gap between goals and reality. Such a methodology was prepared by the planner of the "Seven Million" plan.

The methodology is based on several integrated analyses which define a numerical range within which the planner can make his policy decision determining the exact population targets. The analyses included in the methodology are — 1) trend analysis of past growth; 2) natural increase; 3) capacity of urban settlements according to local master plans; 4) scoring the economic, social and physical potential; 5) scoring policy priority. The sum of the local population targets must equal the pre-determined district and sub-district targets. In order to reach an equilibrium between the district population targets initially fixed by estimating the degree of change feasible to expect and the sum of the local population targets fixed by the five analyses, an integrative process of mutual correction is initiated whose end result gives the Population Dispersal Scheme. As with any policy plan, minor alterations are administered as a result of negotiation with relevant government ministries and public bodies.

The test of a plan of this sort is, of course, in its implementation. The purpose of the Population Distribution Scheme is not to possess a legal or statistical document but to guide the actual regional and national development. As stated before, population plans in the past have been at least partially successful, having influenced the degree of regional development if not determining it. The recent plan includes a list of means and instruments, many of which were adopted from earlier plans and present implementation policies, but some of

The Recent Plan for the Distribution of the Population — the “Seven Million” Plan

The most recent National Plans for the Distribution of the Population were formulated under somewhat different conditions than the earlier ones. The greater part of the population increment in Israel is now from natural increase and not through immigration. The private economic sector is much stronger than it was in the 1950s and 60s and despite the great improvements in the peripheral regions, the main metropolitan area is still attractive. As a result, changes have taken place in the Plans for the Distribution of the Population as well as in the means for their implementation. To illustrate these points we will describe the latest scheme — “The Seven Million Plan” which has recently been approved by the National Board for Planning and Building, and will shortly be presented to the Cabinet for final statutory approval.

The National Plan sets population targets for each of the six districts and fifteen sub-districts and of some one hundred urban settlements for the Country when the total population is forecast to reach seven million inhabitants. The “Seven Million” Plan adopts the center / periphery approach to regional development whereby the three “peripheral” districts are to be the objects of greater governmental efforts than the three “central” districts. The plan calls for the following population shifts over the forthcoming decades :

POPULATION DISTRICTS — %

Districts	1983	Target Year
Periphery		
North	16.3	22.0
Jerusalem	12.0	13.4
South	12.0	14.7
Sum Periphery	40.3	50.1
Center		
Center	20.8	17.6
Haifa	14.2	14.4
Tel Aviv	24.7	17.9
Sum Center	59.7	49.9
Total	100.0	100.0
Sum pop. (thous.)	4,064.7	7,032.0

and more recently the "Five Million Plan" approved by the Cabinet in 1975 and the "Seven Million Plan" in the process of being approved.

The plans for the Distribution of the Population were long-range and comprehensive. They were policy-orientated and some of the earlier ones almost ignored trends. Their implementation was greatly facilitated, no doubt, by the fact that during the 1950s and early 1960s, most of the population growth of the country was due to massive immigration of mainly under-privileged people who were obliged to accept housing and employment provided by the government and public institutions. The means of implementing the National Plan for the Dispersal of the Population was through the provision of the immigrant housing and employment in the development areas. The plan implementation was therefore achieved by close cooperation between the Planning Department, who drew up the National Plan, and the Housing Authority and others, who implemented it. The results were more than modest. Some 30 new towns were established during the 50s and early 60s, most of them in the peripheral areas of the country. A shift was brought about between the percentage of the population living in peripheral districts vis-a-vis the central ones. In 1950, only 20% of the country's population lived in the peripheral almost 35% and at present over 40%. Outstanding was the growth of the Southern District (Negev) in which less than 1% of the total population resided in 1950 and in which 12% live today.

POPULATION IN DISTRICTS — %

DISTRICATS	1950	1953	1965	1983
PERIPHERY				
North	8	16.5	15.7	16.3
Jerusalem	11.5	9.4	8.5	12
South	0.7	4.4	10.5	12
Sum PERIPHERY	20.2	30.4	34.7	40.3
CENTER				
Center	16	20.9	18.2	20.8
Haifa	20	17	16.5	14.2
Tel-Aviv	43.8	31.7	30.7	24.7
Sum CENTER	79.8	69.6	65.3	59.7
Sum TOTAL (%)	100.0	100.0	100.0	100.0
Sum POPULATION (Thou.)	930.13	1,669.4	2,598.4	4,064.7

Comment : some alterations were made in the district boundaries over the years.

are formulated. These targets can be either forecast based on existing or past trends or they can be policy-orientated projections designed to alter the existing directions. Obviously, if plans are based on existing trends, the very implementation of those plans could tend to strengthen those trends. For example, in an area of decreasing population, a development plan for trend based population target would propose less employment, housing and services which, in turn, would bring about further population loss. Only if the planners and developers wish to reinforce the existing directions, should they base their projects on these types of forecasts. However, since the majority of development strategies are designed for under-developed and problematic regions, characterized by negative growth, by all logic, the population targets for such regions cannot be based on the existing trends; rather, they must be policy-orientated or usually larger than the trend forecasts. On the other hand, policy forecasts must present achievable targets if waste of funds and under-utilized investments are to be avoided. The problem of the formulation of population targets is clearly one of finding the *via media* between trend forecasts and over optimism of what changes can be incurred. Therefore, a methodology is needed which can aid in the formulation of population targets based, on the one hand, on policy considerations but which take into account trends and constraints on the other hand. A methodology of this sort has been developed by the planner engaged in the formulation of population dispersal schemes in Israel.

Population Targets and Regional Development — the Israeli Case

The Israeli experience can, perhaps, illustrate the case and point to the connection between population targets and development strategies. The State of Israel achieved a marked degree of success in its long-standing policy of "population dispersal" inaugurated shortly after the nation's independence in 1948. The policy, which has been guiding national and regional planning to this day, calls for the strengthening of the pericheral districts while reducing the rate of growth of the Tel-Aviv Metropolitan Area and environs located on the Central Coastal Plain.

The government development activities, notably in the housing and employment sectors, where usually guided by population targets fixed by the Planning Department within the framework of a National Plan for the Distribution of the Population. Such plans were prepared and revised in the years 1949, 1951, 1954, 1957, 1961, 1963

Population Targets and Development Strategies

Introduction

Regional development in practice progresses through implemented projects, which can be of economic, cultural or social nature. The development of a region has a direct effect on the size of its population, often through the mitigation of out-migration but also by the possible attraction of in-migration from neighboring regions.

Conversely, population targets set by the National or Regional Governments should influence the degree of regional development. This, of course, is under the basic assumption that the government controls, or at least influences, the allocation of development funds and that these funds are appropriated while taking into account the existing and projected populations of these areas in question.

Surprisingly, the importance of population targets as a basis for development is not always obvious to those engaged in development; however, it appears to be both ineffective and inefficient to calculate and plan facilities, such as water installations, power stations, roads, schools, libraries and infirmaries for an unknown future population. The more integrated development complexes for employment, housing and social amenities demand even more so, assumptions regarding the forecasted population, if we are to achieve a coordinated development strategy. For the sake of illustration, the planned development of a region would require that enough housing and communal services be provided for the additional population which is scheduled to be employed in a new industrial complex.

If all the sectoral plans are prepared and implemented by one authority, internal coordination could ensure an effective plan of action; however, since diverse bodies are usually engaged in planning and implementation, agreed regional population targets could serve to ensure coordinated development programmes. Each establishment could simply plan for a known (agreed upon) future population. Since problems of coordination are usually paramount, such an approach provides at least a partial promise for a solution.

If we accept the premise that population targets should serve as the basis for development strategies, we must then define how they