



**STRATEGIC PLAN  
FOR THE CGPRT CENTRE  
IN THE 1990'S AND BEYOND**

**The CGPRT Centre**



***STRATEGIC PLAN  
FOR THE CGPRT CENTRE  
IN THE 1990'S AND BEYOND***

**The CGPRT Centre**

UN/ESCAP Regional Co-ordination Centre for  
Research and Development of Coarse Grains,  
Pulses, Roots and Tuber Crops in the  
Humid Tropics of Asia and the Pacific

CGPRT Centre  
Jalan Merdeka 145, Bogor 16111  
Indonesia  
© 1993 by the CGPRT Centre  
All rights reserved. Published 1993  
Printed in Indonesia

# TABLE OF CONTENTS

	Page
FOREWORD .....	vii
EXECUTIVE SUMMARY .....	ix
I.    BACKGROUND AND PURPOSE .....	1
II.   PARTNERS OF THE CENTRE .....	3
III.  AGRICULTURAL DEVELOPMENT IN THE REGION .....	5
IV.  HISTORY OF THE CGPRT CENTRE, 1981-1991 .....	11
V.   FUTURE DIRECTIONS OF THE PROGRAMME .....	19
VI.  OPERATIONAL IMPLICATIONS AND RESOURCE REQUIREMENTS.....	27
ANNEXES .....	33

# FOREWORD

In Asia, significant development has taken place in the past decade. Economic growth has been the highest among the regions of the world. It is widely acknowledged that this economic growth was triggered by expanding productivity of rice which resulted in self-sufficiency in staple grains in the 1980's. This achievement has at the same time brought new challenges. Secondary crops are increasingly used as feed and material for processed foods and industry in addition to use as subsistence food. Diversification of agriculture, a largely market-led process, also provides an important avenue of adjustment of agriculture to economic growth.

The CGPRT Centre has been in existence for one decade. In this period the Centre, as a research and development agency, has established its niche in agro-socio-economic research and development of CGPRT crops. CGPRT crops include coarse grains, pulses and roots, and tuber crops and corresponds with a wide range of secondary crops.

This document is the product of two years of discussion and deliberation of the Governing Board, the Technical Advisory Committee, the partners of the Centre and the Centre's staff. I express my sincere appreciation for the contributions and efforts which have culminated in this strategic plan.

This document contains the strategic choices the Centre makes in contributing to the development of CGPRT crops for the benefit of their producers, processors, traders and eventually, consumers. In indicating the specific strengths of the Centre and the directions for the activities in the coming years, I am confident that this strategic plan will serve as the guide post for the Centre's operations.

Seiji Shindo  
Director  
CGPRT Centre

# EXECUTIVE SUMMARY

## *Introduction*

The Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (CGPRT Centre) was established in 1981 by the Economic and Social Commission of Asia and the Pacific (ESCAP). It aims to promote socio-economic research and development of CGPRT crops and produce. In 1991 an external review concluded that the Centre had found a niche in the largely unclaimed area of socio-economics of CGPRT crops and that it has emerged over the past ten years as a regional resource institution supporting development of CGPRT crops. The review team pointed out that the momentum of the Centre should be consolidated in a well defined research and development (R & D) programme.

This Strategic Plan provides a basis for the future direction and strategy of the CGPRT Centre. The plan examines the focus of the Centre activities, the role it plays among research and development agencies. The plan outlines the specific strength of the Centre and avenues for the Centre's development in the coming years.

With the continuous and often rapid economic growth of most countries in the region, the agricultural sector and the rest of the economy have become increasingly integrated. The farming sector needs to adjust to this changing situation. This calls for diversification into non-rice crops, remunerative marketing of products and greater attention to socio-economic aspects. The Centre is well placed to assume a catalytic role in this process.

## *Objectives and partners*

The Centre seeks to achieve its wide and long-term objectives of **"initiation and promotion of research, training and dissemination of information on socio-economic and related aspects of CGPRT crops in Asia and the Pacific"** through cooperation and partnership with national research and development institutes, and other regional and international agencies for the members and associate members of ESCAP. In its activities, the Centre serves the needs of institutes concerned with planning, research, extension and development, in relation to CGPRT crop production, marketing and use.

The principal partners of the Centre are national agricultural research and development institutes involved in socio-economic and related areas of CGPRT crop development. The Centre will work together with the following partners: national policy and planning agencies, national extension agencies and extension workers, universities and national establishments for professional training, the private sector including agro-industries and

other national and regional associations. Farmers and other people engaged in CGPRT crops production, processing and marketing are regarded as partners as well as the ultimate target groups.

The Centre will continue and expand its co-operation with FAO, International Agricultural Research Centres (IARCs), and other regional and international institutions.

### ***Emerging need for CGPRT crop development***

Throughout Asia agriculture is intensifying. The awareness of the relationship between rural poverty and environment is of relatively recent date. CGPRT crops have particular significance as they are often grown in marginal areas by small producers. Expansion of production and incomes, through diversification and intensification, is vital not only to raise the income of the farm sector but also to ensure an equitable and sustainable development of the economy as a whole.

The marketable proportion of the total production of CGPRT crops has been rising, as these crops are being utilized to create more processed and value-added products for food, livestock feed and manufacturing. Therefore, marketing, processing and utilization should be given more attention in development efforts.

The new paradigm for agricultural development in the region is based on **the increasing linkage between agriculture and other sectors, and the need for adjustment of the agricultural sector to general economic growth**. This leads to increasing involvement of CGPRT crop farmers in the market mechanisms. The future direction of the Centre's programme is drawn from this context.

### ***Themes for Research and Development***

The Centre's research and development activities seek to catalyze efforts of the ESCAP members and associate members through collaboration and to consolidate the body of knowledge relevant to the development of CGPRT crops and produce.

The new paradigm for agricultural development in the region is based on **the increasing linkage between agriculture and other sectors, and the need for adjustment of the agricultural sector to general economic growth**.

On the basis of the paradigm for the 1990's and beyond, the following five themes are identified:

#### **Theme One: Market development and post-harvest processing**

In view of the increasing commercialization of CGPRT crops, this theme addresses market structure to increase market efficiency and to develop new market opportunities, taking into account post-harvest technology.

## **Theme Two: Changing demand and production systems**

Changes in demand and utilization of CGPRT crops induce changes in production. The theme addresses this issue in an holistic way, taking production, trade and utilization as a system. Activities in this theme would lead to identification of the necessary action for improving the system.

## **Theme Three: Sustainable agriculture and resource management**

A majority of farmers who rely on CGPRT crops as their main source of income are located in rainfed and upland areas, often in remote and fragile environments. This theme promotes efforts towards sustainable development in upland agriculture.

## **Theme Four: Agricultural diversification and poverty alleviation**

Agricultural diversification is regarded as an effective means of adjustment of the agricultural sector to the rapidly growing and changing economy. Since the agricultural sector is often dominated by small farmers, activities under this theme would contribute to the alleviation of rural poverty.

## **Theme Five: Regional co-operation and policy analysis**

The economic growth of many countries of the region has resulted in closer economic relations and greater opportunities for co-operation, especially on agricultural policies relating to CGPRT crops and agriculture. Activities under this theme will provide guidelines in reviewing and formulating national agricultural policies.

## ***Additional activities***

Human Resources Development activities will be tightly woven into the Centre's programme and its themes. The activities will address the following areas:

- (i) Dissemination of the results of the Centre's research projects, identifying and prioritizing of R & D activities of the Centre's partners; and
- (ii) Transfer of research approaches and methods in the field of CGPRT crop development, particularly in carrying out research projects.

Training courses of two to four weeks will be the major activity. One or two courses per year along with several workshops based on research findings of the Centre will be implemented.

The information Service will disseminate the Centre's R & D findings, and it will provide information on CGPRT crops and produce to national research institutes, planning and other agencies.



# I. BACKGROUND AND PURPOSE

1. This strategic plan provides a basis for the future direction and strategy of the CGPRT Centre. After nearly a decade of operations, the Centre needs to re-examine the focus of its activities, the role it plays among research and development agencies involved in agricultural development in the Asia and Pacific region, and the specific advantages that it enjoys and can exploit in the years ahead.

2. This plan grows out discussions held in previous years by the Centre's Governing Board, the Technical Advisory Committee, and the CGPRT Centre itself. The rapid progress of many countries in the region in the last decade, calls for improved definition of the long-term vision for the Centre. With the continuous and often rapid economic growth of most countries in the region, the agricultural sector and the rest of the economy have become increasingly integrated. The farming sector needs to adjust to the changing situation. This calls for efforts for diversification into non-rice crops, remunerative marketing of products and greater attention to socio-economic aspects, from production to utilization. The Centre is well placed to provide a focus for these efforts.

3. The strategic plan begins with a description of the Centre's partners in Chapter 2, which is followed by a discussion of agricultural development in the region in Chapter 3. Chapter 4 provides a review of the mandate, structure and growth of the Centre since its establishment in 1981. Chapter 5 identifies needs for research and development and future directions for the Centre's programme and presents programme themes. Operational implications and resource requirements are presented in the final chapter.



## II. PARTNERS OF THE CENTRE

4. The Centre's objectives in the ESCAP Region are: *"solving food problems, increasing employment opportunities, achieving better income distribution and a balanced diet as well as accelerating close linkages with the livestock and other industries"* through co-operation and partnership with national research and development institutes, and other agencies in members and associate members of ESCAP.

5. The ultimate target group of the Centre is CGPRT crop producers, mostly small farmers in developing countries in Asia and the Pacific, whose livelihood depends on the incomes derived from these crops. Processors, traders and consumers of CGPRT products are also target groups.

6. The principal partners of the Centre are national agricultural research and development institutes involved in socio-economic and related areas of CGPRT crop development. There is a large number of such institutes in the countries of the region. The following groups of organizations are important partners.

- (i) National agricultural research centres involved in CGPRT crop development, particularly in socio-economic and related aspects;
- (ii) National policy and planning agencies involved in formulation of policies relating to CGPRT crops and to farmers growing these crops;
- (iii) National extension agencies and extension workers who are engaged in delivery of improved technologies and other information regarding CGPRT crops;
- (iv) Universities and national establishments for professional training, especially those aiming at higher levels of academic and practical training in relevant areas;
- (v) The private sector involved in CGPRT crop development including agro-industries and other national and regional associations. Collaboration takes place in accordance with relevant national policies; and
- (vi) Farmers and other people related to CGPRT crops and commodities are regarded as partners as well as being the target people.

7. The place of CGPRT crops in the programmes and activities of these five categories of partners differs:

- (i) National agricultural research programmes are usually structured along commodity and agricultural zones. CGPRT crops are not recognized as a group, but major CGPRT crops are usually included. Choices of crops vary among countries depending on their importance. Often interdisciplinary projects and development activities involve socio-economics.

- (ii) National policy and planning agencies usually follow sectoral structuring; within the sub-sector of food crops major attention is reserved for staple grains and, to a limited extent, for CGPRT crops. Although progress is being made, there is still limited attention in agricultural planning to multi-commodity and multi-market planning.
- (iii) Extension systems geared to food crops usually specialize in the major national staple crops which sometimes include CGPRT crops, depending on their social and economic importance. Farm economy is of primary importance.
- (iv) In socio-economic courses at universities, the major priority is transferring knowledge and skills in the application of scientific principles in economics, business administration, and rural sociology. Since national policy and development efforts have been focused on cereals and because case material on rice and wheat is relatively abundant, staple grains have become dominant in education. More attention, however, is being paid to CGPRT crops, as well as to agri-business.
- (v) Usually, feed and processing industries use CGPRT crops. Their needs are invariably specific and may include technical cropping information, price formation and trends, quality rewards, and market information.

8. The Centre will take into account the whole range of CGPRT crops but will face choices regarding major partner groups. Within a project framework, the Centre can address inter-disciplinary and inter-agency co-operation.

9. Networking is important to ensure a close, active relationship with the Centre's partners. In the past ten years a collaborative network has developed in conjunction with the implementation of research projects. This network has served to identify the users of the information the Centre has generated and to select participants in the regional meetings the Centre has organized under its training programme. The Centre will maintain and strengthen its networking function so as to respond to needs effectively.

10. The Centre has objectives, target groups and partners in common with international agricultural research centres (IARCs) and international agricultural development agencies, particularly the Food and Agriculture Organization of the United Nations (FAO). It is therefore uniquely qualified to complement the activities of these international and regional institutions in a mutually beneficial way. The role of the Centre in relation to the largely technology-oriented institutions will be expanded. The past collaborative activities of the Centre with IARCs and FAO are summarized in Annex VII.

### III. AGRICULTURAL DEVELOPMENT IN THE REGION

#### *Rice-based agricultural growth in 1960s-1980s*

11. For several decades, staple cereal crops have been the dominant interest of policy makers and the centre of attention in agricultural development. The overwhelming dietary dependence on rice in the humid tropical and temperate regions of Asia, and the dominance of rice in the cash and subsistence economy, justified this central policy focus. Until the early 1960s, economic growth in the region was slow and sporadic. A high proportion of the population in rural areas remained at subsistence or semi-subsistence level with little improvement in living standards.

12. The development of new rice varieties during the mid 1960s through the co-operation of many institutions, focusing on the International Rice Research Institute (IRRI), initiated agricultural growth in nearly all the nations of the region. Within 20 years, these improved rice varieties and their regionally adapted offspring became the basis for the agricultural growth of the region. Many previous importers of rice became self-sufficient in the 1970s and 1980s. But the development of new varieties alone was not enough. National investment in irrigation, roads and transportation, small engines and electrical power sources, extension systems adapted to local needs, and fertilizer production and distribution systems, all contributed to increase rice production, and subsequently, agricultural and economic growth.

13. As rice production is labour intensive, it absorbed much labour from the rapidly growing rural population. The new, more productive rice-growing technologies made it possible to expand rural employment and incomes and to ameliorate the nutritional situation of many subsistence-oriented and landless families.

14. A similar phenomenon occurred in Asia regarding other staple food grains, specifically wheat and, to a lesser extent, maize. New high-yielding varieties of wheat spread to semi-arid areas in South Asia and, in combination with rice, contributed to the achievement of self-sufficiency in staple food grains.

15. Rice expansion offered a development avenue for the rural sector in much of Asia, which in turn permitted urban industrialization to get underway. Industrialization, accompanied by the rapid growth of income, increased the demand for diversified diets, especially by urban consumers, and hence increased demand for food products that could be marketed and processed successfully. Similarly the demand for livestock feed increased. The effect of this process was felt strongly in secondary crops which are generally produced for market, and which are often processed for foods and feeds. As marketing and processing expanded, new infrastructures, marketing arrangements, distribution systems, transportation and communication services came into being. Such developments have

resulted in growing linkage between the agriculture sector and the rest of the economy. CGPRT crops are of strategic importance in this process.

### *Importance of CGPRT crops*

16. Rice remains the dominant cereal food crop throughout Asia, although wheat is equally important in the semi-arid areas of India, China, Afghanistan, Bhutan, Iran, Nepal and Pakistan. The two crops combined utilize 40% to 60% of the arable land and account for two-thirds of food crop production in the region. Maize is another important cereal, although its position varies widely by country. It is particularly popular in Bhutan, Nepal, Indonesia, the Philippines and China. Food legumes are of high importance in South Asia although these countries remain net importers. Among pulses, soybean, mungbean and groundnut are of significance. China, India, Indonesia, Thailand, Viet Nam and the Republic of Korea are large producers and consumers of soybean. In South Asia chickpea and pigeonpea are of importance. Roots and tubers are the dominant food crops for the Pacific nations, and are extensively produced in other countries. Cassava is widely grown, particularly in Southeast Asia. Sweet potato is also a staple food crop of primary importance in China, Papua New Guinea, and the Pacific countries, Viet Nam, and to a lesser extent, in the Philippines.

17. In the sub-regions, a number of important shifts took place in the period 1981-1989 (Table 1). In general, food crop production expanded at higher rates than population in almost all countries. While the production of rice grew by 28.5%, other crops such as wheat and soybean have shown more spectacular growth. Wheat production increased by 62.7%, reflecting high growth in East and South Asia. Soybean, though its absolute amount is relatively small, increased its production fast in the years 1980-1989, by 280% in South Asia, and by 162% in Southeast Asia. In East Asia, the most important soybean producing region, soybean production grew by 29.5% In South Asia, production has sharply increased, as soybean use for oil is expanding. Maize production increased in Southeast Asia by 53%, but in Asia as a whole kept pace with population growth. Cassava production increased by 34% in Southeast Asia but decreased in the other sub-regions. As is to be expected the various sub-regions show different growth in CGPRT crops and wheat. Rice performs fairly evenly throughout the region.

**Table 1. Estimated Growth in Production of Major Food Crops by Region, 1981-1989<sup>a)</sup>**

	South Asia	Southeast Asia	East Asia	Pacific	Asia & Pacific
Rice	29.5 (145,488) <sup>b)</sup>	34.6 (111,024)	25.0 (200,539)	15.0 (38)	28.5 (457,089)
Wheat	59.9 (70,282)	152.7 (230)	64.8 (92,700)		62.7 (163,212)
Maize	19.0 (10,441)	53.0 (16,558)	25.6 (83,962)	-44.4 (5)	28.3 (110,966)
Soybean	280.3 (1,719)	161.7 (2,117)	29.5 (11,182)		51.7 (15,018)
Cassava	-22.9 (4,891)	34.3 (44,746)	4.4 (3,325)	-23.3 (168)	23.4 (53,130)

a) Various Sources: FAO yearbooks, US Agricultural Development, CGPRT Centre.

b) Figures in parenthesis represent production in 1989 (in '000 tons).

18. In addition to the major CGPRT crops, many other CGPRT crops are of local importance. Of the root and tuber crops, taro, arrowroot and canna are of significance in Southeast Asia. Sweet potato is of importance in the Pacific, Southeast Asia and East Asia. Food legumes such as chickpea and pigeonpea are important throughout the region, particularly in South Asia where they are consumed as the main side dish. Millets, barley and sorghum are not only of widespread importance in South Asia, but show potential as feed in Southeast Asia.

### ***Emerging need for CGPRT crop development***

19. Towards the end of the 1970s, when rice was taking off rapidly, there was increasing concern about the role of secondary crops, as a means of diversifying production. At that time, rice development took place mostly under water- controlled conditions. CGPRT crops are usually grown in upland or rainfed areas and as auxiliary crops in irrigated areas in the dry season. In many countries in Asia, farmers engaged in upland or rainfed agriculture are often located in remote or resource-poor areas; in some places shifting cultivation is practised. Though there is variation in the region in farm-size of CGPRT crop growers, farms are usually small. In extreme cases, upland farming is carried out in poverty-prone and ecologically fragile areas, where small farmers often live below the poverty line. In order to safeguard sustainability careful resource management is required, particularly in those areas where CGPRT crop-based agriculture is practiced.

20. Throughout Asia agriculture is intensifying, often in areas where natural resources are marginal. In some cases over-exploitation of natural resources takes place, inducing a process of environmental degradation and consequently, decreasing farm income and increasing migration. The growing awareness of the relationship between rural poverty and environment is of relatively recent date. CGPRT crops have particular significance as they are often grown in these marginal areas.

21. Agricultural diversification is a means by which farmers can contribute to, and share in, the process of overall economic growth and development. On the one hand in those ESCAP countries which are still in the earlier stages of development with high proportions of output and employment generated in agriculture, expansion of production and incomes, inter alia through diversification, is vital to stimulate overall economic development and growth. On the other hand, in those countries in the region where non- agricultural sectors are larger and growing very rapidly, agricultural adjustment, including diversification, is necessary if farm people are to benefit from the emerging opportunities. Without such adjustments rural incomes increasingly may lag behind those in other sectors, creating problems of equity.

22. CGPRT crops can play a dual role in the diversification process. Firstly, as relative prices change through changing patterns of use and demand, and as new production technologies are developed, farmers may find that farming systems which include CGPRT crops are both more profitable and sustainable. Secondly, CGPRT crops are commonly grown mainly for sale, and are often processed in small-scale local industries. Thus, expansion of the production of these crops can create more employment in rural areas, not only directly in farm production, but also through post-harvest value-adding activities. This process helps to alleviate rural poverty and to slow the drift of people to urban centres.

23. On the demand side, with the general economic growth experienced in Asia, food consumption patterns are changing. While aggregate rice demand has continued to increase with the increase in population, the proportion of rice in food expenditures, though still high in most developing countries, has begun to fall in higher income classes as consumption now covers a broader range of food items. In East and Southeast Asia, rapid economic growth has been marked by a considerable demand for livestock products, and consequently, for a growing quantity of feed materials. Demand for CGPRT crops has expanded to new areas such as feed use. In South Asia, pulses such as oilseed and protein-rich foods have enjoyed continued expansion in demand. CGPRT crops are strongly affected by these changes, with new opportunities for producers and processors. These changes have important implications for formulating research and development actions as well as for economic planning.

24. A large proportion of CGPRT crops, whether grown by commercial producers or small farmers, is marketed. In fact, almost everywhere more than 90% of soybean is grown as a cash crop. Of maize, which used to be a major subsistence food crop in the Philippines, more than 60% of production is now marketed. Similarly, nearly 40% of sweet potato in Viet Nam is currently marketed, either as raw produce or in processed form. In contrast, in Sri Lanka CGPRT crops do not show rapid commercialization. However in general, marketed shares in the total production of CGPRT crops have been rising, as they are being increasingly utilized to create more processed and value-added products. Therefore, marketing, processing and utilization should be given more attention in development efforts. The marketing process has led to strengthened relationships between production and the other sectors of the economy, e.g. linkage with agro-industries. Since nearly the entire post-harvest process is conducted by the private sector - processing industries, food manufacturers, wholesalers, retailers - the encouragement of the private sector for the benefit of both producers and consumers is crucial for CGPRT crop development. Efficient market mechanisms need to be established so that farmers obtain a reasonable share of the values of final utilization. New products and outlets need to be explored and quality of production needs to be improved to suit new requirements.

25. Many of the aspects mentioned above are relatively untouched areas for research and development efforts. For instance, the market structure of CGPRT commodities should be investigated and improved. Government price and trade policies may affect commodity prices, producers' incentives and consumers' purchasing behaviour. These topics still need a more comprehensive incorporation into national and international research and development efforts.

### ***A paradigm towards 2000***

26. A new development paradigm is emerging in Asia. The earlier paradigm of the 1970s and 1980s was based on increasing rice production through cropping intensification and area expansion, thus inducing agricultural development and economic growth. However, in many developing countries in the region, the industrial and service sectors are now growing rapidly. On the other hand, cultivation frontiers are rapidly being reached, while demand for agricultural produce is increasing. This has important consequences for a



new development paradigm, with profound implications for agriculture and CGPRT crops. The emerging paradigm contains the following elements:

- (i) Linkages between the agricultural sector and the other sectors of the economy are rapidly growing in importance and multiplicity. Consequently, small farmers become increasingly involved in the wider domestic and world market;**
- (ii) Sustainable growth in agriculture - growth linked to equitable income distribution and stable ecosystems - has drawn increasing attention;**
- (iii) Consumption of, and demand for food products, spurred by increase in income, population and urban migration, has become increasingly diversified and includes higher valued agricultural produce; and**
- (iv) A general trend towards market-oriented policies, deregulation and decline in state intervention in agriculture.**

27. In many ways CGPRT crops are at the leading edge in this emerging paradigm. Because high proportions of these crops are marketed, CGPRT crop farmers are often more strongly linked to the wider economy than, for example, rice farmers. CGPRT crops are also increasingly being recognized as important in more sustainable farming systems, and, through their downstream employment effects, as vehicles for improving income distribution. There is usually less government intervention in the production and marketing of CGPRT crops than for the main staples, with post-harvest processing largely in the hands of the private sector. There is a clear need for more in-depth and development oriented studies of the socio-economic aspects of the production, marketing, processing and utilization of these crops. CGPRT crops will remain of great importance in national food security. They will also remain important as sources of food and nutrition for rural people. In addition CGPRT commodities are becoming important in intra- and extra- regional trade. The Centre, by its mandate and its regional orientation, is well placed to meet this need, both directly through its own research activities, and also through its catalytic role with national and international research institutions.

## IV. HISTORY OF THE CGPRT CENTRE, 1981-1991

### *Establishment of the Centre*

28. The concept of a research and development centre on CGPRT crops in Asia and the Pacific had its origins in the 1970s. The thirtieth session of the ESCAP Commission held in 1974 in Colombo, Sri Lanka, identified food and agriculture as a priority area. At that time, scarce national resources caused research and development in agriculture to be focused almost entirely on rice, wheat and a few other crops. As a result little agricultural research was done on CGPRT crops. Increasing recognition of the importance of CGPRT crops in agricultural and rural development led to an initiative to establish a regional centre promoting research, production and utilization of CGPRT crops.

29. Based on a feasibility study of the establishment of a centre, ESCAP organized an intergovernmental expert group meeting on the establishment of a regional co-ordination centre for research and development of CGPRT crops, in October 1976, in Bangkok. The meeting agreed that such a regional co-ordination centre should be established and further affirmed that the Centre should give priority to agro-economic studies including social aspects of the crops covered by the Centre. While the Centre would engage in research to fill the then existing gaps in the relevant areas, it would also help strengthen national development efforts.

30. The thirty-third session of the Commission, held in April 1977, adopted resolution 176 (XXXIII), endorsing the report of the Intergovernmental Expert Group Meeting and reaffirmed the need to strengthen national research and development efforts for CGPRT crops. It requested the Executive Secretary to take the necessary steps for the establishment of such a centre. Annex I gives the full text of this resolution.

31. Following this preparatory work, at the thirty-eighth session of the Commission in March-April 1982, the resolution containing the statute of the CGPRT Centre was adopted as resolution 220 (XXXVIII). The statute stipulates: the objectives and functions; structures, governing and consultative bodies; resources; and relations with other UN bodies and specialized agencies and other international institutions. The full text of the resolution annexed with the statute, is presented as Annex II.

32. Earlier, in April 1981, an agreement with the Government of Indonesia was signed. The agreement, entitled *"Agreement between the Government of the Republic of Indonesia and the United Nations relating to the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber (CGPRT) Crops in the Humid Tropics of Asia and the Pacific, in Bogor, Indonesia"*, provides, among others, administrative, financial and related arrangements. It details privileges and immunities provided by the host government to the Centre and its staff. The Centre then moved to Bogor in September 1982.

## ***Objectives of the Centre***

33. The statute of the Centre stipulates the objective of the Centre. This is: ***"to provide members and associate members of ESCAP with expert technical services and facilities required for the development of production, utilization and trade of CGPRT crops by strengthening national research and development activities ..."*** (paragraph 4 of the Statute). In fulfilling this objective, the Centre, in co-operation with other bodies as appropriate, performs the following functions:

***"(i) Provision of assistance for the development of an agricultural co-operative research network;***

***(ii) Preparation of agro-economic studies, including social aspects;***

***(iii) Training of national research and extension workers; and***

***(iv) Collection, processing and dissemination of information".***

34. The objective and functions were translated into an operational version of the mandate as accepted by the Technical Advisory Committee in 1985. This states: ***"the Centre initiates and promotes research, training and dissemination of information on socio-economic and related aspects of CGPRT crops in Asia and the Pacific"***. In its activities, the Centre aims; ***"to serve the needs of institutes concerned with planning, research, extension and development, in relation to CGPRT crop production, marketing and use"***.

35. From the mandate the Centre is conceived as a catalytic institution, promoting development of CGPRT crops. The collaborative research activities are vital in enhancing the capabilities for research and development in member countries. The generation and dissemination of useful information to researchers, extension workers, policy makers and other people involved in CGPRT crop development is essential. Moreover, development of experience and knowledge among the people is of equal importance in promoting research. These three major functions of the Centre, i.e., research and development, information provision, and human resources development are to be implemented in a mutually reinforcing manner to achieve the mandate.

## ***Structure of the Centre***

36. The Centre has a Governing Board consisting of representatives from the host country and elected from members and associate members of ESCAP. The Board reviews the operations of the Centre, and considers and adopts the annual and long-term programmes of work. As an advisory body to the Director, the Centre has a Technical Advisory Committee consisting of eminent scientists and experts directly connected with technical aspects, representing various fields of agricultural research. The past and current members of the Governing Board and the Technical Advisory Committee are shown in Annex III and IV.

37. Institutionally, the Centre has the status of a subsidiary body of ESCAP. This means that financial and staff rules and administrative instructions of the United Nations are to be applied. The statute also defines the Centre's resources which are composed of:

- "(i) The voluntary contribution of the members and associate members of the Commission;*
- (ii) Funds received from other governments;*
- (iii) Funds received from international and national institutions;*
- (iv) Moneys received for services furnished by the Centre; and*
- (v) Other funds or moneys received by the Centre".*

38. In the early years, the Centre operated with modest budgets. Until 1984, annual expenditures were US\$ 200,000 to US\$ 300,000. From 1985, as the number of projects increased and the professional staff increased to five, annual expenditures rose from US\$ 700,000 to US\$ 800,000. These amounts included both cash and in-kind resources, the latter mostly consisting of expert services provided in the form of non-reimbursable loans. Since 1987 the expenditure has largely remained at the level of slightly over US\$ 1.0 million and recently reached approximately US\$ 1.3 million. The evolution of the estimated annual expenditures of the Centre and the number of professional staff is shown in Annexes V and VI respectively.

39. The major financial resources have come from voluntary annual contributions from the member countries of ESCAP, which have been channelled through the extra-budgetary programme of ESCAP. Funds received from international institutions have constituted the second largest portion of the Centre's resources, virtually all for specific projects and programmes. While individual programmes and projects have been financed by the respective programme funds, in order to meet the overhead costs of the Centre's operations, a separate category of funds - "institutional support resources" - has been established. Several countries, both developed and developing, have been contributing to the institutional support resources and the number has gradually increased.

### *The Centre's Activities*

40. Initially, the Centre emphasized the establishment of a co-operative research network, for research activities and was afterwards used for training and information dissemination. In this initial period, the Centre also concentrated on organizing regional workshops aimed at identifying the general direction and subject areas of socio- economics in development of CGPRT crops.

41. The research programme in the years 1982-1985 mainly concerned production of CGPRT crops. The regional co- operative network took shape and assumed a more visible and sustained nature, being reinforced, for instance, by the workshops on: *"Research Implications of Expanded Production of Selected Upland Crops in Tropical Asia"* in 1984, and, *"Methodological Issues on Socio-Economic Analysis of Food Legumes and Coarse*

*Grains*" in 1985. Moreover, the seven country studies carried out under the Centre's component of the RAS/82/002 project also gave an overall picture of production constraints for CGPRT crops in the region.

42. In the period 1985-1987 the Centre began to publish its research results and workshop proceedings. The Centre's newsletter also commenced circulation, which reached 3,000 by 1987. These papers and newsletters have widely disseminated the Centre's activities, findings and recommendations.

43. Studies on marketing, processing and utilization/ demand, which were initiated after 1986, were a timely reflection of the recognition that the development of secondary crops was highly dependent on demand and on other sectors of the economy. Other studies showed the relation between rural employment and CGPRT crops. Together these findings served as a basis for future research. The second phase of the SYGAP project pinpointed the future needs for action regarding research and development policies for increasing soybean production in Indonesia and Thailand. It proved to be a successful approach, involving inter-disciplinary co-operation among research, extension and other development activities at the farm level.

44. Research activities have been gradually prioritized towards the response to the changing and emerging conditions related to CGPRT crop development. Subjects such as rural employment generation, market structure of CGPRT crops and production linkage with other sectors have attracted more attention. Crop reviews clarifying the current situation and indicating future prospects have also maintained their value, as demonstrated by several commodity studies in specific countries. The socio-economic conditions of producers, market mechanisms, and the extent of services supporting development, have been systematically investigated.

45. The Centre has successfully collaborated with various international agricultural research centres, particularly those under the Consultative Group on International Agricultural Research. The socio-economic research which the Centre conducted on root crops with the International Potato Centre (CIP) is an example. With the International Centre for Tropical Agriculture (CIAT), following the cassava workshop in 1984, a similar approach has been proposed and is being considered as one of the concepts in CIAT's regional thrust in Asia. The International Crop Research Institute for the Semi-Arid Tropics (ICRISAT) has become more sensitive towards the development of their mandate crops in Asia in a market context, as demonstrated by the result of earlier work on pigeonpea. The Table of Annex VII summarizes the past collaborative activities of the Centre with FAO and international agricultural research centres.

46. It may be concluded that research projects and workshops in this period had an impact on researchers, policy makers, extension workers, and farmers, processors and traders involved in CGPRT crop development. The impact has been felt primarily on an individual project basis.

47. Human resources development activities of the Centre gradually expanded, from identifying the issues to undertaking region-wide discussions based on findings and implications derived from the Centre's completed research projects. Furthermore, as

shown in the workshop on research resources allocation and comparative advantage, training of researchers in analytical methods to be applied to CGPRT crop development has become one of the features of the Centre's activities.

48. Since 1988, a new direction for the Centre's programme has been sought. The Governing Board and Technical Advisory Committee, in successive sessions, suggested that more emphasis be placed on information services and human resources development activities in order to enhance the regional functions of the Centre. Human resources development activities have been considerably strengthened since 1989, with a full-time training officer, and a new approach.

49. Information and documentation services have two functions. They disseminate information to users, while generating their own information relating to CGPRT crop development. The former function has been well established through creating an efficient information and documentation service at the Centre. Regarding the latter function, in view of the need for integration and easy-to-access statistics on CGPRT crops and commodities, the regional statistical database on CGPRT crops has been efficiently developed in collaboration with participating countries. The data already compiled have not only been published, but also widely used by researchers, policy makers, international and regional institutes, project missions and the Centre itself. The Centre has become a source of information for the development of CGPRT crops. In particular, the focus of the Centre on socio-economic and related aspects of these crops has filled a niche in the region.

50. A summary of research projects undertaken since the creation of the Centre is shown in the tables of Annexes VIII and IX: the Annex VIII table presents the list of these projects and Annex IX their distribution by crop and region. Annex X lists the Centre's publications from the start to July 1992. A few additional publications have been made available since then. Annex XI contains a list of workshops, seminars and training courses organized by the Centre. These tables provide the background information and summarize the development of the Centre's activities for the past ten years.

### ***The Medium-Term Plan, 1988 to 1991***

51. By the mid-1980's it was felt necessary to draw up a medium-term plan, on the basis of lessons learned in the past. The idea was initially raised in 1985. The plan culminated in a paper entitled: "*CGPRT Centre: Review, Perspective and Medium-Term Plan 1988 to 1991*". The plan was discussed in the sessions of the Technical Advisory Committee and the Governing Board. It was endorsed by the Governing Board in 1988, as a policy reference paper and became the basis for the present strategic plan.

52. The plan focused on four groups of topics - production systems; demand, consumption and utilization; markets, prices and trades; and policy and social aspects. These topics were found to have specific relevance to the major crops in each of the four sub-regions - South Asia, Southeast Asia, East Asia and the Pacific, as shown in Table 2. The matrix of geographical areas and study topics shown in the Table provides mainly geographical guidelines for the selection of research projects. The three major functions of the Centre - information and documentation services, training and research - were conceived as inter-related programmes.

**Table 2. Subject matter, sub-regions and major crops of the Centre's programme**

Subject matter	South Asia	Southeast Asia	East Asia	Pacific
Production systems	pulses	soybean maize cassava	tubers	
Demand, consumption, utilization	pulses potato maize cassava	soybean maize groundnut tubers	maize soybean roots and	tubers
Markets, prices and traders	pulses maize	selected commodities	selected commodities	tubers
Policy, social issues	pulses maize	selected commodities		selected crops

Source: CGPRT Centre, *Perspective and Medium-Term Plan, 1988 to 1991*. pg 10.

53. Since 1988, programme development of the Centre has followed the directions indicated in the plan. The Centre's governing and consultative bodies have, on several occasions, asked for the further sharpening of priority areas of the Centre's programme, while shifting the emphasis towards training and information services so as to achieve a fair balance among the three major functions. Meanwhile, it has been felt increasingly that the recent changes in CGPRT crop development call for a more comprehensive review and restructuring of the programme framework. As the medium-term plan only extends to 1991, a new plan is now needed to identify, select and formulate the Centre's programme from 1992 onwards. The Governing Board supported the initiative of the Technical Advisory Committee and the Centre itself, that a strategic plan be established. This plan aims at both further developing the scope and conception of the Centre's role in the light of recent developments, and at formulating a medium-term plan for the Centre's activities.

54. In 1991 the Centre underwent an external review which concluded that:

*"Considering its small size, unstable funding and extremely limited budget, the CGPRT Centre has achieved far beyond its resource base. The Review Team concludes that after a decade of its existence:*

- (i) the Centre has found a niche for itself in the largely unclaimed area of socio-economics of CGPRT crops in the Region;*
- (ii) it has initiated a very promising R & D approach which brings researchers, extension workers and farmers in an interactive manner toward problem-solving at the field level;*
- (iii) the development of a CGPRT oriented research community is now in evidence in the Region as well as outside;*
- (iv) The Centre has emerged as a Regional resource institution for the socio-economics of CGPRT crops;*

*(v) for the CGPRT Centre to grow, blossom and bear more fruit it has to nurture the substance of its institutional identity and to continue to address significant socio-economic issues relevant to CGPRT crops.*

*(vi) To fulfill its promise as a Centre, it needs an expanded and more dependable resource base."*

55. The external Review Report, however, pointed out a weakness of the CGPRT Centre's past performance as: *"each project remains an individual project because the research programme is not well defined"*. It suggested that *"because many research projects were oriented toward identification of issues, there is an urgent need for an analytical synthesis which will enable the Centre to draw conclusions from its work. These research results are the stock-in-trade of the Centre-an indispensable ingredient in its search for institutional identify"*. The report thus underlines the need to define the strategic direction of the Centre's programme on the basis of its past performance and achievements.





## V. FUTURE DIRECTIONS OF THE PROGRAMME

### *Strategic choices*

56. The objectives of the Centre are to provide the member countries with the expert technical services and facilities required for CGPRT crop development. From the previous chapters, it has become clear that the needs of the ESCAP member countries will call increasingly for socio-economic research and development activities.

57. This leads to increasing involvement of CGPRT crop farmers in the market which are in turn affected by changes in demand and consumption patterns. By responding to new opportunities and changing market conditions, CGPRT growers and processors will be able to increase their incomes. At the same time the substantial population growth of rural Asia can increasingly but only partially be absorbed by the industrial and service sectors. Small-scale agriculture, over half of which is based on CGPRT crops, will continue to be widespread. The future is likely to show significant concentration of socio-economic problems in the smallholder sector of agriculture, while increasing responsiveness is required to fulfil consumer needs and shifts in demand.

58. The future direction of the Centre's programme is drawn from the context of this paradigm. Strategic choices are based on the future needs of the member countries and the strengths which the Centre has acquired in the last decade. Research and development activities will remain the major vehicle for the Centre's programme in the future. Human resources development and information dissemination activities will be tightly woven into the overall programme so as to reinforce the Centre's impact while facilitating the research activity.

### *Themes for Research and Development*

59. On the basis of the paradigm for the 1990 and beyond, the following five themes are identified:

**Theme One: Market development and post-harvest processing.**

**Theme Two: Changing demand and production systems.**

**Theme Three: Sustainable agriculture and resource management.**

**Theme Four: Agricultural diversification and poverty alleviation.**

**Theme Five: Regional co-operation and policy analysis.**

60. These themes represent choices in the development domain, taking into account the recent developments in CGPRT crops and the issues described in the previous chapters. At

the same time, the themes represent the major areas of the programme activities of the Centre for the coming decades, and provide the broad indicators by which research projects and activities of the Centre will be identified and formulated. The themes are equally valid as the framework for human resources development activities and provision of information.

61. The role of agriculture in current and future development is viewed as dual. Agriculture continues to be an important source of economic growth. At the same time agriculture contributes to equitable distribution of income. With increasing commercialization of agriculture, value added at all levels of the market, and development of new markets for CGPRT products are becoming important. Together with technology, market development will open new opportunities for CGPRT farmers. The changes in markets, utilization and processing will induce responsive interactions with production systems. In many countries, however, such a process may not necessarily result in alleviation of poverty of small farmers particularly those living in marginal and disadvantaged conditions. Development efforts concerning the rural population should therefore encompass a range of development avenues.

62. The following paragraphs present themes along with their backgrounds and expected impacts and benefits. Individual projects will be developed in line with these themes. In view of the wide variety of issues involved in CGPRT crop development, the scope and structure of projects will vary by country and sub-region.

### 63. *Theme One*

#### **Market development and post-harvest processing.**

##### *Objective:*

- (i) To analyse, characterize, and indicate the directions of improvements for increasing market efficiency of CGPRT commodities; and
- (ii) To explore and provide new market opportunities and uses for CGPRT commodities, taking into account post-harvest technology.

##### *Background:*

This theme aims through analysing market structure of CGPRT crops to increase market efficiency and to develop markets, delineating the respective roles of the public and private sectors. CGPRT commodities are processed extensively and sold as materials for food, feed and industrial use. New uses, new products and new qualities are emerging which attract attention from producers, governments and the private sector. Agricultural research in farm technology usually stops at the harvest stage, leaving scope for development at the post-harvest and marketing stages. As the market for CGPRT commodities develops, the roles of the various actors involved in the process have become more specialized and differentiated. This theme addresses this relatively new area, analyzes the structure, constraints and prospects, and indicates future actions required for the development of markets for CGPRT commodities.

### *Impact and benefit:*

Projects in this theme identify the areas for development and transfer of post-harvest, and pre-harvest technology, responding to the emerging products and outlets and changing market structure. These activities, if integrated, could lead to the formulation of national development programmes for specific crops. Findings will also delineate the roles of individual actors in the process - local traders, processors, wholesalers and retailers in markets, processors and manufacturers on various scales. This in turn would lead to assessment of the role of, and areas of intervention by governments. Moreover, as market prospects and information will be derived from the project, the private sector involved in processing, manufacturing and trading will also benefit.

## **64. Theme Two.**

### **Changing demand and production systems.**

#### *Objectives:*

- (i) To identify and characterize the mechanism of interaction between demand/utilization and production systems; and
- (ii) To indicate actions necessary to facilitate the adjustments and improvements in both production and demand systems.

#### *Background:*

Changes in demand and utilization of CGPRT crops induce changes in production. Such interaction is best identified through holistic study conceiving production, trade and utilization as a system, which can be referred to as "the CGPRT economy". Past experience of the Centre indicates that adjustment is taking place in the CGPRT economies in many countries in the region. This has sometimes been initiated by agro-industries using CGPRT commodities. Market signals, for example in the form of quality rewards, are transmitted to producers. Farming systems need to be adjusted even when a change takes place in a single crop, because of the inter-relationships among crops and other farming activities at farm level. Future development of CGPRT crops thus relies on the accurate identification of the CGPRT economy and of the stages in interactions between production and utilization.

#### *Impact and benefit:*

The characterization of the CGPRT economy would lead to identification of the necessary action to alleviate constraints for the smooth functioning and adjustment of the system. Thus a project in this theme will assist in identifying clearly actions necessary in institutional settings (e.g., credit, farmers' grouping, intervention or non-intervention by the public sector) and research development (e.g., mechanization, post-harvest and production technology). Its impact will include commodity development programmes, research prioritization and planning. Attention for regional aspects of development policies is part of the domain of the themes.

## 65. *Theme Three.*

### **Sustainable agriculture and resource management.**

#### *Objectives:*

- (i) To support sustainable development of the CGPRT agriculture through problem-oriented research;
- (ii) To improve resource use and living standards of upland farmers.

#### *Background:*

The Centre has addressed the local resource use and income relating to upland agriculture in a series of case studies. On the basis of these it is generally conceived that the majority of CGPRT farmers, who largely rely on incomes from farming CGPRT crops, is located in rainfed and upland areas where controlled irrigation is unlikely to be developed. Improvement in incomes and living standards is strongly related to the development of CGPRT crops. Furthermore, CGPRT agriculture often takes place in remote and physically fragile environments. In marginal areas sustainable development through appropriate resource management is a major issue. Agriculture has great significance in the rural development of disadvantaged or poverty-stricken areas. This theme will therefore encompass a broad area of rural development while pinpointing specific geographical areas or segments of rural populations.

#### *Impact and benefit:*

The primary impact will be felt in assisting efforts towards rural development in upland areas, by providing an accurate account of the present situation, direction of improvements and actions to be taken. By including production-specific factors of CGPRT crops, suited to local resource potential and existing and emerging markets, activities will benefit the overall rural development effort. As sustainable development in resource-poor areas will be an important issue, priorities in technology development and policy action will be drawn. The ultimate impact of this theme will be equitable development. Gender and other social issues will also be addressed.

## 66. *Theme Four.*

### **Agricultural diversification and poverty alleviation.**

#### *Objectives:*

- (i) To indicate the directions and actions for generating rural employment opportunities and incomes through diversification;
- (ii) To analyze the process and mechanism of diversification in agriculture, both in terms of interaction among crops and other farming activities and in terms of backward and forward linkages relating to employment and capital.

## *Background :*

Agricultural diversification embraces a wide range of concepts and practices but is as a whole conceived as an effective means of adjustment of the agricultural sector in which small farmers prevail, to the rapidly growing and changing economy. The notion of diversification thus covers not only crop diversification within farm households but also forward and backward linkages in factor and product flows. Intensification of farming can be regarded as a specific form of diversification. Moreover the inclusion of and shift to non-farm activities in the rural economy is an important facet of diversification. Industrial use of agricultural products steadily orients towards expanded use of half- produce as raw material for feed, edible oils and starches is noticeable. Increasing substitution and competition are taking place among a large variety of oil crops which includes not only groundnut, soybean but also coconut and palm oil. Similarly the starch industry which delivers half-produce to the feed, food, textile and wood industries, is seeking to increase efficiency through development of new production-processing linkage. An important aspect of the rapid involvement of industries in the processing stage is a process of economies of scale, to which the small-scale producers of primary goods need to adjust.

## *Impact and benefit:*

Agricultural intensification and diversification have been regarded as the major avenues for increasing rural employment opportunities and consequently rural income. By analysing the current status and prospects at farm and national levels of these prominent processes, which are taking place in rural Asia, the theme will benefit policy planning, rural development, and research programmes. For the use of policy planning, the activities will generate possible options, desirable courses and necessary measures to facilitate and accelerate agricultural adjustment through diversification. For the use of research programmes, the technological constraints, issues and priorities of crop diversification will be pinpointed. As the major impact of the adjustment process will be felt in the increase in rural income and employment, labour absorption capacity and rural labour migration of various scenarios of diversification will assist in establishing appropriate development policy. Gender and social issues will also be addressed.

## **67. Theme Five**

### **Regional co-operation and policy analysis.**

#### *Objectives:*

- (i) To analyse and identify policy impact and options focusing on production, utilization and trade of CGPRT crops/ commodities; and
- (ii) To indicate policy options to facilitate regional co- operation for sustainable development of CGPRT agriculture.

### *Background:*

The remarkable growth of many Asian and Pacific economies in the past decade has resulted in ever closer economic relations and greater complementarities among countries. In the domain of CGPRT crops/commodities, rapidly changing economies affect comparative advantage of individual commodities in each country, which calls for constant review and adjustment. Agricultural policies relating to these crops, and in a broader context to CGPRT agriculture, also require frequent but systematic review and harmonization. Intraregional trade of CGPRT crops/commodities appears to be expanding, which would induce restructuring of the production pattern in countries in line with comparative advantage. Enhanced regional cooperation is beneficial to achieve sustained growth without widening disparities among countries. There are several bodies with which the Centre works to strengthen regional cooperation: the Association of South-East Asian Nations (ASEAN), the South Asian Association for Regional Cooperation (SAARC), the Pacific Economic Cooperation Conference (PECC), the Asian Pacific Economic Cooperation (APEC) and the South Pacific Bureau for Economic Cooperation (SPEC).

### *Impact and benefit:*

The primary impact will be in providing benchmarks and guide-posts in reviewing and formulating national agricultural policies centered on CGPRT crops and commodities. Projects derived from this theme would indicate direction, measures, and policy options for CGPRT development, food security and trade. At the same time, methodological development through the execution of the projects/studies would enhance the capabilities of national planning and research institutes.

68. **Human resources development (HRD) activities** will be structured along the Centre's programme and its themes. Activities will be tightly woven into the project activities under the five themes. The activities will address the following two areas:

- (i) Dissemination of the results of the Centre's research projects, identifying and prioritizing of R&D activities of the Centre's partners; and
- (ii) Transfer of research approaches and methods in the field of CGPRT crop development, particularly in carrying out research projects.

69. The HRD activities largely follow the aims of the research projects under the five themes, and disseminate research findings and implications and often constitute an element of the R & D projects. Some issues to be covered in the future will be: market formation of CGPRT commodities, future trends in CGPRT crop consumption, diversification of agriculture, development of CGPRT crop-based upland agriculture, women's role in CGPRT agriculture, and effects of changes in marketing and processing, including agro-industries, on production.

70. There is a continuous and increasing need for the training of researchers, policy planners, extension workers and other people involved in agro-economic and socio-economic aspects of CGPRT crop development. In particular, capable researchers and policymakers are needed in this field. The second area of HRD activities will respond

to this demand in transferring research and development approaches and methods to the researchers and policy makers. Training courses of two to four weeks will be the major means towards this end. One or two courses per year will be implemented starting from 1993. The following approaches and methods are included:

- Market development relating to Themes One and Two;
- Farming systems analysis relating to Themes Two, Three and Four;
- Database management for research, relating to all five themes; and
- Policy planning covering demand projections, analysis of prices and trade relating to Theme Five.

71. With the increasing importance of development in post-harvest activities and processing of CGPRT crops, the national agricultural research systems call for commodity market development. Basic survey techniques have been developed by the Centre for simple and cost efficient forms of market appraisal. This approach will be systematized and transferred to researchers and other people engaged in product and market related work.

72. The importance of farming systems research has been increasingly recognized in recent years. As this approach is rather costly, many research programmes rely increasingly on low-cost quick surveys, focusing on specific aspects and target groups. The human resources development programme will continue to provide the expertise of the Centre acquired to date in this area, including socio-economic farm surveys.

73. Since the vast possibilities for efficient data analysis and handling on personal computers hold great promise for improving research capacity and capability, enhancing of computer skills of staff of national agricultural research centres and planning agencies will be an important area of human resources development. Attention will be paid to simple data handling and the generation of readily usable data.

74. The shift towards diversification and intensification of farming systems taking place throughout the region calls for multi-commodity approach in research. Diversification as a process, the roles of CGPRT and commodities in the agricultural sector, and the economy as a whole may be better analysed and understood through a multi-commodity approach.

75. On-the-job training through the participation of individual trainees in the Centre's projects will be expanded. Junior researchers from co-operating institutions and universities will be given training opportunities through involvement in the Centre's projects.

76. **Regional Statistical Database System (RSDS)** is a longterm activity of the Centre which constitutes the collection and formatting of aggregated and disaggregated time series data on production, use and trade of CGPRT crops. Through this activity information needs will be served. It is intended in the period 1992-1997 to expand the number of countries covered. The system entails unique, simple software packages which are highly suited to gauge developments in the foodcrop sector. This package and the data, collected by the national partners, are not only being transferred to other partners and national agricultural research centres, but also to planning bureaus, data centres and universities. Training in the software packages and database use and management will be part of the transfer procedure.



77. One of the characteristics of RSDS, which combines time series and district level information, makes it particularly fit for a large number of uses such as the identification of long-term trends in specific areas of CGPRT crop development. With regular updating, the system also provides excellent monitoring possibilities.

78. The information services will focus on national research institutes, planning and other agencies in the region in providing information regarding CGPRT crop development. No other institution offers region-wide and comprehensive information to meet these needs, and the Centre, which has established an effective information and documentation service, is in a unique position to respond to and fulfill these specific requirements.

79. The services will continue to publish proceedings, monographs, and working papers containing the results of R & D and other activities of the Centre. The publication of the Newsletter will be continued. Information services to the research and development community and the general public will thus be continued and further strengthened in the period 1992 to 1997.

## VI. OPERATIONAL IMPLICATIONS AND RESOURCE REQUIREMENTS

80. The main task of the Centre is to carry out research and development of CGPRT crops to benefit the ESCAP members and associate members. The Director of the Centre, under the general direction of the Governing Board, is responsible for implementing the Centre's programme including the raising of adequate funds to finance projects and activities. For this purpose, individual projects and activities will be identified, formulated, implemented and evaluated.

81. This chapter highlights the operational implications and resource requirements of the programme based on the broad strategy presented in the previous chapters.

### *Research collaboration with the partners*

82. Most of the Centre's research has so far been, and will continue to be, undertaken in the form of collaborative research. Under this arrangement, the Centre's staff work together with national researchers, and as required with extension workers and policy planners, while the extent to which each group is involved in different steps of research activities varies by project. In some cases, a national team will be set up under a project which is largely responsible for the project implementation in that country. "Commissioned research projects", in which the Centre's staff are involved only in planning and co-ordination, are also regarded as a form of collaborative arrangement as the subject, structure and workplan are determined in consultation between the Centre and the implementing agencies. The choice of arrangements depends on the nature and theme of the project and the capacity of the Centre and of the national collaborators. In view of the catalytic role of the Centre, projects with such collaborative arrangements will be given priority.

83. Some research activities may be carried out by the Centre's staff, sometimes with the help of external consultants. Studies of an exploratory nature and testing of application of methodologies, for instance, could fall into this category.

### *Regional and Country Focuses and Priorities*

84. Harmonization of the Centre's programme with the priorities and programmes of individual countries must be ensured. This will be achieved at the project identification and formulation stages. Close communication will be maintained with the national agricultural research agencies and institutes concerned in the Centre's activities. Complementing the relationship, the partners, on their side, will share planning, implementation and evaluation functions of collaborative projects. In the countries where a sizeable number of projects is implemented, review and planning meetings will be held periodically.

85. The regional perspective of the Centre's research will be further enhanced. This will be achieved through an increased number of regional or sub-regional projects which will be formulated and implemented in more than one country, with a clear perspective in drawing regional or sub-regional implications. So far, about one-third of all projects has fallen in to this category. Though some socio-economic issues are eminently country-specific, efforts will be made to select subjects common to several countries, to enable more projects of a regional or sub-regional nature to be carried out. More even distribution of the Centre's activities among sub-regions and member countries will also be considered.

86. By further focusing on specific issues that fall within its mandate, the Centre can strengthen its advantage in the international and regional agricultural research community. Many IARCs have already expressed interest in such activities as socio-economic assessment of technology, improvement of marketing efficiency and utilization of products of their mandate crops. Opportunities for co-operation between the Centre, and international agencies such as FAO and regional and international institutes are increasing. This will help to reduce unnecessary duplication of efforts and increase the effects of activities.

### ***Human Resources Development and Information Services***

87. The human resources development activities will continue to engage in training in socio-economic and related subjects, following the general approach described in section V. Harmonization with national priorities and interests will be governed by the same principle as for research. Surveys of needs will be done periodically to indicate which subjects are in strong demand. Joint organization of regional meetings with IARCs, national and international institutions will be encouraged.

88. The information services will continue to develop in their two facets. In order to enhance the impact of the Centre's projects, modes of dissemination will be improved to make such findings and recommendations readily available and easily accessible to the users. Another area for expansion lies in the use of statistical databases on CGPRT crops. Indeed, databases open vast possibilities for quantified analytical studies which may yield specific recommendations and identify policy options. The databases are thus instrumental in the promotion of more development-oriented research.

### ***Staff requirements***

89. In view of experiences over the years, it has become clear that substantial research expertise and a critical mass of professional staff is required. Moreover, given that many issues are common to several countries in the sub-regions, projects should to a large extent be identified and implemented on a sub-regional basis. The research and development activities will be headed by a leader who is assisted by a project development officer. A team of four agricultural economists, covering basic expertise in economics and sociology including methodology development and application, could successfully cover each of the main sub-regions. This points to a need for a full-time research staff of fourteen people. The activities covering human resources development and information services including the statistical database is expected to need eight staff including one leader.

90. In order to help the Director to fulfil his tasks, two assistant (deputy) directors will be assigned, who are in charge of R & D activities, human resources development and dissemination of information respectively.

91. These staff requirements represent a target to be reached by 1996/97, assuming the general continuation of the current institutional setting, shown in the Table 3.

**Table 3. Professional staff requirements.**

Activities	mid-1991	Target 1996-97
Research and development	5	14
Human resources development and information services <sup>a)</sup>	5	8
Director	1	1
	11	23

<sup>a)</sup> The RSDS project is part of the HRD activities.

92. As needs arise, the Centre will have recourse to the services of competent and suitable consultants for particular projects. The Centre has an administration/accounting unit which is backstopped by ESCAP. The number of supporting staff including the administration/accounting officers will depend on needs.

### *Co-operation with the host country and IARCs*

93. The Centre has a special relationship with the host government of Indonesia. The relationship will be cultivated on a continuing basis through formal agreements and informal contacts. The Centre's premises and other facilities are provided and maintained by the host Government. Furthermore, the fact that a number of projects have been, and will be, implemented in Indonesia, is of help in nurturing a friendly working relationship.

94. The Centre will continue and expand its co-operation with FAO, IARCs, and other regional and international institutions. It will foster such co-operation, through networking, conferences, workshops and direct contacts.

### *Resource Requirements*

95. In order to implement the programme, sufficient funds need to be secured. The amounts required for the 1996/97 target size of operations are shown in Table 4, divided into institutional support resources and programme resources. The current level of available resources, however, falls far short of the indicative levels, suggesting that only an expansion of new and traditional funding sources can bridge the gap. It is also evident that the situation is particularly tight regarding institutional support resources, which, in spite of recent new or increased contributions from several developing member countries, have remained at around US\$ 350,000 a year, while expenditures in these areas have increased.

**Table 4. Estimated cost of operations<sup>a)</sup> (in '000 US\$)**

	1991 <sup>b)</sup>	1996/1997
Programme cost		
Research	672	2,250
Human Resources Development	184	430
Information Services	50	- <sup>c)</sup>
Regional Statistical Database System	54	245
Sub-total	960	2,925
Institutional cost		
Personnel	255	435
Information services	-	80 <sup>c)</sup>
GB/TAC and other meetings	20	35
Travel	18	30
Maintenance and other operational costs	61	100
Sub-total	353	680
Total	1,313	3,605

a) In 1991 prices.

b) Estimated expenditures as of October 1991.

c) Included in institutional cost in the target year of 1996/1997.

96. In order to ensure the necessary funds for programme operations as indicated in Table 4, the Centre, in co-operation with member Governments, will strengthen efforts to raise funds. This can be effectively carried out through preparing viable project proposals reflecting the priorities and needs of the participating countries, and actively approaching donors, particularly developed countries and international agencies. These actions include constant consultation with the countries concerned throughout the formulation process. Co-funding arrangements for projects, workshops and other activities with international, regional and national institutions, particularly with IARCs will be encouraged.

97. Regarding institutional support resources, member Governments are requested to increase or to commence their contributions to the Centre so as to meet the target amount for 1996/97 as indicated in Table 4. The Centre will consult with individual countries about the benefits derived from participation in the Centre's activities. Individual countries will decide the level of contribution taking into account income level, size of the economy and agriculture, and the importance of CGPRT crops. Moreover, the Centre will seek to expand the additional income through advisory services provided to Government agencies, international agencies, and the private sector, and sales proceeds from publications and other activities.

98. Finally, in order to strengthen the Centre's capacity and professional staff to cope with increasing needs as indicated in Table 3, the Centre will make further efforts to expand the human resource base through arrangements such as provision of experts in funds-in-trust, provision of non-reimbursable loan experts and establishment of a scheme of visiting research fellows. A special effort will be made to recruit experts from developing countries, through setting up revolving positions to be filled by staff from partner institutes, provided by developing member Governments, in some cases with specific financial arrangements.

99. The Centre's task is both important and complex. It must respond dynamically to change. As a research and development institution, the Centre can benefit its target people in CGPRT crop production through its partners. This plan presents the strategy for achieving the Centre's objectives in response to emerging needs. The thrust of this strategy is to prioritize activities consistent with the advantages of the Centre. Resource requirements have been drawn up on the basis of the new strategy. The Centre can continue to be a useful, unique and efficient institution, contributing to the benefit of those who are involved in the development of CGPRT crops.

# Annexes





## COMMISSION RESOLUTION

176 (XXXIII). **Regional co-operation in the development of coarse grains, pulses, roots and tubers**

### **The Economic and Social Commission for Asia and the Pacific,**

**Recognizes** that coarse grains, pulses, roots and tubers are important to the efforts of the developing countries in the region, not only as staple foods and cheap sources of nutrition but also as sources of raw materials for livestock feed and other industries and ultimately as a vital input in rural development efforts,

**Reaffirms** that there is an urgent need to strengthen national research and development efforts in order that nations may truly benefit from the production of these crops and optimize benefits from all the research which is being carried out at the international and national levels in developing and developed countries,

**Considers that,** to achieve this end, a regional mechanism needs to be devised to facilitate effective co-ordination in research on and development of such crops through the planning and implementation of action-oriented programmes,

**Notes with appreciation** the progress so far made by the ESCAP secretariat in promoting activities for regional co-operation in the development of coarse grains, pulses, roots and tubers,

1. **Endorses** the report of the Intergovernmental Expert Group Meeting on the Establishment of a Regional Coordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tubers in Humid Tropics of Asia and the Pacific;

2. **Requests** the Executive Secretary:

(a) To take the necessary steps for the establishment of such a regional co-ordination centre, in close cooperation with the Food and Agriculture Organization of the United Nations, and the Consultative Group on International Agricultural Research and other appropriate organizations. To mobilise resources from member countries and other sources, and to consult with the Governments of member countries on the provision of host facilities, keeping in view the kind offer made by the Government of Indonesia in this regard;

ANNEX I (continued)

(b) To strengthen the nucleus staff in the secretariat to prepare the ground for initiating and co-ordinating the activities of Phase I of the project;

(c) To submit a progress report on the matter to the Commission at its thirty-fourth session;

3. **Invites** international organizations and institutions concerned with research and development of coarse grains, pulses, roots and tubers and all member countries to extend their fullest assistance towards the successful implementation of the recommendations contained in this resolution.

## RESOLUTION

220 (XXXVIII). **Statute of the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific.**

Sponsored by: **Bangladesh, India, Indonesia, Japan, Malaysia, Nepal, Philippines, Republic of Korea and Thailand.**

### **The Economic and Social Commission for Asia and the Pacific**

**Recalling** its resolution 174 (XXXIII) of 29 April 1977, in which the Executive Secretary was requested to take the necessary steps for the establishment of a regional co-ordination centre for research and development of coarse grains, pulses, roots and tuber crops in the humid tropics of Asia and the Pacific at an early date.

**Recalling further** the unanimous support given at its thirty-sixth and thirty-seventh sessions to its request for the early establishment and operation of such a centre.

**Noting with satisfaction** the action taken by the Executive Secretary towards the implementation of the directives of the Commission, including the signing of the host country agreement between the Government of Indonesia and the United Nations on 29 April 1981, the appointment of the Director and the establishment of the Centre with effect from 29 April 1981.

**Noting with appreciation** the generous financial and technical support provided by the Governments of Indonesia, Australia, France, Japan, Malaysia, the Netherlands, the Philippines, the Republic of Korea and the Union of Soviet Socialist Republics for the implementation of the project.

**Noting also** the endorsement of the draft Statute of the Centre at the fourth session of the Committee on Agricultural Development, held at Bangkok in January 1982.

**Adopts** the Statute of the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific, the text of which is annexed to the present resolution, as a basis for the Centre's operations.

## **Statute of the Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia the Pacific**

### **Establishment and status**

1. The Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific (hereinafter referred to as "the Centre") established in April 1981 by the Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP), pursuant to Commission resolution 174 (XXXIII) and the directives given by the Commission at its thirty-sixth and thirty-seventh sessions, shall continue in existence under the terms of this Statute.
2. Membership in the Centre shall be open to all members and associate members of ESCAP.
3. The Centre has the status of a subsidiary body of ESCAP and the staff of the Centre forms part of the Secretariat of the United Nations.

### **Objectives and functions**

4. The objective of the Centre is to provide members and associate members of ESCAP with expert technical services and facilities required for the development of production, utilization and trade of CGPRT crops by strengthening national research and development activities as a means of solving food problems, increasing employment opportunities, achieving better income distribution and a balanced diet as well as accelerating close linkages with livestock and other industries. In fulfilling this objective, the Centre will take into consideration the interrelationship of problems and programmes of the humid tropics as well as in semi-arid and other agro-ecological areas.
5. In pursuance of the objective stated in paragraph 4, the Centre, in co-operation with other bodies as appropriate, shall, as requested by the countries concerned, have the following functions:
  - (a) Provision of assistance for the development of an agricultural research network;
  - (b) Preparation of agro-economic studies, including social aspects;
  - (c) Training of national research and extension workers;
  - (d) Collection, processing and dissemination of information.

## **Structure and headquarters**

6. The Centre shall have a governing board, a director and staff, and a technical advisory committee.
7. The headquarters of the Centre shall be at Bogor, Indonesia.
8. The Financial and Staff Regulations of the United Nations shall apply to the Centre except as may otherwise be provided by the General Assembly. The Financial and Staff Rules and the administrative instructions of the United Nations shall apply to the Centre except as may otherwise be decided by the Secretary-General.

## **Governing Board**

9. The Centre shall have a Governing Board (hereinafter referred to as "the Board") consisting of a representative nominated by the host country of the Centre and not less than eight representatives nominated by other members and associate members of ESCAP elected by the Commission. The Director of the Centre shall serve as Secretary of the Board.
10. Other than the representative nominated by the host country of the Centre, the members of the Board shall be elected for a period of three years, but shall be eligible for re-election. The first election of members and associate members to the Governing Board will be held at the Commission session in 1982.
11. Governments other than those specified in paragraph 9 above, as well as international and national bodies deemed appropriate by the Board, may be invited to attend its meetings as observers.
12. The first, and inaugural, regular session of the Board shall be convened by the Executive Secretary of ESCAP as soon as possible after the adoption of the Statute.
13. The Board shall meet at least once a year and shall adopt its own rules of procedure. The Board shall meet in special session whenever a majority of its members request the Executive Secretary to convene a special session.
14. A quorum for meetings of the Board shall be a majority of its members.
15. Each member of the Board shall have one vote. Decisions of the Board shall be made by consensus, or where this is not possible, by a majority of the members present and voting.

## ANNEX II (continued)

16. The Board shall at each regular session elect a Chairman and a Vice-Chairman. They shall hold office until the next regular session of the Board. The Chairman or, in his absence, the Vice-Chairman shall preside at meetings of the Board.
17. The Board shall review the operations of the Centre and shall consider and adopt the annual and long-term programmes of work of the Centre. The Board shall submit an annual report on the implementation of programmes to the Commission at each of its sessions.

### **Director and staff**

18. The Centre shall have a Director who shall be appointed for a term of three years by the Secretary-General of the United Nations after consultation with the Board. The first Director may be appointed by the Secretary-General of the United Nations for a term of three years after consultation with the Board. The first Director may be appointed for a period up to two years by the Secretary-General before the establishment of the Board.
19. The Director shall be responsible to the Executive Secretary of ESCAP for the administration of the Centre and the implementation of its programmes.
20. The Director shall prepare and submit to the Board an annual report on the activities, administration, management and financial status of the Centre.
21. The staff of the Centre shall be appointed by the appropriate United Nations administrative authorities.

### **Technical Advisory Committee**

22. The Centre shall have a Technical Advisory Committee (hereinafter referred to as "the TAC"), consisting of eminent scientists and experts directly connected with technical aspects, representing various fields of agricultural research. The maximum number of members of the TAC shall be 12. The members of the TAC shall be appointed by the Director of the Centre in consultation with the Executive Secretary of ESCAP. Representatives of ESCAP, UNDP and FAO shall be *ex officio* members of the TAC. Representatives of other national and international research institutes and agencies concerned shall be invited to participate, as necessary.
23. The TAC shall be responsible for advising the Director on the formulation of the work programmes and on other technical matters concerning the operations of the Centre.
24. The TAC shall meet at least once a year and shall be convened by the Director of the Centre.
25. The Chairman of the TAC shall be elected by the TAC itself.

### **Resources of the Centre**

26. The financial resources of the Centre shall be composed of:
- (a) Voluntary contributions of the members and associate members of the Commission;
  - (b) Funds received from other Governments;
  - (c) Funds received from international and national institutions;
  - (d) Moneys received for services furnished by the Centre; and
  - (e) Other funds received by the Centre.
27. The Centre may also receive contributions of a non- financial nature.
28. The Commission shall at each session review the state of the resources of the Centre on the basis of the report of the Board, and make such recommendations as it may deem appropriate, to ensure that timely and adequate resources are always available to the Centre and its programmes.
29. The Centre shall be administered on a sound economic and financial basis.

### **Relations with other United Nations bodies and agencies and other international institutions**

30. The Centre may establish and maintain such relations as it may deem appropriate with other United Nations bodies and specialized agencies and other international institutions.

## MEMBERS OF THE GOVERNING BOARD

### For the period of 1983-1985

1. Bangladesh
2. France
3. India
4. Indonesia
5. Japan
6. Pakistan
7. Papua New Guinea
8. Philippines
9. Republic of Korea
10. Thailand

### For the period of 1986-1988

1. Bangladesh
2. France
3. India
4. Indonesia
5. Japan
6. Pakistan
7. Papua New Guinea
8. Philippines
9. Republic of Korea
10. Sri Lanka
11. Thailand

### For the period of 1989-1991

1. Bangladesh
2. France
3. Indonesia
4. Japan
5. Nepal
6. Pakistan
7. Papua New Guinea
8. Philippines
9. Republic of Korea
10. Sri Lanka
11. Thailand



ANNEX III (continued)

**For the period of 1992-1994**

1. Bangladesh
2. France
3. Indonesia
4. Japan
5. Myanmar
6. Pakistan
7. Papua New Guinea
8. Philippines
9. Republic of Korea
10. Sri Lanka
11. Thailand
12. Viet Nam

## MEMBERS OF THE TECHNICAL ADVISORY COMMITTEE

### As of December 1992

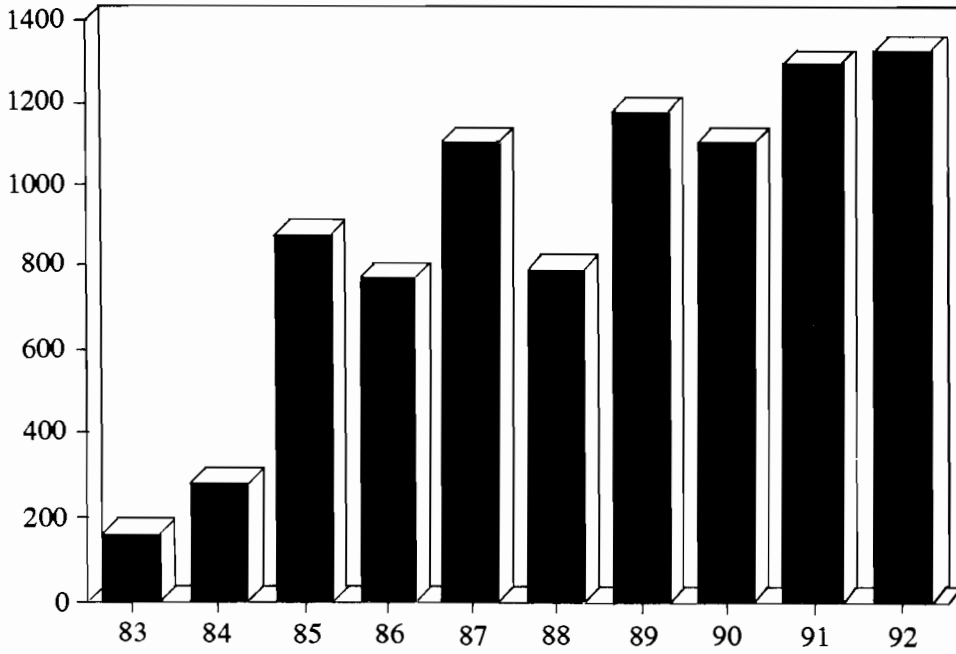
Dr Jean C.L. Chataigner  
Dr J. Brian Hardaker  
Dr Ibrahim Manwan  
Dr Boonjit Titapiwatanakun  
Dr Mohd. Yusof Hashim  
Dr Kunio Takase  
Dr Mohammed Hossain Mondal  
Dr. Wolters

### Outgone members

Dr Soetatwo Hadiwigeno  
Dr Md. Ekramul Ahsan  
Dr J.S. Sharma  
Dr Yujiro Hayami  
Dr J.L. Dillon  
Dr Tongroj Onchan  
Dr Aida R. Librero  
Dr Mokhtar Tamin  
Dr D.B.W.M. van Dusseldorp  
Dr Faisal Kasryno  
Dr Almiro Blumenschein  
Dr Douglas D. Hedley  
Dr Dong Hi Kim  
Dr Chaiwat Konjing  
Dr Matthias von Oppen



**ANNUAL EXPENDITURES OF THE CENTRE ('000 US\$)**





**NUMBER OF PROFESSIONAL STAFF**

<b>As of end of year</b>	<b>International staff</b>	<b>National staff</b>
1981	1	-
1982	1	-
1983	3	-
1984	4	-
1985	6	-
1986	6	-
1987	9	-
1988	9	-
1989	6	2
1990	7	2
1991	7	2



**PAST COLLABORATIVE ACTIVITIES OF THE CENTRE WITH  
FAO AND INTERNATIONAL AGRICULTURAL RESEARCH  
CENTRES**

	1986	1987	1988	1989	1990	1991
FAO	RAS/82/002 <sup>a)</sup> -----			-----	RAS/89/040 <sup>b)</sup> -----	
CIMMYT	On-farm research workshop	Soybean workshop workshop			RSDS workshop	Comparative advantage
IRRI				----- exchange data -----		
CIP		Medium Altitude Potato Indonesia	Sweet Potato Viet Nam		Market workshop	
CIAT	Cassava in Asia 1984 workshop	Research on beans			Cassava in Asia 1990 workshop	Market research
AVRDC	SYGAPI	-----	SYGAPI II	-----		
		Soybean workshop				
ICRISAT		Pigeonpea in Indonesia Myanmar/Thailand				
	AGLN	various workshops -----				

<sup>a)</sup> TCDC for Research and Development of Food Legumes and Coarse Grains in the Tropics and Sub-tropics of Asia.

<sup>b)</sup> Regional Co-operative Programme for Improvement of Food Legumes and Coarse Grains in Asia.





## CGPRT RESEARCH PROJECTS 1985-1990

Start	Finish	Code	Title	Country(ies)	Crop(s)	Domain
1985	1989	SFSI	Socio-economic studies on soybean-based farming system in Indonesia	Indonesia	Soybean	Production
1985	1988	SYGAP-I	Soybean Yield Gap Analysis: Phase I	Indonesia	Soybean	Production
1985	-	RAS/82/002	Analysis of constraints to increased production and productivity of FLCG crops in selected countries of Asia	Asia	FLCG	Production
1985	1987	DHIB	Case studies on demand for selected CGPRT products in human consumption in Indonesia and Bangladesh	Indonesia Bangladesh	CGPRT	Consumption/
1986	1876	FRENCHPAC	Review of French publications and studies on CGPRT crops in the Pacific	South Pacific	CGPRT	Production/ demand utilization
1986	1988	PIGEONPEA	Survey on the potential for pigeonpea in South East Asia	South East Asia	Pigeonpea	Production/ marketing/ utilization
1986	1988	BPOT	Study of demand for root and tuber crops in human consumption in Bangladesh	Bangladesh	Roots, tubers	Consumption/ demand
1986	1988	FEEDSUP	Survey of the utilization of CGPRT crops as livestock feed in Asia	Asia	CGPRT	Utilization
1986	1989	DEASIA	Analytical study on demand for CGPRT commodities in East Asia	East Asia	CGPRT	Demand
1986	1989	MASP/SPIM-I and II	Processing and marketing of CGPRT crops in Indonesia	Indonesia	CGPRT	Marketing/ processing
1987	1989	FAGI	Farmers group activities in upland areas of Indonesia	Indonesia	Soybean	Farmers group
1987	1989	INDPOT	Study on supply and demand situation of potatoes in Indonesia markets	Indonesia	Potato	Production/
1988	1989	REIN-I	Rural employment and income generation from the production, marketing and processing of CGPRT crops in Indonesia: a pilot study in West Java	Indonesia	CGPRT	Production/ marketing/ Processing/ rural employment
1988	1991	SYGAP-II	Soybean Yield Gap Analysis Project: Phase II	Indonesia, Thailand	Soybean	Production/ markets
1989	1989	REIN-II	Rural employment and income generation from the production, marketing and processing of CGPRT crops in lowland in Indonesia	Indonesia	CGPRT and other secondary crops	Rural employment
1989	1991	REIN-III	Rural employment and income generation from the production, marketing and processing of CGPRT crops in Indonesia: Migration and seasonal adjustment of labour in agriculture in Indonesia	Indonesia	CGPRT and other secondary crops	Rural employment
1989	1990	VIPOT	Sweet potato in Viet Nam: Production and marketing	Viet Nam	Sweet potato	Production/ marketing
1989	1991	CAS	Comparative advantage of soybean in selected regions in Indonesia	Indonesia, Thailand	Soybean others	Methodology development
1989	1992	INTUP	Structure and organization of the CGPRT economy in Indonesia	Indonesia	Maize	Production/ marketing
1990	1991	SOYDE	Interaction between soybean utilization and soybean cropping	Indonesia (Thailand)	Soybean	Production/ marketing
1990	-	RAS/89/040	Analysis of constraints to increased production and productivity of FLCG crops in selected countries of Asia	Asia	FLCG	Production/ marketing/ processing



## PROJECT ACTIVITIES BY COUNTRY, 1986-1991

Country	Soybean	Pigeonpea	Maize	Sweet Potato	Potato	Roots. Tuber crops	CGPRT Crops	Total
Bangladesh						BPOT	DHIB*	2(1)
Indonesia	SFSI SYGAP-I SYGAP-II* CAS* FAGI SOYDE*		INTUP		INDPOT		MASP/SPIM I-II REIN-I REIN-II REIN-III DHIB*	13(4)
Thailand	SYGAP-II* CAS* SOYDE*							3(3)
Viet Nam				VIPOT				1
East Asia							DEASIA	1
South East Asia		PIGEONPEA						
South Pacific							FRENCHPACK	1
Whole Asia							RAS/82/002 RAS/89/040 FEEDSUP	3

\* These projects were implemented in more than one country. The number of these projects is shown in the parenthesis in the total columns.



## CGPRT PUBLICATIONS (UNTIL July 1992)

### CGPRT MONOGRAPH SERIES

1. Research Implications of Expanded Production of Selected Upland Crops in tropical Asia.
2. Cassava in Asia: Its Potential and Research Development Needs.
3. Soybean Commodity System in Indonesia.
4. Socio-Economic Research on Food Legumes and Coarse Grains: Methodological Issues.
5. Soybean Development in India.
6. Coarse Grains and Pulses in Nepal: Role and Prospects.
7. Adoption of Soybean in Lupao, Nueva Ecija, Philippines.
8. Agricultural Marketing and Processing in Upland Java: A Perspective from a Sunda Village.
9. CGPRT Crops: Processing and Nutrition.
10. Soybean Research and Development in Indonesia.
11. Constraints to Production of Pulses in Bangladesh.
12. Marketing and Storage of Pulses in Bangladesh.
13. Maize Production in Java: Prospects for Improved Farm-Level Production Technology.
14. Agriculture, Food and Nutrition in Four South Pacific Archipelagoes: New Caledonia, Vanuatu, French Polynesia, Wallis and Futuna.
15. Potential for Pigeonpea in Thailand, Indonesia and Burma.
16. Maize Production in Sri Lanka.
17. Sistem Komoditas Kedelai di Indonesia.
18. Socio-Economic Constraints to Pulse Production in Nepal.
19. Agricultural Marketing in a Transmigration Area in Sumatra.
20. Sensitivity of Soybean Production to Price Changes: A Case Study in East Java.
21. Potato in Indonesia: Prospects for Medium Altitude Production.
22. Upland Economy in Java: A Perspective of a Soybean- based Farming System.
23. Role of Secondary Crops in Employment Generation: A Study in a Rain-fed Lowland Village in Java.

## ANNEX X (continued)

24. Sweet Potato in Viet Nam: Production and Markets.
25. Marketing Innovation for Vegetables: Conditions of Diversification in Upland Farming.
26. Rural Employment and Small-scale Rural Food Processing in Asia.

## WORKING PAPER SERIES

1. Quality and Price Determinants of Secondary Crops in Indonesia.
2. Demand for Corn, Cassava and Soybean in Human Consumption: A Case Study of Java, Indonesia.
3. Bibliography on Soybean Research in Indonesia 1978- 1988.
4. CGPRT Crops in Indonesia: 1960-1990. A Statistical Profile.
5. Shifts and Development in Trade for Various Food Crops in East Asia, 1960-1984.
6. Production and Marketing of Mungbean in Thailand: The Role of Private Sector.
7. Potato and Sweet Potato in Bangladesh.
8. Bibliography of Socio-Economic Aspects of Secondary Crops.
9. CGPRT Crops in Thailand: A Statistical Profile, 1960- 1990.
10. Asian Agriculture: A Sourcebook
11. Agricultural Diversification in Indonesia: Price Responses and Linkages in the Foodcrop Sector, 1969- 1988; an Outlook to 2000.
12. CGPRT Crops in the Philippines: Statistical Profile 19670-1990.
13. Comparative Advantage of Soybean in an Upland Area of West Java: Mathematical Programming Approach.

## PROJECT REPORTS

- Soybean Yield Gap Analysis in Java.
- Analisis Kesenjangan Hasil Kedelai di Jawa.
- Preliminary Survey on Soybean Yield Gap Analysis in Thailand.

## OTHERS

- Plant Resources of South-East Asia 1: Pulses.
- Marketing of Rice, Cassava and Coffee in Lampung, Indonesia.

## CGPRT WORKSHOPS, SEMINARS AND TRAINING COURSES<sup>a</sup>

1. **Seminar on the Development of CGPRT Crops.** August 1981. Krasnodar, USSR. Independent publication by the Centre.
2. **Expert Group Meeting on CGPRT Crops.** October 1981. Bangkok, Thailand. Independent publication by the Centre.
3. **Workshop on Cassava in Asia - Its Potential and Research Development Needs.** June 1984. Bangkok, Thailand. A CIAT publication.
4. **Workshop on Research Implications of Expanded Production of Selected Upland Crops in Tropical Asia.** November 1984. Bangkok, Thailand. CGPRT Monograph series No. 1.
5. **Workshop on Methodological Issues in Socio-Economic Analysis of Food Legumes and Coarse Grains.** November 1985. Bandung, Indonesia. CGPRT Monograph series No. 4.
6. **Symposium on Soybean Research and Development in Indonesia.** February 1987. Bogor, Indonesia. CGPRT Monograph series No. 10.
7. **Training Course on Research Resources Allocation and Comparative Advantage Analysis.** November 1987. Bogor, Indonesia. Mimeograph TG/EC/1 by the Centre.
8. **Training Course on On-Farm Research.** November-December 1988. Bogor/Malang, Indonesia. Mimeograph by the Centre and the RAS/82/002 project.
9. **First Meeting of the Regional Statistical Database System for CGPRT Crops.** September 1989. Bogor, Indonesia. Centre's HRD series No. 1.
10. **Workshop on Increasing Soybean Production in Asia - the Experiences of the Soybean Yield Gap Analysis Project Activities in Indonesia and Thailand.** August 1990. Phitsanulok, Thailand.
11. **Workshop on CGPRT Crop-based Small-scale Processing Industries: Their Effect on Employment and Income Generation in Rural Areas.** November 1990, Los Banos, Philippines. (CGPRT monograph series No. 26)
12. **Second Meeting on the Regional Statistical Database System on CGPRT Crops.** February 1991. Bogor, Indonesia.

---

a Description of each meeting is in the following order. Title (in bold); period; venue; and proceedings of report.



ANNEX XI (continued)

13. **Training Course on On-Farm Research with Special Emphasis on On-Farm Research Trials.** May 1991. Malang, Indonesia.
14. **Regional Workshop on Methods and Procedures for Comparative Advantage Analysis for CGPRT Crops.** November 1991. Bogor, Indonesia.
15. **Regional Workshop on Priorities for Soybean Development in Asia** December 1991. Bogor, Indonesia.
16. **Third Meeting on the Regional Statistical Database System on CGPRT crops.** May 1992. Bogor, Indonesia.

**MEMBERS AND ASSOCIATE MEMBERS OF THE ECONOMIC  
AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC<sup>a)</sup>**

---

**Members**

---

Afghanistan  
Australia  
Azerbaijan  
Bangladesh  
Bhutan  
Brunei Darussalam  
Cambodia  
China, People's Republic of  
Federated States of Micronesia  
Fiji  
France  
India  
Indonesia  
Islamic Republic of Iran  
Japan  
Kiribati  
Korea, Democratic People's Republic  
Korea, Republic of  
Kyrgyzstan  
Lao People's Democratic Republic  
Malaysia  
Maldives  
Marshall Islands  
Mongolia  
Nauru  
Myanmar  
Nepal  
Netherlands  
New Zealand  
Pakistan  
Papua New Guinea  
Philippines  
Russian Federation  
Samoa  
Singapore

---

a) As of April 1992

ANNEX XII (continued)

Solomon Islands  
Sri Lanka  
Tajikistan  
Thailand  
Tonga  
Turkmenistan  
Tuvalu  
United Kingdom of Great Britain and Northern Ireland  
United States of America  
Vanuatu  
Viet Nam

**Associate Members**

Commonwealth of the Northern Mariana Islands  
Cook Islands  
French Polynesia  
Guam  
Hong Kong  
Macau  
New Caledonia  
Niue  
Republic of Palau  
Territory of American Samoa

**LIST OF COUNTRIES AND INSTITUTIONS PROVIDING  
FINANCIAL SUPPORT TO THE CENTRE'S PROJECTS AND  
ACTIVITIES**

Countries: Australia, Bangladesh, France, Indonesia, Japan, Myanmar, Nepal, Netherlands, Philippines, Republic of Korea, Sri Lanka, Thailand and Viet Nam.

Organizations: Commission of the European Communities, United Nations Development Programme (UNDP)<sup>a)</sup>.

---

<sup>a)</sup> Through the Food and Agriculture Organization of the United Nations (FAO).