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Interregional Co-operation between
Pacific and Caribbean Island Countries
in the Development of Small- and
Medium-Scale Agro-Industries
(live marine resources and tropical fruits)
23 September-7 October 1987

WORKSHOP-CUM-STUDY TOUR*

(Jamaica, Trinidad and Tobago, Barbados, St. Lucia)

Report**

*Organized by the United Nations Industrial Development Organization (UNIDO) and supported by the Special Unit for Technical Co-operation among Developing Countries (TCDC) of the United Nations Development Programme (UNDP).

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PREFACE

The recent decades have witnessed a variety of approaches within the Pacific and Caribbean island economies for promoting economic and industrial development. The diversity arises from the various countries' distinctiveness in exploiting similar indigenous resource endowments. The number of States achieving independence has increased and each State has reasserted its distinctiveness in tackling a range of development problems and constraints in order to meet the aspirations of the island peoples.

The existence of similar economic, geographic and climatic conditions in both regions is a good base for developing an interchange of experience in the area of industrial diversification. Novel approaches need to be devised for technical assistance with a focus on realistic approaches resulting from practical experience of developing island countries with similar economic and industrial characteristics.

Recognizing the need for broadening and diversifying the industrial base of the Pacific and the Caribbean island countries, UNIDO therefore endeavours to promote co-operation between the two regions in the field of indigenous resource-based industrialization. A proposal for such co-operation in the areas of industrial planning, agro-based projects, science and technology, institutional arrangements and cottage and handicraft industries was endorsed by the 6th Meeting of the Commonwealth Heads of Governments Regional Meeting (CHOGRM) Working Group on Industry (held in Port Vila, Vanuatu, 27 - 29 July 1985).

UNIDO was subsequently requested to organise a visit for industry representatives of Pacific member countries of CHOGRM to Caribbean countries for an exchange of information and experience on industrial development issues with emphasis on the processing of natural resources, particularly marine food resources, tropical fruits and other agro-food industries.

The objectives were conceived of as follows:

(a) Development Objectives:

- (i) To strengthen and diversify the agro-based and marine resource-based industries of the Caribbean and Pacific regions;
- (ii) To support existing and planned projects in the selected product areas through exchange of information and know-how with similar projects/enterprises in both regions;
- (iii) To assist key decision-makers, particularly those concerned with public sector resource allocation, as well as private sector industrialists/entrepreneurs, in gaining better understanding of the industrialization process in the selected product areas;
- (iv) To initiate inter-regional co-operation programmes and related activities in the selected product areas and establish appropriate mechanisms and channels of communication for future contacts and co-operation.

(b) Immediate Objectives:

- (i) To expose participants to up-to-date experience in both regions with regard to the selected product areas;
- (ii) To identify obstacles and constraints impeding industrial development projects in the selected product areas;
- (iii) To identify sources of expertise (in terms of production experience) within both regions, and steps towards establishing channels of access to such expertise;
- (iv) To exchange views and practical experience among industrialists and decision makers/planners from the two regions with similar interests and commercial experience;
- (v) To expose visiting industrialists and decision makers/planners from the Pacific area to on-going projects in the Caribbean area; study project development and implementation in the utilization of scarce resources (especially skilled manpower); and identify the role of official agencies and institutions in supporting/facilitating such projects.

The Programme of Activities was carried out in the form of a workshop-cum-study tour, with the following itinerary and dates: Jamaica 23 - 27 September 1987, Trinidad and Tobago 27 - 30 September 1987, Barbados 30 September - 4 October 1987, St. Lucia 4 - 7 October 1987.

The Programme of the Workshop consisted of the following agenda items:

- Opening Session (first day of programme): The Workshop was opened by the UNDP Resident Representative in Jamaica Ms. B. McSweeney. Statements were made by UNIDO and local representatives (introduction of issues paper; introduction by counterpart representatives and briefing on potential projects to be visited);
- Round-table discussions during the visits to individual countries, institutions, enterprises and projects;
- Closing Session (last day of programme): Summary of individual discussions and conclusions for follow-up and future co-operation.

The Study Tour Programme included visits to selected existing or planned agro-industrial projects in co-operation with local counterparts in the Caribbean countries.

This report contains a summary of main findings and conclusions emanating from the workshop-cum-study tour as well as relevant annexes. The report was adopted on 7 October 1987 in St. Lucia by all participants in draft form and subsequently consolidated and refined by the UNIDO Secretariat. The report first summarizes the conclusions of the workshop-cum-study tour as adopted by the participants (Chapter I). The report then proceeds to an examination of key issues towards resource-based industrial development in the Pacific and Caribbean countries (Chapter II). A summary of main findings is presented in Chapters III - VI with a focus on institutional support infrastructure, agro- and marine resource-based industrial development and markets for such products. Annex I contains a list of participants, while Annex II includes a list of programme visits.

The report does not contain information or analysis of the manufacturing sector of the Pacific and Caribbean countries which is available in the following UNIDO background documentation:

- (a) UNIDO/IS.645 - Industrial Development Review Series "Pacific Island States: Selected Countries", prepared by the Regional and Country Studies Branch (dated 21 July 1986).
- (b) UNIDO/PPD.51 - Industrial Development Review Series "The Caribbean Region", prepared by the Regional and Country Studies Branch (dated 3 September 1987).

I. CONCLUSIONS OF WORKSHOP-CJM-STUDY TOUR

The participants of the workshop - being senior civil servants dealing with industry - expressed great appreciation to UNIDO and UNDP for having arranged this programme. They felt that they had benefitted from the valuable experience of the industrial development process of the Caribbean island countries. In particular, the participants emphasized that they had gained useful insight into the roles and functions of Governmental Institutions, Industrial Development Corporations, Development Banks, Manufacturers' Associations and Research Organizations, which provided valuable services to industrial enterprises in the fields of agro- and marine-based industries in the Caribbean Countries, either at the national, sub-regional or regional levels. The participants agreed that the workshop-cum-study tour had provided an important inspiration and awareness of industrial opportunities in island countries, which had significant relevance to Pacific island countries.

The group felt that there was a need to follow-up on this workshop-cum-study tour in terms of industrial co-operation between Pacific and Caribbean island countries at the governmental and non-governmental levels as well as between financial and industrial institutions and enterprises, with the assistance of the United Nations Development System.

Similarly, there is scope for fostering institutional linkages between sister organizations of both regions, in terms of regular exchange of experience and information. Industrial collaboration between the two regions could be further facilitated through Manufacturers' Associations and Chambers of Commerce and Industry, through the services of the United Nations Development System, CHOGRM, other international organizations and bilateral aid agencies.

It was recognized that the high priority accorded to industrial development by Governments of the Caribbean island countries has facilitated the establishment of an appropriate institutional set-up, covering aspects such as technological assistance to existing and new enterprises, as well as institutions specialized in industrial financing and export marketing.

The industrial policies and strategies pursued in the Caribbean island countries, particularly in the field of harmonization of industrial incentives should be further assessed with regard to their applicability to the Pacific island countries.

There is scope for establishing an investment promotion infrastructure in the Pacific island countries linked to major financial centres, similar to the system existing in the Caribbean region, but modified to suit the local conditions of Pacific island economies. Such financial and investment infrastructure would need to be coordinated through appropriate Government channels. There is also a need to draw on the successful marketing experience of the Caribbean island countries.

Scope also exists for strengthening the bargaining position of Pacific island countries in terms of trade and investment negotiations by drawing upon the experience of the Caribbean island countries. In this regard, there is need for a common approach to export market penetration, harmonization of industrial incentives and the establishment of a suitable industrial policy framework for the promotion of agro- and marine resource-based industries. Assistance in these areas may be considered by UNIDO, the United Nations Centre on Transnational Corporations (TNC), UNCTAD/ITC, and other international aid organizations.

The activities of the Caribbean Development Bank clearly show the effectiveness of a regional financial institution in mobilizing funds from international financial sources for industrial development. It further transpired that the smaller island countries benefit proportionally higher from such a Regional Development Bank.

The role and function of the Industrial Development Corporations (IDCs) in the Caribbean island countries were highly appreciated by the participants. Such Corporations are very relevant and their functions are to a large extent already carried out through various Government bodies in the Pacific island countries. There is scope for closer linkages with these Corporations to enhance the promotion of industrial development. The salient features of such IDCs are that they would facilitate a separation between industrial policy making and implementation and thus promote a fruitful dialogue between industry and government. It was also noted that the one-stop service for investors existing in many countries has been a particularly useful instrument for accelerating industrial investment.

A salient feature of the industrialization process of the Caribbean island countries has been the establishment of export processing zones and industrial parks/estates (factory shells). The group believes that the establishment of this type of industrial infrastructure is a matter for the Pacific island countries to actively pursue. The UNIDO/UNDP, Commonwealth Fund for Technical Co-operation (CFTC) and Regional Financing Institutions in the Pacific and other international financing institutions may be requested to provide the necessary support.

The group felt it worthwhile to investigate the possibility for negotiating a trade agreement between Pacific island countries and the United States, similar to the Caribbean Basin Initiative (CBI), covering industrial products of importance to the island countries. Similar trade agreements could be negotiated with other major markets in the developed countries. In this regard, the importance of strengthening the bargaining position of the island countries, inter alia, within the context of the Lomé Convention, with assistance from the United Nations Development System was emphasized.

The participants from the Pacific island countries expressed great appreciation of the services of the Caribbean Industrial Research Institute (CARIRI) to the agricultural and agro-processing sectors. In this regard, UNDP/UNIDO was requested to consider providing assistance in the setting up of similar institutions in the Pacific within one of the already existing universities in order to cater for the needs of Pacific island countries.

The group was of the opinion that the following product areas would lend themselves to investigation for further development in terms of feasibility studies in the Pacific island countries:

- Agro-based industries

- (i) liqueur production
- (ii) tropical fruit drinks, wines, juices, nectars, and a variety of other tropical fruit products
- (iii) vegetable processing
- (iv) spices
- (v) jams, jellies and honey.

- Marine resource-based industries

- (i) fresh-water prawns, shrimps, tilapia and their processing
- (ii) other fresh-water fish species and their processing
- (iii) mariculture and processing of a variety of fish species
- (iv) other fish processing such as tuna, shark and their processing through drying, smoking or canning
- (v) marine algae (sea weed).

The group felt that it was both opportune and timely for UNIDO to further promote technical co-operation among developing countries (TCDC) and economic co-operation among developing countries (ECDC) between the Caribbean and Pacific regions through appropriate follow-up of the summary and conclusions emanating from this UNIDO/UNDP workshop-cum-study tour.

II. TOWARDS RESOURCE-BASED INDUSTRIAL DEVELOPMENT IN THE
PACIFIC AND CARIBBEAN ISLAND COUNTRIES -
KEY ISSUES

The island countries of the Pacific and Caribbean exhibit great diversity in size and stage of industrial development. Yet they share many common economic characteristics both in terms of their resource base, industrial structure and potential for industrial growth and development. Indeed the island countries are confronted with strikingly similar constraints and their economic development potential bears many parallels. They are facing similar industrial policy options, opportunities and development possibilities. Due to the small size of the manufacturing sector in the Pacific and its market orientation, there is little if any competition between the two regions; rather their industrial economies are complementary in nature.

In the context of industrial development strategies of both the Pacific and Caribbean island countries three issues generally arise:

- the need to diversify economic activities,
- the need to generate additional employment, and
- the desire to increase self-reliance and reduce the islands' dependence on a few export commodities.

Diversifying the economic structure of the island economies means departing from the earlier pattern of development in which the economy depended almost entirely on the primary sector and on the exploitation of a small range of resources and economic opportunities. The generation of additional employment opportunities has been recognized increasingly as a means for achieving a wider distribution of the benefits of economic development through increased wage-earning opportunities and of greater participation by local people in the monetized sector.

Throughout the islands the size of the manufacturing sector has been small both in absolute and relative terms. In the Caribbean only Jamaica's manufacturing sector has a share of total GDP approaching 20 percent and in the Pacific only Fiji has a share close to 12 percent. Recent economic developments have forced greater priority to be given to agricultural and industrial diversification, employment generation and to redressing deteriorating balance of payments and debt positions. These factors have given rise to concerted attempts to increase industrial production and the degree of processing, either substituting for imports or promoting exports, especially through processing of raw materials which were previously exported in unprocessed form.

Agro-based and marine-resource based industries are the largest branches of industry typically accounting for 25 - 40 percent of MVA (manufacturing value added). They have become priority industries in development strategies which seek to promote forward and backward linkages between economic sectors and which aim at reducing the island countries' vulnerabilities to adverse external economic shocks. Indeed, the need for structural change in the island economies is most evident in these industries.

In the field of food processing there is need for harnessing linkages between agriculture and industry with greater focus on parallel diversification of both sectors; improved processing and supply for domestic markets; and higher degree of processing for export markets with emphasis on creating market niches for high value-added products with the support of good export promotional skills and marketing techniques.

In the field of marine-resource based industrial development, new concepts and integrated approaches would need to be promoted with a focus on developing and improving: aquaculture and mariculture; sea-food processing and distribution; fishery gear equipment and technology; boat building and repair facilities; salt processing; marine biotechnology for food, pharmaceutical and chemical production including utilization of sea-weed; leather production based on fish skin; and marine cottage industry and handicraft (such as mother of pearl buttons). Industrial opportunities arising from marine resources are far greater than generally recognized, not least due to the UN sponsored Convention of the Law of the Sea.

In view of the fragmented and distant location of many island economies, there is a need for inter-regional co-operation in breaking down their isolation by creating awareness of new development opportunities and techniques; of changing market requirements and of new production technologies. Fruitful opportunities exist for the exchange of ideas and sharing of experiences between the island countries in relation to the generation of project ideas and transfer of technology. In this regard, systematic methods for promoting contacts on a commercial basis would need to be explored.

The common elements conducive to the establishment of industrial inter-linkages between selected industries in the two regions are:

- (a) technology-wise: both regions are in control of comparable technologies for the processing of similar raw materials and for the production of similar final products; installed capacities are not fully utilized in both regions;
- (b) market-wise: both regions have their own trade treaties with major developed markets (e.g. Caribbean Basin Initiative (CBI), Caricom, Spartecca, etc.); both regions have entry into the EEC market under the ACP/EEC Lomé Convention; both regions have trade offices in Hong Kong, Tokyo, USA, etc., and endeavour to search for markets for similar products;
- (c) management-wise: in both regions, the management of industries with potential for participation in this scheme is of comparable quality.

These elements suggest that with an appropriate framework of understanding and without transfer of capital from one region to the other, it could be possible to enhance capacity utilization and optimize marketing operations, by incorporating new production lines to produce (under licence or otherwise) products normally manufactured in the other region, and vice-versa.

The key issues which were the main focus of the Workshop-cum-Study Tour, could be divided into eight key topics:

- generation and transfer of product and project ideas
- transfer, adaptation and development of technology
- identification and exploitation of marketing potentials
- role of national and regional development agencies
- role of industrial support and extension services
- role of financial institutions
- role of multilateral and bilateral technical assistance
- possible follow-up and future co-operation within the framework of TCDC/ECDC.

The purpose of the UNIDO Workshop-cum-Study Tour was designed to help strengthen and diversify the agro-based and marine-resource based industries in the island countries by creating awareness of their significant potential for improving the industrial performance of the island developing economies.

III. INSTITUTIONAL SUPPORT INFRASTRUCTURE FOR PROMOTION OF INDUSTRIES

In JAMAICA the group recognized the importance and usefulness of Jamaica National Investment Promotion Limited (JNIP), Jamaica Industrial Development Corporation (JIDC) and Agro-21*) to the industrial sector. Most of the Pacific Island participants expressed the view that these institutions served useful purposes, yet were too large for small Pacific island countries. In this regard, some expressed the view that regional co-operation in the field of institutional infrastructure might be a viable approach, while one participant stated that a committee approach may be purposeful. In this context, the institutions of the Pacific island countries could be modified to serve industry in a similar manner as in Jamaica. Some of the larger countries like Papua New Guinea, Fiji and also Western Samoa thought that the Agro-21 concept was highly interesting and relevant to their countries, which, with some modification to local conditions, could serve the need for strengthening the linkages between agriculture and industry in those countries.

While the institutional infrastructure for industrial promotion in Jamaica was considered to be fairly advanced, some participants pointed to the fact that related institutions existed in the Pacific island countries though with somewhat different scope and functions. This pointed towards the possibility of further exchange of experience with regard to the role and function of industrial institutions in the two regions.

In the field of industrial policies and incentives, the view was expressed that tax holidays had a very marginal effect upon investment. Far more important was the general economic climate. The group also considered that the harmonization of industrial incentives, however purposeful, was very difficult. There was an important need to have a regional financial institution to attract financial resources from international financial markets to be channelled into the industrial sectors of the Pacific island countries. The importance of public sector financing institutions was also recognized. Further, the removal of licensing and reduction of protection and incentives were considered to have a positive effect upon competition and industrial growth and development in general. In view of the scarcity of private entrepreneurial capacity, it was evident that the public sector had a catalytic role in promoting industrial development, especially in the early phases of development until indigenous entrepreneurial capacity had been developed. The establishment of Free Zones was considered to have significant economic benefits in terms of employment creation, especially for footloose industries.

The group noted that TRINIDAD AND TOBAGO had developed a very sophisticated system of institutional infrastructure for supporting the development of industries such as the Industrial Development Corporation (IDC), the Caribbean Industrial Research Institute (CARIRI), the Export Development Corporation, the Institute of Marine Affairs, as well as the Manufacturers' Association of Trinidad and Tobago.

*) Agro-21 is a Jamaican Government agency with the aim to identify and promote non-traditional areas of agriculture, and to assist in seeking the appropriate markets and investors.

There was a general consensus that these institutes had reached a fairly advanced stage of development and sophistication and the group felt that, while some such institutions already existed in the Pacific, there was scope for tailor-made versions of such institutions in the Pacific to suit the size and economic structure of the island countries.

In this connection, a suggestion was made that in some of the small island countries committees may be established to assume similar functions in various areas while in other cases a regional approach to strengthening existing or creating new institutions was considered to be a possible approach. In particular, there was a need in the Pacific region for strengthening financial institutions especially at the regional level.

There was a general consensus among the group that the functions and activities of the IDC were highly relevant to the Pacific island countries with a view to strengthening the link between Government and industry in the implementation of industrial policies, programmes and projects. The group felt that an industrial institution similar to the IDC would be suitable for Pacific island countries either at the national, sub-regional and regional level.

Similarly, the group noted with great interest the successful experience of CARIRI which demonstrated the success of a Government industrial research institute in establishing close linkages with local industries in the fields of processing technologies, testing and quality control, as well as in the development of engineering products required by the food and marine resource-based industries. A wide range of services provided by CARIRI was indeed considered very essential to support the development of indigenous entrepreneurship through consulting advice, training schemes and fellowships. The group felt that there was great scope for advisory services from CARIRI to individual Pacific island countries until such time when a similar institution would have been established in the Pacific region.

Many of the participants from the Pacific island countries expressed interest in collaboration with both IDC and CARIRI.

In BARBADOS the group noted the useful functions performed by the Caribbean Development Bank (CDB), which was established for the purpose of contributing to the harmonious economic growth and development of member countries in the Caribbean area and in promoting their economic co-operation and integration, having special and urgent regard to the needs of the less developed member countries of the Region.

In this connection the group recognized the important role and functions performed by the CDB and expressed the opinion that a similar sub-regional development bank may be suitable for Pacific island countries. It was also mentioned that a UNIDO/UNDP regional project for assistance to Pacific Islands Development Banks was expected to commence in early 1988 (DP/RAS/86/094 - Assistance to Pacific Islands Development Banks) and the possibility of dovetailing this project with the concept of a regional or sub-regional development bank was emphasized.

The Caribbean Technological Consultancy Services (CTCS) were recognized as a network operated by the CDB in co-operation with regional and national institutions, laboratories and industrial enterprises with special emphasis being placed on agro-industry and food processing.

The group met with representatives of the Caribbean Association of Industry and Commerce (CAIC), the only regional private sector association in the Caribbean area. CAIC provides a variety of services to private industry in the field of economic development and research, small enterprise assistance and development (such as SEAP), marketing assistance and trade promotion, training and technical assistance, as well as soliciting external financing. In fact, CAIC has become the primary vehicle for advocating private sector industrial development in the region. The group felt that such a regional industry association would have some potential in the Pacific region for enhancing the process of industrialisation in close collaboration with existing national chambers of commerce and industry. For this purpose, linkages between CAIC and PIACC (Pacific Islands Association of Chambers of Commerce) could be developed.

The group noted the role and functions of the Barbados Industrial Development Corporation (IDC), which were similar to those of its counterparts in the other islands visited. The group felt that such a body performed a specifically useful role, particularly with regard to facilitating access to financial resources and industrial incentives, and in general representing the interests of the industry sector vis-a-vis the Government. It was highlighted that a useful dialogue had been established between IDC, the Ministry of Industry and other institutions dealing with industry in Barbados.

In ST. LUCIA the group took note of the National Development Corporation (NDC), whose purpose is to facilitate and promote foreign and local industrial investment. NDC maintains an investment promotion office in the United States, which has proved very effective in attracting investors, particularly for labour-intensive industries, and in encouraging the relocation of industries from more advanced countries. Assistance is also provided through programmes for the development and management of industrial estates and the operation of a large duty free complex. Support programmes for local entrepreneurship development are also given priority.

IV. AGRO-BASED INDUSTRIAL DEVELOPMENT

The group visited the largest food processing plant in JAMAICA, producing chicken and noodle soup, ketchup, vegetables, peas and a variety of fruits, spices, jams, jellies, which clearly demonstrated the scope for diversified industrial production based upon a variety of raw material sources. It was noted that a significant part of the raw material inputs was imported, mainly due to high local costs and irregular supplies especially during off-season periods. Domestic raw materials are obtained through sub-contracting arrangements with local farmers with a view to securing increasingly local supplies from and income for farmers as well as more regular supplies of raw materials. The group noted that the wide range of products produced were quite similar to the resource base of the Pacific island countries. However, due to high transportation costs, the Pacific island countries may not find it viable to pursue a similar raw material import-strategy, not least due to the quest for maximising domestic manufacturing value added.

The group visited a private cocoa factory which produces cocoa butter, cocoa powder and chocolate primarily for domestic consumption. The factory uses simple technology based upon equipment redeployed from a chocolate producer in a developed country decades ago. The feasibility of integrating agricultural cocoa production with cocoa processing was clearly demonstrated.

It was emphasized, however, that the products would not be competitive on the world market due to the equipment and technology used, but served primarily the domestic market demand and taste. The participants from the cocoa producing countries of the Pacific area expressed great interest in this type of production and technology for further development in their countries, which could be fostered through enterprise-to-enterprise co-operation between the two regions.

The group visited a small-scale enterprise producing alcohol and exotic liqueurs from a variety of agricultural resources such as sugar cane (rum), coconuts, pineapples and other tropical fruits. The enterprise had clearly demonstrated its viability in Jamaica. The factory was based on equipment redeployed from a developed country, with simple technology and high employment impact. The factory was successful not least because of very skillfully designed marketing, packaging and sales promotion efforts which had paved the way for a large export market for such products.

The participants from the Pacific countries expressed great interest in this type of production and felt that many of the raw material resources in the Pacific area, like sugar, bananas, coconuts, sugar cane, pawpaws, pineapples and other tropical fruits would be equally viable for such processing provided that marketing and promotional efforts were pursued in a similarly successful manner.

The group took note of the particular characteristics of the economy of TRINIDAD AND TOBAGO as demonstrated by the dominant oil sector and some heavy industries. The need for strengthening the linkages between agriculture and industry was emphasized by many participants with a view to stimulating agricultural production in product areas required by the food processing industry.

The weak linkage between agriculture and industry had resulted in a high import content of raw materials required by the domestic food processing industry, which in many cases approached 75 per cent.

The Government had initiated efforts to increase agricultural production, food self-reliance and diversification especially in the wake of declining oil prices. Some companies had entered into arrangements for contract farming with local farmers and there was a great awareness of the potential for local agriculture to meet the raw material requirements of the domestic agro-processing industry. However, there were constraints in terms of irregular supplies of raw materials and quality products.

The group visited a number of large agro-industries with a highly diversified product range and predominant export orientation. In this context, some participants stressed the need for proper feasibility studies and a cautious approach before entering into large-scale food processing industries.

The group was also exposed to a small-scale enterprise processing tropical fruits, particularly passion fruits, sorrel and mauby. This company relied entirely on domestic raw materials and served the domestic market for such products. Moreover, the company had demonstrated the feasibility of applying local indigenous technology supported by CARIRI. The group noted that this type of agro-processing plant was highly relevant to the Pacific islands in their quest for self-reliance.

In BARBADOS the group had the privilege of meeting the Honourable Minister of Agriculture, Food and Fisheries, who provided a very comprehensive and illuminating briefing on the entire agriculture, food and fisheries sector of Barbados. The Minister stressed the efforts of the Government to reduce food imports and increase and diversify local agricultural production and processing. He also mentioned the problem of limited crownland available to the Government for agricultural purposes, which to some extent limited the Government's influence on agricultural development.

In ST. LUCIA the group visited a banana plantation, and noted that bananas were the major export commodity of the country (80,000 tons in 1985, 120,000 tons in 1986), yielding 60% of the total export earnings. The St. Lucia Banana Growers Association is the focal point for such exports.

Aunt Lucies', an agro-processing plant owned by the Chamber of Commerce, was originally established as a training centre for the preservation of fruits and their processing into jams and jellies, and transformed to its present form in 1984. Its products - jams, jellies, etc. - are all made from local raw materials, such as oranges, grapefruits, etc. Production and marketing processes are presently subject to revision in order to reach profitability for the enterprise.

The group appreciated the useful visit to the Beausejour Agricultural Project, which was established as a demonstration and training project for local people in the field of fruit and vegetable cultivation.

The visit to the coconut oil factory, originally established in 1935 and modernized in 1986, demonstrate the export possibilities of this particular product.

V. MARINE RESOURCE-BASED INDUSTRIAL DEVELOPMENT

JAMAICA has successfully developed inland fresh water and marine-based aquaculture with integrated fish-processing activities, yielding high economic returns compared to other alternative land uses. Such fish farming and fish processing was considered to provide essential products for domestic consumption with high protein and nutrition contents. The group visited a successful foreign-owned fish-farming project, which was mainly oriented towards the US market through subcontracting arrangements with US supermarkets. The project applied very advanced fish-farming and processing technologies developed in Jamaica with external assistance. It was emphasized that such technologies were viable for fresh water fish where ample fresh water resources were available. In relation to sales, the investment requirements were low and employment generation was high. The project was

able to produce 10,000 pounds of fish per acre. It was noted that the product cycle from hatching to consumption was nine months. The cost of fish farming and processing was US\$ 0.28 per pound, compared with the present selling price of US\$ 5.00 - US\$ 6.00 per pound of fresh fish on the American market. It was stressed that fresh water aquaculture was only feasible in tropical countries and that the local demand was closely tied to the tourist industry, while export demand was currently unlimited.

The large export opportunities to developed countries were primarily due to the consumers' increased health consciousness in connection with fish consumption, which had increased by 45 per cent over the last three years in the United States alone.

The participants of the Pacific island countries expressed deep interest in this type of aquaculture and fish processing and considered that closer examination of its viability would be needed. One of the constraints for some of the Pacific countries was the limited supply of fresh water, especially in the atoll islands as well as the long distance to main export markets. However, the fast growing export markets, especially Japan and the United States, presented substantial export market opportunities.

In TRINIDAD AND TOBAGO the group visited the Institute of Marine Affairs, which is a Government Institute responsible for research and development services to agriculture and industry. The Institute was experimenting with fresh water fish as well as sea water fish farming.

The group noted that sea farming had extremely good potential for foreign exchange earnings. This was of particular significance in the lagoons in many Pacific island countries where great opportunities existed for development of sea water mariculture such as conch, sea weeds and other fish species. In terms of fresh water fish farming, it was noted that this type of aquaculture is particularly essential for the nutritional consumption of fish. The Institute had demonstrated the potential for development of a wide variety of fish species like tilapia, fresh water prawns and also brackish water fish.

The group had the opportunity to visit one of the largest fishery processing industries in Trinidad and Tobago. This processing plant was based on fishing by its own fishing fleet, supported by Taiwanese fishing companies, supplying tuna fish and a wide range of fish species. The company exported tuna fish to the United States while only a small proportion - around 15% - of the output was processed into fish burgers, cutlets, fish fillets and a variety of other processed fish products. The experience of this company clearly demonstrates the possibility of creating value added in the country through fish processing. The group stated that this particular type of venture - although large in scale - had great potential for the Pacific island countries in terms of domestic processing and value added.

In BARBADOS the group visited the Bridgetown Harbour Project which is being developed by the Government on reclaimed land. This complex involves investment requirements of up to US\$ 10 million; fish processing, freezing and storage facilities will be made available to the private sector on a commercial basis. The group observed the important role played by the Government in promoting the integration of private sector fish processing industries with fishing harbour infrastructure.

The group took note of the Bellairs Marine Research Institute, which is playing an important role in areas related to environmental protection, fauna restoration, beach protection and conservation of endangered species, such as turtles.

In ST. LUCIA the group visited the Fish Marketing Agricultural Corporation Ltd., which was established by the Government with the aim to provide marketing facilities to local fishermen. It was noted that fish were processed, stored and exported only in frozen form. Exports were made to neighbouring Caribbean countries as well as to the United States and the United Kingdom.

The Eastern Caribbean Natural Area Management Programme (ECNAMP), which is undertaken by the Saint Lucia Government, aims at an integrated natural resource management and protection along the southeast coast of the island, particularly marine and coastal resources and the protection of rare and endangered species, some of them found nowhere else in the world. It was noted that industrial development and tourism caused heavy demands on natural resources. While new development opportunities were badly needed in the country, their usefulness was directly linked to maintaining the level and functioning of natural resources systems. The group appreciated that new development activities and their potential impacts are carefully considered before any irreversible action is taken.

VI. EXPORT MARKETS FOR AGRO- AND MARINE RESOURCE-BASED PRODUCTS

It was noted that JAMAICA benefitted from its geographical proximity to the US market. However, the distant location of the Pacific islands and the less frequent transport facilities created specific problems in marketing and distribution of products from the Pacific island countries. Yet, it was noted that export opportunities existed towards the United States, Japan, East Asian countries, Australia and New Zealand.

In this context, it was stressed that the Pacific island countries may consider the possibility of negotiating improved trade agreements with key markets, including inter alia the investigation of a trading scheme similar to the Caribbean Basin Initiative (CBI) between Caribbean countries and the United States.

The participants from the Pacific island countries noted the potential for inter-regional collaboration in the field of markets and marketing facilities as well as technology, know-how and management, with a view to facilitating and increasing the industrial output of selected companies in the two sub-regions.

The group stressed that due to the balance of payments surplus of the Japanese economy, Japanese entrepreneurs are increasingly seeking investment and trade opportunities abroad. In this connection, some participants noted that an opening-up of the Japanese market may present a unique opportunity for expanded exports of Pacific products, especially in the field of marine-based and agro-based products.

It was emphasized that the large tourist sector in Jamaica had created market opportunities for high quality products and had also served as a testing ground for the export market potential. It was considered that this particular approach was equally applicable to the Pacific islands. Enhancing the linkages between agro- and marine-based food processing industries and the tourist sector was indeed considered very essential.

Many of the modern agro-based industries visited by the group in TRINIDAD AND TOBAGO exported a great proportion of the output to the North American market, in particular the United States. This was feasible due to the sophisticated marketing skills and the good communication facilities - especially air transport - which facilitated continuous supply of the final products to the export markets.

Some members of the group stated that the Lomé Convention III provided great opportunities for export to the developed countries of the EEC. Both the Caribbean and the Pacific island countries are signatories to the Lomé Convention; yet exporters stressed the difficulty of benefitting from the Convention due to the administrative procedures which required long procedural formalities inhibiting export marketing. The Convention had therefore not achieved the intended results.

In BARBADOS the participants were given an extensive briefing of CBI, CARICAN (preferential trading scheme between Caribbean countries and Canada) and Lomé III, which provided preferential access to export markets in developed countries. It was noted that the objectives of these schemes were sound; however, they had not yet yielded the expected benefits. With regard to CBI, it was noted that a number of product areas were excluded from the preferential list, which were essential to Caribbean countries. The existence of a wide range of non-tariff barriers was also noted.

In terms of marketing, the importance of pricing, packaging, distribution and after-sales services were considered extremely essential. There was need for further assistance to industrial enterprises to benefit from the CBI scheme, which needed modification both in terms of the product range as well as an extension of the scheme.

Similar observations were made concerning the Lomé III Convention. The hope was expressed that the successor of Lomé III would provide improved trade benefits to the countries of the Caribbean and Pacific regions.

It was mentioned that the CARICOM was functioning quite well, though the Common Market Agreement did not in itself solve the trade problems of the member countries. However, within the CARICOM the smaller island countries received proportionally greater benefits from the Agreement. It was also mentioned that harmonization of fiscal incentives was essential with a view to preventing competition among the island countries. Local content regulations, which existed in Barbados, were crucial for increasing the domestic value-added of the manufacturing sector.

With regard to industrial incentives one participant expressed the view that tax holidays were important in the first few years of the operation of an enterprise to cover initial depreciation of investments.

ANNEX I :

LIST OF PARTICIPANTS

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KIRIBATI Mr. T. KAIRORO, Senior Assistant Secretary
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Ministry of Trade, Industry and Labour
P.O. B. 69
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PAPUA NEW GUINEA Mr. K. WARGEM, First Assistant Secretary
Industry Division
Department for Trade and Industry
P.O. Wards Strip, Waigani, Papua New Guinea

SOLOMON ISLANDS Mr. Francis RAMOIFUILA, Chief Commercial Officer
Ministry for Trade, Commerce and Industry
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Honiara, Solomon Islands

TONGA Mr. Lopeti FOLIAKI, Secretary
Ministry of Labour, Commerce and Industry
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Nukualofa, Tonga

TUVALU Mr. P. LAFAI, Operations Manager
Tuvalu's Coconut Co-operation Limited
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WESTERN SAMOA Mr. Hans KRUSE, Director
Economic Development Department
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Apia, Western Samoa

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CHOGRM Working Group on Industry
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Section for Economic Co-operation among Developing
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Department for Programme and Project Development
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ANNEX II:

PROGRAMME OF VISITS AND PERSONS MET

I. JAMAICA (22 - 27 September 1987)

1. AGRO - 21 Corp. Limited (agricultural development, Government agency working in collaboration with JNIP)
Mr. Ralph THOMPSON, Managing Director
Mr. Cecil TAFFE, Director, Strategic Planning and Project Monitoring
2. Aquaculture (fresh-water fish)
Mr. Conley SALMON, Director
3. Eagle Merchant Bank of Jamaica Limited
Dr. Paul CHEN YOUNG, Executive Chairman
4. Grace, Kennedy & Co. Limited (food processing)
Mr. Philip ALEXANDER, Technical Services Manager and Chairman of Jamaica Manufacturers' Association
5. Ian Sangster's Rum Liqueurs Co. Limited
Mr. Ian SANGSTER, President
6. Jamaica Agro-Products Limited (fresh-water fish)
Mr. Eli TISSONA, President
7. Jamaica Industrial Development Corporation (JIDC)
Mr. Ray A. RODNEY, Deputy Managing Director
Mr. Leroy HENRY
8. Jamaica National Investment Promotion Limited (JNIP)
Ms. Ivy BROWN, Deputy Managing Director
Mr. Norman PRENDERGAST
9. Pioneer Cocoa Co.
Mr. John CUNNINGHAM, President
10. Things Jamaican Limited (handicrafts)
Mr. Anton KRUFFT, UNIDO Senior Marketing Consultant
11. UNDP/UNIDO
Ms. Brenda MCSWEENEY, UNDP Resident Representative
Mr. Sergio DELLO STROLOGO, UNIDO Senior Industrial Development Field Adviser
Mr. Peter GEBERT, UNIDO Junior Professional Officer
Mr. William BEALE, UNIDO Senior Agro-Processing Business Adviser

ii. TRINIDAD AND TOBAGO (27 - 30 September 1987)

1. Cannings Limited
Mr. Neil GARCIA, Operations Manager
2. Caribbean Food Corporation
Mr. Ian THOMASOS, Project Analyst
3. Caribbean Industrial Research Institute (CARIRI)
Ms. Irma BURKETT, Office of External Coordination
Mr. James CUMMINGS, Programme Leader Engineering Products Design
Dr. Maura IMBERT, Programme Leader Food and Natural Products
Mr. Lennox LEWIS, Administrative Manager
4. Industrial Development Corporation (IDC)
Mr. Richardson ANDREWS, General Manager
Mr. Jack BALKEESOON, Manager Investment Promotion Division
Ms. Paula BROFFAT
5. Institute of Marine Affairs
Dr. Doon RAMSAROOP, Director
6. National Cannery Limited
Management and technical staff
7. National Fisheries Co. Limited
Mr. Fernando NAVARRO, Chief Executive Officer
Mr. SHAZAM Ali, Assistant Chief Executive Officer
8. National Fruit Processors
Management and technical staff
9. Technical Co-operation Unit, Office of the Prime Minister
Miss Sandra BAPTISTE, Ag. Assistant Director
Ms. Thelma NURSE, Ag. Administrative Officer IV
Ms. Vidiah RAMKHELAWAN, Ag. Administrative Officer II
10. Trinidad and Tobago Export Development Corporation (EDC)
Mr. Aziz MOHAMMED, Marketing Officer Agro-based Industries
11. Trinidad and Tobago Manufacturers Association (TMA)
Mr. Clive TEELUCKSINGH, General Manager
12. UNDP/UNIDO
Mr. I. DESSALEGNE, UNIDO Junior Professional Officer

III. BARBADOS (30 September - 4 October 1987)

1. Ministry of Agriculture, Food and Fisheries
Mr. Warwick FRANKLIN, Minister
Mr. A.A. BRAITHWAITE, Deputy Permanent Secretary
Mr. F. CENNY, Regional Representative of FAO
2. Barbados Chamber of Commerce and Industry
Mr. S.L. TAYLOR, Executive Director
3. Barbados Industrial Development Corporation
Mr. Rawle CHASE, General Manager
Mr. V. BROWN, Deputy General Manager
Mr. A. LAWSON
4. Barbados Manufacturers' Association
Mr. Henry VIEIRA, President of Caribbean Chemical Ind. Limited
5. Bellairs Research Institute
Dr. Wayne HUNT, Director
6. Bridgetown Harbour Project (in conjunction with Fish Storage and Processing Unit, both under construction)
7. Caribbean Association of Industry and Commerce
Mr. P.A. THOMPSON, Executive Director
Mr. A.C. FIELDS
8. Caribbean Development Bank (CDB)
Mr. Arhim EUSTACE, Senior Manager, Project Services Division
Dr. Jeffrey DELLIMORE, Manager, Technical Assistance and Energy Unit
Ms. Yvonne HALL, Coordination of the Caribbean Technology Consultancy Service
Mr. Werner VOETH, Technology Consultant
Mr. Juan GOY, Project Officer
9. Atlantic Fishmongers
Technical staff
10. UNDP/UNIDO
Mr. R. STEFANSON, UNDP Resident Representative
Mr. Roy SETHNA, UNDP Deputy Resident Representative
Mr. Peter RYAN, UNIDO Senior Industrial Development Field Adviser
Mr. Arie KOOLE, UNIDO Junior Professional Officer

IV. SAINT LUCIA (4 - 7 October 1987)

1. Aunt Lucie's (agro-processing plant)
Management staff
2. Banana Plantation
Visit to site with NDC staff
3. Beausejour Agricultural Project
Visit to site with NDC staff
4. Copra Manufacturers Ltd.
Mr. Joseph H. ALEXANDER, Production Manager
5. Eastern Caribbean Natural Area Management Programme
Mr. Yves RENARD, Project Leader
6. Fish Marketing Agricultural Corporation Ltd.
Technical staff
7. Industrial Estate and Free Zone
Visit to site with NDC staff
8. Ministry of Agriculture
Mr. Henry LUBIN, Product Chemist
9. Ministry of Planning
Ms. Marcia PHILBERT-JULES, Central Planning Unit
10. National Development Corporation (NDC)
Mr. Terry DELIGNY, Investment Promotion Division
Mr. André ALEXANDER