

IRAQ: DIFFUSION OF DEVELOPMENT AND DECENTRALISATION
OF THE PLANNING PROCESS

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THESIS ABSTRACT: Iraq: Diffusion of Development and Decentralisation²
of the Planning Process

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This thesis stems out of a dissatisfaction with the present polarized development in Iraq, in which the resultant pattern of out-migration from the rural areas and rapid urbanization focussed on Baghdad has increased the inequities between urban and rural areas. It has also required a greater dependency on imported technology and know-how from the West, thereby ensuring a continuing form of external and internal colonialism.

The approach followed attempts to look into policies for the diffusion rather than the concentration of development so as to ensure greater equalities and to establish a broader and self-sustaining indigenous base for development in the full sense of the word. Implicit in this is an emphasis on 'development from below', coupled with self-reliance and self-sufficiency. This thesis only looks into certain aspects of this vast subject pertaining to rural developments and concentrates on agriculture and rural industry.

To be more explicit, the proposed policies concentrate on the use of intermediate technology and more locally appropriate and relevant education. It is by starting from the existing situation and levels of technology in Iraq, that the maximum number of people can benefit and not by simply transferring more sophisticated technology from the West. The latter is concentrated in location and benefits, does not take root, and soon becomes out of date or inoperative because of the lack of a supporting infrastructure.

These policies necessitate a decentralised planning process; that is, devolving power to the regions and localities while at the same time reducing the authority of Baghdad. This institutional aspect is perhaps the most difficult to study from a distance and is here presented in an embryonic form. In any case, the absolute necessity of local participation in planning (of both citizens and local organizations) renders the proposals of this thesis preliminary and of necessity inconclusive.

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In all cases, the reader should not hold any of the above responsible for any errors of fact, structure, or forms of interpretation for which I, alone, may be found guilty.

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1 - INTRODUCTION: POSING THE PROBLEM

Development in Iraq is characterised by its polarity. Since the early 1950's, the country has suffered from massive migration to Baghdad, the primate city. This migration has been mainly at the expense of the rural areas, denuding them of their most able inhabitants, and simultaneously involving considerable cost to the urban communities. A glance at a map or almost any of the statistics in Part 1, illustrates Baghdad's role as the overwhelming radial centre of social and economic development in Iraq. The end product is reflected in a real difference in the quality and style of living between the main urban centres and the rural areas.

This thesis looks into means of stemming this polarity and diffusing the benefits of development. Its premise is that much greater emphasis or priority should be placed on creating jobs (in both agriculture and industry) and improving amenities in the countryside. Urban pressure would thereby be lessened through a reduction in migration to the cities. Income disparities between urban and rural areas would be narrowed, and the focus of development would be on the rural poor, who have to date received few of the benefits of social and economic development over the past quarter of a century. The investment requirements will be less in rural areas, not only because costs are lower, but also because standards are more aligned to and can make greater use of local resources rather than being based on 'higher' foreign standards, which implies the use of imported goods and services. Furthermore, with this diffusion of development in rural areas, emphasis is placed on self-reliance, and the use of local labor and know-how.

We shall discuss in Part 1 the present bias of urbanization trends to Baghdad in which the costs of relocation of migrants are not sufficiently taken into account. Also, industry is not charged the full social costs of their operations and benefit from economies of scale at the expense of the lower-income rural population. Above all, the concentration of political power at the centre produces the present favored position of Baghdad in receiving the lion's share of all investments. It is well to note at this point that the suggested diffusion of benefits and devolution of policy-making call for some very radical changes.

Dualism between the 'traditional' agricultural sector in rural areas and the so-called 'modern' industrial sector in urban areas increased and became a trend in Iraq with the initiation of development planning in 1951. The plans soon began to place emphasis on high rates of economic growth based on industrialization, which created rapid urbanization and the associated inequities (both between and within regions). Cumulative investment has taken place mainly in the most prosperous areas, that is, Baghdad, and to a lesser extent, Basra and Mosul, where the returns and potential growth rates are highest, and where the major benefits are realized.

In Iraq, to date, 55% of the population are employed in agriculture, and this is where the primary problem lies; but this sector remains substantially untouched and even negatively affected* by these planning policies

*Before industrialization took precedence, Iraq was self-sufficient in agriculture, but for a number of years now it has been a sizeable importer of agricultural produce. There can be few excuses, for the country has a remarkably good agricultural potential, with a present population of just over 10 million. Although the population growth rate is particularly high by global standards, (close to 3.5%), it should be remembered that the country (historically known as Mesopotamia), is thought to have supported up to 25 or 30 million people.

and techniques borrowed from the West, for they have a selective bias towards investment in the modern sector. That is, the aggregate economic objective of higher per capita income, (which is not nearly as significant a datum in underdeveloped countries as it is in the rich industrial countries, where it is still insufficient) ignores qualitative and institutional changes which are an essential feature of development, and has taken precedence over social considerations of equitable distribution. The assumption of an aggregate objective function conceals far more than it reveals, and in any event, there is not a single objective function, rather there are a complicated mixture of goals. This approach represents a sad distortion of what development is conceived to be. As far back as 1949, Schumpeter described it in terms of a diffusion of successive waves of innovation in function (economic, social, cultural and institutional) in geographic space.*

This schism between physical, economic, and social factors in planning in most developing countries can be traced historically from the West's early days of development planning. Thus, with the great upsurge of industrialization in Europe in the late 19th and early 20th centuries, there was little time to reflect on the negative spatial consequences. The social consequences had, in fact, been the subject of criticism well before the mid-19th century, when the serious drawbacks of the growth process, particularly for some social groups, began to be perceived. Long term problems in physical planning only began to be seriously studied with Ebenezer Howard's 'garden city' movement in England early in this century in which

*See T. Hermansen in A. Kuklinski (ed.), Growth Poles and Growth Centres, Netherlands, Mouton and Co., 1972.

the demand was for physical order, environmental amenity..., leading to static physical determinism, which generally overlooked local resources and equity considerations. Economic planning on the other hand, was geared to greater rates of growth of income per capita, balance of payments, etc., in the short term. It is only fairly recently that regional aspects, concerning the spatial distribution of people and activities (particularly industry) and welfare implications began to merit official consideration (although regionalism as a concept goes back at least to Patrick Geddes in the late 19th century). Social planning, or rather social science (since the attempt to produce anything like a social plan has yet to take place) responded to disruptions and stresses accompanying physical and economic policies, but it was rarely considered an indivisible aspect of them.

The outcome is that each planning function (physical, economic and social) evolved separately in response to particular problems at different times. The problems studied and solved were not generally seen as so many aspects of one and the same central problem.* Implicit in this evolution were organizational structures which embodied this separation of tasks. Similarly, planning education was carried out in different institutes using different tools, methods, and indeed, languages not directly communicable to each other. As a result, the three basic planning disciplines address different and often conflicting goals. Even in the USSR, although Marxist theory basically integrates the social, economic and political aspects, the end result is generally uncoordinated. The idea of integrating physical, economic and social planning has a long and unsuccessful history. To

*Again, exceptions can be found as in the case of Patrick Geddes.

attempt an explicit remedy is well beyond the scope of this thesis, however such integration is clearly implicit in the approach, policies and processes evolved.

This fragmented and divisive planning process inherited in its entirety in Iraq and other developing countries, is quite definitely not in the best interests of overall or spread development in Iraq. The conflicts in time and space between physical, economic, and social goals cannot, as is often the case, be simply stated as being either external (as between the economic objective of maximizing GNP and the social objective of achieving equity) or internal (as between primary, secondary, and tertiary aspects or within any one of them), for in reality there are strong links between both. All compete for the same resources, and any selection based on quantifiable measurement on its own is misleading, and tends to favor the modern sector. For example, cost/benefit analysis or shadow pricing techniques must be carefully and cautiously used, if at all, for important qualitative aspects which are difficult to measure are omitted, and any comparisons are generally based on Western standards. The question that must be asked is 'benefits to whom'? The primary emphasis of this thesis is given to the poor majority in rural areas, and not the elite few in the urban areas, and this, as is discussed in Part 2, is not possible by the grafting, (however skillfully done) of foreign techniques and sophisticated technology. Not only does this not serve the development objective in Iraq, but it also increases dualism and dependency.

Development in Iraq can only truly succeed if carried forward as a broadly based movement of reconstruction, concentrating on the rural areas

and rural power, with primary emphasis on self-reliance and self-sufficiency. Anything less must end in failure. In the words of Albert Camus, "real generosity towards the future lies in giving all to the present".* In this, the need is for more appropriate types of technology and education suitable to the needs of specific areas and towards a lowering of the priority given to economic growth as opposed to social objectives. When it comes to getting practical results, local perspectives and biases not only count but are essential for satisfactory implementation.

The process advocated requires a shift away from the preparation of vast planning documents, towards an approach concerned with execution taking place primarily at the lower levels. In Part 3, this study suggests means of moving away from the abstractions of national development planning in Baghdad, to one where the people affected help in making and executing policies, that is, at the local and regional level. However, the necessary local and regional organizations cannot be left in isolation from the national planning and political levels, and therefore, their interrelationships or integration are also explicitly considered (in Part 3).

Tackling these issues for development in Iraq from such a distance, with the inevitable dearth of specific information, is bound to have considerable limitations from several points of view. However, this thesis is intended to be an initial working document, and not solely an academic essay, from which more specific and detailed proposals for local areas may evolve in the near future. It should not be forgotten that the call for wider citizen participation in policymaking renders it a matter of principle that these proposals are regarded as no more than initial guidelines.

*A. Camus, The Rebel, Vintage Books, N.Y., 1957, p. 304

PART 1

PRESENT POLICIES, INEQUITIES, AND PLANNING PHILOSOPHIES

2 - PRESENT POLICIES AND INTER AND INTRA-REGIONAL INEQUITIES

Part 1 describes the present planning policies and processes in Iraq and sets the context for the proposed rural development policies and decentralized planning process described in Parts 2 and 3. This chapter examines the existing development policies and the resulting inter and intra-regional inequities. Its principal aim is to determine real differences in income and 'quality of life' between people in the different geographic and ethnic regions, and in urban and rural areas. The extreme polarity of development in Iraq focussed on Baghdad soon becomes evident. Not only does this adversely affect other regions and particularly the rural areas, but due to the country's cultural diversity it also by-passes certain ethnic peoples.

The discussion then focusses on the polarity of population distribution located mainly in Baghdad, at the expense of the rural areas followed by the imbalances and inequities between and within the principal productive sectors, namely agriculture and industry. The dualistic picture is completed with an examination of the gross maldistribution of education and health facilities and the chapter concludes with the basic objectives and priorities for development that emerge from the earlier discussion.

2.1 CULTURES AND NATURAL ENVIRONMENT: DIVERSITY

Iraq is fortunate in the wide diversity of its natural environment and cultures. There are four primary geo-physical regions*:

- the rugged mountain regions of the North and North East,

*See Lord Salter, The Development of Iraq, The Development Board, Baghdad, 1955, p. 189.

which can be subdivided into the higher mountain areas, the forests of the mountainous slopes, and the grasslands of the northern plateaux;

- the great deserts in the West and South West (Badia al Shimaliya and Janubiya), and the Jazira Desert (between the Tigris and Euphrates in the North West);
- the alluvial plains of the Centre and South, composed of silt deposits from the two rivers;
- the marshlands in the extreme South.

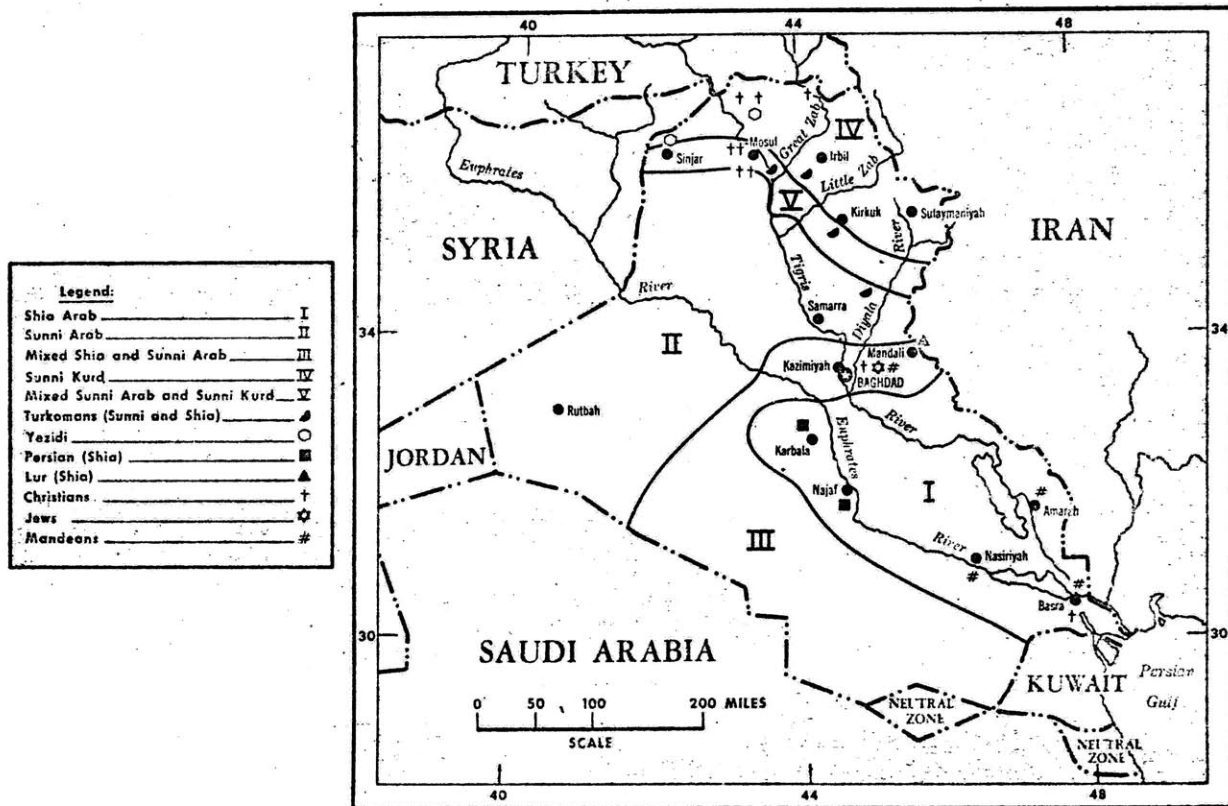
Cultural diversity is equally rich, mainly comprising Arabs (urban/rural, beduin, and marsh) and Kurds, with small Turkoman and Assyrian minorities. Map 1 (which only gives an approximation), shows the geographical location of the different cultures and sects. The present polarization of development in Iraq is taking place at the expense of the Shi'a Arabs in the South, and the Sunni Kurds in the North (as will become clear later). An important tenet of this thesis is that only diffused or decentralized development will ensure more even benefits for all the culturally diverse peoples of Iraq.

2.2 URBAN AND RURAL POPULATION DISTRIBUTION AND GROWTH: POLARITY

As in most parts of the world, the population of Iraq has historically been located in varying proportions:

- on good agricultural land;
- along the rivers and other major transportation routes;
- and in major cities, particularly those with high level economic and social capital (e.g., schools, clinics, etc.)

MAP 1
GEOGRAPHIC DISTRIBUTION OF ETHNIC AND RELIGIOUS COMMUNITIES IN IRAQ



Source: Harvey Smith et al, Area Handbook for Iraq, American University of Washington D.C., 1971, p. 58.

The country's population is estimated at 10.4 millions in 1973, with some 63 percent* being nominally urban, but this represents considerable exaggeration.** This high rate of urbanization does not indicate high levels of development, rather it is the consequence of specific policies to which this thesis is adamantly opposed. A glance at Map 2*** illustrates the extreme and increasing population polarity, with the Baghdad region assuming absurd proportions (over 25 percent of total population), mainly at the expense of the lagging regions. A more spatially specific distribution can be seen in Map A1 in Appendix 1, showing 1965 population density by districts (sub-regions). The settlement pattern is similarly polarized, ranging from a predominance of large urban centres, to very small rural towns and villages. Some 90 percent of the rural population live in villages from 200-2,000 population distributed in over 14,000 villages.**** In between these two extremes there is a corresponding scarcity of medium-sized settlements.***** All this is essentially a manifestation of the

*See Table 1, Appendix 1.

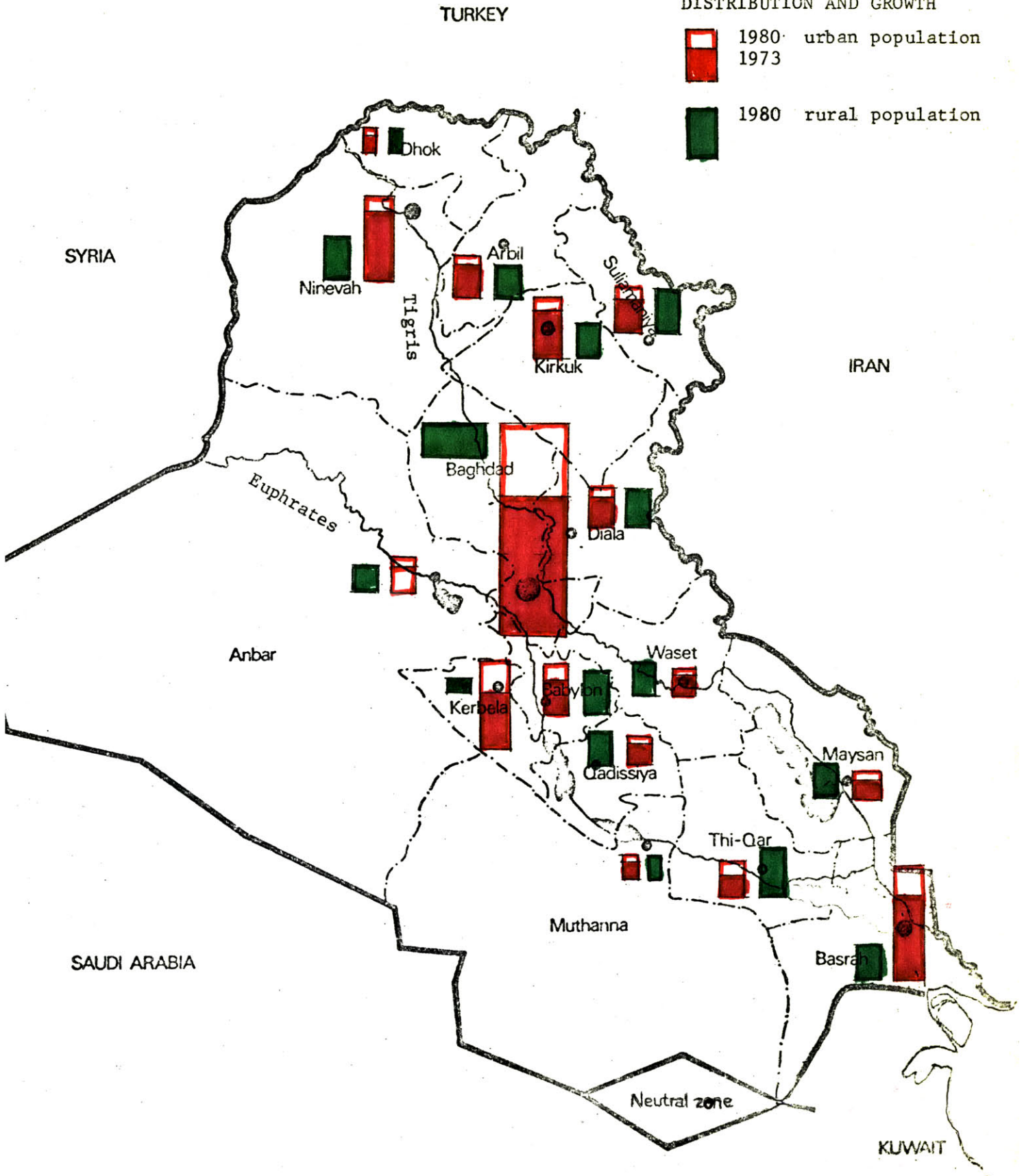
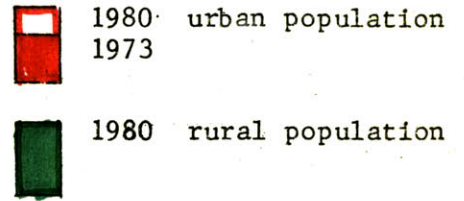
**From the very first census in 1947, to date, the urban population in Iraq has been defined as the population within municipal boundaries, and this has no correlation with the generally accepted UN definition of urban population as living in towns of over 20,000 population; for example, in mid-1967, the UN estimated Iraq's urban population (in towns over 20,000) at 45.7 percent (see UN Studies on Selected Development Problems in Various Countries in the Middle East, 1971, UN, N.Y., 1971, pp. 68-69.) whereas the Iraqi figures for 1965 are 52 percent urban.

***Derived from Table 1, Appendix 1. It should be borne in mind that the projections seem to have been derived by extending past trends, using the growth between 1965-1973 as a base.

****Al Dahiri, The Introduction of Technology into Traditional Societies and Economies, Al Ani Press, Baghdad, 1969, p. 69.

*****About 40 percent of the total population live in large urban centres (100,000+), the figure rising to 70 percent when applied to the urban population in the five Northern regions (Dhok, Nineveh, Arbil, Kirkuk, Sulei-maiya; see Appendix 2), while only 6.5 percent of the total population live in 8 cities with populations of 50,000-100,000.

PRESENT POPULATION DISTRIBUTION AND GROWTH



unevenness of development opportunity, commonly called dualism, which is the real problem in Iraq.

Internal migration has accounted for about 1/3 of this massive urban growth, typically flowing from rural areas and towns to large cities (rather than from rural areas to intermediate towns and then on to large cities). Some 60 percent of the total population increase between 1957-65 is estimated to have occurred in the 12 main cities.* Further confirmation comes from the 1957 census, which indicates the following percentages of population as having been born outside the respective regions:

Baghdad	28.9%	Kirkuk	9.1%	Arbil	4.4%
Basra	17.6%	Diwaniya	5.8%	Amara	3.2%
Kerbela	16.7%	(now Qadisiya)		(now Maysan)	
Kut	12.1%	Hilla	5.3%	Mosul	2.6%
(now Wasit)		(now Babylon)		Naisriya	2.3%
Ramadi	8.1%	Sulaimaniya	5.1%	(now Thi-Qar)	
(now Anbar)		Diayala	4.9%		

In Baghdad, over the same time span (1957-65), migration accounted for 5 percent of the population increase per annum out of a total annual growth of 8.3 percent.** It is well to note that a very sizeable proportion of unemployed or underemployed urban dwellers are very recent rural migrants living in 'sarifas' or shanty towns. According to the World Bank, 35 percent of Baghdad's population in 1970 was made up of recent migrants living in sarifas.*** Furthermore, most migrants con-

*UN International Social Development Review No. 1, 1968, UN, N.Y., p.63.

**See UN Studies on Selected Development Problems in Various Countries in the Middle East, 1971, UN, N.Y., 1971, pp. 70-71.

***World Bank, Urbanization, (Sector Working Paper), June 1972.

sider themselves as having moved permanently.* The four regions, Qadisya, Muthanna, Maysan, and Thi-Qar, worst hit by out-migration are in the South, followed by a fifth region, Wasit, also in the South. The policies to be outlined in this thesis aim to drastically curtail the growth of Baghdad by concentrating effort on developing some secondary urban centres, but more importantly, on agriculture and rural settlements which will not only reduce migration and the pressures on the large cities, but will also reduce dualism, and help the majority of the population, rather than the elite few.

2.3 AGRICULTURE AND INDUSTRY: IMBALANCE, INEQUITIES AND LACK OF COORDINATION

The Iraqi economy is dominated by the oil sector (primarily extraction) representing over 30 percent of the Gross Domestic Product (GDP), with agriculture following with 20 percent. The following figures for GDP in Iraq,** (at current factor cost) illustrate the relative evenness in its formation since 1953, in absolute terms:

	1953	1957	1961	1965	1969
Agriculture	22%	20%	19%	20%	19%
Oil	40%	27%	34%	35%	32%
Manufacture	6%	8%	10%	9%	9%
Other	32%	45%	37%	36%	40%

Gross National Product (GNP), (at current factor cost) grew from ID.265

*The most widely available index of non-permanent migration is the sex ratio between males and females. If men substantially outnumber women, then a part of the explanation lies in the presence of large numbers of bachelor migrants. This phenomenon is often associated with non-permanent migration. (See J.N. Nelson, Sojourners vs. New Urbanites, Unpublished paper) However, in Iraq, the figures indicate relative evenness in male/female ratios in both urban and rural areas.

**See A. Badre, "Economic Development of Iraq", in C. Cooper and S. Alexander (Ed), Economic Development and Population Growth in the Middle East, American Elsevier Pub. Co., N.Y., 1972, p. 305.

NB: The figures for 1957 are distorted because of interruptions in oil flow after the Suez crisis, and those for 1969 are from the 1970-74 National Development Plan, Ministry of Planning, Iraq, p. 117.

millions in 1953 to ID. 698 millions in 1965. This represents an annual growth rate of over 8 percent with the growth of real product (at constant factor cost), at 7 percent, being not much less because of relative price stability. These very high growth rates also appear when the oil sector is omitted.*

The concurrent employment distribution in the country between 1962-71 emphasizes the overwhelming importance of the agricultural sector in providing employment for over half of the labor force. This can be seen in the following table showing population employed by economic sectors (in '000s):**

Year	Agri- cult	Oil	Manu- fact.	Elec/ Water	Cons- truct.	Com- merce	Transp	Ser- vices	Others	Unem- ploy.	Labor Force
1962	827	12	130	12	50	110	117	255	215	110	1,838
1965	1,010	14	140	12	61	125	129	270	230	163	2,148
1968	1,254	15	146	13	66	140	140	290	260	135	2,458
1971	1,435	17	160	13	69	155	154	310	280	167	2,759
1974	1,770	17	208	16	96	179	169	710		-	3,166

For 1971 the employment distribution is about 55 percent in agriculture (includes some disguised unemployment), 0.6 percent in the very capital intensive oil industry, 6 percent in manufacturing, 31.4 percent in other sectors (includes some disguised unemployment) and 7 percent unemployed. The magnitude of the agricultural sector is quite clear. Interestingly enough, employment in agriculture rose from 45 percent in 1962 to 55 percent in 1971, however, if read with Table 1, Appendix 1, it would seem

*For an expanded viewpoint, see A. Badre, op. cit., p. 304.

**Central Statistics Organization, Abstract of Annual Statistics, Ministry of Planning, Baghdad, 1971 and 1974 figures from 1970-74 National Development Plan, op. cit., p. 173.

that most of this increase is located in urban areas in production related to agriculture. Another reason for this increase may be attributable to the distribution of land tenure, which could have the effect of inflating figures on agricultural employment.

The fact that agriculture employs over half the country's population, that is, almost ten times the employment in industry (combining oil and manufacturing), has not prevented the government, until very recently, from concentrating development in industry on the urban areas, to the detriment of agriculture and the rural areas. Although per capita income has been rising at consistently high rates, the gains have gone largely to the urban sector, and migrant labour while agricultural labour has hardly benefited. In fact, there seems to have been a slight decline in the standard of living in rural areas (as measured from 1934-61).*

Beyond this, the interdependence of agriculture and industry has been overlooked and is constantly obscured by the 'glamour' of industry. A dynamic agriculture requires an expanding off-farm market for its products. Furthermore, experience dictates that industry will not be able to progress beyond a rudimentary stage unless agriculture is helped to make great strides forward.** Thus the onus is primarily on agriculture. It is only in the very long term, as productivity greatly increases and agriculture

*J.L. Simmons, Agricultural Development in Iraq, St. Anthony's College, Oxford, 1965, p.2.

Determined that between 1934, (when the first FAO figures became available) and 1961, the rural population, with 5 million out of a total population of 7 million in 1961, suffered from a slight drop in their standard of living judging from grain equivalents, (a more accurate tool of measuring standards of living in rural areas).

**See G. Jones, The Role of Science and Technology in Developing Countries, Oxford University Press, p. 55.

becomes more efficient, that productive employment will increasingly have to be found in the manufacturing industry; but the mistake should not be made of equating such industry solely with major urban centres.

Policies that will reduce this dichotomy between the so-called modern and traditional sectors (the present emphasis being on the former), are outlined in this thesis. The proposed policies will by definition be contrary to the government's present approach (concentrating investment effort on the 'more productive sectors' to the neglect of agriculture), as expressed by policies to maximize National Income or GNP.* A more detailed look at the existing situation in agriculture and industry is quite revealing.

In the case of agriculture, a glance at Map 3 indicates that agricultural land covers almost all the inhabited areas, extending from (and including) the foothills of the North, to the Central and Southern alluvian plain.** However, agricultural growth has been found to be lagging behind population growth, part of the reason being because rural/agricultural areas are treated in considerable isolation from the rest of the economy. National planners (being primarily urban oriented) tend to identify economic development with industry. Industrial expansion is more

*UN, op. cit., p.4

The ratio of the National Income per worker in agriculture to the National Income per worker in other sectors is 0.3-0.5 in most developing countries (in Iraq, it is closer to the lower figure, but in Syria it is 0.52), while in most developed countries it is 0.6-0.8. It is this type of consideration that prompts the government to naively concentrate on the more 'productive sectors' (which maximize GNP) and neglect agriculture.

**According to the UN, in Popular Participation in Development: Emerging Trends in Community Development, UN, N.Y., 1971, p. 106, in Iraq there are 74,960 sq. km of arable land and 36,750 sq. km of irrigated land.

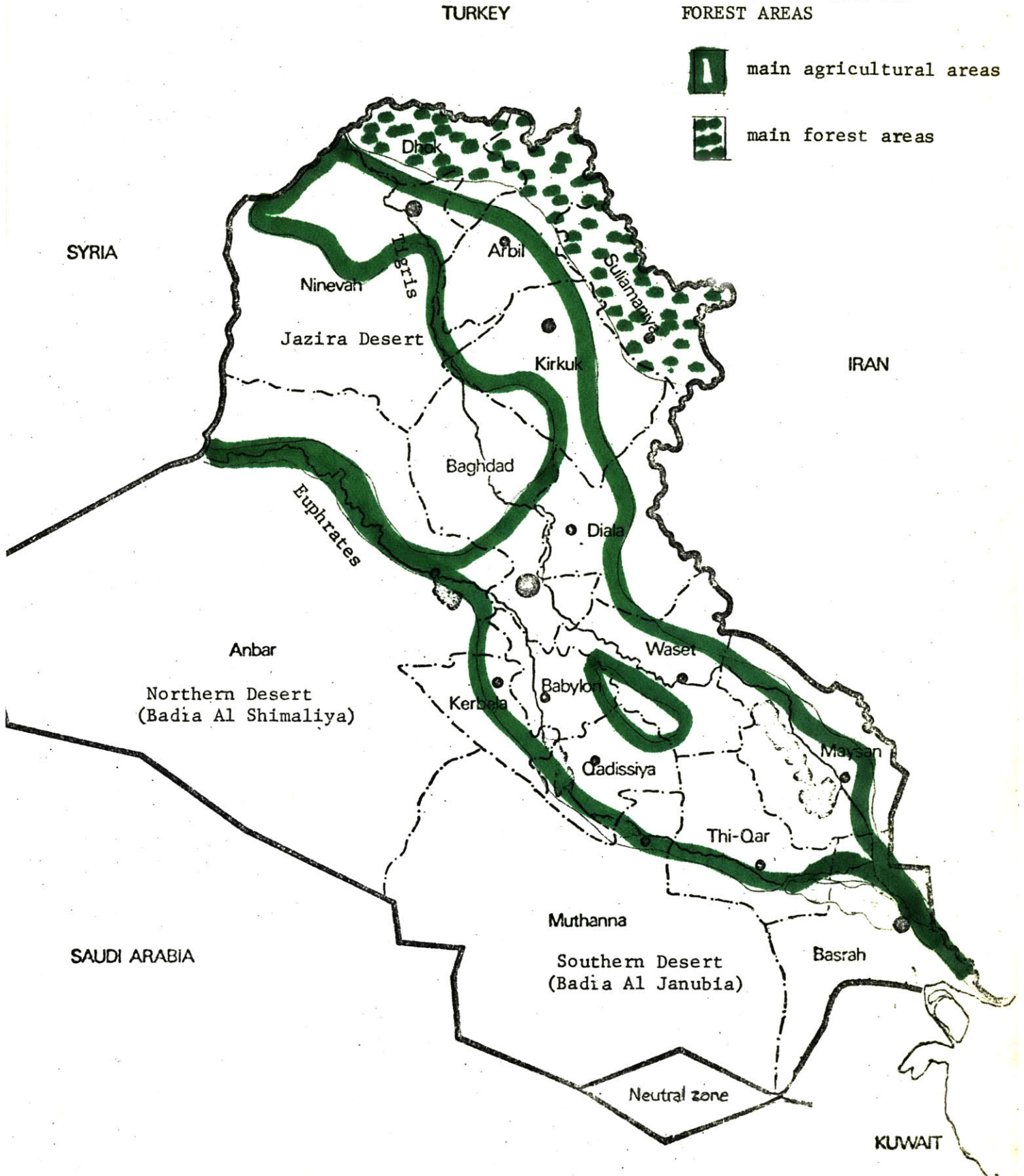
MAIN AGRICULTURAL AND FOREST AREAS



main agricultural areas



main forest areas



easily planned, financed and implemented than agricultural expansion. Furthermore, industry is more spatially concentrated and technically more controllable in its input-output relationships. In contrast, planning and implementing agricultural expansion under the present centralized system in Iraq is handicapped by its wide geographic dispersion, and its innumerable small family farms and cooperatives, all of which require decentralized management, which is difficult in the framework of the present system. Another handicap is the present inadequacy of infrastructure in rural areas.

Lagging agricultural development in Iraq can also be attributed to setbacks caused by bad management.* Management and organization problems were consistently underestimated. This is particularly evident in the land reform programme in which the transfer of ownership was not accompanied by much thought for alternative organization to take over certain critical functions (of the previous landlord). In fact, it was long felt that "...Land tenure is the human problem par excellence in Iraq. In one way or another, it lies behind most if not all social, economic and political problems of the country".** Belief in simplistic attitudes of this nature are a prime cause for the fact that to this day only the political goal of land reform (removing the old landlords) has been achieved in Iraq, and the social and economic problems remain, more or less as before. The cooperative movement in Iraq is relatively recent, emerging out of the

*J.L. Simmons, op. cit., p. 1.

**F. Qubain quoted in A. Al Nasrawi, The Philosophy of Economic Development in Pre and Post Revolutionary Iraq, Ohio State University, 1970.

agrarian reform law of 1958, which has been only partially implemented to date. Unfortunately, success has been limited, due to bad organization and inadequate financing* and lack of inter-departmental coordination, for to be successful, co-operatives require technical advice, funds, markets and administration, while the livestock and crops must be supplied with material and service inputs, irrigation, and drainage.** In short, to succeed, thoughtful and thorough policy-making is needed, but it will remain ineffective, however carefully thought out, if the policy is imposed from above. That is, the villagers' creative and active participation is needed at the earliest planning stages.

In the final analysis, this inability to formulate an effective co-operative theory and construct and initiate a realistic rural credit policy are both results of the present overcentralized administrative structure in Iraq.*** Furthermore, if the agricultural administration, (Ministry of Agriculture and Agrarian Reform) is reviewed, the staff are found to owe their position to their academic ability, (which mainly trains to analyze and not to administer), and not to their administrative capa-

*UN, op. cit., p. 218.

The extremely low level of credit can be seen in the slow expansion of the number of co-operatives from 271 to 501 between 1964 and 1968, and accommodating 29,000 and 62,000 people respectively, yet receiving only ID. 79,000 and ID. 197,350 respectively.

**C. Nader and A. Zahlan (Ed), Science and Technology in Developing Countries, Cambridge University Press, 1969, p. 90; p. 15.

***Experience in Taiwan and Japan has demonstrated conclusively that the most effective organisation for achieving a high rate of growth in agriculture is the complete integration of the extension services and co-operative programmes (the responsibilities of which were just reviewed).

See J.L. Simmons, op. cit.

bilities. Added to which, previous political instability has created an almost total unwillingness to take responsible decisions, except at the very top, and this totally blocks the transition to a decentralized structure.

With regard to industry, the vast majority of establishments have been located in major urban centres. This is due to the existence there of large markets, infrastructure, skilled labour, managers, marketing facilities, and social capital, all of which allow for maximizing productivity and GNP. These unfortunately remain the criteria by which the location and type of industrial investments are decided. The last five-year plan continued with this process of expanding major existing centres. As a consequence, industry is rarely to be found in rural areas, and is concentrated in four cities, namely Baghdad, Basra, Mosul and Kirkuk (mainly oil) leaving large gaps in between.* These four cities have developed more rapidly than the others, partly because of their unique location, resources, labour, good export potential, and so on, but also because of deliberate government investment in them. This concentration reflects the viewpoint that immediate economic returns are more profitable in the four cities than in other locations, but this is a very short-sighted approach.

Some of these cities (other than Baghdad) have good reason to continue to grow. For example, Basra as the only major port with local

*The disparities are even more glaring for commercial enterprises, with Baghdad employing 55 percent of the labour force in this category in 1971 and Basra over 30 percent.

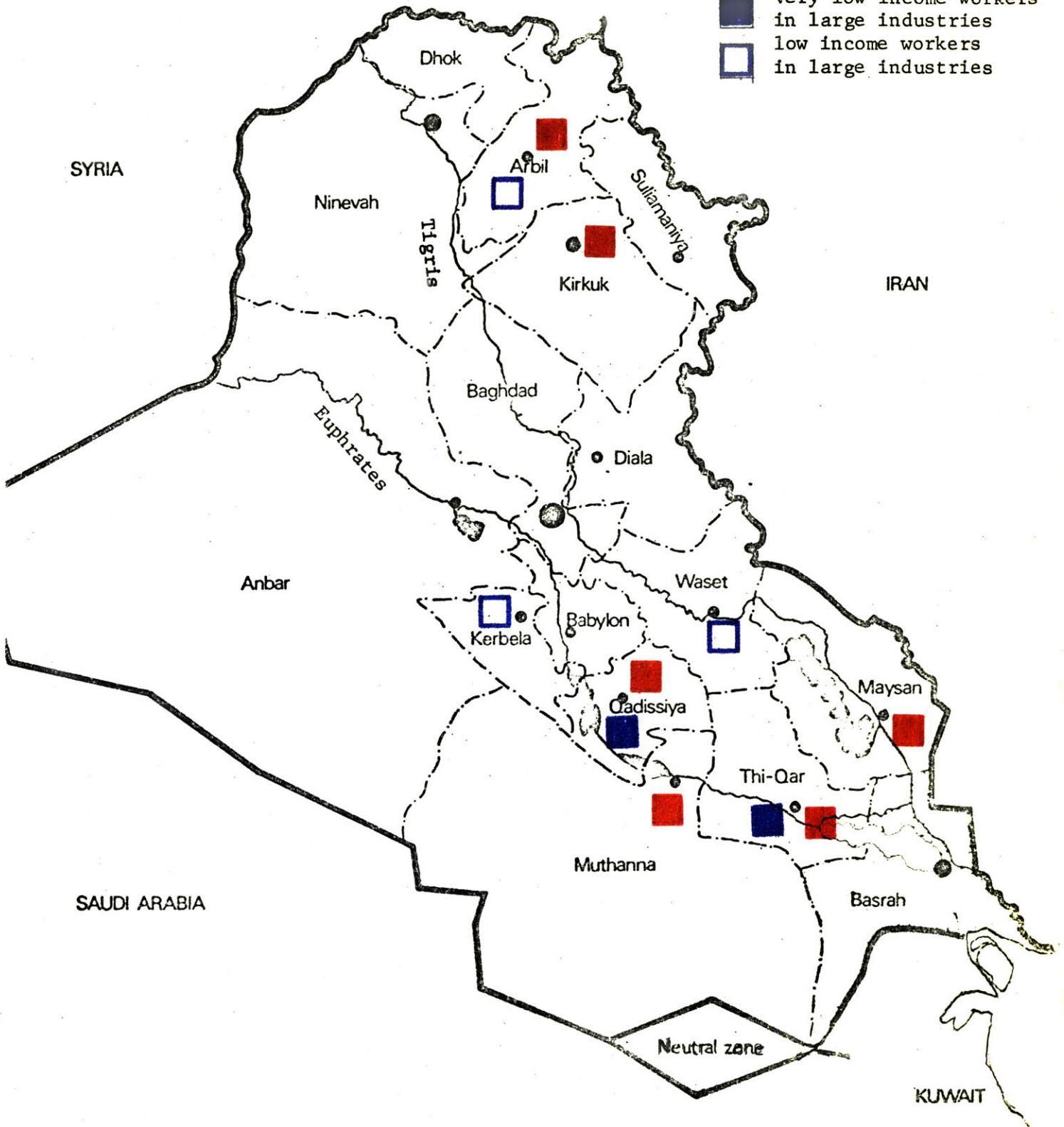
supplies of oil and natural gas, is a natural site for export and import-based industries, and heavy industries, such as oil refining, chemical, and steel; while Mosul with its wealth in raw materials, is suitable for the building-construction industry. The greatly increased oil revenues in the next 5 years ('74-'79), will permit both the concurrent development of heavy industry and further expansion of the petroleum sector. This can be seen in projects for a steel mill in Khor al Zubair (South of Basra), a two-fold expansion of the Basra refinery (reaching 140,000 barrels per day) and a new mammoth refinery (200,000 barrels per day) near Fao (South of Basra), plus expansion of the Basra fertilizer plant, increasing the production of Urea by 9 times.* However, this approach, concentrating on heavy capital-intensive industry, sadly overlooks the true need, which is to reduce dependency and inequity by ensuring that the benefits of development are diffused, (so as to help the majority of people rather than an elite few.)

Tables 2 and 3 (in Appendix 1) clearly show the regional disparities in both the location of industry and income levels. The distribution of large industries is very imbalanced, with some 60 percent located in Baghdad, while the Qadisiya, Thi-Qar and Wasit regions in the South, and Arbil and the other Northern regions lag far behind. A similarly disparate income distribution exists as can be seen in Map 4, with the Qadisiya and Thi-Qar regions lagging very far behind, followed by Arbil and Wasit. It is interesting to note that there are very low levels of

*See Economist Intelligence Unit, Quarterly Review, Iraq, 1973, London, 1973, p. 9-10.

LOW INCOME WORKERS IN INDUSTRIAL AREAS

- very low income workers in small industries
- very low income workers in large industries
- low income workers in large industries



employment for female employees in industry in all regions lacking a major city (the exception is Kirkuk).

With regard to small industries, the most startling fact concerns the extremely low wages earned (about 1/5 of that for large industry). However, even at this level, the same lagging regions, namely Qadisiya, Muthanna, Maysan, Thi-Qar, Arbil and Kirkuk have the lowest wages. It seems clear that the Qadisiya, Thi-Qar and Arbil regions are in need of immediate infusion of investment, closely followed by Wasit, Maysan and Muthanna. Consideration of the preferred size, type, sophistication and employment intensity of industrial plants will have to remain unanswered till Part 2, so as to allow a fuller context to be developed.

2.4 EDUCATIONAL AND HEALTH FACILITIES: MALDISTRIBUTION

The following simple and straightforward description of the facts and figures is quite enlightening as to the regional disparities in educational and health facilities. In 1965, illiteracy at the national level was as high as 70 percent (58 percent male, 82.5 percent female). A literacy drive is clearly a national priority, but not taught in the abstract form as at present, where the subject matter is set elsewhere and has little relevance to the local situation. However, these qualitative aspects will be considered in Part 2 as an integral part of the proposed development policies.

With regard to primary and secondary education, Table 4 in Appendix 1 illustrates that there are some new regions, namely Sulaimaniya, and Diala, which do not have enough of these schools in addition to the regular lagging ones, Qadisiya, Muthanna, Thi-Qar, Wasit, and

Diala. Although not shown in this table, there is also a strong imbalance in university allocations. Out of a total of 37,290 students (29,245 males, 8,045 females) in 1970, 48 percent were in Baghdad University, 26.6 percent in Mustansiriya (also in Baghdad), 10.5 percent in Mosul, 7.4 percent in Basra, 2.6 percent in Sulaimaniya, and 4.8 percent in private colleges.

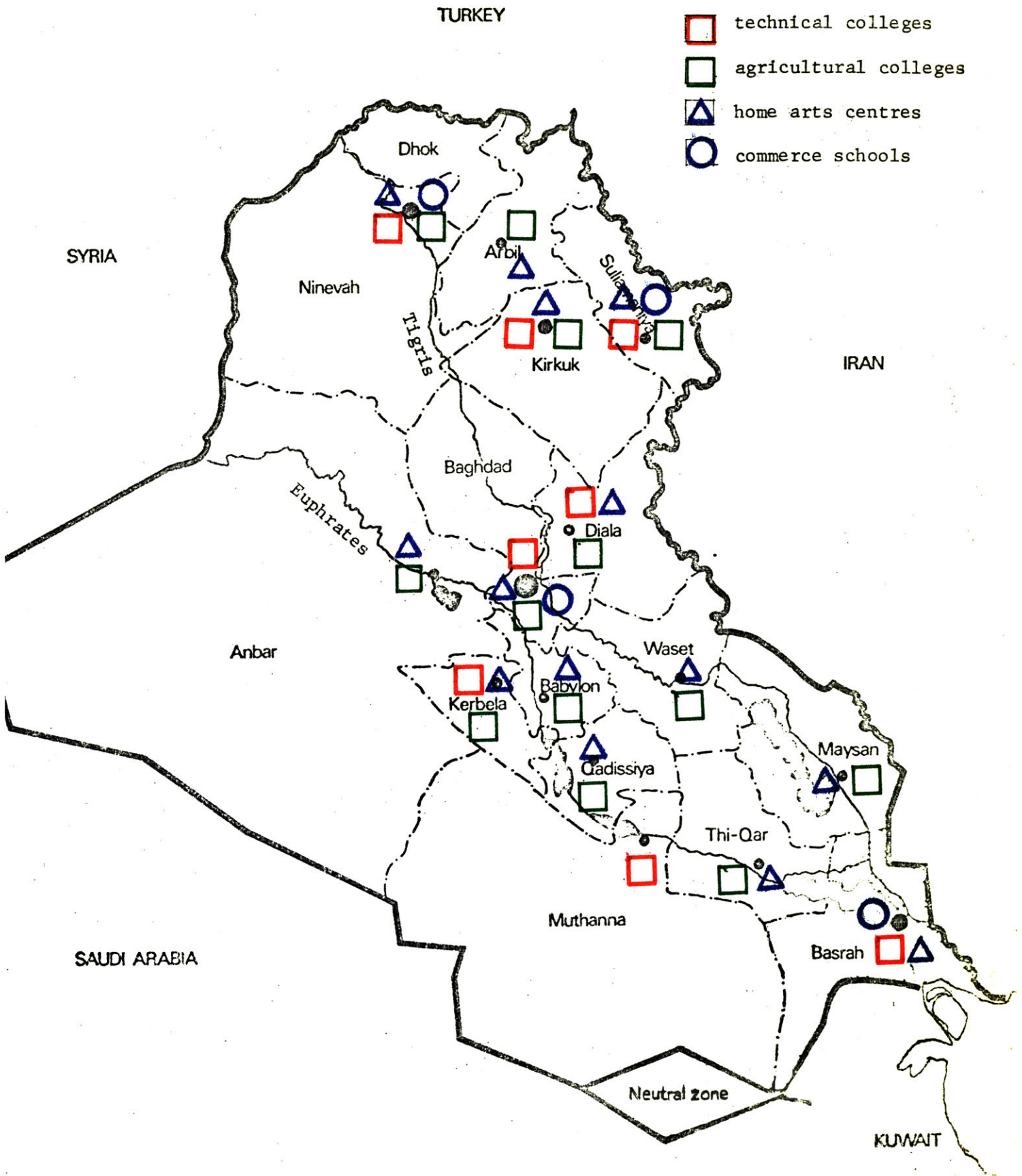
Map 5 illustrates the maldistribution of vocational and technical institutes in Iraq. Only the regions of Dhok, Muthanna and Basra are lacking in agricultural schools, with Muthanna* being the most needy. Technical colleges are missing in all the lagging regions (Arbil, Qadisiya, Thi-Qar, Maysan, Wasit and Anbar) with the exception of Muthanna. The impact of this school is reflected in relatively high wages for workers in large industries in Muthanna (see Table 2, Appendix 1). Home Arts colleges are available in all regions except Dhok and Muthanna. The distribution of Commercial schools is the most disparate of all these types, with Baghdad having four, Basra two, and Mosul and Sulaimaniya one each.

Concerning health facilities, the Baghdad region has a full 50 percent of all allocations, as compared to 25 percent of the total population, (see Table 5, Appendix 1), while Thi-Qar, Wasit, and Sulaimaniya, followed by Kirkuk, Diala, Qadisiya, Muthanna and Maysan are in very short supply of such facilities.

*Because agriculture in Basra is basically limited to date-palm groves, for which there is a specific and efficient institute, while Dhok is primarily a forest region.

VOCATIONAL EDUCATION

- technical colleges
- agricultural colleges
- home arts centres
- commerce schools



Most qualitative aspects concerning educational and health policies are dealt with in Part 2 (section 5.4), but a few general comments at this stage will help to establish the way this topic will be approached. From certain points of view, present education in Iraq almost cripples social progress and learning through its conservative rigidity. Teachers reduce their classes to a ritual incantation and success in formal exams (of fairly artificial knowledge learned by heart) is the accepted ladder to positions of power. Education as advocated in this thesis needs to be a growing and living effort, relevant to particular situations, as well as the needs of the country as a whole*, and not the present static, abstract approach, where every level is incomplete, and considered as a step to university, which only a small percentage of the population attain. Although the primary aim of the development process should be the diffusion of development benefits, present expenditure in education and health are heavily weighted in favour of higher education and major health centres located in the very large urban centres. This is also the case with most other public utility investments (streets, parks, sewage disposal, drinking water, etc.). Thus, it is the same middle class that has always derived the benefits of development, to the exclusion of the lower classes and farmers, who form a clear majority.

In all this, the complaint is not with the levels of expenditure on

*Ghazi Derwish, "Scientific Research in Iraq," in C. Nader and A. Zahlan (Ed.), op. cit., p. 290; states that Iraq's manpower needs are primarily for semi-skilled and skilled workers, technicians, paramedics, etc.

education and health facilities, for they are already very high by any standards*, but rather in quality, relevance, and ease of diffusion of knowledge and know-how. To these issues we will return in Part 2.

CONCLUDING COMMENTS AND OBJECTIVES

So far, the discussion has focussed on the over-concentration of development in Iraq in a few urban settlements (Baghdad, Basra, Mosul), coupled with the basic neglect or badly thought-out policies for rural development. By concentrating on the so-called 'modern sector' (to the exclusion of the 'traditional') policies followed have on the whole increased internal dualism, and external dependency, in that the modern sector's call for greatly increased productivity and higher quality so as to compete internationally, demands new and more complex technologies which have to be imported, and leads to a subsequent drop in employment. It is arguable that there is a need for a 'modern sector' but to believe that this can be expanded to cover the employment needs of the whole population and quickly, is totally falacious.**

Hans W. Singer supports this argument in defining 'dualism' as comprising:***

-different sets of conditions (some superior
and others inferior) which coexist in a given
space at the same time.

*UN, op. cit, p. 103. For example, expenditure on education in 1968 totalled 23 percent of government investment (the highest in the region) and 21.9 percent in 1969.

**See G. Brutzkus, Centralized vs. Decentralized Patterns of Urbanization in Developing Countries, prepared for Conference on Urbanization and Development in Developing Countries, Jerusalem, 1971.

***Hans W. Singer, in International Social Development Review, No. 3, UN, N.Y., 1972, pp. 26-30.

-that this coexistence is chronic and not merely transitional.

-that the degree of superiority or inferiority shows no sign of diminishing, and may be constant or even increasing.

-that the inter-relationship (or lack of one) between superior and inferior elements are such that the existence of a superior element does not do much to pull up the inferior element, or it may even positively pull it down.

He goes on to say that the modern sector cannot provide sufficient jobs to absorb surplus agricultural labour (exacerbated by rapid agricultural mechanization, which promotes greater migration).^{*} The point is that the mere possibility of a job in the modern sector causes migration on a scale that cannot be absorbed. Thus, in Iraq, as in most developing countries, open and disguised unemployment exists as much in the towns and cities as it does in the countryside. This employment crisis is the most dangerous dualism of all.

In other words, this systematic confounding of the so-called trickle-down effect reinforces the fact that no simple rural/urban dichotomy will do, for their problems are very interconnected. In this context, the increasingly dualistic development approach in Iraq has resulted in urban settlements, which are little more than industrial and service enclaves with very little outward diffusion or filtering of benefits. The results

^{*}Ibid.

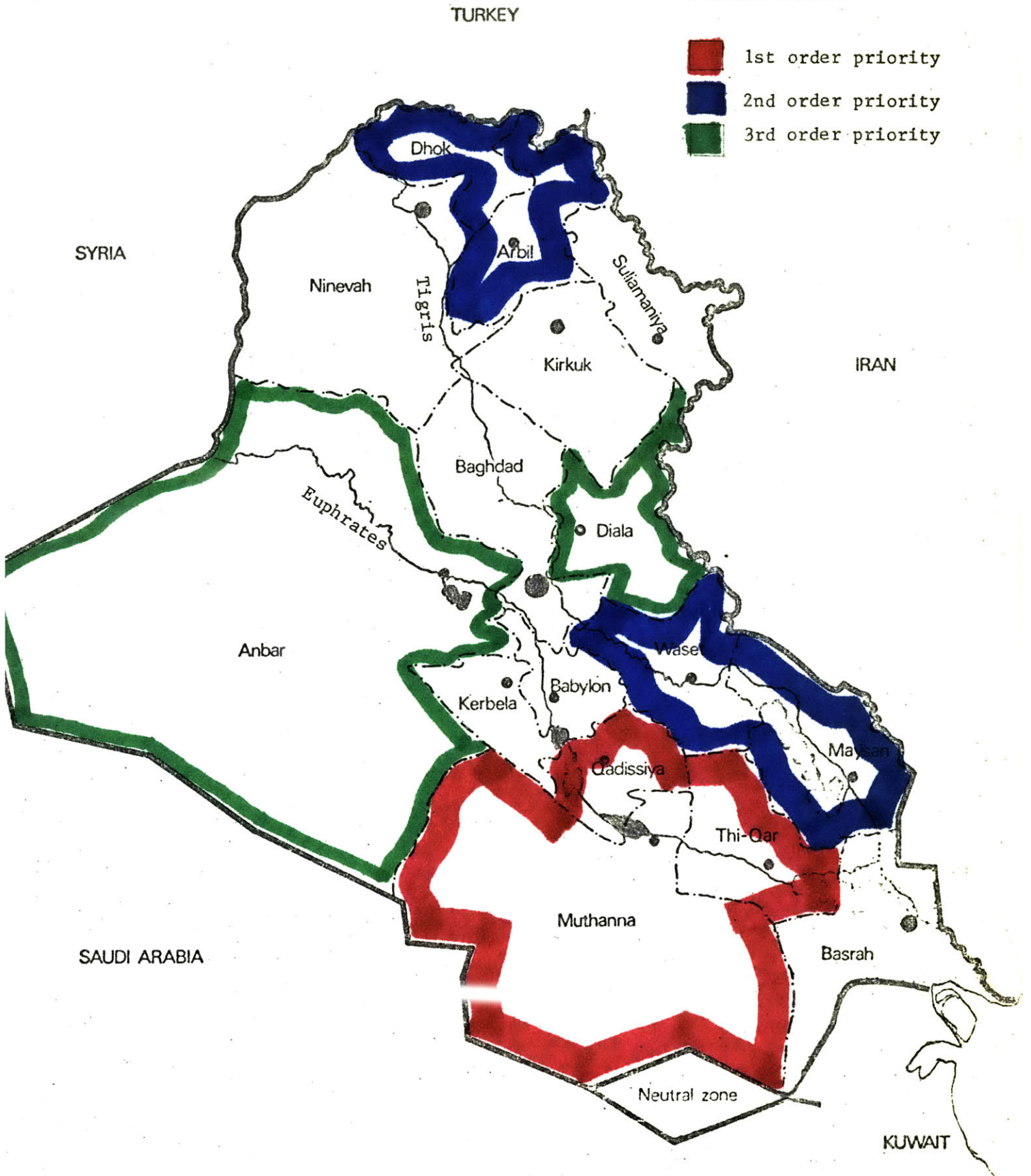
of these policies have been quite clearly detrimental to national development in Iraq (if defined as progress with diminishing inter- and intra-regional inequities) as indicated by the following list:

- grossly unequal spatial incidence of social (schools and hospitals, etc.) and economic (industry, etc.) development has emerged within the 16 regions;
- relative neglect of agriculture and the rural areas has resulted in domestic food production increasingly lagging behind national needs, and with this, imports of critical foodstuffs have increased, with a negative effect on the balance of payments;
- inequities in inter- and intra-regional income have increased;
- migration to the main cities, primarily Baghdad, has accelerated, with all its inherent problems;
- urban employment and under employment has increased;
- alienated national elites have emerged;
- options for future development have been reduced (due to over concentration and polarization);
- overall quality of life has perhaps not deteriorated in terms of access to health, educational facilities, etc., but it leaves much to be desired in rural areas in particular.

The regional disparities are summarized in Map 6, which illustrates that Qadisiya, Muthanna and Thi-Qar in the South are the worst off in terms of out-migration, low levels of investment in both agriculture and industry, and insufficient social capital. These are closely followed by Wasit and Maysan in the South, and Arbil and Dhok regions in the North.

LAGGING REGIONS

- 1st order priority
- 2nd order priority
- 3rd order priority



The next category (of less immediate concern) covers Anbar in the West and Diala region in the East. It is clear that Iraq must concentrate more effort on removing the burden on Baghdad and encouraging the development of other regions, particularly the lagging ones just identified. This should be done not just by means of expanded regional urban centres, which are likely to remain enclaves of development, but more through well-distributed rural settlements, where the crux of the problem is located.

More evidence of the destructive quality of these policies can be seen in the more or less continuous war between the Kurds (in the North), and the Central Government, for over fifteen years. Kurds have demanded decentralization and some form of regional autonomy implying certain controls over local affairs. As the earlier analysis shows, the Kurdish areas include some of the more lagging regions in Iraq. The fact that a similar revolt has not erupted, (and is not likely to) in the Southern and basically Shi'a regions does not preclude their rights concerning a just share of the fruits of development.

As far back as 1952, Lord Salter, in observing this undesirable concentration in a few urban centres, particularly Baghdad, said, "...There must be careful distribution between regions in Iraq, in the interests of both social justice and political stability."* There can be few excuses, particularly as Iraq's already considerable resources have been powerfully boosted with the recent increase in the price of oil. Diffusion of the benefits of development is clearly the only positive means of integrating

*Lord Salter, op. cit., p. 6; p. 36.

and developing Iraq in the full sense of the word. To this end, this thesis goes on to show that an important part of the development effort should bypass the big cities and be directly concerned with agriculture and in creating small and medium sized agro-industrial communities in small towns and rural areas. In other words, this thesis rejects the arguments for maximizing GNP or per capita income, of which Hirschman is probably one of the most influential proponents. Hirschman states that

..."if the economy is to be kept moving ahead, the task of development policy is to maintain tensions, disproportions and disequilibrium..., and...to lift itself to higher income levels, and economy must first develop within itself one or several regional centres (or growth poles)"*

This philosophy of disequilibrium (the sequence of a previous disequilibrium in turn creating a new disequilibrium, and so on) or the polarizing effect of each industry taking advantage of external economies created by previous expenditure,** misses out the essential problem, that is, people, unemployment, increasing income inequalities, etc. In this, social, cultural, physical, and psychological factors are only analyzed from the point of view of how conducive or obstructive they are to economic growth. The lesson to be learned is that one must not treat a city or region as a free market, and individual or enterprise costs and bene-

*A.O. Hirschman, The Strategy of Economic Development, Yale University Press, New Haven, 1958, pp. 66-67; p. 183.

**Ibid., p. 184.

Hirschman goes on to contradict himself in saying that "the resulting concentration due to external economies, although real, is consistently overstated by economic operations.

fits must be counterbalanced by the social or overall costs and benefits. Myrdal's postulation of "perpetuating and self increasing regional disparities under regions close to laissez-faire" seems entirely correct.*

A mature expression of a country is when there are few 'differences' between people in different regions and between the countryside and metropolitan areas. In this context, more income will remain in a well established diversified region, because the majority of goods and services needed are produced locally, while in the lagging regions, most benefits will leak out to the regions where the products are bought. It is therefore not just a quantitative question of inter-regional balance that is of concern, but more importantly, qualitative issues concerning the type and diffusability of investment within regions, for this determines the level of equality and quality of life.

With regard to cultural differences, as has been pointed out earlier, Iraq is fortunate in its cultural diversity, which represents a national wealth to be enhanced. The time scale very directly affects the choice of development policies for different cultural areas (such as Kurdistan). For example, an ultra visible, prestigious, large-scale development policy may well damage the culture by leading to its very rapid transformation. At the same time, to literally preserve a culture in such a way that socio-economic development is sacrificed, would eventually lead to revolt, as has happened in the Kurdish region. A more locally appropriate form of development, as is proposed in Parts 2 and 3, is therefore called for. These policies take on immediate importance due to the re-eruption of the

*G. Myrdal, Rich Lands and Poor, Harper and Bros., N.Y., 1957.

Kurdish revolt.

An important issue in the context of the diffusibility of investments is to ensure economic security through diversity. The reason for this is that a policy calling for the rapid economic development of a region is quite likely to concentrate resources into a narrow area, offering the best prospects, which apart from concentrating the benefits, is also more vulnerable. Although the diversity clearly has to be limited because some concentration and specialization is inevitable as certain regions are more suitable for particular activities. A second issue here concerns the economies of scale, in that a small number of larger units result in greater dependency, and inequalities, cause damage to the environment, and are more vulnerable than a large number of small units, which by definition are more inclined to diffusion. The policies proposed in Part 2 are mainly concerned with tackling these issues.

The discussion of objectives remains relatively general in nature, for it is not in the scope of this thesis to identify detailed goals, nor is it in keeping with the principle of maintaining flexibility to cope with future modifications. There are two important points to consider here. First, that more detailed goals would represent isolated and far too precise value judgments that may well change, and second, that "neither the planners' technical competence nor his or her wisdom entitles him or her to ascribe or dictate values, per se".* In other words, for a policy to be relevant to a locality, effective citizen participation is called for from the very earliest stages of planning, and

*See P. Davidoff and T. Reiner, A Choice Theory of Planning.

this includes the determination of objectives.

This chapter has established the gross polarity and inequity of development in Iraq, and the following chapter looks into the present centralized planning processes which have been instrumental in determining these same development policies. The approach of this thesis to always examine or evolve planning policies and processes simultaneously represents an attempt to be concerned with the reality of the situation in Iraq, and therefore with the feasibility of proposed policies.

To sum up, probably the most important single objective is to concentrate on physical, economic, and social development designed to redress gross inequalities and irregularities in income and wealth between regions and between urban and rural areas.

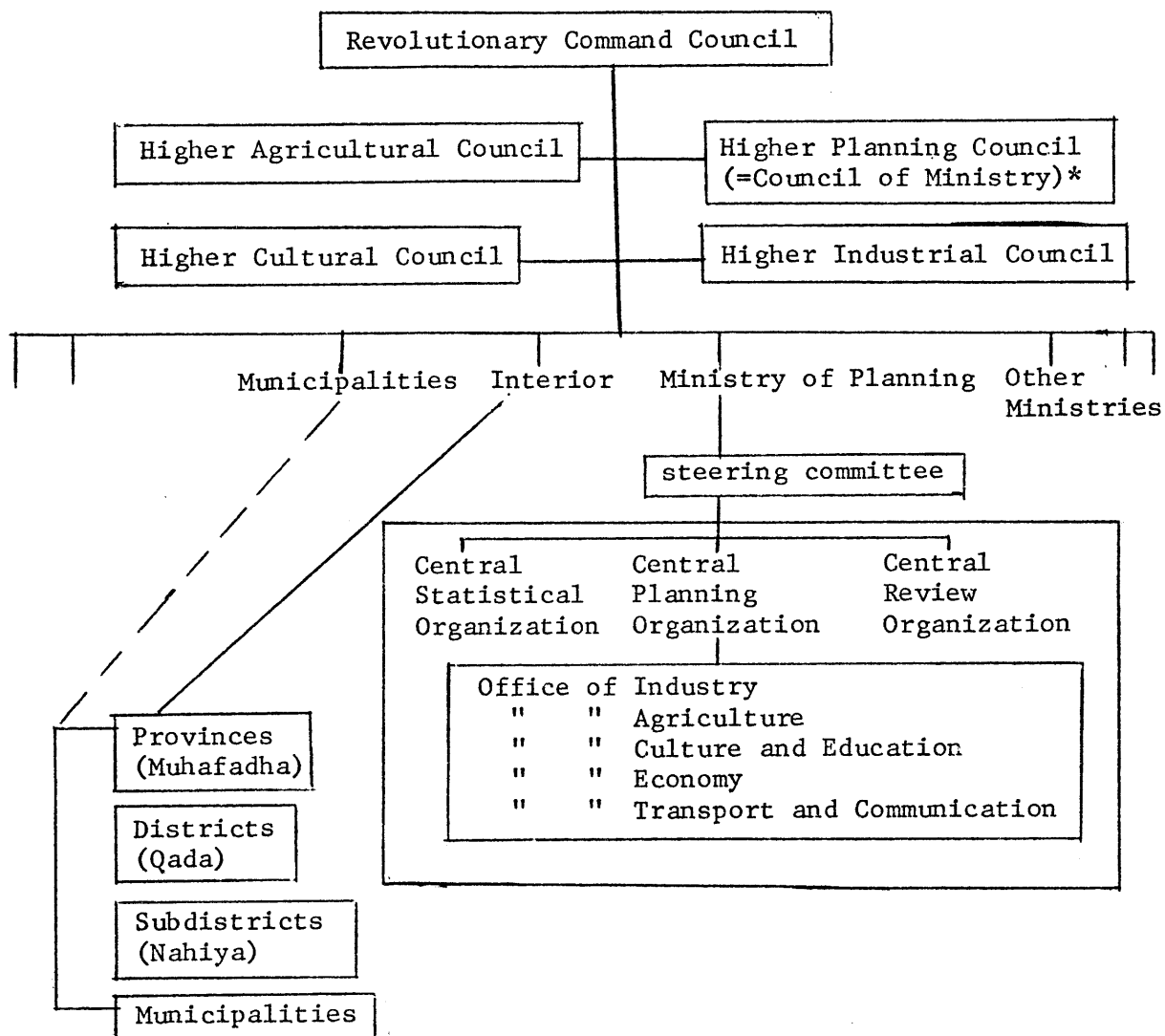
3 - PRESENT INSTITUTIONAL AND REGIONAL STRUCTURE AND PLANNING PROCESSES

This chapter complements the previous discussion on planning policies, and sets the context for necessary changes proposed in Parts 2 and 3. The chapter first describes the present rigid over centralized and hierarchical structure of decision making in Iraq, with very little involvement of lower levels of representation. This sets a meaningful context for the policy formulation as well as clarifying the discussion in planning processes in Iraq. It is followed by the determination of more meaningful regional boundaries for the subsequent planning policies and processes. The last two sections focus on the inadequacies of the present physical, economic, and social planning methods used in Iraq, particularly from the point of view of the objective described earlier.

3.1 THE PRESENT PLANNING/INSTITUTIONAL STRUCTURE: A CRITIQUE

The present planning structure in Iraq is characterized by excessive centralization, a lack of coordination or sufficient sense of urgency, and low morale.* In addition, the promotion process is based on seniority, or political or familial relations, rather than on merit. To put it mildly, there is much room for improvement. The institutionalized framework within which planning takes place can be seen in the following chart, (which is not a complete representation of the government structure or of any of the organizations and departments it considers):

*See F. Jalal, The Role of Government with Industrialization of Iraq, London, Frank Cass, 1972.



The planning tree is headed at the political level by the 'Higher Planning Council', which in effect is the council of ministers, and makes all major decisions. It is headed by the President and Vice-President, and includes minister and other central agency directors as members, the most important of whom are the Ministers of Planning,

*Exists in the constitution, but is presently nonfunctional, the higher planning council acting as an effective council of ministers.

Finance, Economics, Agriculture and Agrarian Reform, Industry, Culture and Education, Transportation and Communications, Health, Public Works and Housing, Municipalities and Rural Affairs, and Interior. It is served directly by the steering committee of the Ministry of Planning as well as by the other ministries and government agencies. The functions of three other higher councils (agriculture, industry, and culture) are primarily executive, and are headed by the President, with the respective ministers acting as Vice-Presidents. These councils do represent tighter control from the centre, and create some friction because of overlap with their respective ministries.

The Central Planning Organization (CPO) operates within this framework and has overall responsibility for Five-Year Development Plans and Master Plans, although most are carried out by the Ministry of Municipalities, or a specific municipality. The Planning Process, in effect, consists of a flow of information from the various ministries to the respective offices in the CPO, where they are received, redrafted and are sent up to the Steering Committee, where in theory coordination is supposed to take place. Decisions are eventually handed down from the Higher Councils to the respective ministries for implementation.*

However, (and this is crucial), there is no effective communication

*For Agriculture, -Ministries of Agriculture, Agrarian Reform, Irrigations, Northern Affairs, Municipal and Rural Affairs, Economy; for Industry -Ministries of Industry, Oil and Minerals; for Transportation and Communications -Ministries of Transport and Communications, Education and Culture, Higher Education; for Buildings and Infrastructures -Ministries of Public Works and Housing, Interior, Public Works and Housing.

between the various sectoral offices in the CPO.

Concerning the regional administrative framework, as can be seen from the previous maps, there are 16 provinces, each having a governor (Mutasarrif) who is appointed by the Higher Planning Council on the recommendation of the Minister of the Interior, and is responsible to him. The governors are the chief agents of the central government, and can be authorized by ministers to act on their behalf. However, their control over most functions is more symbolic than real,* that is, regional authority is basically non-existent. Provincial public offices are all subordinate to the governor, who is assisted by a general provincial council of appointed officials (provincial officials, ministerial representatives assigned to the province, and the mayors of the provincial municipalities.

Each province is divided into districts (qada) having a deputy governor (qaimmaqam). There are 3-10 districts in each province, and in 1965, there were 75 such districts in Iraq, an average of 4-5 per province.** The districts are further subdivided into subdistricts (nahia), headed by a subdistrict officer (mudir). In 1965, there were 180 subdistricts in Iraq.*** The subdistrict officer supervises local teachers, police, land registration and other governmental officials. This officer is invariably considered an outsider by the villagers, and never fully enters into village life.**** So the successful administration

*Kahtan al Madfai, in Administrative Problems of Rapid Urban Growth in the Arab States, UN, N.Y., 1964, p. 101.

**Harvey Smith et al., op. cit., pp. 184-185.

***Ibid.

****Al Dahiri, op. cit., p. 72.

of a village depends to a large extent on the level of cooperation between the subdistrict officer and the Mukhtar (titular head of the village, or the most prestigious person). Popular participation is thus not only ineffective, but also dependent on a powerless official body.

Within this framework, any major city or town* is administered by a municipal authority headed by a mayor (rais baladiya) who is appointed by and responsible to the Ministry of Municipalities, while at the same time being subject to the control of the governor, who retains ultimate provincial authority. This seeming overlapping of responsibilities occurred because in 1958 the Ministry of Municipalities was created from a section originally within the Ministry of Interior, to supervise the other municipalities, and prepare town plans if they were unable to do so. The Baghdad municipality (amanat al asima) is designated by law as the highest municipality, with the broadest power of authority. Its mayor is directly responsible to the Ministry of Municipalities (and not to the provincial council), and has direct access to the other ministries.

The conclusion is clearly that provincial authorities have no real power, and do little more than follow up decisions made at the centre. The central government in Iraq now recognizes the need for some decentralization as witnessed by the very recent law for the establishment

*According to Harvey Smith et al, *op. cit.*, p. 145.

In 1965 there were 5 classes of municipalities: superior (Basra, Mosul, Kirkuk), first (11 No.), second (12 No.), third (47 No.), fourth (158 No.) The classification is based on size of revenues collected, unlike provincial authorities, municipalities are empowered to levy taxes, though their budget is subject to the governor's approval. Note, Baghdad + superior + first municipality = provincial capitals.

of a regional authority in the Kurdish regions.* The area covered is very large, comprising over half the five Northern regions considered earlier, with Arbil designated as the regional capital. The law makes provision for a regional budget (as a part of the national budget) financed by local taxes, plus whatever the central government allocates within the framework of the national budget, and national planning system (articles 1-7a, 1-8a, 1-8b). The governing regional assembly is to be headed by a central government appointee, with the rank of minister (articles 2-13c, 2-13f).

The executive body of this regional assembly is responsible for regional planning within the context of national planning, while the various sectoral regional offices are subject to the control of the respective central ministries which will result in conflict or subservience to the centre. A start has been made in a country which has been highly centralized for generations, but in the context of this thesis, it has not gone far enough. The Kurdish regional body's authority is limited, for it has gained some administrative and financial power internally, but remains very much of a secondary body, in that finance and basic policy is handed down from above without much room for feedback. Furthermore, it is strongly controlled politically by the central government, but this is perhaps only natural as a first cautious step. For these reasons and others, the law has been rejected by the Kurds.

In addition to these criticisms, what is also missing is a fuller

*Government of Iraq; The Law for Local Government in Kurdistan, (in Arabic), Baghdad, April 1974.



view of the spatial development of the country as a whole, that is, the need to look at planning in all and not just in one or a few regions. Clearly, some regions will receive concentrated attention, such as lagging regions, but all must be considered. Failing this, the imbalance and inequities discussed earlier will remain. This thesis quite definitely seeks to greatly strengthen regional and local authorities, enabling them to work with the centre, but not for it. The following section initiates this process by determining more functional definitions of regional boundaries in Iraq.

3.2 REGIONAL STRUCTURE: TOWARDS A BETTER DEFINITION OF BOUNDARIES

The need to revitalize and strengthen regional planning and regional authorities to enable their active participation in formulating and implementing development strategies and policies has already been stressed. The process and institutional means by which this is to be achieved is explicitly dealt with in Part 3. However, the issue of suitable regional boundaries for planning is more appropriately considered at this stage.

As regional planning is concerned with the spatial incidence of economic and social growth, it requires rationally defined regions. Regions should describe a group of contiguous areas having certain common or complementary characteristics, are tied by extensive internal activity. An examination of Map 7 makes it evident that most if not all the 16 administrative provinces in Iraq are arbitrarily defined and not conducive to good regional planning.

PROPOSED REGIONAL BOUNDARIES

-  present provincial boundaries & districts
-  proposed regional boundaries



It is important to realize that some functional regions are not limited by national boundaries, such as the watershed basin of the Euphrates, which includes parts of Syria and Turkey. To cite a particular example of the problems of lack of coordination between these countries, the planners of a project in the North Euphrates basin, within Iraq, discovered that they could not draw adequate amounts of water, as initially envisaged in feasibility studies, due to large withdrawals upstream. Another example is the case of Basra (in the South of Iraq), and Kuwait. Traditionally, these regions have been strongly linked socially and culturally, while although economic links have decreased recently for political reasons, this factor needs to be taken into account when planning the Basra region.

The first of the examples just cited identifies a typical region for Iraq, namely an agricultural, or water, resource region. There are three other regional definitions relevant to Iraq, namely: core or metropolitan regions, such as Baghdad and its environs; ethnic regions such as Kurdistan; and desert regions. There is no doubt that the existing regions represent a starting point for regional development, but even in the immediate or very near future, better planning boundaries ought to be obtained by regrouping the regions. In the long run, however, rational regional boundaries, based on sound geographic, demographic (a question of size of population), economic, social, environmental, and cultural grounds are definitely required.

A criticism common to all the present boundaries, and one that

should influence regional redefinition in the framework of the four types of Iraqi regions is the question of regional population. There is some need for population balance between regions so as to enhance the more even distribution of investment, as well as to ensure inter-regional dealings on a more equal footing. This is particularly important when policy decisions are taken at the national level. In 1973 the regional populations were as follows (see Table 1, Appendix 1), with smaller size and majority rural populations being synonymous with relative backwardness:

-150,000 pop. (Dhok and Muthanna), which are lagging regions;

-360,000-570,000 pop. (Maysan, Anbar, Wasit, Qadisiya, Arbil, Diala, Sulaimaniya, Kerbela, Thi-Qar, Babylon, Kirkuk), it is interesting to note that with the exception of Thi-Qar, the lagging regions are all at the lower end of the scale;

-880,000 pop. (Nineveh, Basra) which represent the two major growth areas;

-3,170,000 pop. (Baghdad).

In addition to problems of uneven size, common to all regions, the other major criticisms follow and are grouped into Northern, Central, and Southern regions. In the 5 Northern regions, one of the main criticisms (also applicable to the central Diala region) is the tendency to locate regional boundaries along the rivers, thereby dividing an otherwise economically and geographically sound functional area.*

*Such as along the Tigris, between Nineveh-Dhok, and Arbil; along the Greater Zab for Dhok-Arbil; along the Little Zab between Arbil and Kirkuk; and along the Diala between Kirkuk and Diala regions.

Dhok is miniscule, a little too strung out and relatively artificial (only recently having been separated from Nineveh region). An important consideration, mentioned earlier, reappears here in that Dhok only became a lagging region after it was separated from Nineveh; that is, regions may hide local inequalities, which is an important reason for emphasizing local organizations within a regional framework. Kurdish cultural unity or definition is also lacking, particularly in the Southern tip of the Arbil region.

Of the central regions, Baghdad is the most absurd. As a core region it should clearly be limited to Baghdad and its environs, with Samarra and Tikrit (which are now parts of the Baghdad region) forming another river basin region. The Anbar region could effectively be divided into an upper Euphrates river basin region and a desert region. Finally, the Kerbela and Babylon regions have too many functionally related cities and large towns in close proximity (15 km), and therefore need to be unified.

The Southern regions seem to be better defined as a whole, except for Muthanna and Basra regions. The former is basically a desert region to which has been added a small part of the Euphrates basin, in order to incorporate an urban area (Samawa). This section would be better integrated into Qadisiya region with Muthanna becoming purely a desert region. The criticism of the Basra region pertains to the meaningless

subdivision of Hor al Hammar, the largest and most Southern marsh, which is the home of the Marsh Arabs (see Basra region in Map 7).

Concerning new regional definitions, it cannot be overemphasized that the new boundaries should not be seen as fixed or static, for regional boundaries must be allowed to change in time, in keeping with new social, economic, and physical realities. Nine regions and regional authorities are proposed, in line with the above criticisms, the boundaries of which can be seen in Map 7. The main criteria can be summarized as aiming towards more even sizing, cultural unity considerations for the Kurds in the Northern regions, and Marsh Arabs in the Basra area, river basin unity for the Northern regions, and a metropolitan region for Baghdad. Crude approximations for the new regional population are as follows (for 1973):*

-Dhok + Arbil + Sulaimaniya (the Kurdish regions)	=1.1 million
-Nineveh	=0.9 million
-Kirkuk + Samarra**	=1.0 million
-Diala	=0.7 million
-Anbar	=0.35 million
-Babylon + Kerbela	=1.1 million
-Qadisiya + Muthanna + Thi-Qar	=1.05 million
-Wasit + Maysan	=0.75 million

*Note: the names do not necessarily correlate with the old provincial boundaries.

**This regional definition is the least satisfactory and requires further information and analysis for a better alignment.

-Basra	=0.95 million
-together with metropolitan Baghdad (from which the desert regions are administered)	=2.5 millions
	<hr/>
Total	=10.4 millions

3.3 PLANNING PROCESSES, 5 YEAR NATIONAL DEVELOPMENT PLANS: A CRITIQUE

This section does not attempt in any detail to describe or critique National Development Plans per se. The criticism is of a more basic nature, and therefore it is the whole principle and process of such planning that is under scrutiny.

Present National Development Plans are synonymous with National Economic Plans, revealing their inherent bias and limitation. However, the development process also implies social, institutional, and political policies applied in space, and therefore, to consider economic aspects in relative isolation becomes more of academic than real interest.* Qualitative aspects are only given lip service, which in effect precludes traditional sectors from the process and focusses all attention on quantifiable aspects of the modern sector. It becomes, in effect, an instrument for encouraging dualism,** while the high level of aggregation

*The preliminaries of the latest plan for Iraq (1970-74), mention the need "to coordinate economic, financial, monetary and commercial policies to ensure plan execution." As has been seen, in section 3.1, the institutional framework leaves little room for such coordination or integration. There is also scant mention of social or spatial aspects (although social investments are quantified at a later stage).

**In this context, the '70-'74 Plan (p. 124) talks of "the traditional sector, primarily agriculture, as having taken the first steps towards the development of modern production techniques", but with no consideration of its effect on employment, migration, dependency, alienation, etc.

allows for the effective masking of real issues, as does the fact that all decisions are made from the centre, with little, if any, local or regional involvement. The question of local social validity is therefore discarded at the outset. Even the acceptance of the plan at the national level is not a foregone conclusion, for the process, as has been seen (in section 3.1) seeks to impose proposals on the operational sectors of government administration, without their active involvement in its preparation.

Formal economic planning of this nature was first adopted in 1951 in Iraq, when a Development Board was established. There have been eight Five Year Plans to date.* The following table gives the breakdown of relative expenditures (priorities), and the rates of implementation, which have been dismal. As can be seen, the first five plans averaged two years apiece, but have stabilized since 1961, but that is not to say that these time spans are particularly suitable. The development and political process is dynamic, and to fix five years as an interval for which all proposals are established in advance assumes marking time, which is certainly not the case. The approach, expanded on in Part 3, seeks to emphasize the continuous nature of planning, particularly important when the purpose is to actively involve local people in the development process.

*The early plans were allocated 70 percent of oil income, but since 1959-1960 plan allotments have more frequently run near the 50 percent mark. For a good description of the first 7 plans, see A. Badre, op. cit., pp. 187-188

PERCENTILE DISTRIBUTION OF NATIONAL PLAN INVESTMENTS 1951-74,
AND THE RATE OF IMPLEMENTATION*

Sector	Agriculture	Industry	Transport & Communication	Building	Other**	Total Planned Expenditure
First Program 1951-55	47.4	--	24.2	19.2	9.1	ID 66
Second Program 1951-56	49.1	20.0	17.2	11.6	2.1	ID155
Third Program 1955-59	37.6	14.3	24.4	20.2	3.7	ID304
Fourth Program 1955-60	33.6	13.4	24.9	26.6	1.5	ID500
(Percentage implemented from '51-'58)	(52)	(37)	(52)	(63)	(104)	(57%)
Provisional Economic Plan 1959-62	12	12	26	49	1	ID392
Detailed Economic Plan 1961-65	20	30	24	25	--	ID566
(Percentage implemented up to '63)	(46)	(60)	(31)	(55)	(68)	(47%)
Five Year Economic Plan 1965-69	25	28	16	26	5	ID561
(Percentage implemented up to '69)	(32)	(53)	(60)	(53)	(31)	(55%)
Five Year National Development Plan 1970-74	34	24	11	12	19	ID537

*NB: All figures from A. Al Naswari, op. cit., except for '70-'74 plan, which are from the 1970-74 National Development Plan, op.cit.

**Includes internal loans, international obligations, planning & followup.

The rates of implementation for all the plans have been very low for a number of reasons, most of which are due to basic weaknesses in the process itself. First, the lack of coordination between government sectors emanates from the rigidly sectoral (as opposed to goal-oriented) institutional structure, which is further exacerbated by the basically economic nature of the plan itself. Thus, projects are not necessarily mutually enhancing, even when they are in the same area. More often than not, they are planned without knowledge of the other projects in the region, (resulting in frequent changes in design during or after construction, or worse, left unaltered). In this context, the cooperative movement* and redistribution of land fell way behind schedule, not because the Ministry of Agriculture and Agrarian Reform was particularly negligent, but because of insufficient correlation with other government organs with responsibility for completing surveys, irrigation and drainage canals, selecting farmers, constructing various buildings and facilities, organizing health and education, and ensuring agricultural extension services, etc.

A second reason for low implementation rates is the current weakness in the overcentralized government decision making process, which makes it difficult to take the necessary decisions in the required number and at the required speed.** In addition, there is often a lack of political commitment to long-range planning policies and targets

*The 1961-65 plan called for the establishment of 2,000 cooperatives, but by the end of the plan period, only 100 were operational.

**See A.O. Hirschman, op. cit., p. 25, or Economist Intelligence Unit, op. cit., p. 7.

(partly as a result of political instability), and an inability often for political reasons to carry out policies previously announced. The third reason is the planning process' failure to involve the political decisionmaking apparatus from the outset, resulting in lack of commitment of the operational ministry to the planning policy proposed. Sectoral planning (for example, in transportation, housing, health, education...) is considered more successful than either coordinated intersectoral or regional planning, because detailed sectoral planning is done by the very ministries or agencies responsible for the programme investment and its implementation.

The planners themselves clearly continue to believe in the process and do not fully appreciate these basic weaknesses. They blame the 'inadequacies of implementation at the national economic level' and make no reference to the active participation of local levels, without whom effective implementation is an impossibility. Or they point to long gestation periods for major projects or to low levels of agricultural productivity, due to the faint propagation of modern technology, or to the underutilization of the productive capacities in many factories.

Such plans, formulated in isolation, are effectively tools of the national elite, and it is not surprising that they should have primarily benefited this elite. By concentrating on large dams, and water storage

infrastructure up to 1958*, the prime benefactors were the large land-owners, and a change of priority to industrialization after 1958, led to greater urbanization, migration and increasing dualism and dependency. Interestingly enough, the reason for this switch was justified as the only means to liquidate the state of economic dependency on foreign interests.

However, any decrease in dependency depends on the use of appropriate levels and types of technology, and the emphasis in Iraq has been on sophisticated capital for the modern sector, which has had the reverse effect** (this issue is discussed in greater depth in Part 2). In both cases, that is, before and after the 1958 revolution, the poor, rural majority were not the main benefactors.

The latest plan is without doubt a great improvement on previous plans, displaying a technical competence not always evident in earlier planning, and some of its suggestions go a long way towards redressing the previous imbalance. However, it does not recognize the implicit and permanent weaknesses just alluded to in this borrowed planning model. Although there is superficial mention of the need to involve the various

*31-46 percent of total investment before the revolution in 1958 was allocated to this sector (see A. Badre, *op. cit.*, p. 292), and this was accompanied by neglect of secondary irrigation canals and drainage, which always lagged well behind the construction of main arteries.

**See the National Development Plan 1970-74. *op. cit.*, pp. 155, 164. 47 percent of the entire central government investment utilized foreign currency and in industry this figure increases to 68 percent. The only relief comes in the fact that 75 percent of these imports are intermediate goods.

operational ministries and agencies in the process, as well as the need to develop local government bodies to ensure a greater degree of initiative on their part in the execution of development strategy, there is little reference to participation in policy formulation, without which involvement in implementation becomes a question of imposition.

The plan mentions the desirability of a geographic distribution of industrial projects, but the proposed enterprises are concentrated in the main cities. Thus, although some territorial concerns were voiced, the problem lies in the lack of a systemised spatial policy relating not only economic but also social objectives to the physical regions. The regional settlement patterns signify certain opportunities, constraints, and needs for the succeeding stages of development by determining the market size, level and need of social and economic infrastructure, degree of labour specialisation and so on. Some of the reasons why such planning pays little attention to space relates to: the high level of aggregation (in which individual, group, and regional behaviour are subjected to summation by sector, thereby disguising the essential problem of income distribution); the relative insignificance of transport and communication costs; a neglect of externalities (such as levels of pollution); and a neglect of non-marketing costs (that is, the qualitative aspects are submerged or discarded because of difficulty in measurement, whereas economic items are very measurable commodities (for example, production, consumption GNP)

It is important to reemphasize that the concern here is not with

regionalising national economic plans and substituting GRP for GNP, for the critical issue is the diffusion of benefits within regions. In this, the present development indicators (GNP or GRP) used to determine 'progress' are so aggregated as to be meaningless for the objectives discussed earlier. This lack of the use of any social indicators of development certainly constitutes a main weakness in the present process. Social indicators are intended to be means by which societal change can be monitored, and 'objectively' measured. For example, a common type of indicator measures the degree of access to modern services, but it does not consider differences in quality between those services. UNRISD determined what is probably as useful a set of indicators as is currently available for measuring the quality of life (defined by some measure of the relative happiness of the majority of the population), but doubts in these remains.

The necessity to move away from GNP or per capita income to social indicators, or some combination of the two is a welcome step in the right direction. However, particularly in the context of the policies of this thesis, it remains a measure or quantification of theoretically qualitative factors, and therefore, because of its implicit abstraction from reality, becomes insufficient on its own. This is particularly true for rural populations and rural development.

The Iraqi government seems to have partially realised the mistakes of the past, and for the first time in many years, has allocated a majority investment to agriculture, in the latest Five Year Development Plan

1970-74, with an overwhelming emphasis on irrigation and drainage projects (42 percent of agricultural investment). However, it remains to be seen if the de facto priorities are the same, for the record here is not favorable.* Furthermore, little is said of the necessity agricultural support services, (health, education, etc.) or of local processing and marketing of produce.

From the breakdown of investment expenditure, it becomes evident that notwithstanding the priority allocated to agriculture, there is no similar correlation with other sectors necessary for agricultural and rural development, which remains overwhelmingly urban.** Thus, of the health budget, only 25 percent is allocated to rural areas and small towns, to construct hospitals in Qadas (districts) and 85 medical centres in Nahias (subdistricts). Similarly, with education, although there is a shortage of technical and vocationally trained manpower and a relative

*It is interesting to note that in the 1965-69 plan where agriculture was the second priority after industry, the de facto priorities of the government (in actual expenditures) emerged as follows: industry, other projects (mainly defence), building and social services, transport and communications, and agriculture; that is, agriculture was given least priority.

**agriculture, 34 percent of total investment: subdivided into 42 percent irrigation and drainage, 15 percent water storage (dams), 13 percent agricultural production projects (mainly farms), 22 percent agricultural services projects; (the concentration is in a small number of large projects). industry, 24 percent of total investment: all of which is allocated to cities. transportation, 11 percent of total investment: only 11 percent is allocated to rural areas for investment. buildings and services, 12 percent: subdivided into 23.5 percent health and 27 percent for culture and education (the rural allocation is in the text), 19 percent water projects for municipalities and villages (no indicator of distribution).

surplus of professionalism*, the plan goes on to propose only 14 percent of educational investment in vocational institutes, the rest being allocated to the traditional degree-oriented education system. The damage does not stop here, for even at the primary school level, only 25 percent of the investments** are in rural areas.

A major criticism can therefore be levelled at the sectoral nature of such planning as opposed to a goal orientation, such as to rural development (which clearly incorporates both social and economic factors). This practice of breaking down development plans into economic and social sectors is very misleading, in that the construction of a feeder road may, in certain circumstances, have a greater effect in terms of social change and modernization than an equivalent investment for, say, a clinic or school.*** This again emphasizes the importance of local participation.

Custom, tradition, social and religious institutions, all exert powerful influences on the structure of society and way of life. Neglect of these aspects can only result in either rejection of policies or cause severe conflicts if implemented. As some changes in social structure and way of life are often a necessary pre-condition for economic growth or development, the success of such development depends on the nature of implied changes. To quote Peter Marris, "It is important to distinguish be-

*The National Development Plan 1970-74, op. cit., p. 13.

**Ibid., p. 144.

***See B. Higgins, op. cit.

tween situations where unfamiliar events can be assimilated before a structure has to adapt; and those where the structure has first to adapt; before the event can be assimilated; the second being far more disruptive and threatening than the first."

To succeed, projects must therefore relate to the natural resources and human circumstances in the regions and localities. This information is not available at the national level and depends on both regional and local planning. These institutions will greatly encourage more participation of the local population, further politicization of the planning process and greater decentralization of effective power as well as to help in equalizing income distribution, all of which are the primary concerns of this thesis. These issues will all be considered in Part 3. The following section looks into physical planning in Iraq. Interestingly enough, its problems are similar to those of economic planning.

3.4 PLANNING PROCESS, MASTER PLANS: A CRITIQUE

Most physical planning has, in fact, been an instrument of dualism, that is, of rapid urbanization and industrialization, as advocated by National Development Plans. In Iraq, as in most developing countries, this has led to rapid polarization and increasing inequities, particularly between urban and rural areas.* The major concern of this section

*Towfighi, in The Strategy of Concentrated Decentralisation for Regional Growth, (M.I.T. Ph.D. thesis), p. 43, demonstrates how urbanisation will not necessarily increase employment opportunities and is likely to increase inequality and regional imbalances.

is not with good or bad land use or Master Plans, per se* but more with criticising the present narrow and isolated basis of its approach, relating only superficially to the broader regional and national implications.

Physical planning as presently applied in most developing countries reflects its early European origins - demand for density limits, physical order and social amenities, few of which are directly applicable to the very different culture, problems, needs, and resources of Iraq.** The strong urban bias of physical planning (as is the case with standard economic planning) reflects the low (5-10 percent) level of employment in agriculture in Europe and the United States. In developing countries, the range is more like 40-80 percent, and in Iraq it is about 55 percent. Its application, therefore, implies exploitation of the rural population for the supposed benefits of high growth rates. In other words, polarized urbanisation induces the rapid imposition of more capital-intensive farming on a large scale (to the detriment of the rural population). The resulting cycle of out-migration from rural areas occurs at a scale and rate which denudes these areas of their most able people, while not being able to absorb all the migrants into urban areas.

In a similar manner, as the transplanted technology induces larger

*In rough terms, decentralized land use plans are good (e.g., the Kuwait Master Plan) or at least better than accretive land use plans (e.g., the Baghdad Master Plan).

**Thus, in the United States, a cultural preference for free standing houses, no boundary walls, and little mixing of commercial with residential land use (all calling for social homogeneity) has led to equating high land values with low densities. The situation is basically reversed in Iraq, from social, cultural, climatic, and structural points of view.

and larger scales of production, the relative advantages of central locations increase, and agglomeration tendencies build up. Left on its own, development investment soon concentrates in the major cities because of the external benefits. But who benefits and who is paying for this free bonus to investors? The point is that one must not treat the city as a free market, and individual (or enterprise) costs and benefits must be counterbalanced by the social or overall costs and benefits. It is on the multiple repercussions of such policies that attention needs to be focussed.*

The Master Plan paradigm has come under severe attack recently, with the physical determinism and static quality of such planning, methods limiting their relevance or utility as a guide to action in developing countries which are changing rapidly.** Thus, the consultants for the Baghdad Master Plan talk of the need for a continuous planning process (correctly stating that the plan is not an end in itself), and lament the damage done to Baghdad by the earlier and dated Minoprio and Doxiades

*For example, improved or innovative transportation applied to a peripheral region in isolation, is likely to increase the opportunities for further concentration by opening new markets for centralized industries. This results in the collapse of small-scale industries serving more limited and localized markets in urban and rural areas in such regions. Furthermore, most transportation innovations of this nature enhance physical mobility and facilitate increased migration.

**Often, the techniques used favor gradual change, as in Western cities, allowing for relative equilibrium. In situations where change or growth is very rapid, as is the case in Baghdad, Basra, and in most cities in developing countries, such models cannot function adequately. In the words of Britton Harris, "such models tell you what's going to happen if nothing happens."

plans, but they still go on to produce an equally static and dated plan.

Some additional weaknesses in the Master Plan process are as follows:

- lack of appreciation of the fluid and dynamic nature of urban phenomena and little consideration of their inter-dependence with other sectors (either ignoring them, or assuming programme inputs from economics and demography without feedback), and other scales (rural and regional) which, amongst their elements, makes projections even more inaccurate.
- insistence on high amenity standards in urban centres results in limited allocations elsewhere due to the scarcity of resources.* Only recently has such physical planning become more sensitive to the particular local needs and resources, but still with only superficial consideration of the consequences of its activities on equity (e.g., on income distribution) or on economic growth.
- inattention to costs and the apolitical view of the process often stymies action and implementation, culminating in general neglect of and apathy to Master Plans; after all, planning is primarily a process of choice, and it should therefore be designed so that the process by which decisions are taken do not remain entirely outside the scope of comprehension or implementation (that is, some remain tied to long term considerations).
- the lack of participation (particularly bad in the case of the Baghdad Master Plan**) and the imposition of decisions from above.

*For example, in the United States, housing costs are about \$30./sq. foot. Applying American or European standards to Iraq (or other developing countries) with 1/10 of the per capita income, does not make much sense, especially when cultural requirements vary. The point is that standards should have some relationship to the local social and economic circumstances.

**The terms of reference allocated 6 months for elaboration of the concept + 1 month for comments, coordination and approval; followed by 6 months for the final plan preparation + 1 month for formal acceptance. This time span is so brief for such a large and important job as to make

It is interesting that criticism of the Master Planning process bears so much resemblance to those of National Economic Planning discussed earlier. Expansion on a few specific issues concerning the Baghdad Master Plan sheds further light on the inherent weakness in its process.

The consultants subdivided Iraq into 3 major regions (North, Central, and South), but nowhere in the report was there any economic, social, or even physical analysis which leads to this division. Thus, the crucial step of determining Baghdad's regional context was not only superficial, but it omitted critical interrelationships. Their specific subordination of regional agriculture and the surrounding rural settlements and towns to the needs of Baghdad does not consider the resulting increased migration* and greater regional inequalities, or any balance of payment problems (due to probable increased food imports). Further myopia is apparent when the report mentions that the regional considerations are only spatial and not economic. It is generally accepted that most spatial decisions have both social and economic impacts.

a mockery of the whole process. Thus, during the interim 1 month allocated for official consultations, only superficial participation would have been possible, let alone any participation by citizens.

*This has been an ongoing process for many years, and according to census figures for Baghdad Muhafadha (very much smaller than the Baghdad region determined by consultants), the urban population grew as follows:

1947	500,000 pop.	=10.5% of country's population,
1957	1,000,000 pop.	=16.6% of country's population,
1965	1,500,000 pop.	=18.3% of country's population.

A massive 60 percent of this growth is made up from immigration, representing an excessively high migration rate and concentration (absorbing 42 percent of total rural-urban migration in these years.)

At this high level of aggregation, the Baghdad region (as defined by the consultants), comprises 53 percent of the country's total population (in 1965), or 4.5 million people, of which 2.4 million are urban. This larger region extends Baghdad's nodality and dominance to an even larger area, ignoring the numerous important cities within this region, (Baquba, Hilla, Kerbela, Kut, Najaf, Ramadi and Samarra). In addition, such aggregated figures cover over inequities, and make the task of allocating benefits where they are specifically needed even more difficult. Furthermore, their projections for 1990 (19.3 million for Iraq) show increasing concentration in the Baghdad agglomeration (city and suburbs) with 4.9-5.3* million or 70-75 percent (up from 62 percent in 1965) of the total population of the Baghdad region (as defined by the consultants). This represents an astonishingly high and increasing level of primacy in this region, and indeed the country as a whole. The following table records the overall population implications:

	<u>1975</u>	<u>1990</u>
Iraq	11,500,000	19,300,000
Baghdad agglomeration		
-low alternative	20.4%	15.8%
-high alternative	22.3%	22.8%

*comprising a concentric (or accretive) central city of 3.2 million
+ a system of settlements in suburban zones
+ a system of satellites within 25 km of the Central Business District (CBD) of Baghdad

The choice of 3.2 million as a target was partly because at 3.5 million large capital expenditure on tracked transport becomes necessary (i.e., threshold analysis), but they fail to mention that this is the result of an accretive pattern proposed in the first place.

Concerning the city's employment distribution, it seems that in 1965 only 18 percent of the city's population were permanently employed. This is very low compared to future activity rates that may go up to 30 percent as employment for women increases. This is clearly a real problem, (considered in Part 2) however, the consultants' choice of increasing employment in all sectors at rates in excess of population growth is very distressing, as it will lead to even further concentration of development in Baghdad at the expense of other regions. Thus, for employment in administration, commerce, industry and construction, the plan calls for a coefficient of growth of 2.2-2.5 (slightly higher than population growth) and for transportation, education and health services of 4.0.* The futility of such a planning process with little coordination lies in such examples, in which employment levels are established in isolation, regardless of the financial means available, or the ensuing regional inequities. It is to avoid such damaging mistakes that the more decentralized and therefore locally relevant process within a regional (and national) context proposed in Part 3 becomes so urgently needed.

This concludes Part 1, which has analyzed and criticized the existing situation in the light of the objectives of this thesis. The discussion now turns to an examination of policies for the diffusion, and not concentration, of development benefits focussing on rural areas where the principal problems and solutions are to be found.

*This decision calls for locating a massive 1/3 of the 1965-69 5 year development plans' allocation for social and technical infrastructure in Baghdad.

PART 2

POLICIES FOR DIFFUSION IN RURAL DEVELOPMENT

4 - DIFFUSION THROUGH RURAL DEVELOPMENT

4.1 A PREVIEW

In Part 1, the extreme polarity of the settlement patterns and government investment in Iraq, and the resultant human inequities were discussed. Urbanisation has not only been rapid, but has been directed to the few large cities.* This is partly because of the strong urban bias of both physical and economic planning, transferred from the West, where only some 5-10 percent of the population are employed in agriculture or in rural areas, and where agriculture occupies a very small and diminishing percentage of the GNP. In emulating the Western model, most developing countries including Iraq, have overlooked or aggravated the problems of rural populations who generally comprise a massive 40-90 percent of the total population. In Iraq, the figure is only 40 percent according to the official statistics. However, in reality the figure is higher (55 percent of the population are employed in agriculture), for a considerable percentage of the nominally urban population live in very small towns (well below the standard UN benchmark for urban population of 20,000).

As has been illustrated, Iraq has a surplus of labour, (unemployed or underemployed), while suffering from a scarcity of management and technical skills, as well as institutional resources, making their dis-

*UN International Social Development Review No. 1, UN, N.Y., 1972, p. 8. Between 1947-57 the total population in Iraq grew by 3.15 percent annually, while it grew by 5.2 percent in cities with over 100,000 people. The rate throughout the '60's was even higher.

tribution uneconomic theoretically, if development in its present form is the criteria. According to the latter viewpoint, smaller centres are liable to find their justification more in a criteria of equity than growth.* In this context, growth poles have been suggested as an alternative means of spreading development and counterbalancing the primate city, while ensuring a high growth rate. Although they represent an improvement over present policies, this philosophy is still dualistic and primarily concerned with the modern sector and high technology industry located in medium sized centres or growth poles. If the assumption is made that the aim of any progress should be to add welfare, security, happiness and not just economic growth, then the so-called benefits achieved by perpetuating social imbalances becomes very questionable.

The growth pole solution for lagging regions cannot be accepted, for this thesis goes on to argue that with the resulting industrial enclave, inter-regional equities may well increase, but at the expense of greater intra-regional inequities. For example, by modernising industry in a lagging region, unemployment may be augmented by driving out marginal enterprises and substituting capital-intensive technology. At the same time, such industries might become depressed by competition from the more efficient industries in the more developed regions. Thus, a pattern of internal colonialism will predominate, both between and within regions. In section 4.2, the use of empirical studies demonstrates that diffusion or filtering of development does not take place through the medium of

*W. Alonso, The Economics of Urban Size, quotes Koichi Mera's estimates that equalisation of per capita income by prefecture in Japan would reduce National Income by 15-30 percent.

growth poles.

Other policies attempt to use transport investments as a development tool for reducing income differences among areas. The underlying theory being that by increasing the accessibility of lagging regions to the main urban centres, their economic development will be accelerated. The problem is that by increasing accessibility between the lagging region and the core, the lagging region's dependency upon the core is being increased, facilitating further out-migration. In the words of Peter Gould, such transportation networks "serve a space-bridging rather than space-organising function"; that is, forming islands of development surrounded by non-participating peripheries.

Again, the filtering theory cannot be supported by evidence. The supposition of the 'trickle-down' or 'spread effect' of development from primate cities, put forward by Hirschman and others** is one of the most doubtful and questionable premises. Brutzkus and others*** provide evidence showing that this has been achieved in affluent countries only by depopulating the lagging regions, while in the more evenly populated countries, such as France and Italy, the income gap actually increased (between 1951-61).

Similar schisms between the ordering of social overhead capital (SOC)

*Peter Gould, "Tanzania 1920-63: The Spatial Impress of the Modernisation Process" in World Politics, Vol. 22, No. 1 (Jan. 1970) pp. 149-170.

**Such as J. Friedman, Urbanization and National Development, (unpublished paper), UCLA, 1970, p. 33.

***E. Brutzkus, op. cit., p. 88.

quotes J.G. Williamson, "Regional Inequality and the Process of National Development", Regional Analysis, L. Needleman (Ed), 1968; and W. Alonso "Urban and Regional Imbalances in Economic Development", Ekistics, May 1969

and directly productive activity (DPA) exist in policies for development where Hirschman* and others call for the provision of DPA first, saying that it exerts strong pressure for the provision of SOC in subsequent periods, while the provision first of SOC is termed permissive. Other studies suggest the reverse.** The argument remains one of the modern versus the traditional sector, and it misses the essential point, in not discussing or considering the type and diffusability of the respective DPA or SOC. The conditions under which diffusion occurs and benefits multiply is the principle issue tackled in this part.

This thesis rejects the policies that have been advocated by many academics, *** for it is explicitly directed towards a complementary (and not a competitive) approach towards urban-rural planning. The need to combine planning of urban and rural aspects in a regional context, is often only seen after the size and rate of expansion of an exploding urban metropolis makes it imperative,**** and not in reaction to the needs of the rural population or the country as a whole. Policies for self-sufficiency and self-development are the primary concern, and these are only possible with the active participation of local populations.

*Hirschman, *op. cit.*, pp. 89, 93.

**Studies by Marcial Echenique in Chile 1970-73 and in the United States (Consad '69, '70)

***Hirschman, *op. cit.*, pp. 12-17, where he states that a group-focussed image of change is incompatible with any large-scale development aiming at fundamental transformation and modernisation of the economy. It is the very nature of such development that certain activities and communities receive temporarily preferred treatment, and that social mobility will be vastly increased as whole social classes and groups are created through industrialisation and urbanisation.

****For example, in Spain, it was only after the negative impact of the first two five-year plans, that the need to concentrate on rectifying the ensuing urban problems became fully appreciated (in the third Five Year Plan, 1971-75).

It is the contention of this thesis that only when rural development is seen as the prime mover, will regional development in the full sense of the word, occur. Most of the main urban settlements in Iraq are of a sufficient size and level of development to survive with far less government investment. The priorities not just for agriculture but also for industry must switch to rural areas, if we are to see a reduction of income inequalities and a proper diffusion of the fruits of development (social as well as economic)*. This chapter deals with these policy issues, first discussing the lack of diffusion taking place through growth poles, followed by aspects of migration, and income and employment multipliers necessary for the diffusion of benefits through rural development. The emphasis on rural development by means of agriculture and rural industries forms the heart of the policy proposals and is considered in the last section of this chapter. The success of these policies is contingent on the use of appropriate levels of technology and education, which is the subject of Chapter 5.

*Attempts to reduce inter-regional income discrepancies by large regional urban centres alone do not seem encouraging. In a recent study of The Strategy of Concentrated Decentralisation for Regional Growth in Italy, 1950-59, by P.S. Towfighi (MIT Ph.D. thesis) states that..."if a regression line is fitted to the rank size distribution of cities of 100,000 population and more, most of the metropolitan areas of the south will fall above the line, which means a relatively high degree of metropolitan concentration." When he analysed the impact of regional investment during the same period, on income equalisation between the South and North, Towfighi found out that "net investment in the South as a percentage of that in the North did not have a positive effect on per capita income of the South as a percentage of that in the North".

4.2 THE LACK OF DIFFUSION THROUGH GROWTH POLES

The current popular development strategy, growth pole theory, is more or less of the same family as the present polarising and dualistic development policies in Iraq. It purports to speed up the process of economic growth and promote inter-regional balance through investment in a few selected growth centres. However, the danger of a growth pole is that it merely concentrates development in a single centre on a regional scale. This centre then prospers in isolation, and even at the expense of the surrounding areas. Thus, it may well promote greater inter-regional balance, but is more likely to have adverse effects on intra-regional equity.* In this section, a refutation is given to the contention that economic or social growth will diffuse naturally from a medium-sized growth pole to the area immediately surrounding that centre, and eventually beyond (which is the measure of success), into the distant parts of the region (basically the rural areas).

The point is that with incentives limited to capital inputs, isolated large-scale industrial enclaves which contribute little to regional development tend to be enhanced. In fact, such enterprises benefit the more advanced regions, such as Baghdad, and through it, the industrialised world. Only by limiting most regional investment and incentives to agricultural development and small-to medium-scale industry, distributed in rural settlements, can a self-sustaining process of regional growth, with increasing equalities and decreasing dependency on external (extra-region-

*H.W. Richardson, The Costs and Benefits of Alternative Settlement Patterns, or Are Cities Bad? UN, ECOSOC World Population Conference, 1974.

al and international) inputs be achieved.

In Iraq, although it has never been specifically stated, both Basra and, to a lesser extent, Mosul, are in effect growth poles. The interesting point is that both these cities are surrounded by the most lagging regions in Iraq (particularly in terms of out-migration, identified in Part 2) namely, Dhok and Arbil around Mosul, and Muthanna, Thi-Qar and Maysan North of Basra.

Growth poles were derived from Perroux' theory* which considered a system whereby monopolistic or oligopolistic conditions were dominant. He was more concerned with growth industries and not particularly interested in urban or regional growth centres, but as his doctrine acquired currency, it became more loosely used. Perroux argued that change is strongly associated with certain large-scale, fast-growing industries, which he called 'propulsive', that is, industries that induce growth. This idea was picked up and further developed by Hirschman,** who argued that such industries, located in relatively few geographic areas and having high forward and backward linkages (maximising other regional inputs and outputs), would induce development by means of continuous imbalance or tensions of shortages and disequilibrium to trickle down to surrounding areas.

Gunnar Myrdal's*** theory of circular causation, in which a cumulative process or vicious circle of poverty, bad health, and little educa-

*See F. Perroux, "Note sur la notion de Pole de croissance," in Economie Applique 8, Nos. 1 and 2, 1955.

**See A.O. Hirschman, op. cit.

***G. Myrdal, op. cit.

tion, continuously press levels downwards, contains a number of conceptual tools that coincide with those of Hirschman. Myrdal's backwash (migration) and 'spread effects', which depend on the complementarity of industry, local raw material, and agricultural produce, has something in common with Hirschman's polarisation and trickle-down effects. However, Myrdal went on to talk about such processes as increasing inequities between regions in the poor countries, (where the polarising forces are stronger than the trickle-down forces), while diminishing them in rich countries. The higher the level of economic development that a country has already attained, the stronger will the spread effects be, due to the self-sustaining nature of the cumulative process at this stage. In effect, while Hirschman argues in favour of the need for initial geographical imbalance through the creation of development centres, Myrdal argues that the mechanisms for spread effects should be strengthened from the outset.

There are numerous proponents of growth poles* as agents of development and diffusion, but the discussion to date, together with the empirical studies that follow, and the subsequent discussion on rural settlements and intermediate technology will hopefully refute these propositions. Unfortunately, all empirical studies on questions of diffusion

*e.g., J. Friedman, *op. cit.*, argues that development occurs through a discontinuous, but cumulative process of innovation originating from a few centres of change (core regions) and that innovations are diffused to peripheral areas or regions.

L. Rodwin, *Nations and Cities*, Houghton and Mifflin Co., Boston, 1970, p. 7. , talks of growth poles in lagging regions as helping to spark a transformation in the agricultural and cultural patterns of the hinterland.

from growth poles were for lagging regions in the United States. It seems that the unavailability of very detailed and disaggregated data precludes undertaking such studies in most developing countries, and certainly in Iraq. Application of their conclusions to Iraq cannot be directly made, but the fact that they concluded on the whole negatively provides a guideline.

Vida Nichols cites the following reasons for economic development to continue to concentrate in the growth pole itself, rather than to decentralise and diffuse:*

- There is considerable doubt as to whether diminishing marginal returns to investment ever set in for a prospering town. As yet, there is little evidence to show that even the very largest of metropolitan cities have reached the point of diminishing marginal returns.
- Investment in the centre continues because as Hirschman has suggested, "the investment opportunities of the centre are frequently over-estimated, and that people often fail to perceive those of the periphery."
- Uncertainty about other investors' actions may make it advisable to remain in a central location capable of commanding the whole regional market rather than risk losing a disproportionate share of the market to a competitor more centrally located than oneself, but this is applicable only to a laissez-faire situation, which is not the case in Iraq.
- Rural-urban migration is not necessarily beneficial. It is usually age and education selective, and often results in a sadly depleted rural population incapable of bringing about the necessary adjustments to agricultural practise. There is strong evidence of this in Iraq.
- The demand for the primary (typically low order)

*V. Nichols, "Growth Poles, an Evaluation of their Propulsive Effect", in Environment and Planning, London, Vol. 1, (1969). p. 195.

goods of agricultural regions is generally very inelastic, so the increased per capita income of the growth pole is unlikely to increase demand for the products of its hinterland. The additional income which does come into the hands of the centre's population is most likely to be spent on high order goods found either in the centre itself or in still larger cities outside the region. Increased per capita income in the centre may even decrease purchases from the surrounding area as more expensive goods (bought outside the region) are substituted for those produced locally. That is, it is only with the poorer rural population, where an increase in income is likely to be spent locally (achieving a high multiplier).

This last point is of particular interest, because it brings up the idea that there are two aspects to the problem of diffusion. On one hand, there is the problem of the spread of growth from one town to the other towns in the region, and on the other, there is the problem of getting growth to spread from a growth pole to the rural parts of a region. Obviously, the processes by which these two types of diffusion may be expected to be brought about are very different, and if a region is primarily agricultural, the market towns within it may be comparatively autonomous.

Nichols examined this very point for the period, 1950-1960, in Georgia, then a lagging region based on a cotton economy, by empirically testing the increase in 'median income'. Atlanta, the growth pole, had a population of half a million, rendering it large for comparison with Iraq. Nonetheless, the results showed marked spread effects (in incomes) to a large area surrounding Atlanta, while for other towns in the state,

those nearer Atlanta grew faster, adversely affecting the more distant ones.* For the rural areas, there was a large increase in income in those near Atlanta (implying agricultural mechanisation), but not for more than half the state's rural areas in the South, where the effect on income was actually negative. Nichols concluded that although investment in the growth pole had an effect on surrounding areas (urban and rural), advantages were to be gained by injecting capital into lower-order centres and the agricultural base itself, because increased incomes in these areas will generate strong income multipliers in higher order centres, but not the other way around.

Some more recent studies, again in the United States, were even more conclusive regarding the lack of diffusion. A study by Yukhin on 64 development centres considered as growth centres by the 'Economic Development Agency' indicated that spread effects from induced growth centres are likely to be non-existent or at best, ambiguous.** Another study of the degree to which industry in the Ozarks region has by-passed the rural poor, concludes that "in-migrants tended to intervene between jobs and the rural poor, who were the targets for the industrialisation programme in the first place.*** That is, from the perspective of the unskilled rural

*Ibid., especially pp. 198-199, and p. 205.

**Yukhin, in N.M. Hansen, Location Preferences, Migration and Regional Growth: A Study of the South and South West United States, Praeger, N.Y., 1973, pp. 18-20, used four independent variables of: growth centres personal income growth rate for 1959-1968 and 1950-1959; population size of growth centre; and ratio of growth centre to hinterland population. These were regressed against the dependent variable, namely the hinterlands' personal income growth rate, (1959-1968)

***Ibid., p. 20.

poor in the Qzarks, such programmes urgently need to be supplemented by auxiliary measures in human resource development.

Another study, by Irwin Gray on employment effects of new industries (aluminum reduction and rolling mill) in rural West Virginia, found minimal benefits to local population. He concluded that "more local people could be at work at the expense of in-migrants, if they had had the necessary minimum education or training."* Thus, any industrial policy must at the outset be fully guided by the local social (educational) and economic circumstances.

Due to the above failures in diffusion from growth centres, Hansen concludes that rather than concentrating investment in the worst areas in lagging regions, (rural areas or small cities), there are numerous intermediate sized cities (100,000-500,000) whose primary function could be to benefit people from lagging areas as migration centres rather than as generators of spread effects. In other words, he is calling for increased mobility and depopulation, which is precisely the reverse of what this thesis recommends. Perhaps this is right for a highly developed industrialised laissez-faire country like the U.S., but for Iraq it is a non-starter. In support of his theory, he cites a study** which concluded that the more efficient migration centres in terms of increasing the incomes of migrants from lagging areas, had populations of 200,000-500,000, and tended to be outside the lagging areas, but not in big distant cities. In fact, of 45 growth centres for the study areas within the Coastal

*Ibid., p. 21.

**Ibid., pp. 149-151.

Plains, Ozarks, Four Corners Area, Upper Great Lakes, 30 were outside the immediate study areas. Only for Appalachia were 10 of the 14 centres within the study area confines.

Another example can be seen in the case of Ciudad Guyana, where, according to Utria,* the national economy has benefitted (in aggregate terms) but at the expense of the population of the region (by marginalising the non-industrial economy).

To conclude, it would seem that in Iraq the injection of effort and investment in lower-order centres and in the agricultural base is more likely to generate stronger income multipliers and better distribution throughout the region, than will a growth-pole policy narrowly defined. In this, a key distinction must be made between the spatial incidence of new development, and its transmission or diffusion through space; that is, the rural areas. The diffusion of new development or innovation takes place within particular social systems or groups, by two processes, the first by the dissemination of information, (the interpersonal**media is held to be the most important), followed by the more complex process of adopting the innovation (which is a learning process). In the context of Iraq, the key point is the requirement for a qualitative change of technology, namely, the need for a more appropriate technology and a type of local organisation relevant to the existing situation, in terms of skills, education, etc.

*Utria, in International Development Review, No. 3, UN, N.Y., 1972.

**T. Hermansen, in A. Kuklinski (Ed.), Growth Poles and Growth Centre, Mouton and Co., Netherlands, 1972, pp. 51-52.

At this stage, before dealing with diffusion through rural development, (that is, agriculture and rural industry) it is important to consider two issues, namely migration and the multiplier effect, where the type and location of investment become critical to achieving rural development. The necessary or appropriate technology and associated education policies are considered in Chapter 5.

4.3 MIGRATION

The previous section considered the negative effect of growth poles. Its premise of actively encouraging some migration to regional urban centres actually results in increased overall volumes of migration by increasing the number of options available to the potential migrants* (all other things being equal). Equally, as discussed earlier, such centres on their own tend to become enclaves of development and few, if any, reverse benefits accrue to the rural areas denuded of their most able people. In this very brief section, means to prevent out-migration from rural areas are discussed in the framework of policies emphasising rural development.

Most migrants are only aware of their individual costs and benefits associated with moving to another place, but are most unlikely to be aware of the resultant costs (and benefits) to society as a whole. For example, with the ensuing congestion and added strain on the infrastructure and social capital of the chosen city, or of the potentially

*See W. Alonso, The System of Intermetropolitan Population Flows, (unpublished paper), Berkeley, 1971.

negative effect on rural areas. As most migrants bring their families, the demand for social capital will be very great.* A similar situation arises when industry is located in major cities, leading to heavy polarisation and congestion. Furthermore, such development does not take account of social cost due to environmental damage, for example, with pollution caused by a concentration of industry. The point is that full social costs are more likely to be adequately dealt with at the regional than the national level, assuming the active involvement or participation of local groups, which is the only sure way of acquiring more knowledge of the area, its people, problems and needs. Otherwise, the regional planners may become most concerned with keeping up with the primate city (as is the case with growth poles).

Migration is also promoted by compulsory education, which although laudible, is not balanced by more investment in rural areas, and secondary cities to provide the better jobs demanded.** As these rising expectations are not met in the area or region, migration increases and often results in structured unemployment and impotence in the urban areas versus the previous sense of community, identity, etc.*** The point is that the education itself is misdirected, with its emphasis on abstract or general knowledge that is often irrelevant to the local

*The situation is clearly explained by the relative balance between the male and female populations in the relevant regions in Iraq.

**Educational aspects are dealt with more fully in section 5.4.

***Questions relating to life-style and socially restrictive rural life with respect to migration are not directly dealt with here, due to limitations of time and the scope of this thesis; however, they are clearly implicit in most of the argument.

situation and needs, which frequently raises false expectations of 'better' or more urban jobs.

Migration can also be facilitated by certain types of transportation investments, such as in major routes to lagging regions. To take the Southern Euphrates regions of Qasisiya, Muthanna, and Thi-Qar as an example, they lack an adequate paved road system and are the most socially and economically backward. These communities have suffered from high rates of migration and lagging agricultural development (partly because the marketing of agricultural products becomes very inefficient and difficult). To generate greater development activity on a regional level, a priority is clearly to first develop a minimal road infrastructure in the regions so as to facilitate the marketing of agricultural produce. However, (and this cannot be over-emphasized), improved transportation on its own in these areas (that is, without the complementary rural development policies proposed), will only facilitate further migration and encourage increased dependency on the main cities (as the roads effectively expand their markets.

In response, this thesis calls for the expenditure of additional national resources in the lagging regions identified earlier, which would also benefit the Baghdad region, as the very high social costs consequent on continuous rapid migration (to Baghdad) would be reduced. This assumes that investment is not just in regional cities, but more so in agriculture and numerous rural settlements (as will be discussed later). This policy need not cost more per se, as it requires a re-

direction of expenditure away from Baghdad and the three other major cities, Basra, Mosul, and Kirkuk, to other regions. It would also decrease urban congestion, reduce pollution and provide a more efficient use of the national transportation system. In other words, only a policy of concentrating development in agriculture and numerous rural settlements, is likely to neutralise the pull of Baghdad and the three other major cities. This will also require certain complementary measures to curb out-migration.

This policy has been, to some extent, successfully applied in Cuba,* where Havana's growth has been markedly slowed, and its relative size, presently 1-3/4 million people, has diminished as a percentage of the country's total population. This was achieved by putting most new productive investment in second-order cities and rural areas, and by severe locality based food rationing, so as to make regions more self-sufficient. Some of the Chinese measures** to influence population movements also have some relevance to Iraq. Their policies are motivated by community self-reliance and equality of access to resources and facilities. They include:

- prompt registration requirements of incoming migrants (perhaps this is not as difficult to control in Baghdad as it may seem at first sight, for the government is the prime employer and therefore, should be able to enforce such a law).

- instruction of rural cooperatives to welcome

*D. Barkin, The Redistribution of Consumption in Cuba, 1968, p. 90.

**International Social Development Review No. 1, UN, N.Y.

back migrants and facilitate their readjustment, providing food, housing, etc., which is eased by state subsidies. However, this programme of transfer or 'voluntary' out-migration of young people from city to rural area has been strongly resisted by some; however, it seems that close to 25 million students, party cadres, medical and industrial workers and others have been transferred, willingly or unwillingly,* (a similar, but perhaps less severe approach should be encouraged in Baghdad);

-instruction of urban workers not to flaunt the attractions of urban life during their periodic visits to villages (control of this aspect would seem to be very difficult, especially in the early stages, before local organizations have been sufficiently built up; however, television and radio should not be used to glorify the capital, as at present, but rather in educating and disseminating knowledge to the rural areas);

-ideologising education in villages to help rural populations understand the importance of agricultural production for national income and development (which makes sense in Iraq);

-revision of urban subsidies and initiation of rural subsidies (which is of prime importance for Iraqi rural settlements);

-decentralisation of cities, that is, to move centrally located enterprises to rural areas selectively and over a long period.**

*See article by the Editor, "Peking's Programme to Move Human and Material Resources to the Countryside", in Current Scene, Sept. 15, 1969, Vol. VII, No. 18. p. 2.

**See R. Thompson, "Containing the City", in Architectural Design, March, 1974, London, p. 51., where the transfer of a timber factory plus its 2,000 employees out of the centre of Chansha is discussed. NB: with relocation plans, the enterprise must allow for the cost of new homes, shops, schools, recreation facilities, as well as the cost of the factory, all of which is the financial responsibility of the enterprise (again, a state subsidy aids the relocation).

In addition to these potential policies to prevent out-migration from the rural areas in Iraq, the overall lack of intellectual stimulus motivates migration among the young and educated, which calls for the establishment of dispersed cultural centres. Some studies* indicate that return migration is usually associated with a more or less guaranteed access to land or alternative means of livelihood. As the population employed in agriculture is high at present, there is less demand for such labour. However, the introduction or expansion of labour-intensive cropping (e.g., rice) and appropriate technology in agriculture, together with alternative employment in rural settlements,** might be an inducement for returning migrants, as well as preventing further out-migration. Such policies indicate a definite move to restore the balance between urban and rural life, and are very strongly advocated in this thesis. The full policy implications of migration cannot be fully dealt with in the space of a few pages, but the essential points of relevance to the forthcoming discussion have been made.

4.4 THE MULTIPLIER EFFECT

The multiplier concerns the direct and indirect effect of investment, where often the indirect effects are larger than the direct ones.

*J. Nelson, Sojourners Versus New Urbanites, The Urban Institute, Washington D.C., 1973.

**W. Alonso, op. cit., argues that there is no fundamental pull towards larger urban areas, but there is a significant pull towards higher incomes; i.e., the flow towards large cities is in response to higher incomes. Additionally, according to Hirschman, op. cit., p. 188, the actual pay differences between centres in developed and underdeveloped regions, are likely to overstate the real productivity differences in the most skilled trades. In other words, a government policy of evening out incomes between similar employment facilities in all regions, would be very beneficial for decentralisation.

As in the case of migration, it is an essential issue to be discussed in considering the diffusion of development to rural areas, particularly regarding the types of investment and linkages between them. The discussion here leads into the concluding section of this chapter on rural development and its settlements. It is also an essential element of the forthcoming chapter, which looks into the means of diffusion through appropriate technology and education.

The tendency is often to see and become conscious only of the visible, and to forget the invisible things that are making the visible possible, and keep it going. For example, the expansion of the beer industry in Iraq may not only lead to the expansion of existing brewing capacity in different regions, but also to increased production of bottles (at, for example, the glass factory in Ramadi, or the creation of a new one elsewhere*), and increased demand for barley, which increases the farmers' income and spending power...and so on, creating a whole chain. In this section, the primary concern is with regional and local (as opposed to national), multipliers, as they concern the benefits in income and employment accruing to particular regions or localities. The higher the multiplier, the greater will be the indirect effects of investment. The relationship between multiplier effects and income distribution is similar.

Generally speaking, the higher the income, the lower will be the marginal propensity to consume, that is, any further increase in income

*A.O. Hirschman, *op. cit.*, p. 103, says that a good rule of thumb is that a new industry can be established as soon as existing demand is equivalent to half the economic size of the plant, and that the additional demand follows later.

will not all be spent on consumption, and will therefore have less effect on other sectors. The contrary situation arises with any increase in income for poor people, as it is liable to be spent (and not saved) on the kind of goods that may be expected to involve few imports and which are possibly produced within the region itself. Therefore, the indirect stimulating effects will be high. The latter proposition has the merits of being socially just and economically sound, and is strongly advocated in this thesis as a necessary policy to decrease dualism and urban-rural inequities by emphasizing rural development. This concept also implies that the greater the degree of self sufficiency of a region, the greater will be the multiplier effect, because of fewer leakages out of the region.

The implication of the discussion to date is that it is important not to select locations for industry on economic grounds alone, as this would increase polarisation, but also to consider the social returns consequent on investment in the lagging regions in general, and the rural areas in particular. This point is continuously emphasised in this thesis, that is, the full range of physical and social implications of economic planning must be considered in advance. Unfortunately, with few exceptions, some of which are discussed here, industrial location in Iraq has been governed by considerations of short-term profitability, that is the choice of maximum commercial returns as opposed to social benefits has led to increased polarisation. In the long term, the situation is further aggravated by such policies, whereas both commercial and social

benefits are achieved if industry is decentralised. Henceforth, unless otherwise stated, reference to industry will be for rural towns and villages.

It follows from the discussion to date that the types of industry having high multipliers are those using local rather than imported raw materials, and also industries with high income elasticities. In the West, foodstuff industries generally have low income elasticities, but as Iraq is not self-sufficient in food, and has a large regional role to play as a supplier of foodstuffs to the Gulf region, this problem is not likely to apply for a long time (this is not to mention the importance of import substitution of foodstuffs). For this and other reasons (discussed previously and in the following section), it is of prime importance to invest in agriculture.

Large and/or sophisticated high technology industries require careful siting or relocation (from major centres) in that such plants located in a small town in a lagging region will probably require imported labour from other regions (examples of this phenomenon were considered in section 4.2). In other words, the local inhabitants will only benefit indirectly, and such policies are likely to result in social friction. An example of this can be seen with the initial development of the high-technology, high-skill oil industry in Kirkuk (the point is emphasised, as Kirkuk was not a small town or village at the time). Its establishment led to considerable monetary gains, which, unfortunately, were distributed so narrowly that they resulted in large inequalities and con-

siderable social friction. When such industries are required, attention should be focussed on their integration with the social surroundings (which includes utilizing primarily local personnel). It should be noted that this requires a decentralised process, and coordination between social, economic, and physical elements.

Some such industries are clearly required in Iraq, a country with vast supplies of hydrocarbons and other minerals, but the point is not specifically to extend this philosophy to the remainder of the development programme. In such cases, we need to learn from the Chinese approach of 'walking on two legs',* which combines capital-intensive methods in the modern sector in urban areas, with labour-intensive methods in agriculture and indigenous industry in rural areas. This simultaneous development is still dualistic, but it yields a high level of productivity in the modern sector while mobilising untapped local resources and gradually accelerating growth of agriculture and small-to-medium-level industries in rural areas. This stress on local plants accords closely with the effort to decentralise.**

The following examples clearly illustrate the very positive multiplier effect (both direct and indirect) of four large industries, recently established in Iraq, namely the paper mill in Jazain, and the sugar refineries in Mosul, Sulaimaniya and Amara. However, the argument

*Pi-Chao Chen, Over-Urbanization: The Rustication of Urban Youth and the Politics of Rural Transformation, as evidence of decentralisation in China, there is no direct control of factories by ministries; in addition, costs are transferred from the national budget to local levels.

**Pi-Chao Chen, op. cit.

will return to the limited number of such potential industries and therefore the need for a cheaper, more diffuse approach involving both agriculture and small-to-medium-scale industries, which implies the use of more locally appropriate technologies.

A 20 million dollar paper mill was constructed in Jazain, in the Thi-Qar region, just north of Basra, using reeds from the marshes as raw material. The plant is highly sophisticated and employs 800 skilled labourers. The reed cutting process chosen could have been equally sophisticated, requiring more skilled labour and resulting in few benefits to the local inhabitants, namely, the marsh Arabs. What is remarkable is the fact that the plant actually uses 5,000 marsh Arabs for the cutting and transportation of reeds to the factory. This policy is clearly laudable, but where it can be criticised is in the choice of location, and more so in its high cost. Regarding the former, Qurnah* would have been a better location, and equally accessible to the marshes. With respect to cost, the mill works out at roughly ID 3500 (about \$10,000) per employee. In chapter 5 it will be argued that much more employment could have been provided with such a large budget.

Similarly successful, but less expensive, ventures in sugar refining were implemented in Mosul, Sulaimaniya and Amara, using local raw materials. The local farmers were encouraged to switch to beet sugar cane production, whereas it would have been initially cheaper to import raw sugar and locate the factories near a port, but the multiplier

*Qurnah, a town north of Basra, has a higher level of existing economic and social infrastructure, while Jazain is a tiny village.

and distributive effects would have been negligible. In this manner, industry can have a very direct effect in raising the standard of living in particular regions.

There are, however, a number of critical considerations here. The first concerns the relative shortage of skilled labour. This is a clear indicator of polarising tendencies, particularly concerning high-skill industries, and is exacerbated by the shortage and uneven distribution of technical institutes. There is therefore a definite need for more technical training colleges, particularly when tied to new industries being developed in lagging regions. The second is concerned with the impossibility of presently obtaining mass employment in such high-skill, high-cost industries. A need is therefore established for more broadly based employment policies in rural areas in agriculture and agro-industries. In this context, Hirschman quotes Aubrey*, who favors small industry in rural or small town settings, on the grounds that you economise on overhead capital expenditure such as water, power, housing, etc. required by urbanised industry and its labour force. High levels of skill are not demanded. These issues, concerning rural development through agriculture and rural industry are now discussed.

4.5 DIFFUSION THROUGH RURAL DEVELOPMENT, IN AGRICULTURE AND RURAL INDUSTRY

The failure of present policies to achieve equitable development has

*Aubrey: "Small Industry in Economic Development," in Social Research No. 18, (Sept., 1951); in A.O. Hirschman: The Strategy of Economic Development, p. 44.

been well documented and discussed in the previous section. In this section and the following chapter, the core of the policy proposals for the diffusion of development are to be found. At first sight, it might seem that the object of rural development policy is solely to increase agricultural production and farmers' incomes. But this would be altogether too simple. The emphasis needs to be on agriculture and rural settlements comprising service facilities and small-to-medium-scale industries of appropriate technology. The question of employment in rural areas is particularly important, for as we have seen, only a small portion of the growing labour force can be absorbed in the urban areas.

The assignment of first priority to the rural areas does not imply that industrialisation has to be delayed, per se; rather, industry is mainly linked to agriculture, which will, in the long term, enable a faster industrialisation of the entire economy. The concentration on agriculture and rural industry creates an infrastructure in rural areas and builds a technically trained labour force to work in future industrial establishments. The location of industry in rural areas offers many other advantages, such as reducing migration and cultural uprooting (any transition to a rural industrial life from agriculture is more likely to occur without sharp disruption of family life and traditions). It also lowers the real cost of labour, housing, and other services, and avoids many of the diseconomies and social disadvantages of congestion in the cities. Most of these yield immediate or short-term benefits, while in the long term, faster agricultural development, with diminishing urban and rural

inequities, and balanced regional development, is achieved.

An important aspect of the inter-relationship between agriculture and rural industry is that, in addition to supplying goods required by the agricultural sector, the industrial workers living in the rural areas create local markets for agricultural products. This factor is of considerable importance in Iraq, where the local transportation and marketing systems are not well organised. Furthermore, such industries provide resources for investment in agriculture by offering employment to peasant families. Growth of rural industry is also likely to be a stabilising factor for rural society* as well as providing employment to the keener elements of rural population who are more prone to migration.

However, (and this is crucial), agricultural development makes more demands than any other policy. Rural development requires efficiency and widespread coordination of programmes from different sectors, agencies, and ministries, as well as interaction between local groups and organizations, and the higher scales (regional, national). Furthermore, its natural geographic and cultural dispersion renders local participation the only adequate means of ensuring the relevancy of policies. These aspects of the planning process will be considered in greater depth in Part 3.

An underlying assumption of rural development as advocated in this thesis, is that the increased rural productivity is translated into increased incomes for peasants (the present dichotomy between rural and

*See D.R. Gadgil in R.Weitz (Ed.), Rural Planning in Developing Countries, pp. 90-91.

urban wages has already been discussed in Part 1). It is therefore essential to the success of the policies proposed here that the principle of exchange of industrial goods for agricultural produce is based on more equal values. Clearly, price policies involve conflicts and difficult compromises in allocating incentives between agriculture and industry and urban and rural areas.* In the context of this thesis, price policy must be based on guarantees, not just to the peasant, but also to rural industry.

Rural settlements and their economic and social functions should not be planned as individual units, but as components of a system of settlements. Specialisation and interdependence among villages is an important condition for developing a dynamic rural society. It is an alliance of mutual benefit and assistance. In other words, a narrow focus on a village, while ignoring its broader surroundings, will not contribute much to rural development. That is, the rural settlement policy proposed here is not intended to dominate and exploit the surrounding countryside, but rather to serve as a catalyst and service (technical, commercial, marketing), educational and processing centre. In addition, a very local bias diverts attention away from the better regional approach, which is able to tap the superior resources of the national government as well as encouraging the participation of a wide range of rural communities, organisations and authorities. A decentral-

*N.B.: The specific incentives, subsidies, tax waivers, etc., will not be discussed fully in this paper.

ized planning process is implicit in these arguments. An important benefit of the policy of proliferation of small plants in rural settlements includes the means to assist in maintaining and repairing tools and machinery locally. The promotion of spread effects from these settlements is then a matter of choosing the type of investment and means of production that both stimulates employment and production in the hinterland and trade through the centres. It is important to note that it is from such revitalised villages and towns that a broader spectrum of rural leadership will emerge, as part of the decentralisation process advocated here.

At the heart of this drive for rural development is the desire for local self-sufficiency, better income distribution, and the provision of sizeable employment possibilities. Rural industry can be divided into two scales comprising a few large industries similar to those identified in section 4.4, and numerous small scale industries of intermediate technology. The concern here is with the latter type, requiring smaller investment, simpler construction, and giving quick results while employing a level of technology requiring less skill and therefore easier to assimilate. These can be subdivided into agro-processing, agro-supporting, and household consumer industries.

The type of industry most likely to impart a strong impulse to agricultural development is that applied to processing and marketing farm produce.* It is also a crucial means of integrating agriculture

*See R. Weitz, "Regional Planning for Rural Development" in R. Weitz (Ed.), Rural Development in a Changing World, M.I.T. Press, p. 112.

and industry. Processing industries have three important advantages, namely: a considerable saving on transportation costs, as most agricultural products lose weight and bulk in processing; considerable reduction of the amount of wastage or perishability, which directly increases local income and also reduces transportation costs; and most important, its use of agricultural raw material, which means it can be geographically dispersed.

Agro-supporting industries such as producing farm implements, pumps and pipes, are next in priority. Small chemical fertiliser plants are rural industries which seem unsuitable for Iraq, due to the lack of phosphates and the concentration of carbohydrates in a few areas. Other labour-intensive industries appropriate for rural areas are those requiring large amounts of space (such as leather, bricks, and cement), abundant supplies of water (such as textile finishing, canning, preserving, and dehydrating fruits and vegetables),* and having high electricity demands (calling for location near energy sources).

Additional rural employment, particularly with regard to seasonal unemployment or underemployment in agriculture, is to be found in the reintroduction of labour-intensive public works (such as roads, irrigation and drainage canals, buildings) as a major tool of development policy. The creation of rural infrastructure on a large scale also contributes to the build-up of the productive capital of the rural economy and its region. Furthermore, our assumption is that dispersed

*See P. Malgavkar, Ibid., p. 132.

and non-concentrated infrastructure does not call for large movements of population. The increased demand for social services and administration, as well as in local consumer industries, will also add to the employment opportunities. There is quite clearly no shortage of opportunities to greatly increase employment in both agriculture and industry in rural areas.

To continue with the above policies for rural development in Iraq, questions of size and location of rural settlements are now considered. Determination of optimal settlement size is a very difficult issue. Sizes for the larger regional towns or cities have been discussed and debated endlessly by numerous people.* However, the criteria have neither been specific, clear, or conclusive, and their range has varied from 25,000-500,000 plus. This point will not be argued here endlessly, as there can be no conclusion; besides, the main argument is concerned more with the small-to-medium-size rural towns and villages. Perhaps, rather than determine an abstract range of sizes based on inconclusive argument, it would be more appropriate to take the actual situation in Iraq as a starting point, and worry about the rate

*In W. Alonso: The Economics of Urban Size (unpublished paper) Berkeley, 1970, a range of 250,00-500,000 minimum is cited for the U.S. by B. Berry In E, Brutzkus, op. cit., Colin Clark is cited at 175,000 for pre-war England; and two ranges of 20,000-50,000 and 200,000-400,000 for North France; and 20,000-200,000 (with allowances for 10,000-20,000 and 200,000-400,000) in the USSR. While Fernandez Cavada, The Problem of Integration of Physical Planning into Economic Planning in the Case of Spain, UN, N.Y., 1973, cites 100,000-500,000 and 25,000-250,000 for the first and second Five Year Plans in Spain.

of change or growth. The following table generalises the settlement pattern in the five Northern regions* of Iraq for 1970.

Bearing in mind the earlier discussion, the conclusion is that the focus of the particular planning effort called for here should be on the 23 rural towns (but not all at once) in that they service, or should do, not only the rural population of the five regions for most of their needs, but also a sizeable part of the nominally urban population. The reason for concentrating on these small towns rather than on villages, is mainly because Iraq's rural population is very widely scattered in over 14,000 villages, many with populations of less than 500.** Any concentration on them as the prime movers, would quite simply be well beyond the administrative and organisational potential of the country, not to mention the problem of viable size, or the difficulties concerning traditional conservatism at the small village scale.

The present catchment populations of these 23 towns (see Appendix 2) vary roughly from 20,000-over 100,000, and in effect they form districts (qadas). Their distribution in serving primarily the rural population within the Five Northern regions, seems satisfactory; however, there are five major gaps in terms of localities with no rural towns of 5,000 population or over. If such a rural settlement network is assumed,

*Chosen partly because the available data are limited to these regions, but also because they include lagging regions and are the focus of the Kurdish problem.

**See UN, Popular Participation in Development: Emerging Trends in Community Development, UN, N.Y., 1971, p. 207

URBAN AND RURAL TOWNS AND CITIES IN THE FIVE NORTHERN REGIONS OF IRAQ,*
1970 (All population figures are in thousands - '000)

Region	Population (Urban=u; Rural=r)	Total Population	Settlement Pattern (all towns and cities mentioned come out of the urban population column)
Arbil	150 u 250 r	400	Arbil 101 pop. + 4 towns from 5-10 pop.
Dhok	50 u 109 r	240	Dhok 18 pop. + 2 towns from 7-14 pop.
Nineveh	430 u 440 r	870	Mosul 310 pop., Tal Afar 46 pop. + 5 towns from 7-11 pop.
Kirkuk	265 u 255 r	520	Kirkuk 191 pop., Tuz Khurmatu 18 pop. + 6 towns from 5-8 pop.
Sulaimaniya	175 u 285 r	460	Sulaimaniya 103 pop. + 6 towns from 5-14 pop.
Total	1070 u 1420 r	2490	4 regional cities from 100-300 pop. 1 regional town at 50 pop. 23 rural towns from 5-15 pop.**

*Source, Appendix 2.

**With two exceptions, one at 16 and the other at 18.

these gaps can be removed by adding five more settlements (presently below populations of 4,500), namely, Shirqat, Qayara, and Shimal in Nineveh province, where each expanded settlement would have a theoretical catchment of 50,000 population; Makmour in Arbil province, supporting up to 65,000 population; and Amadiya in Dhok, with a potential catchment of 60,000. In Iraq, there is little to justify the commitment of effort and resources to new settlements or towns, when existing communities will serve the purpose. That is not to say that new towns are bad, but simply that Iraq, inhabited for millenia, has an abundance of existing towns on which to build.

These rural towns would form the nucleus for the government's agriculture policy in providing the requisite services to the surrounding cooperative farms (technical advice, supplies, credit, and marketing). It is at this level that planning for the district can be coordinated and integrated with the regional and national processes. The decentralisation implicit in the previous arguments and discussed in more detail in Part 3, enhances the effective participation of the villagers at the earliest stages of planning. This is particularly important, as the government's attitude that 'it knows best' and can impose a cooperative spirit and organisation upon the peasants, has, in practise, failed in Iraq.* The devolution of some powers to the local level, which coordinates the villages, ensures a certain sense of local identity and will go a long way towards enhancing the implementation of

*J.L. Simmons, op. cit., pp. 7-15.

these proposals by making them more locally specific and taking account of socio-cultural circumstances.

By planning with, and not against, local social conditions, the process of diffusion can be eased and enhanced. For example, the extended family, which plays an active role in Iraqi village life, with the nuclear family presently existing within it, is often construed as being disadvantageous to 'modernisation'. However, the extended family structure can provide the security and context within which change can be more readily assimilated. In the words of Peter Marris,*

"We assimilate new experiences by placing them in the context of a familiar reliable construction of reality...", and "...the more secure we feel, the more open we are to experience, so long as we believe it will enlarge, rather than undermine, our understanding."

The full importance of taking cognizance of the local social environment and ecology to avoid social and psychological crises, will become clearer after the next chapter on appropriate levels of technology and education.

It should be apparent that the infusion of the appropriate social and economic capital into agriculture and specific rural settlements, requires well-studied and phased programmes, for the available resources will constrain the feasibility of some villages, which, for various reasons, are not in favourable economic situations, or where there is little possibility of development at an acceptable cost. This calls for the decentralised planning process considered in Part 3. The dif-

*Peter Marris, Loss and Change, London, 1974, pp. 6, 109.

fusion of development benefits to rural areas as discussed in this chapter, is not possible without the infusion of appropriate levels and types of technology and education. These critical elements are now considered.

5 - THE CATALYTIC ROLE OF INTERMEDIATE TECHNOLOGY AND APPROPRIATE EDUCATION IN RURAL DEVELOPMENT

One of the foremost concepts of this thesis concerns the application, on a mass scale, of relevant intermediate technology and the introduction of more appropriate forms of education, without which most of the policies for rural development proposed in this thesis will remain academic. Before expanding on this, however, it is necessary to be more explicit about the implicit rejection of sophisticated high technology (transferred from the West with all its trappings), which complements the present polarised and dualistic development and applies equally to growth poles. This is then followed by a discussion of the indigenous technology context of Iraq, and the appropriate Research and Development (R&D) institutes, concluding with the educational implications of the proposed policies.

5.1 IMPLICATIONS OF THE TRANSFER OF SOPHISTICATED TECHNOLOGY

The process of scientific and technological advance has been heavily concentrated in the West (70 percent in the U.S. and 25 percent in Europe)* with only about 2 percent occurring in the developing countries. This unequal distribution would not matter so much if the directions of advance, the priorities and means, were independent of where the work is carried out. However, this is clearly not the case, for not surprisingly, some 98 percent** of R&D expenditure is for solving problems in the same rich countries. Thus, both the choice of problems and

*Hans W. Singer, op. cit., p. 24.

N.B.: The figures exclude socialist countries.

**Ibid.

the methods of solving them will generally not relate to the completely different needs and context of the developing countries.

In the West, R&D in manufactured goods is primarily in the hands of large multinational corporations, while for reproducible goods, such as seeds, R&D is primarily supported by the public sector.* The guidelines for the products and their pricing systems relate to the presence of large domestic markets, sophisticated products and production methods relying on large inputs of capital and high levels of technical and managerial skills, while saving on high-cost labour. It would therefore be remarkable if there was much correlation with developing countries, mainly interested in simple products and designs using simpler production methods, requiring low inputs of capital and high inputs of low-skill labour, and geared to smaller markets.**

Western manufacturers do not consider the actual designing of products suitable for developing countries to be a serious obstacle,*** rather, their concern is for the size and stability of the potential market and fear of inordinately high costs of distribution, maintenance and training. However, with agro-chemicals, there are fewer prob-

*See M. Yudelman et al, Technological Change in Agriculture and Employment in Developing Countries, OECD, Paris, 1971, pp. 157-158.

**Although T. Vietoritz, Industrial Development Consultancy and Choice of Technology, OECD, Paris, 1973, pp. 22-24, in talking of engineering technology deduces that economies with large population are less dependent on such inputs, indicating the importance of economies of scale in highly technical industries.

***See M. Yudelman, op. cit., p. 152: in fact, several prototypes have been prepared but not mass produced, with the exception of a new small scale tractor plus attachments, called DNT, manufactured by Ford and intended for use exclusively in developing countries.

lems of this nature in transfer, but the question of environmental suitability remains. This transferred technology is thus not only unrelated to the needs, but also to the means of developing countries, drawing heavily from limited foreign exchange.* In addition, it may not be useful or even possible unless the importing country has the domestic infrastructure capable of selecting and adapting the chosen technology. This is rarely the case, and the imported technology does not take root, becoming no more than an enclave of modernity. In G.S. Stigler's words, "Small economies that imitate us can follow our methods of doing things, but not our methods of changing things next year, therefore, they will be very rigid.**" Furthermore, the composition of such technology is changing so as to become increasingly less relevant to developing countries.

The present rapid urbanisation and polarisation in Iraq is a function of the borrowed contemporary technology with its demands for economies of scale, etc. The innovations are imported to the main and rapidly expanding urban centres forming modern enclaves. However, the development of these technical products has been based on a perception of the greatest potential for private profit and in the context of developing countries, encourages technological dualism. What is invar-

*Although Iraq's foreign reserves are now considerable, thereby facilitating acquisition of high technology, the qualitatively different needs and social structure, as well as the limitation of existing institutions and infrastructure, remain as critical factors.

**In Hans W. Singer, op. cit., p. 25.

iably overlooked in this process is the resulting dependency (both internally - urban/rural; and externally), and the view that diffusion gradually takes place to the periphery, has been and continues to be strongly contested in this paper.*

Thomas Vietorisz** in discussing technological autonomy versus dependency, says that,

"...a microsocial system with too many outside connections, as compared to its internal functional 'differentiation' (the number of separate components, e.g., industries) will tend to be torn apart by being pulled in too many directions."

In other words, development (concerning technological autonomy) is not just a matter of increasing 'differentiation', but must be accompanied by an adequate level of 'integration' (ability of the system to act functionally as a well organised whole). In the case of Iraq, this implies the need for structural and institutional change, due to the present lack of 'integration'.

To advance technological autonomy, we must focus on technology's self-upgrading potential. That is to say, it is preferable to see an indigenous technology grow up from a modest beginning, than to see a

*Studies by Ove Pedersen on "Innovation Diffusion in Chile", in Friedman, *op. cit.*, p. 17, indicate that "at higher levels of economic development, diffusion proceeds down the urban hierarchy from large to small", (note the omission of rural areas), "while at lower levels, the friction of distance appears to have greater influence." (Note again diffusion, if it does occur, is between cities, thereby increasing the isolation of rural areas.)

**Thomas Vietorisz, *op. cit.*, pp. 5-11.

high-level foreign technology transplanted in a way that perpetuates dependency. Our guide is the conviction that the essence of underdevelopment is the inability to generate indigenous technology.

To rapidly progress in this field, the importance of a large local market is not contested. The Arab world not only forms a sizeable market, but its wealth can also finance the rapid development of indigenous R&D institutes. In this context, Arthur Lewis has observed that, "If developing countries want to grow faster than the developed world, they will have to trade relatively less with the developed world, and relatively more with each other."*

5.2 THE INDIGENOUS TECHNOLOGY CONTEXT

Innovation or change in technology can be defined as the incorporation of a new resource into a production process, as a partial (or complete) substitute for some resource that is currently being employed. In the context of the rural development policies proposed in this thesis, appropriate levels of technology for agriculture and rural industry are called for. The inter-relationship between the two sectors discussed earlier reappears, for technology change in agriculture is not autonomous, nor is it endogenous to the agricultural sector. Its spread depends on the expansion of inter-and intra-sectoral trade between agriculture, industry, and services. Real progress in these will come from within; that is, from Iraq's indigenous technology and not with transferred high technology.

*Arthur Lewis, The Development Process, UN, ECOSOC, 1970.

A most damaging aspect of transferred sophisticated technology is that it tends to disrupt relatively self-sufficient traditional economies, rendering their supporting technologies obsolete, and therefore resulting in the loss of employment. This, together with the fact that the innovations are more often than not, poorly adapted to local conditions, cause major social problems, and adjustments in the local culture that are as much involuntary as they are unanticipated. In other words, technical changes cannot be isolated from the social relationships in which they are embedded. An apparently discreet innovation, such as the introduction of hybrid maize may undermine a whole tradition of peasant life, as it did in France.*

The capacity of a society to assimilate new technology depends both on its capacity to adapt the technology to its own conditions, and on its capacity to adapt itself to the needs of the particular technology. Thus, changes in technological structure seem only to be possible gradually, within the limits of what can be assimilated.** So, whenever disruptive changes are imposed upon people, there is a need

...to allow time for people to repair the thread of continuity in their attachments, for without continuity, we cannot interpret what events mean to us, nor explore new

*P. Marris, op. cit., p. 160.

**M. Yudelman, et al, op. cit., p. 42, quotes a study of the slow spread of innovation in two villages in Mysore, India, which revealed that the average length of time that elapsed between a farmer's first becoming acquainted with innovations and finally adapting them was 7.2 years for improved seeds and 5.1 years in the case of chemical fertiliser. Part of this delay may well be due to lack of guarantees by the government, which is essential in such cases (to reduce risk).

kinds of experience with confidence.*

Due to Iraq's varied population and culture, the pace at which such adoption and assimilation is possible without disastrous social and political consequences is a very important factor in setting an upper and lower limit to the pace of change. Specific decisions concerning rates of change will have to be determined more or less on location; they cannot be made in this thesis, nor will they be constant over any region. The pace of change will probably vary sharply between location and for different uses. In this context, one of the principal lessons to be learned from the Japanese experience** is the importance of progressively modifying existing farming techniques to suit local, physical, economic, and social conditions, rather than attempting wholesale substitution of modern for traditional agriculture.

Some of the negative economic and social effects of imported technology, particularly if sophisticated, have already been considered. There are similar limitations imposed by Iraq's physical environment. This continuous, integrative or coordinating thread in the arguments of this thesis should be noted. To take agriculture as an example, its modernisation depends as much on climate and soil conditions as it does on economic, social and cultural considerations, or the size of holdings or the means of irrigation. The following account illustrates the importance of land suitability and validity.

*P. Marris, *op. cit.*, p. 2, p. 150.

**B.F. Johnston in G. Jones, *The Role of Science and Technology in Developing Countries*, Oxford University Press, 1971, pp. 60-61.

The Central and Southern plains in Iraq are marked by very hot summer temperatures (up to 120°F) with simultaneously low humidity (down to 5%). Thus, wooden parts of farm machinery become extremely dry, while those of canvas, leather or rubber soon lose some of their elasticity and therefore, fit improperly. Fischer explains that,

"...sand and dust storms coming from the Western desert are the greatest enemies of farm machinery, in particular the more complicated kinds. The dust penetrates into nearly every part of the machine, causing heavy wear in all sliding and rotating parts and surfaces."*

It should be noted that tractor work itself stirs up dust and further aggravates the problem. Thus, the frequent engine overhauls and replacements required, heavily tax the few and often distant maintenance workshops, and the end result is a slow deterioration in quantity and quality of output.**

A similar story is recounted by Al Dahiri*** concerning a foreign experts recommendations to farmers in Northern Iraq. More often than not, the soil in the North is mixed with stones, and an expert tried to persuade the farmers to remove the stones before tilling their land. The results at harvest time showed that the fields with stones had a better crop. It seems that in Iraq's dry climate, the stones served the function of preserving moisture. There are numerous other examples of

*K. Fischer, "Farm Mechanisation in Iraq", in A. Al Dahiri, op. cit., pp. 212-213.

**N.B.: Capital/output ratios are invariably used as determinants; however, as has been seen, the machines are often idle up to half the time, and certainly work at less than optimum capacity most of the time.

***A. Al Dahiri, op. cit., pp. 213-214.

peculiarities of the local situation that limit the direct applicability of foreign techniques, particularly the sophisticated ones.* It should be clear that the primary concern should be with specifically local and regional relevance or appropriateness more than the more general national context, which, as with the previous planning policy statements for rural development, render a local and regional approach crucial.

In addition to questions of local relevance, and levels of the technology, the qualitative aspects of the change, such as its effects on the social organisation of the process of production are also of interest. That is to say, does the technology weaken class barriers and reduce income inequalities? Some experience shows that the present pattern of early innovators are those of higher socio-economic status, having larger farms, and subsidiary employment as well as having higher levels of education.** In these circumstances, it is the government's responsibility to acquaint the farmer with the new technology by local trials, and to provide guarantees and credits, which, in the case of the proposals made here, can be through the central cooperatives in the selected rural towns. A suitable price structure is crucial here, for with very adverse terms of trade between farm outputs and its technolog-

*A. Al Dahiri, op. cit., p. 214.

indicates that wheat in fertilised fields does not resist the drought as well as wheat in other fields, and also that large pieces of equipment, such as reapers, binders, and bulky combines, are very difficult to use in the hilly areas in the North, as well as in irrigated areas criss-crossed by canals, ditches, and waterways. The obstructions in irrigated zones can, to some extent, be removed by relaying out the land.

**M. Yudelman, et al, op. cit., p. 43.

ical inputs, a farmer efficient in traditional methods may well obtain a higher net income than the farmer using the new technology.

Both China and Japan offer examples of countries that have deliberately followed courses of technological pluralism, but within diametrically opposite institutional structures. In China, the emphasis is on technology from the bottom up, which enhances diffusion, as opposed to the more common philosophy (still prevalent in Iraq) of filtering from the top down. Hopefully, this thesis has succeeded in illustrating this point. Thus, the Chinese equip their labour force with new technical skills, however rudimentary, and rely on the innovative ability of the skilled workers to generate technical progress.*

Johnston contrasts Japanese and Mexican approaches to agricultural modernisation, where both have achieved high aggregate growth rates.** In Japan, increases in farm output and labour productivity resulted from the widespread adoption of improved techniques consistently of the land-augmenting type (such as fertilisers) by a great majority of the nation's farmers; (i.e., diffuse, small-scale, labour-intensive production). Only very recently have the Japanese mechanised agriculture on a large scale (due to force of circumstances). In Taiwan, the approach has been similar, while in Mexico, the major portion of the impressive gains resulted from a substantial increase in production by a small number of large-scale highly commercial farm operations; that is, primarily

*G. Jones, op. cit., p. 25.

**B.F. Johnston, "Agricultural and Economic Relevance of the Japanese Experience", in G. Jones, op. cit., pp. 60-61.

through capital-intensive or labour displacing farm mechanisation, leaving a majority of peasants untouched, and thereby increasing income inequalities.

Yudelman sought to examine whether a systematic pattern could be said to exist between the two main types of technological change in agricultural production and the subsequent demand for labour.* His conclusions were most interesting, in that land-augmenting innovations, such as fertilisers, were seen to increase yield per hectare as well as resulting in a 30 percent increase in the demand for labour; while not surprisingly, the introduction of large-scale machinery (e.g., four-wheel tractors and their drawn implements) resulted in substantial reductions in the labour requirement, between 12-27 percent. He concluded that selective mechanisation (same as above) may relieve seasonal shortages without unduly displacing labour.

This aspect of agricultural technology is often overlooked; that is, many modern farming methods increase rather than decrease labour inputs. In addition to the example of fertilisers, cited above, better and more timely tillage, weeding, efficient water control for irrigation, harvesting, threshing, and transporting larger crops and introducing livestock, all require more labour, as long as they are not accompanied by more labour saving machinery.** There is a strong case for applying these to the Iraqi situation; however, local R&D is needed to ensure validity.

*M. Yudelman, et al, op. cit., p. 100.

**See K. Schickle in R. Weitz, (Ed.) op. cit., p. 60.

The idea can be simply stated as production by the masses rather than mass production. Or, put differently, "fundamental to unemployment apart from questions of population growth is the current lack of modern labour-intensive technology."* A recent Puerto Rican study concluded that there should be more imaginative exploration of small scale, more decentralised, more labour-using forms of organisation such as have persisted in the Japanese economy to the present day, and have contributed materially to its vigorous growth.** In a similar vein, a recent study on innovation diffusion in Chile concludes that innovations which have a low threshold population size and income, below which their introduction to an urban centre becomes economically unfeasible, will tend to diffuse more rapidly throughout the spatial system than high threshold innovations.***

In addition, small scale operations, no matter how numerous, are in principle less likely to be harmful to the natural environment (although there may well be exceptions). Furthermore, they are much more compatible with man's need for health, happiness, and creativity...versus anonymity and dehumanisation, or, in Schumacher's words, "Small is beautiful". One can perhaps summarise the task of intermediate (self-help) technology for Iraq as:

-creating employment opportunities in rural areas (i.e., no

*B. Higgins, *op. cit.*, p. 5.

**L.G. Reynolds, "Wages and Employment in the Labour Surplus Economy", in E. Schumacher, *Small is Beautiful*, Harper Torchbooks, N.Y., 1973. p. 165

***Ove Pedersen, "Innovation Diffusion within and between National Urban Systems," in J. Friedman, *op. cit.*, p. 17.

- enforced urbanisation);
- allowing for the establishment of cheap enough employment opportunities so as to be accessible to all;
- utilising relatively simple production methods (including organisation, supply, financing, and marketing), thereby minimising immediate demands for high skills;
- advancing new skills* cumulatively and contributing to indigenous institutions;
- producing mainly for local use, from primarily local materials.

The emphasis on localisation demands a more decentralised approach to planning. Intermediate technology in representing a level of technology that takes off from the present context in Iraq, including the capability of the supporting institutional structure, will in all probability lead to genuine local autonomy in sophisticated production methods withing a shorter time span than one that starts too high and therefore

*In T. Vietoritz, op. cit., p. 44.

an agricultural equipment workshop can be very dynamic as on the job training and skill development is provided, which readily leads from repair to spare parts production, to local adaptation of foreign designs, and finally, to local designs for local markets domestically manufactured; while in, say, cement manufacturing, the process is very static, and even after 20 years, it will not lead to the introduction of any related non-metallic manufacturing, such as refractories. In the former, technological autonomy is introduced more rapidly.

remains fairly static, and increases dependency.* The task every time would be to find an intermediate technology which obtains a reasonable level of productivity without having to resort to the purchase of expensive and sophisticated equipment from abroad. Such items should be minimised, perhaps even in such sophisticated sectors as the oil industry, by learning from and utilising knowledge from the early oil technologies of the West. A pan-Arab effort would be needed here. However, it is neither in the scope of this thesis to discuss this issue, nor within the present knowledge.

The emphasis on intermediate technology does not imply regression; rather, it is a genuine movement into new territory, where the enormous costs and complications of capital-intensive production methods are eliminated, and where technology is made more appropriate for diffusion and mass employment. To people whose objection to intermediate technology is that it withholds the best, or most sophisticated, the answer is simply that theirs is not the voice of the real problem (the rural poor). Further objections to the principle of diffusion arise from Iraq's lack of sufficient managerial, technical, entrepreneurial and other skills, but they miss the point, for people incapable of acting as entrepreneurs, etc., on the level of high technology may nonetheless be fully capable of making a success of small-scale enterprises set up on the basis of intermediate technology. Such abilities are not fixed

Note: that the emphasis is on the level of sophistication of the technology, (intermediate) more than on the level of capital-labour-intensity, although they are clearly inter-related.

or given, but must largely be a function of the level of the technology used.* Furthermore, intermediate technology would help to dramatically increase the supply of talent familiar with technical modes of production. **

The choice of appropriate intermediate technology then, becomes a central issue for Iraq, as it is for most developing countries. It is clearly beyond the scope of this paper to determine a full range of such technologies. However, a few general points would reveal the emphasis as being primarily towards the low-income, agro-industrial rural communities, and that the method of choice must cease to rely on the principle of comparative advantage (that is, produce only what is most efficient).*** The intermediate goods can be used directly or as inputs into more sophisticated industries. Some examples might include: easily maintained agricultural implements ranging from simple hand tools to power tillers**** or two wheel tractors, (such as Ford's DST tractors costing as much as a pair of oxen); simple industrial implements,

*See E.F. Schumacher, op. cit., p. 174; or G. Jones, op. cit., p. 60.

**See article by the Editor, Weekly Review, op. cit., p. 6, where he discusses the immense value of the earlier use of backyard iron furnaces in China, which failed from the production point of view, but succeeded in training a workforce, enabling the rapid expansion of its iron and steel industry, using more advanced methods later.

***In T. Vietoritsz, op. cit., pp. 38-41: to take a specific example of feasibility studies for the manufacture of electric motors in Mexico, where such methods of analysis would have rendered Mexico a producer of only large electric motors and not small ones, which would have been cheaper to import from the U.S. This is clearly absurd from other points of view.

****Even now, farmers in Japan rely more on such machines than on four wheel tractors.

such as water pumps; popular household goods; as well as innovations in the already existing leather, food processing, textiles and clothing, printing, and building materials industries. Some of these innovations will be considered in the following section on the development of indigenous R&D establishments which become crucial to the success of the policies discussed.

5.3 THE CRITICAL ROLE OF INDIGENOUS R&D INSTITUTIONS

If it is accepted that most of the economic growth of the industrial countries is attributable to social attitudes, technical progress, better organisation and management relying on a heavy investment in education, training, R&D, and capital, then R&D certainly is an important source of modern technology. If the earlier arguments are correct, it follows that R&D, together with local organizations and education, form cornerstones of rural development, particularly with regard to such issues as self-sufficiency. The social returns of R&D can be very high, if, as proposed, it is directed at relieving constraints on farmers and enhancing rural industry. Enormous gains are to be derived from research in development of new farming systems with improved seeds, water, fertilisers, insecticides and mechanical tools, and in supplying industrial processes. The implications for Iraq, particularly in the context of this thesis, are not confined simply to R&D, but also to the associated work on the social, economic, and physical aspects of both total farming systems and rural industries, as well as the requisite self-generating institutional framework.

Before moving on to these, a brief statement on an aspect of the continual transfer of sophisticated technology, namely, its vehicle of transfer, the foreign company or consulting firm, is called for. One of the foremost problems is the prompt repatriation of profits and dividends, losing the developing country a good deal of investment potential.* Moreover, their high-wage standards tend to spread to indigenous enterprises in the modern sector, and further discourages use of indigenous, labour-intensive techniques. In addition, by invariably using their own personnel, they limit development to the original enclave, and encourage further dependency, which is also increased by the fact that the innovations are frequently imported under conditions of external control. The best consultant and the rarest, is the one who helps the client to a point where the client will not need the consultant any more. The problem is that the task of teaching and training and acting as a catalyst for local groups is plainly in conflict with getting the job done rapidly. Programming and budgeting for such contingencies should become mandatory.

The abandonment of mistaken concepts of modernisation, erroneously identifying progress with physical capital and large scale units alone, for the totally different concept of development proposed in this thesis requires the creation of locally based problem solving capacity in R&D.

*The problem remains in oil countries, for the quantitative aspect is quite secondary to the qualitative, in that if the policy is wrong, money will not make it right, and if the policy is right, (in the context of this thesis) money may not, in fact, present unduly difficult problems.

For such institutions, there are four obvious directions of effort and concentration:

- to start with existing traditional techniques and utilise knowledge of advanced technology to transform them suitably while retaining some aspects of existing equipment, skills and procedure;
- to look back into the history of advanced technology to see what it began with, (bicycles, windmills, forges, distilleries, etc.) for there is much forgotten technology;
- to research and conduct experiments in a direct effort to establish indigenous intermediate technology;
- to start from the existing foreign technology and adapt and adjust it so as to meet the local requirements.

With the first alternative, technology can be built up from the experience and strength of the rural or urban people, rather than transplanting industries completely unrelated to the rural context and atmosphere. The second alternative may well yield very fruitful results, particularly as the present technology or sophistication gap is so very great when compared to earlier times, and therefore more relevance may be found in earlier technology. However, the third alternative is certainly the slowest and most difficult, while adaptation, the fourth alternative, may be very expensive. The local R&D institute is all the more important for this alternative in so far as the introduc-

tion of new technologies invariably generates new problems that have to be resolved. Furthermore, as has been shown, imported technology tends to be more up to date in those sectors in which activities in the developing countries are most similar, typically manufacturing industries in the 'modern sector'. By contrast, there is little or no technical progress in areas where the problem does not exist in the richer countries, which are invariably the most crucial to the developing country. For Iraq and the surrounding regions, such areas include arid zone agriculture, problems of soil salinity and often the problem of subsistence farming, (and therefore the need for multiple cropping), small-scale production methods, etc.*

Although the basic role of indigenous R&D institutes has been defined here as being primarily to establish appropriate intermediate technologies relevant to Iraq's needs, the importance of economies of scale in such research and the need, therefore, of pan-Arab coordination have also been stressed. These may be modelled on two other internationally known agencies, namely the International Rice Research Institute in the Philippines and the Wheat and Maize Improvement Centre in Mexico, whose purpose has been to promote adaptive research for certain types of developing countries. In this, they have been very

*To expand on potential areas of technological improvement (some of which have already been mentioned), for agricultural outputs rice mills, oil mills, sugar refineries, fruit and vegetable canning, dairy production, wineries, brewing...and a host of industries for the conversion, preservation, grading, storage, packaging, and transportation of agricultural produce...plus fertiliser pesticides, seed, and mechanical equipment such as ploughs, harrows, weed killers, sprayers, seed drills, water pumps, pipes, small tractors, etc.

successful in developing new varieties of high yield rice, wheat, and corn suitable to the ecologies of many regions.

In Iraq, the Council of Scientific Research was established in 1966 to which the following institutes are presently attached: the Arid Zone Research Institute; the Biological Research Centre; and the Petroleum Research Centre. So far, these institutes seem to have published no annual reports nor have they been particularly active in more practical ventures.* One of the reasons seems to have been their inability to attract suitably qualified and experienced Iraqi scientists, although it can also be argued that in the context of the rural development proposals, technicians, agroconomists, etc., may be more pertinent; the other being little government financial and psychological support. Although we have no figures of government expenditure in these institutes, there is evidence that developing countries spend between 0.05-0.5 percent of GNP on R&D, while in industrial countries, the range rises to between 2-3 percent.** At a recent international conference called "Technology in Asia (CATASIA)", an increase of expenditure on R&D up to 1 percent was recommended, which would also help to decrease the brain-drain in Iraq.

In considering some of the cost guidelines for intermediate technology applicable to the indigenous R&D institutions, we can define the level of technology in terms of equipment cost per workplace.***

*Ghazi Derwish, "Scientific Research in Iraq", in C. Nader and A. Zahlan, (Ed.), op. cit., pp. 180-182.

**G. Jones, op. cit., p. 43.

***See E. F. Schumacher, op. cit., p. 169.

The problems of transfer of high cost technology can be seen in the following argument. In developing such technology, the rationale is that the ratio of annual income per worker to average capital per workplace, is roughly 1:1. When such technology is transferred to developing countries, the ratio moves up to 1:20, 1:50, 1:100 and much more, rendering the relationship meaningless. In other words, a \$5,000 per workplace technology, as is common in the West, transferred to a country where a \$50-500 technology per workplace predominates, simply cannot spread by any process of normal growth, and in fact, as has been seen, the overall effect is negative. Therefore, the scope of the indigenous R&D institutions should be more or less confined to intermediate technology at \$50-500 workplace.

It is also important to realise that R&D involves a relatively small proportion of the total cost of successful innovation.* Therefore, not only must the entire cost be budgeted for (and figures need not be very high for intermediate technology), but also R&D must be well integrated into the production and marketing systems. One of the dangers of isolation is that apart from the basic one of a considerable reduction in effectiveness, there is also the danger that the institutes will concentrate more on the more sophisticated problems in industrial countries. This is because of the way scientists are trained and acquire prestige. The logical coordinating bodies are the regional and national planning offices. The extent to which these various types of supporting institutes

*Estimate by G. Jones, *op. cit.*, p. 9, indicates that R&D = 5-10 percent, Engineering and Designing the product = 10-25 percent, tooling and getting ready for manufacturing = 40-50 percent, manufacturing start-up expense = 5-15 percent and marketing start-up expense = 10-25 percent.

are capable of working together on a day-to day basis with the R&D institutes is a key measure of successful technological development and local absorption. In this, the higher the rate of participation, the higher the rates of diffusion are likely to be.*

In the context of this thesis, two more R&D institutions immediately spring to mind, one catering to intermediate agricultural implements for the two main agricultural regions, namely the Northern foothills, and the alluvial plains in the centre and South, and the other for intermediate industrial implements, such as water pumps. The reason for creating special centres for R&D is that the universities are not well enough organised to provide the intellectual context for the necessary integration (with other institutes, organisations, and people). Academic subjects soon become institutionalised within their traditional boundaries** and the kind of research conferring academic prestige is rarely practical in nature. This same malady can fall on R&D institutions if they are not well integrated into the social, economic, and physical context of the country. Thus, the R&D institutes need to be reasonably independent of both government and universities and need to attract people who are adventurous enough to risk an unconventional career. Such centres can also become a very important intellectual resource for the country.

*Evidence to support this can be found in Ove Pedersen, "Innovation Diffusion in Chile", in J. Friedman, *op. cit.*, p. 17.

**A major problem is that notwithstanding the fact that scientific research is traditionally a product of universities, in Iraq universities are thought of more as centres of teaching and not of learning, which should be their main concern.

In this, they should also be seen in the context of the following chapter on educational systems more oriented to the specific needs of Iraq.

Research and development of the nature proposed here will remain valueless until it is communicated to the rural populations. The government has prime responsibility in facilitating assimilation of the new technologies. The extent to which the rural populations respond to the new technologies depends also on their basic skills of numeracy and literacy. This educational aspect is another very important aspect of the rural development policies, and is now discussed.

5.4 EDUCATIONAL IMPLICATIONS

Education has taught people to conform to and serve the system, thereby acquiring its values in the process. It has fostered an exclusive elite, somewhat like a caste system, where the number of years of schooling determine position, privilege, prestige, and salary (particularly in government bureaucracy). It has been treated as a production process with fixed inputs and outputs, and has led to raised expectations and with it, increased qualifications (or rather, mis-qualifications), thereby encouraging children to discover in themselves openings that are really not available. The sad truth is that there are large disparities between the promises of education at present and

the ability of the country to absorb those it educates. As the list of problems is endless, only those educational aspects that pertain directly to the concepts previously expressed will be reviewed here.

The substantial re-focussing of policies and priorities directed towards rural development with the aid of intermediate technology, requires new structures of education and re-education. Stress has already been laid on the necessity for responsible participation of all communities (particularly rural) in the development process, as opposed to their present omission, which has resulted in the destruction of many of the traditional sanctions on which these communities were based. Education, as viewed here, must be seen as a way in which such communities (and on a larger scale, cultures) assimilate new knowledge and new interests, while seeking continuity and integrity in the transformation they must embrace, otherwise, dualism and alienation sets in.

Education, in Schumacher's words* "is essentially the transmission of values, but values do not help us pick our way through life unless they have become our own; a part, so to say, of our mental make-up." Thus, the focus of education must be geared more to the needs of specific populations in Iraq, bearing in mind available resources, rather than towards abstract notions of universal knowledge. In other words, the school needs to be rooted in the particular community and its environment, and consequently, the system must be adapted to suit local needs. This is not intended to decry universal knowledge, but rather complement

*E.F. Schumacher, op. cit., p. 75.

it by reducing its present sense of isolation and by helping rural people to live within their own particular culture. However, far from serving as a preparation for tackling the country's most urgent tasks, the present schools in Iraq often end up producing an elite who escape to the towns and cities, and feel above any practical involvement. This is particularly disturbing in view of the rural development policies proposed here.

To cite the examples of China and Japan again, in China* both rural and urban education are being shortened and made largely vocational in nature, while in Japan, economic growth at the turn of the century was accompanied by tremendous emphasis on technical education, particularly at intermediate levels.** Similarly, in Russia, universities account for only 10 percent of higher education, the great majority attending specialist vocational institutes (though the curriculum includes general academic studies***).

As much as this approach seems reasonable, it may well be a mistake to make education overwhelmingly vocational, for it would be a purely economic-or-manpower-oriented viewpoint. Why always make people into narrowly specialised workers?**** What must also be stressed is

*Pi-Chao-Chen, op. cit.

**A. Curle, Educational Strategy for Developing Societies, Tavistock, London, 1970, p. 141.

***G. Jones, op. cit., p. 144.

****Discussions with Kevin Lynch, or as expanded on in an article by the editor of Current Scene, op. cit., p. 3, "...while the main task of workers is in industry, they should also study military affairs, politics, and culture, where conditions permit, they should also engage in agriculture production...with the same range applying to peasants and students."

that education is humanistic, and it can help people maintain contact with their culture and obtain joy and stimulus while they acquire new knowledge.

The idea is to readmit the surrounding world, physically, socially, and culturally into the classroom. Teaching at present in Iraq clearly contributes to a certain kind of learning, but most people acquire most of their knowledge outside schools; that is, most learning happens casually, or accidentally. By divorcing education from its surrounding reality, it becomes even less meaningful. The development of a child, like that of a culture, must come from within itself and not by being a passive recipient of knowledge.

To put it simply, the main educational change called for here is to make primary and middle levels of schooling, vocational and technical training, adult education and mass literacy goals in themselves rather than remaining as mere channels to secondary or university training. Even more, the proposed changes are qualitative; that is, applying to school curricula and teaching methods, particularly for the primary, middle schooling, and adult education. This viewpoint reflects the 'push from below' philosophy, rather than the present pattern of the 'pull from above', which has created a narrow, elitist economic enclave style of development, without a spread of benefits.

The problem in Iraq is that the educational system is not designed to produce appropriate skills or proficiencies that correspond to the

needs of agriculture, industry or government. Both primary and secondary education are mainly designed to prepare for university education, which the majority of the rural population in Iraq never reach.*

Furthermore, the sizeable number of primarily urban students who do reach this level often remain underemployed and alienated, as their expectations were falsely raised. The policy proposed here is that both levels, particularly that of secondary schools should be transformed to become complete in themselves, rather than remain university preparation for the few.** In the context of rural development policies, the educational establishment needs to be focussed on the productive and cultural life of rural communities.

In addition, (as is evident in Table 4, Appendix 1) the ratio of male/female students is only 70:30. This clearly leaves a lot to be desired, but it also illustrates the relative liberation of women compared to previous years. The continuity of this process is crucial, for not only does it encourage women to participate more actively in the economic life of the country, but it also greatly helps in breaking

*The pyramid of enrollment is as follows: (for 1970-71)

Primary school students	= 1,075,000	of whom 35% are in Baghdad
Secondary school students	= 300,000	of whom 221,000 are intermediate, (40% are in Baghdad) 79,000 are preparatory (45% are in Baghdad)
University students	= 37,000	of whom 48% are in Baghdad.

**In the words of Arthur Lewis, in G. Jones, *op. cit.*, p. 130, "Secondary school products are the steel framework of the economy as technicians, record keepers, supervisors, teachers, managers, and administrators, and for every university graduate, you need 5-10 secondary school graduates."

down the social barriers between urban and rural areas.

It must be emphasized that the proposed educational system should also allow those students who show particular promise, and desire, to continue with higher education. Any strict tying of education solely to local needs, although positive, has the very negative effect of encouraging the continuity of a 'caste system'. The importance of education is that it gives individuals the freedom to participate in society. By allowing for occupational mobility, it becomes easier to break the links which in the past tied the socio-economic status of a child very closely to that of his or her parents.

In other words, the bias against children from rural areas must be removed. At the same time, as has been mentioned, the educational system must not be geared towards a professional/academic grand finale, as at present. A combination of educational emphasis mainly on local needs, as described above, while allowing for capable students to continue with secondary and higher education at regional urban centres, is probably the best policy.

Scientific and technical education should also be introduced at the primary level, as this level will still for some years to come mark the end of formal education of a sizeable proportion of the population. This will also involve teaching or re-educating the teachers. An immediate, easily implementable policy is to set up for each primary school in rural towns and some villages, a small workshop as well as incorporating a small farm in which crafts and elementary farming could

be taught. A similar programme needs to be developed for secondary-vocational schools in rural communities.

Concerning the number of such schools, it seems clear that of the 23 existing and 6 proposed rural settlements in the five Northern regions identified earlier, most, if not all, should have secondary-vocational schools,* (as their overall catchments are up to 50,000) and certainly primary-vocational schools. Primary schools need to be well distributed in the villages (with some additions of middle and perhaps even secondary schools).

With regard to adult education, and the literacy programme, the present use of abstract and meaningless texts, such as those used for 5 year olds, and the subordinate position of students, reinforces existing social and economic pressures, to make the peasant feel different, and inferior.** As with all other schooling, it is very important here to link the subject matter to the local community. Paulo Freire, the distinguished educator, says that "any adult can begin to read in a matter of 40 hours if the first words he deciphers are ones charged with local and political meaning."*** In other words, the

*This has the enormous advantage with respect to agricultural extension workers, of facilitating contact with, and acceptance by, local farmers. This trust and mutual identification, normally missing, is absolutely critical to the success of the extension worker.

**Ivan Illich, Deschooling Society, Harper and Row, N.Y., 1972, p. 56, also instruction of this nature, in his words, "smothers the horizons of their imagination".

***Paulo Freire, The Pedagogy of the Oppressed, Seabury Press, N.Y., 1970.

teacher must first find out what words designate currently important issues in the villages, towns, or cities. Beyond this, any teacher is able to use the available educational technology such as books, library, workshop, etc., either to teach and incur dependency by restricting their use, or to encourage learning and independence by making these resources generally available, and accessible.* The guiding principle should be to remove barriers and open up the school as an integral part of the community.

Throughout this thesis, explanations have been given concerning the need for a policy to raise the present low prestige attached to agriculture.** In this educational context, one approach is to attach degrees to vocational professions by combining training and, for example, two or three years of practical experience in the field. On a more general level, agriculture and rural industry should be opened up and have their own proper channels of advancement. Other complementary policies include officially controlled salary structure so as to ensure a minimal difference between rural and urban living conditions, where there are large inequalities at present.

It is simple to blame education when to a large extent, these inequalities simply reflect the values and rewards of society. The present system of incentives makes it altogether rational to seek a white collar

*Ivan Illich, op. cit., pp. 111-116.

**Annual Abstract of Statistics, Iraq 1971, op. cit., p. 543, p. 548. University students in the Agricultural Department = only 7.1 percent (5.3 male, 1.8 female) of the total, and 35 percent of the total vocational school students are in agriculture.

job in the large towns and cities. Furthermore, able people presently shun rural employment, because they feel totally out of touch with the power structure concentrated at the centre. As mentioned earlier, most of the policies in this paper become academic if there is no complementary decentralisation of government, administration and the planning process.

The aim of the approach presented here is to make people as self-sufficient and independent as possible through appropriate knowledge. It is more in the supply of intellectual rather than material goods that this can be achieved, in that the gift of knowledge, provided that it is of the right kind, makes them free.*

To sum up, education as formulated here aims to:

- reduce or minimise elitism, where only a small percentage of the population reach secondary schools and universities, leaving the remainder with a sense of failure;
- reject the present approach which divorces its participants from the society it is supposed to be preparing them for, thereby causing alienation;

*A story in E. Schumacher, op. cit., p. 186, provides a good illustration of this...give a man a fish, and you are helping him a little bit for a very short while; teach him the art of fishing, and he can help himself all his life. On a higher level, supply him with fishing tackle (this will cost you a good deal, and the results remain doubtful), and the man's continued livelihood will still be dependent on you for replacements. But teach him to make his own fishing tackle, and you have helped him to become not only self-supporting, but also self-reliant and independent."

-refute the belief that all worthwhile knowledge comes from books or educated people, thereby discounting general wisdom and common sense, as well as the traditional skills of the farmer.*

This can only be achieved by changes in curricula, reorganisation of schools, making each level of education complete in itself, as well as by retraining the teachers themselves. Each level is intended to be self-reliant and self-sufficient in varying degrees. The difficulty with all this is that it threatens the existing status quo, imposing new burdens on the whole teaching force, and threatening the reputation and status of existing teachers, particularly the older ones. Perhaps these problems have to be accepted as being insurmountable at present. Nevertheless, a programme of re-education and re-training these teachers becomes vital.

As has been pointed out throughout this thesis, almost any policy in isolation from its surroundings is not only doomed to failure, but is likely to have negative effects. Thus, the higher the level of education (in qualitative and quantitative terms) in an area or region remaining depressed, with no complementary investment and effort in agriculture, rural industry, health, and other facilities, the greater will be the propensity to migrate.**

*Ivan Illich, op. cit., p. 149, is full of examples in which educational institutions claim to speak for the people, thereby reducing local creativity and participation.

**See B. Higgins, op. cit., p. 9.

Although the scope of this essay has not included health facilities, or other infrastructure, a few words will illustrate that the same trend of thought applies. For health facilities in rural areas, it would seem to be cheaper and more logical, particularly in early stages, to emphasise preventive medicine, which can be administered by relatively easily trained medical staff, than attempting to install full medical centres which cannot be adequately staffed. This policy could be implemented by introducing preventative and diagnostic clinics at the rural level, which channel people to better equipped institutes and hospitals in nearby urban centres.

In conclusion, to initiate the rural development policies proposed here, a few well-dispersed rural settlements provided with the relevant agro-industrial and social capital in terms of both quality and quantity, would, assuming success, be a powerful stimulus towards the necessary shifts of budgetary priorities called for by this thesis. The following and concluding part of this thesis looks into the requisite decentralised planning process and institutional structure, without which these policies can neither be properly formulated nor implemented.

PART 3

THE DECENTRALISED PLANNING PROCESS FOR RURAL DEVELOPMENT

6. DECENTRALISATION OF THE PLANNING PROCESS AND THE INSTITUTIONAL FRAMEWORK

6.1 A PREVIEW

Life is lived, and major problems occur at the regional and local levels, but resources are gathered in and the power of decision making resides in the national capital. To counter the extreme polarity and inequity of the resulting development, the policies proposed in Part 2 for the diffusion of development benefits emphasise rural development, that is, allocating priority investment to agriculture and small-to medium-scale industry, located in dispersed rural settlements. It is through the use of intermediate technology and more locally appropriate education that these policies are implemented.

In keeping with these objectives, the resulting strategy includes: strong limitations on the growth of Baghdad, the primate city, together with attempts to reverse the flow; some (though strictly controlled)*, encouragement of growth in well-dispersed secondary cities, to counter the pull of Baghdad, particularly in lagging regions; with the major concentration of development effort being on rural development as defined earlier. This thesis has been mainly concerned with the latter, in which rural settlements would function as service centres for the surrounding agricultural villages and communities, as well as being locations for small-to medium-size industries (including food and processing). These policies require a suitable, decentralised planning process, em-

*Through the regional authorities who as we shall see are in effect controlled by local organisations.

bodied in local and regional institutions, within which to operate. This is the subject of discussion here in Part 3.

It must be emphasised that this chapter raises more questions than it answers, and is incomplete, and at times lacking in local specificity. Part of the reason can be found in the lack of sufficient information on the existing planning institutions, but this, of all subjects, is probably the most difficult to study at a distance. The need is not simply for greater knowledge of government, but also for the active participation of people in evolving indigenous, local organisations relevant to the peculiarities of their locality. This is not so much an excuse as it is a statement of the very preliminary nature of this chapter regarded as an initial step in an ongoing process to be further developed in Iraq.

Agriculture, industry, and education as discussed in this thesis are strictly tied to the locality, whereas the present planning process is totally divorced from such spatial disaggregation and specificity. To counter this, active local participation in the planning process becomes essential, as opposed to its present exclusive nature limited to an elite few (though it is unlikely that they would be divorced from the picture). Only through self-reliance and self-development can the persisting dependency and dualism of development in Iraq be decreased and eventually removed. Ideally, the demand is for a vertically decentralised (national, regional, and local) and horizontally integrated (physical, economic, and social) planning process in Iraq. This is an

expression of absolute terms; reality ensures considerably less, and we will only be concerned with certain of these aspects relevant to the policies of this thesis.

As has continuously been emphasised, the decentralised process is not limited to the planning field, and indeed, only becomes possible if complementary political, institutional, and professional functions are also changed. The need is for:

- the active involvement of the political authorities in the planning process;
- a distribution and decentralisation of such authority institutionally and administratively;
- the integration (or coordination) of the functioning of local, regional, and national authorities by creating structural links;
- the active involvement and participation of citizens in the planning process.

These requirements are explicitly considered in this chapter in varying depth, while a fifth - the horizontal integration between social, economic, and physical planning, is implicitly considered.

6.2 DECENTRALIZATION OF THE PLANNING PROCESS

The rural development policies to be implemented demand, first, that development should serve the rural community and, second, that the rural sector should serve national development. This is a reversal of present policies (as discussed in Chapter 2), and requires a radical change in the presently centralised planning process (as discussed in

Chapter 3) The following section discusses this change, first by considering local planning and its regional context which forms the crux of the decentralised planning process. This is followed by an examination of the interactions between the three levels, national, regional, and local, and the time factor in this process.

Planning at the national level allocates the basic factors of production among different sectors based on aggregate statistical data. The wide differences in social, cultural, and economic conditions between the different provinces and districts in Iraq, makes it impossible to formulate a plan at the national level that will fit in with the specific human and institutional conditions of a particular locality. In rural areas, it is particularly difficult to understand the inter-relationship among the various factors operating by remote control.

The essential starting point for implementing the rural development policies (based primarily on self-help and self-sufficiency), is for planning to be intimately linked to the specific human and social environment and institutional factors. In other words, it involves factors that do not lend themselves to quantitative expression. The goals and projects determined at the national level, therefore, seldom accord with real-life circumstances at the local level, and national planning data cannot be accurately represented by the arithmetic sum of local figures, as no common denominator exists. This is exemplified

by differences in:

- socio-cultural structures, customs and human resources (level of skill, literacy, etc.);
- climate and physical endowment;
- technology level and type of existing agricultural production;
- stock of social-overhead facilities for the pursuit of community ends.

Chapter 2 discussed the very substantial regional differences in these factors, particularly in the extreme Northern and Southern-Central regions. Furthermore, agriculture in particular must be geared to thousands of farmers and co-operatives, widely dispersed geographically.* The real interdependence of agriculture and climate, soil, and water availability is far greater than in industry, in general, but as proposed in this thesis, rural industry would be directly tied to agricultural production, functionally and spatially. In other words, in no other part of the economy is a decentralised planning process (including policy implementation) as important as it is for rural development.

From another viewpoint, the rural development policies require appropriate levels and quantities of technological inputs, as well as new knowledge, skills, credits, and changes in the organisation of the production process. These factors are basically institutional or organisational in nature, and do not fit into the global quantities of planning

*e.g., success of a fertiliser dose with one crop in one locality may yield a loss in another area.

at the national level. For example, to adapt a new technology to local conditions requires an administrative service capable of effective functioning at the local level. Thus, to render a national policy for rural development effective, planning must be done from the 'bottom up', as well as from the 'top down'.

A decentralisation of the planning process is necessary not only to cope with the wide differences between localities and regions, often calling for subtle variations in policy, but the complexity and range of conflicts that exist are invariable hidden or overlooked by centralised planning in Baghdad. For example, the problems of national decision making, where regional conflicts are strongest, is in the distribution of national resources among the various regions and their localities. To place such allocations on a more objective basis, decisions must be related to local needs, resources, and performances. Only local organisation (through regional authorities) can be closely related to and acquainted with the local situation to make up this gap.

To offset the historical trend of local governments (being dominated by traditional interest), it is absolutely critical that the local population actively participates* in policy formulation and implementation. A point of importance here is that a community comprising a single

*Unfortunately, the scope of this thesis does not include a discussion of the different participatory models, none of which are truly satisfactory, or effectively participatory, but for further documentation of the present inadequacies, see "The Identity and Validity of the Planning Process in Developing Countries: The Role of the Indigenous Planner", by this author.

'batn' (as described earlier, this pertains to a tight tribal grouping, often of about 100-150 individuals) tends to be more equitable in its internal dealings. However, it is when a number of these groups or mixed groups in villages and towns are considered that real problems of 'self-benefit' arise, and it is with this larger community that local planning and participation must be oriented (otherwise a narrow distribution of benefits occurs)

In other words, the local communities need to determine their collective interest, that is, to reconcile the immediate interests and conflicts of each group in arriving to a common preference. This process must involve considerable give and take. In reaching a sufficient degree of consensus on selected options, the communities must seek a suitable compromise in the traditional efficiency-equity conflict, by balancing a mix of investments or inputs and their programmed outputs against the desired income distribution effect. This would be a means of ensuring a reasonably equitable distribution of investment and income. In addition to the means already discussed, of obtaining local participation, there are two other important avenues that need to be considered, namely mass communications (tv, radio, newspapers) and the local educational service (as discussed in Section 5.4) This latter item is critical, for people whose needs have been neglected for so long often tend to be apathetic, and therefore, part of the responsibility of education is to teach people how to participate.

The planning process must therefore consult the people who are

supposed to benefit from rural development, allow them to air their conflicts, and respect the autonomy of different kinds of people and groups.* It must also allow time for people to understand and assimilate change, so as to avoid alienation. If participation in planning is to be taken seriously, it is essential that the unofficial participants have a measure of control over the process. The respective rural community must be able to apply sanctions against their positions being ignored. If they have a legal right to participate, they must also have a means of legal redress if they are not properly consulted.** In practise, participation has to be more or less institutionalised, that is, some organisations of citizens have to be recognised as representing specific communities, otherwise it would be impossible to articulate discussions and negotiations. The institutional aspects and executive powers of these local organisations is dealt with in the following chapter. The framework within which local planning takes place is discussed first.

Local planning, in the context of the rural development policies,

*In the words of Peter Marris', op. cit., "...when people formerly without influence were invited to participate in decisions, they lost their irresponsibility." He goes on to say, "when people or reformers try to impose change or propose policy, if they deny others the chance to do the same, they are treating them as puppets. When liberal people propose reforms on behalf of blacks (or rich for poor) even the most honourable intentions can be profoundly alienating if they assume the identity of those they seek to help, and tell them what their lives should mean. To be told the meaning of your life by others, in terms which are not yours, implies that your existence does not matter to them, except as it is reflected in their own lives.

**In the United States, for example, citizens' groups have been able to secure constant injunctions against plans on the grounds that they have not been adequately involved, as is their right.

requires a larger spatial context based on social, cultural, economic, and physical functions, otherwise the locality will remain an enclave of development or underdevelopment. Between the allocation of resources at the national level, and its detailed organisation at the local level, there is a qualitative gap (discussed earlier) which cannot be accommodated within a single analytical framework. Regional planning is the most suitable integrative tool for co-ordinating information and policies between the two. It is both the synchroniser and the political tool for the resolution of local and national aspirations. For example, the allocation of national funds (as opposed to potential local resources from agriculture, rural industry) that is, primarily the oil income in Iraq, can be more readily achieved on a regional than a local basis. These investments cannot be subdivided on the basis of over a hundred localities, but can be on the basis of nine regions (discussed in sections 3.1 and 3.2), if for no other reason, the organisational task in the former is well beyond Iraq's present means (however, there are numerous others).

An important clarification of the relationship between regional and local planning as seen in this thesis must be stressed, that is, the power of the regional authorities is primarily based on the aggregate authority of the local units. This is necessary to safeguard against regional planning becoming a mini-version of the present national planning authority, resulting in centralised planning and development on a regional basis. Furthermore, regional planners are likely to remain urban intell-

actuals for some time to come in Iraq, and just as liable to sweep aside local qualitative and equity considerations as occurs presently at the national level.

To expand on this critical issue, the internal balance in representation within the nine regional authorities between the local urban and rural populations will vary by region. For example, the new Kurdish regional authority (a combination of Dhok, Arbil, Sulaimaniya, see Map 7) would comprise: representatives from two cities of 100,000 population each; and from the localities, made up of representatives from about 16 rural settlements of 5,000-14,000 population, and from a similar number of agricultural co-operatives and rural industries which could be chosen in rotation.* The representatives are not grouped according to any hierarchy, rather, the body functionally and legally represents a relationship among equals, to safeguard against the dictation of policy from the two large cities. The regional planning and administrative staff would be subject to this policy, and perhaps participate in it at times. In addition, the majority of committee meetings for decisions on specific rural development policies including financial allocations need not include representatives from the two cities. However, for all major considerations both urban and rural representation is required so as to avoid continued emphasis on the present dichotomy.

*For another example, the Mosul regional authority would comprise representatives from one major city of 310,000, another city of 46,000 population, and from the localities made up from rural settlements, and a similar number of agricultural co-operatives with a supporting planning and administrative staff.

The financial sources for the regional budget are dealt with in the following section; however, it will clarify the argument here to understand that it is made up of local revenues and taxes* plus a percentage of the national budget. The meaning of decentralisation is that the regional authority has the power, and eventually the capacity to generate at least part of its finances and use them without intervention from the national government. The crucial element in defining structural and financial relationships between the localities making up a regional grouping then becomes the amount of control each exercises over the operations of the productive systems in their areas, and over the distribution of its output. The proposal of this thesis is that the localities should have a majority control, but to ensure that each social group derives benefits from the system, a certain percentage of profits is redistributed through the collective regional authority. Similarly, to ensure even distribution within a productive unit, the call is for broadly based enterprises, for example, co-operative farming.

Regional planning is therefore not a substitute for either national or local planning. The argument is not one of centralisation versus decentralisation, per se, rather it is one of striking the right balance between the two. Regional planning is intended as a tool to align local and national aspirations as much as possible through a continuous process of approximation and mutual support. In sum, the regional planning au-

*Not over and above nationally collected taxes, but a part of them.

thorities' responsibilities comprise:

- the co-ordination of local planning (through the collective regional body) in addition to formulating regional plans in the context of local situations, but within national constraints;*
- the determination of objectives and constraints for projects controlled nationally, inter-regionally, or regionally (examples of the former include major highways, oil installations, and of the latter two, dams and major industrial plants);
- the collection and generation of regionally based data;
- the responsibility directly or indirectly (through localities) for implementation and follow up.

It is clear that this decentralisation has removed considerable power from the national level, or the local and regional authorities have been strengthened at the expense of the centre. This devolution of authority requires political strength at the centre, which fortunately is the case in Iraq. In China, for example, the highly centralised system disappeared in 1958 almost overnight, with some 85% of

*It should be noted that emphasis on analytical tools requiring large quantities of refined data is not recommended, partly on the basic grounds of lack of data, but also because the validity of such methods to the participatory rural development policies outlined is questionable. Furthermore, the dynamic quality of rural development is not well served by the generally static models developed for the very different conditions of developed countries.

centrally controlled enterprises transferred to provincial authorities.* This dispersal of industry to the countryside was accompanied by a vast improvement in the economic situation of the rural population.**

The powers at the national level in Baghdad are mainly considered in the following section after a better political context for decentralisation has been set. At this stage, it is only necessary to state that the national authority does not have powers of veto over regional authorities except in matters of centrally controlled enterprises such as oil and petrochemicals, sulphur mining, iron and steel, other heavy industry, major transportation, military installations, major power and electricity enterprises including dams, and other nationally important public works and social and economic infrastructure. In other words, it does not control the sectors specifically relevant to the rural development policies, that is, for most agriculture, small-to-medium-scale industry, local education and health, local public works, including roads and infra-structures: although clearly there can be no uniformity in the level of decentralisation between sectors at any time.

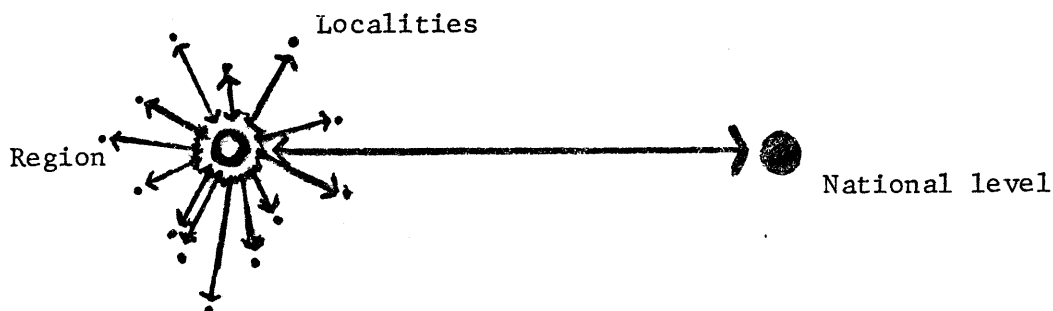
To establish the linkages between national, regional, and local planning, we must turn to the process of integration or feedback between these three levels. The traditional appraisal of a straightforward breakdown of policies and aggregate figures from the national to regional to local levels, has already been severely criticised as inducing

*See Richard Kirby, "China's Strategy for Development," in Architectural Design, London, March 1974, p. 142.

**Ibid.

polarity and rigidity, and any approach to aggregate separately formulated regional plans is also likely to lose relevance in the subsequent attempt to coordinate them at the national level.

The answer, in keeping with the earlier discussion on decentralisation of the planning process, is a continuous process of feedback and interaction between national and regional levels, in which the latter has few executive powers in isolation from the local communities it represents (therefore, it literally represents the locality in its dealings with the centre). The function of regional planning is well described in the following diagram, where the vertical function coordinates the national and local levels. To be operative, regional planning must be linked at both ends of the development chain. The sketch has been pur-



posely drawn horizontally to emphasize that there is no rigid hierarchy in the decision making process. To the question of where to start this process, the answer is, that assuming feedback, it does not matter. How-

ever, in the case of Iraq, because of the present centralisation, it would be more appropriate to start at the regional level.

No discussion of a policy or planning process is complete without relating it to time. Time is very ambiguous, difficult to focus on and difficult to define. At this point the focus will be on aspects of long, short, and immediate time spans, relevant to the rural development policies and decentralised planning process just described.

Long-term guidelines for the rural development policies are necessary to provide the context for their short-term development (for example, directed towards the functional organisation of the rural settlements in space), as well as to provide the necessary perspective for complementary longer term investments (such as dams and main irrigation structures for rural development). In other words, investments need to be allocated in both space and time. Fear of rigidity resulting from the organisation of settlement development patterns is not really justified here, as the diffused and decentralised approach leaves considerable room for change in subsequent stages.

Short-term planning on its own, that is, without a longer-term perspective, suffers from the constraints of time, and a necessity for immediate action: As a result, it is often trend-extending, leaving little maneuverability for the changes in policy and locations called for by rural development. Furthermore, short-term planning, while often leading to immediate benefits for some, may well aggravate future problems and lead to long-term disbenefits. That is not to say that

short-term benefits to the poor are necessarily harmful, rather, the full implications of certain policies, such as the problems of rapid urbanisation and polarisation discussed in Parts 2 and 3, must be considered both in the short-and-long-term. The problem here is one of raising aspirations much higher than can be achieved (for example, that of jobs in urban areas), which for example, the Chinese are generally careful not to do.

At the same time, it is important not to lose sight of the fact that there is a qualitative change in nature between short-and-long-term planning, where the latter is primarily directional and still keeps the options open. Even the short-term plans, to be effective must not be thought of as blue prints, for this assumes that policies and the decision making process marks time, which is clearly unrealistic. The dichotomy between long-and-short-term planning is parallel in nature to decentralisation, as opposed to centralisation, in that decentralisation keeps the options for future development open, while the latter considerably reduces the field of choice.

On the other hand, participation of people in the planning process, particularly as the concern is with rural development, is unlikely to be very active or dynamic in considering long-term plans. The rural population is more likely to be interested in planning new development for the immediate future, as is the political decision maker (who is the principal instrument for implementation). Thus, time relative to people and politicians (immediate and short-term must be con-

sidered) together with time relative to the success of policy (often long-term objectives).

A plan or policy for rural development is only as good as its implementation : In the words of Napoleon Bonaparte, "War is easy, it is waging it that is difficult" : In effect, this requires the direct and active participation of both politicians and the affected rural populations. An established period of time in both political and agricultural processes is one year. The former relating principally to the annual budget and the latter to the seasons. It is here where the reconciliation between planner and peasant and politician must start. The most widely circulated approach, proposed by Albert Waterston in response to these problems is to:

- prepare annual sectoral plans, with an inventory of annual public investment, consistent with available resources;
- link these annual plans with budgets by improving budgetary, organisational, and administrative procedures;
- add perspective by the preparation of multi-annual sector plans, or rolling plans, for a three year period (where one plan is revised at the end of each year), followed by a 10 year perspective plan, in both cases by starting from the annual plan.*

This process has numerous advantages and disadvantages. Among the former

*A. Waterston, Ibid., pp. 94-141.

are that it is a continuous ongoing process, involving or integrating planning with political decision making. It has also built into it a procedure for regular review, evaluation, and revision. However, the problems are more numerous, and include the likelihood of trend-extending (because of lack of long-term perspectives at the outset), and little emphasis on inter-sectoral linkages. In addition, over reliance on budgets avoids the issues of radical change which the policies of this thesis require, in that by focussing on public fiscal allocations, attention is not directed towards mobilizing resources through other means. To put it bluntly, most qualitative issues are lost. Furthermore, a lot of planning such as land reform, has little direct connection with expenditures, but a lot to do with development, and finally, the budgetary process is not conducive to the proposed policies of diffusion and multiple, small-scale, widely dispersed investment.

A more suitable approach is to first establish the constraints for both national and regional planning authorities, set by the long-term objectives and guidelines for rural development (determined by the feedback process between national and regional authorities). This would be followed by the production of an annual rolling plan adhering to the long-term constraints and determined through the process of iteration and participation described earlier. These rolling plans particularly at the regional level, that is, relevant to the localities, would comprise the fiscal, and non-fiscal qualitative aspects mentioned earlier, with an emphasis on the latter. In this manner, a more meaning-

ful and implementable strategy is evolved and repeated annually, including re-evaluation of the long-term constraints as a result of the previous year's performance.

The functioning of this process, particularly concerning the budgetary aspects, will become clearer in the following sections on the institutional aspects of this process. To initiate it is the most difficult step. A start, albeit an insufficient one, has been taken for the Northern regions, which, as has been seen, lag behind most other regions. The addition of the Southwestern region (grouping Qadisiya, Thi-Qar, and Muthanna) which are the most lagging areas in Iraq, would seem to make a suitable start. However, success of the process must be ensured and to avoid unnecessary setbacks, final say on the initially decentralised regions will require further on-the-spot study. Having discussed a theory of decentralisation, it is the practise that is now considered.

6.3 THE POLITICAL AND ADMINISTRATIVE FRAMEWORK

The necessary political and administrative context for the devolution of planning authority to regional and local authorities is considered in this section. As mentioned in the previous section, Iraq's political ideology cannot be divorced from its planning system, if decentralisation is the aim. The essential starting point is the need for a strong and cohesive ideology, partly to ensure a minimum of common denominators concerning the general development goals, and the acceptance of some basic criteria, preferences, and priorities. In other words, the

healthy differences between cultures and localities described earlier would be subject to a minimum of consensus concerning the priority of rural development.

In addition to having a strong cohesive ideology, the government needs to be stable* enabling it to take the radical decisions called for by this thesis; such as redirecting a large portion of government investment away from the major urban areas to agriculture and rural industry, and the decentralisation of the bureaucracy, which is a slow and costly process, very difficult to achieve, and will be strongly resisted by the bureaucrats themselves. This explicit weakening of the central government for the benefit of the local and regional authorities will only be undertaken in government circumstances of strength in ideology and security.

A decentralised planning process should be easier in a socialised economy,** as social conflicts are likely to be more evenly handled than in a market economy, where stronger pressures for individual gain are more likely. However, in practise there are serious problems, as exemplified by the U.S.S.R., where overconcentration of power breeds similarly biased pressure groups (although the more successful Chinese and Yugoslav models will be discussed later). Iraqi socialism at present suffers from a similar over-concentration (see Section 3.1) where ideology is interpreted primarily at the national level, and is imposed on

*Although danger clearly arises in this if a dictatorship settles in.

**A. Waterston, op. cit., p. 562.

lower levels, which remain primarily administrative or technical. In 1958, a revolution in Iraq replaced a colonial ideology left over from the British mandate, with a new ideology, which although more socialist, remained polarised.

The progression in Iraq has so far moved from a heavily dualistic society in which the rural sector is perceptibly divorced from and lags behind overall development, to a government more concerned with rural development, but superimposed from above. In the latter, a pattern of reconstruction emerges, such as unilaterally imposed land reform and co-operatives, where the people concerned are not consulted or participant in the policy formulation. This thesis has no complaint against the policies per se; however, they have not been particularly successful because of the lack of local consultation and cooperation, as well as a lack of local organisation.

Lasting roots can only be found in the rural areas, and from the local culture, which is a reason why the stress has been in the previous sections on building up the grass-roots base, within the present socialised ideological framework. To this end, a decentralisation of power to the regional and local levels becomes necessary. As already discussed, this process has been initiated in the Kurdish regions, where a start, albeit insufficient and under the pressure of force of circumstances has been taken. Encouragement of the government to take this process further can only come through its own internal confidence and the persuasion of

the government by different communities of the absolute necessity of decentralisation for the integrity and true development of the country.

To enhance this devolution of authority, the narrowing of the communication gap between planner and politician is necessary. It goes without saying that to succeed, planning must be joined to effective power at all levels. This rather obvious and simplistic statement is continuously overlooked, and its importance underestimated by planners in Iraq (and elsewhere), hence the low level of plan or policy implementation. Due to the radical nature of the policies proposed here, it is particularly important for planners to spend a large proportion of their time making sure of political support, and less time in preparing plans. A better balance is called for, away from the present over-concentration on plan preparation alone, otherwise, essays such as this will simply acquire dust on a basement bookshelf.

The process being advocated attempts to lessen the present mutual alienation between planner and politician by involving the politician in the planning process from the outset, and more important, by ensuring the planners (rather than the administrators) a role as the principal advisors to the political decision makers. The stress on the latter is because,

...the politician holds a position in a power structure, from which he or she cannot withdraw long enough to gather detailed information, and subject it to critical analysis. Nor are they free

to draw conclusions impartially from the evidence..,*

because their hands are always partially tied, and thus, any real assessment depends on the politicians' outside advisors. It is through this channel that the planner can enhance the chances of initiating rural development policies and decentralisation.

It is not just a devolution of some of the powers of the centre that must be sought, but also an internal change in the decision making process itself towards a reduction in its hierarchy and structure. Centralised governments such as Iraq's are organised to institutionalise not rational procedure, but levels of authority with "each level jealously guarding its power from the intrusion of those below."** Decision making starts at the top (ministers and top advisors), with its administration and implementation below, while fact-finding, analysis, and planning are cast out of the hierarchy altogether. A hierarchy of power therefore, cannot accomodate the requisite decentralised planning process, which is continuous, iterative, self-correcting, and egalitarian.

A recent survey of management problems in developing countries*** concluded that their management systems (public and private) were often characterised by a high degree of central authority in the office of the

*C. Leys and P. Marris, "Planning and Development," in D. Seers, and L. Joy (ed.), Development in a Divided World, Pelican, London, p. 279.

**Ibid., p. 280.

***UNRISD, "Research Notes, No. 2," UN, N.Y.

top management and a lack of delegation, which created difficulties for effective and efficient management methods. Furthermore, these decisions were often made without adequate consultation with subordinates. It seems both irrational and unjust to assign to a higher association what lesser and subordinate organisations are able to do. It should first be necessary to prove that the lower levels are consistently incapable of fulfilling this function satisfactorily, and that the higher level can do a better job. This is particularly important in the context of rural development policies, where delays in certain supplies or decisions can mean disaster. To be more specific, if the lines of responsibility between field officers or local/regional planners and the top of the hierarchy are long, then requests from the local personnel (extension-workers, schoolteachers, cooperative organisers) become utterly frustrated by being more or less unimaginatively reinterpreted and delayed by a succession of bureaucrats on the way.

In evolving a decentralised planning process for Iraq, a few case studies are briefly examined, concentrating on China, because of its emphasis on rural development, whereas decentralisation in the West, say America or Britain, and even Russia, is more urban in orientation and less egalitarian in outlook. Although rural decentralisation does have a long history in America, its early mechanisation and inegalitarian nature reduces its applicability to Iraq.

Before proceeding with the Chinese case, it might help to very briefly examine two countries which have strong local and regional planning authorities, but with a critically different emphasis. In Yugoslavia, planning bodies at the lower levels are fairly independent of those above. There is coordination between the federal and republican levels, who in turn work with district and local levels in drafting plans, but at the same time, it is not required of plans at the lower levels to concur in every respect with those at the national level.* In fact as well as in principle, in Yugoslavia, the planning bodies at lower levels are relatively independent of those above and are considered to be crucial elements of the planning process.** However, in Russia and some other parts of Eastern Europe, although the regional planning bodies are very important parts of the planning process, they are utilised mainly to generate information and implement national plans, rather than to participate in determining plans and policy.***

*See A. Waterston, *op. cit.*, pp. 560-562.

**Other examples in a similar vein include Tanzania (see P. Marris, MIT class notes held by this author) and Switzerland (see E.F. Schumacher, *op. cit.*, p. 107). In the former, the concern for ideology at all levels has entailed substantial 'economic' costs (according to some accounts), but it has also achieved stability and some participation, through primary emphasis on ujama villages and self reliance. This change has been achieved without loss of confidence in local culture, that is, by replacing the previous colonial ideology for a new one, found not so much among the elites, which are too influenced by Western models, but rather from the local culture and from the countryside. A very different yet in some respects similar case, concerns Switzerland, a country of 6 millions, divided into more than 20 cantons, each of which is a kind of development district, with the result that there is a fairly even spread of population and industry, and there is no tendency towards the formation of excessive concentrations.

***The Russian experiment in decentralisation was relatively brief, lasting from 1957 to 1970 when the regional councils were abolished and planning reverted back to a highly centralised form.

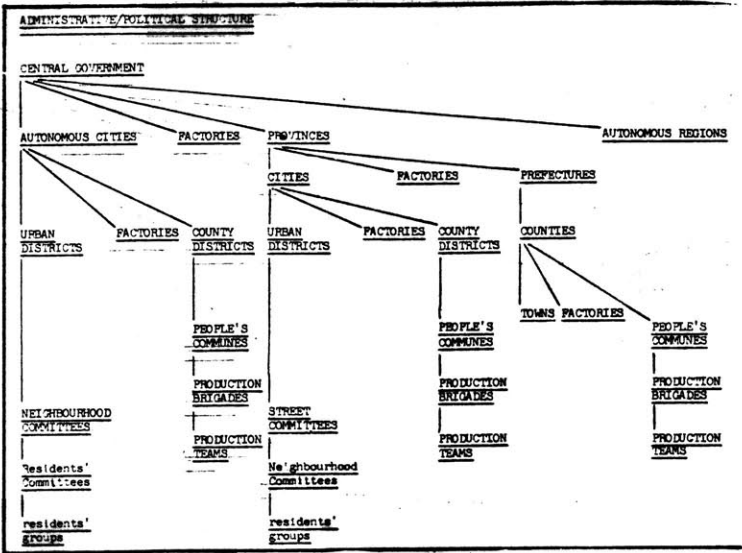
In other words, planning policies are imposed from above on 'efficient' local organisations which implement them. The Yugoslav approach is clearly preferred.

In considering the Chinese case study, no attempt is made for completeness or historical chronology. Only aspects relevant to the Iraqi case for rural development and decentralisation are considered, to which reference is constantly made where applicable, directly or by adaptation. The following chart provides the overall Chinese context; however, it should not be read in strictly hierarchical terms, due to the relative autonomy of most operational and organisational aspects. The related proposals for Iraq are in the adjacent chart. Under the central government, there are 3 autonomous cities (an example is Shanghai), some directly run state factories and public works, and 21 provinces and 4 autonomous regions* (primarily remote, of minority races, and of military importance). Translated to the Iraqi planning context, the proposal is for: One autonomous city (Baghdad) under the central government; a range of directly run industries (e.g. petro-chemicals, steel) and infrastructure (e.g. air, sea, and rail transport, most dams); and 9 regions of which Kurdistan could be an autonomous region.**

*N. Jeffrey, "Administrative/Political Structure for Planning (in China)" in Architectural Design, March 1974, London, p. 144.

**Although this seems logical in the light of the current situation, at this stage, it is not possible to be more specific for further on-the-spot study and information is required.

CHINESE ADMINISTRATIVE/POLITICAL STRUCTURE



Iraqi counterpart

Central government and Central Planning Organisation

Baghdad (autonomous city) and 9 Regional governments and Regional Planning Organisations

Local Organisation (8-15 per region)



(N.B. no hierarchy is implicit)

Under the Chinese provinces, are a total of 150 cities, many factories, and 1,500 prefectures which are administrative districts for rural areas.* Next in line are the counties (having towns, factories, peoples' communes, and production brigades, which correspond in population size to the proposed Iraqi regions. Again, translated to the 9 Iraqi regions, there are about 15 cities, certain large factories (such as the paper mill North of Basra discussed earlier), and probably

*N. Jeffrey, Ibid., p. 145.

slightly over 100 districts. It is interesting to note that in China the counties are the lowest level of State administration with a comprehensive responsibility in economic planning and development, industry, agriculture, finance and commerce, education and health, as is the case with the proposed Iraqi regional authorities (for certain enterprises and levels). What is important is that these regional functions must not relate to central ministries, by the branch principle of organisation, which generally implies the centralisation of command and administration. By contrast, in China, the inter-branch coordinating agencies or 'peoples' committees', cut across branch lines, and therefore have the power to pull together a broad range of activities such as those necessary for rural development.

Further application of this principle implies that in a decentralised planning process, the regional bodies must not be responsible to the central planning organisation, but to the regional government. At present, in Iraq, although all provincial activities, planning and other, must go through the provincial governor (which seems suitable to the principle of decentralisation), the same governor is a direct appointee and responsible to the Ministry of Interior, a line agency, which negates much of this office's value. However, the proposed regional authorities are not subject to any line agency but to the regional government. Similarly, at the local level, no formal bureaucratic administration is proposed, rather local government is through committees. This is also facilitated by the fact that rural areas are more difficult to run bureau-

cratically than cities.

Decentralisation was only risked in China after the problem of regionalism was solved. That is, regional power was given to a regional party rectified of regionalism. Because these people were considered loyal to Peking, they were awarded a broad range of operational autonomy under the slogan 'do the best according to local conditions'.* However, the checks remained in that the party secretary was generally from outside the province, and the provincial governors from inside, but most power remained in the hands of the former. This imbalance between local and national representatives should be reduced in the case of Iraq to enhance mutual trust.

This appeasement of both national and regional groups appears to be the only way to create a functioning regional body in Iraq, particularly during the initial period, in that the devolution of authority requires communication and mutual trust between functionaries at the centre and region. Communication between the region and locality is theoretically assured by the very form of the executive regional authority (discussed earlier). Thus, for the two initial regions, chosen for decentralisation: a combination of representation from the Kurdish people and from the central government is required for the Northern region; and between Shi'a Arab representatives of the people in the South Western region, and probably a Sunni Arab representative of the Central government. However, it is very important to rapidly recruit local people

*See F. Schurman, Ideology and Organisation in Communist China, University of California Press, Berkeley, 1973 ed., p. 215.

into regional government to avoid the appearance of an occupation from outside*. Trust at the early stages is essential to avoid relationships turning sour, which may well set back the programme for long periods of time.

The next stage of the argument concerns the necessary financial base of the regional and local organisations. As mentioned earlier, experience shows that regional bodies are most successful when they have resources of their own and administer their own budgets**. The sources are partly from within the region, but particularly in the early stages of decentralisation, a substantial part of the funds for regional development need to come from the centre (but this portion will become progressively less). In Iraq, this latter source for regional budgets is likely to continue indefinitely, because the central control of the oil wealth is necessary to ensure its even distribution. The oil sector has not been considered in any depth in this thesis, as it would have greatly expanded the topic. The wealth and power it bestows

*An example of this can be seen in the regionalisation programme in Thailand (set forth in conversations with Richard Meier at MIT in April 1974). The first step was to recruit people from the top rank of the civil service, that is, the elite, from the capital, for the job of regional development executive. Apparently, the reason for choosing from the elites was so as to ensure direct access to the central authorities or ministers, thus enabling the more rapid expedition of projects in the future. These executives were persuaded to leave the capital only after being assured that this was a good career line for advancement, and it seems that later in the process, they all felt that they were surviving politically. However, there is a clear conflict here with local or regional identification, in that trust is likely to be short in an executive from the centre, appointed by the centre. What can be abstracted from this is, perhaps, an approach to transfer personnel from central ministries reduced in 'size' (because of the loss of certain powers) to the regions.

**A. Waterston, op. cit., p. 563.

on the centre may diminish the possibilities for real decentralisation unless, as is proposed (in the following section), a percentage of the oil income is guaranteed by law to the regional government.

In China, the decentralisation in 1958 indicated no structural rearrangements for financial subdivision in terms of control, but laid down general lines of revenue sharing between the centre and regions, with the latter authorities given a greatly increased share of budgetary revenue (as well as retaining a share of the profits from regional enterprises)*. In all this, the heavy losers are the ministries or line agencies. As the oil income is to be collected at the centre, this procedure is also proposed for Iraq.

In the Chinese decentralisation plants at county level and above are primarily financed with government funds (from the provinces or prefectures)**, while in the communes (in size nearly equivalent to Iraq districts), a substantial portion of the funds comes from local accumulation.*** Thus, the primary stress at this level is on self-reliance. To ease the burden on localities in some instances the state offers a guaranteed market to local plants.**** In effect, the state initially

*F. Schurman, op. cit., pp. 208-209.

**Article by the Editor, Weekly Review, op. cit., p. 9.

***N. Jeffries, op. cit., p. 14, for an example of this in the financing of a hydro-electric and irrigation project for 2,000 hectares in Shen Deh county (in Kwangtung province), where the decision started at the county level (after consultation with commune and brigade levels), and was then reported to the Prefecture and Provincial levels for clearance. Of the 6 million yuan required, the state, through the county, provided 1.2 million with the remainder coming from locally accumulated funds.

****Article by the Editor, Weekly Review, op. cit., p. 9.

assumes broad economic responsibility for the profitable operation of local enterprises. All this is applicable to the Iraqi situation. In time, both administration and budgeting would be more fully transferred to the regions and their localities.

It is clear that one essential part of the decentralisation process is for the centre to share with the local and regional entities a portion of national revenues (see section 6.4) proportionate to the responsibilities being transferred, otherwise, decentralisation would amount to an increase in indirect taxation (to the detriment of the local population).* Although the decentralisation of planning and plan implementation is warranted, the evidence indicates that in matters of taxation, the opposite may be necessary, to ensure equitable distribution.** Another important aspect of decentralisation of financial power is that it is likely to result in a reduction in corruption, due to the less centralised control of funds.

To ensure equitable distribution within regions, dual control of prices and certain supplies, some centrally and others regionally controlled, is necessary.** To conclude this section, a brief examination

*Thus, in China (see article by the Editor, Weekly Review, op. cit., p. 12) the financial responsibility is being transferred from the government directly to the farms and factories in the towns and cities, including education (responsibility of brigades at primary level and communes for middle schools). Whereas, in India (see Malgavkar, op. cit., p. 125), the rural industries programme was reviewed in 1966 (four years after its inception) to find that the existing administrative process adversely affected the implementation of the programme.

**Again, the case of China, see F. Schurman, op. cit., p. 178.

of some specific implications of such decentralisation for rural industry, agriculture and education follows, again mostly using the Chinese case study.

Industry transferred to provincial and lower levels of control* in China comprised most light, non-strategic, heavy, and construction industries. The provincial authorities thus acquired a greater share of production profits and greater control over personnel and the allocation of materials than previously. Concomitantly, the planning system was greatly simplified with considerable leeway given to factory managers, with flexibility in decisions on reinvestment of a percentage of enterprise profits.** Of particular interest in this context is the fact that some 80% of light industry in China (in 1957) was dependent on agricultural raw materials, and the particular emphasis on self-reliance at the lower levels meant reliance on labour-intensive production and the development of notably local capital resources. These procedures would all seem to be very valid for Iraq, and form part of the proposals for rural development and decentralisation.

*For a more detailed subdivision, see the article by the Editor, Weekly Review, op. cit., p. 8, which lists the following breakdown of responsibilities:

- at provincial level - major plants for tractors, machine tools, electric power;
- at district level - farm machinery, small engines, simple lathes;
- at county level - machine repair shops, small chemical fertiliser plants;
- at commune level - small shops for maintenance and tool repair.

N.B. There is a certain similarity here with the rural industries suggested in Part 3.

**F. Schurman, op. cit., pp. 176, 205.

For agriculture, the concept is of a network of local cooperatives which, particularly at the early stages, can draw on technical and financial support from the main local agro-industrial organisation of the district (based in the small rural towns discussed in Part 2). It should be remembered that these main local organisations together form the core of the regional authority (see previous chart), and provide an effective link between the different regional administrative units, as well as helping in the training of local technicians and operators, and in the maintenance works.

The importance of these organisations can be seen by their inducement of high agricultural growth rates in Japan and Taiwan,* and in the Comilla Academy in Bangladesh. This academy

...propagates the methods it teaches by handing the responsibility directly to those who in the long run have to make use of the new techniques, and it is in a large measure due to the direct involvement and participation of both officials and the people that the academy's work is effective in mobilising efforts for rural development.**

Two crucial points come out of this quotation, namely: that the success of the local organisations proposed in this thesis requires continuous political support (for which local competence needs to be demonstrated); and that while financial and technical measures are extremely important, their effect will be relatively small in the absence of active local participation. A major problem here is that cooperation has to be

*UNRISD, op. cit., pp. 105-106.

**See R. Schickle, op. cit., p. 62.

stimulated, and often created where there has been no tradition of it except in the very small tribal 'batn' and extended family scale (mentioned earlier).

The absence of cooperation between the present centrally and bureaucratically administered industrial and educational establishments in Iraq, and between them and the more diffused and badly organised agricultural establishments is a very powerful negative influence on regional and rural development. In improving communication and cooperation the role of education is particularly important. The problems of education (particularly concerning rural development) in Iraq are found at the local level, yet the resources and powers of decision are concentrated in the Ministry of Education in Baghdad.

In the context of a more decentralised and appropriate educational system, the potential link between local schools and the Ministry of Education could be a regional administrator or supervisor, incorporated within the regional planning authority. This office offers the potential for communication between national and local planning levels, enabling the modification of programmes in response to local need. The machinery for this already exists within the present Muhafadha (province) system, but authority is lacking. These regional supervisors are key people to recruit and must be resident in or near the locality, have sufficient powers, and be able to get a hearing and timely decisions from above.*

*An illustration of this approach can be seen in the case of Ciudad Guyana in N. McGinn and R. Davis, Build a Mill, Build a City, Build a School, MIT Press, 1969, p. 250.

As mentioned in the Preview, the lack of sufficient local information is the reason why at times this chapter becomes perhaps too general in nature. However, this is not necessarily detrimental, for to take the arguments of this section concerning the relationships between, and the formations of, the local, regional, and national planning organisations and authorities further requires local participation as well as additional information and on-the-spot study. The following concluding section takes these issues concerning the three main planning levels, namely national, regional, and local to their operational or institutional towns.

6.4 THE OPERATING INSTITUTIONAL FRAMEWORK

This section follows on directly from the previous two on the decentralised planning process, and its political and administrative framework for rural development. Here the concern is with the three principle planning institutions, namely the Central Planning Organisation (CPO), Regional Planning Organisation (RPO), and local organisations which together form the heart of the decentralised process.

THE CENTRAL PLANNING ORGANISATION

As described earlier, in Section 3.1, the existing CPO is largely concerned with maintaining the status quo. Its structure is hierarchical, and any linkages with other central agencies, let alone regional authorities, are nominal, or at least uni-directional. Evolving a CPO to fit the requirements of decentralisation and rural development calls for the present organisation to cease resembling a bureaucracy in the traditional

sense, and lose its rigid lineal hierarchy. This demands:

- augmenting the present vertical linkages with strong horizontal ones, between sections and departments in the administrative structure;
- shifting the emphasis of the CPO's administrative structure from organisational or rule-observation, to a goal or policy orientation;
- recognising its mutual interdependence with other ministries and departments, and consequently establish two-way communications;
- recognising its mutual interdependence with the 9 regional authorities, particularly important in the light of the devolution of a sizeable portion of its present responsibility and authority to them.

Two principal approaches to CPO's have been identified. To be more explicit, the first coincides with the present CPO in Iraq, and considers that a Ministry of Planning (the parent ministry of the CPO) is not adequate, because the conflicts with other ministries involved in the planning process in a 'competition among equals' remain.* Consequently, it calls for a cross-ministerial co-ordinating planning

*A list of those presently involved in rural development includes the Ministries of: Agriculture, Agrarian Reform, Irrigation, Northern Affairs, Municipal and Rural Affairs, and Economy (mainly for agriculture); Industry; Public Works and Housing, Communications, Health, and Education (for social and other services); and of course, the Ministry of Interior.

authority attached to the President's or Prime Minister's office. This authority would, therefore, be above ministerial or sectoral realms, and assuming it is bestowed with the relevant authority, it would have access to and coordinating powers over them. The magnitude of potential conflicts in such a proposal, which reduces some of the independent planning powers of the various ministries, is considerable, and although such bodies do exist in some countries, they not surprisingly, remain inoperative; that is, without sufficient power and authority.

The second point of view complains that such an agency is treated with suspicion and even hostility by other government ministries and agencies, let alone any regional authorities to whom they seek to dictate policy. Experience shows that if a planning agency's powers impinge heavily on another department, antagonism results and it becomes difficult for the planning agency to perform its functions.* In other words, activities work better if they do not entail any threat or hint of infringement of autonomy. Furthermore, the relative autonomy of the ministries often corresponds to the real political independence of powerful ministers, and tends to make the theoretical hegemony of an all-powerful planning office unrealistic.

The second approach correctly assumes that the smaller the burden placed on the central planning agency, the better its chances of operating effectively. This is clearly implicit in the devolution of a large por-

*A. Waterston, *op. cit.*, p. 465.

tion of its power to the regional authorities. Hence, a planning agency does well to remain small, leave much to other ministries, and not attempt to compete with them. Waterston, in echoing this approach, states that common sense tells us that the operating organisation will cooperate more wholeheartedly on a project or programme which it has conceived and prepared than on one which was formulated and foisted upon it by another agency.* However, if left in total isolation, inter-sectoral problems appear. This lack of coordination between the planning and operational ministries can be minimised by bringing operational personnel into the planning process, and appointing planners to the relevant operational ministries for rural development: the most important ones being Agriculture and Agrarian Reform, Industry, Irrigation, Municipality and Rural Affairs, and Health and Education.

In short, variations on the second option are more in keeping with the decentralised process for rural development. The role of the CPO should be mainly to perform a sufficiently broad synthesizing role and to avoid becoming absorbed in over-specialised administrative tasks, and to evolve and evaluate policy in cooperation with regional authorities and the other relevant ministries.** In actual fact, the CPO cannot synthesize effectively without some controls,*** that is, while

*See A. Waterston, op. cit., p. 445.

**Ibid., p. 464.

***Among the decisions which planning must influence if it is to be effective (in addition to agricultural and industrial investment) for rural development are budgets, legislation, land acquisitions and sales, building permits, schools and health facilities, etc.

the planning agency can be less involved in detailed implementation, both the CPO and the relevant operational ministry must be involved in the policy or plan formulation stage of the process, partly through a two-way exchange of staff. The importance of the two-way link is that the CPO must be willing to learn from the operational ministries (and the regional authorities) who are more involved in the practical realities of specific situations.

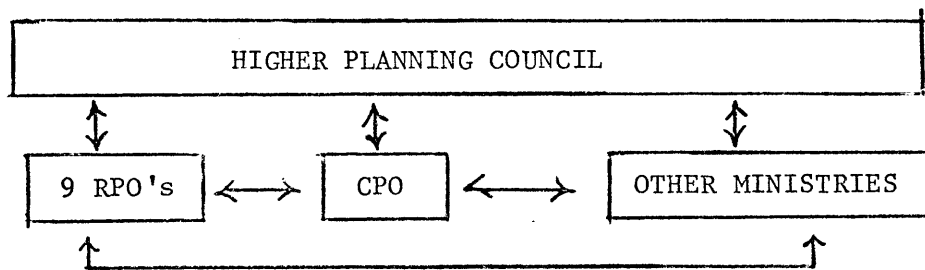
What must be avoided is making and imposing plans or policy on a ministry, for this will surely stop their implementation. It must not be forgotten that most policies relevant to rural development are determined at the regional level, that is, by participation of the localities. (Even if the CPO's authority carries the day, the problem will return at implementation stages. In the case of Iraq, it is probably only through informal contacts between individuals that the necessary cooperation and coordination can be assumed.* Unfortunately, this has a tendency to strengthen central cliques. However, with the devolution of power away from the centre, this negative aspect of informal contacts will diminish.)

There are many additional advantages in the more active links established between planner and politician, some of which were discussed earlier. A critically important one is the potential for policy evaluation. This is crucial because the decision maker needs to know what

*Various other methods, through committees between ministries, or super ministries, or an official coordinating body have a fairly poor record.

happened and why, for unless the consequences of decisions are continuously reported back, there can be little rational progress in the effort towards a continuous and decentralised planning process.

The following diagram represents a crude approximation of the proposed process; reference should be made to the existing scheme illustrated in Section 3.1.



The suggestion is to retain the Higher Planning Council, which in effect operates as a Council of Ministers. As discussed earlier, the relationships between the various planning bodies is not hierarchical, rather it is circular or one between equals.* The 9 RPO's would have access to the CPO as well as the Higher Planning Council and other ministries when necessary.

Before concluding this section on the CPO, it should be noted that the process of annual budgeting is not left in isolation at the Ministry of Finance, rather the decentralised process foresees close collaboration between this ministry, the CPO, and the nine RPO's perhaps by means

*B. Horvat, in H. Faber, D. Seers (eds), *The Crisis in Planning*, p. 198, states that this philosophy is well advanced in Yugoslavia, where in contrast to the normal vertical hierarchy, there is no official hierarchy. He goes on to say that there are no official lines of subordination, and coordination is instead put on a horizontal footing under the three slogans, 'decentralisation, democratisation, and de-étatisation'.

of interdepartmental budget committees. Although participation of the Ministry of Planning in the preparation of the ordinary budget has had a long and unsatisfactory history in Iraq,* it has been primarily due to the overconcentration of power in the hands of a few ministries, not least of which is the Ministry of Finance. In the context of decentralization, this power will have been curtailed, which should enhance the prospects for collaboration. Other extreme measures such as bringing the budgetary department under the aegis of the Ministry of Planning** is more likely to subvert the rural development policies proposed here. Apart from reducing the time available for planning, the inclusion of this very quantitative process (more inclined to the modern sector) directly in the planning process, further discourages proper consideration of the qualitative issues so necessary for rural development. In brief, the CPO's power and function includes: participation in decisions on central budgetary allocation between the 9 regions, Baghdad (the single autonomous city) and the budget centrally controlled by the CPO and the various government ministries and agencies, joint development

*F. Jalal, The Role of Government in the Industrialization of Iraq, Frank Cass, London, 1972, p. 77. A law calling for such participation was decreed in 1961 (Law No. 70 of 1961), but the Ministry of Finance rejected this view, and in 1964 another law (No. 44 of 1964) was passed, making supervision of the budget one of the planning body's obligatory tasks. This also seems to have had no administrative effect, and a further law (No. 37 of 1965) was passed, again stressing the importance of such participation in budget preparation. However, a later law (No. 18 of 1966) reduced the role of the planning body to an "expression of Opinion" which makes it totally ineffective.

**A. Waterston, op.cit., p. 384, suggests that "the power of the Ministry of Finance limits the impact of the CPO, then the government should move this interdepartmental committee under the aegis of the Ministry of Planning, as happened in Malaya, Iran, Korea, and Venezuela."

with the RPO's, of annual rolling plans in the context of the above objectives, in which the CPO and other central government bodies have jurisdiction over the oil, steel, and other major heavy industries, transportation network, rail, sea, air, and main highway, and other nationally important public works and social and economic infrastructure. It does not have authority over: local agricultural and rural industries, local health, education, local public works, and infrastructure, and the regional budget, all of which are subject to the regional and local authorities.

The following section discusses these regional planning bodies, which complement the CPO but are not related to it hierarchially. In this context, it bears repetition that the RPO's are not isolated planning bodies, but a collection of local organizations, and this is crucial, for a plan's success depends also on public acceptance of its objectives. Planners should never forget this.

REGIONAL PLANNING ORGANIZATIONS

It should be clear by now that both the quality of planning and the degree to which its general objectives are supported by the country as a whole, depends to a large extent on giving responsibility to the regional and local authorities. To this end, the present regional structure (the 16 existing Muhafadhas or provinces were discussed in Section 3.1), must change radically and fundamentally, although they represent a starting point from which to progress to better regional

definition, more authority, and better personnel. The detailed delineation of regional boundaries need not cause much trouble, as the new lines could be drawn along existing gada (district) boundaries. It must be emphasized that these boundaries should not be considered as fixed, and should be allowed to change and evolve in time as needed. Of the nine RPO's proposed, two have been selected for initiating the policies for decentralization: one is the North, covering the Kurdish areas (primarily Dhok, Erbil, and Sulaimaniya) where a faltering step in the right direction has already been taken, and the other is in the South West, comprising Qadisiya Muthanna and Thi-Qar. To function effectively, these regional authorities must be statutory and not merely advisory bodies with no executive function. Otherwise, there will be little incentive or authority to coordinate the various activities called for by the rural development policies, and any local planner/administrator or manager with capacity and initiative, not to mention the rural population in general, will move to Baghdad, the centre of power. With this, the local rural population will subside to passivity, as at present.

To ensure permanence, the RPO's must be institutionalized. There are 4 of potentially applicable institutional variations for these authorities, as indicated below.

- legal--providing each authority with a percentage of national revenue (determined by consultations between the Higher Planning Council, the CPO, and the nine RPO's), which need not be a

fixed percentage, as this may will rigidify the system, and lead to misallocation, in terms of too small or too large sums for a particular region;

- administrative--that is, institutionalized by administrative decree, which is the present case, but this alone would be too weak a measure to shift the centre of gravity of decision making;
- corporate-- (for example, Guyana Corporation, Tennessee Valley Authority), having ample financial resources, however, in practise, these have been limited to one, or a few important and often lagging regions in a county, resulting in pressures on the government to redress the imbalance; in addition, they are generally very non-participatory (the TVA being an exception);
- independent local government--having its own resources is not feasible because of the necessary central collection of the oil and mineral wealth to ensure equitable distribution.

The first approach appears to be the most favorable, given that the revenue allocation remains flexible. By this is meant that the allocations need to take account of the existing conditions in each region in terms of size of population, level of income disparity, level of social and economic infrastructure, etc., all of which will change in time between regions. As all the nine regions, with the exception of Anbar, roughly have populations between 0.7-1.05 million out of a total population of 10.4 million (that is roughly 7-10 percent of the country's

population in each region), a good rule of thumb may will be to distribute not less than 7 percent of development funds to each region (except Anbar). Minimum allocation is often a euphemism for maximum allocation, but the fact that the distribution is decided by consultation between the various regional and central authorities is in itself a safeguard, although perhaps not a foolproof one.

The only other feasible alternative is the corporate institution. Such authorities are potent institutes, and being regionally based, often succeed in obtaining local popular support, giving them extra strength in dealings with the national authorities. Although this is in keeping with the philosophy of decentralization, these authorities have a tendency to become very strong, which may well lead to pressure for regional separatism, and this is sadly becoming a real danger in the Kurdish regions. For this and the reasons cited earlier, it is not a particularly suitable regional institutional form for Iraq.

Regarding financial allocation, the annual resource allocation and budgetary process whereby a regionalized national budget is effected has already been discussed. The ensuing political power accorded to the RPO's will give them the feeling that they truly form an integral part of the country, and hopefully, will become very effective in promoting rural development and regional dynamism. To further stimulate and encourage public participation, particularly at the outset, the government should actively publicise the new approach for rural development strategies. People will be able to see the goals in perspective, and

how they fit into them. That is, a villager might not migrate, knowing that the local rural settlement was to be infused with the social capital presently lacking, as well as with small scale industry. This would be particularly enhanced by the decentralization process, as the villager would be in a position to press for its implementation through the local organization. This process which yields considerable control to the people most affected by the same decision seems certain to mobilize popular self-help, by employing individual and collective potentials of the local community and region.

To conclude this section, there are two simultaneous problems regarding the institutionalization of the RPO's within the planning process. The first concerns the establishment and internal functioning of the RPO's, and the second concerns the problems of structure, coordination and communication with higher levels. Communication with lower levels is implicit in the very nature of the RPO's; however, these local organizations need to be given time to establish themselves and their identity. In the present case, the crucial starting point is to first establish the two RPO's proposed and subsequently expand the number (whether all at once or one by one is an issue for further study) while allowing for coordination and communication (that is, the iterative process) will improve gradually.

The concluding section of this chapter is on local organizations, which are critical for the success of the rural development policies, as well as for the decentralized planning process. Without them, region-

al planning may well become just as polarized in its application as central planning is at present.

LOCAL ORGANIZATIONS

Mobilization of the rural potential, a clear objective of this thesis, is, at least in the initial stages, likely to depend largely on initiative, organization and resources from outside. However, the emphasis of this effort must be principally focussed on developing local awareness and abilities for organization, without which, their present dependency will never be replaced by self-reliance and active participation in rural development.* Under laissez-faire economies, the lack of such organization encourages large-scale development and polarized benefits, but in Iraq, a country where land reform has removed the previous land distribution inequalities, the lack of effective local organization has resulted in migration, apathy, and a neglect of agriculture and the rural areas.

The approach towards rural development, as established in this thesis, cannot be understood except in the framework of the wider institutional reform which has been the subject of this whole chapter. In this favorable institutional framework, the need to evolve local organizations is critical; after all, progress is mainly made possible through

*The lack of such organization in Mexico has been instrumental in encouraging the dualistic pattern of development, whereas in Japan and Taiwan, the presence of these institutions has been such as to encourage wide participation, particularly of small family farms in the technological transformation and development of agriculture, enhancing the relative uniformity of income distribution.

local initiative, that is, when it is released. In other words, when small rural population groups acquire a sense of functional belonging to a wider society, they are more likely to lose their sense of being at the mercy of the outside forces. Or in the words of Liu Shao-Chi, "Only through the people's own struggles and efforts can their emancipation be achieved, maintained and consolidated."* Furthermore, "Creativity always comes as a surprise to us, therefore we necessarily underestimate our creativity, and a lot of tasks that seem improbable at first sight, are very feasible, given the chance."**

Instead of dogma and rigid doctrine, society becomes integrated through the cross-cutting loyalties of these local organizations, to which everyone is subject. Thus, in rural areas, a villager's occupation makes for loyalty to the local cooperative, or industrial enterprise; as a tribesman loyalty is to the clan, and so on. So long as each bring the villager into association with a different group, the potential disruptiveness of block (rather than societal) loyalties, is checked by the need to maintain ties with other bodies. Such local organizations also guard against excessive differences between urban and rural wages. Paradoxically, trade unions, the equivalent urban organizations, in this context, represent and defend the already privileged urban workers, often at the expense of the undefended agricultural laborer.

*S. Barraclough, in R. Weitz (ed.), op.cit, p. 378.

**A. O. Hirschmann, Development Projects Observed, Washington, D.C.: The Brookings Institute, 1967, p. 13.

The principle local organizations foreseen are those pertaining to rural settlements (agro-industrial enterprises as well as municipal authorities), and agricultural cooperatives. These local organizations contribute to planning to the extent that they influence political processes and decision making. The principle local organization based in the rural town, discussed earlier (for the Northern region) is made up of representatives from the local agricultural cooperatives and rural industries, chosen in rotation if their number exceeds a manageable level. Again, there is no hierarchy. There may well be a difference in population size or wealth, but this is not translated into a rigid hierarchical structure. The absence of any part of this lower level of organization (below regional) will tempt the upper levels to misuse their power as they have done in the past.

An approach to growth, particularly in the agricultural sphere on purely cooperative lines, without the use of privately employed labor is almost certain to be much slower and probably less productive. However, it holds out more hope of an equal distribution of wealth. Cooperatives, as local organizations, have multiple purposes and are also likely to be more effective than purely social organizations, as they associate people as well as an economic enterprise. Their tasks are fairly widespread and integrative, incorporating economic production; the diffusion of intermediate technology, and training; the development of informed citizens; as well as the social and political aspects of generating local leadership, of encouraging people to contribute to improving their

condition by their own means and effort through participation in the working community, and encouraging awareness in others.

To be effective, a cooperative structure must not be imposed from above, as is the current approach in Iraq, for unless the necessary educational work is carried out simultaneously, the organizations will be cooperatives in name only. It seems obvious that if cooperatives are to achieve their aims, all of their workers should participate in their economic benefits and decision making. In practice, this is very difficult in traditionally organized societies, because of the likelihood of excessive paternalism from within, further exacerbated in the "top down" approach by the presence of officials and extension workers from a "higher" and better educated social class.* It generally appears to these officials to be more efficient to build cooperatives from the top down, instead of from the bottom up, as the latter course is more difficult and requires patient and skillful educational and promotional efforts.**

For all its present problems, there is much room for hope in the framework of the proposed principle local organizations in rural settlements, which will serve as a catalyst in organizing marketing facilities

*See S. Barraclough, op.cit., p. 382.

**F. Schurman states that to negate the problems of the traditionally structured communities just mentioned, the Chinese would set the boundaries of cooperatives through the village, hoping by dividing it to "smash the traditional leadership." At a later stage of development, the cooperative could be reformulated to include the whole village.

and diffusing intermediate technology. These organizations will also be participant in initiating localized education and training called for by these policies. Through the better organization envisaged by the process, these principal local organizations, acting as local governments, should also be in a better position to extend credit facilities from within, and by borrowing from the various agricultural banks, or the regional fiscal authority.* Through these credits, it would seem to make sense to most cooperative organizations for the government to acquire a small equity interest (but without managerial involvement). This is partly so that it may directly benefit from any profits, but the interesting point is that its voting or non-voting equity interest provides an opportunity for the regional authority to be directly involved and aware of local affairs, and then ensures a useful channel of communication, which could greatly enhance coordination and the integrative process.

It is important not to lose sight of the fact that these cooperatives or local groupings for rural industry are not an end in themselves, but are primarily an institutional means of organizing mutual self-help and development. It is the local population's subsequent initiative that decides the relative success of a project. However, in lagging

*J. Van Muralt, Rural Institutes and Planning Change in the Middle East and North Africa in A Review of Rural Cooperation in Developing Areas, Geneva, 1969. So far, apparently only in the Basra region have cooperatives extended loans to members from within (to buy pumps); elsewhere, it has been through external banks, etc.

areas, where the population is poor and unstable (where the more dynamic people have systematically migrated), the government needs to play a very active and encouraging role, so as to stimulate people long accustomed to seeing their region lag far behind other areas. This could be done through the regional authorities where applicable. This raises the issue of whether RPO's get initiated before local organizations and cooperatives get going. Again further study is called for; however, emphasis on the local organizations should be greater so as to avoid powerful RPO's being formed.

According to Schickle, there are five basic needs for rural development, namely:

- local transportation and marketing facilities (such as food processing plants) in which the types, size and financing cannot be decided by the center, but must be locally determined;
- R & D and extension services, in which the need is to adopt and develop technology suitable to local conditions, and subsequently demonstrate them;
- credit and marketing services, implying well-managed cooperatives;
- favorable rural social environment which includes the need to develop managerial capacities, and encourage opportunities for self-improvement, the need for participation, schools, land reform, etc.

To these should be added equitable distribution of the benefits of development, which as with the other items requires the lessening of dependency,

and dualism, particularly between agriculture and industry (or between rural and urban areas). This thesis has attempted to deal in varying depth with all these issues for rural development in Iraq. It is fitting that this chapter concludes, as did Part 2, with local organizations in general, and people specifically, for this has been, and remains, the primary focus.

7 SUMMARY STATEMENT AND CONCLUDING COMMENTS

At the outset, it should be stressed that this thesis no more than initiates the study for rural development and decentralization in Iraq. An enormous amount of work is now required to make implementable programs out of the initial policies.

The thesis just sets out in Part 1 to establish the polarizing tendencies of present policies and the overcentralized and uncoordinated nature, in terms of physical, economic, and social aspects, of the planning process, leading to the concentration of investments and benefits of development primarily in Baghdad and to a lesser extent in Basra and Mosul. The losers have been and remain the rural population who have been denuded of their most able people through immigration. The theme of this thesis, namely rural development, is in response to the present dualism which neglects the traditional rural sector.

Part 2 discusses the rural development policies and concludes with proposals for developing agriculture and rural industry in a complementary manner through the extensive use of intermediate levels of technology and more appropriate forms of local education. The importance of local R & D institutes in the former and of a decentralized or localized educational system in the latter was emphasized. The principle statement of this second part is that the diffusion of development benefits and a reduction of the inequities in income and life style between the urban and rural areas is only possible through development "from below", that is, through self-reliance and self-sufficiency. To this end, the parti-

icipation of people in this development of their locality becomes essential. To render this participation meaningful, power must be invested in the local and regional organizations, which calls for substantial devolution of authority from the center. The process of achieving this decentralization is the subject of Part 3.

Decentralization is probably the most difficult topic to evolve a program for from a distance, because of the explicit requirement for very specific and detailed knowledge of the present institutions in Iraq, and the numerous localities and regions. In addition, the people in these localities and regions are the principle benefactors of rural development, must be encouraged to organize themselves locally. None of these factors can be satisfactorily studied from a distance. For this reason, this part more so than the others represents an initial step in which more questions are raised than answered.

The decentralized planning process hinges on the interactions between the Central Planning Organization and 9 Regional Planning Organizations. The latter organizations are subject to and a part of regional authority composed of representatives from agricultural cooperatives, rural industry, rural municipalities, and the major regional cities. The relationship between these representatives must be hierarchical so as to ensure that the regional authority is not dominated by its main urban center. Thus, regional authority is dependent on local sanction and approval, and cannot function in isolation. This is to ensure true diffusion of development in the rural areas rather than it being recentralized at the regional level.

The power and authority of the respective levels (that is, national, regional, and local) is as follows: At the national level, power and authority of the CPO is restricted to determination of long-term objectives and guidelines for short term development jointly with the Regional Planning Organization; joint development also with the RPO's of annual rolling plans in which the CPO and other central government bodies have control over the oil sector, steel, other major heavy industries, primary transportation, and other nationally important public works and social and economic infrastructures.

Budgetary appropriations between the central government, the 9 regional authorities and the autonomous city of Baghdad is another critical area in which the CPO participates. The allocations are determined by joint decision of these same parties; however, as a safeguard, a minimum of 7 percent (evolved on the basis of regional population) of the national development budget must be allocated to the 9 RPO's (see section 6.4). This is, some 60 percent of this budget is guaranteed to be spent in the regions and primarily in the rural areas, because the control of the regional authorities is biased towards local communities and their organizations. The importance of this is that a sizeable portion of the national income is from the oil sector, and this is likely to continue to be centrally controlled in the foreseeable future. It should not be forgotten that a sizeable portion of the central budget is also spent in the regions, but most of this will be on major projects and infrastructure.

The regional authorities have complete control of the regional budget; that is, the central government has no powers of veto. The

authorities (whose composition was described earlier) are aided by the RPO's in determining regional plans (on an annual rolling basis) and allocating the regional budget to local agriculture and rural industry, local health and education, local public works and infrastructure. In effect, their principle responsibility is to coordinate the needs and opportunities of the various localities within the region.

The local organizations need to be considered in conjunction with the regional bodies. The main local units based on the rural towns of 5,000-15,000 population and averaging about 10 per region (see Section 4.5) bring together the surrounding agricultural cooperatives, rural industries and local municipalities, and represent them at the regional level. However, control of local agriculture and industry is in the hands of the respective agricultural cooperatives and rural industrial organizations; that is, once the regional budget has been allocated, the power is transferred to the specific enterprises.

The three organizations (national, regional, and local) together form the crux of the argument for decentralization. It is perhaps appropriate to conclude by restating the objective of this thesis, and that is to reduce inequities between peoples in different regions and in urban and rural areas. The emphasis here has been on rural people and their development through self-sufficiency and self-reliance and the theme is well illustrated in this quote from Albert Camus, "real generosity towards the future lies in giving all to the present."*

*A. Camus, The Rebel, New York: Vintage Books, 1957, p. 304.

APPENDICES 1 AND 2

APPENDIX 1 (to sections 2.2, 2.3, 2.4)URBAN AND RURAL POPULATION DISTRIBUTION AND GROWTH

It is not clear on what basis the projections in Table 1 were made, except that the figures imply extrapolation for 1973-80 on the basis of the growth that took place between 1965-73. This is evident in the similarity of the relative values of the gain or loss in urban and rural population at these bench-mark years. This trend-extending viewpoint needs to be borne in mind in reading the figures and their conclusions as described below.

Between 1947 and the projected figures for 1980, the national population increases by a factor of less than 3, while:

1. Baghdad region increases by a factor of 6;
2. Sulaimaniya, Babylon and Kerbela regions increase by a factor of 3;
3. Kirkuk region increases by a factor of $2\frac{1}{2}$;
4. Nineveh-Dhok, Diala and Anbar regions increase by a factor of 2;
5. Wasit region increases by a factor of less than 2;
6. Qadisya, Muthanna, Maysan and Thi-Qar regions retain remarkably stable population totals, indicating considerable loss through migration.

The percentage increase in urban population and its regional distribution between 1973-80 is similar to the increase between 1965-73 and tallies with the polarized tendencies implicit in the above figures. The national urban population increased by over 40 percent and the distribution

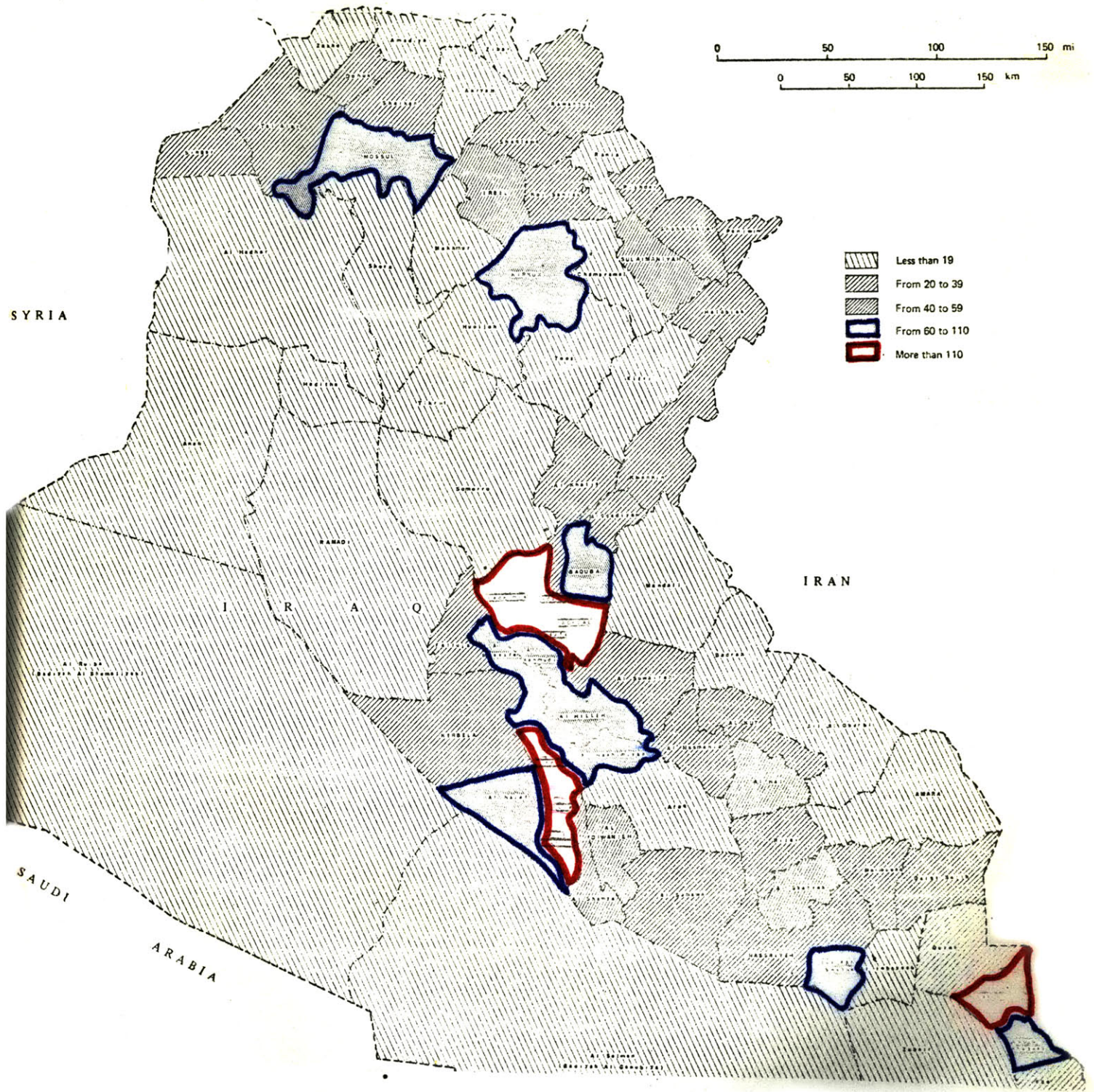
is as follows (using the same regional groupings by number as above):

Region 1 and 2 increased by about 50%;

Region 3,4,5, increased by about 30%;

Region 6 increased by about 20%.

POPULATION DENSITY BY MUHAFADHA AND QADA IN 1965 (population per sq. km)



UN, Studies on Selected Development Problems in Various Countries in the Middle East, 1971, UN, N.Y., 1971.

APPENDIX 1 (continued)

TABLE 1: URBAN AND RURAL POPULATION DISTRIBUTION BY REGION IN 1965, 1973, 1980 (POPULATION IN '000 s)* (continued on next page)

Region	1947 Total	1957 Total	1965		Total
			Urban	Rural	
Nineveh	595	755	358	384	742
Dhok			52	94	146
Sulaimaniya	226	305	128	272	400
Arbil	240	273	135	222	357
Kirkuk	286	389	232	242	474
Diala	272	330	135	262	397
Anbar	193	253	123	184	307
Baghdad	817	1,313	1,597	449	2,046
Wasit	225	296	103	231	334
Babylon	261	355	165	283	448
Kerbela	274	217	250	90	340
Qadisiya	378	520	131	269	400
Muthanna			51	92	143
Maysan	307	330	104	241	345
Thi-Qar	372	459	133	366	499
Basra	369	503	415	254	669
Total	4,816	6,299	4,112	3,935	8,047

*Central Statistical Organization, Annual Abstract of Statistics, 1971, Ministry of Planning, Iraq, and M. El Imam, Interpolation of Preliminary Estimates and Projections of Governorate Population by Sex and Age, Rural and Urban, UNESOB, 1972.

APPENDIX 1 (continued)

TABLE 1: URBAN AND RURAL POPULATION DISTRIBUTION BY REGION IN 1965, 1973, 1980 (POPULATION IN '000s) (continued)

Region	1973			1980		
	Urban () indicates % increase, '65-'73	Rural () indicates % increase, '65-'73	Total () indicates % increase, '65-'73	Urban () indicates % increase, '73-'80	Rural () indicates % increase, '73-'80	Total () indicates % increase, '73-'80
Nineveh	506 (41)	368 -	874 (18)	656 (30)	349 -	1,005 (15)
Dhok	73 (40)	90 -	163 (12)	94 (29)	86 -	180 (10)
Sulaimaniya	213 (66)	308 -	521 (30)	317 (49)	336 -	653 (25)
Arbil	216 (60)	245 -	461 (29)	312 (44)	263 -	575 (25)
Kirkuk	334 (44)	239 -	573 (21)	440 (32)	234 -	674 (18)
Diala	204 (51)	271 -	475 (21)	279 (37)	275 -	554 (17)
Anbar	182 (48)	188 -	370 (21)	245 (35)	189 -	434 (17)
Baghdad	2,650 (66)	516 -	3,166 (55)	4,025 (52)	593 -	4,618 (46)
Wasit	148 (44)	227 -	375 (12)	192 (30)	222 -	414 (10)
Babylon	257 (56)	304 -	561 (25)	363 (41)	320 -	683 (22)
Kerbela	424 (83)	104 -	528 (55)	652 (54)	121 -	773 (46)
Qadisiya	172 (31)	241 -	413 (3)	205 (19)	218 -	423 (2)
Muthanna	67 (31)	83 -	150 (5)	81 (21)	75 -	156 (4)
Maysan	139 (34)	220 -	359 (4)	171 (23)	200 -	371 (3)
Thi-Qar	186 (40)	353 -	539 (8)	235 (26)	341 -	576 (7)
Basra	622 (50)	262 -	884 (32)	852 (37)	272 -	1,124 (27)
Total	6,393 (55)	4,019 -	10,412 (29)	9,120 (43)	4,094 -	13,214 (27)

APPENDIX 1 (continued)

TABLE 2: EMPLOYMENT AND WAGES IN LARGE INDUSTRIAL ESTABLISHMENTS, 1970*

Region	% Pop.	%Empl. Male	Ave. No. Empl. Male	Empl. Female	Total Wages (Male)** ('000 I.D.)	Avg. Wage Employee I.D.
Nineveh + Dhok	10.4	7.6	6,317	259	2,492	394
Sulaimaniya	5.0	1.7	1,431	474	593	414
Arbil	4.4	0.4	310	3	84	271
Kirkuk	5.6	1.5	1,214	6	396	326
Diala	4.7	1.8	1,520	11	596	374
Anbar	3.7	0.6	527	-	157	300
Baghdad	28.5	63.7	52,636	3,361	21,215	403
Babylon	5.5	6.4	5,288	128	1,848	349
Kerbela	4.8	2.8	2,293	57	657	287
Wasit	3.7	2.9	2,377	415	629	265
Qadisiya	4.3	0.8	615	-	127	207
Muthanna	1.6	1.1	942	1	284	301
Maysan	3.8	3.0	2,439	5	811	325
Thi-Qar	5.6	0.8	699	4	121	173
Basra	8.4	4.9	4,023	4,044	1,351	336
Total	100.0	100.0	82,628	8,768	31,334	379

N.B. These employees are mainly employed in food manufacturing (17,000), textiles (14,000), and non-metallic products (8,500).

*Central Statistical Organization, *op. cit.*

N.B. Large industries are identified as employing 10 or more

**Female unavailable

APPENDIX 1 (continued)

TABLE 3: EMPLOYMENT AND WAGES IN SMALL INDUSTRIAL ESTABLISHMENTS, 1969*

Region	% Pop.	Avg. No. Empl. %	Total	Total Annual Wages ('000 ID)	Avg. Wage/ Empl.
Nineveh and Dhok	10.4	7.5	4,421	321	73
Sulaimaniya	5.0	2.9	1,686	121	72
Arbil	4.4	3.7	2,162	109	50
Kirkuk	5.6	6.0	3,517	211	60
Diala	4.7	3.1	1,803	136	75
Anbar	3.7	1.9	1,136	85	75
Baghdad	28.5	40.6	23,830	2,359	99
Babylon	5.5	4.0	2,355	199	85
Kerbela	4.8	11.8	6,920	491	71
Wasit	3.7	2.2	1,303	101	78
Qadisiya + Muthanna	5.9	4.3	2,538	148	58
Maysan	3.8	2.5	1,455	100	69
Thi-Qar	5.6	3.0	1,757	114	65
Basra	8.4	6.5	3,836	380	99
Total 1969	100.0	100.0	58,719	4,876	83
Total 1968	100.0	100.0	54,227	5,014	92
Total 1967	100.0	100.0	56,302	4,984	89
Total 1966	100.0	100.0	46,124	3,832	83

*Ibid.

N.B. Small industrial establishments are identified as employing less than 10.

APPENDIX 1 (continued)

TABLE 4: DISTRIBUTION OF PRIMARY AND SECONDARY SCHOOL STUDENTS AND TEACHERS, 1965*

Region	% Pop. 1965	% Distrib. of Primary School Students**	% Distrib. of Primary School Teachers	% Distrib. of Secondary School Students
Nineveh & Dhok	10.9	10.2	11.0	9.2
Salaimaniya	4.9	3.2	3.2	1.1
Arbil	4.4	2.9	4.0	2.0
Kirkuk	5.8	5.0	5.4	5.1
Diala	4.9	3.2	3.2	4.3
Anbar	3.7	3.7	4.5	4.1
Baghdad	25.2	34.9	29.2	45.4
Babylon	5.5	4.9	5.7	4.9
Kerbela	4.1	4.6	4.3	5.3
Wasit	4.7	2.9	3.9	2.4
Qadisiya & Muthanna	6.7	4.6	5.3	3.2
Maysan	4.2	4.0	3.7	1.9
Thi-Qar	6.1	3.9	4.4	2.2
Basra	8.2	9.4	8.7	8.9
Total	100.0	100.0	100.0	100.0

*Ibid.

**Out of a total population of 8.1 million, 1.03 million were primary school students, of whom 30 percent were female.

APPENDIX 1 (continued)

TABLE 5: DISTRIBUTION OF HOSPITAL BEDS AND DOCTORS, 1965*

Region	% Pop. 1965	% Distrib. of Doctors	% Distrib. of Hospital Beds
Nineveh & Dhok	10.9	7.0	8.4
Sulaimaniya	4.9	1.4	2.6
Arbil	4.4	2.0	4.9
Kirkuk	5.8	3.8	3.5
Diala	4.9	3.4	2.4
Anbar	3.7	3.4	2.6
Baghdad	25.2	50.0	46.4
Babylon	5.5	3.8	4.6
Kerbela	4.1	5.0	3.9
Wasit	4.7	2.3	2.7
Qadisiya & Muthanna	6.7	5.0	4.7
Maysan	4.2	3.0	4.3
Thi-Qar	6.1	2.2	2.1
Basra	8.2	8.8	7.9
Total	100.0	100.0	100.0

*Ibid.

APPENDIX 2

TABLE 1: POPULATION DISTRIBUTION FOR ARBIL MUHAFAHDA, 1970*

Location	Population		
	Urban	Rural	Total
ARBIL	107,129	55,522	162,651
Arbil QC**	101,779	-	101,779
Aincowa	4,790	25,388	30,178
Qosh Teppe	560	30,134	30,694
MAKHMOUR	6,540	60,288	66,828
Makhmour QC	3,261	6,376	9,637
Guwair	1,192	19,564	20,756
Kandinawa	2,087	21,921	24,008
Qarach	-	12,427	12,427
KOISANJAQ	11,416	31,060	42,476
Koisanjaq QC	10,772	13,782	24,554
Taq Taq	644	17,278	17,922
RAWANDUZ	8,167	33,422	41,589
Rawanduz QC	5,493	7,025	12,518
Bera Dost	541	10,657	11,198
Diana	1,865	7,200	9,065
Khalifan	268	8,540	8,808
ZIBAR	2,188	21,673	23,861
Mirgasur	607	7,122	7,729
Barzan	1,081	3,978	5,059
Mezuri Bala	500	10,573	11,073
SHAQLAWA	12,575	35,031	47,606
Shaqlawaw QC	7,456	-	7,456
Khoshnaw	763	10,825	11,588
Harir	2,309	11,184	13,493
Salah Edin	2,047	13,022	15,069
CHOUMAN			
Balak	1,627	15,059	16,686
Total	149,642	252,055	401,697

*Source: Iraq Consult, Socio-Economic Studies for Development of Tourism in the North of Iraq, Baghdad, 1973.

**QC= Qada (sub-regional level) Centre

APPENDIX 2 (Continued)

TABLE 2: POPULATION DISTRIBUTION FOR DOHUK MUHAFAZHA, 1970*

Location	Population		
	Urban	Rural	Total
DOHUK	23,305	39,173	62,478
Dohuk QC	18,284	-	18,284
Sumail	2,943	15,988	18,931
Doski	1,390	12,420	13,810
Zawita	343	7,543	7,886
Mizoori	345	3,222	3,567
AMADIYA	4,402	56,430	60,832
Amadiya QC	3,354	8,338	11,692
Sersink	1,048	16,228	17,276
Barwari Bala	-	18,427	18,427
Mirwarican	-	13,437	13,437
ZAKHO	15,620	44,639	60,259
Zahko QC	13,778	-	13,778
Silifani	627	17,969	18,596
Sindi	314	15,385	15,699
Guli	901	11,285	12,186
AQRA	9,900	48,644	58,544
Aqra QC	7,462	-	7,462
Nahla	852	6,324	7,176
Ashayer Al-Saba	939	22,740	23,679
Surchiya	647	19,580	20,227
Total	53,227	188,886	242,113

*Ibid.

APPENDIX 2 (Continued)

TABLE 3: POPULATION DISTRIBUTION FOR NINEVEH MUHAFADHA, 1970*

Location	Population		
	Urban	Rural	Total
MOSUL	322,420	63,638	386,058
Mosul QC	310,313	-	310,313
Bashiga	7,929	18,365	26,294
Hemidat	1,257	26,355	27,612
Hamam Al-Alil	2,921	18,918	21,839
SHIRQAT	8,807	74,185	82,902
Shirqat QC	2,918	37,160	40,078
Qayara	3,811	24,631	28,442
Zab	2,078	12,394	14,472
HAMDANIYA	11,505	34,440	45,945
Hamdaniya QC	11,505	13,172	24,677
Kalak	-	7,929	7,929
Namrud	-	13,339	13,339
TELKAIF	11,568	39,813	51,381
Telkaif QC	7,249	15,127	22,376
Wana	-	8,825	8,825
Algoosh	4,319	15,861	20,180
SINJAR	12,067	85,046	97,113
Sinjar QC	9,161	51,679	60,840
Al-Shimal	2,906	33,367	36,273
SHIKHAN	7,126	23,866	30,992
Shikhan QC	7,126	13,991	21,117
Meriba	-	9,875	9,875
TAL'AFAR	51,576	79,837	130,913
Tal'afar QC	46,138	-	46,138
Zummar	2,205	37,942	40,147
Ayadhiya	2,356	21,512	23,368
Rabi'a	877	20,383	21,260
HADHAR	1,856	19,961	21,817
Hadhar QC	1,002	-	1,002
Tel	854	19,961	20,815
AL-BAAJ			
Al-Baaj QC	1,858	21,130	22,988
Total	428,783	441,916	870,199

*Ibid.

APPENDIX 2 (Continued)

TABLE 4: POPULATION DISTRIBUTION FOR KIRKUK MUHAFADHA, 1970*

Location	Population		
	Urban	Rural	Total
KIRKUK	211,179	64,751	275,930
Kirkuk QC	191,294	6,356	197,650
Qara Hasan	2,144	13,765	15,409
Altun Kupri	4,563	9,298	13,861
Shiwan	632	15,692	16,324
Dibis	6,917	11,386	18,303
Taza Khurmatu	5,629	8,254	13,883
KALAR	2,076	23,328	25,404
Kalar QC	1,324	-	1,324
Bibaz	369	7,105	7,474
Shirwana	383	16,223	16,606
KIFRI	12,234	28,656	40,890
Kifri QC	8,283	-	8,283
Qara Teppe	3,418	17,924	21,342
Jibora	533	10,732	11,265
CHEMCHEMAL	7,951	34,446	42,397
Chemchemal QC	6,350	12,200	18,550
Aghjalar	819	12,718	13,537
Sangaw	782	9,528	10,310
TUZ KHURMATU	25,081	61,661	86,742
Tuz Khurmatu QC	16,404	11,826	28,230
Qadir Karam	830	13,067	13,897
Daquq	2,942	17,851	20,793
Sulaiman Beg	2,133	8,454	10,587
Amerly	2,772	10,463	13,235
HAWIYA	6,162	43,192	49,254
Hawiya QC	4,802	-	4,802
Hawiya	-	23,145	23,145
Al-Riyadh	1,360	20,047	21,407
Total	264,683	256,034	520,217

*Ibid.

APPENDIX 2 (Continued)

TABLE 5: POPULATION DISTRIBUTION FOR SULAIMANIYA MUHAFADHA, 1970*

Location	Population		
	Urban	Rural	Total
SULAIMANIYA	111,962	67,104	179,066
Sulaimaniya QC	103,091	-	103,091
Tanjro	1,014	13,962	14,976
Qara Dagh	701	12,386	13,087
Surdash	1,087	17,922	19,009
Bazian	288	9,049	9,337
HALABJA	29,772	61,515	91,287
Halabja QC	13,950	-	13,950
Sirwan	514	20,301	20,815
Khormal	7,921	18,555	26,476
Derbendikhan	3,792	10,518	14,310
Shahra Zur	3,595	12,141	15,736
PENJWIN	5,864	24,912	30,776
Penjwin QC	5,864	11,169	17,033
Qarmak	-	13,743	13,743
SHAHARBAZAR	4,691	48,179	52,870
Shaharbazar QC	1,574	13,730	15,304
Mawat	1,605	14,666	16,271
Serojik	1,512	9,126	10,638
Sewil	-	10,657	10,657
PISHDER	12,126	35,690	47,816
Pishder QC	10,126	21,273	31,399
Mirga Bengord	2,000	14,417	16,417
RANIA	10,513	46,299	56,812
Rania QC	5,040	-	5,040
Chinaran	872	6,583	7,455
Nawdasht	2,177	20,062	22,239
Rania	2,424	19,654	22,078
Total	174,928	283,699	458,627

*Ibid.

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