

**STRATEGIC PLAN
FOR THE CGPRT CENTRE
TOWARDS THE 21ST CENTURY**



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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

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FOREWORD

In Asia, significant development has taken place the past decade. Economic growth has been the highest among the regions in the world. It is widely acknowledged that the 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 their 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, roots and tuber crops and correspond 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

FOREWORD

to
Revised Strategic Plan

The former strategic plan, namely “The Strategic Plan for the CGPRT Centre in the 1990’s and Beyond” was prepared in 1992 and released in 1993. It is still valid and usable for at least several more years.

However, since the conditions related to agriculture, especially food consumption patterns and the commodity trade regime, have been changing remarkably in the Asia and Pacific region in recent years, the necessity of revising the strategic plan was indicated at the 14th session of the Governing Board (GB) of the Centre held in December 1995.

The Centre then started reviewing the former strategic plan and expressed its intention of revising it at the 14th session of the Technical Advisory Committee (TAC) and the 15th session of the GB held in November and December 1996, respectively. A working group was organized at the Centre in May 1997 for the revision. A draft revision of the core part of the strategic plan “Agricultural Development in the Region” and “Future Directions of the Programme” was submitted for discussion and comment at the 15th session of the TAC and the 16th session of the GB held in November and December 1997, respectively.

Based on comments received and further advice, the revision was completed in March 1998 with a new title “Strategic Plan for the CGPRT Centre towards the 21st Century”.

The revision aimed firstly to accommodate current changing conditions of agriculture and relevant issues in the region and to give directions to the Centre’s future programmes. Secondly, it aimed to make the document more concise and clear in its structure as well as in the text. Since, as a matter of fact, a large part of the former strategic plan was found to be still valid and usable, some chapters were retained in original form or with minor changes, while major revisions were made in the chapters “Agricultural Development in the Region” and “Future Directions of the Programme”.

I heartily hope that this revised strategic plan will guide the CGPRT Centre in its future programme activities for the development of CGPRT crops in the Asia and the Pacific region towards the 21st century.

With many thanks to the GB, to the TAC and to the Centre’s staff for their serious discussion and earnest cooperation.

March 1, 1998

Haruo Inagaki
Director
CGPRT Centre

I. AGRICULTURAL DEVELOPMENT IN THE REGION

Economic and agricultural growth in the 1980s - 1990s

1. Change continues in the current decade of the late 1980s and the 1990s in the Asia and Pacific region. Changes have occurred in the general socio-political outlook of the Asian states and in the pattern of economic growth. Intra- and extra-regional trade has grown, and expanding financial markets are connecting the Asian economy. The currency shocks which started in 1997 underline that the Asian economies are exposed to uncertainty at least in the short run. The role of the state in exchange rate control and exchange rate movement has decreased somewhat in this process.
2. The role of agriculture in economic growth has also changed with the decrease in the proportion of GDP it generates. In the 1970s and 1980s when the value of the cereals made up substantial proportions of GDP, productivity growth in cereals provided the broad rural development avenue. Currently, services, trade and industry have become the dynamic growth sectors. However, this does not mean that there are no dynamic sub-sectors left in agriculture. In general one can observe that most countries follow the same growth path; following on the cereal industry, many specific industries and sub-sectors such as poultry and fishery, the feed industry, the fresh produce market and the starches, vegetable oils, rubber and fibers all provide dynamic elements. The broad scope of agricultural industry shows the large number of important linkages between industry and agriculture.
3. This means that, with general economic growth, the inherent diversity in agriculture leads to a complex set of avenues of development. Of the CGPRT crops, horticultural produce and feed and food crops continue to be important, and have become more prominent as avenues of development which reach deep into the rural economies. The role of agriculture as an avenue of rural development is almost completely determined by the market forces prevalent in the specific sub-sectors. There is still substantial intra-regional variation in the intensity of market forces in the many sub-sectors of agriculture. Major determining factors are the degree of urbanization and the density and expansion of infrastructure and communications. Consequently, agriculture, together with industry and trade, will continue to be among the most important players in the rural economies of Asia.
4. However, avenues for rural development are not limited to agriculture; migrant labour, remittances, services and construction are especially important in rural areas. In most countries of Asia, the major rural in-flow of cash is generated by migrant labour. In general rural people have become less dependent on agriculture, and more on employment in the services and construction sectors. Nevertheless, agriculture remains by far the biggest rural employer.

5. A very important development, which took place largely unnoticed in the late 1980s and the 1990s, concerns a long term shift in demand for agricultural products. Contrary to the view that under conditions of economic growth processed produce will become progressively important, it turns out that the consumption of fresh produce in fact has remained constant throughout Asia, and in most countries is in a long term process of expansion. This observation simply underlines that the diversity in consumption in agriculture is such that one has to refrain from using a viewpoint that recognizes only a single sub-sector as a dynamic source of growth and income expansion.

6. Whilst there are many changes taking place in Asian agriculture, there are also many elements which remain stable. Growth in productivity is still far from exhausted; the recipe of irrigation, improved varieties and fertilizers still applies in many areas. In general, and at a most fundamental level, it should be noted that the bio-physical determinants of agriculture - climate and soils - are still the main decisive factors in what is possible in given areas. In recent years attention to susceptibility of agriculture to drought is increasing. The improvements in infrastructure stress that the bio-physical factors are becoming even more important for local development. Attention to environmental issues has expanded in Asia and the Pacific, and it has become clear that land use - the one essential characteristic of agriculture - is a major issue.

7. 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 rural economy, justified this central policy focus. While this policy concern will in all likelihood continue unabated, it is not certain that the actual tools for intervention - improved seeds, fertilizers, credits, floor and ceiling prices, controlled imports and exports - can continue to be used as in the decades of the green revolution. The growing linkage between the agricultural sector and the rest of the economy is increasingly leading to distinct regional and intra-regional division of labour in the Asia and Pacific region.

Consumption and production of CGPRT crops

Consumption

8. Recent studies show sharp contrasts among the countries in Asia in consumption patterns and trends of foodstuffs. This change is attributed to an increase of real income throughout Asia until 1997 with largely sustained high growth. One can divide the consumption of agricultural goods into four major forms: fresh food, processed food, animal feed and industrial use. Structural change in agriculture is signified by changing trends in these categories. Even though real income has supposedly increased steadily, one can not discern dramatic breaks in the trends of the basic categories of agricultural products. In particular the trends in processed animal feed did not live up to the expectations of decades ago, which were possibly implicitly based on an overestimation of consumer preference for meat. If there is something like an Asian consumption pattern, one would qualify it as being low in meat, moderate in vegetable proteins, high in carbohydrates and high in fresh produce.

9. In most South East Asian countries consumption of fresh produce (vegetables and fruits) is around 70 - 110 kg per year, compared to the consumption of cereals which ranges from 110 to 170 kg per year. In China the consumption of fresh produce is quite high at around 110 kg per capita per year, in comparison to consumption of grains and grain equivalents, estimated at around 100 kg in urban areas and 265 kg in rural areas. In India and Pakistan consumption of fresh produce is rather low at around 30 kg per year, while consumption of milk and dairy products reaches around 60 to 90 kg per capita per year. Consumption trends for cereals are largely flat or slightly negative; trends are also negative in the consumption of fresh produce, especially in the high volume consuming countries. Meat consumption is around 60 kg per year in Thailand; in other developing countries in Asia, it is in a positive trend at levels of around 20 kg. It is lower in the dairy producing and consuming countries. Urban consumers absorb markedly higher quantities of meat than rural consumers. The current changes in consumption indicate a shift to higher value and quality produce in the higher income groups. This process takes place particularly in the groups of fresh produce, meats and to some extent also cereals.

10. Even though it is clear that increasing income and urban growth influence dynamic patterns in demand structure, the aggregate stability underlines that income growth is slow and that it affects urban and rural areas differently. This emphasizes the continuing importance of income growth and spatial differences in income. One can distinguish three consumption patterns of carbohydrates: rice, wheat and noodles. Noodles and wheat tend to be more popular in the temperate zones in Asia, while consumption of rice dominates in the tropical parts of Asia. There are many signs that a mixture containing all three forms of carbohydrate consumption is becoming popular among the more affluent urban consumers. One could even speak of an overall trend towards a homogenous starchy food consumption pattern throughout Asia.

11. At the regional level one can discern very specific patterns of consumption. In arid zones as well as in mountainous regions throughout Asia, coarse grains - maize, sorghum etc. - are of vital importance as sources of food and feed. In the island countries of the Pacific, root crops, especially taro and yam are the basic foodstuff. Rice and wheat are the major items in the tropical and temperate plains, while sweet potato and other root crops dominate in the tropical mountain areas.

12. The still scarce regional studies on nutrition show a clear relationship between local income and consumption patterns, and, as expected, the use of local food and feedstuffs. An important aspect is the seasonal adaptation of the consumption pattern. This pattern has rarely been charted, and is quite important in the more isolated and poorer areas of Asia.

Production

13. Although many changes are taking place in Asia, there is remarkably little change in the actual production mix and the composition of the diet in rural areas. 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.

14. Food legumes are very important in South Asia, although all countries remain net importers, except Myanmar, which has emerged with Australia as the major exporter in the region. Myanmar has recently become the main pulse exporter in Asia north of the equator, while Australia is the main Asian exporter in the south, underlining the importance of seasonality of supply, and interseasonality in structuring competitive advantage. Among pulses, soybean, mungbean and groundnut are of significance, although in South Asia many genotypes (chickpea, pigeon pea, black and green gram) are important. China, India, Indonesia, Thailand, Vietnam and the Republic of Korea are large producers and consumers of soybean.

15. 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 a staple food crop of primary importance in China, Vietnam, Papua New Guinea, and in the archipelagoes and the Pacific countries. Taro, arrowroot and canna are of significance in Southeast Asia. Sweet potato and taro are of importance in the Pacific, Southeast Asia and East Asia.

16. In the sub-regions, a number of important shifts took place in the period 1990 - 1995 in comparison with the period 1981-1989 (Table 1). In general, cereal production growth rate decreased in East Asia. Loss of area to urban sprawl and stable instead of growing productivity are the major factors. Soybean maintained fairly high growth, especially in South Asia. Growth in cassava production was recorded in South Asia. The 1980s were the years of yield-led production growth; the 1990s are the years of stagnating growth in production in the major crops. This does not mean that no potential for yield improvement exists in the major crops; there are still improvements possible in the tail end of the period of productivity growth. Moreover, and possibly just as important as the earlier productivity growth, substantial improvements are now occurring through shifts in crops towards higher value produce. The cooler areas in Asia in particular have shown their natural comparative advantage in the production of temperate crops, such as potato, carrots, onions, cabbage and leeks. There is mounting evidence that the medium and high altitude areas in countries with high economic growth participated fully in the growth, and that earlier relative marginalization has been effectively countered by the increasing demand for fresh produce.

Table 1. Estimated growth in production of major food crops by region (%), 1981-1989 and 1990-1995

	South Asia		Southeast Asia		East Asia		Pacific		Asia & Pacific	
	1981-1989	1990-1995	1981-1989	1990-1995	1981-1989	1990-1995	1981-1989	1990-1995	1981-1989	1990-1995
Rice	29.5	5.6	34.6	18.9	25.0	-4.1	15.0	31.5	28.5	4.4
Wheat	59.9	24.8	152.7	19.4	64.8	3.3		10.6	62.7	11.9
Maize	19.0	7.8	53.0	10.2	25.6	12.9	-44.4	6.2	28.3	12.1
Soybean	280.3	89.5	161.7	13.7	29.5	19.0		-55.8	51.7	28.3
Cassava	-22.9	17.8	34.3	9.7	4.4	8.9	-23.3	-0.5	23.4	5.9

CGPRT crops and development

17. Current developments show that agriculture in Asia, taken at the national level, does indeed diversify with economic growth. The process of diversification has a very distinct pattern. One can distinguish in the tropical zone of Asia and the Pacific:

- (i) rice based lowland
- (ii) rice/CGPRT based upland
- (iii) CGPRT based lowland
- (iv) CGPRT/livestock based upland
- (v) horticulture/CGPRT cooler medium altitude land
- (vi) horticulture/CGPRT high altitude agriculture
- (vii) livestock/CGPRT based alpine agriculture

18. These categories basically follow temperature and major crop groups. CGPRT crops play a role in all zones, often, but not necessarily in conjunction with livestock. Horticultural production would seem to give the major impetus towards local change, while CGPRT monocropping for feed is another.

19. On the aggregate there are signs though that the process of diversification is actually rather slow. This has important consequences and implications for the role of the wide group of CGPRT crops in development in terms of potential for productivity growth and crop shifts.

20. In the decades of broad investment in irrigation, CGPRT crops were often grown as the last crop, taking up residual moisture. This pattern still exists, although there are signs that the extent of monocropping is increasing. In virtually all countries in Asia, and especially in continental rainfed Asia, one can observe completely commercialized CGPRT cropping sequences, as well as multi-cropping of cereals.

21. CGPRT crops continue to be sources of income for farmers in upland or more marginal areas, where CGPRT crops are usually dominant. 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 practiced. 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. Recent studies confirm that crop shifts are necessary for farmers to maintain their land and labour productivity. The substitutability of CGPRT crops offers many possibilities, in mixed horticultural and food/feed cropping and in food/feed and livestock farming. Stagnation in cropping patterns is usually associated with isolation and marginalization of areas.

Environment and marginalization

22. 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 in this respect in marginal areas.

Diversification as an economic current and as a policy direction

23. 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 may increasingly lag behind those in other sectors, creating problems of equity.

Processing and employment

24. 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 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.

Markets and marketing

25. 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. For 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 Vietnam is currently marketed, either as raw produce or in processed form. 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 other sectors of the economy, e.g. linkage with agro-industries. Since nearly the entire post-harvest process is conducted by the private sector including processing industries, food manufacturers, wholesalers and 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. The intensifying trade in agricultural produce will create a growing need for quality indicators and international agreements on these and certification. Some controls will be necessary.

Policy

26. It has become clear that the role of the private sector is indispensable in development, though the role of the state continues to be quite large. The current situation in policy setting shows a multi-layered picture. In most if not all countries, national as well as regional policy is in operation, covering production, marketing, pricing and other fields. The role of local government is coming more into the limelight in recent years, but there is yet no clarity on what it may achieve. This question is becoming more urgent with the increasing pressure to liberalize trade in general, which will include agricultural products. There is still reluctance on the part of the state to abandon its major policy of price controls on the major crops. It cannot however be assumed that a simple repetition of the earlier and successful formula can be applied to the many crops coming into high growth. On the other hand, the very nature of agricultural production - its use of land and natural resources - requires some type of coordination of the production and consumption chain.

27. There are many signs that a regional approach is needed in conjunction with the age old commodity approach in research and development.

A paradigm towards the year 2000 and beyond

28. By the late 1990s one can say that a new development paradigm has emerged 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) Linkage between agriculture and industry

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 and equitable growth

Sustainable growth in agriculture - growth linked to equitable income distribution and stable ecosystems - has drawn increasing attention.

(iii) Dynamic demand shifts

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.

(iv) Market oriented policies

There is general trend towards market-oriented policies, deregulation and decline in state intervention in agriculture.

29. 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 strongly linked to the wider economy. 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 CGPRT 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.

II. FUTURE DIRECTIONS OF THE PROGRAMME

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

31. The future directions of the Centre's programme are drawn from the context of the broad paradigm: linkage between agriculture and industry, sustainable growth and equitable income distribution, diversifying demand and market oriented policy. 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 research activities.

Strategic choices

32. The major strategic choice - the Centre's mission - being a given, further specification is needed in subject matter terms, thematic terms and in an operational manner; i.e. in terms of task orientation of partner agencies and actual practice. The following paragraphs provide classification.

33. The following themes have been selected:

- Theme 1: Consumption and production**
- Theme 2: Market development**
- Theme 3: Sustainable agriculture and resource management**
- Theme 4: Socio-economic policy analysis**
- Theme 5: Rural development and poverty alleviation**

34. These themes take into account the major features of the paradigm and the current situation of CGPRT crops. The themes overlap; they are not discrete domains but rather clusters of technically and economically related issues. The following paragraphs give objectives and backgrounds of the themes.

Theme 1: Consumption and production

35. *Objective:* to identify trends at national, regional and sub-sectoral levels in efficiency of factor use, production and demand, opportunities for improvements through productivity increase, improved farm management and crop shifts.

This theme focuses on spatial and temporal trends in production, productivity and land use. Zonation, bio-physically and socio-economically, provides a major analytical tool, in addition to the statistics from national and international sources.

Theme 2: Market development

36. *Objective:* to identify opportunities for improved market efficiency and potential for industrial innovation and improvement of processing and market technology and distribution.

This theme focuses on both fresh and processed produce and on industries, technology and the financial support sector. It may be possible to link studies under this theme to biophysical and socio-economic zones, in order to strengthen generalization. Competition policy, quantity and quality control and certification are part of this theme. These elements already play an important role in agriculture in Asia, and it is expected that this role will expand.

Theme 3: Sustainable agriculture and resource management

37. *Objective:* to operationalize the concept of sustainable agriculture and resource management and identify economic opportunity and directions of market formation in resource use.

This theme brings together biophysical and socio-economic issues, and focuses on natural resources such as land and water, and human resources. Under this theme, environmental issues, climatic variation and change can be addressed. Also the formation of factor markets can be addressed under this theme.

Theme 4: Socio-economic policy analysis

38. *Objective:* to monitor current policy trends and identify areas where socio-economic research in a bio-physical context can contribute to improvement of policy.

Socio-economic problems are a continuing characteristic in rural areas on the way to development. Government policy will continue to play an important role in agriculture in Asia; there are currently signals which point policy into different directions, namely, towards less and towards more involvement. Environmental problems and resource problems point towards more involvement, while trade liberalization seems to push government towards less involvement. In addition, there are sharp differences in the spatial application of policies, which are connected with the role of national and regional government. To a large extent, this is reflected by the present trend towards regionalization of agricultural research and development. These issues, and a judicious balance, will be the focus of this theme.

Theme 5: Rural development and poverty alleviation

39. *Objective:* to identify opportunities for improvement in rural income and welfare through development avenues provided by CGPRT crops and connected industries and services.

CGPRT crops are of paramount importance in isolated marginal areas and therefore offer avenues of development. Productivity increases, combination with livestock and post harvest activities are quite important. In this respect, the following issues can be addressed under this theme: infrastructure, welfare, gender, poverty, risk, etc. Also institutional issues dealing with property and credit may find the place in this theme.

Human Resources Development (HRD) activities

40. The HRD activities will be structured along the Centre's themes and are closely coordinated with the HRD activities of both national and international networks and agencies. The Centres HRD programme starts from the real needs in the national institutional infrastructure. In the years 1990 up to 1998 the programme successfully integrated management and information handling in its activities, filling a need which is not addressed by other regional or national agencies. In this period the programme expanded its predominantly regional and thematical focus towards in-country and management activities. It is expected that both types of activities will continue to be of importance. The HRD programme is a precursor of the currently important drive towards regional development and regional planning and analysis, and has incorporated since its inception geographical information with the actual datasets involved. It is expected that the regional focus and the actual use of geo-referenced datasets will strengthen the HRD programme. The activities will include three major lines:

- (i) management training for agricultural services,
- (ii) dissemination of the results of the Centre's research projects, identifying and prioritizing of R&D activities of the Centre's partners; and,
- (iii) transfer of planning and research approaches and methods.

41. There is a continuous and increasing need for short-term intensive training in management for researchers, policy planners, extension workers and other people involved in the biophysical, agro-economic and socio-economic aspects of CGPRT crop development. These needs are addressed by the three main fields of HRD activities. While applications will fall into the broad themes, the actual methods to be included in the HRD programme will be:

- (i) task, programme and project management;
- (ii) integrated database management;
- (iii) spatial analysis, biophysical and; socio-economic zonation;
- (iv) seasonal modeling, forecasts;

- (v) statistical analysis; and
- (vi) business and farm analysis.

42. The possibilities for efficient data analysis and handling on personal computer hold great promise for greater efficiency and task and programme performance in agricultural services and public administration. The focus of the HRD programme concerns improved planning, research capacity and capability, and enhanced computer skills of staff of national agricultural research institutions and planning agencies. Attention will be paid to data handling and the generation of readily usable data, including geo- and time-referenced data. Ultimately the HRD programme orientation seeks to minimize costs and time for government agencies. Operations approaches will be part of the material.

Information services

43. The information services will focus on provision of data and information regarding CGPRT crop development to national research institutes, planning and other agencies in the region. The Centre's database contains geo- and time-referenced data on a large number of basic indicators, covering all major CGPRT crops and markets. This database goes back to the 1960s/70s, and thus offers an eagle's eye overview of Asia, as well as a detailed mosaic of spatial and temporal variability of production and biophysical determinants. This database offers immense possibilities to support major research on climate and agriculture, long term policy impact, and, more important in the short run, operations research and area production forecasts.

44. 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.

III. HISTORY OF THE CGPRT CENTRE, 1981-1997

Establishment of the Centre

45. 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.

46. Based on a feasibility study for 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.

47. The thirty-third session of the Commission, held in April 1977, adopted resolution 174 (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 that the Executive Secretary took the necessary steps for the establishment of such a centre. Annex I gives the full text of this resolution.

48. 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.

49. 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

50. 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".*

51. 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"*.

52. 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

53. The Centre has a Governing Board consisting of representatives from the host country and elected from members and associate members of ESCAP (Annex III). 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 Annexes IV and V.

54. 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".

55. 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\$ 1.2 - 1.3 million.

56. The major financial resources have come from voluntary annual contributions from the member countries of ESCAP, which have been channeled 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

57. Initially, the Centre emphasized the establishment of a co-operative research network for research activities and it 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.

58. 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.

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

60. Studies on marketing, processing and utilization/demand 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.

61. Research activities have been gradually prioritized to respond 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.

62. 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 was proposed and is 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.

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

64. 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.

65. Since 1988, a new direction for the Centre's programme has been sought. The Governing Board and the 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.

66. 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.

The Medium-Term Plan, 1988 to 1991

67. 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 former strategic plan.

68. The plan focused on four groups of topics - production systems; demand, consumption and utilization; markets, prices and trade; 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 and utilization	pulses maize potato cassava	soybean groundnut maize tubers	soybean maize roots and tubers	tubers
markets, prices and trade	pulses maize	selected commodities	selected commodities	tubers
policy, social issues	pulses maize	selected commodities		selected crops

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

69. 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 aimed 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.

70. 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."*

71. 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 towards 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 identity"*. 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.

Activities during 1992-1997

72. In 1992 the CGPRT Centre developed a strategic plan for its future activities. The plan identified a new paradigm for agricultural development in the region based on "the increasing linkage between agriculture and other factors and the need for adjustment of the agricultural sector to general economic growth". The plan identified five themes for the Centre's future activities:

- (i) market development and post-harvest processing*
- (ii) changing demand and production systems*
- (iii) sustainable agriculture and resource management*
- (iv) agricultural diversification and poverty alleviation*
- (v) regional co-operation and policy analysis*

73. In principle, the Centre's programme followed the strategic plan and consisted of activities undertaken jointly with the co-operation and collaboration of the National Agricultural Research Systems (NARS) which could include national policy and planning agencies, universities, private sector organizations and International Agricultural Research Centres (IARCs).

74. With the approval of the strategic plan by the Governing Board in January 1993, the Centre's programme was restructured in line with the directions indicated in the strategic plan. Programmes and projects were identified and formulated along the five themes and placed for

funding with potential donors as appropriate. In translating the strategic plan and its five themes into a workplan, the Board agreed to discuss an annual working plan with a time horizon of three years. To this effect, a medium-term plan --which was a rolling plan updated annually -- covering the period of 1994-1996 was prepared and submitted for consideration of the Governing Board.

75. For the period of 1992-1997, training activities of the Centre addressed the following subjects:

- (i) Socio-economic support for agronomic research such as cropping/farming systems research and post-harvest technology,
- (ii) Socio-economic methods and approaches relating to sustainable agricultural development including resource management,
- (iii) Database management and applications,
- (iv) Policy formulation and related subjects such as scenario definition, projections, resource allocation, sector and sub-sector planning and modeling.

76. The Centre continued publication and documentation activities to better serve a wide range of users in CGPRT crop development. Five publications were issued in 1993, some 2,500 copies of publications of the Centre and its cooperating international and regional research institutes were distributed and the Centre's quarterly newsletter was produced regularly.

77. The Centre continued to maintain cooperative relations with various United Nations bodies and specialized agencies and other international and regional institutions. They included FAO, International Potato Centre (CIP), International Centre for Tropical Agriculture (CIAT), research and development centres affiliated with the Consultative Group of International Agricultural Research (CGIAR), and national institutions such as Centre de Cooperation Internationale de Recherche Agronomique pour Development (CIRAD) of France, Japan International Research Centre for Agricultural Science (JIRCAS) and Central Research Institute for Food Crops (CRIFCI), Center for Agricultural Socio-Economic Research (CASER) and Bogor Agricultural University (IPB) in Indonesia.

78. The informal consultative meeting of the Centre held in March 1994 in Jakarta resulted in positive outcomes. Several countries announced increases and commencement of contributions to the Centre at the fiftieth session of the Commission.

79. In 1995 the Centre underwent an external audit by the UN Board of External Auditors. The audit covered the following major areas:

- (i) Accounts and financial reporting: audit on Project Trust Funds,
- (ii) Purchase of equipment,
- (iii) Office equipment property management: renovation of the building and non-expendable property,

- (iv) Staffing: consultants and consultancy services,
- (v) Internal audit.

80. Regarding project management, the audit recommended that the Centre should evolve a procedure to periodically review and evaluate the impact of its activities on the target group. It was also recommended that the management should revise the reporting procedure to facilitate project monitoring and corrective actions through the semi-annual progress report.

81. The audit recommended that the Centre better manage the Project Trust Funds to enable proper expenditure review, monitoring and control. Better management of purchase of equipment and property was also recommended.

82. In mid-1996, an informal meeting on strengthening the institutional capacity of the CGPRT Centre was held in Bangkok. The meeting was attended by the traditional member countries of the Centre: France, Indonesia, Japan, the Netherlands, and Sri Lanka and it focused on the Centre's activities, staffing and financial conditions, and management. The meeting produced positive suggestions which enabled the Centre to improve its management and activities.

83. Due to rapid change of socio-economic conditions of the Asia and Pacific region, the role of agriculture has also changed. This situation led the Centre to initiate action for revising the current "Strategic Plan for the CGPRT Centre in the 1990's and Beyond". The revision was attempted principally to rationalize the future directions of programme activities to meet current demands and movements in agricultural development in the region. Simplification of the chapter structure was also considered. The revision is to be completed in March 1998 under a new title "Strategic Plan for the CGPRT Centre towards the 21st Century".

84. The revised strategic plan presents five themes for the Centre's activities:

- (i) Consumption and production**
- (ii) Market development**
- (iii) Sustainable agriculture and resource management**
- (iv) Socio-economic policy analysis**
- (v) Rural development and poverty alleviation**

85. The Centre took into account, during the period of 1992-1997, issues on economic growth and change, regional trade and market conditions. The research and development projects emphasized trade liberalization and inter regional market of CGPRT crops as well as agricultural and economic sustainability.

86. In line with the suggestion given by the Governing Board, the Centre is preparing for its impact evaluation. The impact evaluation primarily aims to evaluate the Centre's coordination function through a review of the individual programme activities in the past, to ascertain

demand for its services, and to collect advice for future programmes and improvement and development of the Centre. In late March 1998, the materials for impact evaluation of the Centre's activities are to be sent to the reviewers and evaluators through representatives of the traditional partner countries of the Centre. The materials consist of a record of research and development activities, lists of human resources development activities and publications and database catalogues. The inquiries will be completed in 1998.

IV. MANAGEMENT OF THE CGPRT CENTRE

Partners

87. The Centre's task is to work on "solving food problems, increasing employment opportunities, achieving better income distribution and a balanced diet as well as accelerating close linkages to the livestock sector and other industries" through co-operation and partnership with national research and development institutes, and other agencies in members and associate members of ESCAP (Annex VI).

88. The principal partners of the Centre are national agricultural research institutes involved in CGPRT crop development, particularly in socio-economic and related aspects; national policy and planning agencies involved in formulation of policies relating to CGPRT crops and to farmers growing these crops; and education and extension institutes, the private sector, and farmers or people related to CGPRT crop development.

89. The network with the partners is important for effective and efficient implementation of the Centre's programmes. A collaborative network has developed in conjunction with the implementation of research and development projects and human resources development projects over the past 15 years. This network has served to identify subjects for research and users of information generated by the Centre and to select participants for regional meetings and training courses arranged by the Centre. The Centre will maintain and strengthen its networking function to respond to needs on a timely basis.

Programme activities

90. The Centre's programme activities are divided into two programmes, i.e. the research and development programme (R&D) and the human resources development and information services programme (HRD/IS). The two programmes are complementary.

91. The R&D programme had been structured along the directions indicated in the former strategic plan "Strategic Plan for the CGPRT Centre in the 1990's and Beyond" and will be structured hereafter along those in the revised "Strategic Plan for the CGPRT Centre towards the 21st Century".

92. The strategic plan identifies the following five major themes for R&D activities:

- (i) Consumption and production;
- (ii) Market development;
- (iii) Sustainable agriculture and resource management;

- (iv) Socio-economic policy analysis;
- (v) Rural development and poverty alleviation.

These themes are inter-related and mutually complementary; they indicate the general direction of the Centre's R&D programmes and serve as guides for identifying and formulating projects.

93. The Centre's research projects are undertaken in collaboration with partner institutes of member countries. The Centre's staff work together with national researchers, policy planners and, as required, with other officials and university staff. The extent to which national staff are involved in different steps of project formulation and implementation varies by project. In view of the catalytic role of the Centre in the collaborative process, a number of projects have been implemented by national teams or experts while the Centre's staff are involved in setting up the workplan, coordination among country teams, development and exploratory application of methods and approaches, preparation of integrated project reports, and organization of regional workshops for wider dissemination of project findings. The Centre takes the responsibility of identification and formulation of projects in consultation with partners, and the placing of proposals to ESCAP for approval and to potential governments for funding (Annexes VII, VIII and IX).

94. The Centre's research and development projects should have regional or sub-regional dimensions and perspectives. This does not necessarily mean that projects are implemented by all countries in a sub-region or in the whole region. Due to resource limitation, most projects are implemented only in selected countries, often in representative areas. The results obtained from these areas or cases are then discussed, interpreted, and disseminated to all the countries in the sub-region and region.

95. The selection of participating countries and research subjects needs to match the priorities and programmes of individual countries. This is achieved at the project identification and formulation stages through close contact, communication and dialogue with the Centre's partner institutes. Review and planning meetings are instrumental to adhere to this operational requirement.

96. The Centre basically puts its priority coverage on the CGPRT crops. At the same time, the Centre, in its programme activities, deals with other crops such as horticultural crops, feed crops, industrial crops and other food crops as well. This treatment is often necessary and appropriate in the case of national and regional studies on integrated agriculture.

97. The HRD activities address the following three areas:

- (i) Transfer of approaches and methods of research and policy formulation in the field of CGPRT crop development;
- (ii) Dissemination of the results of the Centre's research projects; and
- (iii) Identification and prioritization of R&D activities and derived human resource development needs of the Centre's partners.

The operational scope is structured along the five themes as indicated in the strategic plan for the CGPRT Centre.

98. The following modalities can be used in implementing the activities;

- Regional meetings/seminars
- Short-term working seminars/courses at the Centre
- In-country short-term courses/on-the-job training
- On-the-job- training in R&D projects of the Centre

Working seminars of around two weeks, together with focused in-country training, have become the major activity in recent years, and this will remain so in the future. The working seminars and in-country training aim to transfer a defined set of skills at various levels of organizational hierarchy (Annexes X and XI).

99. The information services provide support for external users and for users within the Centre. This objective has been translated into three main activities: publication, documentation and statistical information. Publication and documentation have been on-going activities of the Centre since 1985 and they target agriculturists engaged in research and education. The compilation and distribution of statistical databases have been implemented since 1987. The activity was carried out since 1991 in the project "National and Regional Statistical Database System for CGPRT Crops (RSDS)", which was completed in 1997. Under this project, statistical databases for seven countries were published and thematic digitized maps were compiled (Annex XII).

Management

100. Under the general direction and guidance of the Governing Board and the Technical Advisory Committee, which have met regularly once a year, the director of the Centre is responsible for managing and operating the Centre to implement its programme activities.

101. A large part of the personnel issues and financial transactions of the Centre are undertaken by the ESCAP secretariat, while a number of clearance functions, such as authorization of official travel, proposal for hiring consultants and individual contractors, preparation of contracts and purchase of equipment and materials, were decentralized and transferred to the Centre in 1994. Substantive backstopping functions of the Centre, such as reviewing project documentation, monitoring project implementation, arranging meetings of the Governing Board and the Technical Advisory Committee, are provided by the Rural and Urban Development Division (RUDD) of the secretariat.

102. The Centre has been receiving support and assistance for financial transactions and administrative matters from the United Nations Development Programme (UNDP) and other services including information from other UN agencies. Support and assistance have also been rendered to the Centre by agencies of the Government of Indonesia, such as the Agency for Agricultural Research and Development (AARD), The Central Research Institute for Food Crops (CRIFC), the International Cooperation Bureau of the Ministry of Agriculture, and the Directorate of Multilateral Economic Cooperation of the Ministry of Foreign Affairs.

Staffing

103. Each of the experts is assigned specific tasks relating to projects and activities; the staff size needs to match both the workload and qualifications required for implementing projects and activities.

104. The total staff size has been around 20 in recent years. The functional distribution of the staff is given in Annex XIII and XIV. The number of professional staff in these 17 years is shown in Annex XV. Both a substantial increase and stable provision of the professional staff are crucial in the future. In addition, a sequential staff arrangement and continuity of leading staff are essential for sustainable activities and management of the Centre. It was found that the average length of service of individual staff was 3.0 years in an analysis of the sequence of the Centre's professional staff during the 15 years, with some exceptions.

105. Regarding the support staff, the current size of both administrative and project-related staff is considered to be the minimum in terms of effective operation of the Centre. The employment modality of all support staff was changed from individual contracts to the fixed term appointment according to the Staff Rules and Regulations of the United Nations effective 1 August 1994. Salary scales and working conditions of the U.N. General Services Staff have been applied to them. They can also join the medical insurance and pension schemes of the United Nations.

Finance

106. Virtually all financial resources of the Centre were provided by the voluntary contributions of the ESCAP members in 1997, under categories (i) and (ii) as stated in the Article 24 of the Centre's Status (Annex XVI). A small portion of the programme resources was provided by the UNDP through the ESCAP secretariat for a short term project.

107. The Centre's financial resources are divided into two categories. The first category is called "institutional support resources". The resources are contributed by the supporting member countries in cash form (Annex XVII) and used in principle for the management and general operations of the Centre other than project activities. The other category of financial resources is called "programme resources", which are allocated to designated individual projects and activities. Corresponding financial accounts are set up for specific projects and the funds of an account must be spent exclusively on the particular project.

108. The estimated annual expenditures are shown in Annex XVIII and those divided into institutional support resources and programme resources are shown in Table 3 below for the five years from 1994 to 1998. As a whole, both resources increased appreciably in 1995 and have been maintained at about the same level.

Table 3. Overall size of the basic financial resources: 1994 - 1998

	(US\$)				
	1994	1995	1996	1997	1998 ^{d)}
Institutional support resources	342,550 ^{a)}	394,407 ^{a)}	396,470 ^{a)}	422,706 ^{b)}	422,706 ^{b)}
Programme resources ^{c)}	638,116	898,858	814,998	752,584	745,426
Total	980,666	1,293,265	1,211,468	1,175,290	1,168,132

a) Based on the paid contribution.

b) Based on the pledges for 1997.

c) Allocated fund and viable carry-over.

d) Estimated on the basis of available information as of 1 March 1998.

109. The institutional support resources are further divided into two accounts, namely the Joint Contribution (US\$ account) and the Indonesian Contribution (Rp account). The expenditure items included in the Joint Contribution are: (i) regular expenditures: director's emoluments, consultant fees, official travel costs, fees for medical insurance and pension of support staff, costs for TAC and GB meetings, purchase of office equipment and books, telephone charges (overseas), programme support costs (PSC); and (ii) occasional expenditures: director's induction and repatriation costs and home leave costs, and charges forward and subsidy or supplement to programme activities.

110. The Indonesian Contribution is a non-convertible rupiah fund used for emoluments of support staff, utility costs (electricity, water, etc.), telephone charges (domestic), purchase of office equipment, maintenance costs (premises, cars, equipment, etc.) and miscellaneous.

111. The programme resources are divided according to their features into cash and other forms, mostly in-kind. The cash form largely corresponds to technical assistance trust funds. Commitments, allocations and uses of these funds, except those committed to multi-year projects, are made available on an annual basis and their control and administration are carried out by the ESCAP secretariat.

112. In addition to the above funds, the Centre's programme resources are supported by other forms of contributions, mostly in-kind. Provision of experts on a non-reimbursable loan (NRL) basis is the major part of in-kind programme contribution. Other types of resources include such items as operational costs related to NRL experts, provision of other experts such as visiting researchers and back-stopping missions, and the in-country supporting cost of national experts, workshops and training courses, all directly relating to specific projects. Annual resources for the two programme activities are given in Table 4.

Table 4. Annual resources for the two programmes

		1994	1995	1996	1997	1998 ^{a)}
in cash						
Research and Development (R&D)	US\$	380.958	532,233	471.766	411,216	392,719
	%	61.3	59.2	57.9	54.6	52.7
Human Resources Development and Information Services (HRD/IS)	US\$	47.158	366,625	343,232	341,368	352,707
	%	38.7	40.8	42.1	45.4	47.3
Total	US\$	638,116	898,858	814,998	752,584	745,426
	%	100	100	100	100	100
in-kind (man-months)						
R&D		61* 53**	81* 53**	78* 53**	87.5* 40**	69.5* 41.5**
HRD/IS		18**	12**	4**	14**	30**
Total		61* 71**	81* 65**	78* 57**	87.5* 54**	69.5* 71.5**

a) Plan for 1998.

* Expert services provided by collaborative agencies in participating countries.

** Expert services provided by governments or institutes in the form of non-reimbursable loans or others.

ANNEXES

- I. Commission Resolution 174 (XXXIII)
- II. Commission Resolution 220 (XXXVIII)
- III. Members and Associate Members of the Economic and Social Commission for Asia and the Pacific (ESCAP)
- IV. Members of the Governing Board of the CGPRT Centre
- V. Members of the Technical Advisory Committee of the CGPRT Centre
- VI. Involvement of Countries in the Activities of the CGPRT Centre in 1997
- VII. CGPRT Research Projects 1985-1997
- VIII. Past Collaborative Activities of the Centre with FAO and International Agricultural Research Centres
- IX. Current Research and Development Projects
- X. Current Human Resources Development Projects
- XI. CGPRT Workshops, Seminars and Training Courses
- XII. CGPRT Publications
- XIII. Staffing in 1997 and Plan for 1998
- XIV. Organization Chart of the CGPRT Centre for 1998
- XV. Number of Professional Staff
- XVI. Countries and Organizations Providing Financial Support to the Centre's Activities
- XVII. Institutional Support Resources - Contributions from Members, 1990-1997
- XVIII. Estimated Annual Expenditures

COMMISSION RESOLUTION 174 (XXXIII)

174 (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 Co-ordination 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 co-operation with the Food and Agriculture Organization of the United Nations, and the Consultative Group on International Agricultural Research and other appropriate organizations. To mobilize 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.

COMMISSION RESOLUTION 220 (XXXVIII)

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

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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 and 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.

ANNEX II (continued)

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.

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 by the Secretary-General of the United Nations after consultation with the Board for a term of three years. The first Director may be appointed by the Secretary-General of the United Nations after consultation with the Board for a term of three years. The first Director may be appointed by the Secretary-General before the establishment of the Board for a period up to two years.

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 "TAC"), consisting of eminent scientists and experts directly connected with technical aspects, representing various fields of agricultural research. The maximum number of members of TAC shall be 12. The members of 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 TAC. Representatives of other national and international research institutes and agencies concerned shall be invited to participate, as necessary.

23. 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. TAC shall meet at least once a year and shall be convened by the Director of the Centre.
25. The Chairman of TAC shall be elected by TAC itself.

Resources of the Centre

26. The financial resources of the Centre shall be composed of:
 - (a) The 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;
 - (e) Other funds or moneys 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 AND ASSOCIATE MEMBERS OF THE ECONOMIC AND
SOCIAL COMMISSION FOR ASIA AND THE PACIFIC
(ESCAP)^{a)}**

Members

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

Philippines
 Russian Federation
 Samoa
 Singapore
 Solomon Islands
 Sri Lanka
 Tajikistan
 Thailand
 Tonga
 Turkey
 Turkmenistan
 Tuvalu
 United Kingdom
 United States of America
 Uzbekistan
 Vanuatu
 Viet Nam

Associate Members

American Samoa
 Cook Islands
 French Polynesia
 Guam
 Hong Kong, China
 Macau
 New Caledonia
 Niue
 Northern Mariana Islands

^{a)} As of March 1998

MEMBERS OF THE GOVERNING BOARD OF THE CGPRT CENTRE

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

For the period of 1992-1994

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

For the period of 1994-1996

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

For the period of 1997-1999

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

MEMBERS OF THE TECHNICAL ADVISORY COMMITTEE OF THE CGPRT CENTRE

As of December 1992

Dr. Jean C.L. Chataigner (France)
 Dr. J. Brian Hardaker (Australia)
 Dr. Ibrahim Manwan (Indonesia)
 Dr. Boonjit Titapiwatanakun (Thailand)
 Dr. Mohd. Yusof Hashim (Malaysia)
 Dr. Kunio Takase (Japan)
 Dr. Moh. Hossain Mondal (Bangladesh)
 Dr. W.G. Wolters (the Netherlands)

Ex-members

Dr. Soetatwo Hadiwigeno (Indonesia)
 Dr. Md. Ekramul Ahsan (Bangladesh)
 Dr. J.S. Sharma (India)
 Dr. Yujiro Hayami (Japan)
 Dr. J.L. Dillon (Australia)
 Dr. Tongroj Onchan (Thailand)
 Dr. Aida L. Librero (the Philippines)
 Dr. Mokhtar Tamin (Malaysia)
 Dr. D.B.W.M. van Dusseldorp (the Netherlands)
 Dr. Faisal Kasryno (Indonesia)
 Dr. Almiro Blumenschein (Brazil)
 Dr. Douglas D. Hedley (Canada)
 Dr. Dong Hi Kim (Rep. of Korea)
 Dr. Chaiwat Konjing (Thailand)
 Dr. Matthias von Oppen (Germany)

As of December 1997

Dr. Boonjit Titapiwatanakun (Thailand)
 Dr. Euan Fleming (Australia)
 Prof. Masao Kikuchi (Japan)
 Dr. Claude Aubert (France)
 Dr. Raghunanth D. Ghodake (Papua New Guinea)
 Dr. A. Mudzakkir Fagi (Indonesia)
 Dr. Dong Phil Lee (Rep. of Korea)
 Dr. Arie Kuyvenhoven (the Netherlands)

Ex-members

Dr. Jean C.L. Chataigner
 Dr. J. Brian Hardaker
 Dr. Ibrahim Manwan
 Dr. Mohd. Yusof Hashim
 Dr. Kunio Takase
 Dr. M. Hossain Mondal
 Dr. W.G. Wolters
 Dr. S.M. Elias (Bangladesh)

**INVOLVEMENT OF COUNTRIES IN THE ACTIVITIES OF THE
CGPRT CENTRE IN 1997**

Countries	Governing Board	Technical Advisory Committee	Provision of resource person and consultant	Collaborative research	Participation in seminar, workshop, and training course	Information services
Australia	-	+	+	-	-	+
Bangladesh	+	-	-	-	+	+
Brunei Darussalam	-	-	-	-	-	+
China	-	-	-	+	-	+
Fiji	-	-	-	-	-	+
France	+	+	+	-	-	+
India	+	-	-	+	+	+
Indonesia	+	+	+	+	+	+
Japan	+	+	+	+	-	+
Lao PDR	-	-	-	-	+	+
Malaysia	-*	-	-	+	+	+
Myanmar	+	-	-	+	+	+
Nepal	-	-	-	-	+	+
Netherlands	-	+	+	-	-	+
Pakistan	-	-	-	+	+	+
Papua New Guinea	+	+	-	-	-	+
Philippines	+	-	-	+	+	+
Republic of Korea	+	+	+	+	-	+
Singapore	-	-	-	-	-	+
Sri Lanka	+	-	-	+	+	+
Thailand	+	+	+	+	+	+
Vietnam	-	-	-	+	+	+

* Observer

CGPRT RESEARCH PROJECTS 1985-1997

Start	Finish	Code	Title	Country(ies)	Crops	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
1986	1986	FRENCHPAC	Review of French publication and studies on CGPRT crops in the Pacific	South Pacific	CGPRT	Production/ demand utilization
1986	1986	FSR-1	Farming systems research relating to CGPRT crops (Phase I): Inventory survey on farming system research relating to CGPRT crops in selected countries in Asia	Bangladesh, Indonesia, Nepal, Philippines, Sri Lanka and Thailand	CGPRT	Production
1986	1987	RAS/82/002	Socio-economic studies on food legumes and coarse grains in the tropics and sub-tropics of Asia (RAS/82/002): Analysis of constraints to increase production and productivity of selected coarse grains and food legumes (Phase II of RAS/82/002)	Bangladesh, India, Indonesia, Nepal, Philippines, Sri Lanka and Thailand	Grains, legumes	Production, marketing
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, CGPRT	Consumption/ demand Utilization
1986	1988	FEEDSUP	Survey of the utilization of CGPRT crops as livestock feed in Asia	Asia	CGPRT	Demand
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	1988	SOBS/SFSI II/SOFDI	Socio-economic studies on soybean based farming systems in selected countries: Socio-economic study on soybean-based farming system at district level in Indonesia	Indonesia	Soybean	Marketing
1987	1989	FAGI	Farmers group activities in upland areas of Indonesia	Indonesia	CGPRT	Farmers group
1987	1989	INDPOT	Study on supply and demand situation of potatoes in Indonesia markets	Indonesia	Potato	Production

ANNEX VII (continued)

Start	Finish	Code	Title	Country(ies)	Crops	Domain
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	1990	MASP-II	Study on marketing systems and price policies of selected CGPRT crops in selected countries of Asia	Indonesia, Thailand	CGPRT	Marketing policy
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	1990	VIPO	Sweet potato in Vietnam: Production and marketing	Vietnam	Sweet potato	Production/ marketing
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	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
1992	1995	WIDUP	Women's role in upland farming development in Asia	Indonesia, Philippines, Sri Lanka	CGPRT	Rural employment
1992	1995	DIVFAM	Farmer's strategies regarding agricultural diversification	Indonesia, Thailand	CGPRT	Rural employment
1994	1995	SUASA-1	Sustainable upland agriculture in Southeast Asia - a study of constraints and prospects for its development	Indonesia, Philippines, Thailand	CGPRT	Production strategy
1994	1997	MPUPA	Market prospect of upland crop products and policy analysis in selected countries in Asia	China, India, Indonesia, Pakistan, Philippines, Thailand, Vitenam	CGPRT and other secondary crops	Production, consumption, marketing

ANNEX VII (continued)

Start	Finish	Code	Title	Country(ies)	Crops	Domain
1994	1994	SOYSIN	Synthesis of soybean studies	Countries in Asia	Soybean	General
1994	1997	DIVAPOL	Agricultural diversification and food crop trade: Their implication for agricultural policies in Southeast Asia	Indonesia, Thailand, Vietnam	CGPRT	Trading, policy
1996	1996	PULSES	Pulses trade study	India, Myanmar, Pakistan, Sri Lanka	Pigeon-pea, lentils	Trading
1996	1998	SUASA-2	Economic assessment of selected resources management techniques in marginal upland agriculture	China, India	CGPRT	Management, production
1996	1999	TradeLib	Effects of trade liberalization on agriculture in selected Asian countries with special focus on CGPRT crops	China, India, Indonesia, Japan, Malaysia, Pakistan, Philippines, Thailand, Rep. of Korea, Vietnam	CGPRT	Trading (regional and International)
(Being proposed)						
1998	2000	ECOPOP	Economic and policy analysis for the ecoregional approach in Southeast Asia	Indonesia, Philippines, Thailand, Vietnam	CGPRT	Policy impact on agricultural development
1998	1999	SUASA-3	Human resources development to enhance sustainability of upland agriculture in selected Southeast Asian countries	Indonesia, Philippines, Thailand	CGPRT	Farm management, rural development

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

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

^{a)} TCDC for Research and Development of Food legumes and Coarse Grains in the Tropics and Sub-tropics of Asia.

^{b)} Regional Co-operative Programme for Improvement of Food Legumes and Coarse Grains in Asia.

^{c)} Refer full-title in the text and Annexes VII and X.

CURRENT RESEARCH AND DEVELOPMENT PROJECTS*

Funding Agent	1992	1993	1994	1995	1996	1997	1998	1999
Government of Netherlands	—————WIDUP—————							
CIRAD	—————DIVFAM—————							
	—————DIVAPOL—————							
	—————ECOPOL**—————							
Government of Japan	SUASA-1							
	—————MPUPA—————							
	—————TradeLib—————							
Government of Rep. of Korea	—————SUASA-2—————							
	—————SUASA-3**—————							
ESCAP/UNDP	PULSES							

* Refer full-title in the text and Annexes VII and X

** Being proposed

CURRENT HUMAN RESOURCES DEVELOPMENT PROJECTS*

Funding Government	Year								
	1992	1993	1994	1995	1996	1997	1998	1999	
<i>The Netherlands</i>			RSDS						
		CRTA							
		HRD/IS							
				SERP					
				STAC					
								TERAP	
<i>Japan</i>			TMRS						
				TSMA					
				Hands-on 1					
				Hands-on 2					
								Hands-on 3	
								Hands-on 4	

Countries involved	Project												
	RSDS	CRTA	HRD/IS	SERP	STAC	TERAP	TMRS	T SMA	Hands-on 1	Hands-on 2	Hands-on 3	Hands-on 4	
Bangladesh	X	X	X	X	X	X	X	X		X			
Cambodia			X		X	X			X				
China		X	X	X			X	X					
Lao PDR	X	X	X	X	X	X	X		X				
India		X	X		X	X	X				X		
Indonesia	X	X	X	X	X	X	X	X					
Rep. of Korea		X	X				X						
Malaysia		X	X	X	X			X					
Myanmar	X	X	X	X	X		X	X					
Nepal	X	X	X		X	X	X			X			
Pakistan	X	X	X	X	X	X	X	X			X		
Papua New Guinea						X							
The Philippines	X	X	X	X	X	X	X	X				X	
Sri Lanka	X	X	X	X	X	X	X	X				X	
Thailand	X	X	X	X	X	X	X	X					
Vietnam	X		X	X	X	X		X	X				

- * RSDS: Strengthening of the national and regional statistical database system of CGPRT crops.
 CRTA: Agricultural economist: strengthening the CGPRT Centre's research and training activities.
 HRD/IS: Strengthening the human resources development and information services programme of the CGPRT Centre.
 SERP: Training in socio-economic research and policy planning in CGPRT crops.
 STAC: Strengthening training activities of the CGPRT Centre.
 TERAP: Dissemination of tools for eco-regional analysis and planning for the development of CGPRT crops in Asian Monsoon Agriculture (being proposed).
 TMRS: Training course in market research and survey relating CGPRT crops development.
 TSMA: Training in socio-economic methodologies for agriculture research, with specific reference to the upland agriculture.
 Hands-on: Hands-on training in database management and application relating to CGPRT crop development.

CGPRT WORKSHOPS, SEMINARS AND TRAINING COURSES^a

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.
17. **Seminar: Changes in Food Consumption, Its Effect on Production and Use of Upland Crops in Asia.** October 1992. Kandy, Sri Lanka.
18. **Seminar: Upland Agriculture in Asia.** April 1993. Bogor, Indonesia.
19. **Workshop: Marketing and Processing of Food Legumes and Coarse Grains: Their Effect on Expanding Rural Employment in Asia.** May 1993. Serdang, Malaysia.
20. **In-country Training for the Staff of Ministry of Agriculture, Myanmar in Computer Skills and Use Including Regional Statistical Database System (RSDS).** June - July 1993. Yangon, Myanmar.
21. **Study Tour for Economic Assistance, Department of Agriculture (DOA) - Sri Lanka. (Diversified Agriculture Research Project/DARP).** June - July 1993. Bogor, Indonesia.
22. **Training Course on Market Surveys Techniques.** February 1994. Bogor, Indonesia.
23. **The Fourth Regional Statistical Database System.** October 1994. Bogor, Indonesia.
24. **Regional Workshop on Women's Role in Upland Farming Development.** January - February 1995. Chiang Mai, Thailand. CGPRT Monograph series No. 32.
25. **Training Course: Socio-economic Methodologies for Agricultural Research with Specific Reference to Upland Agriculture.** May 1995. Bogor, Indonesia.
26. **Working Seminar on Land Use and Crop Modeling for Agricultural Planning.** September 1995. Bogor, Indonesia.
27. **Workshop on Integrated Seed Systems for Low-input Agriculture.** October 1995. Malang, Indonesia. CGPRT Monograph series No. 31.

28. **In-country Working Seminars on Agricultural Planning, Land Use and Integrated Database Management.** March 1996. Vientiane, Lao PDR and Hanoi, Vietnam.
29. **Regional Working Seminar on Quantifying Sustainability.** September 1996. Bogor, Indonesia.
30. **In-country Working Seminars on Operations Research and Database Management.** December 1996. Kathmandu, Nepal and Dhaka, Bangladesh.
31. **Market Prospects for Upland Crops in Asia.** February 1997. Bogor, Indonesia. CGPRT Monograph series No. 34.
32. **A Tool for Measuring Policy Impact in Rural Areas: the Multilevel Analysis Tool for Agriculture (MATA).** March 1997. Bangkok, Thailand.
33. **Regional Working Seminar on Database Establishment and Management Implications.** September 1997. Bogor, Indonesia.
34. **In-country Working Seminars on Integrated Database Management.** November 1997. New Delhi, India and Islamabad, Pakistan.

CGPRT PUBLICATIONS

CGPRT MONOGRAPH SERIES

Series No.	Title and Year
1.	Research Implications of Expanded Production of Selected Upland Crops in Tropical Asia. 1985.
2.	Cassava in Asia: Its Potential and Research Development Needs. 1986.
3.	Soybean Commodity System in Indonesia. 1988.
4.	Socio-Economic Research on Food Legumes and Coarse Grains: Methodological Issues. 1986.
5.	Soybean Development in India. 1986.
6.	Coarse Grains and Pulses in Nepal: Role and Prospects. 1987.
7.	Adoption of Soybean in Lupao, Nueva Ecija, the Philippines. 1987.
8.	Agricultural Marketing and Processing in Upland Java: A Perspective from a Sunda Village. 1987.
9.	CGPRT Crops: Processing and Nutrition. 1987.
10.	Soybean Research and Development in Indonesia. 1987.
11.	Constraints to Production of Pulses in Bangladesh. 1988.
12.	Marketing and Storage of Pulses in Bangladesh. 1988.
13.	Maize Production in Java: Prospects for Improved Farm-Level Production Technology. 1988.
14.	Agriculture, Food and Nutrition in Four South Pacific Archipelagoes: New Caledonia, Vanuatu, French Polynesia, Wallis and Futuna. 1988.
15.	Potential for Pigeonpea in Thailand, Indonesia and Burma. 1988.
16.	Maize Production in Sri Lanka. 1988.

ANNEX XII (continued)

Series No.	Title and Year
17.	Sistim Komoditas Kedelai di Indonesia. 1988.
18.	Socio-Economic Constraints to Pulses Production in Nepal. 1988.
19.	Agricultural Marketing in a Transmigration Area in Sumatra. 1989.
20.	Sensitivity of Soybean Production to Price Changes: A Case Study in East Java. 1989.
21.	Potato in Indonesia: Prospects for Medium Altitude Production. 1989.
22.	Upland Economy in Java: A Perspective of a Soybean-based Farming System. 1990.
23.	Role of Secondary Crops in Employment Generation: A Study in a Rain-fed Lowland Village in Java. 1990.
24.	Sweet Potato in Vietnam: Production and Markets. 1991.
25.	Marketing Innovation for Vegetables: Conditions of Diversification in Upland Farming. 1991.
26.	Rural Employment and Small-scale Rural Food Processing in Asia. 1991.
27.	Local Soybean Economics and Government Policies in Thailand and Indonesia. 1992.
28.	Changes in Food Consumption in Asia: Effects on Production and Use of Upland Crops. 1994.
29.	Marketing and Processing of Food Legumes and Coarse Grains: Effects on Rural Employment in Asia. 1994.
30.	Upland Agriculture in Asia. 1994.
31.	Farmers and Traders in a Changing Maize Market in East Java. 1996.
32.	Integrating Seed Systems for Annual Food Crops: Proceedings of a Workshop Held in Malang, Indonesia, October 24-27, 1995. 1995.
33.	Women in Upland Agriculture in Asia: Proceedings of a Workshop, held in Chiang Mai, Thailand, January 31-February 3, 1995. 1996.
34.	Market Prospects for Upland Crops in Asia: Proceedings of a Workshop Held in Bogor, Indonesia, February 25-28, 1997. 1997.

WORKING PAPER SERIES

Series No.	Title and Year
1.	Quality and Price Determinants of Secondary Crops in Indonesia. 1989.
2.	Demand for Corn, Cassava and Soybean in Human Consumption: A Case Study of Java, Indonesia. 1989.
3.	Bibliography on Soybean Research in Indonesia 1978-1988. 1989.
4.	CGPRT Crops in Indonesia: 1960-1990. A Statistical profile. 1991.
5.	Shifts and Development in Trade for Various Food Crops in East Asia, 1960-1984. 1990.
6.	Production and Marketing of Mungbean in Thailand: The Role of Private Sector. 1990.
7.	Potato and Sweet Potato in Bangladesh. 1990.
8.	Bibliography of Socio-Economic Aspects of Secondary Crops. 1990.
9.	CGPRT Crops in Thailand: A Statistical profile, 1960-1990. 1991.
10.	Asian Agriculture: A Sourcebook. 1991.
11.	Agricultural Diversification in Indonesia: Price Responses and Linkages in the Food Crop Sector, 1969-1988; and Outlook to 2000. 1991.
12.	CGPRT Crops in the Philippines: A Statistical Profile 1960-1990. 1992.
13.	Comparative Advantage of Soybean in an upland Area of West Java: Mathematical Programming Approach. 1991.
14.	CGPRT Crops in Vietnam: 1976-1990. A Statistical Profile. 1993.
15.	20 Years of Horticulture in Indonesia: The Vegetable Subsector. 1994.
16.	CGPRT Crops in Sri Lanka: A Statistical Profile. 1995
17.	CGPRT Crops in Pakistan: A Statistical Profile. 1996

ANNEX XII (continued)

Series No.	Title and Year
18.	CGPRT Crops in Indonesia: A Statistical Profile. 1996
19.	Gender Issues in Upland Agriculture. 1996.
20.	Market Prospects for Upland Crops in India. 1996.
21.	Market Prospects for Upland Crops in Thailand. 1996.
22.	Market Prospects for Upland Crops in the Philippines. 1997
23.	Market Prospects for Upland Crops in Pakistan. 1997.
24.	Market Prospects for Upland Crops in China. 1997.
25.	Market Prospects for Upland Crops in Indonesia. 1997.
26.	Market Prospects for Upland Crops in Vietnam. 1997.
27.	Market Prospects for Pulses in South Asia: International and Domestic Trade. 1997
28.	Integrated Report of the Project “Market Prospects of Upland Crop Products and Policy Analysis in Selected Asian Countries.” 1997.
29.	Looking Into Agricultural Statistics: Experiences from Asia and the Pacific. 1997.

PROJECT REPORTS

- Soybean Yield Gap Analysis in Java. 1988.
- Analisis Kesenjangan Hasil Kedelai di Java. 1989
- Preliminary Survey on Soybean Yield Gap Analysis in Thailand. 1989.
- Priorities for Soybean Development in Asia. 1992.
- Increasing Soybean Production in Asia. 1992.

OTHERS

- Plant Resources of South-East Asia I: Pulses. 1990.
- Regional Statistical Database System for CGPRT Crops: First Regional Workshop. Report on a Workshop held in Bogor, Indonesia. 18-20 September 1989. 1990
- Marketing of Rice, Cassava and Coffee in Lampung, Indonesia. 1991.
- Socio-Economic Research for Agriculture: With Reference to Management. 1996.
- Sustainable Upland Agriculture in Southeast Asia: A Study of Constraints and Prospects for its Development. 1996.
- A Tool for Measuring Policy Impact in Rural Areas: The Multilevel Analysis Tool for Agriculture (MATA). 1997.

***PALAWIJA** NEWS (CGPRT CENTRE NEWSLETTER) SERIES**

Year	Volume/No.	Main Subject/Topic
1984	I/1	<ul style="list-style-type: none"> • Cassava potential in Asia
1985	II/1	<ul style="list-style-type: none"> • Technology transfer and micro level policy research • Cooperation for Socio-economic studies • Palawija crops in human nutrition
	II/2	<ul style="list-style-type: none"> • Household gardens • Biomass for biogas generation
1986	III/1	<ul style="list-style-type: none"> • Economic and social survey of Asia and the Pacific • Indonesian soybean commodity system • Gasification of biomass
	III/2	<ul style="list-style-type: none"> • Coarse grains • On-Farm Research (OFR) in Malang • Future CGPRT crops
1987	IV/1	<ul style="list-style-type: none"> • Agricultural surplus • Variability in farming systems
	IV/2	<ul style="list-style-type: none"> • Economic evaluation of N-fertilizer trial • Cassava's current situation

* Secondary crops (CGPRT crops) in Indonesian language

ANNEX XII (continued)

Year	Volume/No.	Main Subject/Topic
1988	V/1	<ul style="list-style-type: none"> • Concepts in comparative advantage analysis • Research resource allocation issues for Asian agriculture • Agricultural development and issues for research • Aspect of agricultural diversification
	V/2	<ul style="list-style-type: none"> • Maize production • Sweet potato production, variety selection and development • Cultural factors in the diets of the Southwest Pacific
	V/3	<ul style="list-style-type: none"> • Soybean yield gap analysis project • Socio-economic studies on soybean-based farming systems at the village level in Indonesia
	V/4	<ul style="list-style-type: none"> • Marketing environment of CGPRT crops • Role of CGPRT crops in developing economics
1989	VI/1	<ul style="list-style-type: none"> • Private sector participation in agricultural development • Utilization research: putting the consumer first
	VI/2	<ul style="list-style-type: none"> • Comparative advantage analysis of soybean • Soybean yield gap analysis • Market development in Java
	VI/3	<ul style="list-style-type: none"> • Opportunities for grain legumes in Nusa Tenggara Timur • Cassava goes commercial
	VI/4	<ul style="list-style-type: none"> • Sweet potato in South Vietnam
1990	VII/1	<ul style="list-style-type: none"> • Korea, food legumes and coarse grain in an industrial economy • Evaluation of the agricultural and rural economy of Chiang Mai variety
	VII/2	<ul style="list-style-type: none"> • Non-edible applications of soybean oil • Price forecasting of palawija crops • Thailand vegetable oil situation and prospects
	VII/3	<ul style="list-style-type: none"> • Sweet potato in Central Vietnam • Market channels, quality incentive and contract harvesting: the case of maize and groundnut
	VII/4	<ul style="list-style-type: none"> • Thal, the home of chickpea in Pakistan • Sweet potato in Northern Vietnam

Year	Volume/No.	Main Subject/Topic
1991	VIII/1	<ul style="list-style-type: none"> • Fertilizing taro in the lowlands of Papua New Guinea • A note on supply and demand modeling
	VIII/2	<ul style="list-style-type: none"> • Potentials and problems of income and employment generation through smallscale processing of CGPRT crops • Sustainable agriculture in Papua New Guinea •
	VIII/3	<ul style="list-style-type: none"> • Current status and potential of cassava products in Asia • Technology adoption in Indonesia
	VIII/4	<ul style="list-style-type: none"> • Soybean utilization, processing and production policy in Indonesia
1992	IX/1	<ul style="list-style-type: none"> • Arrowroot production in the Marshall-Island • Soybean productivity in Indonesia
	IX/2	<ul style="list-style-type: none"> • The comparative advantage of maize and poultry feed production • Productivity and production of CGPRT crops in Myanmar
	IX/3	<ul style="list-style-type: none"> • Comparative advantage analysis of cereal crops: practice in China
	IX/4	<ul style="list-style-type: none"> • Soybean production in South Vietnam • Soybean yield gap in Sri Lanka
1993	X/1	<ul style="list-style-type: none"> • D 180 soybean in the north of Vietnam • On-farm adaptive research for food legumes and coarse grains
	X/2	<ul style="list-style-type: none"> • Short and long-term measures for agricultural development in Myanmar • Food consumption patterns in urban areas and consequences for local food processing in Africa: a contribution to methodological questions
	X/3	<ul style="list-style-type: none"> • Diversification and commercialization of upland agriculture: the Malaysian experience • CGPRT crop-based small scale processing industries: their impact on employment and income generation in rural areas of Korea

ANNEX XII (continued)

Year	Volume/No.	Main Subject/Topic
	X/4	<ul style="list-style-type: none"> • Changes in food consumption and basic needs coverages in rural Indonesia • Changes in food consumption in Sri Lanka with special reference to livestock products and selected subsidiary food crops
1994	XI/1	<ul style="list-style-type: none"> • Labour employment and income generation in Maize production, marketing and processing • Processing and marketing of fresh soybean milk
	XI/2	<ul style="list-style-type: none"> • The integrated management of groundnut pests • Field conservation on the use of sex phenomenon to control <i>Spodoptera litura</i> in soybean
	XI/3	<ul style="list-style-type: none"> • Research and extension impacts on food crops production in Indonesia • Policies and priorities for farming systems research in Indonesia
	XI/4	<ul style="list-style-type: none"> • Agriculture information management systems in India • Statistical database systems of CGPRT crops in Nepal
1995	XII/1	<ul style="list-style-type: none"> • Thai cassava starch industry: current and future utilization • Tripolid cassava for industry
	XII/2	<ul style="list-style-type: none"> • The role of women in upland agriculture: Gender issues raised by case studies in Indonesia, Sri Lanka and the Philippines
	XII/3	<ul style="list-style-type: none"> • Sustainable upland agriculture in South East Asia
	XII/4	<ul style="list-style-type: none"> • Gender roles and attitudes in upland farming systems
1996	XIII/1	<ul style="list-style-type: none"> • Profitability and sustainability of Peri-urban vegetables production systems
	XIII/2	<ul style="list-style-type: none"> • Seed systems for annual food crops • Seed sector development on secondary crops
	XIII/3	<ul style="list-style-type: none"> • Long-term change in dietary patterns and food demand in Asia

Year	Volume/No.	Main Subject/Topic
	XIII/4	<ul style="list-style-type: none"> • Seed quality of secondary food crops • The role of Chinese rural women in the development of agriculture
1997	XIV/1	<ul style="list-style-type: none"> • Market prospect for upland crops in China • Production, consumption and marketing of pulses in Myanmar
	XIV/3	<ul style="list-style-type: none"> • Market prospects for upland crops in Thailand • Domestic demand composition and projections for major upland crops
	XIV/4	<ul style="list-style-type: none"> • Uses and users of agricultural statistics

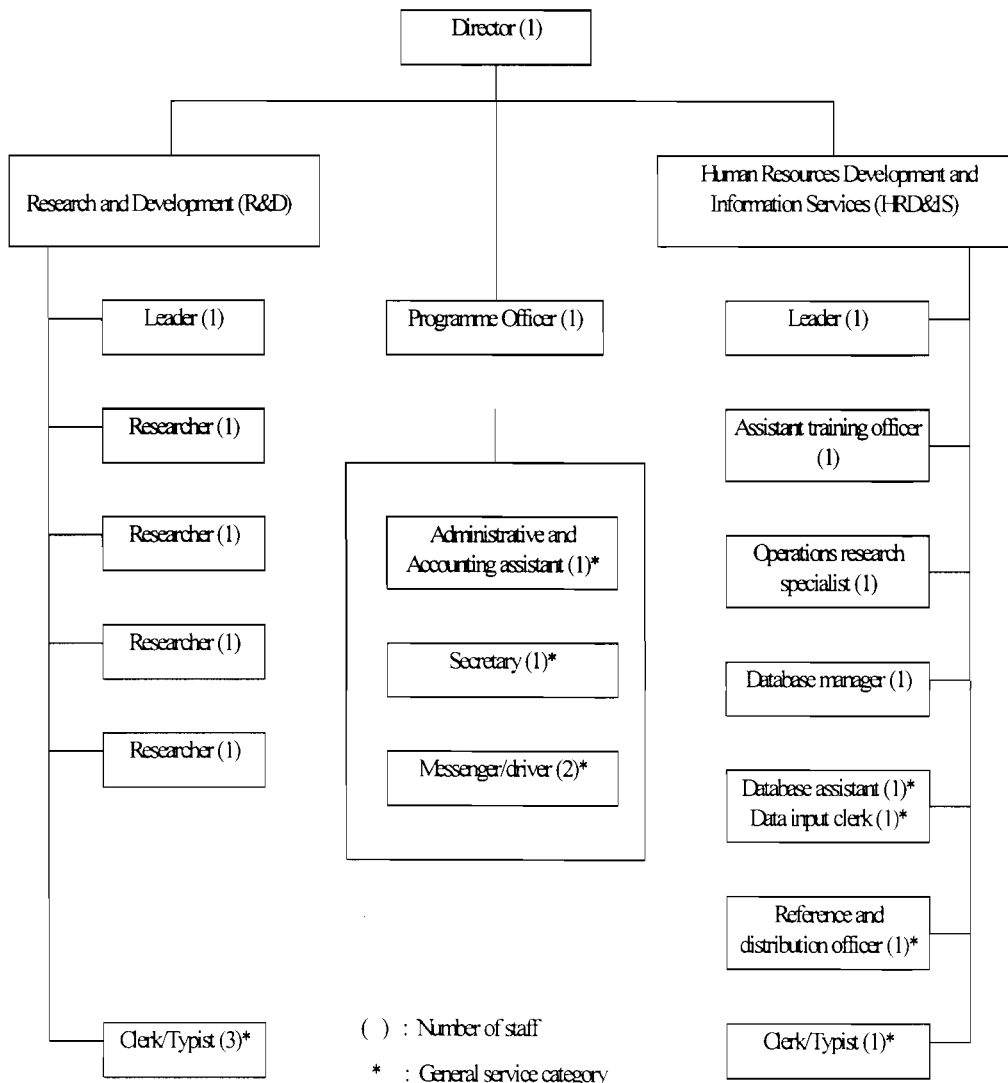
STAFFING IN 1997 AND PLAN FOR 1998

	In position as of 01/12/97	Staffing plan for 1998 ^a
Research and development programme		
Leader	1	1
Programme officer	1	1
Researcher	2	4
Secretary/clerk*	3	3
Subtotal	7	9
Human resources development and information services programme		
Leader	1	1
Assistant training officer	-	1
Operations research specialist	1	1
Database manager	-	1
Database assistant*	2	2
Reference/distribution officer*	1	1
Secretary/clerk*	1	1
Subtotal	6	8
Administration and management		
Director	1	1
Administrative/accounting assistant*	1	1
Secretary*	1	1
Messenger/driver*	2	2
Sub-total	5	5
Total	18	22

* Staff in General Services Category.

a Based on the programme of work for 1998.

ORGANIZATION CHART OF THE CGPRT CENTRE FOR 1998



NUMBER OF PROFESSIONAL STAFF

As of end of year	International staff	National staff	Total
1981	1	-	1
1992	1	-	1
1983	3	-	3
1984	4	-	4
1985	6	-	6
1986	6	-	6
1987	9	-	9
1988	9	-	9
1989	6	2	8
1990	7	2	9
1991	7	2	9
1992	6	4	10
1993	7	1	8
1994	9	1	10
1995	8	1	9
1996	7	1	8
1997	6	1	7

COUNTRIES AND ORGANIZATIONS PROVIDING FINANCIAL SUPPORT TO THE CENTRE'S ACTIVITIES

Until 1991:

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)^{a)}

1992 - 1997:

Institutional support: Bangladesh, India, Indonesia, Japan, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Sri Lanka, Thailand and Vietnam.

Programme support:

Countries: France, Japan, Netherlands, Republic of Korea.

Organizations: FAO, UNDP

^{a)} Through the Food and Agriculture Organization of the United Nations (FAO).

**INSTITUTIONAL SUPPORT RESOURCES -
CONTRIBUTIONS FROM MEMBERS,
1990-1997**

(US\$)

Members	1990	1991	1992	1993	1994	1995	1996	1997
Bangladesh	1,000	1,000	1,000	1,000	1,000	1,000	1,000	(1,000)
India	-	-	-	-	5,000	5,000	10,000	(15,000)
Indonesia ^a	30,000	35,900	44,700	51,311	65,050	120,705*	113,039*	120,817**
Japan	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Myanmar	-	-	1,000	1,000	1,000	1,000	1,000	1,000
Nepal	500	500	500	500	500	500	500	500
Pakistan	-	-	-	-	-	-	5,000	5,000
Papua New Guinea	-	-	-	-	5,000	(5,000)	(10,000)	- ^c
Philippines	26,381 ^b	5,000	5,152	5,165	5,000	5,716	5,716	19,184
Rep. of Korea	15,000	15,000	15,000	15,000	20,000	20,000	20,000	20,000
Sri Lanka	-	-	10,000	10,000	10,000	10,000	10,000	10,000
Thailand	15,000	15,000	15,000	15,000	30,000	30,486	30,215	30,205
Vietnam	-	-	-	1,000	(1,000)	(2,000)	(2,000)	- ^c
Total	287,881	272,400	292,352	299,976	343,550	401,407	408,470	422,706

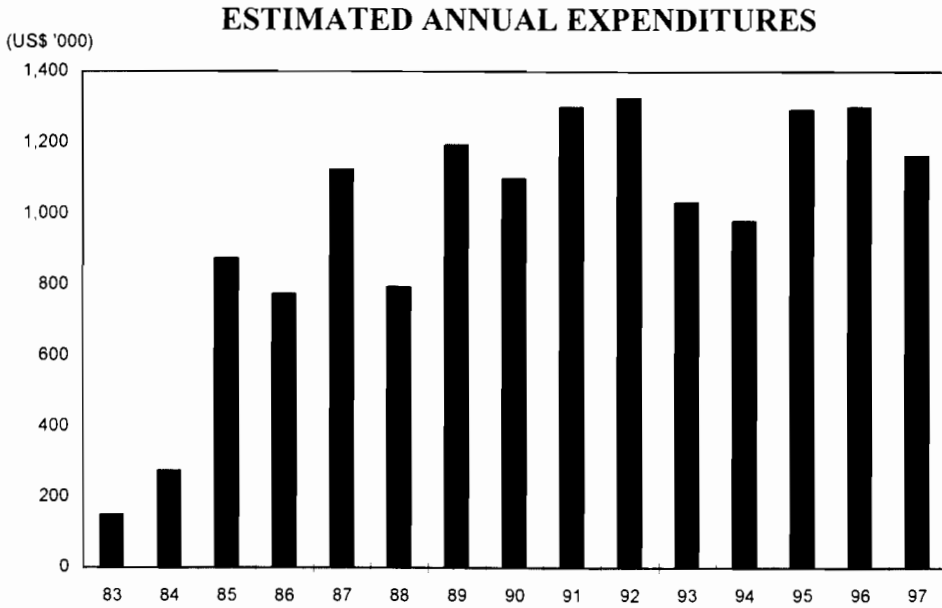
Note: Parenthesis indicates the payment has not been made yet as of 1 March 1998.

^a Until 1990, estimated amounts based on in-kind contribution, and from 1991 onward, cash contribution in local currency converted in US dollars at the time of payment. * The amounts were same as Rp 263,380,000 for both 1995 and 1996.

** The amount is equivalent to Rp. 289,718,000.

^b Represents five years' contribution for 1985 - 1988 and 1990.

^c The status of the pledge has not been confirmed yet.



Note: 83 - 93: in cash + in kind
94 - 97: in cash