

**NATIONAL DEVELOPMENT STRATEGY  
(2001-2010)**

**A POLICY FRAMEWORK**

**ERADICATING POVERTY AND UNIFYING GUYANA**

**A CIVIL SOCIETY DOCUMENT**

**ANNEX 11**

**AGRICULTURAL INSTITUTIONS**

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## The Annexes to the National Development Strategy: An Explanatory Note

In June 2000, the National Development Strategy (NDS) of Guyana was formally presented to the President of Guyana and the Leader of the Opposition in the form of a core document, a 348 page distillation of the main elements of the analysis of the Guyana situation and the resulting strategy for action drawn from material prepared by 24 sectoral committees of the National Development Strategy Committee (NDSC). While Chapter 1 of the core document provides an outline of the origins of the NDS and the methodology of its preparation, the purpose of the present note is to explain the Annexes to the core document.

The Annexes are edited versions of the original drafts that the sectoral committees prepared, using a format that facilitated systematic thinking, though at the cost of some repetition. They are therefore longer than the corresponding Chapters of the core document, and also differ from them in other ways:

1. While the Annexes were individually edited in terms of their content, in the core document, disagreements or dissonances between Chapters were removed; for example, if the Chapter on the Private Sector proposed a strategy for Education that was in contradiction with a strategy proposed in the Chapter on Education, the two were rationalised.
2. While the core document was updated with the most recent data where possible, the Annexes generally retain their original data; for recent economic and social statistics, the attention of readers is particularly drawn to the recently completed *1999 Guyana Survey of Living Conditions*. In addition, again because of differences in when they were prepared, what was a Bill at the time of the original draft may have become an Act by the time the core document was being edited. This type of difference may be footnoted in the Annexes.
3. The treatment of the Annexes as historical documents occasionally produced another kind of difference, the main example of which is the Annex on Energy which was written before the privatisation of the Guyana Electricity Corporation, and whose strategy was largely preempted by that privatisation; while the edited Annex deliberately relied on the original material, new material was developed for the core document. These differences may also be footnoted.

It is worth noting that the updates found in the core document usually demonstrate the soundness and continued applicability of assessments made on the basis of earlier data or other information.

There are fewer Annexes than there are Chapters in the core document. For various reasons, some sectoral committee drafts were finalised in the same format as the Chapters of the core document, and there would therefore be little difference between the Chapter and the corresponding Annex. (Examples of this are the Macro-Economic Strategies and the Management of the economy; Sugar; Urban Development; Land; Housing; and The Family). The core document also includes Chapters for which there were no corresponding sectoral committee drafts; the first three Chapters of the core document (Origins and Methodology, National Objectives and Governance) are examples.

For those sectors where there are both separate Annexes and core document Chapters, the titles and numbering of the two correspond except in two cases: one, the corresponding Annex for the Chapter on Manufacturing is titled Manufacturing and Technology and includes material on Science and Technology that the core document had placed elsewhere; and two, the corresponding Annex for Chapter 4, Macro-Economic Policy, is Annex 4, Financial Sector Policy, because the material prepared for the Financial Sector Policy Annex was incorporated into the Chapter on Macro-Economic Policy.

The National Development Strategy was published in summarised form (the core document) for the practical reason that few people would have the time to read the over 700 pages represented by the Annexes. Yet the Annexes have a clear value. They include background information and assessments that were too detailed for inclusion in the core document, but which trace the process that shaped the strategy. Above all, they preserve for us and for posterity the earlier thinking, and the full range of thinking, of the women and men whose work provided the foundation of the NDS. In doing so, they honour the labour which the sectoral committees put into distilling their own work and life experience and the views of the public they consulted in the process. It is this foundational material that is now being published, making the National Development Strategy of Guyana available in both summary and extended forms.

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## LIST OF ACRONYMS

AITCC	Agricultural In-Service Training Communication Centre
ANTEG	Association of Non-Traditional Exporters in Guyana
ARC	Agriculture Research Committee
CARDI	Caribbean Agriculture Research and Development Institute
CARICOM	Caribbean Community
CDB	Caribbean Development Bank
CIDA	Caribbean International Development Agency
C/MPU	Commercial/Market Policy Unit
EC	European Community
FAO	Food and Agricultural Organisation
FOA	Faculty of Agriculture
GMC	Guyana Marketing Corporation
GNCB	Guyana National Co-operative Bank
GRDB	Guyana Rice Development Board
GSA	Guyana School of Agriculture
GUYSUCO	Guyana Sugar Corporation
IAST	Institute of Applied Science and Technology
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Co-operation on Agriculture
IPED	Institute of Private Enterprise Development
ISNAR	International Service for National Agricultural Research
LIDCO	Livestock Development Company
MFCL	Ministry of Fisheries, Crops and Livestock
MOA	Ministry of Agriculture
NARI	National Agricultural Research Institute
NDC	Neighbourhood Democratic Council

NTC	Non Traditional Crops
NDDP	National Dairy Development Programme
NEOCOL	National Edible Oil Company Limited
NGMC	"New" Guyana Marketing Corporation
OAS	Organisation of American States
RDC	Regional Democratic Council
REPAHA	Regional Education Programme for Animal Health Assistants
SIMAP	Social Impact Amelioration Programme
UG/FoA	University of Guyana/Faculty of Agriculture
UWI	University of the West Indies

## ANNEX 11

### AGRICULTURAL INSTITUTIONS

#### I. Basic Features of the Sector

In reviewing the institutional framework for agriculture, this Annex will place emphasis on support for the non-traditional crop and livestock sectors, since sugar and rice institutions are addressed in other Annexes. Many local, national and international institutions and agencies are directly or indirectly involved in the agricultural sector. Those supporting the non-traditional crop and livestock sector are classified into six broad groups:

- The Ministry of Agriculture (MOA) and the Ministry of Fisheries, Crops and Livestock (MFCL)
- Institutions involved in technology and training
- Producers, processors and marketing associations
- Regional and local government institutions
- Banking and financial institutions
- International organisations
- Other support service institutions and agencies

Table 11-1 shows a list of the institutions classified in the above-mentioned groups, and the roles they are performing within the agricultural sector.

#### A. The Ministries of Agriculture and of Fisheries, Crops and Livestock

These two Ministries remain at the centre of the institutional make-up of the sector. As the primary governmental and general support institution, the Ministries are expected to:

1. provide overall policy direction for the sector;
2. ensure the coordination of functions between the large number of public sector institutions involved in agriculture, and between those institutions and the private sector;
3. monitor developments in the sector, provide current information and develop long-term plans;
4. manage the project cycle and negotiate external financing for agricultural projects;
5. collect and process data, carry out analysis, and disseminate relevant information; and
6. respond to emergencies in the sector in areas such as a sudden crop or livestock loss resulting from pests, disease or weather.

Table 11-1  
Institutions and Agencies Supporting Non-traditional Crop and Livestock Sector

Type or Function	Public Sector	Wider Public Sector	International	NGO and Private Sector
Technology development and transfer	- Ministry of Agriculture (MOA) - Ministry of Fisheries, Crops and Livestock (MFCL)	- NARI - NGMC	- CARDI - IICA	
Technical assistance	- MFCL (Extension)	- NARI - NDDP - NGMC	- FOA - IICA - CARDI - OAS	- Input Suppliers
Training		- UGFA - GSA	- UWI - REPAHA	- SSCTC
Finance	- Ministry of Finance	- GNCB	- IDB - World Bank - CDB - CIDA - IFAD - EC - USAID	- IPED
Administration/ coordination/ regulatory/ policy	- MOA, and MFCL - Ministry of Regional Development - Regional Democratic Councils - NDCs		- CARICOM	
Marketing	- Ministry of Trade	- NGMC - LIDCO		ANTEG, Fishermen's co-ops
Production	- NARI (Mon Repos livestock farm) - MFCL (Guyana Fisheries Ltd.)	- LIDCO - NEOCOL		GAPA, Fishermen's co-ops Poultry Assoc.

The Ministry of Agriculture has three departments: Lands and Survey, Hydro-meteorology, and Planning, while the Ministry of Fisheries, Crops and Livestock has departments of Crops and Livestock, and Fisheries.

The Crops and Livestock Department is primarily responsible for the provision of technical and extension services to the farming communities. These services, as presently organised, focus on particular crops and livestock on a national basis. The crop programmes include vegetables, coconut, roots and tubers, quality seed production, nursery development, and programmes for plant protection. There is a general livestock programme that provides services to farmers in animal health and animal production, and a specific programme for the development of the poultry industry.

Associated with the Ministries' extension activities are the following organisations and units, which all function far below their optimum and need to be rehabilitated if extension capabilities are to be enhanced:

- The Agricultural In-service Training Communication Centre (AITCC), developed in the late 1970s as a centre to produce agricultural information material for the farming community, and to provide residential training to farmers and extension personnel.
- The Veterinary Diagnostic Laboratory developed in the early 1980s to carry out Parasitology, Haematology, Pathology, Microbiology and other diagnostic support to the livestock-rearing community. This Laboratory is currently not operational.
- The Livestock Station at Mon Repos, originally designed as a centre for livestock research in the Ministry of Agriculture, which has now been transferred to NARI.

The following are the main problems affecting the extension service:

1. Organisational problems:
  - a. poor linkage with agricultural research and other related organisations in agriculture;
  - b. poor policy direction;
  - c. lack of an infrastructure to support extension;
  - d. limited transportation and other support facilities;
  - e. scarce material resources;
  - f. weak monitoring and evaluation of extension officers and the overall programme.
2. Extension programme problems:
  - a. a top-down approach to programme planning;



- b. poor linkage between extension officers and farmers;
  - c. programmes that do not respond to the real needs of farmers and do not encompass the whole commodity system;
  - d. not enough focus on the marketing component.
3. Staff problems:
- a. a poor remuneration package;
  - b. rapid turn-over and a consequent shortage of staff;
  - c. poor support services in respect of information and training.

## **B. Technology Institutions**

### 1. National Agricultural Research Institute

The National Agricultural Research Institute (NARI) was established by an Act of Parliament (Act No. 19) in 1984.

During 1982, the Government had commissioned a study to identify alternatives for the management of agricultural research in Guyana, undertaken by the Netherlands-based International Service for National Agricultural Research (ISNAR).

The proposed alternative policy choices were:

- a. A research programme that concentrated on sugar and rice but included on-farm testing for most of the other crops, or a programme in which some research was going to be done on sugar and rice, but which also included adapted and applied research on several other crops; and
- b. A large research unit that would include extension and perhaps some input-supply services, or a small central research unit that would depend on other organisations for the implementation of field trials and the dissemination of results.

Based on the recommendations of the ISNAR Report and views and opinions from the farming community and agricultural scientists, the then Minister of Agriculture set up a team of senior agricultural scientists to investigate the issue further and to advise the Ministry appropriately.

In 1984, NARI, "a new public institution," took over the physical assets (fixed and movable) and staff of the then Department of Research of the Ministry of Agriculture.

The present functions of NARI are to:

- a. advise on, and develop, appropriate systems to promote balanced, diversified and sustained agricultural development and optimise agricultural production through adaptive and investigative research; and
- b. facilitate the use of improved production technology by agricultural producers, and establish adequate feedback systems for them in order to achieve and maintain national self-sufficiency and export capacities in food and fibre.

For carrying out the above functions, the Institute has power to:

- a. conduct applied agricultural research, including research into appropriate systems of mechanisation, to provide answers to current and foreseeable problems facing crop, livestock, forestry and fisheries production;
- b. evaluate the applicability of scientific findings in other countries to local conditions;
- c. determine, develop and popularise mechanisms, programmes and activities by which the agricultural potential of Guyana may be realised; and
- d. collaborate closely with all other agencies and institutions engaged in agricultural and related research.

Apart from the establishment of the Institute, the NARI of Guyana Act 1984 also established an Agricultural Research Committee (ARC) with the following functions:

- a. to advise the Minister on matters of policy relating to agricultural research;
- b. to supervise and control the functioning and activities of the Institute;
- c. to ensure that the activities of the Institute are consistent with the policy and objectives of the Government and with national priorities relating to agriculture and agricultural research;
- d. to approve, oversee and evaluate, on a continuing basis, the programmes being implemented by the Institute; and
- e. to give general and technical advice and guidance to the Director of the Institute.

Over the past ten years the more significant outputs from NARI have been as follows:

- a. the release of the rice variety Guyana-91 (which is resistant to blast and gives higher yields than the standard blast-susceptible variety, Rustic); and the breeding of varieties G9502, BR 7-10, and BR 240;

- b. the development of a technique for controlling mealy bug and the scarlet tip disease in pineapple;
- c. the production of disease-free planting material (although on a small scale) in pineapple, cassava, sweet potato and plantain, using tissue culture technology, and expansion of the production and distribution of clean basic planting material to farmers;
- d. completion of a 1:1,000,000 soil map of Guyana;
- e. resuscitation of plant nurseries, the Livestock Station, the Seed Production Unit, and the Kairuni Horticultural Station;
- f. the rehabilitation of the infrastructure at the Centre and the re-equipping of the laboratories; and
- g. development of research programmes in vegetable crops, root and tuber crops, horticulture, livestock, soils and environment and agricultural services.

There is an anomaly in the fact that the Extension Service has programmes in crops and livestock, but no visible linkages with similar commodity-research programmes of NARI that would enable research results to be transferred to farmers and allow farmers' problems to be made known to researchers. The recently-created Guyana Rice Development Board (GRDB) has been given the responsibility for both rice research and extension. GRDB takes a tax on all rice exports, which is used to finance developmental activities within the rice sub-sector. It is suggested that with the removal of rice from NARI's mandate, the institution may be better able (with its present resources) to do more meaningful work in the "other crops" and livestock sub-sectors.

To achieve better technology transfer, a much closer integration of the national agricultural research and extension services is needed. One possibility, which has been mooted in government circles, is that of unifying the two services and marketing under a single institution. This, in itself, may not solve the problem of poor linkages but would certainly provide for closer contact between the two fields. As important as the institutional fusion of the two services is the need to reform the roles of the various actors in the system. The differing status levels of "researchers" and "extensionists" must be removed through a process of reformulation of the objectives that govern the institutions. Further, these objectives must be firmly based on a recognition of the producer and the community as the main resources and not merely as "targets" for the forcible "transfer" of knowledge. These ideas are elaborated under "The Strategy".

The very debate over the need for effective linkages between research and extension signifies the breakdown in the purpose for which the system was established in the first place. A system of technology generation and transfer has little meaning if there is no organic link between its component parts, and between the system and the farming community. Any programme for the reform of the system must include approaches that involve the participation

of the farming communities at all levels of operation. Such approaches have been experimented with in Asia and other regions and have shown significant results. Participatory systems for research and extension are particularly appropriate to small-farmer communities, since they involve self-diagnoses of community problems, and the setting up of systems under which the communities themselves are empowered to carry out their own experimentation and access technological support.

## 2. National Dairy Development Programme

A Cabinet decision established the National Dairy Development Programme (NDDP) in January 1984. The establishment of the NDDP in the early 1980s was consistent with Government's objective of national self-sufficiency in the production of milk and the reduction of foreign exchange expenditure on milk imports.

The self-sufficiency strategy embraced the following measures:

- a. increase in the national cattle herd population;
- b. improvement in the genetic potential and thus the quality of herds;
- c. reduction of milk imports in correlation with increased local production;
- d. improvement in cattle-rearing technology and animal husbandry practices;
- e. the promotion of improved animal nutrition by the introduction of improved pastures; and
- f. improvements in milk collection, processing and distribution systems.

At its inception, the overall objective of the NDDP was to achieve national self-sufficiency in fresh milk by 1988. However, as of 1988 the mandate of NDDP was expanded, and its mission statement was subsequently modified to read as follows:

"To spearhead the development thrust of a self-sustaining, self-regulating, economically viable cattle industry within the context of national self-sufficiency in milk and dairy products, beef and beef products and the export of these commodities."

## 3. New Guyana Marketing Corporation

The original Guyana Marketing Corporation (GMC) was created by Order No. 97 of 1963 made under the Public Corporation Ordinance (No. 23 of 1962). The Corporation operated like the typical marketing board present in many developing countries at that time. It set buying prices for various farm products and bought all produce offered to it at that price. The produce was then sold to consumers at various outlets and from trucks going house to house. Selling prices were usually set below buying prices to keep food cheap to consumers. The poor

transportation and handling facilities delayed the movement of produce from farm gate to the consumer and resulted in tremendous losses of produce bought and stockpiled by the Corporation. The Treasury absorbed the losses resulting from the activities of the Corporation but by 1984 the worsening economic crisis facing the government forced a re-examination of the operating policy of GMC.

In 1985, with the aim of reducing the drain on the Treasury, the policy of the GMC was changed drastically. There was a total cessation of all buying and selling operations and the adoption of a mandate to provide market facilitation services to the private sector for the export of non-traditional agricultural produce, facilitate local market development, develop and disseminate post-harvest technology, conduct market research and provide market intelligence services to farmers. The internal structure of this "New" GMC was reorganised into three divisions: technical, administrative and accounts. The Technical Division itself comprised three units: market intelligence, technology transfer, and commercial policy.

a. Market Intelligence Unit

The aims of the Market Intelligence Unit were to:

- (i) reduce the risk involved in the marketing of agricultural products by: Improving market transparency; improving efficiency and orderliness in the distributive system; facilitating reductions in price fluctuations; and strengthening the bargaining power of farmers;
- (ii) provide market information about crops and livestock products to agricultural marketing participants including producers, intermediaries and consumers to increase marketing efficiency and productivity;
- (iii) provide market information to farmers and market participants so that they can more effectively meet market requirements, stabilise prices and reduce gluts and shortages;
- (iv) provide market information to Government and other policy makers; and
- (v) forecast demand and supply characteristics for the major commodities as a guide to producers and consumers.

b. Technology Transfer Unit

The objectives of the Technology Transfer Programme were to:

- (i) develop and provide training on grading, storage, packaging, and transportation requirements for quality produce;

- (ii) promote the production of non-traditional crops specifically for the export market;
- (iii) develop and document the steps involved in exporting perishables to specified markets; and
- (iv) provide market extension services.

c. Commercial/Market Policy Unit

The aims of the Commercial/Market Policy Unit (CMPU) are to:

- (i) provide a one-stop documentation service for exporters of agricultural produce;
- (ii) carry out market research for the private sector for a fee;
- (iii) make available certain kinds of approved packaging for exporting produce; and
- (iv) advise the Government on agricultural marketing policy, for non-traditional produce.

In 1997, the New GMC resumed buying of farmers' produce but at prices negotiated directly with the farmer. In addition, only quality produce for which there was a ready demand was bought. The produce was sold at four GMC outlets in Georgetown, New Amsterdam, Corriverton and Lethem at an average mark-up of 10 percent. The outlet in Georgetown was supplemented by two mobile units that offered produce and other basic food items to consumers on Saturdays of each week. The sale of fish at affordable prices, the shipment and sale of mutton from the Rupununi, and the sale of fresh milk have been some of the successful projects accomplished by the New GMC. The corporation also made trial shipments of produce to the Caribbean Islands, United States, Canada and Britain.

4. Non-governmental Agencies

The agencies involved in agriculture in Guyana are IICA, CARDI, OAS, and the FAO through its Trinidad office. Up to recently there was no co-ordination of the activities of these agencies and they engaged in activities almost as they determined. This situation led to duplication of effort, reduced effectiveness and a lack of focus on the main problems. Recently, the Agricultural Research Committee was given the overall task of co-ordinating the work of all the agencies which should be directed to fulfilling the requirements of the National Development Strategy.

## C. **Agricultural Training Institutions**

### 1. Guyana School of Agriculture

The Guyana School of Agriculture (GSA) was established thirty-two years ago and offers both a certificate and a diploma programme in agriculture. The certificate programme is a two-year course with a strong practical bias, and is intended for youths with a full primary education who have attained the age of seventeen. It is designed to equip young people for successful farming careers. The diploma programme is a sub-professional two-year course designed for students with a secondary school background.

### 2. Regional Educational Programme for Animal Health Assistants (REPAHA)

The Regional Educational Programme for Animal Health Assistants (REPAHA) conducts a diploma programme similar to GSA and is presently training students in Animal Health and Animal Production. Since its inception in 1975, REPAHA has graduated more than 350 Animal Health and Veterinary Public Health Assistants from seventeen countries in the Caribbean.

The first group of students were graduated in Animal Production from REPAHA in 1994, following a survey which indicated that employers of REPAHA graduates required competence in Animal Production and Agribusiness Management

### 3. The University of Guyana

The University of Guyana offers two programmes to the first-degree level in Agriculture; these courses are conducted by the Faculties of Agriculture and Education respectively. The programme offered by the Faculty of Agriculture is a four-year course and leads to a general Bachelor of Science degree in Agriculture. The Faculty of Education also offers a Bachelor of Education degree with an option in Agriculture. The relevance of the degree training in Agriculture is vital to the success of any agricultural programme in this country since the professional staff would come from this programme. However, the facilities and funding for research at the University are inadequate and the timetable too packed with theory courses. As a result, little research is done and this leads to training which lacks an orientation towards local production problems. Further, the absence of a higher degree programme is a great handicap in the provision of specialist services in the field.

### 4. Overall Assessment

The human resources allocated to these three tertiary level training institutions are inadequate. There are vacancies at both the technical and the support staff levels. The recurring staff vacancies can be ascribed, *inter alia*, to poor remuneration packages. There is a lower number of vacancies at REPAHA, which provides a better remuneration package. All three institutions have used part-time staff to deliver some courses. It is estimated that during the 1993-1994 academic year, part-time lecturers conducted approximately 80 percent of the courses

at GSA. This in itself is not a bad practice, if the part-time teachers can add the practical component, which is lacking, but this is not generally the case.

A frequently expressed opinion is that the training received at the University of Guyana, Faculty of Agriculture does not equip students to perform in their profession adequately, particularly in the commercial and managerial realities of farming and agribusiness. The diploma and certificate programmes at GSA and REPAHA have produced graduates who are much more acceptable in the workplace. This may be related to the practical orientation of these programmes.

#### **D. Local Government**

Within the existing Regional Democratic Councils (RDCs), the recently-introduced Neighbourhood Democratic Councils (NDCs) are considered the institutional structure through which plans and decisions regarding the needs of farmers and communities in general can be coordinated. There are, in addition, several quasi-governmental entities (e.g., SIMAP) as well as non-governmental and other organisations (cooperatives, producers' associations, etc.) which operate at the community level.

## **II. Issues and Constraints**

### **A. The Ministries, Technology and Training Institutions**

The main local institutions that deliver agricultural support services are the Ministry of Agriculture (MOA); the National Dairy Development Programme (NDDP); the Guyana Marketing Corporation (GMC); the Guyana School of Agriculture (GSA); the Faculty of Agriculture of UG (UG/FOA); the National Agricultural Research Institute (NARI); and the Institute for Applied Science and Technology (IAST).

A regional institution, the Caribbean Agricultural Research and Development Institute (CARDI), and an international institution, the Inter-American Institute for Cooperation on Agriculture (IICA) supplement local support. In addition, all the local institutions have benefited at one time or another from international donor funding through agencies such as the IDB, IFAD, the World Bank, FAO and the CDB.

The sugar and rice industries both have national institutional structures dedicated to their development. The institutional strength of these industries is not unrelated to the fact that both benefit from preferential markets (mainly in Europe) which offer prices significantly higher than world market prices. The Guyana Rice Development Board (GRDB) provides research, extension and trade-related services to the rice industry. A wholly government-owned corporation controls the bulk of the sugar industry. While government extracts a levy from the sugar industry, the industry retains most of the preferential gain. Gains from these preferential arrangements have not been specifically targeted to the development of other agricultural sub-sectors. While it is expected that rice and sugar will continue to maintain their own



developmental institutions, the support arrangements for "non-traditional crops and livestock (which is basically a small farm sub-sector) remain fragmented and ineffective.

Poor definition of public and private sector roles hinders the institutions of the sector, leading to fragmentation of planning, policy analysis and project implementation capacity. Government institutions must ensure that the activities that they perform are those that the private sector cannot effectively perform. Because of the budgetary constraints facing the public sector, there have been some reductions in staffing and the shedding of many services traditionally provided by MOA, MFCL and other agricultural support institutions (e.g., extension services, and input supply). There is, however, need for a more formal approach to rationalisation of service provision.

The capacity in MOA and the MFCL for policy review is weak, and they have the further disadvantage of being oriented towards centrally-provided services as opposed to community-based services. Low levels of emoluments in the public service definitely militate against the provision of high-quality administrative and planning services. Severe financial constraints have also led to inadequate availability of equipment and supplies, further limiting the effectiveness of the Ministries' staffs.

In terms of agricultural products, there is a dualistic institutional structure characterised, on the one hand by well-organised marketing and other support arrangements for the major export products, and on the other, by fragmented, under-funded and ineffective arrangements for non-traditional crops and livestock. There are poor and inadequate linkages between institutions and poor communications between MOA and MFCL.

Agricultural technological services are often provided in a context in which important infrastructure and non-agricultural services are not in place. The lack of an integrated approach leads to poor absorption of technology. In addition, the Ministries' operations are characterised by a limited interface between clients and planning and executing services, leading to poor feedback and, consequently, a possible lack of relevance of plans and programmes.

A general concern in the provision of public agricultural services is that they are not well-targeted on rural households of more modest means. Agricultural extension is the most obvious example. More well-off farmers can afford to bring, and do bring in their own private extension advice regarding such issues as crops, varieties and planting and cultivating strategies, but this option is obviously out of the question for the poorer farmers. Extension services are one hundred percent subsidised, and therefore the question must be posed whether that subsidy is justified in the case of large farmers.

Similar observations can be made in the case of livestock services and assistance in the adoption of better post-harvest practices.

These issues and constraints affect all public agencies that deliver agricultural services. Given the key role of technology development in agriculture, it is important to be specific about the constraints on NARI's research programme:

1. Organisational constraints include inadequate contact with farmers, poor linkage with agricultural extension and other related organisations in Agriculture, inadequate evaluation of research impact, and lack of staff motivation at professional and sub-professional levels.

2. Among the research programme constraints is a frequent gap between the programme and the needs of farmers, and between the objectives of researchers and those of farmers. In addition, not enough attention is paid to economic and marketing issues, the use of documented results, or the need to validate technologies before transferring them to farmers.

3. The main staffing constraints are unattractive remuneration packages, low morale and an absence of agribusiness and socio-economic marketing experts on the staff.

4. In terms of financial constraints, the main issues are limited financial and material resources.

Many of these constraints also affect the delivery of tertiary-level training:

1. Organisational problems include poor linkages with other agricultural institutions, poor research facilities, and limited laboratories and other practical teaching facilities.

2. The main curricula problems are that courses are too theoretical, lack a strong practical dimension, and are insufficiently oriented towards national problems and conditions.

3. Staff problems are poor remuneration and low morale.

4. Financial problems comprise: limited financial resources, scarce material resources, and too few grants and scholarships to students.

5. Other problems include a poor perception of and attitude towards the agricultural profession by the general society; the relatively low student intake; lack of basic textbooks and other teaching aids and a failure to utilise available human resources for the benefit of training programmes.

## **B. Local Government**

Neighbourhood Democratic Councils have only a limited role in the mobilisation and disposition of resources, and under current legal and administrative arrangements, they cannot function effectively as providers of services at the local level. Local authorities have been forced to operate through a narrow window of influence at the regional level, and have had to be responsible primarily to central and regional governmental structures and not to their constituents. The poor management and organisational skills among council members is seen as a factor contributing to the inability of NDCs to realise their mandate. In addition, the lack of access to production and marketing information, and the low exposure to labour-saving and capital-saving technologies, limit the ability of the local leaders to be agents of change and

modernisation in their communities. These factors favour the integration of reformed and strengthened NDCs into a national institutional framework for the agriculture sector.

### **C. Producer and Marketing Organisations**

Producer organisations serve an important function through representation of producer interests, and through the provision of inputs and services which can be much more effectively supplied by a group than by individual producers. In Guyana, the history of producer organisations has been a chequered one. Unlike the Rice Producers' Association in rice and the Cane Farmers Associations in sugar, few organisations in the non-traditional sector have demonstrated resilience. A review of several producers' and marketing organisations revealed that they are, for the most part, under-funded by their membership and often come to life only during periods of crisis. Weak organisation among producers limits their ability to receive information, new technology, services and inputs.

The formation and successful operation of marketing organisations have had an even more chequered record than producer organisations in Guyana. The only success stories have been some fishermen's cooperatives that combine production, marketing and input supply functions for their membership. The distance between an individual producer and market outlets is sometimes very great. Whereas a large farmer may have a truck with which to fetch a wholesale load of fertiliser, and in turn carry the crop to market, a smaller farmer may have to pay someone else for those services, thus increasing costs and reducing gross margins. Farmers can benefit from the economies of scale resulting from coming together to carry out activities in large volume. In this regard, marketing organisations can play a vital role in increasing net incomes of farmers

### **D. Financial Institutions**

Studies have found that the supply of credit to the rural sector is limited by factors such as the risk linked to agricultural production and markets, the sector's small size, and informal nature, and the lack of experience of staff of lending agencies. Lending has been very low and restricted to the larger rice producers: rice is a sturdy crop in Guyana and the rice industry is relatively well-structured but is, nevertheless, considered by lending institutions as risky. Returns to non-traditional crop producers are much more volatile than those to rice producers, and non-traditional crop producers are therefore denied access to commercial bank credit.

The penetration of rural areas by commercial banks is low, leading to inadequate savings mobilisation and delivery of credit. In addition, this inadequate interface and contact between the banks and the agricultural producers, coupled with the preference of commercial banks for asset-based lending as opposed to cash-flow lending, results in an inflexible lending policy towards the sector. Only a small percentage of the banks' funds are lent, while some 70-80 percent are held in special deposit accounts or Treasury Bills and are therefore not available for productive lending to the economy. Lending rules, even within the Government-owned

GNCB<sup>1</sup>, effectively exclude more than 80 percent of Guyana's farm households from access to institutional and commercial credit.

Government must be proactive in encouraging banks to change their orientation towards agricultural and rural lending. In addition, a serious study should be undertaken of the possibilities for a linked system of small-scale rural credit unions, with local autonomy but central supervision and rediscounting facilities. Systems of this type appear to be well adapted for mobilising rural savings and lending to small farmers and are being implemented in a number of Latin American countries, including Nicaragua and Honduras.

### III. Sectoral Objectives

Institutions that function well are central to the process of economic development as they define the "rules of the game" in human interaction. In agriculture, the institutional question is particularly complex, because of the implications for food production, general roles, rural and urban employment and incomes, net foreign exchange earnings, the environment and political power. Accordingly, the principal objectives of policy in the area of national agricultural institutions are:

1. To develop an institutional policy framework that clearly defines the roles of the public and private sectors, focusing the former only on providing those goods and services that cannot be provided efficiently or equitably by the latter.
2. To improve efficiency in the provision of goods and services offered by the public sector.
3. To improve the relevance of public services to the needs of all persons involved in the production, marketing and consumption of agricultural produce.
4. To improve institutional support for the development of the diversified small farm sector.
5. To give greater priority to the rural poor as beneficiaries of publicly supplied services.
6. In the area of community governance and public participation, to improve coordination between national and local institutions so that local communities can access information and resources from other levels of government.

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<sup>1</sup> GNCB's general lending rules are as follows:

- a loan must be 100 percent secured with deposits (cash or quasi money) or 125 percent in the case of immovable property owned under registered deed or transport;
- project viability must be ascertained to the bank's satisfaction;
- loan amount should not exceed G\$40m or be less than G\$1m (or credit required for 10ha. of rice);
- group lending is possible only to legally formed entities.

7. Regarding producer and marketing organisations:
  - a. to improve the effectiveness of these organisations in providing economic benefits to their members; and
  - b. to enhance the public sector's capacity to assist these organisations.
8. As far as financial institutions are concerned:
  - a. to increase rural savings mobilisation;
  - b. to increase credit delivery to agriculture based on rural savings; and
  - c. to increase the long-run viability of institutions for agricultural finance.

## **IV. The Strategy**

### **A. The Ministries and Technology Institutions**

1. The Ministries of Agriculture, Fisheries, Crops and Livestock will produce a plan for the future direction of agricultural support services, setting out priority Government functions, relationships with the private sector and communities, and a cost-management matrix for identified functions. The plan will include measures to improve the institutional and financial basis for the development of the diversified small farm sector.

2. In order to achieve these objectives, a new Board will be formed to encompass the roles presently being performed by NARI, NDDP, NGMC, and the Crops and Livestock and Fisheries Departments of the Ministries. The Directors of this Board will be appointed by and answerable to the Ministers. The GRDB will act as a model for this Board, which will be named the Guyana Agricultural Research and Development Board. The Board will maintain strong links with and co-ordinate and monitor activities of non-governmental agencies such as IICA, CARDI and FAO, in order to ensure that their programmes conform to the Government's stated priorities and overall direction. The Board will be semi-autonomous, allowing it to operate outside the limits of the Public Service. It will be financed in the first instance through the present current and capital allocations made to these institutions. To decrease the burden on Central Government over time, it is anticipated that it will eventually earn much of its revenue via the operation of an export levy on agricultural produce. The membership of the Board will be broad-based, and will include all interests involved in the sector: local government, community organisations, representatives from the rice and sugar sectors, small farmers, and representatives of training institutions. The grant of semi-autonomous status to the Board will allow for a comprehensive review of staffing levels, remuneration packages and on-going training efforts. The ultimate aim will be to develop a self-sustaining community-based service within a framework of national support. The centralisation of marketing, research and extension activities under one Board will maximise scarce resources and provide direction and focus to

those sectors which have traditionally been sidelined as a result of past emphasis on sugar and rice cultivation. It is anticipated that the Board will ensure a more effective and accountable use of funds and physical and human resources, limit duplication of effort, and lead to a more directed approach to the development of the agriculture sector.

3. Producers will be encouraged to grow crops for which a ready market exists and the market will drive the provision of support services. Research and extension will be channelled into these same crops.

### **B. Agricultural Training Institutions**

1. Guyana must aim to be largely self-sufficient in agricultural training facilities given the high costs of overseas training. The main institutions of training, i.e., the Guyana School of Agriculture (GSA) and the University of Guyana/Faculty of Agriculture UG/FA will be strengthened in material and human resources through internal and external funding, so that they can effectively produce the skills and expertise required for the improvement of the sector.

2. Part-time instructors, well-managed, will be used to enhance this objective of ensuring the GSA's continued provision of graduates who are practically-oriented through hands-on experience during their training.

3. The UG Degree Programme will be improved along two lines: students will be required to have a better scientific grounding in the early stages of their training programme, and in later stages, they will be exposed to practical farming situations and be oriented through appropriate coursework, field excursions and practical assignments to actual problems affecting the agricultural sector. Students will be attached to practical farming situations for 6 months as part of the course of training.

4. A higher degree programme will be instituted at the University of Guyana in which all the available resources, both human and physical, of institutions such as NARI, GRDB, GUYSUCO, NGMC and related organisations such as the Iwokrama and Tropenbos Projects, will participate.

5. Government will organise incentive packages for trained agriculturists aspiring to become farmers, particularly in the provision of land and availability of development capital.

### **C. Producer and Marketing Organisations**

Opportunities for training in management, marketing, accounting, and finance will be extended to the leadership and membership of producer and marketing organisations as a priority. In addition, their exposure and access to new technology will be facilitated and co-ordinated through their participation of the proposed new Board (See A2 above).

**D. Financial Institutions**

1. Government will consider (a) providing incentives for the location of bank branches in certain rural areas, and (b) reviving post office-based savings institutions.

2. Efforts to set up a Development Bank to be managed by the private sector will be accelerated.

3. Group guarantee schemes of the Grameen Bank type, as used successfully by Scotia Enterprise in Georgetown, will be instituted in rural areas.

4. The possibility of creating a linked set of rural credit unions, both for mobilising more rural savings and for retaining more funds in rural areas through agricultural production and marketing loans, will be urgently explored.

5. Banks will be encouraged to link credit and savings services so that loan amounts will be determined in part on the basis of the client's savings performance, and to train loan officers to function more like agricultural extension officers in order to provide commercial banks with first-hand knowledge of loan applicants and their credit-worthiness; this will enable the banks to judge the soundness of projects rather than rely only on collateral in making loan decisions. Collaborative arrangements like term credit between banks and equipment suppliers who are better positioned to assess clients as loan risks and to repossess equipment for resale in case of default, would also be useful in this regard.

6. As generally recommended by agricultural experts, Government and the Bank of Guyana will critically re-examine the continued high lending rates of around 18 percent, which restrict investors' demand for local funds to invest in the capitalisation of agricultural production and marketing.