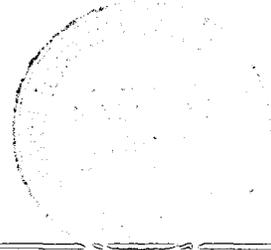


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Workshop ECLAC/FAO on Analysis of Food Systems in English Speaking Countries

PORT OF SPAIN, TRINIDAD AND TOBAGO, 16 - 18 DECEMBER 1985



REPORT OF THE WORKSHOP



Economic Commission
for Latin America
and the Caribbean



Regional Office
for Latin America
and the Caribbean

JOINT ECLAC/FAO AGRICULTURE DIVISION
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REPORT OF THE ECLAC/FAO WORKSHOP ON ANALYSES OF FOOD SYSTEMS
IN THE ENGLISH-SPEAKING CARIBBEAN COUNTRIES

(Port of Spain, 16-18 December 1985)

Joint ECLAC/FAO Agriculture Division
Santiago, Chile

Table of contents

	<u>Page</u>
I. BACKGROUND DATA, ORGANIZATION AND OBJECTIVES OF THE WORKSHOP	1
II. THE GENERAL DOCUMENTS: A BRIEF ACCOUNT OF THEIR CONTENT..	4
1. Analysis and design of food policy	4
2. Nutritional aspects in the formulation of food policy	6
III. NATIONAL CASE STUDIES: A BRIEF SUMMARY	7
1. Barbados	7
2. Guyana	10
3. Jamaica	12
4. The Organization of the Eastern Caribbean States	16
5. Trinidad and Tobago	19
IV. POLICIES AND ACTIONS OF REGIONAL ORGANIZATIONS	24
1. The Caribbean Agricultural Research and Development Institute	24
2. University of the West Indies	24
3. The Caribbean Common Market	24
V. MAIN TOPICS RAISED DURING THE DEBATES	26
1. Private agents and the state in the functioning of the food system	26
2. Implications of the financial and foreign exchange crisis on the functioning of the food system	27
3. Problems relating to the productive structure of the food sector	27
4. The international, regional and subregional environment and its implications for the functioning of the national food systems	28
5. Problems relating to data availability and analytical tools for the design of food policy	29
6. Follow-up	29

	<u>Page</u>
ANNEX 1: List of documents	31
ANNEX 2: List of participants	32

I. BACKGROUND DATA, ORGANIZATION AND OBJECTIVES OF THE WORKSHOP

Background data

The Workshop forms part of the programme of activities of the Joint ECLAC/FAO Agriculture Division devoted to the analysis of food systems and to the preparation of outlines of sectoral economic policy geared to the raising of the levels of food security. The papers presented and the discussions held on this occasion are additional to those relating to earlier Workshops, one held in Mexico in 1983 to deal with the area of Mexico and Central America, and the other in Lima in 1985 to cover the Andean Area countries. This therefore completes the series of Workshops planned in the said project as stages prior to the preparation of studies of regional scope on the analysis and design of economic policy in the food and agriculture sector.

Organization

The Workshop was organized by the Joint ECLAC/FAO Agriculture Division and the Subregional Office for the Caribbean of the Economic Commission for Latin America (ECLAC), with a decisive contribution from the FAO Regional Office for Latin America and the Caribbean (RLAC). It was attended by twenty-two experts invited on a personal basis and not in representation of governments or institutions (see annex 1).

In the opening session the Director of the ECLAC Subregional Headquarters for the Caribbean the FAO Representative in Trinidad and Tobago and the Resident Representative of the United Nations Development Programme delivered brief addresses. The need for clear policies and the growing importance of food policy analysis to guide the development of the food and agriculture sector toward achievement of national objectives with respect to food security were emphasized by the Director of the ECLAC Subregional Office who invited the participants to an open and informal debate in order to take full advantage of the fact that they were invited in their personal capacities and not as representatives of their respective governments or institutions.

The FAO Representative began his address by emphasizing that the present Workshop was the last in a series of meetings of this type held previously in Mexico to cover that country and Central America, and in Peru, to cover the Andean Area countries, and went on to make some comments on the debates which had taken place on the subject at the FAO World Conference in November 1985, underlining the adoption of the World Pact on Food Security. Finally the UNDP Resident Representative, noting that the work of many agencies has both direct and indirect

influence on the food and nutrition status of developing countries, commended the initiative, taken by ECLAC and FAO, in addressing the crucial issue of food systems and food policy analysis in the English-speaking countries of the Caribbean, and mentioned that the Workshop was being held at an opportune time, since many Caribbean governments had expressed deep concern over existing low levels of food production and the generally vulnerable food security status, particularly in view of the downturn in the economies of many countries in the region.

At the end of the debates, and in bringing the Workshop to a close, the FAO Representative and the Director of the ECLAC Caribbean Office stressed the national and regional importance of the various items discussed, particularly in view of the conditions of acute constraint that the external financial crisis was imposing, and would continue to impose, on the economies and food systems of the region. They thanked the participants for their frank and open approach, pointing out that this confirmed the advantages, for the purpose in hand, of having invited the members in their personal capacities. On their side several of the participants, in thanking FAO and ECLAC for their initiative, expressed their satisfaction at having had an opportunity for a frank and informal exchange of ideas such as that provided by the Workshop.

Objective

The Workshop was convened with the following aim: first, to explore some of the theoretical and methodological aspects of the analysis and design of economic policy geared to the achievement of food security; second, to examine the main features of the structure and functioning of the food systems of representative countries in the English-speaking Caribbean region; and third, to receive information on activities relating to food problems prepared by subregional institutions.

Among its specific objectives were the following:

- (a) To analyse the present structure and functioning of the food systems of the English-speaking Caribbean countries.
- (b) To explore the scope and limitations of policy directly or indirectly geared to the achievement of food security.
- (c) To estimate the nature of the problems of access to food and of the deficiencies found in this respect among certain social groups.
- (d) To consider the scope and limitations of some of the subregional measures taken to attain food security.
- (e) To examine some of the dilemmas encountered in designing public policy in the food sector, particularly in respect of the degrees of external openness and of state intervention in the functioning of the national food systems.

(f) To analyse alternative policies aimed at alleviating problems of aggregate availability and of access to food in the case of the marginated social sectors.

(g) To compile suggestions and data deriving from the assessment of experiences which will facilitate the preparation of a document of regional scope destined to provide guidelines for the design of an economic policy for the food and agriculture sector.

Activities implemented

The Agenda of the meeting included both the oral presentation and discussion of a set of documents especially prepared for the Workshop, and a number of contributions for the information of participants on activities connected with the subject of food carried out by regional institutions such as the West Indies University, CARDIE and CARICOM. Nine papers in all were presented (see annex 2). Two of these were of a general nature and dealt with conceptual aspects: one relating to the analysis and design of food policy and the other to nutritional considerations in the formulation of food plans and policies. Five documents were devoted to the analysis of the national food systems of countries (or groups of countries) representative of the region (Barbados, Guyana, Jamaica, Trinidad and Tobago, and the Organization of Eastern Caribbean States (OECS), which includes Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Christopher/Nevis, Saint Lucia and Saint Vincent and the Grenadines). In addition to the foregoing a short report was submitted on Belize and a summarized outline to serve as a basis for discussing conceptual aspects and problems of lack of information on food policy.

II. THE GENERAL DOCUMENTS: A BRIEF ACCOUNT OF THEIR CONTENT */

1. Analysis and design of food policy

The main purpose of the document prepared by JLAC was to propose an adequate methodological base for the drawing up of diagnoses of the structure and functioning of food systems that will contribute to the design of food policies.

The first part of the document was devoted to a brief introduction on the main methodological problems encountered in dealing with such a complex subject as the food system, including, for this purpose, a very brief critical analysis of the scope and limitations of the neoclassical approaches and the historico-structural approach, and finally expounding the option of a systemic approach incorporating the social and economic relations confronting the analysis of the food issue. This is only a sketch of the content of a more extensive text to be prepared later on.

The second part of JLAC's contribution consisted of a summary of the main transformations and trends observed in the world food economy, with emphasis on the growing disarticulation between the food "basket" produced for export and that required for domestic consumption, along with the markedly segmented and concentrated character of the international market -in consequence of increasingly protectionist policies in the developed countries- and the also increasing importance of transnational corporations.

In the third part, and as an introduction to the guidelines for a food security policy, a set of attributes desirable for a food system were defined. In this connection it was stressed that the food issue is at once a problem of aggregate availability and of individual access, and that the systematic fulfilment of both conditions implies a progressive advance toward food systems which increasingly achieve:

i) Sufficiency, defined as the capacity to generate an aggregate availability to satisfy both the prevailing effective demand and basic demand of those sectors which, because of their income, are unable to express their demand in market terms:

ii) Stability as related to the fluctuation of the levels of availability with respect to traditional levels, regardless of whether or not the level of sufficiency is attained.

*/ Both in this section and in the next very brief versions are presented of some aspects of the papers submitted at the Workshop and the responsibility of the authors as indicated in annex 2. Hence their content does not necessarily represent the opinion of the sponsoring agencies.

iii) Autonomy, which relates to the degree of external dependence of the national food systems. External dependence, or vulnerability, is often calculated on the sole basis of agricultural trade balances. However, this type of calculation gives only a partial and often a distorted view of the true picture of the external vulnerability of food systems due to the relative importance of domestic and imported commodities in the national food balance sheet;

iv) Sustainability, understood as the capacity of the food system to ensure that the short-term goals of food availability and access to food are not attained at the expense of deterioration in renewable and non-renewable natural resources, which would make sustained long-term performance impossible; and

v) Last but not least, equity, understood as universal entitlement to an amount and quality of food considered as the minimum necessary both from a biological and socio-cultural point of view.

In Part IV the paper presented some of the main dilemmas currently faced in the definition of public policy in general and of food policy in particular. Some simplistic formulations were criticized, as, for example, that which makes control of population growth the central issue in solving problems of entitlement, since there is ample evidence that there is no direct relationship between population growth and access to food by those in need. Polarization between the proponents of centrally planned and market economies as the most effective procedures to ensure food security was also criticized and it was postulated that both elements have a role to play. In this respect it was clear that emphasis on one or the other could lead to different kinds of biases which might be contrary to the attainment of food security.

The divergence of opinion between national food self-sufficiency as opposed to the concept of comparative advantage was also criticized in that absolute adherence to one or the other was based more on ideology than on an objective analysis of real conditions in the sense that, to define the degree of self-sufficiency and of openness, one has to take into consideration not only national potential but also the reliability of external markets both as a source of compensation for internal shortages and as a market for exporters, as well as evaluate to what extent the benefits of one or the other strategy go directly or indirectly to those in need.

The problem of divergent proposals between strengthening the small farming sector or relying on large scale, high technology and capital-intensive farming for basic food production was also discussed. Emphasis was placed on the idea that the strengthening of the small farming sector is more supportive of a food security strategy when problems of access are serious and when it is the small farmers and the rural population who are seriously affected by problems of access.

Finally, some aspects of appropriate technology for the strengthening of small farming agricultural systems were considered, and it was suggested that increasing the productivity and production of small farmers was essential to improve national food supplies. The development of improved and progressive technology compatible with the small farmers' systems was considered to be a crucial

factor in contrast to a sort of "populist" tendency to burden such farmers with marginally improved, obsolete systems in the guise of 'appropriate technology' for their conditions. Although the continued use of traditional systems might ensure small farmers' control over the technology applied to their production, this would only serve to condemn them to a state of poverty brought about by the inefficient use of the means of production resulting in low levels of productivity.

2. Nutritional aspects in the formulation of food policy

The second paper concerned with the conceptual aspects of food security placed its emphasis on the nutritional aspects implied in the formulation of food policy, complementing the political and economic aspects considered in the first paper.

A definition of food policy was presented as signifying "the collective efforts of the state and its institutions to influence the decision-making of food producers, marketing agents and consumers in order to attain stated social objectives". These objectives consider overcoming both the economic and nutritional aspects of the food problem and are taken to include growth in food supplies, adequate food reserves and solving the access or entitlement problem by way of income distribution which would facilitate the attainment of satisfactory nutritional status through access to food by all segments of the population. The author disputed the concept of some experts who distinguish between food policy and food and nutrition policy, and who consider the latter to be a mechanism for co-ordination of sectoral policies. This concept was considered to be unsound since both direct and indirect interaction on nutrition and health lie within the scope of food and nutrition planning.

After some consideration of the basic nutrition concept, and the presentation of a generalized system indicating the relative proportion of different food sources for a satisfactory nutritional status for the population in the region, the author presented an outline of the scope of food and nutritional policies, separating those which are related to food supply from those related to food demand and to vulnerability.

With this outline as the framework the author presented a brief summary of the results of two studies undertaken in Antigua and Barbuda and in Saint Vincent and the Grenadines to evaluate the impact of food policies and trade regimes on food production, marketing and food consumption and nutrition.

III. NATIONAL CASE STUDIES: A BRIEF SUMMARY

Although it was intended in all cases to follow a common pattern in analysing the functioning of the national food systems, the differences in the nature of the problems faced by each of the countries forming the area, as well as in the breadth and depth of the information available, gave rise to documents which differ not only in the length assigned to each topic but also in the importance attached to the different aspects of the functioning of the food systems. Without prejudice to the foregoing, all the studies contain an analysis of varying length on the productive structure of the food sector -with emphasis on aspects relating to agricultural production; on the prevalent patterns of food consumption; on the nutritional status of the population; and on the external insertion of national food systems.

There is also an analysis of the main aspects of public intervention in the food problem, including, in some cases, a description of the institutional apparatus in charge of the application of the adopted policy.

In several of the studies mentioned the final chapter is devoted to the formulation of some lineaments of alternative policies for the achievement of food security.

1. Barbados

The population of Barbados is estimated to be 252,500, indicating a density of 587 persons per square kilometre. The tourist industry is dynamic and in 1984 added the equivalent of some 62,000 residents. The high population density and relatively large numbers of tourists affect the structure, organization and functioning of the food and agriculture sector and can also be expected to influence national food policies.

(a) Structure of the food and agriculture sector

Sugar cane continues to be the dominant crop, although the area has decreased from 16,000 hectares in 1975 to 14,000 ha. in 1984; the corresponding sugar production declined from 137,000 to 100,000 tons. Large plantations produce most of the sugar cane, with small farmers accounting for about 16% of the area and 10% of the production. The industry is important in terms of employment, foreign exchange earnings and by-product utilization. However, increasing production costs (US\$ 378 per ton in 1980 as against \$ 599 per ton in 1984) and decreasing prices (US\$ 482 per ton in 1980 compared with \$ 374 per ton at current prices in 1984) pose serious problems within the context of national economic policies and, more particularly, policies relating to the food and agricultural sector.

The problems being experienced within the sugar industry have caused both the plantations and the small farmers to consider the production of alternate crops and to focus their attention on the potential for diversifying their production. Although these circumstances tend to channel private sector activities toward the implementation of the Governments' stated policy, which is to diversify the food and agricultural sector and to place emphasis not only on a revitalized sugar industry but also on vegetables root crops, pork and poultry, only limited progress has been made toward diversification.

Available data show that the production of vegetables and root crops has fluctuated owing to problems with water control, pests and diseases, but the major factor is reported to be fluctuations in area cultivated as a direct response to marketing problems.

Barbados shares the experience of many small countries in that limited land area places severe constraints on large-scale cattle production and although some small-scale dairy units have been developed the larger part of the milk provided for sale is produced from reconstituted constituents which are imported.

A small-scale sheep production programme, based on the locally selected Barbados "black-belly" sheep, is being developed but the mutton produced meets only a small part of domestic demand.

Poultry production is now fairly well organized and the country has attained self-sufficiency in the production of whole chickens and eggs; however, hatching eggs, feed constituents and poultry equipment are imported as well as substantial quantities of low cost chicken parts, i.e., wings, backs and necks.

Pig production is also dependent on imported feed and, although efforts have been made to increase production and create linkages with local meat-processing facilities, imports of fresh and chilled pork total some 380% of local production.

Fish is a major source of protein in the Barbadian diet. The industry is predominantly artisanal, exploiting in-shore areas and restricted to day trips only. Larger, better-equipped boats capable of remaining at sea for several days and having the potential to exploit off-shore resources are being introduced and it is anticipated that these boats will substantially increase catches.

The agro-industry subsector was for many years based on the processing of sugar cane and its by-products. During the last two decades, the subsector has been diversified and expanded with emphasis being placed on food processing to supply the national and regional (CARICOM) markets. However, the bulk of the raw materials are imported rather than produced locally and although there are stated policy objectives to establish strong linkages between primary production and food-processing there are as yet few cases in which these objectives are being realized.

(b) Food access and nutritional status

Current food balance sheets and data on demand and consumption patterns are not available. During the period 1980 to 1984, the population increased at a rate of 0.3% per annum while per capita income increased by 35% and the total wage index was marginally higher than the retail price index. These data can lead to the assumption that, in general, the national food procurement capacity was enhanced during the corresponding period; unfortunately, data are not available to indicate the capacity of the various socio-economic groups to obtain the recommended food intake.

Nevertheless, in spite of the very high level of per capita income (US\$ 8,218) and in spite of its accelerated rate of growth, problems of access to food may still affect a significant part of the population, since the rate of unemployment of the labour force was as high as 17.1% in 1984. A National Health Survey held in 1980 as compared with data of 1969 and 1975 showed a marked improvement in the nutritional status of pre-school children, since the percentage of malnourished declined from 17.5 to 10.2 and to 8.8 in 1981; nevertheless, low birth-weight babies and retardation of growth were still a significant problem. Another serious problem among school children, but particularly among adults, was obesity, since around 16% of males and 38% of females are obese, especially in the 35-49 and 50-64 age groups. Another problem revealed by the Survey was a marked decline in breast-feeding, which dropped from 52% at six months in 1964 to 17% in 1981.

(c) External vulnerability of the national food system

During the period 1980 to 1984, the share of food imports in the total cost of imports increased from 10.7% to 12.1%; but the volumes and the nominal current values changed only marginally. The main categories of imports were meat and meat preparations, dairy products, cereals and cereal preparations, fruits, vegetables and livestock feed ingredients. During 1984, the major food supplying countries were the CARICOM countries, 11.3%, USA 41.9%, Canada 12.5%, Australia 6.3% and New Zealand 6.9% by value.

With respect to local production, almost all of the required inputs such as machinery and equipment, spare parts, agricultural chemicals, seeds and a large part of the fuel continue to be imported.

(d) Public policy

The government has traditionally maintained minimal direct involvement in production and in the commercial aspects of the food and agriculture sector, believing that private enterprise can perform such services more efficiently. This allows the public sector to concentrate on regulatory mechanisms, administration of incentives support services and infrastructural development financed by the public sector.

The government's stated objectives for the food and agricultural sector in the Barbados Development Plan for 1983-1988 place priority on measures designed to:

- (a) Increase agricultural export earnings and reduce food imports;
- (b) Stabilize and where possible create employment opportunities in the agricultural sector;
- (c) Improve farm incomes;
- (d) Increase domestic food production and at the same time ensure that nutritional requirements are satisfied;
- (e) Promote the conservation and more efficient use of natural resources and other production inputs; and
- (f) Increase the capacity and efficiency of public sector agricultural support services.

The strategy to achieve the above objectives includes:

- (a) Rationalization of the sugar industry and concurrent programmes to increase domestic food production;
- (b) Production programmes supported by the implementation of import substitution policies such as pricing, import levies and incentives to develop agro-processing linked to the primary production sector;
- (c) Support for and reorganization of the internal and external agricultural marketing services, the private sector being encouraged to take over an increasing share of the marketing operations; and
- (d) Improvements in the national agricultural extension service, agricultural research and agricultural information with particular attention to collection and analysis of agricultural data for use in development planning.

2. Guyana

(a) Organization of the food and agriculture system

Agriculture is the largest productive sector in Guyana's economy, contributing an average of 22% to GDP during the period 1970 to 1984. Rice and sugar are the most important commodities, employing some 20% of the total labour force and earning 40-60% of the foreign exchange. These two commodities are also important users of foreign exchange to purchase machinery, chemicals, fuels and other production inputs.

Sugar production contributes about 15% of GDP and earns 35% of the national foreign exchange. About 80-85% of the sugar cane is produced on large state-owned estates. Rice is the largest user of developed agricultural land (90,000 ha.) and is predominantly a small-holder private enterprise activity involving some 15,000 farm families.

Other important food items include coconuts, palm oil, corn, pulses, peanuts, root and tuber crops, plantains, vegetables, citrus fruits, coffee and cocoa; non-food crops include tobacco and cotton.

The livestock subsector is characterized by beef production under extensive systems and by pigs and poultry. Milk production remains at low levels; there are relatively few dairy animals and milk production is increasing only slowly in response to the large demand over supply.

The fisheries sector comprises a commercial marine industry producing shrimp for export and fish for the domestic market; an artisanal marine subsector and an inland fisheries subsector.

Although a net food exporter, Guyana is not self-sufficient in food. Import policies have reduced the value of food imports from some 14.5% of total imports during the 1970s to 3.5% in 1983.

The structure of the food sector in Guyana contrasts strongly with that of the other English-speaking Caribbean countries in that Guyana is a net food exporter. The country is nearing self-sufficiency by consuming what it produces, whereas the other countries show typically high levels of import dependence. The main food commodities which are now imported include edible oil, salt and powdered milk.

(b) External vulnerability of the national food systems

The absence of recent quantitative information hampers an assessment of the size of food access problems that characterize the population of Guyana. Neither the plans of the Food Consumption Survey of 1981 nor those of the Consumer Expenditure Survey of 1983 could be completed owing doubtless to financial restrictions. A study on malnutrition in pre-school children conducted each year during the triennium 1974-1976 revealed that only 55% of children between 0 and 59 months were in a normal condition, with 24% showing first grade malnutrition and close on 11% showing second and third grade malnutrition.

(c) Strategies to improve national food security

The national strategy to improve food security recognizes the need to increase foreign exchange earnings for further development of the food and agricultural sector and at the same time to finance imports of nutritionally essential items for which local production capacity is limited or lacking.

Emphasis is placed on improving services and the implementation of policies to facilitate the application of improved technology designed to increase production, promote agricultural diversification and agro-processing, reduce post-harvest losses and achieve cost efficiencies.

Import substitution is to be pursued and measures taken to utilize production capacity. Production programmes are geared to increase the supply of food legumes, rice growing is expected to increase from 100,000 to 133,000 hectares and production from 200,000 to 290,000 tons in 1989. Milk, sugar, cassava, edible oil and vegetables are also identified for immediate output promotion.

In view of Guyana's substantial marine fishery resource and potential to develop inland fisheries, specific supporting policies have been developed for the fisheries sector. These policies include assessment of marine resources to establish controls over the volume of catch and periods of fishing, provide increased support for training, improvements in physical infrastructure, assistance to the artisanal fisheries subsector and a programme to use existing inland water resources to develop aquaculture.

Specific measures being taken to implement the above policies include:

- (a) Water control projects to improve rice production capacity;
- (b) Allocation of foreign exchange to increase the availability of crucial production inputs such as machinery and equipment, spare parts, agricultural chemicals, fuel and packaging materials;
- (c) Review of internal commodity pricing policies as an incentive to producers and at the same time a review of consumer prices to ensure access to food for all sectors of the population;
- (d) Strengthening of the key institutions; and
- (e) Support services with particular attention to the extension services, marketing, monitoring production to develop early warning systems with respect to food supply, and the development of agricultural data systems to record, analyse and make available current information on the performance of the food and agriculture sector.

3. Jamaica

The contribution of agriculture to the Gross Domestic Product (GDP) averaged around 8% for the period 1980/1983; which, as expected, shows a declining tendency since the corresponding percentage during 1960/1969 was nearly 10%. Its contribution to foreign exchange earnings is significantly greater and reached around 15% (1982) of which more than half was derived from sugar and rum exports.

Agriculture is the dominant sector in providing employment with 35% of the labour force engaged in this sector, as compared with only 11% for manufacturing. But both remuneration for agricultural workers and the level of productivity is much lower in agriculture than in other sectors: productivity and remuneration are around seven times higher in manufacturing and 26 times higher in mining than in agriculture.

(a) Structure of the food and agriculture sector

The general feature of the structural organization of the food and agricultural sector is its high degree of concentration. As regards land tenure almost 82% of farm units are below 5 acres and one third even below one acre; at the other extreme, less than 2% of the holdings are over 25 acres and control generally two-thirds of the land. There seems to be a tendency towards greater concentration since the number of small farms has increased at a greater pace than the area they control and farming units above 100 acres have significantly increased their share of total land. Furthermore, it is generally believed that the majority of small farmers do not have clear legal titles to their lands, although most of these "untitled" farmers are owners of their land rather than tenants of illegal squatters.

The development of the agro-industrial subsector, besides that of sugar processing -which had its peak in 1965 and has declined substantially since then- was initially hampered by a lack of domestic food crops to provide raw material sources. Until the early seventies the agro-industrial sector consisted primarily of some industries engaged in the processing and packaging of export crops such as sugar, bananas, coffee, citrus fruits, cocoa and copra. Quantitative restrictions and other import-substitution promotion policies, stimulated domestic production, which doubled over the period 1971-1978. A survey of the subsector reported that between 22% and 54% of the total value of raw material purchased by this subsector was imported; for the average firm nearly 43% of the raw material used is imported. Inadequate supplies of imported raw material and insufficient availability of raw material from domestic agriculture were found to be the major constraints to the development of this subsector. To a large extent, a combination of problems of inventory management and the absence of any procurement purchasing plan enabling agro-industrial firms to develop a continuous and adequate supply relationship with local farmers is the main cause for the problem of supply of raw material.

In relation to marketing it can be said that the prime mover in the domestic market is a group of individual operators called "higglers" who distribute usually small quantities to local markets scattered all over the island. Small farmers, because of their dispersed location and because they operate as individuals, are virtually at the mercy of the "higglers" who may or may not provide them with any assistance. It must be mentioned that the "higgler" system is very sensitive to market demands.

One large public market in the Kingston area is used as a base for price setting and there is a complex and large variety of arrangements and marketing margins. Despite the very high marketing margins (they can be as high as 50%) attempts to substitute the "higgler" network were not very successful since this system has a mechanism for purely local distribution for highly perishable products extremely difficult to beat on cost. Nevertheless, in an effort to improve the efficiency of marketing domestic agricultural products, the Government has recently established a producer market organization whose function will be to provide an organized system linking production with the final consumer.

As regards the composition of output, there has been a constant growth of the domestic food sector in contrast with the declining performance of the traditional export sector (between 1970-1979 land under export crops declined by 27% while that under domestic food crops increased by more than 50%). To a large extent these tendencies are the result of policies of import substitution that came into full effect in 1974 and led to increases in domestic demand and higher domestic food prices from that year onwards.

(b) Consumption patterns and nutritional status

In the post-war period, consumption of cereals, meat, fish, dairy products, fruits, vegetables and sugar steadily increased, while legumes, eggs, fats and oils remained static. As in many other places, cereals (in particular, wheat), emerged as the greatest single source of both protein and energy. This pattern of consumption implies a heavy dependence on imported food which amounts to 25% of the energy intake.

Per capita availability of energy and protein increased from 2 250 k/cal and 57.9 grammes of protein per day in 1966 to 2 537 k/cal and 68.4 grammes of protein per day in 1970. From the 1970s onwards, average availability has been quite stable, although, surprisingly, the percentage of energy provided by vegetables has slightly increased, owing most probably to the country's ability to provide through imports and local production this kind of food at reduced prices and not to changes in consumer performance, since the demand for animal products in all segments of the population has demonstrated a highly positive value in contrast with the demand for root crops.

Studies on income and consumption patterns show, as was expected, changes in the relative importance of different sources of energy and income increases. In this sense, brown sugar occupies the first place in low-income groups, this being in the eleventh place for the upper-income groups which had rice as their main staple. This study further showed big differences in the quantity of food consumed and therefore the ability of the groups to obtain the recommended dietary allowances. The highest-income group consumed two and a half times the recommended allowance for proteins while the lowest income groups consumed only 40% of the level. A more recent study also showed some degree of inadequacy in energy consumption for the 25% of the lower-income population.

A National Health Status Survey conducted in 1985 revealed that 14.6% of pre-school children were moderately to severely malnourished, coinciding with the findings of a survey conducted in 1978. All these studies demonstrated that malnutrition was most common in rural Jamaica (25.3%), and, as expected, in households of the unemployed.

It is worth noticing that one of the nutrition surveys found distinct patterns in the admission rate for malnutrition during 1967-1976; the highest coinciding with the dislocation that followed oil price increases and the lower ones coinciding with political campaigning in poor areas, owing to the "distribution of political largesse".

Estimates of the problems of food access, based on income and the cost of a recommended diet, put the figure of those nutritionally at risk as high as 70%. This seems to be an overestimation since there is little evidence of overt malnutrition, although the figure can be taken as referring to those vulnerable to negative changes in the economic situation. In this respect, account should be taken of the fact that general unemployment in 1984 was as high as 25% of the labour force.

(c) Public policy

The problem of land concentration has long been considered an obstacle, and although several programmes by different governments were designed to tackle it, land in Jamaica remains highly concentrated.

Subsidy programmes have been widespread but have often been criticized for not reaching the desired beneficiaries and having little impact on food production.

In recent years various types of assistance have been given to the food and agriculture sector including direct food and agricultural inputs, finance and technical aid. Public policies in support of the food and agriculture sector also include facilitating small farmer access to productive land, subsidies in support of production inputs, the setting up of marketing facilities, tax incentives and remission of import duties, and infrastructure investment loans and subsidies. At the same time price controls, designed to keep food prices low, the high cost of marketing services and praedial larceny were identified as disincentives.

In addition, recent programmes have been implemented to reduce direct government involvement in the agriculture sector and to create opportunities for increased involvement by the private sector. It is within this framework that a special programme was launched in 1983 (Agro 21) to mobilize foreign investment for large-scale and technology intensive development of agricultural resources. The main objectives are: to fully utilize available production resources, expand employment in agriculture, integrate small farmers into new opportunities and make modern technology available to improve their production, increase agricultural export earnings, increase the production of present crops, introduce new crops, and reduce food dependence by increasing domestic food production and, where possible, by substituting indigenous crops for imported commodities.

The Government of Jamaica has also formulated a National Agricultural and Food Marketing Policy whose objectives are to increase food production, to achieve equitable distribution of the end value of the food produced, to maintain price stability to producers and consumers, to encourage investment in agricultural production and marketing systems, to create employment opportunities, to maximize utilization of primary products and increase foreign exchange earnings.

The paper noted that "there seems to be a clear statement that policy should be focused on developing rural small farming", that such farmers produce the major part of domestic food crops and that the dual policy of increasing farming income while holding down consumer prices can be achieved only by strong programmes to increase the productivity and production of small farmers and improve services, in particular marketing.

(d) Guidelines for an alternative programme

At the risk of over-simplification, it would seem that the development of a food security programme must have the following objectives: increasing the income of rural residents; providing increased opportunities for productive employment; increasing the supply of food while holding down costs; increasing foreign exchange earnings through growth of exports; decreasing foreign exchange expenditure through import substitution; and strengthening the productive resource base of the Jamaican agricultural sector.

The policy dilemma that arises is that on the one hand farmers respond positively to price incentives and, on the other hand, there is a limited ability of the rural population to pay increased prices for food. The issue, therefore, is to increase the supply of food while minimising cost. There seems to be a clear proposal for the focusing of policy on developing rural small farming in the Jamaican setting. It is these farmers who have, over the years, provided the major part of the domestically produced food. The twin objective of increasing prices for them whilst holding down prices to the consumer can only be achieved by improving the marketing of their products and providing public sector support through the conservation and efficient use of soil, water, credit and management resources. Structural reforms, technical change, as well as favourable pricing policies to farmers, are all necessary.

The strategy for achieving the objective of greater production and consumption involves an improvement in technology dissemination with a focus on solving the problems of hillside farmers.

4. The Organization of the Eastern Caribbean States

The seven small island states which comprise the Organization of Eastern Caribbean States ^{1/} (OECS) were considered as a unit. The OECS countries have a history of chronic difficulties with productivity, investment and mobilization of resources for economic development. Their economies are characterized by smallness, heavy external dependence, precarious financial positions and weak fiscal structures for exerting control over their internal economies; consequently, they are vulnerable to the impact of international inflation and recession. These countries also share the common problems of poorly developed food and agriculture systems, the need for clear definition of policies and the implementation of programmes to ensure national food security.

^{1/} Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Christopher/Nevis, Saint Lucia and Saint Vincent and the Grenadines. (The British Virgin Islands is an Associate Member but is not included in this study.)

Although sharing many common problems and attributes, the OECS countries also differ in a number of geographical characteristics; land area, resource endowment, population size, apparent economic potential and also the structure of their economies and the direction of economic development.

Among the import changes which have taken place during the last two decades, the following can be mentioned: The decline of export agriculture; the demise of sugar industry in all countries except Saint Christopher/Nevis; the dominant role of the banana industry in the Windward Islands; expanded production of domestic food crops and the growing importance of animal production for domestic market in some countries; and the decline of the large private estates which have been superseded by state-owned estates in some countries and the relative growth of small farming agriculture.

Although these changes have taken place, as recently as 1983 agricultural commodities accounted for 47.6 to 83.4% of the marketable exports of five of the OECS countries and contributed an average of 14.7 to 30.5% of total GDP during 1981-1983.

(a) Resources for food production

Although the use of resources to produce food for local use or for export may be important, experience has shown that cessation of production for export can cause the demise of an industry and the loss to the internal economy of both the main commodity and its by-products, as in the case of sugar and cotton. It was also noted that whereas the banana production is organized for export, the fruit makes a significant contribution to national food supply and is also an important source of carbohydrate feed for domestic pig production.

(b) Factors influencing food security

Land tenure and land use patterns, including the alienation of prime agricultural land for other uses, poorly developed infrastructure, the virtual absence of conservation and development of water resources for agricultural use, poorly developed agro-processing capacity and limited facilities for holding significant quantities of local produce under controlled storage, increase the apparent risks associated with investment in primary production and so place constraints on food and agricultural production.

The small size of the OECS member countries and their limited financial resources were identified as important factors placing constraints on the development of effective national agricultural support systems and services. The apparent potential for complementary production programmes, inter-country trade and the sharing of common services to supply scarce technical and managerial skills which individual countries seem unable to develop or to retain, remains to be realized.

Data relating to trends in food demand and consumption patterns were not available but national food balance sheets for 1979-1981 indicate that aggregate food availability may not be critical with respect to the average food needs of the total population. However, the lack of information relating to apparent imbalances in access to food in different areas of each country or by various socio-economic groups places serious constraints on analysis of the food security status of the OECS countries.

(c) Public policy toward food security

During the last two decades, all OECS member countries have, at some time, issued general policy statements placing emphasis on the redevelopment and diversification of the agricultural sector in order to earn foreign exchange and to increase national food production. The absence of clearly defined food and agriculture policies within a national framework has created uncertainty in the agricultural sector of some OECS countries. Land use and land development policies to minimize alienation of agricultural lands for other, irreversible uses, guidelines concerning resource ownership, land tenure, and public sector intervention in production and commercial areas could help to create a framework for the long-term investment required to develop the agricultural sector.

Public sector participation in the production, pricing and distribution of food is common to the OECS countries. The objective is to increase food supply, achieve an element of income redistribution by improving access to food by groups which are at risk.

Typically, the governments of the OECS countries seek to stimulate agricultural production through indirect subsidies such as concessionary import levies on production inputs and making loans through public sector agencies at interest rates lower than the going commercial rate. Despite such efforts, substantial areas of previously cultivated lands remain idle or under-utilized as rough grazing.

It is likely that the capacity to import food will continue to be a key element in a viable food system for the OECS countries in the foreseeable future.

Possible co-operation programmes include food information networks; co-ordinating food imports possibly through joint procurement; negotiating jointly for long-term supply contracts for both consumer products and production inputs; securing access to global food support schemes and/or concessionary finance to purchase staple food imports, and the establishment of an OECS mutual support system which could respond to immediate emergency needs and which offers scope to develop longer-term measures required for the sustained growth and development of the national food and agriculture systems.

5. Trinidad and Tobago

(a) Land distribution pattern

A comparison of data between the 1963 Agricultural Census and that of 1982 shows that the land distribution pattern has not really improved and might even have got worse in some respects. Holdings under 2 hectares represented nearly 53% of all holdings and accounted for less than 9% of the relevant land area; at the other end of the scale, although there has been some improvement in the distribution pattern, holdings of 50 hectares or more account for less than 1% of the number of holdings but for more than one-third of the land area. This high degree of concentration is further complicated by the extent of squatting which can be qualified as "phenomenal" since a rough estimate in some countries reported that the area under squatting was around one-third of the total area cultivated in food and vegetable crops. Furthermore the level of abandonment or semi-abandonment reported for farmland is also a matter of serious concern since in the early 1970s a survey indicated that almost one-third of all land distributed had less than 20% cultivated and only 17% of the holdings had 75% or more under cultivation.

(b) Performance of the agricultural sector

During the fifties agriculture showed a more than satisfactory rate of growth (4.2%), which from 1960 began a sharp decline, the export sector, based on traditional crops, being the major contributor to this decline. In the context of the economic boom fuelled by petroleum in 1974, which gave rise to an average annual growth rate for the economy of 8% per year (1975-1980), agriculture's contribution to total GDP decreased from 6% in 1970 to 2.6% in 1983. Nevertheless, within this general picture there was a rising contribution of domestic agriculture: significant increases occurred in milk, eggs, pork and poultry production, root crops, rice and green vegetables. However, there were also decreases in beef, copra, bananas and plantains.

(c) Food imports and dependence

During the period 1973-1981 the large earnings obtained from petroleum allowed the country to finance expansion in consumer spending and this created large increases in the effective demand for food. Much of this increased demand was met by imported supplies and in consequence, external dependence for food increased sharply in the last decade; hence, in 1982, import dependence for cereals and grains was 99.6%; roots and starches, nearly 74%; sugar and syrups, close on 77%; meat and meat products, around 34%; milk and milk products, 83%; fats and oils, nearly 50% and fruits and fruit juices, more than 96%.

It should be noted that, except for wheat and items imported largely for animal feed (corn, soybean meal), the control of food items from external sources is strictly in the hands of private enterprise. There is no real intervention by Government and there are no obligations on the part of importers to meet specific requirements or to act according to the direction of Government if a crisis situation threatens. There is therefore an almost total dependence on various importers for many basic items required by the country.

(d) Employment in agriculture

Agriculture's share in the total labour force has declined steadily through the past decade from 23.5% in 1970 to 10.1% in 1981. Unemployment rates that increased from an average of 12.5% in 1970 to a peak of 15% in 1975 declined later to 10% in 1981. However, recent data (1983) show that the highest levels of unemployment are in agricultural areas, the highest figure being that for Tobago (20%).

(e) Agriculture and food subsidies

Increased earnings by the petroleum sector allowed large income transfers to the food and agriculture sector in the form of incentives, subsidies and support services which were introduced to increase production and access to food by all sectors of the population. Although access to food was greatly increased, efforts to raise production were less successful, particularly with respect to the crop sector whose output tends to show marked fluctuations. The same applies to the wide-ranging programme of incentives and to the development of infrastructure for the fishing industry that was estimated to have increased catches only marginally during the period 1975-1983. In fact, import dependence for fish products has remained at very high levels; the volume of imports increased by some 83% during 1976-1981 and has remained relatively constant since that time.

As from 1984, before the announcement of major changes in the 1985 budget speech, input subsidies included land preparation, fertilizers, chemicals, spraying equipment, machinery and other equipment, orchard establishment, ground limestone, livestock housing, animal feed, vehicles, drying facilities, farm roads, bridges and culverts, fencing, molasses, jiffy pellets and pots, bee-keeping equipment, and also agriculture credit from the Agriculture Development Bank at highly subsidized rates (3% and 6.5%). Government expenditure on the incentive programmes increased at the incredible cumulative annual rate of more than 39% per year from 1966 to 1983, reaching an estimated 62.5 million that, because of reduced availability of funding, dropped to 26.1 million the following year. An evaluation made in 1982 concluded that the subsidy programme has a bias against domestic agriculture, stating that the "structure of the food and agriculture subsidy programme is unsatisfactory in terms of agricultural transformation or reduction of insecurity in food supplies. The agricultural segment of the programme contains the most unsatisfactory elements ... the entire subsidy scheme is devoted to export agriculture, sugar, cocoa and coffee accounting for approximately 64% of the total food and agricultural subsidy expenditure in 1981 ... A substantial portion (13.4%) of the total subsidy is spent on consumer items such as rice, flour,

cooking oil, meat and poultry meat. Therefore, domestic agriculture receives only approximately one-fourth of government subsidy on food and agriculture. Distribution of the subsidy within the domestic agriculture subsector also leaves much to be desired; poultry and other livestock feed accounts for only 18% of the total subsidy expenditure or over 70% of the allocation to domestic agriculture."

Mention should finally be made of programmes meant to increase the level of nutrition and the level of access to basic food by the population. One of them is the School Nutrition Programme which provided meals for nearly 36% of the primary school population and mild drinks for some 40% of this population. Most of the expenditure on these programmes (more than two-thirds) is devoted to local purchases and thus some degree of linkage through arrangements for contract deliveries of vegetables and fruits is part of the programme. The second programme is the Food Stamp Programme (referred as Food Subsidy since 1983), which has increased seven-fold between its initial year and 1984. While the intention is to facilitate the purchase of basic foodstuffs there is no real control or means of monitoring the actual results, since cash payments are made available to the recipient.

(f) Marketing

A central marketing agency was created in 1966 as a semi-autonomous body and the main one in charge of agricultural marketing with ambitious and wide-ranging responsibilities. Nevertheless, the evaluations made in 1978 and in 1985 indicate the persistence of many deficiencies, including: inadequate facilities for grading, packaging, storage and transportation; ineffective price support mechanisms; limited market intelligence; minimal promotion of the consumption of locally-produced food; civil servants' working conditions and hours, etc. Because of all these problems the central marketing agency never fulfilled the role indicated in its mandate and at best it is estimated that the agency influences only around 4% of national production, primarily fresh vegetables.

The public market structure is composed of one central wholesale and retail market in the capital city and 18 retail markets located in the major population centres. A recent IICA study made the following evaluation: "The rate of deterioration of these markets has far exceeded any attempts at modernization by the local government ... only the central market in Port of Spain has access to cold storage and chilled boxes for fish and meat ... facilities for such activities as washing, grading and weighing are conspicuously lacking ... most of the markets suffer from limited space ... competition from weekend vendors, who occupy pavement space immediately outside the market, forces the regular retailers to temporarily abandon their indoor stalls, thus adding to the general traffic congestion..."

In relation to the wholesaling and retailing of domestic agricultural produce the IICA study indicated: "First, produce is considered to be of best quality and least expensive at the roadside stands where it is normally retailed by members of the producer's family or the producer himself ... It is also high quality at the street corner retailers, although the price may be significantly higher, owing to the fact that much of it is purchased from public market wholesalers. The quality of produce is considered lowest at the public market, probably because of the tendency to carry over produce for several days. In spite of the many limitations the domestic market is characterized as a dynamic, responsive system thus testifying to the abilities of the main participants to adjust rapidly to consumer demands."

(g) Agro-processing

The agro-processing industry in Trinidad and Tobago is quite extensive, involving numerous plants handling a wide range of products. The negative side of this picture, however, is that almost the total processing activity depends on imported raw material. The processing of sugar and its by-products, including alcohol distillation, as well as poultry and poultry products and some fish, is based on domestic primary production. The remainder of the agro-processing activities is essentially the bottling and canning of imported materials. Constraints on the development of agro-industries based on indigenous raw material are similar to those experienced by all the Caribbean countries: inadequacy in the supply of raw materials, their high cost relative to imports and logistical problems of consolidation and delivery of supplies to the processor.

Over the past five years some areas of the agro-processing sector have expanded considerably: output of meat, poultry and fish processing increased by 147%, the processing of animal feeds increased by 233%, whereas in the dairy products category there was a 58% decline. There was also a fall in the feeds and vegetable group except for citrus fruits, which increased by nearly 24%.

In relation to agro-industry, a report by a Committee appointed by the Cabinet to make recommendations for the food-processing industry (June, 1976) mentioned the following problems as perceived by processors: uncertainty of government policy and plans for the sector, unreliability and shortages of supply, fluctuating prices, problems with the central market agency, difficulties in reaching optimum scales of operation, etc. The problems expressed by the farmers related to: poor marketing arrangements, controlled (unremunerative) prices, high production and transport costs, unavailability and/or high cost of agricultural labour, praedial larceny, transportation problems, lack of involvement or consultation in planning production programmes and mutual distrust between farmers and processors. Other important problems were the lack of trained personnel and little technological capacity for identifying, locating and installing food-processing machinery and equipment.

(h) Food consumption and nutritional status of the population

Trinidad and Tobago, like many other Caribbean territories, is not in a critical situation with respect to the availability of food in the general sense. In fact for the 1969-1981 period, Trinidad and Tobago had a 26% excess of energy and nearly a 76% excess of protein. Only Barbados was in a better position according to data for 12 countries. In spite of this level of aggregate sufficiency, available data for Trinidad and Tobago in 1977 indicated that 40% of households did not meet their energy requirements and 31% of households had a protein deficiency.

Following the oil boom of the mid-1970s, there was a general improvement in levels of income, income distribution and greater access to food. Towards the end of this period (1978-1982) average weekly earnings in real terms grew by 6%, compared with 2% in 1973-1979 and, for production and ancillary workers, the rate of increase was 8%, or four times that of the earlier period (1973-1977).

IV. POLICIES AND ACTIONS OF REGIONAL ORGANIZATIONS

1. The Caribbean Agricultural Research and Development Institute

The research policy and programmes of the Caribbean Agricultural Research and Development Institute (CARDI) are designed to support the CARICOM Regional Food and Nutrition Policy which seeks to improve the food security status of the CARICOM countries. The objectives of CARDI programmes are to expand food productions, increase the proportion of local foods in national diets, conserve foreign exchange and increase available food reserves. CARDI places priority on food commodities for internal use and the reduction of post-harvest losses as an important strategy to increase domestic food availability.

Improvements in the national herds of cattle, sheep and goats; pasture improvement; development of animal rations using local ingredients; improved systems for meat and milk production; the development of improved production systems for small farmers in the Eastern Caribbean as well as soil management problems, were identified as the focal points of the CARDI work programme.

2. University of the West Indies

The University of the West Indies (UWI) performs three main functions: training, research and outreach. The University co-operates with other Caribbean institutions whose activities affect food policy and the analysis of the food and agriculture sector. Attention is given to monitoring and analysing food imports, taking into consideration supply, foreign exchange requirements, income, employment, etc.

The Department of Agricultural Economics is developing a linear programming model in efforts to determine how best to allocate and use production resources to meet food needs in the CARICOM region. However, improvements in the available data base and refinements of the model are prerequisites for the guidance of production recommendations.

3. The Caribbean Common Market

The Caribbean Common Market (CARICOM) Council of Ministers provides a forum for the discussion and design of the general framework and scope of co-operation among the member countries of CARICOM.^{1/} These countries place high priority on increasing

^{1/} Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Christopher/Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago.

production and trade in primary agricultural products and livestock, the development of agro-industrial capacity with particular reference to the food sector and the development of a wide range of support services, which are designed within a complementary, multi-island framework.

The rules of the Common Market exclude the imposition of restrictions or barriers to trade among member states; import-licencing regimes, however, have been maintained in most CARICOM countries. Recently, a common protective policy to promote and facilitate free trade in primary agricultural products and livestock among CARICOM countries, and to provide protection against unfair competition from third countries, has been agreed to by CARICOM governments. When fully implemented, the common protective policy is expected to help to increase confidence to invest in the food and agricultural sector and gradually to improve the capacity of the CARICOM countries to produce for their own food and nutrition needs.

V. MAIN TOPICS RAISED DURING THE DEBATES

The main issues on which the discussion focused can be divided into six topics:

1. Private agents and the state in the functioning of the food system

Several problems were raised by the participants who called particular attention to the problem of state control over some key regulatory mechanisms: for example, stocks of critical components of the basic diet, since in most cases the level of available stocks is determined and controlled by private agents and this was considered to have potentially harmful consequences should national food supplies become critical.

The participants felt that the state lacked efficient mechanisms for an adequate intervention in the functioning of the food system in areas related to trading, storage and distribution. Some mentioned that in most cases in which marketing boards or state enterprises intervened directly, bureaucratic biases arose. Notwithstanding such problems, most participants felt that it was more a problem of reorganizing than of abandoning direct state participation in some critical areas of the economy.

Concern was expressed about the fragmentation of state action in matters of food policy among different ministries and agencies. Conflicting criteria and priority ratings are often employed by different public agencies to arrive at decisions concerning a given component of the food system. Such problems affect not only public sector programmes but also reduce the efficacy with which private agents can respond to the needs of the food system. In consequence, the participants recognized the need for better co-ordination and co-operation among public agencies and also between the public and private sectors to improve the functioning of the national food systems.

Several aspects of price policy were considered. Particular attention was given to the subject of subsidies. Some participants indicated the existence of a bias in favour of export-oriented agriculture. In this respect, production for the domestic market received much less stimulus. Many participants felt that it was necessary to reverse this trend if a greater degree of autonomy in food production were to be achieved. Comments were made on problems concerning the management of subsidies, in that, too often, some criteria that are applied are not necessarily consistent with social priorities. In some cases, subsidies were provided to the same producers by different agencies, distorting resource allocation and leading, among other things, to the over-utilization of subsidised inputs.

There was a general consensus that price policy is a key element of food policy and that all producers, even the smallest, are price responsive. Wide variations in the efficient use of subsidies and the adverse effect which price controls usually exert on production point to the need for a review of policies. The apparent conflict between the desire to increase the income of farmers and to keep consumer prices stable will have to be solved.

2. Implications of the financial and foreign exchange crisis
on the functioning of the food system

A dominant concern among the participants was the foreseeable consequences of a foreign exchange crisis that was developing in all the countries of the region. In this respect, some of the participants indicated that, even in those cases in which critical problems of availability and access did not exist in the past, there is now evidence that they are beginning to emerge. This situation is particularly serious for these countries, with the exception of Guyana which is facing problems of a different kind, since external dependence for basic national foods is extremely high.

In terms of access, increasing levels of unemployment and difficulties in reactivating productive structures so heavily dependent on imported inputs place a greater burden on food assistance programmes already in force in some countries, both because an increasing number of families are in need and because of the budgetary restrictions imposed by the crisis itself.

Some of the participants agreed that the crisis might have some elements of a blessing in disguise in the sense that the domestic production would have to be strengthened and stimulated. On the other hand, mention was made in the case of Guyana of the difficulties in maintaining the normal functioning of the existing productive structure owing to the shortages of spare parts and other critical inputs which must be imported.

3. Problems relating to the productive structure
of the food sector

Considerable discussion was devoted to problems in the area of land tenure, the prevalence of squatting, insecure forms of tenure and the smallness of plot sizes. It was suggested that part-time farming should be re-evaluated in terms of the efficient use of production resources, its contribution to national food production and also its potential role in increasing access to food for those persons who engage in this type of farming.

In the area of distribution, the role of the state and of private agents was discussed, particularly problems of organization of the multiplicity of private agents, for example, the 'higglers' in Jamaica.

Problems connected with storage capacity and the various kinds of storage needed were mentioned. Particular attention was given to the structure, organization and functioning of the agro-processing sector, its apparent weakness and high level of external dependence both at the national and regional levels. The under-utilization of agro-processing plants was mentioned as a common problem in many countries of the region. There was consensus that the strengthening of the agro-processing sector and the establishment of strong links with the primary production sector merit priority attention.

The small size of the markets involved was considered to be one of the main problems needing a more creative and original approach, since marketing is one of the most important constraints on production and general economic development in the countries of the region.

4. The international, regional and subregional environment
and its implications for the functioning
of the national food systems

Issues relating to regional and subregional co-operation recurred throughout the meeting. The need to recognize national food security policies as the basis for the development of regional and subregional policies was advocated. The view was expressed that the absence of strong regional policies lead to the tendency to place little emphasis on regional agreements in the food and agriculture sector while pursuing either national or bilateral policies divorced from them. Moreover, the apparent lack of complementation between the food production systems of many of the countries of the region was considered an obstacle to the development of meaningful regional food security agreements and programmes. However, some participants were of the opinion that there is scope for the development of complementary production programmes and in particular, special programmes to supply specific products and markets.

The participants considered that regional production projects could be developed to take advantage of the differential resource advantages of the various countries; for example, the land resources of Belize and Guyana and the marine resources of the contiguous exclusive economic zones of the Caribbean countries. Regional projects in the agro-industrial sector could be based on linkages with large-scale primary production projects where land resources were available or on complementary production at the national level and consolidation of output produced to agreed standards and subject to strict quality controls.

Reference was made to on-going regional programmes in a wide range of research disciplines: production technology, economic evaluation, sociology, nutrition and the transfer of technology to the productive sector. It was felt that areas such as institutional building and improvements in technological capacity might be advanced significantly if conducted as regional programmes although gestation periods might be prolonged.

Marketing was further discussed in terms of the possibilities of developing a regional organization to market selected crops and attention was drawn to the current activities of the Caribbean Agricultural Trading Company (CATCO), which is a regional -CARICOM- enterprise, in promoting both intra- and extra-regional trade in agricultural products and the handling of production inputs. However, there was general consensus on the need for further in-depth analysis and evaluation of the impediments to effective regional marketing, paying attention to the political and national interests, transportation, the organization of regional storage, etc.

The participants recognized a number of importance though not insurmountable obstacles to the implementation of regional projects. These included political and national interests, variations in the stage of economic development and technical capacity, apparent economic potential and also the structure of their economies and the direction of economic development.

5. Problems relating to data availability and analytical tools for the design of food policy

Concern over the limited range and reliability of the existing data on food production and consumption was expressed by many participants. Mention was made of the need to develop reliable food and agriculture information systems to provide necessary data for national policy design purposes and for the design of bilateral and regional agreements.

Some information was given in relation to a linear programming model being developed by the Department of Agricultural Economics of the University of the West Indies. Without prejudice to the interest of this kind of exercise, words of caution were given concerning the use of this type of model for policy-making at its actual stage of development.

The participants commended the initiative taken by ECLAC and FAO in convening the Workshop which came at an opportune time, since most of the English-speaking Caribbean countries were beginning to address the serious problem of food security. They agreed that the Workshop had made a significant contribution in identifying and focusing attention on a number of issues crucial to the food system of the countries involved.

6. Follow-up

There was full agreement that follow-up action should be taken to provide in-depth information and analysis of national food and agriculture systems and also to formulate specific action programmes to improve these systems, taking into account not only the national capacity of each country but also the potential impact of regional linkages. The participants suggested that the studies could, inter alia:

(a) Identify and describe the existing food and agriculture systems of the individual countries, giving particular attention to the wide spectrum of policies, economic measures, social structures and ecological conditions determining the structure and organization of the national food and agriculture systems and ultimately the food security of the nation and its people.

(b) Analyse systematically the factors which limit or facilitate development of the food and agriculture system and its capacity to increase food supplies, recognizing interrelationships between components of the national systems, inter-country linkages and the complementarities between short-term and longer-term factors within each system.

(c) Give special attention to the capacity of the food and agriculture systems to ensure food security during periods of stress or crisis which may be triggered by internal factors or problems with crucial links with external supplies, by natural disasters or by economic recession;

(d) Identify the important elements relevant to the formulation of policies to improve national food systems both at the national and regional levels, giving attention to strengthening existing policies and also to new policies for the benefit of disadvantaged socio-economic groups;

(e) Identify and document action programmes to achieve the recommended policy objectives.

The participants further recommended that ECLAC/FAO should carry forward the initiatives taken by convening this Workshop, and that priority should be given to completing the additional field research to supplement the case studies prepared for this Workshop in order to document comprehensive national food policies and programmes for the English-speaking Caribbean.

Finally, the participants urged that on completion of the studies, ECLAC/FAO should convene national workshops to discuss the recommended policies and programmes and to obtain comment and feedback from all relevant national agencies concerned with the food and agricultural system prior to preparation of the final recommendations.

ANNEX 1

WORKSHOP ON FOOD SYSTEMS AND FOOD POLICY ANALYSIS
Port of Spain, 16-18 December 1985

List of documents

FS/1	Draft Agenda
FS/2	List of Participants
FS/3	List of Documents
FS/WP/1	Food Security in the Member Countries of the Organization of Eastern Caribbean States, prepared by Carle J. Walter
FS/WP/2	Food Systems in the Caribbean - The Guyana Case Study - prepared by Patricia Bender
FS/WP/3	The National Food System of Barbados, prepared by Eric Armstrong
FS/WP/4	Food Security in Trinidad and Tobago, prepared by E. Patrick Alleyne
FS/WP/5	A note on the Agricultural Sector of Belize, prepared by Eric Armstrong
FS/WP/6	Food Security for the Caribbean, Conceptual Presentation - A Basis for Discussion - prepared by E. Patrick Alleyne
FS/WP/7	Food Systems/Food Security/Food Policy in Jamaica, prepared by Keith L. Roache
FS/WP/8	Analysis and Design of Food Policy: Guidelines for a Systematic Approach, prepared by the Joint ECLAC/FAO Agriculture Division, Santiago, Chile
FS/WP/9	Nutritional Aspects in the Formulation of Food Policy, prepared by Curtis E. McIntosh

ANNEX 2

WORKSHOP ON FOOD SYSTEMS AND FOOD POLICY ANALYSIS

16-18 December, Port of Spain, Trinidad

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