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PORT OF SPAIN TRINIDAD

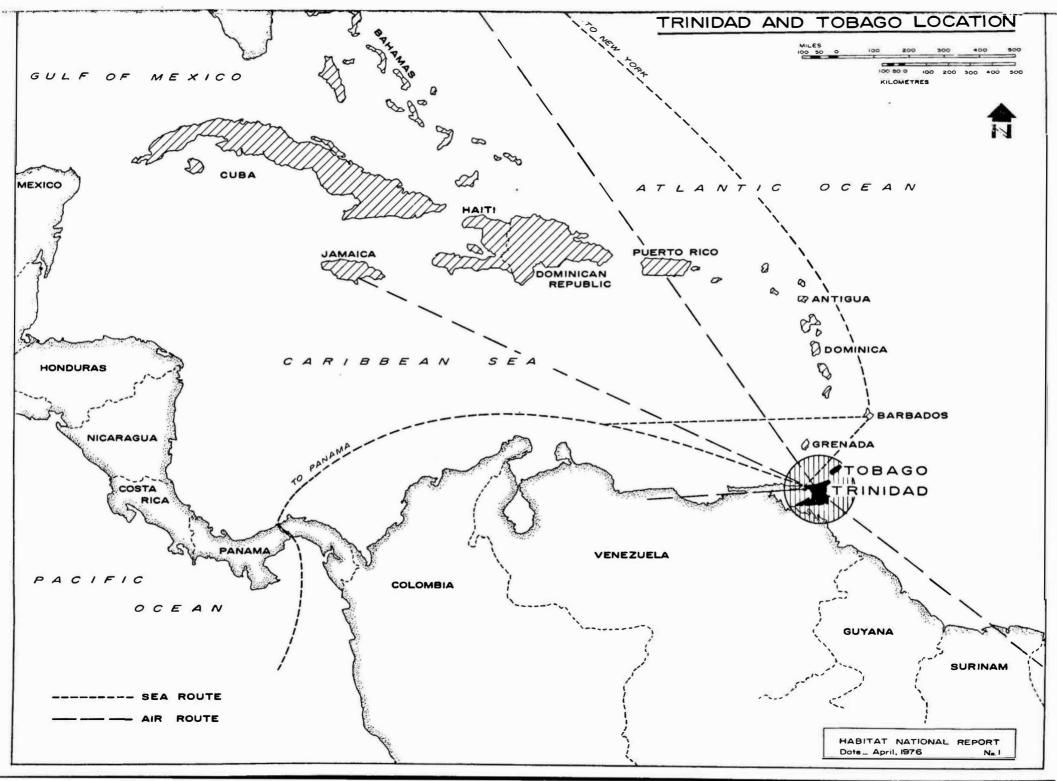
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INTRODUCTION

This national report on human settlements presents a statement on the human settlement situation in Trinidad and Tobago and an analysis of the key factors which influence the course of development of its human settlements. It also examines existing settlement policies, planning and development action against the prevailing constraints and opportunities and attempts to determine the requirements for change in policies and planning in order to improve the condition of human settlements and the quality of life enjoyed by their inhabitants.

I. THE HUMAN SETTLEMENT SITUATION

The current human settlement situation in Trinidad and Tobago is the result of the action and inter-action of several determinants, of which the key factors are:

- (a) the country's physical characteristics and resource endowment;
- (b) its development history vis-a-vis political and economic decision-making; and
- (c) institutional and bureaucratic constraints on development planning and action.

1.0 PHYSICAL CHARACTERISTICS AND NATURAL RESOURCES

Because of its small size, twin island configuration, hot, rainy, tropical climate and location just off the north-east coast and on the continental shelf of the South American Continent, Trinidad and Tobago is endowed with a fragile natural environment easily modified by external forces. Extreme vigilance must, therefore, be exercised against modifying influences such as, marine pollution, coastal erosion and periodic but severe climatic disturbances on human settlements.

Internally, physical factors have influenced the pattern and distribution of settlements in Trinidad and Tobago. For instance, the broken topography of the southern half of the island of Trinidad, though not a serious barrier to physical development, has tended to encourage the formation of small dispersed settlements along main roads. In this area institutional factors, such as land ownership and land disposal policy and the location and use of exploitable resources have also tended to exert a very strong influence on pattern and form of settlement.

Along the north coast only a very few narrow indentations of flat land are available for settlement between the sea and the steep slopes of the Northern Range which is a low 1 range of hills running east to west across the northern part of the island of Trinidad. Between the base of the Northern Range and the Central Range is found the most extensive area of flat land, the agriculturally rich Caroni Plain. The valleys of the Northern Range also possess land of the highest agricultural capability.

This configuragion of mountain range juxtaposed with flat lands of high agricultural quality constitutes the most serious land use conflict and constraint on development, since the country's largest and most dynamic conurbation, the Capital Region, is located here.

Containing the tendency for urban development in the Capital Region, not only to sprawl out on the plain and pre-empt good agricultural land, but also to creep up the hillsides and destroy the natural vegetation is one of the major planning problems of the country. In fact so serious is this problem that its solution completely dominates settlement planning policy and thinking.

The tradition of openness and a reliance on external trade forced on the country by our colonial history, coupled with a continuing dependence on our marine territory as an important source of development resources have encouraged the establishment of the majority of settlements in the coastal zone.

The pattern today is one of over-concentration of settlements in this coastal zone, especially along the West or Gulf of Paria Coast. These settlements today exhibit a distorted and inefficient internal form. Since growth started on the coast and could only take place inland, their cores have become off-centre and largely inaccessible to their catchment populations.

¹The highest peak is just over 3000 feet.

In Tobago, settlement distribution and form are completely dominated by topography. Most of the island is covered by a single range of hills which leaves only about one-quarter of the island's II6 square miles of land surface readily available for development. Nearly all of this developable land is found along the coast in small pockets. Land ownership and disposal policy have also confined settlements to the most infertile and unusable pockets of land, since the owners of large estates maintain all of the good agricultural land in plantation agriculture. Tobago is located in the hurricane belt and has suffered considerable destruction to its physical stock from two hurricanes within recent times.

2.0 DEVELOPMENT HISTORY

The economic and social effects of colonialism on countries like Trinidad and Tobago are well known. Planning studies suggests that there are serious settlement development effects as well. It seems that the need to satisfy the demand for primary products for export to the metropole caused land use and settlement development to be considered purely in terms of facilitating export production. So that, if any conscious decisions were made about settlement factors, the decisions would have been influenced by this narrow view, rather than from the viewpoint of social needs of the inhabitants.

Today the country can point to many defective human settlements created during that era. And the burden of these settlement mistakes weighs heavily against current efforts at improvement in the quality of life of their inhabitants. Port of Spain is a classic example of the colonial capital city and trading port. Point Fortin, La Brea and Santa Flora are pathetic inheritances from the boom period of exploitation of the oil resources of South Trinidad.

The neat managerial compounds and dilapidated villages of the sugar cane belt bear testimony to the dual standards typical of the colonial sugar company's approach to human settlement development. Finally, the degradation of barrack-yard living on the coconut and citrus plantations has probably contributed as much to the dislike for agriculture and rural life so prevalent today as any other factor.

Settlement locations in areas where the plantation economy flourished tended to be confined to small pockets or strips of marginal lands. Peasant farmers and agricultural workers had no opportunities for stabilizing their existence either by improving their homes and immediate surroundings or by improving their family income. The situation was aggravated by insecurity of land tenure which still prevails in many of these areas.

3.0 ECONOMIC AND SOCIAL FACTORS

Underlying the basic indicators of economic performance in Trinidad and Tobago, are some of the factors which affect the human settlement situation.

Openness and dualism in the economy have produced widely differing standards in human settlements. On the one hand certain settlements display the universal characteristics of the modern sophisticated city, while others are maintained as sub-standard entities barely satisfying the minimum needs of their residents. What is even worse is that dual standards sometimes exist side-by-side within the same settlement.

Distortions in the country's economic structure also seem to encourage a mis-allocation or mal-distribution of resources. Larger settlements, like the primate centre, attract the largest share of resources at the expense of smaller settlements. Certain sectors, like urban transportation, are disproportionately allocated resources in competition with other sectors.

And finally, the ability of different sections of the population to help themselves in the quest for a better quality of life follows closely the pattern of geographic and sectoral distribution of income. Thus, it is observed that urban incomes and the high wages in the oil industry are reflected in the relatively higher quality of settlements found in these areas. While the lower wages in the agricultural sector can only provide to the one-quarter of the population which it supports, settlements which meet the barest needs of that population.

4.0 CONSTRAINTS ON SETTLEMENT DEVELOPMENT ACTION

Conscious development decisions could modify the influence on settlements of natural and other factors and solve many of the problems identified. But to be effective these decisions must be taken and executed within an appropriate framework. And, in particular, in the case of human settlement development, planning must operate free from unnecessary institutional and bureaucratic constraints.

The subsequent discussion on national settlement policies and development action will reveal some of these problems and shortcomings. However, there are two aspects which seem to be of paramount importance. The first is that the political and institutional framework for decision-making on settlements in Trinidad and Tobago is highly centralized and has no significant spatial content or geographic basis. Thus today's human settlement pattern has resulted more from the effect of indirect influences rather than from the exercise of positive settlement-based strategy and action. The second aspect relates to the key role of land ownership and the power of decisions on the use and disposition of land.

4.1 The Spatial Dimension in Development Decision-Making

Trinidad and Tobago is a small unitary state which has always had a strong central government in control of all key decisions affecting development.

Local government has tended to be relatively weak, and in development terms, the country has always been seen as a single geographic entity rather than a mosaic of settlements or local districts.

This lack of a spatial dimension in development decisions, understandable perhaps in the colonial administration, has unfortunately persisted into the post-independence era where it is most noticeable in the country's national development planning process.

It is still not possible for instance, to disaggregate development budgets and identify allocations for settlements or even for regions and districts. It is also not possible to find specific allocations for environmental development and improvement. Under these circumstances the development effort cannot produce any sustained progressive improvement in any specific settlement whatever the merits of its claims.

Furthermore, it is impossible to evaluate progress towards improvement in the quality of life of peoples living in any particular settlement without this integrated approach to assessment of their needs matched by investments for production and delivery of the required services and facilities.

The inclusion of a spatial or physical settlement dimension in development policy and decision-making is the first major requirement for change in the human settlement situation in Trinidad and Tobago. The second is the acknowledgement of land as a key resource in human settlements and in development.

4.2 Land: Ownership and Use

The small size of Trinidad and Tobago¹ constrains us to be extremely cautious and prudent in the use of land. Land is a key element in all development, since every project must ultimately be sited somewhere and the inter-dependence of activities must be maintained by traffic flows

¹ Total area: 1980 square miles

through the medium of land. In other words, the spatial factor is the unifying element in development.

In Trinidad and Tobago land use is affected by the entrenched right of private persons to own and enjoy land and to use it for private purposes and gain. Also guaranteed by law is protection from compulsory acquisition without adequate compensation.

These constitutional guarantees imply that the use of land cannot be directly or arbitrarily influenced by governmental measures without regard for the rights of individual land owners. Control of land use often can only be operated through very complex and cumbersome systems of laws, incentives and sanctions.

Furthermore, landowners are able to derive significant capital gain without development effort or cost to themselves since there is no punitive taxation against speculation in land, no system for collecting betterment in value created by the community and no positive incentive to encourage development. Finally, government which bears the responsibility for supply of services, such as water, electricity, drainage and roads and for provision of essential social facilities like schools, health and recreation facilities, community centres and public buildings, is often forced to acquire land for these communal needs on the open market and at very high cost.

The constraint imposed by the system of land ownership is further aggravated by the dual nature of decision-making on land use and development. Government plans for settlements and for development projects in the interest of the community. But implementation of the best plans is often frustrated and inhibited by lack of co-operation of the landowners involved who possess the ultimate power of decision by being able to withhold land from use.

Secondly, there is a further risk that private land use decisions will not always produce the most appropriate pattern of land utilization, either to satisfy community needs or to preserve the community's environmental resources. In addition, land may not be made available in the right quantities or at the right time by owners whose aim is to maximise return on land rather than to use it in the interest of the community.

Harmonization of the interests of private landowners, government and people as consumers of land is certainly one of the most needed requirements for change in policy formulation on human settlements.

Ways must be found for allocating land more equitably, for regulating its use in the interest of the community and for lowering the cost of acquisition of land for community purposes.

5.0 CLASSIFICATION OF SETTLEMENTS

In order to understand the existing pattern and the role and function of each settlement in Trinidad and Tobago, preliminary analyses have been made of the size and distribution of catchment populations and of the range of services supplied by each settlement. It was found that settlements can be placed in a hierarchy with the large primate city-region (the Port of Spain Capital Region) at the top, followed by San Fernando (the second town) and an array of intermediate regional and sub-regional urban centres, and at the bottom by a number of small rural service centres or villages ranging in population up to 6,000 inhabitants.

It must be noted here that in a small country like Trinidad and Tobago a hierarchical classification of settlements has a somewhat different meaning than in the case of larger developing countries. This is so because all areas in this country are under the strong and direct influence of the primate city, and in addition, there is a strong inter-dependence between the Capital Region and all other areas. As a consequence, the country

exhibits a high degree of homogeneity in values and behaviour, which is reflected in the common aspirations shared by all sections of the population especially in terms of human settlement needs and standards.

The classification, though requiring further study and elaboration, is useful as an analytic tool in understanding the differences in characteristics and functions of settlements and in arriving at appropriate kinds of solutions to their problems.

A generalised discussion of settlements at different levels of the hierarchy is found at Appendix I.

HUMAN SETTLEMENT POLICIES, PLANNING AND DEVELOPMENT

To be effective, human settlement development action, whether directed at solving problems arising out of the existing situation or designed to accommodate growth in population and satisfy additional demands, must be conducted within the framework of specified policies. In turn the policies must be inspired by commonly accepted aspirations and goals.

Ideally settlement policies should be evolved and explicitly stated at the national level. They can then be disaggregated and spelled out into operational terms for application at the regional, sub-regional and local levels where specific action within human settlements can take place.

The ideal does not exist in Trinidad and Tobago. Instead there exists a situation in which human settlement development is a "fall-out" from action taken in pursuit of economic growth strategies supported by individual sectoral development projects.

The unfavourable effects on human settlements of the abovestated deficiencies in national policy formulation can be seen in the following review of recent experience with national planning and sectoral programming.

6.0 NATIONAL DEVELOPMENT PLANNING

Since its introduction in 1956 National Development Planning in Trinidad and Tobago has been synonomous with national economic planning. The country has become very familiar with this kind of planning which has produced, so far, as its major output three Five-Year Development Plans. (1958–1963) (1964–1969) (1969–1974)

These periodic statements of Government's national development policies tended to emphasise strategies for economic growth and programmes and projects within separate economic sectors. Very rarely were these policies aimed specifically at settlement development. Adherence to this approach meant that the success of the country's national planning effort was measured in terms of economic indicators and aggregated sectoral targets which often masked an unablanced performance and uneven achievements in settlements and in the quality of life enjoyed by the population at large.

The performance in the housing sector is indicative of the wider situation. Over the period of the last two decades, during which national income rose quite significantly, the housing deficit per 1,000 population increased due to a substantial and continuing shortfall in construction of dwelling units. Annually, the deficit in the formal housing sector is about 50% of the total of over 10,000 units required. Parallels can be found in the patterns of change in other sectors such its, the basic public utilities and social services and in urbanization. For example, the quantum of potable water available to the population has dropped to the point where serious deficiencies in supply are experienced in many settlements. It is noticeable also that per capita consumption varies throughout the country.

Traffic congestion especially on Port of Spain city streets and serious deficiencies in the capacity of traffic routes when viewed against the increasing volumes of vehicular traffic at peak hours generated largely by daily commuters are other indicators of deterioration in the settlement situation.

Rapid urbanization and migration into the Capital Region have resulted in the creation of many spontaneously developed settlements with attendant problems of overcrowding, inadequate infrastructure, poor physical organization, deficient servicing and low environmental quality.

Although historical data on urbanization are not available, it is possible to gain some appreciation of the trend by looking at the share of the total population enjoyed by each of the seven major administrative areas in the country.

Table I indicates that between 1921 and 1970, St. George County (including Port of Spain City) steadily increased its share from 38.0% to 44.1%. The next most urbanized County, Victoria, showed a similar trend after 1931, increasing its share from 19.5% to 21.2%, having lost proportionately to St. Patrick between 1921 and 1931. In its turn St. Patrick after very significant growth up to 1960, from a share of 9.0% to 13.0%, dropped suddenly to 11.9% by 1970. This trend is an exact reflection of the pattern of change in the oil industry in St. Patrick where it was centered during this period.

The rural counties, Caroni, Nariva-Mayaro, St. Andrew-St. David and the island of Tobago have all recorded steady declines in their shares of the population

PERCENTAGE POPULATION DISTRIBUTION BY
BY COUNTY: 1921-1970

	1921	1931	1946	1960	1970
St. George	38.0	40.5	43.5	44.0	44.1
Caroni	14.0	12.5	11.5	11.0	11.2
Victoria	21.5	19.5	20.0	21.0	21.2
NarivaMayaro	3.0	3.0	2.5	2.5	3.0
St. Patrick	9.0	11.5	12.0	13.0	11.9
St. Andrew/St. David	8.0	7.0	5.5	4.5	4.8
Tobago	6.5	6.0	5.0	4.0	3.8

SOURCE: Census-1946, 1960, 1970.

The conclusion to be drawn from the above is that Trinidad and Tobago's national development planning effort has not produced a balanced distribution of social benefits not the kind of satisfaction to which people living in individual settlements aspire. In recent years there has been growing acceptance of the view among persons involved in planning, that the process itself would have been enhanced in terms of social satisfaction if the goals and targets had included environmental or spatially-focussed factors, especially in relation to different settlements and population groupings, as well as the conventional economic aspects. This idea was well expressed in the Fournex Report "Development and Environment" where it was stated that "Besides quantitative targets in the fields of income growth and employment, similar targets should also be spelt out for income distribution, public health, nutritional standards, housing and other welfare-oriented public goods".

The idea of adopting the 'human settlement' as the co-ordinating concept around which this broader environmental or spatial concern can be crystallised seems to fit in well with the revised orientation to national development planning suggested in the Fournex Report.

In noting that many developing countries were turning away from a pre-occupation with 'how much to produce and how fast' to 'what to produce and how it is distributed', the report pointed to some of the major policy areas which will have to be given specific attention if the new approach is to be successful. These include, location of industries, land use policy, urban-rural inter-action and community development, and sectoral policies, as well as physical planning of facilities to ensure proper integration of individual development programmes and projects into the overall physical environment.

7.0 RE-ORIENTATION IN PLANNING

Recognising the shortcomings in the former approach, Trinidad and Tobago has taken the first steps on the road to re-orienting its national development planning process.

The milestones on the road towards a more comprehensive development planning approach are marked by the growing recognition of the necessity to include the spatial dimension in planning. The first step was taken in 1960 by the enactment of the Town and Country Planning Ordinance which made provision for comprehensive physical planning. (See Appendix for details of the Ordinance).

In 1963, an agency was created to deal exclusively with the function of town and country planning. This agency, the Town and Country Planning Division was incorporated into the newly created Ministry of Planning and Development in 1967. The new Ministry was charged with broader overall responsibility than purely economic planning. It assumed responsibility for initiating broad development policies, for co-ordinating sectoral programmes with national social and economic objectives and for monitoring and evaluating progress in programmes and projects as well as drafting the national development plans.

These institutional arrangements have provided Trinidad and Tobago with the tools for formulating policies on human settlements and initiating appropriate development action. However, full effectiveness in the use of these tools depends to a large extent on the degree of commitment at all levels to certain goals and approaches and the will to make the institutions work.

The most explicit commitment to integration of economic planning with town and country (or physical) planning is to be found in the Third Five Year Development Plan (1969–1973) where the concept of regional planning was first introduced ¹. And although no recent statement has been

The Plan states that "the object of regional planning is to clarify the goals of programmes at the national level in terms of local aspirations and needs and to co-ordinate action at all levels so that developmental activities of both national and local significance can be properly integrated and achieve optimum results—In short regional planning forms a bridge between long—range global sector programming and short—term project plans at the local level"

made on the approach to be taken in achieving more comprehensiveness in development planning, the initiative is being followed up by the planners involved in different facets of the process.

The impact of these efforts on human settlements can be better understood if they are discussed on three levels—national, regional and local.

8.0 NATIONAL STRATEGY FOR PHYSICAL DEVELOPMENT

At the national level a comprehensive approach to development demands that strategies be evolved for dealing with questions of how and where social and economic activities are organized in space. It is also necessary to decide on the optimum distribution of population and, as far as possible, on the optimum size of population groupings.

It is clear, however, that it would hardly be possible and certainly not advisable to select a strategy arbitrarily without a thorough examination of the many issues involved and without consulting the people who will be affected.

Consequently, several alternatives for a national development strategy have been examined in a publication entitled 'Planning for Development: THE NATIONAL FRAMEWORK' in order to initiate discussion on a preferred course for physical development and to provide guidelines for deeper study of the development potential of regions, sub-regions and local areas.

The four alternative strategies considered are:

- (1) Concentration of development in the Capital Region; this means that all new growth is deliberately encouraged to take place in this area while growth in other areas would be limited or discouraged;
- (2) Dispersal of growth: this encourages smaller centres to grow at an even rate while the primate region is restrained;

- (3) Growth Pole development: this promotes significant growth at one or two centres selected on the basis of potential; and
- (4) Laissez Faire: this allows existing trends to take their own course unchecked and undirected and without the intervention of planning.

The implications for human settlement development of these different alternatives emerge quite clearly from the discussion of the strategies and the criteria which were selected for evaluating them. The stated criteria are:

- (a) Development objectives and their priorities;
- (b) Economic and Social Benefits;
- (c) Economic and Social Costs;
- (d) Comparison between long and short-term benefits;
- (e) Our way of life; and
- (f) Prospects for implementation.

The report which presents in broad perspective an overview of the state of development in the country and highlights the main development issues, does not advocate the immediate adoption of any one strategy. Quite properly, recognizing that it is the right of the citizens and their leaders to decide what kind of country they want, the framers of the document defer the choice of a strategy until such concensus is reached after thorough discussion among all participants in the development process, and until further analyses have revealed the full implications of different strategies.

The dimensions of the growth expected in Trinidad and Tobago over the next twenty-five years to the end of the century indicate the enormity of the task that has to be tackled at the national level of planning and emphasize the vital necessity for a development strategy as mooted above. By the year 2000, the population of Trinidad and Tobago is expected to be of the order of one and three-quarter millions compared with just over one million today. This means that in one generation the increment in population will be equal to the total population living it the country around the middle of the century, some four and one-half centuries after discovery.

This new population will be different in several important respects and particularly in terms of the impact which it will have on the environment. It is certain that their aspirations and expectations will be much higher and as a consequence demands will be for shelter, infrastructure and services of a standard much higher than that found in most of today's settlements.

By the year 2000, about 65% of the total population will be living in urban settlements, in contrast to 50% today. This means that between 85% and 90% of the new population will be urbanites. While overall density over the country will rise from 500 persons to nearly 900 persons per square mile, urban densities, based on projected distribution, will jump to over 4000 persons per square mile.

As an alternative, it is clearly important to consider what the implications would be if the majority of these new urban dwellers settled say, in the Capital Region as against other regions, which could happen if a 'laissez-faire' or non-interference strategy were adopted.

One implication of this would be the relative depopulation of other settlements. Another would be the substantial increase in density (possibly approaching 10,000 persons per square mile) with the inevitable adverse consequences for use of land and environmental quality. A third implication would be the excessive pressure on urban services and facilities and the possible lowering of levels of satisfactions to the point where they may not even be available under normal circumstances.

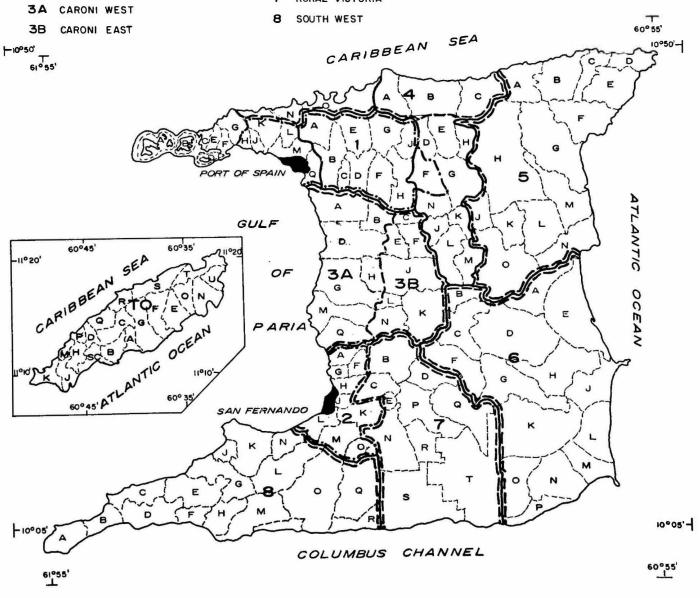
PLANNING REGIONS AND SETTLEMENT AREAS OF TRINIDAD AND TOBAGO

MAIN URBAN REGIONS

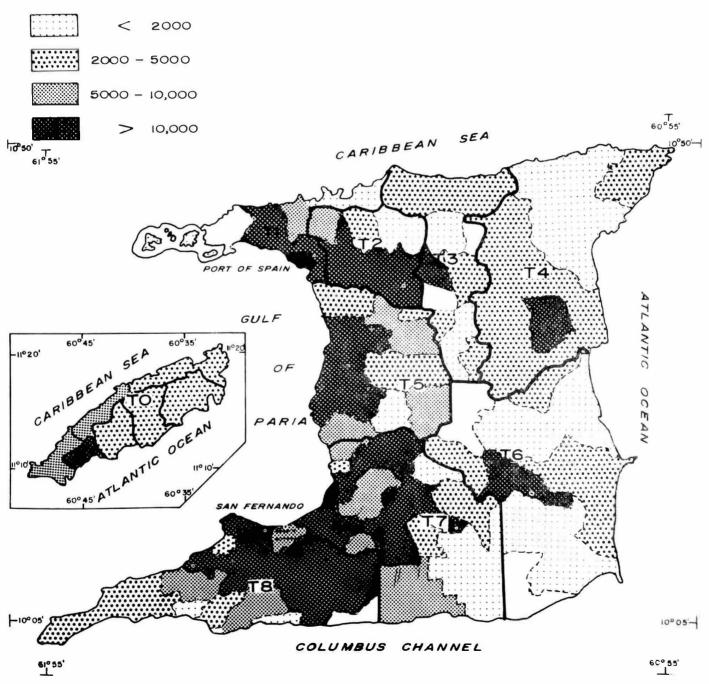
- 1 PORT OF SPAIN/CAPITAL REGION
- 2 SAN FERNANDO

OTHER REGIONS

- 4 NORTH COAST
- 5 NORTH EAST
- 6 SOUTH EAST
- 7 RURAL VICTORIA



TRINIDAD AND TOBAGO POPULATION DISTRIBUTION 1970



Source: CS.O. population Census 1970

In terms of the above, the questions to be posed and answered in devising a strategy must include 'at what standards should the new demands be met?' 'what resources are to be allocated to meeting these demands?' and 'how should the population be distributed and grouped so as to satisfy their demands at the predetermined standards?' The spatial content of the strategy becomes clear when the necessary questions are posed in these terms.

9.0 REGIONAL PLANNING

In Trinidad and Tobago the regional level is seen to be crucial in the comprehensive approach to planning. The draft Capital Region Development Plan¹ focusses on regional planning as 'the logical link between sectoral economic planning, and the physical development of land which proceeds from investment in public and private projects'.

To put it another way, regional planning can be viewed as a basis for dynamic interaction between economic decision-makers at the national level, public and private analysts and administrators at project level and the people in settlements at the local level where the impacts are felt.

The basis for integration in the development process is also seen in the concept of regionalisation. This is based on the view that the national economic system consists of a number of spatial sub-systems, the cities and their regions, which can be considered as socio-economic entities. When these are adopted as regions for planning and implementation of projects, they can provide a convenient framework into which otherwise seemingly unrelated projects can be fitted and integrated for the benefit of individual regions and for the greater satisfaction of regional residents.

Town and Country Planning Division: "Planning for Development: The Capital Region"

The product of a regional plan then becomes "a package of proposals and projects which may be implemented sectorally or by a number of sectoral agencies working in co-ordination, but will reflect a coherent strategy for development". The regional plan serves as "a tool which facilitates decision-making in the selection of priorities and the allocation of resources both within and between regions".

Following this approach, planning analyses have been carried out at the regional level in Trinidad and Tobago. These more detailed analyses of implications are pointing in the direction of a "growth pole" strategy (Strategy No. 3 on page 17) as the one most likely to achieve desirable human settlement objectives.

The thesis behind the strategy is that its adoption will result in

- (1) de-concentration of activities out of the highly congested parts of the Capital Region by encouraging new growth in settlements outside of this area. Relieving congestion is expected to stop the slide towards a complete breakdown of services and destruction of the environment in congested areas;
- (2) better use of land and natural resources by achieving a more balanced distribution of and higher return on private and public investments; and
- (3) a more human and socially satisfying pattern of living and scale of development through the creation of a more balance distribution of population groupings and a more rational hierarchy of human settlements.

This strategy is realistic and the prospects for achieving a large measure of success have increased over the last year with the opportunity which the country now has for developing growth poles based on petroleum and other energy-based industries.

Three 'petro-poles' have been identified. Strategically distributed over the island of Trinidad they are located as follows:

- (1) in the West Central part of the island at Point Lisas in the Caroni Region;
- (2) in the South West Region in the Point Fortin/
 La Brea area: and
- (3) in the South East in the Guayaguayare/Point Galeota area.

Apart from the primary or basic jobs which the development of these petro-poles will create, development of the poles and the settlements around can be planned comprehensively with the provision of adequate infrastructure, housing, community facilities and the expansion of jobs in secondary industry and services. The creation of a market in each petro-pole also makes it possible to link their development with the rational development of food in the adjacent rural areas without destroying the natural environment, the character or the traditional life styles of the rural communities.

It is, of course, possible to visualise the establishment of heavy industry in these petro-poles without any conscious attempt being made to capitalise on the opportunities for improving the human settlement situation. In fact, the South West Region (County St. Patrick) offers a good case—history of missed opportunities for creating better and more stable human settlements through the lack of a long-term perspective in development strategy during the first cycle of development of the country's petroleum industry.

The following quotation from a special report on this region neatly summarises the situation:

"The St. Patrick Region of Trinidad and Tobago and more particularly Point Fortin represents a classic case of the effects of colonialism and international trade on a developing country. The metropolitan entrepreneur was content to discover and exploit the mineral resources, using capital intensive technologies that did not require much labour. The investment increased the total volume of international trade for the country but did little to improve the social and economic life to the country, The maximisation of profit was the simple motivating factor while the expendable factor of production in the whole process in times of stress was labour. Thus, the history of St. Patrick is the history of oil-rapid growth and just as rapid decline; prosperity followed by depression".

The adoption of a stated development strategy and the establishment of a regional planning framework are the measures being proposed to prevent a repetition of the above situation and more positively, to initiate development of stable patterns of settlement and satisfying life-styles for the people of the region.

The regional development plans drafted for the three regions where petro-poles are located have elaborated the measures that must be taken to realise the objectives already stated. These concentrate mainly on the following:

- the reservation of land in major natural land-use categories such as agriculture, forestry, waterconservation areas, nature reserves and wildlife sanctuaries;
- (b) the design and establishment of an optimal hierarchical pattern of settlements which will provide the people of each region a satisfactory living environment and access to a complete range of services. The pattern must be flexible enough to permit adaptation to expanding and/or changing circumstances;
- (c) the establishment of adequate networks of infrastructural services to support the anticipated growth of population, industry and service activity, also with enough flexibility to change and/or expand to meet new needs; and
- (d) the establishment of a transportation system which will provide a satisfactory level of service for movements within the region and between the region and the rest of the country.

The degree of success anticipated through the regional planning process is indicated globally by the population growth statistic. In the West coastal sub-region of the Caroni Region the expected rate of growth between the period 1970 and 1980 and between 1980 and 1995 averages 2.9% and 3.5% respectively. These rates contrast with the regional average of 2.4% and 2.9%, and with national averages of 2% and 1.8% over the same periods.

In the case of the South-west Region what is expected is firstly, stabilisation of the recent growth rate of one per cent per annum and then a reversal of the recent trend in the later period 1980–1995 with a 1.8% average annual growth rate.

The situation in the South East Region is not as promising as in the other two regions. The fact is that the South-east has a much longer road to travel towards growth and self-sufficiency having lagged in terms of development for so long behind other administrative and functional units in the country. The regional planning proposals seek to ensure that the region continues to hold its own relative to other regions and to establish a framework for accommodating growth which may be stimulated over time by longer term measures. The plan also indicates the magnitude of the effort that has to be made if the objective of extraordinary growth and development were considered desirable in terms of national strategy.

10.0 LOCAL AREA PLANNING

Local area planning is the most commonly-practised of the spatially based planning activities. It is the level at which development action impinges directly on people and their immediate surroundings.

Because of the immediacy of these impacts, it is level of major concern to people. It is understandable, therefore, that people are more conscious of and respond more readily to planning activities which deal with the development, redevelopment or improvement of settlements and local areas within settlements. These are the aspects that will be discussed in this section.

It is regrettable, however, that because of this tendency to focus on immediate surroundings, people react more strongly to their defects and tend to see the shortcomings as inherent in the settlements and local areas rather than to place them in the larger regional or national context where lasting solutions must be sought.

Trinidad and Tobago's experience with local area planning and development suggests that no significant improvement in the quality of settlement will occur until certain major issues at the regional and national levels are resolved. Transportation and drainage are suitable examples of these issues.

Traffic congestion has become a serious problem in the capital city Port of Spain, in San Fernando, the second town, and in other main urban service centres. Considerable expenditures are being incurred to solve the commuting problem. The effect will be to speed traffic and increase capacity of roads, but there will also be increase in pollution, dust and noise and the environmental quality of many business and residential areas will probably deteriorate. A reversal of this trend is hardly likely unless there is—

- (a) a national policy on transportation which encourages a shift to public transport as against more private cars, and
- (b) a strategy of more balanced distribution of population and economic activity to reduce the need to travel.

Planning and design solutions in the settlements <u>per se</u> well not solve the problems caused by excessive traffic and congestion.

Few settlements in Trinidad and Tobago have escaped environmental damage from flooding and bad drainage during the rainy season. As in the case of traffic, both the problem and its solution spread far outside the limits of any particular settlement. And it is sometimes frustrating to find that attempts at partial solutions within settlements aggravate rather than improve the situation.

Clearly, permanent solutions to drainage must be based on a total system in each drainage basin, and on a more fundamental level, the choice of locations for new settlements or extensions to settlements must respect the natural drainage characteristics of localities.

Similar situations arise when dealing with other elements of human settlements such as, water supply, sewerage, solid waste disposal and energy. All of these elements must be placed within a larger framework and must be related to rational policies at the national level.

It is within this context that the argument in support of comprehensiveness in local area planning can be made, Moreover, there is need for vertically integrating the different levels of planning in order to ensure consistency between overall goals, national policies, regional development strategies and action on the local level.

Trinidad and Tobago does not have many examples of local area planning carried on within this kind of comprehensive and totally integrated framework. The best examples are to be found in large-scale housing projects built either by private enterprise or by the public housing agency, the National Housing Authority. Other examples worthy of mention are those smaller settlement projects developed for persons of modest means through the "partnerships in housing" concept by the National Housing Authority under the aided self-help system, by the Sugar Industry Labour Welfare Committee for sugar workers and the Texaco Housing Aid Department for oil workers. (The latter three schemes form the subject of Trinidad and Tobago's audio-visual presentation)

There has been no serious in-depth evaluation of the social impact and degree of acceptability and satisfaction with the products of these efforts. Consequently, it has not been possible to test the practice of planning, design and development of settlements in order to refine and improve the process and determine its capability to meet new demands. Similarly, there has been no rational attempt to evolve a set of settlement and housing standards appropriate to the needs of the people

of the country.

For instance, one defect in local area development which has been observed is the lack of co-ordinated social facilities provision to match the housing and physical facilities provided in many of the settlements constructed to-date. This reflects defects in co-ordination, scheduling and in the determination of priorities for development expenditure.

The absence of proper evaluation of past performance also means that an excellent opportunity for building-in a learning capability into the planning and development process is lost.

This situation is unfortunate as it places a serious burden on the requisite institutions in the effort to satisfy the needs of the population over the next quarter of a century. Without tools that are appropriate to the task, it will be impossible for the country to build almost as much settlement as we have today, at higher standards and at five or six times the rate achieved in the past.

Perhaps the first requirement in devising an appropriate set of tools is to understand the defects in existing settlements and to decide what kind of improvements is possible within the limits of available resources. Then it should be possible to specify suitable forms of treatment at standards which are both acceptable to the inhabitants of the settlements and achieveable in terms of available resources.

In Trinidad and Tobago we have identified three types of settlements for purposes of determining improvement and development measures:

- Type 1: Intensively developed settlements approaching saturation;
- Type 2: Transitional settlements undergoing change and intensification; and
- Type 3: Extensively developed 'rural' (that is, agriculture based) settlement experiencing either a state of depression or pressure for new non-agricultural development.

(1) Intensively Developed Settlements

Most of these settlements display the entire spectrum of functional, visual and physical characteristics found in all types of settlement. Thus within a Type 1 settlement such as the Capital city of Port of Spain, is found a highly developed congested central business district (CBD), deteriorating inner suburbs in transition from residential to commercial and business uses, expanding areas of uncontrolled settlement and areas in need of conservation and redevelopment,

These Type 1 settlements enjoy top positions in the hierarchy as important concentrations of social and economic activity; they represent a considerable investment of human and financial resources, and play a key role in the functioning of the country. Consequently, it is essential that they be made to work efficiently and satisfy the requirements of their residents and other users for work, shopping, schooling, entertainment, etc..

For this reason, the planning and management of such settlements must seek to maximise user satisfaction, through the renewal and rehabilitation of areas and buildings, the rationalisation of land uses, improvement of inter-action and movement between existing activities and incorporation of essential new functions.

Specifically, these aims are stated in the Port of Spain Central Business District Plan:

(a) satisfactory treatment of conditions of obsolete development;

- (b) the improvement and enhancement of shopping facilities and the definition of sites for hotels, offices, public buildings, car parks, etc.;
- (c) the improvement of traffic circulation in order to achieve a rational effective flow of people and goods essential for the functioning of a contemporary urban centre, and a separation of vehicular and pedestrian traffic; and
- (d) the rationalisation of the land use and activity pattern, and the removal of certain uses which are not compatible with Central Business District functions.

For achieving betterment of other parts of a Type 1 settlement, the planning approaches are:

- (1) Comprehensive redevelopment which entails demolition of existing structures and change from existing use, which is found necessary for decaying areas of changing land use and functional obsolescence and for uncontrolled settlements with make-shift house structures and no amenities in inappropriate locations.
- (2) New development which covers vacant areas (such as worked out quarry sites) or areas where total demolition is necessary as a prelude to any satisfactory form of development. The opportunity exists here for innovative provision of shelter and services.
- (3) <u>Improvement and Rehabilitation</u> which applies to areas where structures can be repaired and improved, where site conditions permit installation of necessary environmental components, and where existing uses are rational and compatible.

(2) Transitional Settlements

These settlements (Type 2) are characterised by a lack of basic amenities and urban facilities and the unbalanced nature of their development. Most of them started as dormitory suburbs or small communities on the fringes of larger centres. The spread of urbanization and the changing pattern of demand have overtaken them, but because environmental development tended to lag behind functional changes, these settlements remain deficient.

Though deficient they have the potential for development into viable centres because of favourable location and the opportunities for expansion and intensification. Planning and management must aim at improvement and consolidation of the existing settlement structures by making up deficiencies in infrastructure, social amenities and urban facilities and by balancing their development through the introduction of service activities and work for residents of these communities.

(3) Rural Settlements

Of equal importance with the development of urban-type human settlements is the complementary development of rural settlements (Type 3). These areas of natural landscape and vegetation and of agricultural production are clearly necessary to maintain a balanced national community.

Because, in addition to directly productive uses, such as food production and forestry, these areas are habitats for wildlife, and provide recreational outlets and opportunities for contacts with nature for residents of more urbanised areas.

Also, rural dwellers are nearly always the guardians of a country's traditional culture and way of life, the preservation of which is so important in maintaining a degree of stability for societies undergoing rapid change, often originating from foreign sources.

Thus the objective of a planning strategy for such settlements must be to preserve the natural environment, to prevent all forms of unwise use and destruction of vegetation and landscape, and to enhance the quality of rural life so as to make available to persons living in these settlements opportunities for social fulfilment no less attractive than those available to their urban counterparts.

REQUIREMENTS FOR CHANGE IN THE FIELD OF HUMAN SETTLEMENTS_

The assumption here is that the purpose of change in the field of human settlements is to achieve an improvement in the human settlement situation in Trinidad and Tobago and in the quality of life enjoyed by all its residents.

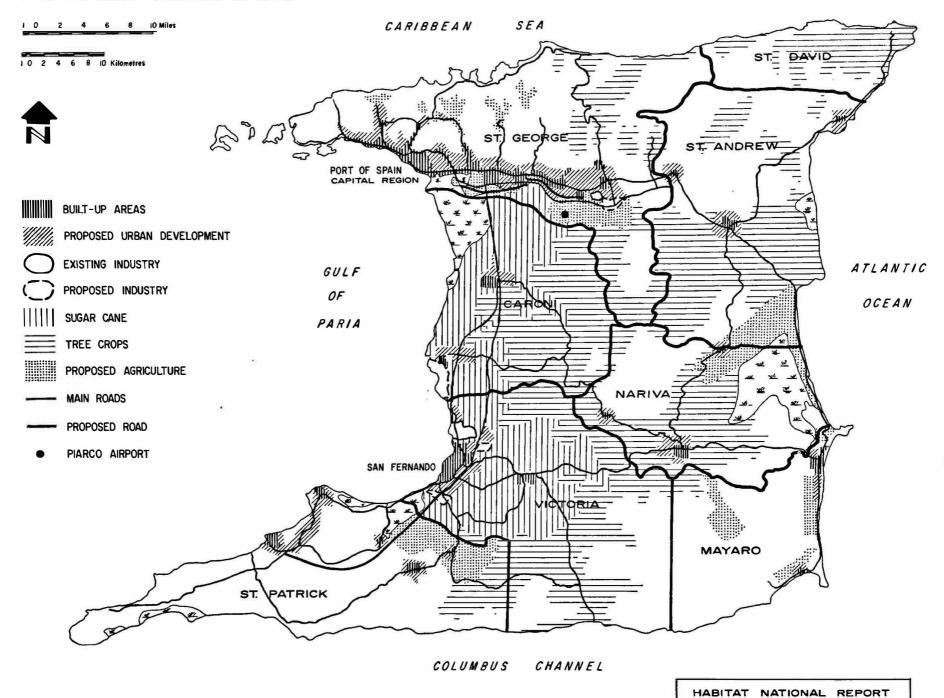
In Part I the human settlement situation was examined against the background of the major determinants which have influenced the situation as well as the more important constraints on achievement of improvements in the future.

In Part II an analysis and evaluation have been made of the problems confronting human settlements in Trinidad and Tobago with particular reference to the shortcomings in policy formulation, planning and development. Out of these discussions tentative approaches have emerged on ways and means of improving the human settlement situation. These will be expanded and refined in this part into a set of requirements for change which are needed to produce a better quality of life for people living in human settlements in Trinidad and Tobago.

11.0 NATIONAL PLANNING FOR DEVELOPMENT OF HUMAN SETTLEMENTS

It has been stated that Trinidad and Tobago is already on the road towards a more comprehensive and balanced approach to national development planning. What is advocated here is not merely the introduction of the spatial dimension into national development planning, but rather the adoption of the human settlement as the physical entity for development decision-making and action.

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The use of the human settlement as the decision making unit for development places the emphasis in planning on the management of growth and distribution of population in order to create a more balanced system of population groupings, since experience from the past suggests that the existing distorted pattern of population distribution has an adverse effect on measures designed to achieve the declared goal "of a more equal society" ¹ by "the full utilization of our human and natural resources".

Excessive migration of people into the primate city-region (the Capital Region), the rapid un-integrated exploitation of a single natural resource such as petroleum, and the emphasis in agriculture on export crops are events in our history of development which could concievably have produced more satisfactory results if development goals had been pursued in terms of spatially focussed objectives.

Thus it is conceivable that a pattern of population distribution would have emerged in which the oil-rich regions of the country would today possess settlements comensurate in size and function with the place of the oil industry in the economy; agricultural areas would have maintained their status, held their population, and exhibit a more appropriate pattern of settlements geared to the adequate servicing of the agricultural activity and the population which it supports; and, above all the capital city—region would not be over-congested and threatened with environmental and functional breakdown.

¹ Third Five Year Development Plan

Second Five Year Development Plan

Another aspect of the requirement to manage population distribution is the need to establish an hierarchy of settlements starting with the national centre, down through the intermediate centre to the small rural service centres in order to provide the population with a full range of services within easy reach of homes. An incipient hiararchical structure exists. What is required is the strengthening of the structure to meet development goals.

12.0 LAND: POLICY AND REFORM

Underlying the economic determinant of settlement pattern is the fact of private land ownership, often absentee and foreign. Self-interested landowners not only make economic decisions, but also determined settlement pattern by their decisions on land use and their policy on land disposal.

Change in land policies, particularly with respect to property rights, is clearly a crucial requirement for improvement in settlements, especially in a small island community like Trinidad and Tobago where the distribution of property rights, both quantitatively and qualitatively, is distorted and where land is so crucial to development. The concentration of population and development in a few areas further aggravates the situation by placing the benefits accruing from community-created property values in the hands of a relatively few landowners.

The importance of the issue can be guaged from the fact that the demand is growing for a stated policy at the national level to deal with such questions as chattel rental and leasehold tenure especially of urban lands. Reform in agricultural land has become an accepted development tool. Perhaps the new awareness of the key role of urban land in development of settlements will also lead to appropriate reforms in urban land tenure and ownership patterns.

13.0 PUBLIC PARTICIPATION

The value of public participation in planning, management and development of human settlements is well recognised in Trinidad and Tobago. Unfortunately, machinery for involving the people in a meaningful way in these activities has not been established.

There is provision under the Town and Country Planning Ordinance for the public to be given an opportunity to comment on every development plan before it is approved. However, this provision permits public participation only in a very formal and structured fashion which generally does not provide the best opportunity for complete involvement of persons, especially the least articulate and organised members of a community.

The limited experience available in Trinidad and Tobago has shown that people are willing to participate and can make valuable contributions in these human settlement activities. What is significant about the experiences is that it appears that people must become emotionally committed before they become involved. This was seen in two instances, one, in which people's homes and immediate surroundings were to be considerably affected by redevelopment; and two, where people became involved emotionally in the decisions that were being made about the development of a part of the country that had been leased for over thirty years to a foreign government as a naval base.

The energy generated by this kind of emotional involvement can be valuable in improving the output from the planning process and the quality of settlements which result.

However it must also be recognised that productive and socially beneficial public participation in this field may only be achieved if the development action proceeds in a more informal manner and at a slower pace.

What is needed, therefore, in settlement planning and development. is firstly, a change in goal-orientation to include human development in terms of building self-reliance and self-determination and, secondly, the mobilisation of social energy in decision-making and management of human settlement.

The above implies a more organic and evolutionary form of settlement creation and growth. It also implies a re-structuring of the planning and development process and a re-orientation of the attitude of planners and development specialists.

14.0 INSTITUTIONS AND MANAGEMENT

Any change in dealing with human settlements must be implemented through appropriate institutions. The form of institutions established must be structured with the peculiar circumstances of human settlements in Trinidad and Tobago in mind. These relevant circumstances are firstly, a highly centralised decision-making process in development matters; secondly, relatively weak local government; thirdly, a recognition in the planning process of the need for greater comprehensiveness and the introduction of regional planning techniques; fourthly, no agency exclusively responsible for urban development or redevelopment; and fifthly, no agency exclusively responsible for rural development or environmental matters, and finally no machinery for public participation.

There are in place, however, several agencies whose actions affect the situation in human settlements, even if only in general and indirect terms. These agencies most of which are implementing relevant laws are described in the Appendix. In addition there are the functional ministries which have responsibilities for specific areas of governmental activity and for delivery of public services. And finally, there is the central co-ordinating ministry carrying out the functions of finance, planning and development.

The requisite change in institutions would spring almost directly from the acceptance of the human settlement as the entity for decision-making on development action. What this would mean is that the relevant institution(s) would be organised on a spatial basis. Decision-making would be de-centralised and be focussed at the settlement or local area level.

Comprehensiveness in the planning process would be an essential aspect of the institution's operational approach because development action would be planned on a spatial basis rather than on a sector basis and be environmentally consistent in terms of objectives. It would also be necessary to integrate development activities vertically between the national, regional and local or settlement levels to ensure that they conform to policies, fit in with priorities and resource allocations and maintain the desired balance in development.

The above comments apply not only to new development, but also to the management and maintenance of existing development, two aspects which are often overlooked in dealing with human settlements. And finally any new structure of institutions for human settlements must incorporate the appropriate machinery for productive public participation.

In a report dealing with an inner suburb of Port of Spain, the institutional question was addressed in a study of feasibility in carrying out successfully an urban development programme. The report states that once a commitment to urban development as a priority item has been taken, there is a strong implicit need for a management mechanism to follow through effectively on that commitment. The report also recognises the need for a single identifiable focus in dealing with any urbanised area or settlement in the form of a management mechanism which is accountable, capable of performance in terms of professional specialization and ability to co-ordinate the imputs of a variety of sectoral agencies working in the same area and to guarantee delivery in response to an established programme.

It is certain that the success which an institution with the above outlook will have will make the case most convincingly for its establishment and application to settlement planning, management and development throughout the country.

15.0 RESOURCES ALLOCATION

In the "supplementary Notes on the Budget for 1976" presented in Parliament in December 1975, a reference is made to the use of physical development plans in development programming and budgeting. On page 29, the 'Notes' state

"The physical development plans are also proving their value as programming tools. Where public works projects and major social facilities require long periods of gestation, the plans provide a suitable framework with which demands can be projected and projects can be properly co-ordinated".

This statement appears to mark the progress to-date towards a more comprehensive approach to planning for development in Trinidad and Tobago. The development plans referred to are regional development plans which are (1) providing a guiding framework for resource allocation and (2) assisting in the identification of projects on a spatially integrated basis.

The next step must clearly be the balancing of resource allocations to settlements or other functional physical units not only on the basis of current or future population size and demands, but also in keeping with desired goals. Such goals may include accelerated growth in backward settlements, redress of imbalance or stimulation of growth in new areas.

CONCLUSION

This national report has been prepared in a simple descriptive style in order to communicate the essential facts and issues concerning human settlements in Trinidad and Tobago. In its purpose it seeks to promote an understanding and exchange of experiences on human settlements in this country.

It is hoped that, however they may be assessed (either as successes or failures) our efforts in overcoming constraints, solving problems and making use of opportunities, will provide useful insights for others faced with similar situations. In turn, we would wish to benefit from the efforts and experiences of others.

It is in the spirit of this kind of interchange of experience that we intend this national report should be read and commented upon.

Trinidad and Tobago Habitat Preparations Committee January, 1976.

APPENDIX I

Discussion on EXISTING SETTLEMENTS

- The Primate City and Region
- The Intermediate Centres
- The Small Service Centres and Villages

THE PRIMATE CITY AND REGION

Description

As it is functionally defined, the capital city of Port of Spain has a population (1970) of about 157,000 or 15% of the total of the country. The densely built-up region around the capital (Capital Region) which covers 203 square miles or 10% of the nation's area, and consists of a number of formerly discreet settlements, has a population (1970) of 443,000 persons or 43% of the total. From what was described as little more than a cluster of fishermen's huts and Indian settlements on a muddy mangrove shore in 1783 when it was designated the capital, Port of Spain has grown into a truly vibrant metropolis and dominant national centre.

In addition to being the seat of the national government, it is the main general cargo port, the administrative, commercial and financial core of the nation and the major centre for entertainment and sport.

As such, the city is the most powerful magnet for social and economic activities and exerts a strong pull on migrants and job seekers who perceive the fact that job opportunities far exceed the working population in the city (the ratio is 266:100). These jobs are all (except for one per cent) in the secondary and tertiary sectors. Based on 1973 figures, of the total of 41,800 jobs in commerce 73% are located in the region and of this number 67% are in Port of Spain itself. In the case of service employment, the region accounts for 61% of all the jobs in this category, and the city's share of that is 63%. Sixty-five per cent of the hotel accommodation is in the region and of this 85% is in Port of Spain. The value of manufacturing output from the region amounts to 78% of the total in the country, while Port of Spain alone accounts for 25%.

The above description of Port of Spain and its region suggests that Friedmann's model of the spatial development of an underdeveloped colonial country in which a primate city or region is parasitically supported by the output of a backward hinterland, is applicable to Trinidad and Tobago.

Studies suggest also that Port of Spain and other settlements in Trinidad and Tobago suffer from many of the ills attributable to this model of spatial development. For instance, it is observed that the bulk of private investment in business and industry (except in oil and sugar) and public expenditure in infrastructure and community facilities is absorbed in the Capital Region.

Shelter, Infrastructure and Services

This higher level of investment is reflected in the better quality of the housing and services found in the region. Proportionately, when compared with other areas in the country, more households have water-borne toilet facilities (66%:26% overall), more have access to piped water supply (89%:46% overall) and generally housing is of a higher standard (75%:65% overall in good condition) and improving (Only 25% of houses were considered poor in 1966 compared with 47% in 1958). On the other hand, overcrowding in the city is still the highest, except for one other area, and uncontrolled or spontaneous settlement is spreading and becoming a more serious problem. Traffic also poses a serious threat to environmental quality and basic enjoyment of the city as vehicle volumes are very high on city streets and streets that carry commuter traffic. For instance, 1973 peak hour traffic entering the central business district of Port of Spain totalled 11,000 vehicles, while the 12 hour day time total (6.00 a.m.—6.00 p.m.) was 80,000 vehicles.

Health

There is serious overcrowding in some social facilities such as health and education reflecting the fact that the city services a catchment population which extends to the whole country. The largest and most highly developed health institutions are located in the capital city. These include the main general hospital, the country's only mental hospital and infirmary for aged persons. The city also has the majority of the private medical institutions and practitioners.

Education

Port of Spain has traditionally been the centre for education and culture in the country. And although over the last decade there has been a major programme of educational building in other parts of the country, the city still maintains its dominance in the field. For instance, the city's share of secondary school places increased between 1960 and 1970 from 30% to 34%; and in primary schools from 10% to 15%. In addition, it has the National Museum, main concert hall, library headquarters and main technical institute.

As may be expected also, many of the protective and other national services in the country are either headquartered in the city or have their main facilities here.

THE INTERMEDIATE CENTRES

Description

Intermediate centres are here defined as regional and subregional centres i.e. the main town in a region or subregion. These centres are usually the largest towns in the region or subregion and they tend to have the highest level and range of social and commercial facilities.

Offices of national and local government are also located in these centres, so that they function as administrative centres as well.

The centres vary in size and population. Populations range from 85,900 to 4,300 depending upon the catchment population served in the region or subregion. The higher populations are found in centres serving the more urban regions and subregions and the lowest populations in centres located in the more rural parts of the country. There tends to be a migration of population from the smaller villages and settlements of the regions and subregions to the intermediate centres.

In 1970, approximately 338,000 persons or 33.0% of the population of the country lived in such centres.

The employment structures of these centres vary significantly depending on the character of the region in which they are located. Thus in the more urban regions and subregions most of the population in the intermediate centre is employed in the tertiary and secondary sectors with a small percentage in the primary sector. For example, in Tunapuna, an intermediate centre within the Capital Region, employment in the tertiary sector is 65%, in the secondary 24% and 11% in the primary sector.

In contrast in the more rural regions a much higher percentage of the population of the centre is employed in the primary sector. Even in some of the higher order centres a preponderance of primary jobs are found. For example, Couva, although it services the rapidly developing West-Central Region still has 40% of its employment in the primary sector, while 33% and 26% are found in the secondary and tertiary sectors respectively.

Shelter, Infrastructure and Services

Intermediate centres usually contain the highest level of infrastructural and community services and facilities of the regions or subregions which they serve. However, in terms of national standards, the nature and range of these facilities appear to follow closely the prevailing regional standards.

Water Supply and Sanitation

In housing there is overcrowding but the incidence of structures in poor condition is not as high in these centres as in the small service centres and villages.

The most common method of water supply seems to vary greatly according to whether the region in which the centre is located is essentially rural or urban in nature. Thus the percentage of accommodation units with water piped to dwelling or yard in 1966 ranged from 79% in intermediate centres located in very urbanised regions or subregions to 15% for the more rural centres.

The same pattern of service is found in the case of water borne toilet facilities. In 1966 this ranged from 50% to 10% of accommodation units in these centres.

Health

As for health facilities, all the towns contain at least one health-care delivery centre. In addition, approximately three quarters of these towns contain hospitals. However, the facilities and services available at these hospitals are totally inadequate to meet the needs of the population of the region or subregion. This is reflected in the very high occupancy rates (mostly in the vicinity of 150%) and the resultant overcrowding found in these institutions and the limited scope of facilities and services offered.

Education

Generally, the secondary schools serving particular regions or subregions are concentrated in these intermediate centres. This tendency towards concentration, though necessary, seems to lead to overcrowding. As can be expected, however, primary schools are more widely distributed throughout the region or subregion. Three quarters of these centres have branch libraries.

Other Services

In addition to the services discussed above other main services located in these centres are—

- (a) Protective—a police station and fire station
- (b) Social Assembly-a community centre
- (c) Shopping-a market and shopping district
- (d) Communication—a post office and telephone exchange
- (e) Government—regional or subregional offices of national and local government

Some of the intermediate centres lack one or more of the facilities discussed above, and in some instances the level of service offered is not adequate to the needs of the client population. However, the function of these centres is quite clear and their pivotal role in the hierarchy of centres will become better understood as planning analyses proceed and will be strengthened as the regions develop.

THE SMALL SERVICE CENTRES AND VILLAGES

Description

About 24% of the population live in villages of fairly rural character. In all but a few cases these villages are within a ten-mile radius from the intermediate sized centres and 50 miles from the major centres, Port of Spain and San Fernando. Villages generally lie on main roads so that communication linkages between villages is of a fairly high standard.

However, in this feature is found one of the most problematic forms of settlement, what is known as, ribbon development. In ribbon development buildings are strung out along the main roads in narrow bands with little development taking place at any depth from the main roads. This form of development is typical of all villages but is much more widespread in the South of Trinidad and in areas where estate ownership of land militated against the more efficient compact nucleated types of settlement. In its worst forms ribbon development creates traffic problems by the unnecessary mixture of through traffic with commercial and residential activity, it inhibits accessibility for development of backlands away from the main road and by its linear form discourages social cohesion of communities and increases the cost of providing social services to communities.

Shelter, Infrastructure and Services

The supply of facilities in these villages such as housing, water, electricity, education and health are unsatisfactory, reflecting mainly the over-concentration of attention on the primate city and larger centres.

Housing, Water Supply and Sanitation

In housing there is both overcrowding and a high incidence of structures in poor condition. For villages gross overcrowding defined as four or more persons per bedroom was of the order of 42% of all units, just about the size of the national averages. Units in poor condition—that is units which could not reasonably be expected to last for more than five years ranged, in villages, from 58% in some areas to 37% in others. In addition to this a substantial proportion of units, some 18% were both grossly overcrowded and in poor condition. Over the period 1957 to 1966 the gross overcrowding in housing units showed a decline of about six per cent.

Public standpipe is the most common method of water supply, serving more than half of village households. In-house piped water supply is next and serves between one quarter and one fifth of all households. Overall, over 90% of the households have access to a regular supply of treated water, while only ten per cent of households have to depend directly on springs, rivers and other untreated sources of supply. The inadequacy of water supply in villages is merely part of the general problem of expanding the total supply of water to the country.

Pit latrines are still the major mode of sewerage disposal in villages serving between 75 to 95 per cent of households. Water closets, restricted by the limited water supply serve less than 13% of households.

Education

School accommodation is uneven varying between extremes of overcrowding and a surplus of school places in different areas, depending on whether villages are growing in population or not. The level of overcrowding varies from 98 pupils to 125 pupils per 100 school places.

More serious than overcrowding is the problem of poor school buildings in village areas. In many instances classes have to be conducted in buildings which are substandard in construction and lacking proper services and facilities for both students and staff. The problem is complicated by the difficulty in providing school buildings at reasonable cost especially for higher education, in areas of low population density.

Health

Similar problems beset the health services in villages. Although coverage of the population by district hospitals, health offices and mobile health clinics leave all but the remotest villages outside of a six mile radius of medical facilities, problems exist in the inadequacy of existing equipment and the shortage of doctors and other trained staff.

APPENDIX II

DESCRIPTION OF LAWS AND INSTITUTIONS RELATED TO HUMAN SETTLEMENT

- Public Health Ordinance
- Town and Regional Planning Ordinance (repealed)
- Restriction of Ribbon Development Ordinance (repealed)
- Slum Clearance Ordinance
- Town and Country Planning Ordinance
- Water and Sewerage Act
- Highways Act

Limited progress has been recorded in dealing with specific aspects of the problem of human settlements in Trinidad and Tobago. Such action arose largely out of programmes designed to solve specific problems on a sectoral basis rather than on the basis of a comprehensive approach to the more fundamental needs and defects of our human settlements.

To facilitate such action there are in force in this country several pieces of legislation which deal with particular aspects of human settlements.

The following are summary descriptions of the legislation.

Public Health Ordinance

The oldest law governing action on human settlement is the Public Health Ordinance first enacted in 1917 and revised in 1950. This law provided a certain measure of control over public health aspects of settlements, housing areas and habitable buildings and assisted in the maintenance of satisfactory living conditions in human settlements at the time when the pace of development was slow, change was not very significant and densities were low.

However, the Public Health Ordinance's total effect is limited, since it gives no positive power to create settlements or parts of settlements, no power to control land use nor intensity of land development and no power over other components of settlements such as traffic, parking and basic service systems. In other words it lacks a planning dimension.

Town and Regional Planning Ordinance

The first introduction of the planning dimension came with the enactment of the Town and Regional Planning Ordinance in 1939—

"to make provision for the orderly and progressive development of land, cities, towns and other areas whether urban or rural, to preserve and improve the amenities thereof, and for other matters connected therewith."

The limitations in this ordinance derived from the fact that it was not universally applicable throughout the country, neither in its authority to plan nor in its power to control development. Furthermore, its power resided in a quasi-government commission rather than in the hands of an official or department of government. Although, as a consequence, it operated on the sidelines rather than in the mainstream of on-going governmental activity, its usefulness has been proven by the examples of successful developments of human settlement that resulted.

Restriction of Ribbon Development-Slum Clearance Ordinance

In 1942 and 1950 respectively, the Town and Regional Planning Ordinance was supplemented by the Restriction of Ribbon Development Ordinance and by the Slum Clearance and Housing Ordinance. Their titles clearly suggest the limited functions to which these enactments were addressed.

The Restriction of Ribbon Development Ordinance sought to improve the amenities of roads and their functioning by imposing restrictions on or preventing development along road frontages.

The Slum and Clearance and Housing Ordinance came into operation only by resolution of the appropriate authority and only after the condition of housing areas and the quality of life in these areas had deteriorated to the lowest possible levels and the areas were condemned as slums.

Development action taken under these enactments resulted in improvements in human settlement conditions in selected areas, but because of their lack of comprehensiveness and universal applicability they did not provide a firm policy base on which could be built permanent, long-term action aimed at overall development of all facets of human settlements.

Town and Country Planning Ordinance

These powers came with the introduction in 1969 of the Town and Country Planning Ordinance which is an ordinance that makes provision for the orderly and progressive development of land in both urban and rural areas and for the preservation and improvement of the amenities thereof.

Specifically the law confers on a Minister of Government three major responsibilities:

1. To ensure the proper integration of physical development with social and economic policies and plans by means of a continuing and comprehensive process of development planning; the obligation on the Minister being "to secure consistency and continuity in the framing and execution of a comprehensive policy with respect to the use and development of all land in the Territory in accordance with a development plan for the Territory prepared in accordance with the provisions of Part II."

- 2. To prepare a development plan for the whole territory of Trinidad and Tobago or for parts thereof; (Part II) and
- 3. To grant permission for any development of land (Part III)

Though the law is patterned after that of the United Kingdom, planning practice differs. It has had to be constantly modified and adapted to the special conditions of Trinidad and Tobago. For instance, the Trinidad and Tobago Ordinance provides for control over- sub-division of all land, including agricultural land. The necessity for this arises from the recognition of land as a vital resource which ought not to be fragmented at the whim of individual owners.

Also, here in Trinidad and Tobago it is considered essential in planning for development of human settlements and in managing the process of change taking place within settlements, to understand as precisely as possible the social needs and economic factors which are the determinants of the resultant land use and physical considerations. Thus, while it is possible to prepare settlement plans in conformity with the law which merely deal with their physical components, such physical plans would not be very helpful, since they would be unrelated to people's real needs for shelter, schooling, recreation and so on, or to such factors as the system of production and distribution of goods and services, and insensitive to the social and cultural value of our natural resources of soil, water, air, etc..

Out of this approach to development the operational methods currently employed in the planning and management of human settlements emerge. These are summarised under four headings.

- (a) the evolution of the comprehensive planning process in which there is integration of economic and social planning with physical planning;
- (b) the process of planning for physical development at national, regional and local levels, in both the urban and rural context;
- (c) the system of guidance/control of development undertaken by public agencies as well as by private individuals; and
- (d) planning advisory services and co-ordination to inform participants in the planning process and to ensure that development actions harmonise.

SUMMARY

To sum up: in Trinidad and Tobago human settlement policies and development action come within the framework of the following laws at (a), and within the direction of the undermentioned agencies at (b);

(a) Laws:

- (i) Public Health Ordinance, which governs the public health aspects of human settlement development and management;
- (ii) Slum Clearance and Housing Ordinance which makes provision for clearance and re-development of deteriorated living areas;
- (iii) Town and Country Planning Ordinance, which makes provision for development planning, control of development and other incidental matters;
- (iv) Water and Sewerage Act which gives the Water and Sewerage Authority joint responsibility with local authorities for administration of parts of the Public Health Ordinance as they relate to aspects of domestic water supply and protection of the public from polluted water:

(v) Highways Act which consolidates and up-date enactments relating to highways, streets and bridges generally and in particular within settlements.

(b) Responsible Agencies:

1. Statutory

- (i) Local Government Bodies, that is, Municipal and County Councils, which have exclusive and shared responsibility for administration of the Public Health Ordinance and the Highways Act:
- (ii) National Housing Authority which administers the Slum Clearance and Housing Ordinance and carries responsibility directly for public housing and indirectly for other aspects of housing;
- (iii) Town and Country Planning Division, Ministry of Planning and Development administers the Town and Country Planning Ordinance;
- (iv) Water and Sewerage Authority is jointly responsible with local authorities for some aspects of water supply and sanitation in settlements and exclusively responsible for others;
- (v) Highways Authority, who is the Minister of Works for major highways and the Local Authorities for highways in settlements.

2. Advisory

(i) Urban Redevelopment Council, advisory to the Minister of Planning and Development on redevelopment and improvement of deteriorated inner suburbs of Port of Spain. The functions of the U.R.C. have now been expanded more widely and they are to apply both to large urban settlements as well as smaller towns and villages. The new agency is called the National Redevelopment Agency.