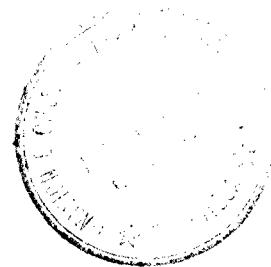


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ECONOMIC COMMISSION FOR LATIN AMERICA

Office for the Caribbean

THE SITUATION OF STATISTICS
IN THE WEST INDIES ASSOCIATED STATES

P R E F A C E

The ECLA Caribbean Office has long regarded improvements of statistics in the West Indies Associated States as a major necessity. A decision was therefore taken in 1971 to focus attention on the problem by preparing a paper. It was hoped that by so doing the office could give further justification to the need for technical assistance from ECIA in this field.^{1/}

Acknowledgement of the efforts of the hard working staff of Statistical Units in the Associated States is hereby given. The personnel of these small, ill-equipped offices have the task of collecting and compiling statistics, in many cases under most difficult circumstances. Not only do they provide information to their own governments, but also they must fill a growing number of requests from regional and international organizations for statistical data.

It is hoped that focussing attention on the situation will lead not only to material improvement in the scope and quality of the statistics but also to improvement in the facilities and general conditions of the staff.

In the paper the expression West Indies Associated States should be taken to include Montserrat as well as Antigua, Dominica, Grenada, St. Kitts-Nevis-Anguilla, St. Lucia and St. Vincent. These seven countries together are an Associated Member of ECLA. They are also members of the East Caribbean Common Market (ECCM), the East Caribbean Currency Authority (ECCA) and the Caribbean Free Trade Association (CARIFTA), which are regional organizations all have some responsibility for statistics.

Dollar figures quoted refer to East Caribbean Currency. The current exchange rate was US\$1 = EC\$1.84 approximately, prior to the "floating" of Sterling.

^{1/} The importance of the problem of statistics is underlined by the recent appearance of a paper titled "Statistics in the Associated States, British Honduras and Montserrat with Recommendations for Technical Assistance: Technical Report, No. 6, Caribbean Development Bank, Bridgetown, Barbados, July 1972.

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THE SITUATION OF STATISTICS IN
THE WEST INDIES ASSOCIATED STATES

INTRODUCTION

The inadequacy of the statistical services of the Commonwealth Eastern Caribbean countries has long been recognized and many recommendations have been made to effect improvement.^{1/} Much concrete progress has not been achieved, perhaps, deriving from historical factors and more concern with political ends.

Governments in the Area are now more concerned with the questions of economic development and enhancing the welfare of their citizens. It is generally recognized that economic planning is necessary and planning depends to a large extent on detailed knowledge of the structure and current performance of the economies. Consequently, appreciation of the importance of statistics as a vital tool seems to be increasing.

There are, however, many constraints impeding progress in the development of statistics such as inadequate financial resources, small size of the territories. These and other factors contributed to the limited success of the Regional Development Agency's Statistical programme^{2/} which was to have been the focal point for developing statistical work in the territories of the West Indies Associated States.

This paper seeks to examine the current situation, indicates some of the purposes for which data are urgently needed and considers the machinery and organization structure needed to establish a more adequate system of data collection in the Associated States and Montserrat.

^{1/} See for example A Statistical Program for the Regional Development Agency and its Participating Territories, prepared by Norman Lawrence, U.S. Aid and U.S. Bureau of the Census, Sept. 1968.

^{2/} Ibid.

THE EXISTING SITUATION

(a) Administrative and Organizational

As of early 1972, of the seven member territories, one only (Antigua) had no functioning Statistical Unit though obviously some statistical compilations are done. No budget provisions had been made for a Unit in 1971, the last year for which printed Government Estimates are available. There are reports of plans to set up a Statistical Unit in 1972.

In most territories, the Statistical Unit comes under the Ministry of Finance and the Statistical Officer (the head of the Unit) reports to the Financial Secretary. In one case (St. Lucia), the Ministry involved is Planning, Development and Statistics while in another case (St. Vincent), the Unit is attached to the Premier's Office.

The size of the Statistical Unit varies, with St. Lucia, the largest, having eight persons, while Montserrat has three, two of whom were part-time, including one provided by the United Kingdom on a short-term basis. The Units are too small and the functions too few for any meaningful specialization. In some islands, however, a few staff members concentrate on external trade statistics. The more experienced staff perform other tasks such as collecting data, preparing publications and may assist in surveys and censuses.

The typical organization of personnel and their functions are as follows:

Head - Supervise work of other staff, handle administrative duties, assist with surveys and censuses.

Deputy or Senior Assistant - In some cases, responsible for certain special operations, e.g., publications, data collection or trade statistics; also acting in place of the Head of Unit.

Statistical Assistants or Clerks - Perform detailed tasks including collecting and collating information, processing customs documents and compiling trade statistics.

In some cases, the statistical work is combined with typing. Up to 1969, statistical assistants operated card punch and verifying machines (small hand-operated I.C.L. card key punch and verifier).

The largest budgetary expenditure on salaries is of course in St. Lucia, the country with the largest staff. However, for those countries for which data are available for 1971, the budgeted salary expenditure per head averaged about EC\$4,000. There is considerable variation around this average figure - in excess of 20 per cent - resulting not so much from large differences in salary scales but because of the varying turn-over rates of staff in each country.

There are no degree holders or holders of professional statistical diplomas in the statistical units. Reportedly, the highest level of formal training received by any member was partial completion of the final course for the diploma of Associate of the Institute of Statisticians.

Most Statistical Officers, that is the senior officers in charge of the Units, have completed various formal training courses during their careers. These include courses given at the Statistical Departments of the larger territories of the Commonwealth Caribbean and at foreign organizations and institutes, and government offices engaged in statistical work, such as the U.S. Department of Agriculture, U.S. Bureau of the Censuses, Canadian Bureau of Statistics.

Some junior staff have completed the two-month training course conducted by either the Statistical Office in Barbados or Trinidad, few have only informal in-service training, i.e., job experience only. The most recent regional course was conducted in Barbados during the summer of 1971, under the auspices of the Statistical Coordinating and Advisory Committee (SCOAC) of the Commonwealth Caribbean and the University of the West Indies with the cooperation of the Barbados Statistical Office.

(b) Substantive work

The statistical offices are engaged mainly in processing and compiling external trade statistics, preparing publications, collecting retail prices, preparing ad hoc statistical data for use of governments and regional and international organizations and assisting in some

instances in the infrequent censuses and surveys. As indicated earlier, some statistical units do not perform all the tasks set out above.

All the territories publish annual external trade reports, but only four of them currently put out statistical digests. These are supposed to be annual but actual publication is very irregular. Monthly or quarterly external trade bulletins are currently published by two countries, two others having suspended these publications during the last few years. A fifth territory has plans to put out a statistical abstract in 1972. Appendix I shows the position with respect to frequency and latest available publications for each territory.

As indicated by the foregoing, the main area of work is External Trade Statistics. In all countries most stages of processing are done by the Statistical Unit on the basis of customs documents. In a few cases, an Officer is stationed in the Customs Department to do preliminary processing including checking for legibility and accuracy of the documents. Tabulations of detailed trade statistics in all except one country is done at an independent Data Processing Centre by tabulating machines or computer. Summary tables, however, are done at the Statistical Offices from the machine tabulations.

Data for the monthly or quarterly retail price indexes are usually collected by the Statistical Unit but in a few cases the Ministry of Labour performs this function. The methodology had been developed by independent consultants as part of a programme for the entire region.

Most of the other data for statistical abstracts, including sectoral data are collected from private firms, commodity organizations or other Government Departments such as the Registrar of Births and Deaths, Ministry of Agriculture, Ministry of Health, etc. It is not unusual for statistical personnel to compile aggregate figures from detailed reports, kept by these various organizations and departments.

Censuses and surveys are quite irregular except for the decennial Population Census, which is planned and administered by the Commonwealth Caribbean Census Coordinating Committee. In some cases, the Statistical Officer is the Census Officer and other statistical personnel assist with the census work. Other major surveys such as household surveys, and agricultural surveys are carried out largely with outside expert assistance. Ad hoc inquiries of one kind or another are sometimes carried out by the Statistical Office personnel.

National Accounts data for these territories during the early part of the 1960's were done by the University of the West Indies. For more recent years, this work has been done by the British Development Division in the Caribbean located in Barbados, except in the case of Dominica where Gross Domestic Product estimates have been done locally apparently jointly by the Statistical Unit and the Planning Department.

(c) Currency of Data and Gaps

(i) Censuses and Surveys - As far as censuses are concerned, the decennial Population Census has been the most regular. The main problem is the lengthy interval between enumeration and publication of the results. Preliminary 1970 Population Census data such as total population by sex and districts are already available for most territories but it appears that the printed detailed tabulations will not be available for some time.

The most recent Agricultural Census for these countries was done in 1961 under the auspices of the now defunct West Indies Federation. An Agricultural Survey was carried out by the British Development Division in the Caribbean in 1965/66 for one country (Grenada). In 1971, a pilot agricultural survey was carried out in one territory. This was supposed to be the first stage of an Agricultural Survey of the seven territories but for several reasons the programme has come to a halt.

A Household Survey was started under the auspices of the West Indies Federation in 1961 and completed some years later for most of these territories. The data collected provided the basis for the retail price indexes published for some of the territories. There were plans for a Household Budgetary Survey in 1971, but these were not realized; one territory had plans to carry out such a survey in 1972.

(ii) Publications - Annual External Trade reports are available for all territories up to 1967. Four territories have published these for 1968, but only two for 1969, and one for 1970. Of the four countries that put out Annual Statistical Digests, three have done so for 1970, the other for 1969. Three countries put out Quarterly External Trade Reports; in one case data is available to mid-1971, in another up to December 1969, and in the third case data is available up to December 1968. One of the major problems affecting publication is printing delays as statistical publications are accorded low priority.

(iii) Coverage and content - The Annual External Trade Reports by virtue of revenue interest and the source of the basic data (that is, Customs Departments) are fairly complete as far as coverage of imports is concerned. There are, however, some short-comings especially on the export side, for example, exports of agricultural commodities, transported by small vessels in the inter-island trade may be inadequately represented both as to quantity and value. Similarly, the catch of locally registered fishing boats that are disposed of in other countries would not normally be included. The statistical abstracts clearly reflect the inadequate state of data collection but are more notable for their omissions, presenting a very inadequate picture of the local economies.

A summary of available major statistical series for the various countries is presented in Appendix II.

(d) Statistical Training Facilities

Some statistical training facilities in the region are available at the University of the West Indies as well as the Statistical Offices of the larger territories of the Caribbean Free Trade Association of which these Associated States are members. The University of the West Indies does not offer a degree programme in statistics but courses in statistics and mathematics are offered in the Social Science Faculty. In-service training programmes are conducted in Barbados, Jamaica, and Trinidad and in the past personnel from the Associated States have attended. Previously, these courses which were geared toward the middle and lower level staff were given annually but they have been conducted less frequently in recent years.

Statistical training is one of the main functions of the Statistical Coordinating and Advisory Committee (SCOAC) of the Commonwealth Caribbean and was set up in 1969. During 1971, SCOAC was financed by the CARIFTA Secretariat and conducted a training course in Barbados in conjunction with the Institute of Social and Economic Research of the University of the West Indies and the Barbados Statistical Office for personnel from the Associated States. Originally, the intention was to conduct such a course annually, but so far as is known, no course is planned for 1972.

(e) Some Current Problems

With respect to tabulation aids there are adding and calculating machines available in all units as well as old models of International Computers Limited hand-operated card key punch machines and verifiers. All the Units have at least one each of the card punchers and verifiers. However, only two Statistical Units have either one adding machine or calculating machine per staff member. In most other cases, the ratio of these machines to staff is less than 1:2 and sharing of machines with other Departments is common.

Government computer installations exist in two countries, Dominica and St. Vincent and there are reports that plans are being completed to install one in Antigua. However, this will apparently be under non-government auspices.^{3/} Up to 1971, the St. Vincent Data Processing Centre which came into operation about 1969, processed external trade data for most of the territories. The Dominica Centre became operational late in 1971, and as of early 1972, had not begun to process the work of the Statistical Unit. There had been suggestions to divide the work of processing external trade statistics for the seven territories of the Associated States between the St. Vincent and Dominica Centres, but so far no decision has been taken.

^{3/} Information has subsequently come to hand that the Manager of the Antigua Centre is already at the location so that the Centre may already be operational, and that the Centre is partly government owned.

Many problems have been experienced with the St. Vincent operation, and at present there has been little if any improvement in the currency with which trade statistics for the territories become available. These problems are sufficiently important to warrant some elaboration. The following excerpt from the summary of discussion of a meeting of statisticians^{4/} of the territories is illustrative:

"Dissatisfaction was expressed with the quality and timeliness of data received from St. Vincent. The quality of data was seriously affected by errors which ranged from fictional code numbers to transposition of units of quantity and which were due not only to problems of illegibility and inaccuracies in the source documents, but also to the more underlying technical factor that enough validity checks were not built into the programmes utilized. As a consequence, much time was spent picking up and recording errors, and making subsequent adjustments. This, coupled with organizational inadequacies in the Data Processing Department, led to serious delay in the publication of trade statistics. It seemed that the arrangement with St. Vincent was not superior to the previous one made with Barbados."

In other words, more processing time is required now to code customs documents and to correct errors on the monthly, quarterly and annual computer tabulations. In addition, there is reportedly a charge of EC\$500 a month for this job so that the overall cost of processing trade returns has increased with no increase in the speed with which data become available and no freeing of statistical personnel to do other jobs.

Among the reasons for these problems are the following:

- (a) Previously, data were transferred to punch cards and were verified in the Statistical Offices by clerks who were familiar with the customs documents; Customs Departments could be consulted directly;
- (b) These cards were then sent to Barbados where they were processed and the print-out prepared by tabulating machines. (In the present situation, copies or original customs documents are sent directly to St. Vincent where the information is transferred to paper tapes. The operators of these paper tape punch machines are not familiar with customs documents and other nuances of the trade, and the customs documents were not designed to facilitate machine processing. This seems to be one of the chief sources of problems);

^{4/} Minutes of Meeting of Statisticians of R.D.A. territories on 7th and 8th December 1970.

- (c) The amount and type of detail each country requires to have tabulated varies;
- (d) It appears that there was no concurrent manual/computer runs for a sufficiently long period to clear all the "bugs" in the system;
- (e) Apparently, the programme was inaugurated without full consultation with all the Statistical Offices to determine whether the system was adequate to meet all the individual requirements and to determine the sub-routines necessary to satisfy individual needs.

Another major problem experienced by the statistical units is turn-over of personnel. One office shows an exceptional record with most staff members having fairly lengthy periods of service. All the other offices have been losing one or two staff members each year. With the small size of staff, this could mean for the various territories anything from a 25 to 66 per cent turn-over.

Perhaps the most basic problem is the apparent lack of recognition of the importance of detailed, comprehensive statistics to fully understand and evaluate performance of the economies, to provide background information for making rational policy choices and operating decisions and for planning social and economic development. This lack of recognition is manifest in the inadequate staff and facilities, the low hierarchical position of the statistical units and the lack of meaningful support of the regional statistical efforts.

STATISTICAL LEGISLATION

So far as is known at present, at least three countries have comprehensive statistical laws; Grenada, St. Kitts and St. Lucia. It is understood that the last named country is considering updating its statistical law. A fourth country, Dominica, is actually in process of examining the Barbados statistical law with a view to drafting their own. It is certain however that the other territories have laws relating to statistics for example bearing on the Population Census.

In general, the statistical laws define the duties of the statistical department and provides for coverage of all areas of data collection. The laws require cooperation of individuals, businesses, Government Departments, and Agencies, etc., demand secrecy of officials involved in collecting and processing statistics and set out penalties for offences under the law for refusing to furnish information or revealing information illegally. In short they appear to provide an adequate legal basis for collecting and publishing a fairly wide range of statistical data.

THE BASIC STATISTICAL NEEDS

(a) Comments on available data and statistical work

Appendix II shows, inter-alia, the type and nature of statistics available, the agency responsible for collecting the data and the frequency with which such data are collected or published. As noted earlier, statistical abstracts are currently published by only four of the territories. In addition to the data collected and processed by the statistical offices all countries collect statistics in such fields as health, education, transportation, etc., where record keeping is a subsidiary function of the substantive work of Government Departments.

Bench-mark data are available in three areas; Population, Agriculture and Household Income and Expenditure patterns. The 1960 Population Census was fairly comprehensive and provided useful analytical data. The 1970 Population Census was carried out in April of that year, but to date, tabulations are available mainly on global population in each territory with a few sub-divisions, such as age, sex and enumeration district totals. This census was more comprehensive than the earlier one. Tabulation of 1970 Population Census data for all these territories as well as most of the rest of the Commonwealth Caribbean territories is being done at the Jamaica campus of the University of the West Indies. Apparently, processing and publication problems are affecting the appearance of the results, but hopefully, these will be available within a shorter time span than in the case of the 1960 census.

The Agricultural Census of 1961 covered such details as land utilization, form of tenure, acreage and number of holdings in various crops, harvested production, number of live-stock by type, farm population, farm employees and power and machinery use. It should be noted that earnings and most items of input and costs were not included. The Agricultural Survey of Grenada conducted during 1965-66, included data on average farm gate prices during the twelve-months period for some crops.

The latest Household Surveys were done around 1961/62. There is no evidence of formal surveys in other economic sectors though ad hoc enquiries have been made of the Hotel Sector for example. For some territories, Departments of Agriculture make estimates of output of various commodities but these are usually not published. The most immediate problem here is the outdatedness of these comprehensive surveys; the scope of future surveys will also have to be broader.

The statistical offices in general, are directly engaged in compilation of external trade statistics from customs documents, collection of prices and compiling the retail price indexes, and in some instances, collection of quantum of output figures for selected agricultural and industrial commodities. In this latter case, the figures are not collected from individual producing units, for the most part, but from the most accessible secondary sources such as records of government revenue departments, Ministries of Agriculture and Trade, and commodity organizations. It will be noted that some of these data therefore, relate to goods sold, delivered from bonded warehouses or exported, etc. and often do not truly reflect actual production.

Various other government departments also collect figures in the course of their normal duties, but in many cases data are not available in published form and in some cases the statistical offices utilize detailed records to compile aggregates. The problem with this situation is the lack of systematization and the fact that data collection is only incidental to the work of the substantive organizations and hence much useful information may not be at all available on the records. This is sometimes true of immigration records, government revenue and expenditure data, and health and education statistics for example.

As mentioned above, external trade statistics, vital statistics and government revenue and expenditure data are the most comprehensive and readily available. External trade statistics data are available on a fairly detailed basis, but in some cases, the details have proved inadequate, for example, many countries are still experiencing difficulty in furnishing statistics on imports and exports of the 22 items of the Agricultural Marketing Protocol to the CARIFTA Agreement. It is of course difficult to provide information on all the possible detailed commodities that might be required for various purposes. A number of other useful trade data are not computed, for example, indexes of prices and quanta and designation of imports by importers, that is, whether personal, government, industry, commercial, etc. These latter, of course, could be derived by reference to original customs documents, a rather time consuming task. Some trade publications also do not show a summary table with value of domestic exports by countries of destination.

One major shortcoming with the available figures of government expenditure in some countries is the lack of detailed information on actual capital receipts and expenditure. A detailed breakdown of capital expenditure by wages and salaries, goods and services purchased as well as other specified payments would be very useful. For some countries data on Government Expenditure by Economic Classification are also not available.

Vital statistics are typically collected by district registrars unconnected with Statistical Offices. Some of the useful information contained in these detailed records are not available in published form.

The situation is obviously worse in other important areas such as manpower statistics, and in industry and service activities. Data on levels of employment, wage rates, value of output, costs and so on, are extremely scarce or just not available, at least not in published form.

The inadequacy of available statistical data is a function of the size of the statistical offices, the lack of emphasis on data collection, the generally weak financial position of the governments, lack of centralized direction and organization of data collection and also the level of training of many persons involved in data collection and record keeping. Another problem with both collecting and publishing of statistical data is related to the number of units, particularly in the goods-producing sectors. On the

one hand, in agriculture, the number of producing units are frequently small and widely dispersed throughout the country making it difficult to collect data. On the other hand, in industry, particularly manufacturing, frequently there are only one or two firms in a particular industry. In many such cases, establishments simply do not supply the data and even where data are supplied, they cannot be published.

(b) Minimum requirements

It should be borne in mind in this connexion, that these countries are still only semi-independent, that only recently they were completely administered by the United Kingdom Colonial Office, and as a consequence, economic planning and development were not given any priority. As a concomitant, the need for statistical services beyond certain rudimentary information such as population, government budget data and basic import and export data and some information arising from reports of various government departments were all that was considered necessary. With internal self-government and responsibility for managing the economies now resting with the local population, the question of encouraging economic development becomes necessary. The first step obviously, is an inventory of the economic situation, but the existing information is very sketchy.

The purposes for which data are necessary are well known and need not be elaborated here. Suffice it to say that existing data are inadequate for precise assessment of overall economic magnitudes and for integrated planning. Except in very general terms much basic data on activity within detailed sectors of the economy are not known. Policies and plans have therefore to be formulated on the basis of educated guesses and assessment of the impact these have on economic activity have a low degree of reliability. By the very nature of the economies, there is large dependence on exports. Export promotion therefore, ought to be pursued vigorously, but the rather detailed data on such aspects as output, unit costs, raw material, availability by sources, suitability of soils, trained labour force, etc., often are not

available. In view of the policies of promoting and attracting investment and granting of fiscal incentives, countries should need to know market research information such as size of the market for various commodities, existing and potential competitors, output in competing production, and the level of skilled work force. They should also be in a position to measure benefits and/or losses that may be involved.

These countries are all members of CARIFTA. Under the Agreement certain information must be collected. These include information on origin of goods entering into regional trade which, with some specified exceptions, must contain at least 50 per cent of domestic (CARIFTA) value-added. In addition, local value-added is one of the props on which the proposed scheme of harmonization of fiscal incentives to industry rests. Under the Oils and Fats Agreement and the Agricultural Marketing Protocol, countries must furnish information to the CARIFTA Secretariat on estimated output, consumption, as well as imports and exports of specified items. Information on local prices and costs would be a valuable aid in determining prices for purposes of the Agreement.

International organizations also make frequent demands for data from these countries, much of which cannot be supplied. Technical assistance experts experience difficulty in making quantitative evaluations having to spend a disproportionately large part of their time on data collection, and this no doubt, has some effect on the quality of their reports and recommendations.

As a minimum it would seem that an attempt ought to be made to collect data in the six broad fields listed below to assist governments, technical assistance personnel, regional and international organizations and others in their analytical work.

The broad fields in which statistical information are necessary are:

- (i) National Accounts;
- (ii) Tourism;
- (iii) Construction;
- (iv) Man-power statistics;
- (v) Social statistics;
- (vi) Prices.

Perhaps the most important needs in terms of priority are national accounts because of their comprehensive nature. Several of the other areas mentioned are, however, related to national accounts. Agriculture, Industry and Household budget data also form an integral part. In this connexion, it would seem mandatory that comprehensive surveys should be carried out in all major sectors of economic activity as well as of personal income and expenditure patterns. These surveys would yield inter-alia data on value and volume of output, by kind of input whether imported or domestic - (the latter further broken down by economic sectors), income by type, employment and expenditure patterns, prices, etc. These surveys would serve as bench-marks and ideally should be carried out at least at five-year intervals. Collection of some of the more important data could be undertaken at least annually from the larger units in order to provide current indicators of activity.

Data are generally available currently on number of visitors classified by origin separating cruise ship passengers from visitors spending one day or more. Bearing in mind the present potential importance of tourism to these countries, more detailed data especially on expenditure should be collected. Periodic comprehensive surveys supplemented by annual inquiries are also necessary here.

Construction is another area of vital concern because of its potential for employment, use of domestic resources and contribution to economic activity. In addition to comprehensive bench-mark data, current information on the value and volume of construction put into place by type of purchaser, source and kind of raw material as well as numbers employed would be useful.

Man-power statistics is another important area. Annual and perhaps quarterly data on employment, man-hours worked, wages in various industries by occupational classification should be collected. These would assist materially in development planning exercises.

Retail price indexes should be available for all territories either monthly or quarterly, on as recent a basis as possible. The Household survey mentioned above, would furnish the basic information. Other price information would also be useful but could perhaps be

derived from other work such as import statistics and a survey of the distribution sector.

Social statistics are important for measuring welfare and the standard of living. The first priority here would be to require Government Departments such as the Ministries of Health and Education to keep more adequate records and to make them available.

The foregoing has clearly demonstrated the scarcity of statistics in the ECCM countries. The fact that the countries are small does not lessen the requirements for data. Their small size can facilitate data collection and can make measurement of impact of specific economic plans easier.

It should not be considered that all the work implied from the above ought to be carried out simultaneously. Projects can be phased as time and staff permit. It is important, however, that some of the surveys such as of Agriculture, Industry and Households be done early with a view to deriving data basic to the National Accounts.

ORGANIZATION AND ADMINISTRATIVE REQUIREMENTS

In the foregoing sections, the current position with statistics was discussed and some of the deficiencies indicated. There was discussion also of the necessity for collecting statistical data in general and in certain specific fields indicating some priority areas. The international recommendations on statistical data for less developed countries^{5/} exceed by far the minimum requirements stated above. This is so because of the peculiar situation of the Eastern Caribbean territories such as small geographical area, stringent limitation on fiscal and other resources and the existing attitudes toward and difficulties in collecting and publishing data. It is now necessary to determine the organizational requirements of a programme.

^{5/} See UN Statistical paper, Series M. No. 31: Statistical Series for the use of Less Developed Countries in Programmes of Economic and Social Development, New York, 1959.

(b) Budget requirements^{6/}

	\$EC
Head of Department	\$ 8,000
Deputy Head	\$ 6,800
1 Senior Statistical Assistant	\$ 5,500
3 Statistical Assistants	\$12,600
4 Junior Statistical Assistants including Typists	\$ 8,400
	<hr/>
Total 10	\$41,300
	<hr/>

These figures are taken for the most part at the mid-point between the minimum and the maximum of salary scales of persons in the equivalent jobs in these territories.

The total figure here exceeds the expenditure of St. Lucia in 1971 by about \$6,000, but it is certain that if that country were to expand its staff to 10 persons the additional expenditure would be more than \$6,000. In one country this figure is more than double their current expenditure. In the other cases, the increase would be in the vicinity of 70-80 per cent. It is expected, however, that in practice expenditures would increase more gradually as staff size and functions increase. Moreover, new appointments are likely to be at or near the minimum of the scale. Added to this would be the cost of additional office equipment including calculating machines, temporary field staff for surveys and additional survey costs.

The actual cost here would depend on the equipment already available and would normally increase as staff size increases. With the usual delays in recruiting and training staff, expansion would be gradual. Additional expenditure in the first year could reasonably be limited to two desks, two chairs, one adding machine and one calculating machine at a cost of around \$2,500; if a typewriter, filing cabinets, shelves, books, etc. are added, the increase would

^{6/} In some territories staff in some grades already earn more than the levels used in these calculations.

be perhaps as high as \$3,500.^{7/} Subsequent annual increases should be lower. Sharing the cost of the card/paper tape converter, discussed in the section on Processing Facilities and Equipment would be an additional expenditure to be taken into account.

PROCESSING FACILITIES AND EQUIPMENT

As pointed out above tabulation aids are scarce, in some cases less than one machine (adding or desk calculators) to two persons. In all cases, a typewriter is available. It has also been pointed out that computer facilities are also now available in at least two territories of this area, as well as in the larger CARIFTA territories.

There should be at least one machine to a person preferably more calculators than adding machines in an office. Similarly, a second typewriter in each office would not be superfluous.

With respect to electronic data processing equipment, all countries may eventually wish to have their own computer and could perhaps, use one full-time taking into account the vast amount of records government departments keep. For example, inventory control of medical stores, public works department stores, payroll and pensions records, income and other tax records, health, vital statistics and education records to name a few can be quite voluminous. The cost, of course, is the prohibitive factor.

For statistical office use the type and number of electronic equipment would depend on the size of the office and the scope of its activities as well as the type of computer facilities to be used and its location. It seems a reasonable assumption that these countries would wish to use the facilities of Antigua, Dominica or St. Vincent (the latter now being used by most). The problem arises because each territory has old but still useful hand-operated card punchers and verifiers while the computers in the countries named utilise paper tape as the basic input source, and because of the difficulty being currently experienced with the processing of trade statistics at the

^{7/} Price quotations of selected equipment are given in Appendix III as an indication of levels prevailing in 1971.

St. Vincent Data Processing Centre as explained previously.

Two possible solutions are (a) that each territory have its own paper punch machine and verifier; and (b) a card/paper tape converter installed at the Computer Centre.^{8/} The first alternative is not recommended on grounds of cost and maintenance problems. The second solution appears the more feasible because card/paper converters could be installed at one or perhaps two locations if the decision to divide the work among the St. Vincent and Dominica facilities is followed up. Costs should be lower and maintenance easier and cheaper to effect where equipment is centralized. The United Kingdom might be willing to provide the equipment or subsidize the purchase under its Grant-in aid or technical assistance programmes. Any cost that must be borne locally could be shared by the countries using computer facilities.

LOCATION OF THE STATISTICS DEPARTMENT

In most cases, Statistical Units at present, are attached to the Ministry of Finance, in some cases, to the Ministry of Trade or the Ministry of Planning. Complicating this picture is the fact that in some countries, the Ministries of Finance and Trade are combined. At least in one case, the Planning Department is part of the Ministry of Trade. It seems desirable that the Statistical Department should be closely allied to, if not an actual part of the Planning Department where the Planning Department is separated from the Ministry of Finance. This would serve to strengthen Planning Departments where the need for data is perhaps the greatest. It would also emphasise to the public and to business that surveys are not conducted for the purpose of tax assessment.

^{8/} These are not new ideas, having been discussed at meetings of the Statisticians of the West Indies Associated States (previously Regional Development Agency, Working Party on Statistics).

INAUGURATING A NEW SYSTEM

The next question is how to proceed from square one, that is, from the existing staff and functions towards the "ideal" situation. Clearly, the most pressing needs are finance and the commitment to devoting increased resources, however modest, to statistics. Without these no progress will be made. Secondly, there should be created, a high level Coordinating Committee to facilitate statistical work. This Committee should consist of the Head of the Statistical Office and certain Senior Government Officials such as the Permanent Secretaries of Agriculture, Trade and Industry, Financial Secretary, Comptroller of Customs, etc., or their more senior assistants involved with collecting and/or processing and using statistical data.

The Coordinating Committee should have among its functions the following:

- (a) Draw up plans for the development of future statistical work;
- (b) On the basis of their experience agree on the organizational structure to be created for collecting, processing, etc. of data in their territory;
- (c) Set policy guidelines for cooperation between the statistical unit and various government departments with respect to collecting, processing and sharing data;
- (d) Determine and recommend to government the financial resources to be committed to statistical work.

Cooperation and coordination in data collection activities are necessary to ensure maximum results. It would be desirable to enlist the cooperation of several government departments in conducting surveys, for example. It has already been pointed out that many government departments collect statistical information of various type in these territories, yet unavailability of data is a major problem. Statistical work can be facilitated by easier access to such data. Moreover, documents and forms of government departments could be redesigned to facilitate statistical work, for example, customs documents, immigration cards, ad hoc inquiries of government ministries, etc. Furthermore, the requirements of the statistical laws for cooperation of government departments would become more explicit with such a Committee.

It would seem desirable for the Statistician to be secretary of this Committee. The Chairmanship could be decided by election. The Committee would need to meet frequently in the early stages; the necessity for frequent meetings declining as the operational phase of the work gets underway. However, when new surveys are contemplated or when matters arise which require inter-departmental cooperation, for example, introduction of a new tariff system, this Committee would then have to meet.

The Committee should be involved not only with internal co-operation but also with regional and foreign countries and with international organizations especially in technical assistance. The purpose here is to increase interest in statistical matters, to keep departments informed and to enlist the support of key departments in matters of interest to the statistical units.

At the operational level, the immediate need is to streamline current activities beginning with processing and compiling External Trade Statistics. This is of course, not strictly within the functions of the Committee. However, cooperation of various departments such as Customs and national or foreign Data Processing Centres, and perhaps regional organizations is necessary. There are decisions that must be taken regarding the present programme of processing from the customs documents stage to the problem of computer processing and the printing of external trade reports. Some problems requiring early solutions are:

- (a) Where should computer processing be done:
St. Vincent, Dominica, Antigua or elsewhere?
- (b) How to revise current procedures to take into account such new realities as the imminent introduction of the BEN Common External Tariff, and to facilitate computer processing?

Beyond these, it will be necessary to expand the existing operations of the Statistical Offices to the areas of surveys and periodic inquiries and compiling National Accounts.

With respect to the question of training, the immediate needs are to increase the training of lower level personnel; but almost as urgent is the necessity to train personnel at least in the basic aspects of Computer Science, to facilitate designing of adequate systems for future use. Training, however, may have to await reorganization of the structure and in some cases recruitment of additional personnel.

At some point in the near future, it will be necessary to upgrade the post of Head of the Statistical Unit. The two possibilities would be to recruit a fairly highly experienced statistician or economist, or alternatively, to send Statistical Officers for additional training. The alternative chosen would of course depend on the situation in each territory. One thing is clear, however, and that is that the Head of the Statistical Unit must be sufficiently trained and must be at a sufficiently high level in the Government Service to command the respect and to get the cooperation of Permanent Secretaries and other senior government officials.

Short-term technical assistance at either the organization or operational stages can be secured from the United Nations system, from the larger CARIFTA territories or from developed countries on a bilateral basis. Furthermore, inauguration of a regional programme of statistics either at the Associated States or CARIFTA level would facilitate the programme in each country. The coordinating committee mentioned above would be ideally suited to deal with the technical assistance aspects.

Appendix I

Selected Information on Statistical Services
of the West Indies Associated States

Country	SIZE OF STATISTICAL UNIT						Salary Budget 1971	Expenditure Estimates EC\$	Main Tasks	Publications
	BUDGETED			IN SERVICE						
	Statis- tician	Stat. Officer	Others ^{1/}	Statis- tician	Stat. Officer	Others ^{1/}				
DOMINICA	-	1	4	-	1	4	24,375		Compiling External Trade Statistics Collecting Prices for retail price indexes Collecting diverse information for statistical Abstract Preparing Publications Ad Hoc tasks - as required, e.g. Assist Population Census.	1. External Trade Report (Annual) - 1969 2. Annual Statistical Digest (irregular) - 1969 3. Monthly External Trade Report (Temporarily Suspended)
GRENADA	-	1	6	-	1	4	21,972		Compiling External Trade Statistics Collecting prices and computing monthly retail price indexes (temporarily suspended) Collecting diverse statistical data now mainly on ad hoc basis Preparing Publications.	1. External Trade Report (Annual) - 1967 2. Quarterly External Trade Report 3. Quarterly Statistical Bulletin Oct-Dec. 1968 temporarily suspended

^{1/} Include typists; in some cases clerk/typists.

^{1/} Include typists; in some cases clerk/typists.

Country	SIZE OF STATISTICAL UNIT						Salary Expenditure		Main Tasks	Publications
	BUDGETED			IN SERVICE			Budget Estimates			
	Statis- tician	Stat. Officer	Others ^{1/}	Statis- tician	Stat. Officer	Others ^{1/}	1971	EC\$		
ST. KITTS- NEVIS- ANGUILLA	-	1 ^{2/}	1 ^{2/}	-	1	3	n.a.		Compiling External Trade Statistics	1. External Trade Report (Annual) - 1970
									Collecting diverse statistical data for Statistical Abstract	2. Digest of Statistics (Annual) - 1970
									Preparing publica- tion ad hoc tasks - as required, e.g., Assist Population Census.	3. Summary of CARIFTA Trade (Annual) - 1966
ST. LUCIA	-	1	8	-	1	7 ^{3/}	33,350		Compiling External Trade Statistics	1. Annual Overseas Trade Report - 1968
									Collecting prices and computing month- ly retail price indexes	2. Annual Statistical Digest - 1970
									Collecting diverse statistical data for Statistical Digest	3. Quarterly Overseas Trade Report -Apr.- June 1971
									Ad hoc tasks as re- quired, e.g., Assist in Population Census	
									Preparing Publications	

^{2/} These two posts only are indentifiable in the Budget
Estimates as performing statistical work.

^{3/} Three temporary posts for 1971.

Country	SIZE OF STATISTICAL UNIT						Salary Expenditure Budget Estimates 1971 EC\$	Main Tasks	Publications
	BUDGETED			IN SERVICE					
	Statis- tician	Stat. Officer	Others ^{1/}	Statis- tician	Stat. Officer	Others ^{1/}			
ST. VINCENT	-	1	5		1	5	24,420	Compiling External Trade Statistics	1. Annual Trade Report - 1967 2. Digest of Statistics Annual 1970 - irregular #20 3. Quarterly Overseas Trade Report - Oct.-Dec. 1969 Collecting diverse statistical data for Statistical Digest Ad hoc tasks as required e.g. Assist in Population Census Preparing Publications
MONTSERRAT		1 ^{4/}	2 ^{5/}					Compiling External Trade Statistics	1. Overseas Trade (Annual) 1968 Ad hoc tasks as required, e.g. Assist in Population Census Prepare Publications
ANTIGUA	No Statistical Unit in existence as late as January 1972								1. Annual Trade Report - 1967

^{4/} The Officer-in-Charge has another substantive post and performs this duty on part-time basis.

^{5/} Include one U.K. V.S.O. staff who also works for the Ministry of Finance on Budget, etc.

Appendix II

Information on Selected Statistical Series
of the West Indies Associated States

Statistical Series and Inquiries (1)	Country (2)	Agency collecting Basic Data (3)	Frequency (4)	Latest (5)	Notes, Remarks, etc. (6)
1. POPULATION - Census Data on number of persons on census day classified by: Type of households, ethnic and national origin, marital status, age, sex, religion, literacy and working popula- tion data, etc.	Antigua Dominica Grenada Montserrat St. Kitts- Nevis- Anguilla St. Lucia St. Vincent	Census Committee Assistance of Statis- tical Offices and specially recruited and trained enumera- tors and supervisors	Decennial	April 1970	Organization, coordination, pre- paration of manuals, etc., in hands of Central Coordinating Committee headed by University of the West Indies personnel. 1970 Census included in addition data on Housing and Income. Only preliminary data such as total population by enumeration areas age and sex and similar basic tabulations available to date.
2. VITAL STATISTICS Births, deaths, net migration, estimated year and population, marriages, still births, etc.	Antigua Dominica Grenada Montserrat St. Kitts- Nevis- Anguilla St. Lucia St. Vincent	Births, deaths, marriages - Registrar's Offices or Health Department Migration data - Immigration Records in Police Department	Migration - Arrivals and Departure regis- tered at time of event; Births, deaths and marriages shortly after occurrence. Publication usually Annually though quarterly data available for St. Vincent	n.a. 1968 n.a. n.a. 1970 1970 4th Quarter 1969	Period in Column 5 refers to published figures.
3. LABOUR Wage rates by selected occupations. Labour force projections Wage rates and earnings selected occupations Wage rates of government non-establishment workers	Dominica St. Kitts- Nevis- Anguilla	Labour Department Labour Department	n.a.	1969 1971	See under Population 1970 Census data available for working pop- ulation by occupational category, age and sex.

Statistical Series and Inquiries (1)	Country (2)	Agency collecting Basic Data (3)
LABOUR (Cont'd)		
Number employed in Government Public Works Department	St. Lucia	Presumably records of Public Works Department
4. (i) AGRICULTURE - Census	Antigua	West Indies Federal
(a) Holdings - Number, size, form of tenure, utilization	Dominica	Government
(b) Selected crops - Number of holders, area harvested, production; for tree crops - number of trees	Grenada St. Kitts- Nevis- Anguilla St. Lucia St. Vincent	Standing Committee on Agriculture
(c) Livestock - Holdings, numbers classified by size of holding		
(d) Farm Population		
(e) Persons employed		
(f) Machinery, power use, trans- port, irrigation, fertilizer use, etc.		
(ii) Agricultural Output Data		
Sugar cane, cotton, Copra	St. Kitts- Nevis- Anguilla	n.a.
Copra, timber	St. Lucia	n.a.
Selected root crops, cotton,)) arrowroot, bananas, nutmegs,)) and mace, cocoa beans))	St. Vincent	Department of Agriculture; Commodity Associa- tions for bananas and arrowroot

Frequency (4)	Latest (5)	Notes, Remarks, etc. (6)
Quarterly	1970	
Irregular	1961 Grenada also 1965/66	Between April 1965 and March 1966 the British Development Division in the Caribbean conducted an Agricultural Survey which was roughly same in scope and coverage as the 1961 Census - See <u>Current Estimates of Agriculture</u> , 1965/66 - Grenada, British Development Division in the Caribbean - Bridgetown, Barbados.
Annual	1970	
Quarterly for Copra, Annually- timber	1970	
Annual	1970	

Statistical Series and Inquiries (1)	Country (2)	Agency collecting Basic Data (3)
5. MINING & MANUFACTURING		
Quantum of output data		
Pumice, Beverages and tobacco products, vegetable oil, coconut meal and soap	Dominica	n.a.
Sugar, molasses, copra and beverages	St. Kitts- Nevis- Anguilla	n.a.
Rum, vegetable oil, coconut meal, soap and lumber	St. Lucia	Statistical Office
Rum and cotton lint	St. Vincent	Statistical Office from Customs records etc.
6. ELECTRICITY		
(a) Total Generated	Dominica	Statistical Office
(b) Generated, Consumption - by category of consumer and total consumers; and Revenue and Expenditure	St. Kitts- Nevis- Anguilla	Statistical Unit
(c) Capacity, Generation Revenue, distribution by category of consumer and number of consumers	St. Lucia	Statistical Office for companies
7. RETAIL TRADE		
Price Index	Dominica Grenada St. Kitts- Nevis- Anguilla St. Lucia	Statistical Office Statistical Office Labour Department Statistical Office

Frequency (4)	Latest (5)	Notes, Remarks, etc. (6)
Annual	1968	
Annual	1970	
Annual and Quarterly	1969	
Annual	1970	
Annual	1968	Data exclude one plant.
Annual	1970	Some details lacking for 1969 and 1970; Anguilla excluded.
Annual	1969	Capacity and total generation available only for city of Castries.
Monthly	1969	Temporarily discontinued in
Monthly	1969	St. Vincent; also Grenada since 1970
Monthly	1970	
Monthly	1971	

Statistical Series and Inquiries (1)	Country (2)	Agency collecting Basic Data (3)	Frequency (4)	Latest (5)	Notes, Remarks, etc. (6)
8. EXTERNAL TRADE					
(a) Quantity and value of trade of detailed commodities and commodity groups by origins and destination	Antigua Dominica Grenada Montserrat	Statistical Offices from Customs documents	Monthly in principle (in at least one case daily)		St. Kitts and Montserrat do not show table (b). Series shown here are common to all except as specified. Some countries, notably St. Lucia show also additional series such as trade by SITC Divisions and trade by regional and geographic groupings.
(b) Summary of trade by Currency Areas and principal countries	St. Kitts- Nevis- Anguilla				
(c) Summary of trade by all countries	St. Lucia				
(d) Principal items of imports and exports	St. Vincent				
(e) Trade by SITC Section					
9. GOVERNMENT BUDGET DATA					
Detailed items of actual and estimated Recurrent Revenue and expenditure.	All territories	Accountant General's Department and Budget Unit of Ministry of Finance	Annual	1971	Details of actual capital expenditure not published for nearly all territories. Few territories publish economic classification of expenditure.
Summary tables of major revenue and expenditure heads.					
Details of estimated capital Revenue and Expenditure.					
Income Tax Assessments	St. Kitts- Nevis- Anguilla and St. Lucia	"		St. Lucia and St. Vincent	
10. MONETARY STATISTICS					
Money supply. Commercial Banks Assets and Liabilities distinguishing foreign loans and advances by economic categories. Selected interest rates.	Leeward Islands (Antigua, St. Kitts- Nevis-Anguilla, Montserrat) Windward Islands (Dominica, Grenada, St. Lucia, St. Vincent)	East Caribbean Currency Authority from information furnished by commercial banks of each territory	Quarterly	December 1971	

Statistical Series and Inquiries (1)	Country (2)	Agency collecting Basic Data (3)	Frequency (4)	Latest (5)	Notes, Remarks, etc. (6)
11. SOCIAL STATISTICS					
(a) Education	Dominica	Department of		1968	In principle, various government departments are charged with keeping records in the areas of their competence.
Data on number of schools, teachers and pupils	St. Lucia	Education	Annual	1970	
	St. Vincent			1970	
(b) Health					
Data on hospitals and patients, incidence of diseases and deaths by cause .	Dominica	Department of Health	Annual	1968	
(c) Crime statistics	Dominica	Police and judicial authorities	Annual	1967	
	St. Lucia			1970	
12. TRANSPORTATION			Annual		
Motor vehicles registered and licensed by type.	Dominica,	Police Department		Dominica 1968	St. Kitts data do not specify type of ships.
Ships - arrivals, type and cargo landed	St. Kitts-Nevis-Anguilla	Customs Department and Harbour Masters Department		St. Kitts 1970	
	St. Lucia			St. Lucia 1970	
	St. Vincent			St. Vincent 1969	
Aircraft - numbers landing	Dominica and St. Kitts-Nevis-Anguilla	n.a.		Dominica 1968	
				St. Kitts 1970	
cargo	Dominica	n.a.		1968	

NOTE: The information contained in this Appendix does not necessarily relate to all the data collected in all the territories. In general, it refers to the more recently published data available to the ECLA, Port of Spain Office. In the circumstances, some discontinued series may not be included.

Appendix III

APPROXIMATE PRICE OF SELECTED OFFICE EQUIPMENT^{1/}

Burroughs Electronic Calculator, model C - 3262 with one storage memory, 12 digits, automatic round-off, etc.	-	\$1,295.00
Victor Mechanical Adding Machine	-	420.00
Adler Standard type Typewriter with 15" carriage	-	660.00
Metal Desk, 60" x 30", wooden top, single pedestal	-	260.00
Arm-chair, Executive type, metal, vinyl upholstered	-	120.00
		<hr/>
		\$2,755.00
		<hr/>

^{1/} The equipment named here are not to be taken to imply any recommendation as to model and make. The sole purpose is to convey an idea of cost of certain type of equipment.

Appendix IV

Organization Chart - Statistical Office
(West Indies Associated States)

