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CARIBBEAN NETWORK OF REGIONAL INFORMATION SYSTEMS



**UNITED NATIONS**

ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN  
Subregional Headquarters for the Caribbean



## CARIBBEAN NETWORK OF REGIONAL INFORMATION SYSTEMS

1. The ECLAC/CDCC secretariat was mandated by the third session of the CDCC to establish a Caribbean Information System based on sectoral networks - emphasis being given to those areas identified by the Committee as priority. Three such networks were established by the secretariat in areas relating to Social and Economic Planning and Development, Patents, and Agriculture.

2. Since then a growing number of regional and subregional information systems have been, or are being established, in response to identified information needs or mandates given to other regional integration institutions, e.g. CARICOM, OECS, CDB, by their governing councils in different sectors of development activity.

3. This situation was brought to the attention of the Committee at its ninth session and the need to formulate a regional information strategy within which existing systems can operate and future systems guided was emphasized.

4. At the request of the Committee and in collaboration with the CARICOM secretariat, the ECLAC/CDCC secretariats sought and received financing from IDRC to enable funding of a consultant mission to prepare a working document, which could provide the basis for a regional information system strategy, and to convene an experts meeting to review the document. The terms of reference of the consultant mission are attached as Annex I. The report of the Consultant mission, entitled A Regional Information System Strategy for the Caribbean to the Year 2000 (WP/RIS/L.87/1), is very comprehensive and was based on wide ranging in-depth discussions. It was submitted to all member governments for their consideration and discussed at an experts meeting convened jointly by ECLAC/CDCC and CARICOM secretariats in Port of Spain, 27-29 May 1987. (Report LC/CAR/G.228).

5. This paper brings to the attention of the Committee some of the issues raised in the strategy document and further discussed at the experts meeting and suggests a mechanism to be put in place to monitor, streamline and co-ordinate future activities as a means of ensuring the rational development of Caribbean regional information systems.

### Overview of the existing situation

6. Caribbean governments have recognized the importance of information<sup>1/</sup> to the development of individual countries and to the region as a whole. Their further recognition of the need to access data produced in or about member states (of various groupings - CDCC, CARICOM, OECS, CDB) and to share this information on a mutually beneficial basis has led over the past ten years to governments giving mandates to regional institutions to establish regional information systems in various sectors identified for priority development. In this way, a number of information systems for different sectors are either in place or are in process of development. Some of these are:

- (a) Caribbean Information System for Social and Economic Planning - CARISPLAN [ECLAC/CDCC];
- (b) Caribbean Patent Information System - CARPIN [ECLAC/CDCC];
- (c) Caribbean Information System for the Agricultural Sciences - CAGRIS [UWI implementing a CDCC decision];
- (d) Caribbean Trade Information System - CARTIS [CARICOM];
- (e) Caribbean Agricultural Marketing Information System - CAMIS [CARICOM];
- (f) Caribbean Technology Consultancy Service - CTCS [CDB]; and
- (g) Caribbean Energy Information System - CEIS [SRC, Jamaica].

7. Several other systems are planned in response to various mandates given by Caribbean governments. A brief summary of these systems is appended as Annex II.

8. In addition to the systems developed by inter-governmental bodies, regional systems are also being developed in the areas of business and agriculture by non-governmental organizations such as, the Caribbean Association of Industry and Commerce (CAIC) and the Association for Caribbean Transformation (ACT).

### Mandates for establishing the Systems

9. The mandates given to regional institutions to establish the information systems, arise out of the recognition of information gaps as a deterrent to the development and implementation of programmes in priority sectors.

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<sup>1/</sup> Information is used in this paper to refer to quantitative, bibliographic and textual or factual data. Information system denotes an organized set of procedures for the rational and systematic application of all types of information services - data, bibliographic information and information technology - to social and economic problems.

10. In the early stages, 1977-1983, when only three systems were established, there was little likelihood of duplication or overlap because the sectors and principal users were clearly defined. However, as the mandates increased (between 1984 and 1987, eight systems have been or are in the process of being established, and ten others are planned), and as there are areas of overlap in information needs in sectoral development, there is a strong likelihood of overlap and consequently a need for rationalization in the light of the intersectoral programmes being developed.

11. Further complications arise when several separate requests are received by one donor agency from institutions within the region, for the establishment of an information system for the same purpose; or when external agencies extend their information systems into the region, without any attempt to ascertain what local developments are already taking place in the same field.

12. Whereas it had once been possible through an informal arrangement for the regional institutions involved to cooperate in the establishment of information systems and avoid duplication and waste of resources, this informal method of co-operation has become difficult to operate owing to the many activities and external agencies now involved. The question of co-ordinated development therefore needs to be addressed urgently by the Committee.

13. An added dimension to the problem described above is one which arises because of the high financial costs involved in establishing these systems. It has become the norm for the sponsoring institution of the regional information system to seek funding for at least three years to assist in the setting up of the system. In the early period of the establishment of regional information systems, the International Development Research Centre (IDRC) of Canada was almost the sole source of providing financial and technical assistance for regional information projects (Unesco being the agency more concerned with the development of national information systems). However, with the increase in the number of information systems being established, and the increasing costs of establishing these systems, it has become necessary to involve more than one donor agency in the development of projects. Each donor agency has its own modus operandi and makes its own requests of the recipient institution. These terms do not always allow the sponsoring institution to remain the executing agent for the project, and this does cause considerable adjustment to be made to the project. Since the Caribbean lacks a defined framework within which these information systems should be established at the regional level, there is no direction given to the donor agencies as to the type of system that the region would wish to see established. No direction is consequently available in respect of the methodology which should be applied, or in respect of the computer hardware and software that should be used to permit the compatibility of all systems and facilitate intersectoral access.

14. There is an additional problem in respect of financing the information systems which needs to be noted. Continued financing of the information systems once established, causes some concern. Notwithstanding the availability of funds from donor agencies for the initial development of the systems, there is need for the continuous

support by governments of the national nodes or centres in the regional information systems. While funding assures the establishment of the systems, it is necessary to determine at the pre-project stage, the level of financial commitment of Governments to providing human and physical resource requirements and to providing the necessary maintenance and servicing on a long term basis. This is crucial in the assessment of the viability and sustainability of the systems, and has become the issue on which donor agencies now determine whether or not to grant support to projects for the establishment of information systems.

#### Type of Information Systems being established

15. An examination of the information systems currently in place or being developed shows that there are three types - bibliographic, quantitative and factual. The first few systems established were of the bibliographic/factual types and provided general information to the respective sectors. Other systems now being established are quantitative and oriented towards addressing specific problems. Thus systems such as CARTIS - the Caribbean Trade Information System, and the Caribbean Agricultural Marketing Information Systems - CAMIS, the ECCB Debt Management Recording System, are essentially quantitative, geared to providing information for specific problems, and requiring a different methodology. This is normally best developed through a pilot project approach, which serves to clearly define, prior to implementation of a larger project - the total resource needs and types of suitable information outputs. As most of these quantitative systems are relatively more costly to implement, there is the likelihood that more than one donor will be involved in the funding and implementation. This reinforces the need for agreed guidelines from the regional institutions.

#### Existing methodology for establishing Regional Information Systems

16. The establishment of all the current regional information systems has taken into consideration as a first step, the existing capabilities at the national level for providing the relevant services, and seeks to work through the recognized channels at the national level for the implementation of the systems.

17. Methodologies and standard formats for the operation of networks within the Caribbean Information System have been developed over the years. These methodologies have been adopted by other regional systems, through informal co-operative arrangement at the level of the respective information managers. This has helped to ensure systems compatibility and the possibility of intersectoral access to databases.

18. At present each regional information system is established as a network, consisting of national focal points or nodes and a regional co-ordinating centre, which plays a pivotal role in the implementation of the system and serves to strengthen the national nodes' capability to set up and maintain computerized data bases and identify and provide information services to users at the national level.

19. The methodology for the establishment of these systems is normally discussed at a workshop with the participants from Member States, and the details worked out, prior to the search for funding for the information projects. Experience points to the conclusion that this networking methodology has come to be generally accepted in Member States and is an appropriate way of giving effect to a policy of developing regional co-operation in the field of information.

#### Rationale for the regional approach to Information Systems Development

20. While the regional approach to the development of information systems is not the only option open to Member States, it seems that this co-operative approach does bring with it certain clear benefits:

(a) The improvement of the national focal points (which are usually existing special libraries with special functions) to provide service nationally;

(b) The ability of the region to mobilize funds for a sector whose impact is not readily measurable in economic terms;

(c) The reducing of the technological gap between the information rich and the information poor, by the ability of the regional centre, equipped with the interface technology to download data (i.e. copying the data from one computer directly into the memory of another in a form in which it is integrated with the recipient system and is immediately available for use) from external data bases on behalf of the countries;

(d) The ability to provide centrally the capability of evaluating the usefulness of the data base being externally accessed, prior to the commitment of funds to engage in this exercise as part of the function of the system;

(e) The establishment of standards in relation to hardware and software, procedures and norms for the use of the system, which allows for the easy exchange of data and enhances the information sharing capacity of the system;

(f) The provision of on-the-spot and jointly organized training for users and providers of information;

(g) The design and testing of the computerized system prior to implementation, and the maintenance centrally of the integrity (or validity) of the data base; and

(h) The possibility of co-ordinating the development of systems into a network so as to optimize use of resources and utilization of the systems while minimizing duplication.

21. It is also worthwhile mentioning that the report of the Consultant mission referred to at page one, concluded, in respect of the question as to whether or not there was any variance between the national and regional information systems, that "details on policies governing participation in regional information systems which had to be gleaned

from current activities indicate that participation in the regional systems is in keeping with the policies of the Member States".

22. The recommendations of the Consultant Mission and of the meeting cover both technical and general policy issues and have been included as part of the report of the meeting (see Annex III - Summary and Recommendations). The general policy issues are brought to the attention of the Committee for their determination and the technical issues will be taken up subsequently.

#### Mechanism for overall co-ordination of Subregional Information Systems

23. One of the most important recommendations addressed by the experts meeting in May 1987 was that in order to avoid the likelihood of wasteful duplication and overlap in the development of regional information systems, it would be necessary to put in place a mechanism to monitor and assist in co-ordinating the planning, implementation and operation of these systems. It was proposed that the mechanism should be an institutionalized committee that would play an advisory, monitoring and consultative role.

24. One task of this committee would relate to the process of establishment of regional information systems ensuring in particular, that appropriate activities and/or criteria are defined and applied to the establishment of each system. These would cover the following:

(a) That the issues of sustainability, human and physical resource requirements, impact of the national financial resources on the development of the system, would be addressed by all governments of participating countries in the establishment of a system;

(b) That the requirement for a centre with a relevant information base to be chosen as a regional co-ordinating focal point and for the parent institution to be able to support the role of focal point, be met;

(c) That proposals for the establishment of new information systems be examined in the context of already established systems and planned programmes with a view to optimizing the use of resources;

(d) That the information systems are indeed responsive to the needs and priorities of countries;

(e) That there is a clear definition of the target user group, which will imply acceptance of the subject scope and outputs and services of the system;

(f) That compatibility of the systems is maintained as well as standards and methodologies; and that where there is exception from compatibility, that there be a clear rationale for this. It is important to maintain the integrity of regional standards as a first priority and to provide assistance to the national systems to maintain these standards, where there is the need for this assistance;



(g) That as far as is possible, a test of the viability of the system prior to implementation be carried out, preferably through the use of a pilot project, which will assist in determining human resource requirements at the regional and national levels, equipment needs including computers and peripherals, software, costs of outputs and services to be provided and user requirements, overall capital and running costs of the system;

(h) That every effort be made to optimize the resources directed towards training, ensuring the introduction of information technologies and methodologies so that the largest audiences can be reached and the number of short term courses in the information field could be reduced while still maintaining maximum benefits to a greater number of persons.

25. Another role of this committee would be to ensure that evaluation of the systems for effectiveness, not limited to the specific objectives of the system project or the requirements of donor agencies, be systematically carried out, in the light of the continuing development of new systems and in the light of the changing priorities of users.

26. A third role of the committee, or a subgroup of the committee, would be participation in the negotiation process for external funding to support the establishment of regional systems or the continued operation of already established systems. This participation could take the form of:

(a) Reviewing the project proposal prior to final submission to donor agencies and providing comments according to an agreed checklist;

(b) Maintaining regionally, the ownership and copyright of data bases generated within the regional systems, and ensuring the observance of the rights of privacy, where these obtain; and

(c) Being involved in regional initiatives which use high technologies for the rapid processing, transmission and dissemination of information.

27. The fourth role for this committee would be to co-ordinate the overall management of the regional systems, to ensure that:

(a) The objectives of the systems continue to be met;

(b) The human, financial and physical resources are put to maximum use;

(c) Co-ordination of activities of external agencies involved in the establishment of regional information systems is constantly promoted and that information systems being established are done in the context of an agreed regional framework.

Establishment of the Committee

28. The meeting was of the view that a committee with advisory, monitoring and consultative roles to perform functions related to the roles outlined in paragraphs 24-27 above, and representative of the following groups should be set up:

(a) Regional integration institutions charged with managing regional information systems. These constitute the following at present:

- (i) ECLAC/CDCC secretariat;
- (ii) CARICOM secretariat;
- (iii) OECS secretariat; and
- (iv) Caribbean Development Bank;

(b) Managers of other regional information systems. These constitute the following:

- (i) CEIS (Caribbean Energy Information System) managed by the Scientific Research Council, Jamaica;
- (ii) CAGRIS, managed by the University of the West Indies, St. Augustine, for ECLAC (one only to be represented on a three-year rotation basis);

(c) Representatives of national co-ordinating bodies of national information systems (four only to be represented on a three-year rotation basis);

(d) Representatives of national focal points of regional information systems (four only to be represented on a three-year rotation basis); and

(e) Representatives of other interest groups, for example, telecommunications, computer science, statistics, library and information professional associations (two representatives only on a three-year rotation basis).

29. To ensure the effectiveness and objectivity of the committee, members should rotate on a triennial and the secretariat on a four-yearly basis.

30. The secretariats of the four regional integration institutions - ECLAC/CDCC, CARICOM, OECS, CDB, should provide the secretariat for the committee and should guarantee the necessary resource support, including one part-time secretary.

31. The Chairmanship of the committee would rest either with one of the four integration institutions (but not to coincide with its provision of the secretariat), or with one of the institutions responsible for co-ordinating a regional information system.

Financial implications

32. It is recommended that the committee meet formally once per year, and communicate on issues as they arise.

33. The annual expenditure for four years to the institution hosting the secretariat of the committee should be the cost of a part-time Secretary, office accommodation, travel and per diem for one person, office supplies and use of communication facilities.

34. The CDCC is being asked to:

(a) Note the issues in the development of regional information systems, which need urgent attention;

(b) Agree that a Consultative Committee on Regional Information Systems be established to perform functions identified with the roles outlined above, which are to seek to ensure that:

- (i) Activities as set out in paragraph 24 dealing with the process of establishment of regional information systems are effected;
- (ii) Continuing evaluation of the systems' effectiveness is carried out (paragraph 25);
- (iii) There is participation of the committee in the negotiation for external funding (paragraph 26);
- (iv) On-going co-ordination of the overall management of the regional information systems is accomplished (paragraph 27);

(c) Authorize the secretariat to take the necessary steps to ensure the formation of the Committee.

Annex I

TERMS OF REFERENCE

The objective of the Consultant Mission is to prepare, for submission to the CARICOM and ECLAC/CDCC secretariats, a working document which could provide the basis for a regional information policy to be reviewed by a group of technical experts from the region before submission to CARICOM and CDCC and OECS member states for study and ratification.

The Consultant shall discuss with relevant library and information authorities in a selected number of Caribbean countries<sup>1/</sup> the conceptual framework of existing information systems, policy issues and alternatives which would allow for better co-ordination of regional and national systems and improved delivery of services.

The document will, inter alia, review the mandates and activities of regional organizations in the development and implementation of information systems and programmes; examine the role and inputs of international organizations and the impact of these combined activities in the region. It will also serve to identify gaps and measures for improving access to information and maximizing the benefits which could be accrued from these systems in terms of their contribution to the overall development goals of the region.

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<sup>1/</sup> Barbados, Cuba, Dominican Republic, Guyana, Jamaica, Saint Lucia and Trinidad and Tobago.

Annex II

CARIBBEAN NETWORK OF REGIONAL INFORMATION SYSTEMS

Regional Information System

<u>Sector</u>	<u>System</u>	<u>Type of system</u>	<u>Co-ordinated by</u>
AGRICULTURE	CAGRIS [1985/6-] (Caribbean Information System for the Agricultural Sciences) Scope: Agricultural Research Literature Users: policy-makers, planners, researchers, technical personnel	bibliographic	UWI for ECLAC
	CARDILS [1981-] (Caribbean Agricultural Research & Development Institute Literature Service) Scope: CARDI research materials Users: CARDI staff, government officers, other agriculturalists	bibliographic	CARDI
	Animal Health Disease Reporting Information System [to commence 1987] Users: Agriculturalists	quantitative	IICA
	CAMIS: [to commence 1987] (Caribbean Agricultural Marketing Information System) Scope: Agricultural production data, current market information (product and enterprise specific) Users: farmers, exporters, trade officials et al	quantitative and factual	CARICOM
	CARTIS [1986-] (Caribbean Trade Information System) Scope: Non-traditional production and marketing information Users: Exporters, manufacturers and trade officials	quantitative, factual and bibliographic	CARICOM

<u>Sector</u>	<u>System</u>	<u>Type of system</u>	<u>Co-ordinated by</u>
SOCIO-ECONOMIC PLANNING	CARISPLAN [1977-] (Caribbean Information System for Economic and Social Planning) Scope: Socio-economic planning information Users: Policy-makers, planners, researchers et al	bibliographic and factual	ECLAC
	Agricultural Technology Transfer (proposed) Scope: Agricultural technology Users: Commercial farmers	repackaging and factual	CARDI
INDUSTRY	CARPIN [1985-] (Caribbean Patents Information System) Scope: All patents in force in Caribbean Users: Policy-makers, planners, researchers, technical personnel	bibliographic and factual	ECLAC
	CTCS [1984-] (Caribbean Technological Consultancy Service) Scope: All substantive topics of interest to small industries Users: Small enterprises	factual and (repackaging)	CDB
	CARSTIN - Technology Transfer Support Information System (proposed) Scope: All relevant areas of industrial activity Users: Enterprises	factual	
	CARSTIN - Information system for small-scale industry (proposed) Scope: Small-scale, industrial development Users: Small-scale manufacturers and entrepreneurs	factual	

<u>Sector</u>	<u>System</u>	<u>Type of system</u>	<u>Co-ordinated by</u>
ENERGY	CEIS [1987-] (Caribbean Energy Information System) Scope: Data on new and renewable sources of energy and in petroleum pricing Users: Policy-makers, planners, technical personnel	bibliographic, factual and quantitative	SRC - Jamaica
BANKING AND FINANCE	Eastern Caribbean Central Bank Debt Management Recording System [1987-] Scope: Data relevant to debt status of the ECCB Users: Ministries of Finance of the ECCB Member States	factual, quantitative and (repackaging)	ECCB
DISASTER PREPAREDNESS	Disaster Preparedness Information System [1982-] Scope: Information in preparation for and prevention of disasters Users: General public	bibliographic, (repackaging) and mass media links	Pan-Caribbean Disaster Preparedness Office
HEALTH	Health Information System (proposed)	quantitative, factual and bibliographic	

Annex III

A REGIONAL INFORMATION SYSTEM STRATEGY FOR THE CARIBBEAN  
TO THE YEAR 2000

Executive summary

This document outlines the proposals for a regional information system strategy which have resulted from the exercise jointly undertaken by the Caribbean Community (CARICOM) Secretariat and the United Nations Economic Commission for Latin America and the Caribbean (UNECLAC) Subregional Headquarters for the Caribbean, with financial support from the International Development Research Centre (IDRC) of Canada.

In an effort to identify the relevant issues which impact on the regional information systems and to determine an acceptable strategy, the consultant examined the factors influencing the development of the regional information systems, the resources available in the region and the national policies and plans which are to be implemented in the next decade and has therefore made recommendations on the development of the systems, as well as their products and services.

While undertaking a mission to the UNECLAC Subregional Headquarters for the Caribbean, the CARICOM Secretariat, Trinidad and Tobago, Barbados, Saint Lucia, the Dominican Republic, Jamaica and to IDRC, Canada, the consultant discussed issues outlined in the Background paper relating to the development of a regional information policy with officials responsible for the development of national information policies, national information systems and regional information systems and programmes.

The draft report of the consultant was reviewed by a technical meeting of the system managers and other specialists and the modifications proposed by the meeting have been included in this final document.



## CHAPTER 1

### The regional information systems

The regional information systems under discussion have been established by the governments of the region to provide access to data relating or relevant to the member states and to provide this information as an input to the regional development process.

## CHAPTER 2

### The geographical area

The regional groupings included in this study include the Caribbean Development and Co-operation (CDCC), the Caribbean Community (CARICOM), the Caribbean Development Bank (CDB) and the Organisation of Eastern Caribbean States (OECS). As the membership of these groupings overlaps, it seemed appropriate to examine the policy issues in relation to the English-speaking Caribbean, Cuba, Haiti, the Dominican Republic, Suriname, the Netherlands Antilles and Aruba.

## CHAPTER 3

### Priority sectors

Agriculture, industry, energy, trade, tourism, socio-economic planning, public health and preventive medicine, education, disaster preparedness and the environment, were identified by member states as priority development areas and regional information systems exist or have been proposed for these priority sectors, except tourism and the environment. The technical meeting requested that culture be also included as an area for the development of a regional information system.

## CHAPTER 4

### Information needs and services required

It is proposed that the systems will serve all members of the development community: policy-makers, planners, administrators and managers, technical personnel and researchers in the service of the governments of the member states and will also extend their services to other members of the community - the farmers, entrepreneurs and the exporters - the potential innovators in the public and private sector.

## CHAPTER 5

### Regional information systems and programmes

Regional and subregional systems exist in the areas of agriculture, disaster preparedness, trade, socio-economic planning, industry, energy and banking and finance, and include or expect to include, bibliographic data on documents produced in or about the region, textual data on regional specialists and specialist institutions and research in progress, and quantitative data on regional production. One system has been repackaging specialist information for distribution to small-scale industrialists - the Caribbean Technological Consultancy Service (CTCS) and another system - the Association for Caribbean Transformation Agricultural Information Service (ACT-AIS) has also been using English language and creole radio programmes to disseminate information to the agricultural communities.

## CHAPTER 6

### The mandates of relevant-organizations

The CARICOM Secretariat and the UNECLAC Subregional Headquarters for the Caribbean have been implementing information systems in relation to their areas of specialization and they are expected to work closely in the implementation of this strategy and in the future on the co-ordination of the policies relating to regional information systems.

## CHAPTER 7

### Activities of regional organizations in the development of regional information systems

Several regional organizations including the: UNECLAC Subregional Headquarters for the Caribbean, CARICOM Secretariat, Caribbean Development Bank, University of the West Indies, OECS Secretariat, now serve or are expected to serve as the regional and subregional focal points for regional information systems which fall within their areas of specialization.

## CHAPTER 8

### Activities of extraregional and international organizations in the development of regional information systems

Extraregional and international organizations have provided technical and financial assistance in the development of the regional

information systems. They include the main donor agency, the International Development Research Centre (IDRC), as well as Unesco, the Commonwealth Secretariat, the Organisation of American States (OAS), the United Nations International Trade Centre (UNITC) and the World Intellectual Property Organization (WIPO).

## CHAPTER 9

### Resources

An examination of the human, technological, information and financial resources now available for the maintenance of the regional information systems demonstrated a significant improvement over the past decade. There is need, however, for continued national and external support for infrastructural development if the systems are to achieve their stated objectives.

## CHAPTER 10

### National policies

All member states have discussed the development of national policies and the majority have prepared formal statements on the objectives of developing a national information system for the libraries in the country. These policies do not however cover all areas of the information sector. Details on policies governing participation in regional information systems which had to be gleaned from current activities indicate that participation in the regional systems is in keeping with the policies of the member states.

## CHAPTER 11

### Mechanisms which facilitate the national and regional information flow

Libraries and documentation centres, statistical services, referral centres, postal services, data and telecommunications facilities and mass communications media, were considered to be the main means of facilitating the regional and national information flow. Lack of intra-regional data communication facilities is a barrier to the flow of information and it is recommended that the University of the West Indies Distance Teaching Experiment (UWIDITE) and other existing regional facilities be investigated as the basis of a publicly available regional data network.

## CHAPTER 12

### Proposals

The proposals detailed in chapters 12 and 13 identify the systems which should be linked to prevent unnecessary duplication and to ensure that the data collected can be provided to the users. Proposals are also made for establishing systems for health, the environment and tourism, and for standardization and compatibility between all the systems.

Further development of the human resources to manage the regional and related national systems is also proposed, both in terms of new training and upgrading of skills to match the requirements of using the new technology and providing a more vibrant information service.

## CHAPTER 13

It is proposed that the linkages of the systems with the national and regional mass media will provide for a wider dissemination of information to the development community.

The establishment of a Caribbean Network of Regional Information Systems is proposed.

In order that these proposals could be discussed and adopted by all involved in their implementation, they were discussed initially at a technical meeting of system managers and other specialists and subsequently submitted to all the member states and to the next meetings of the Caribbean Development and Co-operation Committee, the CARICOM Ministers responsible for national information systems and the CARICOM Heads of Government conference.

### Policy monitoring

It is recommended that this be the responsibility of the Network Consultative Committee which would be composed, inter alia, of the managers of regional systems and which would, through regular consultation, determine policies relating to existing and proposed systems.

## RECOMMENDATIONS FOR IMPLEMENTATION OF THE STRATEGY

### Network management

Regional information systems for providing access to the information produced in or about the region, should be established or developed in the priority areas of:

AGRICULTURE  
BANKING AND FINANCE  
DISASTER PREPAREDNESS  
EDUCATION  
ENERGY  
THE ENVIRONMENT  
HEALTH  
INDUSTRY  
LAW  
SOCIO-ECONOMIC PLANNING  
TRADE  
TOURISM  
UNEMPLOYMENT

The rationalization of the systems and the linkages proposed in the report are to be used as a guide to eliminate overlap and for determining linkages of related systems.

As the implementation of the policies will require co-ordination of the activities of these systems, it is recommended that a Caribbean Network of Regional Information Systems be established. The Network should be composed of the existing regional information systems and others as developed, and the Consultative Committee would determine current and on-going policies, the boundaries between systems and the linkages of related existing and proposed systems.

There should be regular consultation between the members of the committee, and the University of the West Indies Distance Teaching Experiment (UWIDITE) should be investigated as a means of communication between the members.

The fact that the regional systems are multi-disciplinary requires that the strategy be ratified at the highest governmental level. It is therefore recommended that the strategy be presented to the next meetings of the Heads of Government of the Caribbean Community and of the Caribbean Development and Co-operation Committee.

The CARICOM Secretariat and the UNECLAC Subregional Headquarters for the Caribbean should be responsible for presenting proposed changes in the strategy to the future meetings of the Heads of Government and of the Caribbean Development and Co-operation Committee.

The network should be recognized as the regional link with extraregional and international agencies. This would encourage the development of the regional systems within a systematically developed strategy.

#### SYSTEM DESIGN

There should be an overall design for each of the systems proposed. This design should include consultation with member states on the basic structure of the system, their participation and project proposals for extraregional funding.

#### INPUT

As the systems are based on locally produced and locally relevant material, it is also recommended that the member states and regional organizations ensure that their policies of classification and declassification facilitate access to unpublished documents and other data on the results of regional experience and research.

#### PROCESSING

The techniques employed for processing the systems' data should be selected in relation to current regional practices and facilities and these should be periodically reviewed in order to take advantage of changing technologies. Common methodologies and input formats should also be employed for the design and structure of the systems' databases.

#### Hardware

As the distribution of copies of regional databases to member states will require compatibility of equipment, it is recommended that the equipment used in the microcomputer-based systems be IBM-compatible machines for which servicing is available locally.

#### Software

As the mini-micro CDS/ISIS software package produced by Unesco is the most appropriate package presently available, it is recommended that this be the standard software for bibliographic databases on microcomputer-based systems. As UNECLAC has been designated by Unesco as the regional distribution centre, it should also be requested to continue training staff of the national and regional centres and to investigate the possibility of data transfer between MINISIS, CDS/ISIS

and OCLC, which should facilitate the participation of the university libraries in the regional systems.

## DISSEMINATION OF INFORMATION

### Information on the systems

Member states should be made aware of the systems, their structure, services and local points of access to the systems' resources. The public and private national and regional media should be used to promote the systems. The newsletters of the regional organizations - CARICOM Perspectives, CDCC Focus and CARINET should be employed to publicize the systems and their services wherever possible.

### Information on the regional information strategy

The strategy as finally confirmed by the member states should be as widely circulated as possible within the region as well as to extraregional and international organizations involved in the development of the regional information systems.

### Information held by the systems

Users and potential users need to be aware of the information held by the systems and it is therefore recommended that updated copies of the regional databases should be available to the national focal points. Printed output should be distributed to provide back-ups for the computerized systems.

### Repackaging of information

Significant pieces of information held by the systems should be summarized, analyzed, reviewed and disseminated through the mass media.

### Access to external databases

Relevant information produced outside of the region should be made available to users of the region through relevant systems when the regional databases have been established.

### Data communication

It is recommended that a regional data network be established to facilitate communication and to reduce travel costs between the national and regional focal points of the systems. It is recommended that the feasibility of using UWIDITE and other regional facilities as the basis of this network be further investigated.

### National policies

The development of national information policies for the information sector will facilitate national development and will clarify the relationships with the regional systems and programmes. There should be regular communication between the national focal points and the regional centres to ensure the implementation of the national policies.

### Human resources

Programmes for the development of information professionals should include training in areas required by the systems. This should include long and short-term training in the areas of systems analysis, computer literacy and the repackaging of information, the languages of the member states and other subject specializations.

### Financial resources

Information should be designated a priority area for national budgetary funding and for external technical and financial assistance. Regional agencies should provide assistance at the national level within the framework of the regional system strategy.

### Future developments

The above proposals have sought to rationalize the development of the regional information systems with particular emphasis on the aspects relative to the responsiveness of the systems to their constituencies. The mechanisms recommended for implementing these proposals have involved:

- initial review by a meeting of the systems' managers and other technical experts;
- circulation of the proposals to all member states;

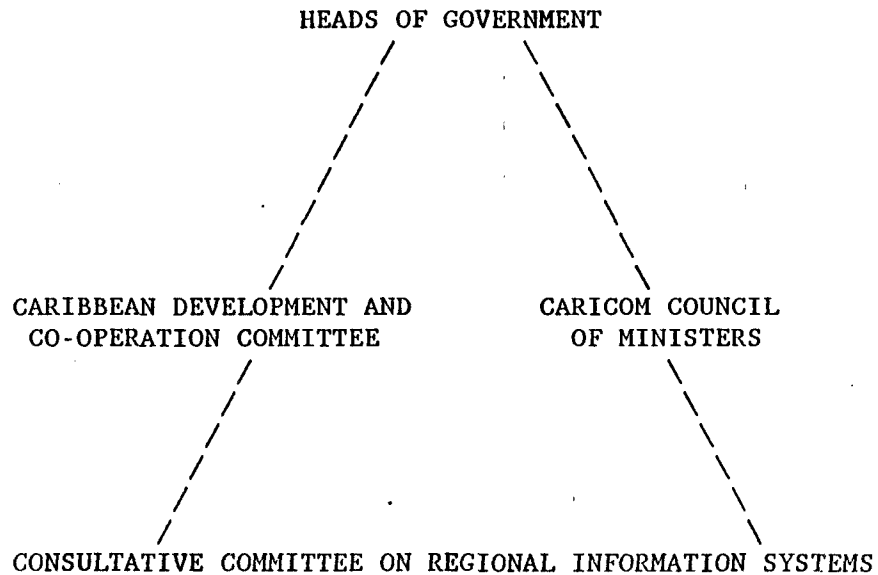


- submission to meetings of the:

(a) Caribbean Development and Co-operation Committee;

(b) Heads of Government Conference of the Caribbean Community.

The acceptance by the above groupings of ministers is expected to provide the mandate for implementation of the strategy and therefore ensure its availability as the framework governing the regional information systems to the year 2000.



advising:

THE CARIBBEAN NETWORK OF INFORMATION SYSTEMS

in the area of:

AGRICULTURE  
DISASTER PREPAREDNESS  
INDUSTRY  
TRADE  
ENERGY  
BANKING AND FINANCE  
SOCIO-ECONOMIC PLANNING

AND OTHER SYSTEMS AS DEVELOPED

A PROPOSED FRAMEWORK FOR THE  
DEVELOPMENT OF THE REGIONAL INFORMATION SYSTEM STRATEGY



