BASIC ISSUES OF BELIZE'S AGRICULTURE DEVELOPMENT POLICY
This paper has been prepared by Dr. Aryeh Erez, UNDAT Expert, at the request of the Government of Belize. The points of view, expressed in this document do not represent an official position of the United Nations.
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This report attempts to highlight several concrete and central issues of the agricultural development of Belize. The principal and characterizing features of the agricultural sector can perhaps be summarized as follows:

- the extremely low man/land ratio
- the vast and unutilized land resources
- the predominantly foreign ownership of private land holdings
- the declining exports of the traditional timber industry
- the growing food imports
- the persistence of the subsistence "Milpa" land use system
- the impact of foreign entrepreneurship in the development of monocultural industries (sugar, banana, citrus, rice, mango)
- and in the establishment of a few new settlement (Mennonites)
- the opportunities of Belize's membership in CARICOM

These features are sufficiently documented by various reports and surveys and require no further verification. The main issues of Belize's future development deal therefore: with the urgent necessity to mobilize its idle land resources; with the indispensability to define a sound population and immigration policy; and with the conceptualization and the implementation of large-scaled, regional and sufficiently integrated development and settlement projects.

In the following these three central issues will be discussed and certain options for their solution will be offered for Governments' consideration.

2. Mobilization of Land Resources

The Draft Development Plan 1974-1976 summarizes the potential land use and the present distribution of freehold land as follows:
"a) Some 2.2 m. acres of the country's 5.7 m. acres are suitable for agriculture;
b) although 51% of these potential agricultural lands are in private ownership, only 8% is being cultivated as against 12.5% of similar Government land;
c) Seventy five per cent of the freehold lands are in the ownership of those with holdings of 10,000 acres and over;
d) Nearly all the owners of these large holdings are absentee landlords; and
e) Forty four per cent of the farmers are on leases - mainly annual leases of small plots of up to 20 acres each."

Tables 1 and 2 illustrate the present landownership situation and the foreign landholdings in Belize.

It appears obvious from these striking figures that this anachronistic landownership cannot further be tolerated. The world-wide food shortage, the growing costs of the food imports into Belize and into CARICOM, the impact of the imported inflation on the costs of living, and last but not least, the traditional negligence and land speculation trends of the absentee landlords fully justifies a more vigorous and radical policy of the government in order to get these lands under cultivation.

The present main ordinances of the Land Legislation include the following 6 measures:

a) The Crown Land Ordinance (allocation of Crown Land to nationals)
b) The Land Tax Ordinance, updated in 1971
c) The Acquisition of Land Ordinance (compulsory purchase of private estates)
d) The Rural Land Utilization Ordinance (disincentives for unutilized holdings over 100 acres)
e) The Land Reform Ordinance (security of tenure)
f) The Alien Landholding Ordinance (1973)
### Table 1

**LAND OWNERSHIP PATTERN IN BELIZE**

<table>
<thead>
<tr>
<th>Size group acres</th>
<th>Number</th>
<th>Percentage</th>
<th>Accumulated percentage</th>
<th>Number</th>
<th>Percentage</th>
<th>Accumulated percentage</th>
<th>Average acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>3,620</td>
<td>100.00</td>
<td>-</td>
<td>2,389</td>
<td>100.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Under 20</td>
<td>2,702</td>
<td>74.64</td>
<td>74.64</td>
<td>23,871</td>
<td>1.00</td>
<td>1.00</td>
<td>8.8</td>
</tr>
<tr>
<td>21 - 100</td>
<td>586</td>
<td>16.19</td>
<td>90.83</td>
<td>28,260</td>
<td>1.18</td>
<td>2.18</td>
<td>48.2</td>
</tr>
<tr>
<td>101 - 1,000</td>
<td>215</td>
<td>5.94</td>
<td>96.77</td>
<td>82,615</td>
<td>3.46</td>
<td>5.64</td>
<td>384.3</td>
</tr>
<tr>
<td>1,001 - 10,000</td>
<td>75</td>
<td>2.07</td>
<td>98.84</td>
<td>228,746</td>
<td>9.57</td>
<td>15.21</td>
<td>3,049.9</td>
</tr>
<tr>
<td>10,001 - 25,000</td>
<td>32</td>
<td>0.88</td>
<td>99.72</td>
<td>459,724</td>
<td>19.24</td>
<td>34.45</td>
<td>14,366.4</td>
</tr>
<tr>
<td>25,001 - 50,000</td>
<td>4</td>
<td>0.11</td>
<td>99.83</td>
<td>139,804</td>
<td>5.89</td>
<td>40.34</td>
<td>34,973.5</td>
</tr>
<tr>
<td>50,001 - 100,000</td>
<td>4</td>
<td>0.11</td>
<td>99.94</td>
<td>293,567</td>
<td>12.28</td>
<td>52.62</td>
<td>73,391.7</td>
</tr>
<tr>
<td>Above 100,000</td>
<td>1</td>
<td>0.03</td>
<td>99.97</td>
<td>138,518</td>
<td>5.80</td>
<td>58.42</td>
<td>-</td>
</tr>
<tr>
<td>Belize Estate and Produce Co. Ltd.</td>
<td>1</td>
<td>0.03</td>
<td>100.00</td>
<td>994,626</td>
<td>41.62</td>
<td>100.00</td>
<td>-</td>
</tr>
</tbody>
</table>

**Source:** Draft Development Plan 1974-76, Ministry of Planning, Belize.
### Table 2

**NATIONAL AND FOREIGN LANDHOLDINGS IN BELIZE**

(Acres)

<table>
<thead>
<tr>
<th>Size group</th>
<th>Total</th>
<th>Owned by nationals</th>
<th>Owned by foreigners</th>
<th>Percentage of foreign ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2 389 821</td>
<td>207 482</td>
<td>2 182 339</td>
<td>91.32</td>
</tr>
<tr>
<td>Under 20</td>
<td>23 871</td>
<td>23 871</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>21 - 100</td>
<td>28 260</td>
<td>28 260</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>101 - 1 000</td>
<td>82 615</td>
<td>40 531</td>
<td>42 084</td>
<td>50.94</td>
</tr>
<tr>
<td>1 001 - 10 000</td>
<td>228 746</td>
<td>38 532</td>
<td>190 214</td>
<td>83.16</td>
</tr>
<tr>
<td>10 001 - 25 000</td>
<td>459 724</td>
<td>-</td>
<td>459 724</td>
<td>100.00</td>
</tr>
<tr>
<td>25 001 - 50 000</td>
<td>139 894</td>
<td>-</td>
<td>139 894</td>
<td>100.00</td>
</tr>
<tr>
<td>50 001 - 100 000</td>
<td>293 567</td>
<td>76 288</td>
<td>217 279</td>
<td>74.01</td>
</tr>
<tr>
<td>Above 100 000</td>
<td>138 518</td>
<td>-</td>
<td>138 518</td>
<td>100.00</td>
</tr>
<tr>
<td>Belize Estate and Produce Co. Ltd.</td>
<td>994 626</td>
<td>-</td>
<td>994 626</td>
<td>100.00</td>
</tr>
</tbody>
</table>

It is generally agreed that these ordinances did not result in any accelerated development and that they should be amended and updated.

The current land valuation system is based on two criteria only, the present vegetation coverage and the present access, by roads or waterways. Landowners frequently claim improper and unrealistic classification of their holdings. The nonexistence of a sufficiently staffed and equipped land valuation unit does not permit the proper consideration of those claims, the results are losses in revenue, delay of tax payments and also payments in kind, where usually marginal lands are transferred instead of tax payments in cash. The present tax rates have been revised in 1971 and ought to be updated again in order to represent the actual purchase power of the B$ in 1975. Using for this purpose the cost of living index these rates must now be doubled.

It is understood that the land commissioner has submitted a detailed proposal for the establishment of a land valuation unit and that its staffing and costs within the present budgetary years are feasible. Based on the land classification surveys carried out in various parts of the country within the last years it is now possible to use this new and updated source of information and to apply a more accurate valuation system which will be based on the following four criteria: access, topography, soil properties and average net income. The last criterion reflects the potential site value of a land property based on the present prevailing "average" land use systems, which are not excessive in capital investments, such as properly managed cattle ranches, mixed farming of the Mennonite type, etc.

The Rural Land Utilization Ordinance which applies to holding above 100 acres only and to two of the best land types (middle and high bush vegetations) did not result in the expected disincentive effects and its implementation is also handicapped by the lack of a more accurate valuation system.
The subject of the land holding ordinances and their revision has recently been discussed by the Land Reform Committee and the author had the opportunity to participate in this meeting and to submit the following recommendations:

1) To establish a land valuation unit as proposed by the Land Commissioner;

2) To update and to double the present land tax rates;

3) Landowner should be permitted to choose one of the following two alternatives of land tax payments during a transition period of 3-4 years until the new land valuation unit is able to impose the new and more accurate taxation system for all landholdings in Belize.

   Alternative A: to pay the updated rate, based on the present valuation system;

   Alternative B: to pay according to the proposed new valuation system.

4) Landowner should be charged a part of the valuation cost according to a progressive rating system, such as the following:

<table>
<thead>
<tr>
<th>Less than 50 acres</th>
<th>No charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 - 100 acres</td>
<td>25% of the costs</td>
</tr>
<tr>
<td>100 - 500 acres</td>
<td>50% of the costs</td>
</tr>
<tr>
<td>500 - 2000 acres</td>
<td>75% of the costs</td>
</tr>
<tr>
<td>above 2000 acres</td>
<td>90% of the costs</td>
</tr>
</tbody>
</table>

5) Concurrent with the valuation of lands of owners who chose Alternative B, the new valuation unit should commence a systematic valuation programme of those landholdings which have a high priority for their inclusion in development projects, such as lands in the Belize River Valley;

6) The rural land utilization tax should be waived for those lands which are taxed according to the new valuation system.

/7) In order
7) In order to avoid the detrimental and negative impacts of land speculations, any transactions of land ownership on parcels larger than 5 acres should require the approval of the land commissioner;

8) Potential areas for the implementation of new regional development projects should be officially declared as such. A land development authority should be formed as a statutory body for the implementation of the development programme. This authority should be able to expropriate the lands of those landowners who do not participate in the development programme of the mentioned authority.

9) The lands acquired in this manner should be paid for according to the taxation base chosen by the landowner (see paragraph 3). Payments for those lands should be partly in cash and partly in annual installments, bearing a nominal interest rate.

10) All the real estate agents operating in Belize should be registered, only nationals should qualify for this purpose and a substantial registration fee should be imposed, in order to curb further land speculations and to control more tightly foreign land ownership;

11) In order to stabilize and to develop the lands cropped today by the Milperos it is proposed to protect their leasing contracts with private landowners which will prevent the unilateral dissolving of the lease by the landowner, if the Milpero has indicated and proved his intention to settle permanently. In such a case his lease contract should be transferred into a long range leasehold, with ample technical and capital assistance of the government for further investments for proper land clearing, use of inputs, etc. Such legislative steps could substantially induce the Milperos to become sedentary farmers.

3. Population and Immigration Policy

Any meaningful discussion of the indispensability of a clear and sustaining population and migration policy must be related to the necessity to populate the vast and empty fertile lands of Belize and
represents in fact one of the most important aspects of a future land settlement policy. The overcrowded towns of Belize do not require additional inhabitants, which might only aggravate the present unemployment situation, at least not in the sense of additional unskilled and poor immigrants.

The population of Belize, from the rural as well as from the urban areas, must undoubtedly be taken into consideration as the primal manpower reservoir for future land settlement schemes. In particular, the youth of the country could potentially become the main driving force for a nation-wide rural reconstruction and land settlement scheme. It is widely agreed that Belize, because of its historical background and its bilingual and multiracial character does not face the same post-colonial and post-slavery trauma which still prevail in many Caribbean territories. This colonial heritage manifests itself in a rather negative attitude toward farming and in a very low social status of the "man with the hoe and the cutlass". One of the results of this attitude is the strong migration trend of the initiative and the skilled who seek opportunities abroad in view of the severe population pressure and unemployment situation in most of the CARICOM countries.

Belize, although of a fundamental different historical background, faces also these negative effects of the migration trend, consequently, extended educational efforts will be needed for a substantial reversal of this brain drain and its diversion into rural development channels.

The negative impact of the emigration from Belize is closely related to the nonexistence of an indigenous Belizean middle class farmer prototype. Belizean youngsters searching for a brighter future face nowadays very extreme, atypical and undefyable examples of farmers in the countryside. These examples range from the extreme primitive labor and capital extensive Milpero on the one side, to the highly sophisticated and capital intensive foreign owned and foreign managed 'Big Fall' Corporation on the other side.
In between those two extremes one can find large monocultural plantations (citrus, mango, cane) capital intensive and labour extensive cattle ranches of various sizes, small rice farms in the south, the Mennonite settlements, and the cane farms in the north. The last two examples fall certainly into the category of middle sized, independent, modern and efficient family farms. Their function as an imitable example for hundreds and thousands of potential Belizean youngsters is however in the short range very limited as a further extension of the cane land is confined by the capacity of the existing sugar factories, and as the success of the Mennonite villages can only be analyzed within the frame of their specific idealistic approach towards rural life. The convincing success of the Mennonite villages from the point of view of agricultural development represents indeed an example of a planned settlement scheme, where adequate planning and financing, proper organization and, certainly the most important factor, pious dedication to hard work, were combined for the purpose of building a new rural community, based on the spirit of mutual assistance, cooperation and common faith.

It is precisely because of these ethical values, that the Mennonites succeeded to establish their new villages in a rather short time of some 15 years.

One of the fundamental issues of the agricultural development planning in Belize is the mobilization of human resources to settle on its vast and idle lands. Tiny lots of those lands are occupied today by Milperos, who adhere to the old and primitive traditional shifting cultivation practice. Their transformation into a modern farming society must be viewed as a sudden leap out of the early middle ages into the twentieth century, replacing almost overnight the cutlass, the hoe and the matchbox, their sole input means, by a complex and highly sophisticated modern technology and social structure. Such a leap will undoubtedly result in severe adaptation and transformation difficulties and in frictions and disappointing failures, which are
nowadays defined as unavoidable results of the "future shock". The complexity and the various psychological and sociological aspects of this transformation process of a historical perspective are a subject of a growing number of scientific investigations, some of which are listed in the appendix.

It seems that a slow and carefully planned stepwise transition might be more successful than their abrupt transplantation from the isolation of a hardly accessible small milpa in the jungle into an entirely new environment of a mechanized, modern, export-oriented farm. It will certainly be possible to integrate a growing number of carefully selected Milperos into the foreseen settlement programme, and suitable programmes and educational efforts should be made to accelerate their transformation process towards sedentary farming.

In concurrence with this process, the necessity of a large-scaled and properly planned immigration policy should be considered. The potential benefits of immigration are recognized by the government which applies today a "case for case" policy, where each application for a permanent residency permit is being individually investigated for its potential contribution to the economy and the welfare of the country. One can hardly deny a certain discouraging impact of this procedure, in particular in view of the fact that clearly defined criteria for successful candidacy have not been published insofar.

Belize may in the near future become a sovereign and independent state which will substantially increase its public spending, not only for the replacement of the present British capital and budgetary assistance, but merely for the establishment of its own diplomatic service and defence forces. These imminent additional public expenditures, as well as the present severe unemployment, the rising cost of imports, the widening foreign trade deficit and the persisting paucity of the larger part of the population call urgently for an accelerating development effort and also for a serious reconsideration of the present immigration policy.
Examples and experience of other typical immigration countries, such as Canada, Australia and Israel could be used for the definition of selection criteria and for the establishment of a new integrated immigration and land settlement administration. In this context the following topics ought to be decided upon.

a) Ethnical Selection Criteria

Taking into consideration the geographical and historical realities of Belize, its situation in the Central American subcontinent and its membership in the English speaking countries of CARICOM, the future maintenance of a certain internal ethnical and racial balance might perhaps be considered as an important selection criteria. A possible approach towards this aim might be the adoption of a quota system, which will help preserving the present balance. Another solution might perhaps dismiss entirely these racial and ethnical considerations as being counterproductive to the goal of an open, multiracial and free society. Thus, Belize might be willing to strive for what is called nowadays a "melting pot" or "pressure cooker", where immigrants from many countries are molded into a new society. Such a process must be evaluated with a certain historical perspective, experience indicates that only in the second generation full integration will be obtained, while in the first generation the immigrants will seek to maintain and to preserve their own national identity.

b) CARICOM as a potential source of new immigrants

Belize, with its vast unused lands has the potential to become one of the major food suppliers of CARICOM, whose food import bill is of growing concern to virtually all the government of the Caribbean community. In particular, pulses, fodder grain and beef produced in Belize could replace costly imports from third countries. Belize's
membership in CARICOM gives it also access to the benefits of its regional financing institutions and the many other regional activities of the Caribbean Community.

In view of the severe population pressure in most of the CARICOM member countries and of the empty land potential of Belize it might be opportune to emphasize a certain reciprocity and to agree on a concept of a regional immigration and settlement scheme. Such a programme could be organized under the auspices of the highest CARICOM institutions, such as the Conference of Head of States, the Standing Conference of the Ministers of Agriculture, the CARICOM Secretariat, the CDB, etc., in order to secure the fullest participation of the regional institutions involved in its proper planning, financing and implementation.

It will be necessary to define clear and agreed criteria for immigrants and settler candidate selection, such as age, marital status, education, experience in farming, size of family, equity capital means, passing of psychotechnical tests, successful participation in preparatory training courses and others.

Adequate preparatory training should be carried out in the home countries of the candidates before their transfer to Belize, where in the meanwhile suitable land will be cleared for the new settlers. Immigration settlers should perhaps be settled homogeneously in separate villages according to their country of origin instead of their arbitrary mixing into an heterogeneous and alien group. The sociological and psychological aspects of such a CARICOM wide regional resettlement scheme will have to be thoroughly studied. Proper planning and timing of the whole selection, training, transfer, settlement and absorption process should be carried out under the current guidance of a qualified international consultant, experienced in the planning and implementation of similar large scaled settlement schemes.

The settlers
The settlers should be transferred to the site of their new villages and be given already cleared land, building materials for their home and farm equipment, livestock, tools and other essential inputs. During the first years they ought to follow instructions of a "Belizean Land Development Authority", land titles should only be issued after a sufficiently long absorption period of several years.

In addition to this organized scheme of a massive regional resettlement programme of several hundreds of settlers per year an additional programme for individual West Indian settlers could be conceived. For those candidates different criteria in the field of own capital, experience and managerial abilities will have to be decided upon. Their access to regional financing institutions for loans for the purchase of equipment and livestock, clearing of land, etc., should be clarified and published.

It seems obvious that these ideas require a tremendous effort of detailed planning, as they represent an entirely new concept of fully integrated, properly programmed and adequately financed regional resettlement scheme. The above mentioned CARICOM institutions as well as international financing and advisory agencies should be approached for their assistance in the preparation of a detailed prefeasibility study for this programme.

c) Individual Immigration

Following the success of the Mennonite Villages it might certainly be opportune to encourage the establishment of additional settlements of this type, perhaps less secluded and of a stronger desire towards integration into the Belizean society. The various skills and entrepreneurial abilities of this type of individual or affinity group immigration could substantially contribute to the successful implementation of the new regional development projects, as outlined in detail in the following chapter. Such projects include not only the basic activity
of settling each year a few new villages, but also the concurrent construction and expansion of an agricultural infrastructure. The main components of this are regional and subregional supply and marketing centres, processing, storage and grading facilities, machinery services and repair shops, water supply systems and many other supporting enterprises which are an essential part of a fully integrated modern farming area.

All these ventures require professional skills, initiative and managerial abilities to size the right opportunities, to invest, to cooperate with others and thus to contribute to the process of diversification and sophistication of a modern export oriented agriculture.

In addition to these opportunities for the private and cooperative business sector the above mentioned agricultural infrastructure will include also a growing number of public services, such as a research, experimentation and demonstration stations, agricultural training schools, an adequate extension service, an administrative centre of the new development area, communal services and many others. A farseeing and properly published immigration policy could attract settlers, entrepreneurs and professionals for these purposes by offering not only low priced land and certain financial assistance, but primarily a rare and challenging opportunity to participate in the exciting venture of the development of one of the last still untouched land resources of Central America.

The mechanics for the attraction of those immigrants could be planned as follows:

a) The Land Development Authority should periodically publish a list of the required professionals and of the open opportunities for settlers, technicians, entrepreneurs for the establishment of the new services in the newly opened settlement areas and service centres.
b) Successful candidates will be selected by the authority and should be granted free lease holds to settle.

c) Professionals and technicians which will be employed by the new public services in the settlement area, should also be granted leaseholds for their homes and initial employment contracts.

d) Entrepreneurs interested in the establishment of new business ventures in the new regional centres should be offered pioneer industry status and substantial financial help.

Details for this aspect of the proposed immigration and settlement policy will have to be carefully planned by the development authority in order to avoid improper timing of their establishment and discouraging failures.

d) **Import of modern technology through joint ventures**

It can hardly be argued that Belize's membership in CARICOM will not automatically seal off its new production and regional exports from the influence of the world market of agricultural commodities and its price fluctuations. The new settlers in the Belize River Valley and in other potential development areas will have to export and to compete with well established producers in other parts of the world. This fact is already strongly felt by the citrus processing industry and will have to be seriously considered in the general planning of the new development projects. The sole solution for this threat and challenge is in the sphere of the successful introduction of modern technologies and of efficient production methods.

This solution obviously does not negate the necessity to seek long range supply contracts with other CARICOM member countries, secured markets, specific protection for infant export industries and similar measures; but ultimately only the efficient producer will survive, in particular in view of the present worldwide economic crisis, whose duration and impact of the potential products of Belize's new settlement areas cannot be foreseen.
It might therefore become opportune to integrate into the new regional settlement and development programme the establishment of a few larger scaled and technologically highly advanced joint ventures. The example of the modern "Big Fall' rice production corporation could be extended for other similar enterprises, such as a modern and intensive pasture and feedlot cattle ranch, perhaps with Central American knowhow and capital (Nicaragua, Costa Rica), the establishment of a modern export industry of fresh and processed tropical fruits, the extension of the citrus industry and of the newly revived banana export enterprises.

The general economic and financial conditions of these new joint ventures should be carefully considered, taking into account the ultimate goal of the Belizean character of these enterprises, in terms of maximizing and widest distribution of benefits to the Belizean people.

4. Regional Development and Land Settlement Projects

The present development routine in the LDC's of CARICOM ought to be thoroughly revised. The main components of this routine are the project pipeline dealing with several comparatively small and usually insufficiently coordinated projects, the assignment of a number of technical advisors and field officers by the various members of the regional advisory establishment who try to do their best in spite of the chronical lack of counterparts, office space, equipment, etc., and several more or less futile attempts to prepare national and/or sectorial development plans, some of which can be found on the shelves of the various ministries, desperately calling for revision and implementation.

In spite of this rather inefficient planning routine, which resulted also in serious disbursement difficulties and idling of CDB funds, very
funds, very valuable planning components have been accumulated and could now be incorporated into regional development projects, or, in the case of the smaller LDC's into national development projects.

Such a project of the nature of a regional land settlement scheme in the Belize River Valley is at present being considered by the Government, following the submittal of a very detailed report of the British ODA, called "The Agricultural Potential of the Belize Valley", where the Government intends to acquire an area of some 80,000 acres of fertile land in the Belize River Basin. In the following, some guidelines for the conceptualization, planning and implementation of this first large scaled and fully integrated regional project are outlined.

a) Preparation of a bankable overall feasibility study

The previous efforts of the Government to compile basic information about the agricultural potential of the Belize River Basin will now substantially facilitate the preparation of a comprehensive feasibility study. In particular, the collection and analysis of the climatic, pedological and hydrological data are of primal importance. The main parts of the required feasibility study, which represent the next station in the "Project Pipeline" of the realization of the project are outlined below:

History of the project and scope of the feasibility study

Previous surveys and studies, initial implementation, present stage of project planning.

Development policy and general planning concepts

Acquisition of land, settlement policy, human resources, immigration policy, establishment of new villages and regional centres, role and impact of
impact of CARICOM on the project, land tenure and leasehold systems, establishment of supporting services and of the project administration, etc.

The Agricultural Development Plan

- Crops, agrotechniques, livestock, farm types, target incomes, stages of farm development programmes, optimized farm production plans, crop budgets, bush clearing techniques and schedules, land use maps, marketing and export, etc.

Physical Planning

- General layout of the location of the new villages and of the new regional supporting centres, programmes and specifications of the regional infrastructure (roads, water, power) detailed design and costs of settler housing and farm buildings, etc.

Mobilization of Human Resources

- Selection procedures for settler candidates, including candidates from Belize, from CARICOM countries and from others, training programmes for settlers, time tables and costs for the mobilization, transfer and settlement process, logistic considerations, sociological enquiries and supporting studies, etc.

Services Development Planning

- Establishment of semi-autonomous companies for land clearing, farm machinery services, input supplies and marketing, water and power supply, etc., legal aspects, time tables, investments, locations, etc.
Project Authority Organization

Establishment of a regional development authority, coordination of its activities with the various governmental departments, financial authorization and independence, delineation of the decision making process, advisory services of consultants, etc.

Calculation of the Overall Time Table and of the Cash Flows

Economic Evaluation and Analysis

Present value of total net benefits, internal rate of return, social rate of return, economic justification of the project, sensitivity analysis, etc.

Project implementation Programme for the First Financing Trench

For the preparation of this basic document, which must meet the highest standards of the World Bank and of other international financing institutions, it will be necessary to hire the services of a qualified international consulting company which could be able to mobilize within a short time the required team for this study. The IBRD, FAO and UNDP maintain updated lists of those consultants whose services are considered as preconditional for the financing of such large scaled development projects as the Belize River Basin Settlement Scheme.

The costs and financing of the preparation of the feasibility study could either be included in the general overhead expenditures of the project, or perhaps financed by specific grants. The CDB and other regional institutions could certainly be helpful in the search for such an opportunity.

The services of a qualified consulting company for the preparation of similar or perhaps smaller projects in other CARICOM countries are badly needed, in view of the heavy burden on the limited staff of the CDB, which has today to prepare these studies by itself. The
establishment of a new properly staffed and trained West Indian consulting company is recommended for the benefits of project implementation in all the LDC's. The preparation of the Belize Valley feasibility study by a capable international consultant may provide an excellent opportunity to train West Indian professionals and technicians, such as agronomists, hydrologists, economists, system engineers and others for this purpose. Thus, substantial benefits could be obtained not only for the establishment of a new West Indian consulting company, but also in particular for Belize itself, as a part of those West Indian professionals could be convinced to stay on in Belize and participate in the implementation phase of the project.

b) Forming a new rural society in the Belize River Valley

Sociologists and psychologists argue if given individual attitudes seek their challenges or if not a new challenge will change given attitudes. The above outlined new venture of a large scaled, versatile and complicated development project represents undoubtedly a point of departure from traditional thinking towards a new concept of accelerated development. Traditional and routine planning targets will thus have to be replaced by a rather obstinate struggle for the fulfillment of such an ambitious new endeavour.

It can safely be assumed that the traditional reservation and doubts of the Milperos and of the other people living today in the project area could gradually be transformed into a more willingly and even enthusiastic participation in the new project. The role of the Belizean youth in the implementation of this project should not be underestimated, and specific programmes for the training of young Belizean settlers ought to be incorporated in the human resources planning part of the project.

It can also be assumed that certain frictions and misunderstandings between the present population and the new immigrants, and also among
the new settlers themselves, will occur. The government and the project administration might be accused of favoritism and politicians may try to capitalize from those inevitable tensions. On the other hand, a growing competition among the new settlers could result in a continuous pressure on the project administration for more loans and more land.

Policy decision makers may hesitate to embark into such a new venture and perhaps dismiss the whole idea as unrealistic, premature and beyond the capacity of the new and unexperienced administration and similar evasive arguments. Such a reaction is understandable, in view of the many reports, studies, projects and proposals which have been submitted in the past to the government and were never implemented, and which can be found today, on the shelves of the ministries concerned. The main reasons for their oblivion are certainly not technical or economical errors and miscalculations, but timidity and irresolution of the decision-makers to dare such new ventures.

Hesitations concerning the ability of the understaffed ministries to cope successfully with such a new project could be overcome by the establishment of a new and specific project administration authority, which during its first years could be guided by key officers of the above mentioned consultant. Thus, current day to day decisions will be made by a competent and fully authorized project management, while the government will concentrate its efforts on the principal policy issues. It would be advisable in this respect for government planners to visit and learn the experience of similar development projects carried out in several Central and South American countries. Such visits could perhaps be sponsored by the IBRD, BID, or by the local governments and could be very instructive and helpful for the final conceptualization of the Belize River Basin project.

/The prototype
The prototype of the new Belizean farmer must represent an attractive standard of living, a modern open minded and innovation seeking, hardworking self-made man, earning a target cash income comparable with a middle level government employee, providing his children with proper alimentation and education; a member of a village council, and of a multi-purpose cooperative, owning perhaps his own tractor or pick-up, living in a 3 bedroom house with modern sanitary installations, etc. These targets should not be dismissed off-hand as utter utopia, as they have been in fact achieved in the Belize River Basin by many new settlers within less than 20 years.

The new villages will require many services, such as provision and distribution of inputs (machinery, fertilizers, chemicals, fittings, tools, etc.); processing of products (grading, drying, storage, pecking, milling, transportation, marketing, etc.), as well as many new public services (schools, hospitals, churches, police, community affairs, etc.). The aspects of the physical planning and of the optimal size and location of these services will have to be carefully studied, taking also into consideration the future role of the existing communities and towns in the area. In this manner the isolation of the new settlers and communities could be avoided and an integration of the present and new population of the area can be achieved.

/Bibliography
Bibliography

Fromm, Erich  
Maccoby, Michael 


Ballesteros, Juan  
Edel, Matthew  
Nelson, Michael 

"La colonización del Papaloapan", Serie de estudios sobre tenencia y uso de la tierra. Centro de Investigaciones Agrarias. México, 1970

Bassols Batalla, Angel* 

Dos ejemplos concretos de colonización del trópico mexicano. El Día (México), 24 y 25 de mayo de 1965

Comisión del Papaloapan* 


Durán; Marco Antonio* 


Fei, J.C.H. y Naris, G.* 


Franco Bencomo, Joaquin* 

Los nuevos centros de población. Serie monografías, No. 4, Chapingo: Centro de Economía Agrícola, Colegio de Postgraduados. Escuela Nacional de Agricultura, 1965

Hassier, Juan A.* 

Notas de campo. Universidad Veracruzana, 1953

Hirschman, A.O.* 


Sen Amartya, K.* 


Shearer, Eric, B.* 

Settlement of New Lands in Tropical Latin America. Some Unconventional Policy Considerations (mimeographed)

Siemens, Alfred* 

Recent spontaneous Settlement in Southern Veracruz, Mexico: The Development of an Untidy Frontier. Occasional Papers of the Canadian Association of Geographers, B.C. Division, No. 6, 1964

Siemens, Alfred* 


* Citado en la bibliografía de "La colonización del Papaloapan".
Stavenhagen, Rodolfo*  

Vidal, Jorge*  
La tragedia del salitre, Santiago, Chile, 1953

Villa Rojas, Alfonso*  

Voght, Williams*  
People, Challenge to Survival, New York, Sloane, 1960

Instituto Nacional Indigenista*  

Instituto Nacional Indigenista  
Antropología de una presa

King, Richard V.*  
River Basin Projects and Regional Development Strategy in Light of Mexican Experience. Ithaca, N. Y.: Cornell University, Department of Agricultural Economics, 1964

Menz, John A.*  
The Papaloapan Project. Department of Economics, University of California, Berkely, 1951

Nelson, Michael  

Noriega S., José*  
Control del Río Papaloapan. Preparación del plan de estudios definitivos y programa de construcción de las obras. México, Comisión Nacional de Irrigación, 1946

Poleman, Thomas T.*  

Reyes Osorio, Sergio*  
Estudio sobre la disponibilidad de tierras afectables para fines agrarios en México. México: Centro de Investigaciones Agrarias, Documento de trabajo

* Citado en la bibliografía de "La colonización del Papaloapan".