



UNDP



ASSISTANCE TO THE DEVELOPMENT OF BARD PROJECT

A project of the Government of the People's Republic of Bangladesh
Sponsored by the United Nations Development Programme

A MASTER PLAN OF SOCIO-ECONOMIC RESEARCH AT BANGLADESH ACADEMY FOR RURAL DEVELOPMENT

658.46
BAT
Q-2

Bangladesh Academy for Rural Development (BARD)

Kotbari, Comilla, Bangladesh



ASSISTANCE TO THE DEVELOPMENT OF BARD PROJECT

A Project of the Government of the People's Republic of Bangladesh
Sponsored by the United Nations Development Programme

A MASTER PLAN OF SOCIO-ECONOMIC RESEARCH AT BANGLADESH ACADEMY FOR RURAL DEVELOPMENT

**Bangladesh Academy for Rural Development (BARD)
Kotbari, Comilla, Bangladesh**

Published by :

The Director General
Bangladesh Academy for Rural Development (BARD)
Kotbari, Comilla - 3503

Tel : (081) 6428, 8406, 6102

July 1993

A3456

658.461

BAT

C-2



Printed at

BARD Computer Centre
BARD, Kotbari, Comilla.

FOREWORD

Bangladesh Academy for Rural Development (BARD), the pioneering institute of its kind in the country and in the South-east Asian region earned name and fame through its innovative actions in conducting training and research and evolving appropriate and innovative models of rural development programmes. After more than three decades of its establishment in 1959 it faced a number of limitations in utilizing its full potential. Such limitations included: lack of adequate facilities for the Faculty members for acquiring higher education and training; lack of a framework for a medium term research activities in conformity with the important contemporary research issues; lack of appropriate technologies and income generating activities for the rural poor especially women for adaptation through action research and finally lack of a good development communication and information system for diffusion of the findings of research, training and action research activities of BARD.

In order to overcome the limitations, the Academy felt the necessity of expert consultancy in the relevant fields and the United Nations Development Programme (UNDP) came forward to assist it by providing a technical assistance through a project called Assistance to the Development of BARD (ADB). Under the aegis of the project, three expatriate and four national Consultants were appointed for a total period of 66 man-months to work in four specific areas. Dr. S. K. Saha from the Centre for Development Studies (CDS), University of Wales, U.K. was appointed as the

Socio-economic Research Consultant-cum-Chief Technical Adviser (CTA) for 16 months. After 10 months of his service when he resigned on personal grounds, he was replaced by Dr. K. C. Alexander, Director(Sociology), National Institute of Rural Development (NIRD), Hyderabad, India for the rest of the period. The Socio-economic Research Master Plan of BARD is the outcome of the exercises of these two expatriate Consultants. Dr. Dibyendu Sen, Director (Extension and Transfer of Technology), NIRD, Hyderabad, India worked for 12 months as the expatriate Consultant on Training and Education. He prepared the Master Plan on Training at BARD. An Action-Research Plan on Specific Areas of Appropriate Technologies and Income Generating Activities for Rural Women was prepared by Mr. A.K.M. Shahjahan and Mr. M. Nurul Huq who worked for 12 and 6 months respectively as National Consultants. A group of three Consultants consisting of expatriate Consultant Mr. S.B. Thakur, from the Centre for Nepal and Asian Studies, Tribhuban University in Nepal, two National Consultants Dr. M.A. Mannan, Director, Rural Development Academy (RDA), Bogra and Mr. Minhajuddin Ahmed from Fisheries Research Institute(FRI), Mymensingh prepared the plan on Upgradation of the Development Communication and Information Units at BARD. They worked for 3, 6 and 12 months respectively.

We appreciate the works of the Consultants and express our sincere thanks to them for their valuable contributions. It is expected that the reports of the Consultants in four specific areas will provide a framework for future activities of the Academy. The outputs of the project have been discussed in

several fora in BARD and outside including the Annual Planning Conference (APC) of BARD held in Comilla on 24-25 July 1993 which helped in the formulation of the Annual Plan of BARD for 1993-94. A separate Management report has been prepared on the basis of the outputs of ADB project to assist BARD in its programmes for next few years. We also express our thanks to UNDP for funding the project and to the Rural Development and Co-operative Division (RD CD) of the Ministry of Local Government, Rural Development and Co-operatives of the Government of Bangladesh for its co-operation. The project was the first nationally executed UNDP assisted project in Bangladesh and we hope the experiences gathered through successful execution of this project by BARD would pave the way for BARD and other national institutions to execute more projects of such nature in the future.

July 1993

Dr. Salehuddin Ahmed
Director General, BARD
and National Project Director,
ADB Project

PREFACE

The Assistance to the Development of BARD (ADB) Project was the first nationally executed UNDP-assisted Project in Bangladesh. Bangladesh Academy for Rural Development (BARD) was selected as the executing agency of the project by the Government of Bangladesh. The four-year project commenced from 15 October 1989 to come to an end on 14 October 1993. As a part of the technical assistance provided to the Academy through the project, three expatriate and four national Consultants were appointed to work for a total of 66 man-months to prepare their consultancy reports on four specific areas. In completing their works, each Consultant was assisted by a two-member team of Policy Counterpart and Action Counterpart who were selected from the BARD Faculty.

It was a pleasure for me to be associated with the project starting from preparation of the project proposal, drafting the PRODOC and finally working as the Deputy National Project Director vis-a-vis Executive Project Director. Though the responsibility was given to me on gratis and in addition to my normal duty, yet it took lot of time and gave me lot of strains during the last four years. The most rewarding part of my job was the association with the expatriate and national Consultants of the project, and the experiences gained through successful execution of the first nationally executed UNDP-assisted project in Bangladesh. I shall consider all my hard work worthwhile if it paves the way for BARD and other national institutes in Bangladesh to execute more and more such projects in the future.

On this opportunity I express my heartfelt thanks and gratitude to all concerned including the Director General of BARD for the role played by them in connection with the implementation of the project.

July 1993

MD. ABDUL QUDDUS
Director (Research), BARD
and Deputy National Project Director
ADB Project

CONTENTS

Phase I

Chapters	Page
1. Introduction	1
1.1. PRODOC Terms of Reference on the Master Plan	1
1.2. End-of-Contract Status (First Phase)	3
2. Theoretical Perspectives on Rural Development	4
2.1. Charting the Terrain	4
2.2. Indigenous Roots of the Concept	4
2.3. Community Development	7
2.4. The Comilla Model and the Integrated Rural Development	10
2.5. Central Place and Growth Pole Theories	12
2.6. World Bank's Rural Development Sector Policy	14
2.7. World Bank's Policy Shifts on Rural Development	20
2.8. Rethinking Rural Development	24
2.9. Creating a Culture of Interdisciplinarity	27
Appendix 2.1.	35
3. The Global Environment	40
3.1. Creating a Capability for Managing a New Generation of Rural Development Projects	40
3.2. What is Structural Adjustment ?	41
3.3. The Prime Issues	42
3.4. Social Impact of Structural Adjustment : How It Worked Elsewhere	43
3.5. Theorising Poverty Alleviation in Structural Adjustment	45

3.6.	Social Dimensions of Adjustment Project	52
3.7.	Structural Adjustment in Bangladesh	54
3.8.	Recommendation for an Initiative	57
4.	BARD as an Agency of Research, Training and Project Implementation/Experimentation	59
4.1.	The Original Mandate	59
4.2.	Akhter Hameed Khan : His Approach and Philosophy and the Building of an Intellectual Culture	60
4.3.	The Later Phase : the Emergence of a Counter-Culture	63
4.4.	The State-of-the-Art Thinking on Action Research	65
4.5.	The New Mandate	69
4.6.	BARD as an Agency of Implementation	70
4.7.	The Research Output	80
5.	Building a Research Network for Rural Development in Bangladesh	86
5.1.	Nature of the Need	86
5.2.	How to Build the Network	87
5.3.	Identification of Institutions	88
5.4.	Screening of CVs by a Committee of Eminent Scholars	91
6.	Priority Subject Areas for a Programme of Action Research on the Socio-Economic Aspects of Rural Development	94
6.1.	A Participative Approach to the Identification of Priority Subject Areas	94
6.2.	Principles of Identification	97
6.3.	List of Priority Subject Areas Identified for a Programme of Action Research on the Socio-Economic Aspects of Rural Development	99

7. Recommendations	102
Reading List	109

Phase II

8. DIMENSIONS AND INDICATORS OF DEVELOPMENT	113
- Economic Dimension	114
- Welfare Dimension	118
- Sociological Dimension	121
- Political Dimension	122
- Holistic Nature of Development	123
- Summary and Conclusion	126
9. THEORIES OF SOCIO-ECONOMIC DEVELOPMENT	129
- Dualistic Theories	129
- Population growth and development	130
- Economic theories	131
- Marxist Theories	135
- Sociopsychological Theories	138
- The Problem of Equity	142
- Importance of Per capita Income	144
- Summary and Conclusion	145
10. RURAL DEVELOPMENT EFFORTS IN BANGLADESH	148
- Increase in Food Production	149
- Development of Water Resources	154
- Reduction in Poverty, Provision of Employment and Equity in Income Distribution	158
- Development of Local Institutions	165
- Human Resource Development	176
- Fertility Reduction	181

- Rural Development Training and Research	182
- Summary and Conclusion	183
11. ROLE OF BARD IN THE IMPLEMENTATION OF DEVELOPMENT PROGRAMMES	188
- Diagnostic Studies of Prevailing conditions	191
- Local Institutions, Local Government, Development Personnel and Leadership	195
- Administration and Local Planning	200
- Development of Special Groups : Women, Youth, Disadvantaged sections	204
- Human Resource Development	206
- Farm Management Studies	210
- Irrigation, Inputs and Credit	213
- Monitoring, Evaluation, Impact, Social Change	213
- Action Research	221
- Summary and Conclusion	231
12. SOCIO-ECONOMIC CHARACTERISTICS OF BANGLADESH	237
- Predominance of Agriculture	237
- Agricultural Credit	241
- Livestock	242
- Non-Farm Sector	243
- Inequality	243
- Employment	245
- Low Human Development	247
- Level of Living	253
- Child Labour	257
- Importance of Agricultural Sector	258
- Problems of Women	261

- Environmental Problem	266
- Sociological and Psychological Characteristics	268
- Political and Administrative Characteristics	271
- Summary and Conclusion	275
13. RURAL DEVELOPMENT PERSPECTIVES	282
- Increasing Population Pressure	282
- Diversification of Cropping	286
- Expansion of Non-Agricultural Sector	289
- Spatial Mobility	292
- Urbanization	293
- Education	294
- Changes in Beliefs and Values	296
- Social Mobility	297
- Perception of Inequality	297
- Administrative Systems	299
- Women's Problems	300
- Social Control	302
- Changing Developmental Ideology	303
- Human Development	305
- Assessment of Training Needs	307
- Summary and Conclusion	307
14. AREAS, THEMES AND TOPICS FOR RESEARCH	316
- Recapitulation	316
- Areas and Themes	321
- Topics for Research	323
- Human Resource Development	323
- Economic Growth	326

- Administration	329
- Evaluation	330
- Rural Institutions	330
- Environment and Disaster Management	331
- Social Characteristics	332
15. RESEARCH METHODOLOGIES AND ANALYSIS PLANS	335
- Human Resource Development	335
- Economic Growth	358
- Administration	369
- Evaluation Studies	375
- Rural Institutions	375
- Social Characteristics	378
16. A Manual of Socio-economic Research Methodology	389
17. Summary of the Report	465
18. REFERENCES	480

INTRODUCTION

1.1. PRODOC Terms of Reference on the Master Plan

The second item of the Chief Technical Adviser's terms of reference, as laid down in the PRODOC, requires him to "assist in the preparation of a master plan for socio-economic research projects and develop the project documents specifying the research methodologies to be used". The summary table of immediate objectives, outputs and activities appearing in pages 16 to 19 of the PRODOC lists this master plan as a major output and provides this qualifying description of its intended specifications: "A detailed and realistic programme for action research on the socio-economic aspects of rural development for implementation by BARD's research staff within the policy guidelines and major emphasis of the national rural development strategy and formulation of a master plan for rural development to be pursued by the Government of Bangladesh". The purpose of producing this output, according to the PRODOC, is to facilitate the achievement of the immediate objective of "upgrading BARD's capability to impart training to an increasing number of Government and non-Government officials at various levels in the socio-economic aspects of rural development". It is interesting to note that the TOR make no specific reference to action research while the summary table sees a "programme for action research" as an important component of "a master plan for rural development". This output is expected to be produced through the performance of a set of four activities which are as follows:

- 1.2.1 Identification of subjects to be researched /investigated, target groups/communities to be covered and research methodologies to be applied and / or tested;
- 1.2.2. Selection of types and numbers of personnel (researchers and support staff) to be involved;
- 1.2.3 Selection of information handling, analysis and interpretation techniques and
- 1.2.4 Selection of means to ensure utilisation of results.

1.2. End-of-Contract Status(First Phase)

It is important to appreciate that the production of a research master plan is an immensely complex process involving a whole series of iterative, interactive and interlocking activities and sub-activities. It is also a participative process involving weaving together of inputs from a large number of people such as policy makers, policy implementers, administrators, managers, planners, academic researchers, NGO executives and, of course, rural people themselves. None of the plan activities listed in the PRODOC can therefore be regarded as one-shot and conclusive, only as indicative markers of an on-going process which will gel into a definitive structure only towards the end of the 16-month consultancy period of the CTA.

This report presents the status of the master plan at the end of the first 10 months of a 16-month period of contract. According to the Work Plan agreed in a tripartite meeting of the representatives of the Ministry of Local Government, Rural Development and Cooperatives, the Bangladesh Academy for Rural Development and the United Nations Development Programme, the draft plan was not due for submission until October 1, 1992 and

the document was than to take another four and a half months in getting finalised. The Chief Technical Adviser who was commissioned to write the master plan, however, gave notice to terminate the contract of work on August 15, 1992, as the Government of the People's Republic of Bangladesh did not agree to make the terms of the contract compatible with those offered in projects executed by the international agencies.

The analyses, suggestions and recommendations presented are of a tentative nature and many of these would need a great deal of more follow-up work to be put into them. It will take about another six months of work to develop this report into an adequately detailed master plan.

THEORETICAL PERSPECTIVES ON RURAL DEVELOPMENT

2.1. Charting the Terrain

The purpose of this chapter is to briefly trace the evolution of those concepts and ideas which together have come to be known as rural development. In order to understand the real nature of the dynamics of rural development, it is important to appreciate that the processes and activities associated with it cannot be situated in any single sector of the economy. In sectoral terms rural development is a lateral process of conceptualisation. It cuts across many sectoral boundaries and recreates composite realities and programmes of action by putting together elements and components taken out of a whole range of differentiated sectors. Space is the principal cementing factor in rural development thinking and practice. When we talk about rural development planning, we are talking about the planning of activities which must hang together in geographical juxtaposition in extensive areas outside the city limits. Rural development, therefore, is essentially area development.

2.2 Indigenous Roots of the Concept

For the people of this subcontinent, the concept and philosophy of rural development is no gift from the West. It is a galaxy of scholars and intellectuals born here who had built up, through their writings and their work, that rich body of knowledge that has now come to be referred to as rural development. Rabindranath Tagore had written his piece called

Polleer Unnati (Rural Development) way back in 1915 followed by a substantive and innovative article on Samobay Neeti (Cooperative Principles) written in two parts in 1918 and 1922. In Bhoomilokkhi (Wealth of Land) written in 1918 he argued for the introduction of technologically improved agricultural practices, in Polli Prokriti (Nature of Rural Life) written in 1928 he repeated the same message with greater emphasis and identified the increasing flow of surpluses from rural to urban areas as a principal cause of rural poverty. In most of his numerous writings on rural development, he continuously put the main emphasis on self-help and local initiative in releasing the creative energies of the rural people for constructive work. "That your welfare should depend on the charity of others is a curse that you really do not want to have" is what he said in a meeting of rural people in 1915. One finds a string of these articles from 1915 to 1940. He also tried to practice what he believed in. On one occasion he offered to brick-line the wells at his own expense if the villagers agreed to dig them at their own initiative. He would travel extensively, visiting parts of his far-flung estate, taking his message of rural development directly to the peasants.

Among the pioneers of rural development practice in the subcontinent, the three names which deserve to be mentioned with a great deal of respect are those of Niaz Muhammad Khan, T.I.M. Nurannabi Chaudhuri and H.S.M. Ishaque, all Indian Civil Service officers working in Bengal in the 1930s and 1940s. Khan was the first to demonstrate the great potential of mobilising

voluntary work in carrying out specific rural development tasks. As the Subdivisional Officer of Brahmanbaria in the 1930s, he effectively used that method in clearing out water-hyacinth from tanks and water bodies and reexcavating a vital drainage channel in the area. Ishaque used the same method in Serajganj in organising a mass literacy campaign which included adult education in night schools, opening a large number of new schools for both boys and girls as well as training camp for teachers. All of this was achieved without any dependence on government funds. Later on, in a book published in 1945, he develops his practical ideas into a well-articulated operational model of rural reconstruction which he defines as "a movement to give the masses a new consciousness, to awaken in them (a) sense of self-help, to educate and organise them in active cooperation and voluntary joint-effort, to create the sense of good citizenship, to build better homes, better villages, in general, to promote the physical, social, moral and material advancement of the rural communities as a whole" (1945,23).

When the provincial government of Bengal created a new department of Rural Reconstruction in 1938, Chaudhury was appointed its first director. The colonial government however did not back up its symbolic move of creating the department by allocation of funds. The elaborate rural development plan that Chaudhury prepared did not receive government approval during the three years he remained in charge. Strapped by shortage of funds and staff and insensitivity of an uncaring colonial government he did what he could. He organised a training camp

for junior government officials at Bishnupur in 24-Parganas (currently in West Bengal, India) in January 1940 for inculcating the skills and attitudes needed for rural development. Later on, he also organised rural development training programmes for non-officials and volunteers (Ishaque : 1945, 12-17). Chaudhury and Ishaque deserve recognition for pioneering the concept of training people for rural development.

2.3 Community Development

The emergence of rural development as a distinctive paradigm can be traced back to diverse sources of theorisation. Among the first of a succession of ideas to catch the imagination of a wide range of thinkers and practitioners was the concept of community development. Ruttan summarises the essence of the idea as "a process which (i) involves the direct participation of people in the solution of their common problems, (ii) employs a democratic process in the joint solutions of community problems and (iii) activates and/or facilitates the transfer of technology to the people of a community for more effective solutions of common problems" (1984, 393). The summary is correct in what it says. What it omits to say is however more significant. The concept assumes a communality of interests among people within a community. It assumes that the landless and the middle peasantry, the powerless and the strongmen and the abandoned women and their polygamous husbands have an identity of interests and shared perceptions of common problems. Shortly after the independence of India and Pakistan from the British in 1947,

community development became the dominant ideology of rural development in both the countries.

India's community development programme was launched on October 2, 1952, in a village called Alipur just outside Delhi. The guiding spirit and the driving force behind the programme was an immigrant from Bangladesh. His name was S.K. Dey. The core principles of the programme were very basic : (i) muscles can do it, (ii) muscles can be trained to do it and (iii) conditions can be created to do it. The programme was perceived as a nationwide movement to consolidate a triple charter of rights for the entire population which included (i) the right to live, (ii) the right to work for a living and (iii) the right to receive what is earned. The two institutional pillars of the movement were democratic decentralisation (panchayati raj) and cooperative organisations (sahakari samaj). The principal strategic elements of the movement were (i) production in agriculture as the top national priority, (ii) promotion of rural industries, (iii) promotion of cooperative institutions for development of the economy, (iv) development of local resources including the utilisation of manpower, (v) optimum utilisation of resources available to decentralised institutions, (vi) assistance to the economically weaker sections of the village community, (vii) progressive dispersal of authority and initiative, both vertically and horizontally, with special emphasis on the role of voluntary organisations, (viii) progressive increase in competence of both officials and non-officials, (ix) understanding and harmony between politicians and government

officials and (x) cohesion and cooperative self-help in the community. By April 1963, the programme had spread to the entire length and breadth of the country. (Dey: 1964).

In Pakistan, community development was sought to be put into practice in the shape of a Village Agricultural and Industrial Development (V-AID) programme which was launched in 1953. This too was meant to be a nationwide movement and was supported by US aid. The Pakistan Academy for Village Development at Comilla owes its origin to the need for training officers and other personnel for administering and managing this programme. In concept and approach the V-AID programme was a re-run of the earlier Rural Reconstruction programme launched in 1938 but quietly discontinued in 1946. The objectives of the new programme were officially stated as follows :

" to solve the problems of the villages by helping the villagers to help themselves individually and as communities. It is an attempt to look at the village as a whole through the eyes of its people and in the light of their vast store of accumulated knowledge and wisdom. It uses the principles of community organisation and development which are based on human experience and thus avoids the mistakes of past efforts at community development. It aims at coordinating the total resources of the Government and the people for a concerted and determined effort to reconstruct village life in Pakistan" (V-AID Administration : 1956, 2-3).

Administratively, V-AID was situated within the Ministry of Economic Affairs and no separate Ministry was created for it. At the Central Government level there was a Chief V-AID Administrator. Each province had a Provincial Director who headed a cadre of officials comprising development officers in charge of blocks and village level workers in charge of groups of

villages. A district advisory committee was created and the District Officer was nominated as its chairman but the established district administrative set up was, in the main, completely by-passed. The programme was able to make only a limited impact on the rural society and economy of Pakistan. The government's interest in it waned after the military coup of October, 7, 1958 and it was finally discontinued in 1961 (Tepper : 1966). A joint Government of Bangladesh/World Bank study of a decade ago had characterised the V-AID programme as "diffused and unfocussed" and also "not successful" (Government of Bangladesh and World Bank : 1981,1)

2.4. The Comilla Model and the Integrated Rural Development

After the demise of the V-AID programme there seemed to exist a planning vacuum in the rural development field in Pakistan. This vacuum was however quickly filled by the innovative ideas of Akhter Hameed Khan in collaboration with the Michigan State University team of experts which worked at Comilla from 1959 onwards. These ideas triggered a set of pioneering projects which came to be known as the Comilla model. ✓ The model had four principal components :

- (i) The Thana Training and Development Centre (TTDC) - to provide a focus for a decentralised and coordinated rural administration at the local level, bringing together a diverse range of local government functionaries of developmental departments under one umbrella.

- (ii) The Rural Works Programme (RWP)- to build the rural physical infrastructure and to create employment opportunities for the rural poor.
- (iii) The Thana Irrigation Plan (TIP)- to coordinate the formation of precooperative groups to ensure sound use of irrigation equipment.
- (iv) The Two-Tier Cooperative System - to organise village-based farmers' cooperatives (Krishak Samabay Somities, KSS) and to federate them into a Thana Central Cooperative Association (TCCA).

Three of these were very quickly taken up by the government for nationwide replication : RWP in 1961-62, TTDC in 1963-64 and TIP in 1967-68. ✓ The model also caught the imagination of the world and became the forerunner of what later came to be known as integrated rural development (IRD). What are the elements that the IRD is supposed to integrate and how, is a question that the literature on the subject has not yet satisfactorily answered.

✓ The promising results of the experimental projects launched in Comilla Kotwali thana encouraged the government to gradually extend these projects, along with other additional components, to the whole of Comilla district (now subdivided in Comilla, Chandpur and Brahmanbaria districts) by 1968 and this extended coverage became known as the Comilla District Integrated Rural Development Programme (CDIRD). In 1970, the Pakistan Government had decided to replicate the IRDP programme nationwide. The war

of liberation delayed the launching of the IRDP in Bangladesh until 1972. ✓

2.5. Central Place and Growth Pole Theories

Two German economic geographers writing in 1940s, Walter Christaller and August Losch, had highlighted the need for theorising geographical space as an essential prerequisite of understanding the dynamism of the economic processes. This theorisation is particularly significant for understanding the processes of rural development because, unlike 'urban', which refers to localised entities separated by vast expanses of geographical space, 'rural' refers precisely to those expanses of territory which covers the whole of the country outside the city limits. The two slightly different versions of central place theory presented by Christaller and Losch may therefore be regarded as two solid premises for theorising rural development.

Shortly after the theory of central places came the concept of growth poles, first introduced in the literature by Francois Perroux of France in 1950 in an abstract theoretical form but swiftly reformulated as tools of practical rural and area planning by a succession of writers among whom were Myrdal (1957), Hirschman (1958), Boudeville (1966), Friedmann (1966) and Saha (1977 and 1978). The concepts of central places, growth poles and growth centres became stocks-in-trade in India's block-level planning, particularly from its third five year plan (1961-66) onwards. A large number of very detailed block-level planning manuals were prepared with Ford Foundation and US-AID funding in which a great deal of intellectual effort was invested

in evolving scientific methodologies for the identification of a hierarchy of growth centres and matching each level of centres in the hierarchy with a set of appropriate functions. The concepts gradually also found their way into the national and area planning documents of most Third World countries.

The central place and growth pole approaches to rural development essentially visualise the process as the diffusion of development impulses emanating from a few dynamic centres of innovation and reaching out to the whole territorially extensive rural society through a wide scatter of rural growth centres. Among the social scientists who took a leading role in developing these ideas into operational models of planning were economists, geographers, political scientists and public administration scholars. Sociologists in the West remained too busy for too long in theorising modernisation to find, until recently, much time for practical aspects of planning. They were, therefore, not very receptive to space-derived concepts like growth centres. The anthropologists too remained locked in their incurable obsession of studying non-white "primitive people" within an ideologically driven colonial framework of a "them-and-us" syndrome while the real issues that mattered for the rural masses of the Third World passed them by.

At the programme implementation level the CD and the IRDP would have become a lot more effective if their designs were more responsive to space as a dimension of reality. The failure of the former and the continued vacuousness of the latter can, to a

large measure, be attributed to the neglect of space in the planning process.

2.6 World Bank's Rural Development Sector Policy

The World Bank has been a major operator in the field of rural development in most Third World countries since the 1960s. It started taking a high profile role in this area since the famous speech of its president, Robert McNamara to the board of governors meeting at Nairobi on September 24, 1973. In that speech he pledged his organisation's support for improving the productivity and welfare of the rural poor in the poorest countries. Shortly after that speech, the World Bank published its Rural Development Sector Policy Paper in February 1975. In that document the World Bank defines rural development in the following way :

✓ "Rural development is a strategy designed to improve the economic and social life of a specific group of people - the rural poor. It involves extending the benefits of development to the poorest among those who seek a livelihood in the rural area. The group includes small-scale farmers, tenants and the landless" ✓ (1975, 3).

The document proposes a strategy for rural development which will recognise these three points. Firstly, movement of people out of low productivity agriculture into other more productive sectors has been rather slow. Secondly, the current poverty conditions of the rural masses will further worsen if the high rates of population growth continue and ways are not found to remove or ameliorate currently operating technical, institutional and organisational limitations. Thirdly, since rural areas do have resources in the forms of labour, land and at least some

capital, these could be mobilised to reduce poverty and improve the quality of life.

Further on in the document, the concept of rural development is further elaborated thus :

"The central concept of rural development presented here is of a process through which rural poverty is alleviated by sustained increases in the productivity and income of low-income rural workers and households. The emphasis is on raising output and incomes rather than on simply redistributing current income and existing assets. Operationally, this concept of rural development requires that target groups be specified among the rural poor, for whom specific measures to raise production and income can be designed. The notion of target groups lies at the root of the definition of rural development as a separable and distinct component of general development strategy (1975,17).

The World Bank recognises that the process and activities which together constitute rural development do not relate to any specific economic sector : "The operational goals of rural development extend beyond any particular sector : they include improved productivity, and thus higher incomes for the target groups as well as minimum acceptable levels of food, shelter, education and health services" (1975,17). The World Bank thus sees rural development principally as a poverty alleviation programme. At the core of any programme for rural development must, therefore, lie the definition of the poor. Two categories of the poor are identified : (i) those in absolute poverty, i.e., earning US\$ 50 or less annually in 1969 prices and (ii) those in relative poverty, i.e., earning an income which is more than US\$ 50 but less than one-third of the national average for the countries in which they live. The poor are

generally known to have certain specific characteristics among which are: (i) a vast majority of them depend on agriculture for a livelihood, (ii) some of them also depend on non-agricultural activities as important supplementary sources of income, the non-availability of which greatly increases the poverty of small-farmers and landless and near landless labourers, (iii) they live in a variety of climatic and ecological conditions, (iv) their poverty conditions are routinely further worsened by national calamities arising out of drought and severe floods, (v) large numbers of them farm small and fragmented holdings using traditional low-yielding subsistence production technologies, (vi) many of them are tenants and sharecropper whose poverty conditions tend to be even worse than the smallholders and (vii) many of them are also totally landless rural workers who depend principally or exclusively on employment in agricultural and non-agricultural activities.

The World Bank identifies a set of interrelated processes which together, in the main, constitutes "the dynamics of rural poverty" (1975,24). These are : (i) growing demographic pressure on agricultural land which can be relieved only upto a point by technology - led increases in production, (ii) inadequate availability of health services and education opportunities to the rural poor which results in "physical and mental lethargy and inability to sustain hard work on a regular basis; limited ability to recognise or to respond to problems and challenges; lack of awareness; inactive and poor motivation towards improvement and learning; and, often, hostility towards outside

sources of change" and also (iii) limited access to other services like domestic water supply, electricity, waste disposal and other economic infrastructure (1975,25-28). It suggests that sustained urban bias of policy makers is a major obstacle to any serious effort of breaking out of this dynamics.

The policy paper points out that the government has to have a strong commitment to rural development policies at the national level if the impact on the problems of rural poverty is to be effective and broad-based. This commitment needs to be demonstrated in the form of a policy framework the principal components of which will have to be (i) a price policy for regulating the overall relationship between input and output prices within agriculture, and the terms of trade between agriculture and other sectors of the economy, in a way that stimulates rural development by providing more advantageous market access to small farmers and landless labourers, (ii) a fiscal policy which aids mobilisation of resources by taxing landed property and cost recovery on productive investment by imposing charges on those benefiting from publicly financed investments, (iii) a land policy for correcting extremely skewed distributions of land and eliminating the stranglehold of the rural oligarchy on credit and marketing institutions, (iv) a regional policy for helping to incorporate considerations of locational optimality, scale economies and external economies in the investment planning process and (v) a technology policy which brings the small-farmer at the centre of the focus of all research geared to the generation of on-farm technologies.

The policy paper suggested the creation of an institutional machinery for effective planning and implementation of rural development programmes which will need to have the following elements:

- (i) a national plan or programme of action for rural development together with supporting national and regional policies and adequate centre-local financial arrangements,
- (ii) a strong organisation at the national level to coordinate vertically organised sectoral departments of the central government,
- (iii) greater decentralisation with effective machinery at the regional and local level to coordinate the sectoral activities of national departments operating in the region and regional and local departments and
- (iv) participation by the rural poor in the planning and implementation processes through local government, project advisory committees, cooperatives and other forms of group organisation (1975,33-34).

The policy paper recommends three alternative approaches for the implementation of rural development programmes which are :

1. The Minimum Package Approach: This aims at modest improvements in levels of living through increased agricultural outputs. This is a low-cost approach in which limited resources can be spread out widely. The prerequisites for the success of this approach are : (i) technical soundness and viability of the package, (ii) a social structure in which certain people commanding local respect are willing to act as model farmers without remuneration, (iii) a land tenure which allows production beyond subsistence level and (iv) a loose system of credit

supervision, with satisfactory repayment rates enforced through firm and visible discipline in the case of government credit.

2. The Comprehensive Approach: This incorporates two further options - implementing national coordinated programmes or more selective area development schemes. The first involves a massive nationwide planning exercise the immensity and the complexity of which may be beyond the reach of professional resources in many countries. The latter is a more practicable and pragmatic approach of which Comilla Model is cited as a prime example.

3. Sector and Special Programmes : These include rural public works, education and training, credit, feeder roads, village electrification, water supplies, health facilities and rural industries programme. These programmes do not, by themselves, constitute a basis for self-sustaining increases in productivity and income but are usually planned as components of other more comprehensive programmes which have these objectives.

In addition to these approaches, the policy paper also refers to what it calls "new style" projects which may not fulfill the strict definitional criteria of a rural development project but have these main characteristics : (i) they are designed to benefit large numbers of the rural poor, while earning an economic rate of return, that is , at least equal to the opportunity cost of capital, (ii) they are comprehensive in their approach to small-scale agriculture and provide for a balance between directly productive and other components, (iii) they have a low cost per beneficiary, so that they could be

extended to other areas, given the availability of additional resources (1975, 60-61).

2.7. World Bank's Policy Shifts on Rural Development

The World Bank's Operations Evaluation Department published an evaluation study of its rural development project implementation experience over the period 1965-86. The study yields interesting insights (World Bank: 1988).

There is no doubt that McNamara speech had an immediate impact on the prioritisation of the World Bank's lending programme. The number of RD projects as a percentage of agriculture projects jumped from 32 per cent in 1973 to 59 per cent in 1974 and 62 percent in 1976, staying around 55-60 per cent mark until 1982. The RD lending as a percentage of agriculture sector lending also shot up from 15 per cent in 1973 to 49 per cent in 1974, reaching a peak of 71 per cent in 1982. Since that year however, the importance of RD in the World Bank's scheme of priorities seems to have declined. In absolute terms the RD lending declined from a peak of 2.2 billion US dollars in 1981 and 1982 to 1.2 billion in 1984, rising again to around 2.2 billion in 1986. As a percentage of total agriculture sector lending, the RD lending has declined from its 1982 peak of 71 per cent to 36 in 1984, rising again to 47 per cent in 1986.

The shift of World Bank's concern away from poverty alleviation and toward structural adjustment had already begun in 1980 but a semblance of a balance of emphasis was sought to be maintained at the official policy level between the two

objectives until 1982. In that year, the Bank undertook an informal review of its general approach to the alleviation of poverty. The major conclusion of the review was that growth and poverty alleviation are complementary objectives and the former can be better achieved through trade liberalisation or changes in fiscal or price policy than through projects directly targeted at the poor. The operational focus was on structural adjustment policies and the concern for poverty alleviation was expressed by mentioning the need for (i) mitigating the burden that, the World Bank knew, those policies will bring to bear on the poor and (ii) more research to find out the nature of those burdens. Having thus prepared the ground for reviving the old doctrine of reaching the poor mainly through market-driven growth, or not at all, it quickly dropped poverty alleviation as a policy concern in its 1983, 1984 and 1985 Annual Reports and abolished the Rural Development Division in 1986.

In 1986, the World Bank again created a special "poverty task force" which wrote a policy study entitled Poverty and Hunger : Issues and Options for Food Security in Developing Countries and its Annual Report for that year also included a section on that subject, thus putting poverty alleviation back on its agenda. Its 1987 Annual Report prioritised "the struggle against poverty" ahead of its advocacy for "economic adjustment and growth, debt rescheduling and trade liberalisation". Among the initiatives it announced that year were : (i) strengthening the use of the country assistance programme to address problems of poverty, particularly through operations in agriculture,

education, health, population and urban development, (ii) increased analysis of the social effects of adjustment, (iii) assistance to governments in designing structural-adjustment and sectoral-adjustment programmes that, to the extent possible, protect the poor and (iv) increased collaboration with other agencies, both official and non-governmental, in addressing poverty concerns in the context of adjustment by supporting compensatory nutrition and employment programmes for the poor (World Bank : 1987, 15-16). The Bank's 1989 Annual Report reiterated its "commitment to poverty alleviation" stating that: "The central goal of the World Bank is the reduction of poverty. Ways to achieve that goal are at the heart of the Bank's activities - whether through support for adjustment measures designed to lay the foundations for sustained growth, through investment lending, or through its research and country economic and sector work" (1989,38).

The 1990 Annual Report too puts "special operational emphasis" on poverty alleviation and food security. It refers to a core poverty programme which includes (i) projects and economic and sector work whose primary purpose is the reduction of poverty in identifiable groups, (ii) projects that aim to reduce population growth rates and (iii) activities relating to poverty alleviation which contain significant elements of targeted poverty reduction even though they have other, or more general objectives (1990, 57).

The Bank's World Development Report of 1990 was focussed on the issue of poverty. It advocated a two part approach to the

problem of reducing poverty. The first part requires the adoption of policies that make productive use of the poor people's most abundant asset - labour, as a propulsive force for broadly based economic growth. In order to implement this first part of the strategy it requires developing countries to phase out exchange rate controls as well as measures to protect manufacturing industries and instead to encourage agriculture and labour-intensive forms of manufacturing. It also requires them to ensure that the public expenditure programmes are targeted at those activities in which the poor are engaged and that the delivery of the services, such as roads, irrigation, and agricultural extension, is not biased against the poor. The second part requires the provision of social services - especially primary education, basic health care, family planning and nutrition to improve living conditions and increase the capacity of the poor to respond to whatever income-earning opportunities arise from economic growth.

The Bank's 1991 Annual Report devotes a whole section to the strategies to reduce poverty, particularly highlighting the need for analysing country policies, designing assistance strategies to support those policies, developing an information base and organising effective operational steps to implement the strategy. In order to backstop implementation, says the report, the Bank is supporting the writing of two documents; (i) a handbook on best practices in poverty reduction for the use of operational staff and (ii) an operational directive (OD) summarising its guidelines on operational issues.

From the McNamara speech onwards, the World Bank's policy approach seems to have equated rural development principally with the concepts of poverty alleviation. However, the latter concept itself is getting increasingly encapsulated within a tight framework of structural adjustment. There seems to exist a strong indication, therefore, that research on rural development may begin to lose relevance to reality unless it takes on board an inquiry into the effects of structural adjustment measures on the rural society and the economy.

The World Bank's recent documents suggest that, apart from the core programme projects, which are directly targeted at the poor, most of its other projects are also designed to be poverty sensitive and generate considerable poverty alleviation impacts. A list of IBRD/IDA funded projects approved for the Agriculture and Rural Development sector in Bangladesh from 1982 to 1991 is included as an appendix to this chapter. BARD should approach the World Bank for funding research for assessing poverty alleviation effects of these projects at the micro level.

2.8. Rethinking Rural Development

In the terrain of ideas on rural development presented in this chapter one common concern stands out in bold profile. The concern is about how best to integrate or balance the pursuit of two objectives which together encapsulate most people's desire to build a better society of tomorrow. The first objective is to achieve rapid economic growth through increased productivity, improved efficiency and greater accumulation of surplus. The

second is to build a society which is just and equitable; a society free of hunger, disease, ignorance and fear. The adjective 'rural' has often meant no more than an expression of an awareness about the current phase of the historical process in which most societies of Asia, Africa and Latin America are embedded - a phase characterised by the fact that, unlike in the West, a vast majority of people in these continents lives outside the processes of industrialisation and urbanisation.

The community development programme of the 1950s, the Comilla model projects and various post-Comilla formulations of the integrated rural development programme of the 1960s and growth pole based area development activities of the 1970s and 1980s were all built on a premise that the complementarities of interests among different sections and income groups in the society were of greater importance than conflicts and oppositions of interests. Because of the existence of these complementarities, it was further assumed, any general expansion of production in the economy would benefit all sections through diffusion and trickle down. It was because of this approach that the Comilla model was more concerned with the middle peasantry than the landless. None of these approaches saw any need for any radical changes in the existing relations of property in society or any redistribution of means of production.

When it started to become increasingly clear, after the writings of Myrdal (1957), Hirschman (1958), Friedmann (1966), Mahbubul Haq (1976), Saha (1977), Griffin and Khan (1978) and others that, in most cases, growth does not result in trickle

down, at least not for very long periods of time, basic needs and target group approaches to rural development began to occupy the centre ground of policy from mid 1970s onwards. Targeted programmes for the small farmers, the landless, the children of poor families (nutrition programmes) and assetless women were launched in increasing numbers as a result of this shift of emphasis.

While the World Bank's publications on poverty have been coming out thick and fast with unceasing regularity ever since the McNamara speech of 1973 and Michael Lipton has also been waging his relentless war against the poor of the Third World, a few economists of South Asian social origin have been raising fundamental questions about the process of poverty generation and they have been doing so without needing to step outside the framework of mainstream economics (Haq: 1976, Sen : 1981). Paradigm enforcers of the West have not yet been able to completely crowd out the voices of those who are trying , against heavy odds, to put back on the agenda the question of a fair deal for the poor of the Third World.

The dependency theorists and post-dependency writers on peripheral capitalism have also brought about irreversible changes in the intellectual terrain of rural development . They have put the issues of international division of labour as well as of domestic and international shifts in terms of trade firmly on the agenda of rural development. As the Third World economies get increasingly incorporated into a global system the rural economy will not remain insulated from the far reaching impacts

of the corporate sector for long. These impacts are already generating serious social consequences in sub-saharan Africa. In parts of Bangladesh today, plantation agriculture exists alongside peasant agriculture. This is a case of two differentiated segments of the economy existing in geographical proximity but at great social and economic distance from each other. This is also a case of corporate sector enclave formation within a regional segment of the rural economy. The phenomenon deserves studying.

If BARD does not play its role in shaping the direction of theoretical developments appropriate for addressing the emerging real issues of rural development in Bangladesh, then planning activities for rural development in this country, and elsewhere in the Third World, will continue to be laden with inappropriate theoretical structures evolved by people who have no real life roots in these societies. That is a tragedy that does not need to happen. The purpose behind my recommendation for the creation of a new development and policy planning division in the reorganised administrative structure, is to enable BARD to play that role.

2.9. Creating a Culture of Interdisciplinarity

2.9.1. The Concept of a Paradigm

Research work on rural development cannot be done cohesively and systematically unless a culture of interdisciplinarity is actively inculcated, supported and continuously reinforced as a core element of intellectual ethos. This does not seem to have happened in BARD, in any case, not to

any appreciable extent. Rural development itself comprises a whole range of interrelated activities which cannot be theorised, analysed or understood within the boundaries of any one discipline. What rural development needs is not a theory, not even a collection of theories, but a composite paradigm which can shift over time as the nature of the problems change, requiring a continuous recombination of the contents of actions devised to solve them. This composite paradigm will of course draw elements of knowledge from a wide range of conventional disciplines of social, natural as well as life sciences but will be more effective than any one of them because it has the dynamism and manoeuvrability of building ever new combinations of these elements for backstopping and directing specific kinds of actions.

2.9.2. A Model of Transdisciplinary Learning

In order to help build a culture of interdisciplinarity in BARD, I introduce here, with substantial modifications, the model of transdisciplinary learning which I had presented in a conference in Berne, Switzerland, in 1981 and later, in another colloquium in Swansea, UK, in the same year (Saha, 1981, 1983). The model is based on the input-output system which is a widely used tool of macroeconomics. It conceptualises, and accounts for, the flows of commodities and cash within the economy, or a system, in a structure of four intrerrelated quadrants. In the first quadrant, sectors of the economy supply to , and receive from, each other a whole range of diverse goods and services as inputs and outputs, which are used up and transformed, through

appropriate production technologies, into a fresh set of goods and services which are sent out to the market either for direct consumption by the domestic population or for use elsewhere, i.e., outside the economy. The absorption of this second set of supplies into the domestic or the export market is conceptualised as the second quadrant and is called the final demand sector. The process of producing and transforming the inputs and outputs into supplies for the final demand market, in turn, generates streams of values or cash flows which accrue as incomes to people engaged in the supply of inputs. These flows of income are conceptualised as the third quadrant and called the value-added sector. There is also a fourth, rather invisible, sector, in which transfers of values take place outside the market system (see diagram 1).

In the transdisciplinary learning model (see diagram 2) accumulation, interweaving and consolidation of theoretical knowledge and its application for addressing concrete problems take place through a series of distinct but interrelated processes. In the first place, flows of discipline-bound knowledge, i.e., those stemming from conventional university departments of economics, sociology, engineering sciences and others must be actively interwoven into streams of applied fields of specialisation; the nature, the range and the contents of which have to be determined on the basis of a systematic and informed identification of problems and imperatives which require priority planning intervention within a given time frame. In concrete terms, this will mean the following things :

Supplies to Sectors						Food	Cloth- ing	Hous- ing	Health	Other
Supplies from Sectors	1	2	3	4	n^{th}					
	1	Intersectoral Flows Quadrant				Final Demands Quadrant				
	2									
	3									
	4									
	K^{th}									
Pro- fits										
Rents										
Inter- est										
Sala- ries	Value-Added Quadrant					Non-Market Transfers Quadrant				
Wages										
Other- ers										

Diagram-1
A Conventional Input-Output Table

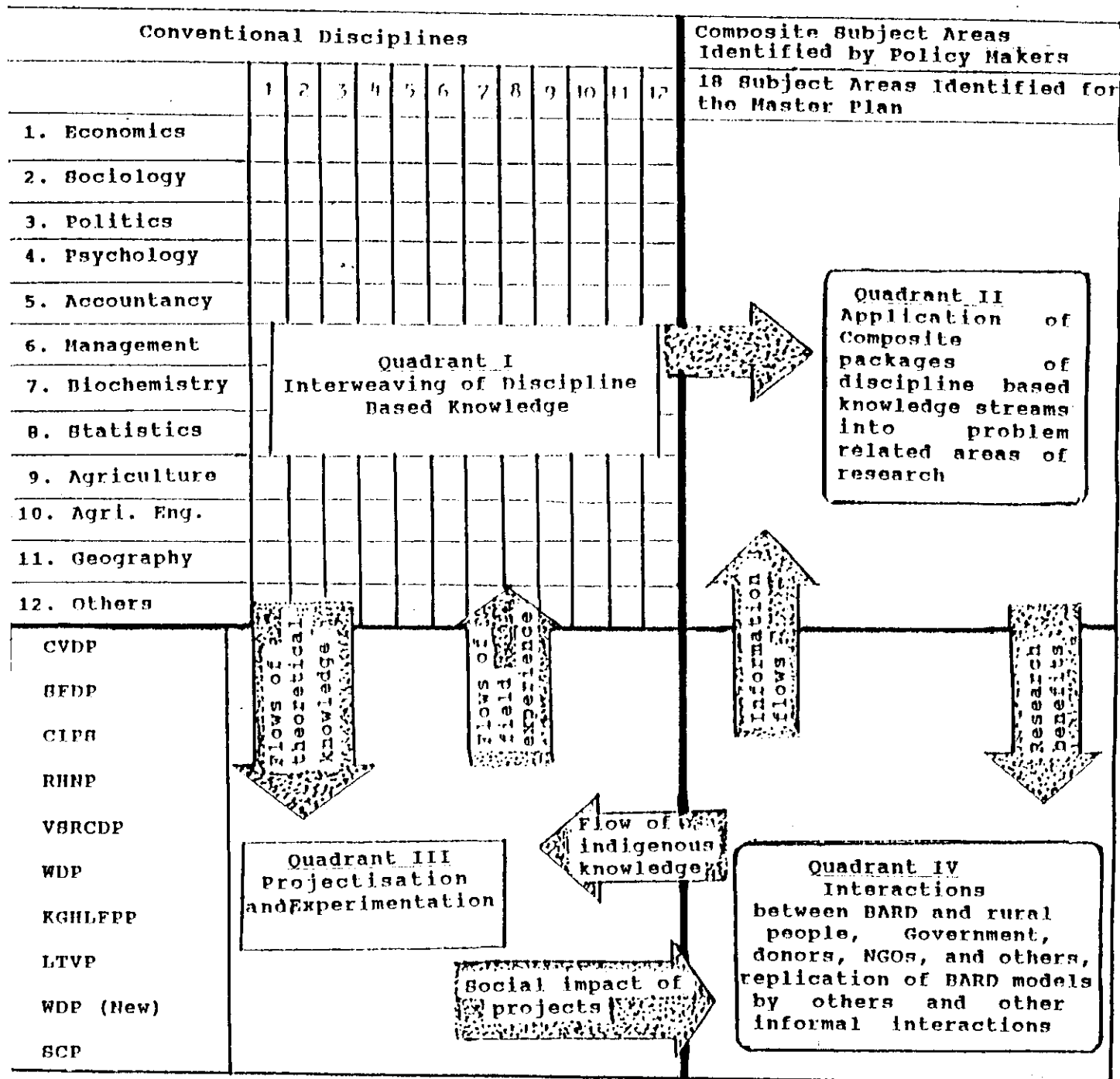


Diagram-2

A Transdisciplinary Learning Model

- (i) The faculty members must continuously and demonstrably stay in touch with the latest theoretical as well as applied advancements of knowledge in their own disciplines and the Academy must find a way of ensuring and monitoring that they do so; this is essential, because, unless, for instance, an economist or a sociologist continues to remain a good economist or a good sociologist, he or she cannot be a credible participant in any transdisciplinary learning.
- (ii) In addition to continuing to keep a firm rooting in the knowledge base of his or her own discipline, each member of the faculty should be encouraged to acquire subject matter knowledge of the theoretical premises and practical applications of at least two other disciplines through discussions with his/her colleagues or through readings of the appropriate literature assisted by colleagues; the former would help in knowledge-deepening and the latter in knowledge-widening and the two together would constitute the foundations of transdisciplinary learning.

This intermeshing of knowledge drawn from different disciplines is very similar to what happens in the first quadrant of an input-output table where a series of inputs and intermediate outputs are combined and transformed into supplies to meet final demands. The contents of the final demand or the second quadrant in the transdisciplinary learning model are

determined by the subject areas identified in advance by the think-tank people as priority areas of planning intervention. The creation of the new macrotheoretical structures needed for backstopping these new areas of applied interdisciplinary knowledge will also have to be a part of the contents of this final demand quadrant. The system will require that the composite knowledge flows generated through the interweaving of disciplines in the first quadrant must match the predetermined application related demands of knowledge included in the second quadrant. In the third or the value-added quadrant of this model are situated the actual pilot or experimental projects . Like in the input - output model, these projects can only be sustained if the first two quadrants of the system continue to function robustly, i.e., discipline based theoretical knowledge flows are generated and interwoven in the first quadrant and then applied to the problem-related subject areas incorporated in the second quadrant. It is the interrelationship between the first two quadrants which yields value for the third quadrant.

As in the input-output table, the activities of the fourth quadrant in this model too remain largely invisible. Included in these activities are the on-going interactions between faculty members and the rural people and groups as well as the matrix of interactions involving the Academy, the government, the donors and the NGOs which result in the acquisition of new projects and the replication or the withering away of the old ones.

The model can be used as a powerful epistemological device to demonstrate to the faculty that it cannot engage in action research in a credible way unless its members (i) continue to work for retaining a firm grounding in the theoretical knowledge base of their own disciplines, (ii) equip themselves to work in partnership with their colleagues from other disciplines and (iii) specialise in specific subject areas by continuously undertaking research studies in those areas which involve the testing, validation and consolidation of theories and concepts through the analysis of empirical data.

The model, thus, can be an important stepping stone for creating a culture of interdisciplinarity in BARD which is crucial for building up its research capability.

WORLD BANK (IBRD/IDA) FUNDED PROJECTS IN BANGLADESH
(Agriculture and Rural Development Sector)

<u>Year</u>	<u>Subsector</u>	<u>Total Cost</u> <u>(IBRD/IDA</u> <u>Contribution:</u> <u>in million US\$)</u>	<u>Project Description</u>
1982	Irrigation and Drainage	\$ 41.4 (\$27.0)	Flood control and drainage will be provided for about 80,000 hectares in three areas, Chalan Beel, Satla Bagda, and Hail Haor, thereby protecting these areas from excessive flooding and helping to increase farm production and employment activities, such as marketing, processing, and the supply of farm inputs.
1982	Research and Extension	\$40.9 (\$27.0)	A second research and extension project - one that includes reorganising and merging five extension agencies, increasing extension staff in fifteen districts, providing bicycles and other vehicles to improve mobility, constructing offices and seed stores, and expanding the Bangladesh Agricultural Research Institute -will support the government's efforts to achieve food self-sufficiency.
1983	Area Development	\$176.9 (\$100.0)	Increased agricultural production, additional employment opportunities, and higher income for the rural poor are to be generated through a second rural development project that includes provision of credit, institution-building measures, expansion of the Irrigation Management Programme, and assistance to the Bangladesh Rural Development Board in providing a special package of inputs to the rural poor.

<u>Year</u>	<u>Subsector</u>	<u>Total Cost</u> (IBRD/IDA Contribution: in million US\$)	<u>Project Description</u>
1983	Irrigation and Drainage	\$141.9 (\$68.0)	Some 4,000 deep tubewells will be installed, the Bangladesh Agricultural Development Corporation will be strengthened, and technical assistance and training provided to the Integrated Rural Development Program.
1984	Agroindustry	\$25.6 \$(20.0)	About 50,000 small farmers will benefit from a project designed to increase cane and sugar production and improve sugar-industry productivity by strengthening extension services to cane growers, development till farms, improving cane transport and handling, and rehabilitating three sugar mills.
1984	Irrigation and Drainage	\$58.0 (\$41.5)	Almost a half million people are expected to benefit from a project that seeks to raise agricultural production by increasing the area under high-yielding rice and wheat (through improved drainage and/or irrigation and by reducing crop losses from flooding) and to strengthen the institutional capacity of the Bangladesh Water Development Board.
1984	Research and Extension	\$9.9 (\$8.1)	This second agricultural-training project will assist the government in upgrading the quality of extension and research services by improving the quality of middle-level training and higher-level in-service training of the Ministry of Agriculture, by developing a career-development strategy for extension agents, and by extending the ongoing Agriculture Management Development Program.

<u>Year</u>	<u>Subsector</u>	<u>Total Cost</u> <u>(IBRD/IDA</u> <u>Contribution:</u> <u>in million US\$)</u>	<u>Project Description</u>
-------------	------------------	--	----------------------------

1984	Research and Extension	\$32.2 (\$24.5)	
------	---------------------------	--------------------	--

A second agricultural-research project will help develop a strong research coordination, planning, and monitoring organisation at the Bangladesh Agricultural Research Council; bring livestock, fisheries, and forestry more effectively into the research system; strengthen the national research-station network; and help finance priority research areas. Training of scientists and technicians is included.

1985	Area Development	\$65.0 (\$48.0)	
------	------------------	--------------------	--

About 115,000 farm families are expected to benefit from a project designed to protect against crop losses, loss of life, and property damage due to floods; improve the physical environment to allow farmers to adopt improved agricultural practices; and strengthen the Bangladesh Water Development Board.

1986	Fishing	\$37.7 (\$22.0)	
------	---------	--------------------	--

Production of shrimp in coastal areas of the country will be intensified through the introduction of improved shrimp-culture technology consisting mainly of improved water-management and related shrimp-culture practices. Technical assistance and training are included.

1986	Forestry	\$36.0 (\$28.0)	
------	----------	--------------------	--

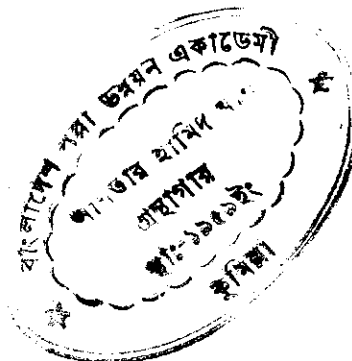
A second forestry project seeks to expand and adequately maintain forest areas and thereby increase the supply of fuelwood for domestic consumption; provide protection against cyclones, tidal bores, and soil erosion; and increase the supply of wood for industrial and commercial users.

<u>Year</u>	<u>Subsector</u>	<u>Total Cost</u> <u>(IBRD/IDA</u> <u>Contribution:</u> <u>in million US\$)</u>	<u>Project Description</u>
1987	Irrigation and Drainage	\$27.5 (\$20.0)	A fourth flood-control and drainage project aims at protecting against crop losses, loss of life, and property damage due to floods; enhancement of the physical environment to allow farmers to adopt improved agricultural practices; and strengthening of the Bangladesh Water Development Board.
1988	Irrigation and Drainage	\$111.0 (\$81.5)	Food production is expected to increase through support of investments in small - scale subprojects to protect agricultural land against floods, prevent salt-water intrusion, improve drainage, and provide water for irrigation. In addition, the capacity of the Bangladesh Water Development Board to implement new projects and to operate and maintain completed projects will be strengthened, and damaged flood-protection, drainage, irrigation, and town-protection infrastructure will be restored.
1989			
1990	Fishing	\$62.7 (\$44.6)	The incomes of about 130,000 families of fishermen and pond owners will increase through a sectorwide fisheries project in the western part of the country that focuses on stocking flood plains with fingerlings, improving shrimp culture and developing institutions.
1990	Irrigation and Drainage	\$111.0 (\$53.9)	About 700,000 families are to benefit from a project that will protect and increase farm production and incomes through rehabilitation and improved operations and maintenance of existing irrigation, flood-control, and drainage projects. Institution-building assistance to the Bangladesh Water Development Board is included.

<u>Year</u>	<u>Subsector</u>	<u>Total Cost</u> <u>(IBRD/IDA</u> <u>Contribution:</u> <u>in million US\$)</u>	<u>Project Description</u>
1991	Agricultural Credit	\$59.4 (\$35.0)	Through a strengthening of agricultural support services (breeder-seed operations and extension services, for instance), agricultural production will increase-especially of foodgrains-and a diversification process, aimed at introducing high-value export crops, will be initiated.
1991	Irrigation and Drainage	\$126.7 (\$75.0)	income The average annual per capita of more than half a million farm families is expected to increase as a result of a project that supports increased investment by farmers in simple, low-cost minor irrigation equipment sold by private dealers for cash under the government's liberalized policy and institutional framework for private-sector-led minor irrigation development.
1991	Irrigation and Dainage	\$171.1 (\$54.0)	Some 314,000 families may see their annual per capita incomes more than double as a result of a project designed to promote growth in agriculture through increased private-sector investment in minor irrigation facilities.

EC 35836

A 3456



THE GLOBAL ENVIRONMENT

3.1. Creating a Capability for Managing a New Generation of Rural Development Projects

Since the time when Akhter Hameed Khan helped develop and put into practice, the ideas which came to be known as the Comilla Model, and particularly during the last five years or so, there has been a sea change in the global macroeconomic environment. These changes have severely limited the space for manoeuvre available to the Third World governments in managing their dealings with the dominant international agencies like the World Bank and the International Monetary Fund (IMF) and with the dominant bilateral donors of the Organisation for Economic Cooperation and Development (OECD) and, what is far more disturbing, in managing their own domestic macroeconomic variables. No exercise in rural development planning, either at the national or the local level, and the project cycle activities which must stem from it, can be seriously undertaken in the 1990s and beyond the turn of the century without a clear understanding of the nature and contents of the recent changes in the macroeconomic environment. This chapter seeks to provide a basis for that understanding with a view to facilitating the creation of the research support capability that BARD, and the institutions which may be linked with it in the future, will have to have for designing and implementing the new generation of rural development projects which will now be needed.

3.2. What is Structural Adjustment ?

In theory, structural adjustment is the very essence of development because no economy can properly function and develop if the components of its basic structure are at odds with each other. In more concrete terms it is that part of a country's development policy which seeks to optimise the functioning of the supply side of the economy by taking active measures for the removal of all those state controls and regulations which had hitherto obstructed the free operation of the market forces. The other side of the same policy is stabilisation which is targeted at the demand side of the economy. In the context of the recent economic history of the world, however, structural adjustment and stabilisation have both come to be associated with the relentless pressure which the World Bank, the IMF and the dominant donor countries of the West are bringing to bear on Third World countries for bringing the economies of the latter in line with the policies dictated by the former.

The first publicly available IMF text on stabilisation was written by Omotunde Johnson and Joanne Salop in 1980. The IMF and the World Bank must have started their theoretical and project design homework for deemphasising poverty alleviation and prioritising stabilisation and structural adjustment even earlier than that. The Johnson and Salop paper began with the presumption that external imbalance is the product of overexpansion of demand, rather than exogenous shock, and that the crucial issue was increased expenditure arising out of increased demand which was what needed to be contained. The

problem with their analysis was that they studied the impact of stabilisation on poverty in terms of functional (returns to factors), regional and public-private distributions of income and left out of their perview the distributions which alone are interesting and purposive for real world social analysis, i.e., those in terms of individuals, households or socio-economic groups. A later IMF-supported study on distributional impacts of stabilisation and structural adjustment also appears equally inconclusive and unilluminating (Sission : 1986); a World Bank study on the same subject carried out at about the same time yielded no definitive results either (Yagci et al : 1985). The problem is that studies of effects of sudden shifts in macroeconomic variables on income distribution are usually carried out with reference to the Kuznetsian U-curve which, by definition, are studies of long-run changes, and, therefore, tell us very little about the welfare impacts at the bottom end of the distribution in the short run, say in a time profile of one to ten years.

3.3. The Prime Issues

The prime structural adjustment issues for the rural development planner in Bangladesh are these : What are the short- and medium-run effects of the currently operating IMF Enhanced Structural Adjustment Facility (ESAF) regime on the living conditions of the rural poor ? To what extent the planner can continue to engage in those market interventions which have hitherto been his stock-in-trade in designing targeted poverty alleviation projects ? What are the chances of the cooperative

institutions built by Akhter Hameed Khan to continue to survive once the full blast of the unregulated market forces are unleashed on them ? What safety nets can be built for the most vulnerable sections of the rural society once the hidden subsidies on food and other rural inputs are phased out ? Surely BARD needs to equip itself with the professional ability of looking into these questions systematically and methodically.

3.4. Social Impact of Structural Adjustment : How Has It Worked Elsewhere ?

Received theories of neoclassical economics and of Western sociology are of very little help in answering these questions. Economists tend to justify the short-run cutbacks in the consumption levels of the poor by citing future gains which will arise out of the current austerity. But then, their models do not ensure that the social groups which suffer the present cutbacks will be the recipients of the future gains. Furthermore, for the bottom-end of the distribution profile which already exists at the frontier of survival, the discount factor for the net present value calculation of any future gains is very heavy indeed.

Structural adjustment programmes usually put heavy pressures on governments to switch investible resources from non-tradables to tradables and from domestic consumption linked activities to export related activities. Rapid price inflations stemming from this switch generate faster increases in food prices and other basic necessities than the general price level. The poorest in the rural population, e.g., the landless, the marginal peasants

and the women in female-headed household making a living out of petty trading, rice-husking or cow or smallstock fattening, who do not grow food and have to buy it from the market, end up suffering most from these differential price rises. The impact of the switch on total factor demand also tends to generate redistribution at the expense of labour. One simulation exercise involving Colombian peasant producers shows that subsidies to expand exports, a course favoured by structural adjustment regimes, increase poverty whereas import tariffs, discouraged by such regimes, lower it (Dervis, de Melo and Robinson : 1982). Often the root of the macroeconomic imbalances, which the structural adjustment measures seek to correct, lie in domestic "overheating" or overexpansion of demand associated with positive efforts to improve the consumption levels of the poor. If this expansion is forcibly rolled back and , at the same time, it is also stipulated that cutbacks cannot be achieved through investment cuts, as is usually the case in a structural adjustment regime, then the limited gains of the poor emerge as prime targets for receiving the cuts.

There is very clear empirical evidence from several countries of sub-saharan Africa that forcibly imposed demand contractions built into the structural adjustment regimes have pushed sizable segments of the poor deeper into more extreme forms of poverty and destitution (Saha: 1991). A country specific study drawing on the Malawian data of the 1980s also clearly shows that the rural poor, particularly the landless, get most hurt by structural adjustment. Between 1981 and 1986, Malawi had to

secure three structural adjustment loans from various donors in its effort to ride out of its severe macroeconomic difficulties and, in the process, had to accept very tough IBRD/IMF conditionalities among which were : (i) liberalisation of the grain markets, (ii) forcing the public sector agricultural marketing corporation to scale down its operations and (iii) elimination of fertiliser subsidies. The combined effect of these policy induced measures were massive rises in fertiliser prices followed by even greater rises in the producer, and therefore retail, prices of food. The food-deficient rural households, many of them small subsistence farmers, were badly hurt. As the food prices shot out of the reach of their normal buying abilities, many of them were forced to work on larger farms for additional cash wages in order to buy food in the open market. This left them no time to prepare their own small subsistence holdings for the next agricultural season's sowing, thus further aggravating the supply situation of food. The IBRD/IMF sponsored measures also meant a rapid shift of emphasis away from the National Rural Development Programme (NRDP). No alternative delivery system was designed to reach the poorest sections of the smallholders (Lele : 1990).

3.5. Theorising Poverty Alleviation in Structural Adjustment

A World Bank sponsored study published in 1987 made a serious effort to find a theoretical structure within which poverty concerns of the policy makers could be integrated into the design of structural adjustment programmes (Demrey and Addison: 1987). The study begins with a clear recognition that

identifiable poverty groups can get badly hurt during the implementation of structural adjustment programmes and that the economic disadvantages suffered by them could be long lasting. It draws on the distinction made by Frances Stewart between "primary claims on resources which arise directly out of the productive process of work and accumulation, and secondary claims which result from the transfer of primary claims" (1983, 4-5). It argues that the poverty alleviation component of a structural adjustment programme should put the priority policy emphasis on increasing the primary claims of the poverty groups on resources and that the secondary transfers could be resorted to only as supplementary measures or for reaching those groups who cannot be reached by the former method. Five broad approaches to assisting the poor under adjustment are identified :

- i) increasing their access to productive assets,
- ii) raising their return on assets,
- iii) improving their employment opportunities,
- iv) ensuring their access to education and health services and
- v) supplementing their resources with transfers.

The first four relates to increasing the primary incomes of the poor, the fifth to an effort to give them access to secondary incomes.

3.5.1 Increasing the access of the poor to productive assets

Land reform is identified as an important policy tool in this approach. It is pointed out that landlessness is a prime cause of rural poverty in many countries. Citing evidence from Thailand, the study points out that giving the landless legal

titles to the land which they currently cultivate without legal security, leads to substantial increases in the productivity of land which secures a lasting basis not only for the alleviation of poverty but also for economic growth. It is, however, admitted that land reform has serious political ramifications which may call into question its feasibility as a routine element in structural adjustment.

3.5.2 Raising the return on assets held by the poor

Where the poor possess no other productive assets but their labour the only way to bring about improvements in their poverty status is to secure and boost their real wages with reference to the relative prices of goods and services in the market. However, in those cases where the poor hold other productive assets, measures to raise returns on these assets are likely to benefit the poor. Measures favoured by the World Bank are the removal of import controls and tariffs, which it believes benefit the rich by creating rent receiving opportunities for them in a distorted market and hurts the poor, particularly the rural poor, by tilting the rural-urban terms of trade against them. There is some theoretical basis to say that the removal of these tariffs and controls leads to increases in the producer prices of agricultural commodities as well as of the goods produced by non-farm informal sector enterprises. This, however, tends to happen alongside massive deteriorations in the poverty conditions of the rural landless labourers as well as urban assetless workers many of whom are also of recent rural origin. Squeezing the ultra -

poor in order to benefit the poor may prove to be a dubious policy.

3.5.3 Improving the employment opportunities of the poor

The study recognises that adjustment tends to involve job losses in the formal sector and those who lose their jobs can soon join the ranks of the "new poor". It, however, maintains that this problem is short-run. In the medium and the long-run, eliminating policy induced distortions in markets will allow reallocation of resources in accordance with the country's comparative advantage and relative prices to stay at market-clearing levels which should maximise employment opportunities across the board. Short-run problems arise from three reasons. Firstly, structural adjustment through its effects on relative prices, reallocate resources away from nontradables and into activities producing tradables. However, because of the price rigidities and slow spread of, and response to, market information, the expansion of tradables sector does not take place as fast as the contraction of the nontradable sector. It could be several years before the demand for labour reaches pre-adjustment levels. In the meantime poverty augmentation could be widespread. Secondly, demand deflation which stems from adjustment measures also creates further unemployment unless real wages were quickly adjusted downwards. Both outcomes will exacerbate poverty in the short-run. Thirdly, fiscal restraint imposed on governments in adjustment regimes often necessitate the retrenchment of large numbers of public sector employees many of whom will also join the ranks of the poor.

The policy response suggested by the study for overcoming these short term difficulties (how short is the short term, it does not say) is to increase the occupational and geographical mobility of the poor. More specifically it recommends that the poor be encouraged to move into new tradable activities, mainly in the informal sector, which will emerge as a result of adjustment induced shifts in relative prices and demands. What the study does not point out, and should have, is that the net effect of the suggested policy response would be that a large number of people would have to be forced out of more secure and better paid employment into less secure, less paid and more exploitative employment and self-employment.

3.5.4 Ensuring the access of the poor to education and health services

Successful adjustment often requires restraints on public expenditure and its prioritisation of directly productive sectors and on supporting infrastructure. Broadly based health and education programmes can therefore experience severe squeeze. The study recommends better cost-effectiveness of public expenditure on these programmes so that primary health care rather than high medical technology based hospital treatment, primary rather than university education and basic needs like rural water supplies, sanitation and low-cost housing rather than the demands of modern consumerism, receive a higher priority within the budget allocations for human capital development. It highlights the basic principle that the market should increasingly be allowed to take up the needs of better-off groups

so that public expenditures in social sectors could be better targeted to the poorer groups.

3.5.5 Transfers

The study justifies transfers only as a supplementary measure on the margins of a programme of action whose main emphasis is on securing for the poor increased primary claims on resources. This justification could stem from several reasons. Firstly, many poor families work in service and other nontradable sectors and the benefits accruing to the economy through the expansion of the tradables sector therefore take time to filter through to them. In the short term, these families may need the safety net of income or consumption transfers. Secondly, many members of poor families are not economically active (e.g., young children or the aged). Yet others may be subject to severe discrimination (seclusion of young girls and women in some societies). Creating primary income claims for these people may be difficult to achieve. Thirdly, transfers may be necessary to bridge the time lag in the switch of resources from nontradable to tradable activities.

Transfers in the form of marketwide subsidies is wasteful of national resources because a sizable part of the expenditure is absorbed by better-off sections of society. Better targeted consumption transfer mechanisms like the school feeding programme, food supplementation through health clinics and food stamps for the elders and very poor are more cost-effective, purposive and politically justifiable. Despite their lower budgetary costs however, the targeted food programmes have much

higher delivery costs than subsidies and much more difficult to administer. The non-government organisations may be better able to handle this task than the government departments or agencies.

Food aid may depress domestic food prices which may frustrate a major policy objective of raising food prices in order to encourage increased production of food. The donors may be persuaded to switch food aid to financial aid for purchases of local foods which can then be transferred to the poor. Cash transfers may be preferable to food transfers in some cases. The former is easier to administer and can therefore be more cost effective. It is however more difficult to ensure that cash transfers will reach intended targets or be spent on meeting basic needs.

3.5.6 Guiding principles

The study seeks to establish a set of four guiding principles for macroeconomic policy formulation by Third World governments. Firstly, the structural adjustment is unavoidable, the only choice is between orderly or disorderly adjustment. The regime is likely to be more orderly if it takes into account the problems of the vulnerable groups. Secondly, income distribution changes in favour of the better-off is an essential part of the agenda of adjustment. These changes are in fact the main incentive or driving force behind the resource reallocations without which the objectives of adjustment cannot be achieved. Measures to protect the poor, therefore, must not come in the way of these incentives to the better-off in the form of increased

incomes. Thirdly, poverty alleviation must, in the main, take place through increased primary income claims of the poor-transfers must take a distant second position as an item of policy. In plain English this means that the poor must be made to work hard in exchange of receiving any additional income and must not expect anything for free. Fourthly, ensuring cost-effectiveness of social expenditure must be one of the core elements of a poverty sensitive adjustment programme. In other words, the poor must be helped not through increased social expenditure but through reallocation of resources from the not-so-poor to the very poor.

3.6. Social Dimensions of Adjustment Project

In an effort to highlight its concern for poverty in designing structural adjustment programmes, the World Bank, in partnership with the United Nations Development Programme and the African Development Bank, set up a Social Dimensions of Adjustment Project in 1987. The project has so far concentrated its activities exclusively in the countries of sub-Saharan Africa. Nevertheless, the ideological content of analysis and the policy orientations reflected in its outputs provide valuable insights into the World Bank's general thinking on poverty alleviation during structural adjustment.

The project policy analysis paper published in 1990 shows that social and economic sector spending in sub-Saharan Africa during the decade of the 1980s tended to increase, both as fractions of total expenditure and in real (inflation adjusted) per capita terms. Even so, poverty alleviation effect of this

expenditure was minimal. Three reasons are cited: (i) inequitable intrasectoral expenditure patterns, (ii) low effectiveness in programme delivery and (iii) inadequate ratios of recurrent spending.

The World Bank's core premises of the theoretical framework for restructuring public expenditures for poverty alleviation are that the concept of the standard of living is an aggregation of several components each of which can and should be valued relative to each other and that the expenditure based measures of welfare must be complemented by the concept of basic needs. It is further assumed that the standard of living of the poor can be improved more cost effectively through basic needs investment than through investment in directly income generating activities and that the rate of return on the former is greater than the latter. The theoretical analysis highlights three sets of parameters : (i) those that quantify the importance of one component as opposed to another in the social valuation of the standard of living, (ii) those that quantify the links between public expenditure and achievements along several components of the standard of living using production function models and (iii) an assessment of what fraction of public expenditure in any given category reaches the poor. The analysis makes it possible to disaggregate those components of public social expenditure out of which larger proportions reach the better-off and helps create a basis for designing a programme of poverty sensitive expenditure cuts.

Good quality household surveys, cost data on specified services and their input components and data on service utilisation are principal prerequisites for policy research on poverty sensitive structural adjustment.

3.7. Structural Adjustment in Bangladesh

The World Bank's 1992 macro-policy report on Bangladesh is a good source document to study the enforcement of a structural adjustment programme. It recommends that the agenda for the future economic policy management of the government should include these three principal items : (i) to reverse the declining trend in investment (both public and private) through increased domestic savings and improved public sector investment prioritisation so as to increase public investment, (ii) to establish an enabling macroeconomic environment to support export-led growth by accelerating the implementation of, and strengthening, ongoing reforms and (iii) to reform appropriate public policies including those relating to food price stabilisation, buffer stock management and distribution and production of minor irrigation equipments, chemical fertilizers and seed. In order to facilitate the pursuance of such an agenda, the government had already negotiated a structural adjustment facility (SAF) programme with the IMF in 1987 which was further augmented by an enhanced structural adjustment facility (ESAF) negotiated in 1991. The government has been extremely cautious in its public sector expenditure management since these facilities were put in place which has led to large shortfalls in public investment targets, including those in

agriculture and rural development sector, since 1988. The World Bank reports "a possible deepening of poverty in recent years" in Bangladesh even though the national economy registered a hefty 6.6 per cent GDP growth in 1990 and not-so-bad 3.3 per cent growth in 1991. Nationwide, the per capita food availability in 1991 was exactly the same as in 1983; in 1990 relative to the 1983 base, it was substantially more. The domestic production of food had increased by 13.2 per cent in 1990 and by 2.0 per cent in 1991. Relative to 1983, domestic food production in 1991 was 24.5 per cent higher. These impressive gains in production and overall macroeconomic growth do not seem to be filtering through to the poor.

The World Bank identifies three main objectives which agriculture and food policy in Bangladesh should seek to achieve: (i) self-sufficiency in foodgrain production, (ii) improved rural income distribution, nutritional status and employment opportunities and (iii) promotion of agricultural exports to support the balance of payments. The major elements of the policy reform package it recommends for the agriculture and food sector are : (i) gradual phasing out of the price stabilisation and buffer stock operations, (ii) complete privatisation of distributive trade in minor irrigation equipment, (iii) eliminating subsidies on all minor irrigation equipments, particularly on deep tubewells, (iv) liquidating the Bangladesh Agricultural Development Corporation's (BADC) stocks of unsold shallow and deep tubewells (STWs and DTWs) through auction, (v) privatising all functional DTWs managed by BADC and writing off

irreparable DTWs managed by it, (vi) selling new DTWs at full cost, (vii) elimination of custom duties and tariffs on all irrigation equipments, (viii) gradual withdrawal of the BADC from all upazila level sales of fertilizers and privatisation of the retail trade from upazila level downwards, (ix) abolition of restrictions on movements of fertilizer stocks, (x) decontrolling farm-level prices of fertilizer, (xi) elimination of fertilizer subsidies, (xii) gradual withdrawal of the BADC from breeding and multiplication of seeds and leasing out of BADC seed farms to the private sector, (xiii) gradual withdrawal of the BADC from the upazila level seed sales and limitation of its role as a wholesaler to the private sector, (xiv) decontrol of seed imports and (xv) elimination of all subsidies on seed sales. The government has already made substantial progress in the implementation of these measures resulting in major increases in the consumption of agricultural inputs and in agricultural production.

There is no research evidence to hand on the impact of these measures on rural income distribution, shifts in nutritional status of, and the creation of employment opportunities for, the rural poor. There is, therefore, a clear need for undertaking detailed micro-level research to assess the impact of each of the above elements of policy on rural poverty as well as productivity in the rural economy.



3.8. Recommendation for an Initiative

BARD needs to take a lead in this. It can recommend to its Board of Governors to set up a study team comprising representatives of the Ministry of Finance, the Bangladesh Bank, the Rural Development Division of the Ministry of Local Government, Rural Development and Cooperatives, the Planning Commission, the Bangladesh Institute of Development Studies and selected members of its own faculty for undertaking research on the social impact of structural adjustment in Bangladesh. It can consider approaching the World Bank and the UNDP for cofinancing such a research project. It may need the assistance of an expatriate consultant to write up the project proposal, set the project up, organise the initial training of the selected project personnel on the concepts and methodologies and get the project started in its work. But the bulk of the work, and after the first 12 months or so, all the work, of this project will be done by Bangladeshi researchers. The outputs of this research will gradually have to be fed into BARD's training programmes and consultancy and advisory services and widely disseminated through workshops and seminars.

At the present time, the theoretical knowledge on how the various components of the structural adjustment programme actually work their ways through the economy and the social fabric is rather patchy and tenuous. BARD's micro-level researches on the subject, if properly designed and conducted, can in fact provide solid foundations on which new blocks of theoretical knowledge can be built. The beginning of the real

process of development in the Third World requires that the scholars of the Third World social origins themselves build those theoretical structures which are needed to backstop research for facilitating that process. The World Bank, the IMF and other donor/creditor agencies can help by supporting institutions like BARD in undertaking field-level research on the impact of structural adjustment on rural poverty. BARD, on its own part, cannot afford not to take interest in the subject.

BARD AS AN AGENCY OF RESEARCH, TRAINING AND PROJECT IMPLEMENTATION/EXPERIMENTATION

4.1 The Original Mandate

The origin of the Bangladesh Academy for Rural Development (BARD) can be traced back to the establishment of the two Pakistan Academies for Village Development (PAVDs) at Comilla and Peshawar in 1959; the Comilla wing was opened on 27 May. The name of the two Academies were changed to Pakistan Academies for Rural Development (PARDs) in October, 1962. The Academy acquired its present name after the creation of Bangladesh in 1971.

Even a cursory reading of the early documents relating to PAVD makes it clear that the principal objective for which the two academies were established was to train government officials engaged in the implementation of rural development programmes. The opening paragraph of the PAVD's first introductory brochure has this to say on the institution's role: "Originally, the Academies were planned to train only the supervisors and development officers of the V-AID organisation. The plan gradually expanded to include training of supervisory and administrative personnel in the civil and other nation-building departments". Further on, the brochure identifies the following functions for the Comilla PAVD :

- i. to train officers in rural development work,
- ii. to conduct social and economic research and surveys,
- iii. to undertake model extension activities,

- iv. to conduct model training classes for villagers,
- v. to prepare rural training materials,
- vi. to discover effective teaching methods,
- vii. to organise small pilot projects and
- viii. to evaluate the effectiveness of Academy's operations in small areas (PAVD: 1960, pp. 3-6).

The emphasis on training was obvious and other functions such as research, extension and the organisation of pilot projects were clearly seen as activities which supported and strengthened the Academy's ability to train.

4.2 Akhter Hameed Khan : His Approach and Philosophy and the Building of an Intellectual Culture

From the very beginning, however, Akhter Hameed Khan, the first and the long serving chief executive of PAVD/PARD, had embarked on a course of pushing the frontiers of the limited role which the military bureaucrats who had drafted the executive order setting up the Academy had assigned to it. Within a year of the establishment of the PAVD at Comilla, he had launched two major research projects, one looking for ways of achieving improved paddy cultivation and the other surveying the cottage industries of the Comilla thana area. The role he had charted out for the Academy was very clear: "to carry out systematically the experimental planning in our area" and "to be a living centre of village development, where knowledge is not only collected and disseminated, but some fresh and critical thinking is done, and ideas and schemes are analysed and tested as in a laboratory" (Khan: 1960, 3-4). The role he had chosen for the Academy was

evidently one of a pioneer agency of social science research pushing new frontiers of knowledge in the field of rural development.

What were Akhter Hameed Khan's views on the scope and the methodology of social science research? These are probably best captured in the following extended extract from his own writings:

"The practical orientation and collaboration with the departments forced us to make some modification in the conventional scope and methodology of research. As far as survey research was concerned we could observe the strictest scientific or statistical rule. But besides survey research we also arranged observational and action research.) A certain amount of laxity could not be avoided in both. An action research project by this very nature, should go on for a long time, and acquire new dimensions as it proceeds. It is the equivalent of R&D sections in modern industry. (Sometimes our highly trained social science instructors complained that the methods employed in observational or action research were slipshod. They advocated much stricter control for the sake of academic credibility. I pointed out that academic credibility was not our goal. Our goal was purely utilitarian, viz: to find a workable model for the departments and then evaluate and refine it further, if it was widely introduced.) We never forgot that the purpose of the action or experimental pilot projects was to understand different aspects of a problem or problems, to discover viable and critical solutions, and ultimately to present a model which could be duplicated easily by the departments. As the proof of the pudding is in eating, the worth of the pilot project model is in its duplication"(Khan: 1991, 24-25).

Akhter Hameed Khan, thus, clearly made a distinction between three kinds of research in the field of rural development, i.e., survey, observational and action; the first was required to be methodologically rigorous, the latter two, not so. The third category of action research was also viewed as synonymous with experimental pilot projects, several of which, launched at

Comilla, later led to the development of what has now widely become known as the Comilla model.

From all accounts, over the long period of his work at Comilla, Akhter Hameed Khan had obviously proved himself to be the giant of a man. He was not a social scientist in the narrow sense of the term. He was a man with a vision as well as a mission. He was a philosopher, an activist and a leader of men all rolled into one. He was acutely aware of the need for rural people, who at the end of the day paid for social science research, also seeing tangible value stemming from it. He had no time for the leisurely pace of work of many middle class researchers. It is only in this context that one can correctly appreciate his views on social science research. He did not preach mediocrity or laxity of standards in research. What he did insist on was the awareness of a sense of purpose and the only purpose that mattered to him was that social science research should be socially useful. "Let us try to be useful" is how he concluded his introduction to the first annual report of the PAVD(Khan : 1960,3).

He was never opposed to the use of theory or scientifically rigorous methodology in research as has sometime been made out by some of his contemporaries. He could not have. An intellectual giant like him, who had dedicated much of his life to reading Rumi, Al-Ghazaly, Leo Tolstoy, Gandhi and the Buddhist scriptures, could hardly ever have failed to see the necessity of using systematic and structured knowledge for guiding meaningful action which is what theory does to practice in social science.

4.3 The Later Phase: the Emergence of a Counter-Culture?

A clear indication that Akhter Hameed Khan and the American advisers who worked with him in the early years of the PAVD/PARD had wished to see theoretical and methodological rigour in the research outputs of the institution can be seen in the fact that they had required that the subject matter instructors to be recruited for it should have Ph. Ds. There is no suggestion here that a Ph.D. is either a necessary or a sufficient prerequisite of academic excellence. But the management decision of making the degree of Ph.D a desired qualification for a faculty post did demonstrate an emphasis on building an academically strong and credible faculty. Arthur Raper, a member of the first team of American advisers which was working at Comilla at the time of the establishment of the PAVD, also points out that, even though, "the fundamental idea of using the results of systematic observations and experimental research for instructional and policy-making purposes" was recognised as important, but in practice, many of the "decisions and actions were taken ahead of the evaluative contribution of the researchers". Furthermore, "much of the research work has been of the small-scale type" which has generated "vast amounts of usable unanalysed data that have accumulated through the routine recording of what has happened. Among the problems related to the use of these basic raw data have been the absence of an overall research design that encompassed their use Also, there are the continuing problems of upgrading the technical performance and objectivity of the members of the research section". He went on

to quote from an unpublished report of an evaluation team which had criticised the Academy's research as mainly of the "count and divide" type (Raper: 1970, 210-26).

An impression seems to have gained ground among some of the contemporaries of Akhter Hameed Khan that the Academy's role in research is only to engage in action research which is somehow a different kind of activity in scope and content than the theory backed and methodology driven research which takes place in other social science research institutions and which is not the business of this Academy. Such thinking, which is by no means universally shared in the faculty, ignores the fundamental epistemological tenets that theoretical backing and methodological rigour are essential components of good quality and problem oriented social science research, that a theory is nothing more than an essential means of organising ones ideas effectively before pressing them into the channels of concrete action and that there is nothing more practical in social science research than finding a piece of good theory and using it for organising action. However, as this impression has gained some ground in the faculty's own perception of its role and because there is some evidence, which will be discussed in a later stage, that it has been blunting the sharp edge of the Academy's research capabilities, it needs to be addressed.

The damaging effect that such thinking has had on the research capability of BARD over the years appears to have been succinctly documented by a review team looking at BARD's activities in 1979. The team comprised four eminent scholars,

viz. Rounaq Jahan, Manowar Hussain, S.A. Qadir and Milton Barnett. It complained of:

" a pervasive tendency best described as a trained incapacity on the part of many faculty members to think other than in terms of "the Comilla model". Alternative strategies seem to be neither sought nor desired; there is a tenacious clinging to old, ostensibly time tested methods, their possible limited relevance to the conditions of the current period notwithstanding" (Jahan et al : 1979, 14).

The team went on to complain that BARD's research tended to be fragmentary, wanting in rigour and relevance and ad hoc in nature and that it was unable to provide even the minimum level of research backstopping to its project obligations. It recommended that "cutting down on unnecessary training obligations is essential to the well-being of the Academy" (Jahan et al: 1979, 21). They had felt that resources which were then allocated to training ought to have been reallocated to strengthen sound research activities.

Thirteen years on, the faculty needs to consider if the situation has now changed or if the views expressed by Jahan et al are still valid.

4.4. THE STATE-OF-THE -ART THINKING ON ACTION RESEARCH

Akhter Hammed Khan himself used the term action research only as a synonym of organising experimental pilot projects for their subsequent wider replication elsewhere. The term was elaborated in considerable detail in an FAO manual written by Bernard Van Heck who in turn was drawing on an earlier work by Gerrit Huyzer (Van Heck: 1977, 1979; Huyzer: 1975). According to

Van Heck, the action research based programmes need to have the following objectives:

- (i) to ensure that existing rural organisations are organised or adjusted in such a way that rural people feel encouraged to participate in them;
- (ii) to stimulate, where needed, the creation of participatory types of rural organisations which are sensitive to the problems of the poor;
- (iii) to create critical awareness of their conditions and capabilities and to encourage the unorganised poor to self-mobilisation and to participation in rural organisations; and
- (iv) to promote self-supporting socio-economic group activities among the rural poor through their organisations.

Van Heck further points out that the procedure of action research needs to fulfil the following requirements : (i) the researcher plays the role of the spectator as well as the participant; he takes sides in conflict situations because not to do so would tantamount to siding with those in power, (ii) the poor are encouraged to participate in the process of research, (iii) research tools are used to stimulate and manipulate change factors in such a way that problems are solved as best as possible and a prototype of systematic action may emerge and (iv) research is conducted in such a way that brings gains to the people in the process of research itself.

Ideas associated with the term 'action research' have further been clarified by a group of British educationists in the 1980s. Cohen and Manion see action research as a procedure and describe it thus:

" essentially an on-the-spot procedure designed to deal with a concrete problem located in an immediate situation. This means that the step-by-step process is constantly monitored (ideally, that is) over varying periods of time and by a variety of mechanisms (questionnaires, diaries, interviews and case studies, for example) so that the ensuing feedback may be translated into modifications, adjustments, directional changes, redefinitions, as necessary, so as to bring about lasting benefit to the ongoing process itself" (1980, 178).

They further point out that action research is appropriate when "specific knowledge is required for a specific problem in a specific situation or when a new approach is to be grafted on to an existing system" (1980, 181). Also, in action research the task is not finished when the project ends; the participants continue to review, evaluate and improve practice.

Brown and McIntyre situate action research within the iterative process of research itself involving an on-going and cyclical movement from problem identification, formulation of general principles, hypothesis building, appropriate action, implementation of action, modification of general principles and generation of further hypotheses. Their succinct description of the complementarity between theory building and action in research is worth quoting in some detail:

"The research questions arise from an analysis of the problems of the practitioners in the situation and the immediate aim then becomes that of understanding those problems. The researcher/ actor, at any stage, formulates speculative, tentative, general principles in relation to the problems that have been identified; from these principles, hypotheses may then be generated about what action is likely to lead to the desired improvements in practice. Such action will then be tried out and data on its effects collected; these data are used to revise the earlier hypotheses and identify more appropriate action

that reflects a modification of the general principles. Collection of data on the effects of this new action may then generate further hypotheses and modified principles, and so on as we move towards a greater understanding and improvement of practice. This implies a continuous process of research and the worth of the work is judged by the understanding of, and desirable change in, the practice that is achieved" (1981, 245).

It is important to remember that action research is not a method or a technique. It is simply a procedural approach to signify emphasis on the problem solving, experimental and participative aspects of social science research. Furthermore, action research approach does not mean that research can be theoretically soft or methodologically weak. BARD's capability to engage in good quality action research will depend a great deal on its faculty's skills in linking theory with practice, i.e., building a priori structures of deductive logic and using those conceptual structures in carrying out problem solving exercises and in building replicable models of operational planning. Skills needed for action research are not separable from those needed for good quality and theoretically and methodologically sound socio-economic research. Action research is a component, albeit a crucial component, of a more comprehensive research process of using organised and codified knowledge in systematically identifying and solving concrete problems. It is not sustainable outside the totality of the process. Without the backing of a sound training in theory and methodology, it is likely to degenerate into an exercise of mere counting and listing of facts and events.

4. 5. THE NEW MANDATE

The Bangladesh Academy for Rural Development Ordinance of 1986 provides 8(eight) distinct functions to the institution. Section 8 of the Ordinance says:

"The functions of the Academy shall be -

- (a) to conduct research in rural development and allied fields;
- (b) to provide training to government officials and others concerned with rural development;
- (c) to test and experiment on concepts and theories of development;
- (d) to evaluate the programmes and activities relating to rural development;
- (e) to provide advisory and consultative service to the Government and other agencies;
- (f) to guide and supervise students, national and foreign, in their dissertation works;
- (g) to arrange and conduct national and international seminars, conferences and workshops; and
- (h) to help policy planners in the field of rural development.

One can notice a significant and qualitative difference between the BARD's new mandate of 1986 and the one it had inherited from the PAVD/PARD. Number of functions remained 8(eight) in both the mandates, but the new mandates are much wider in scope. Besides the three former responsibilities of conducting training, research and action-research, BARD has also been given the new responsibility of providing advisory and consultative services to the government and other agencies, and helping policy planners in formulating national policies related to rural development. BARD needs to take on board this pronounced shift of emphasis in its new mandate.

4.6. BARD as an Agency of Implementation

As BARD will be the core agency of implementation of the envisaged research master plan, it cannot make sense to embark on the preparation of that plan without taking a look at its organisational structure and the disciplinary orientation of its faculty.

4.6.1. The Faculty

The Academy's faculty has a sanctioned strength of 59 members of which 46 are currently on the pay roll. Out of this 46, as many as 9 are currently away on training or secondment. The existing faculty membership represents 18 different disciplinary backgrounds which can be grouped into four broad categories : (i) social science disciplines, (ii) agriculture related disciplines, (iii) pure science disciplines and (iv) support and vocational services disciplines. Details are shown in table 1. Social sciences currently represent less than half of the membership of the faculty. Economics is particularly thin on the ground; out of the five on the faculty list, one is away on secondment to the International Labour Office, one is shortly to proceed on leave preparatory to retirement, leaving only one deputy director and two assistant directors to represent the totality of the economics component of the faculty's professional expertise. The faculty appears to be particularly ill equipped in macroeconomic theorisation, model building and policy analysis. There are also no geographers and soil scientists in the faculty which severely restricts its ability of engaging in

Table 1

DISCIPLINARY BACKGROUNDS OF BARD FACULTY MEMBERS

Disciplines	Directors	Joint Directors	Deputy Directors	Assistant Directors	Total
<u>Social Science Disciplines</u>	<u>5</u>	<u>5</u>	<u>7</u>	<u>3</u>	<u>21</u>
Politics/Public Administration	1	1	3	1	6
Economics	0	2	1	2	5
Sociology	4	2	0	2	8
Psychology	0	0	1	0	1
Home Economics	0	1	0	0	1
<u>Agriculture Related Disciplines</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>4</u>	<u>11</u>
Agriculture	2	0	1	2	5
Agro Engineering	1	0	2	1	4
Livestock	0	1	0	0	1
Fisheries	0	0	0	1	1
<u>Pure Science Disciplines</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>3</u>
Biochemistry	1	1	0	0	2
Chemistry	0	0	0	1	1
<u>Support and Vocational Services Disciplines</u>	<u>0</u>	<u>5</u>	<u>2</u>	<u>4</u>	<u>11</u>
Statistics	0	2	0	2	4
Accountancy	0	1	1	0	2
Journalism	0	1	0	0	1
Library Science	0	0	0	1	1
English Literature	0	0	0	1	1
Management	0	1	1	0	2
Total	9	13	10	14	46

Source : BARD's Administration Division

research in such crucial rural development related fields as land use and soil surveys and terrestrial aspects of the management of the environment. Psychology is represented by a single member which raises the problem of the lack of opportunity of the continuing cross-fertilisation of ideas with own-discipline peers, a crucial requirement for the intellectual development of any social scientist.

There are 11 faculty members trained in agriculture related disciplines out of which five are agriculture graduates and four are irrigation engineers. Both these disciplines thus seem to have critical minimum masses of representations in the faculty which makes professional consolidation through on-going peer interaction possible. The lone livestock and fisheries experts in the faculty do not enjoy this advantage. They can continue to stay tuned to the latest advances in their fields only through on-going interactions with their peer groups in the Bangladesh Livestock Research Institute and the Bangladesh Fisheries Research Institute respectively. All these 11 members also need to professionally interrelate with their social science colleagues in the faculty in all their research activities.

There are also two nutritionists and a chemist in the faculty. They had to spend most of their time in formulation and management of a number of action - research projects in areas like public health and nutrition, rural education and women in development. Most of their research outputs are also related to bench-mark survey, evaluation or

impact assessment of these projects. They should allocate more time for their research efforts. They can make valuable contributions to research in a wide range of fields by working in close partnership with social scientists of the faculty.

The remaining 11 members of the faculty belong to a diverse range of disciplines which include statistics, accountancy, management, journalism, library science and English literature. These members have a crucial role to play in providing critical inputs into the Academy's applied research activities, but to encourage mainstream research in the intellectual traditions of these disciplines per se is perhaps outside the realm of its mandate.

A tightly managed forward planning programme for the career development of all members of the faculty deserves a high priority in the management of the Academy.

4.6.2. The Organisational Structure

According to the administrative arrangements approved by the Board of Governors in its 45th meeting on 19.9.1987, the Academy is organised in nine divisions each headed by a director. Faculty strength for each division and those in actual employment are shown in table 2.

Four of the Academy's nine divisions, i.e., those dealing with administration, project, research and training, could be regarded as management divisions engaged primarily in support and service functions while the others could be called subject matter divisions providing academic inputs for research, training

and other mandated activities. The four management divisions account for 21 out of 60 sanctioned faculty positions. If we add the posts of the Director General and the Additional Director General to the number engaged in management functions, it would seem that 38 percent of the sanctioned strength is deployed in managing the institution. On the face of it, the present organisational structure would seem to display a degree of over-management and over-bureaucratisation and there may be a case to consider if a much greater proportion of the faculty resources could not be released from peripheral management and housekeeping functions and redeployed to get on with good quality research and the preparation and updating of good quality training materials, which are in any case, the primary and mandated responsibilities of all faculty members. The research master plan will have to address this matter.

Table 2

APPROVED FACULTY STRENGTH AND ACTUAL NUMBER OF FACULTY MEMBERS EMPLOYED

DIVISIONS	APPROVED POSITIONS					IN POST				
	Director	Joint Director	Deputy Director	Assistant Director	Total	Director	Joint Director	Deputy Director	Assistant Director	Total
Administration	1	1	0	4	6	1	1	0	3	5
Project	1	1	1	1	4	1	1	1	1	4
Research	1	1	1	1	4	1	1	1	1	4
Training	1	1	1	2	5	1	1	1	2	5
Rural Economics	1	2	2	4	9	0	2	2	2	6
Rural Sociology	1	3	3	3	10	1	3	1	2	7
Rural Administra- tion	1	1	1	2	5	1	0	1	1	3
Rural Education	1	2	2	2	7	1	2	1	1	5
Agricultural Development	1	2	2	2	37	1	1	2	1	6
Total	9	14	13	21	57	8	13	9	14	44

Plus one post of the Director General and one post of the Additional Director General

Source : BARD's Administration Division

4.6.3. A Portrait of the Faculty's Self-Perception of Its Action Research Capability

A questionnaire survey to assess the faculty's thinking on a number of policy and strategic issues was conducted in November, 1991. One of the questions included in that survey was this :

"Do you think that, since the 1960s, BARD's capability in doing high quality action research has : (i) substantially improved, (ii) improved, (iii) remained about the same, (iv) deteriorated or (v) substantially deteriorated ?"

The purpose of asking this question was to understand the faculty's own perception of the state of the well-being of the Academy vis-a-vis its action research capability. Out of the 32 available faculty members at the time, 23 completed and returned the questionnaires, which represented a response rate of 72 per cent. The responses, cross-tabulated with the ranks of the faculty members, are presented in table 3. Most respondents chose to answer the question with reference to the base line of the 1970s rather than the 1960s.

Surprisingly, 78 per cent, or nearly four-fifths, of the respondents said that the Academy's research capability has declined or substantially declined since the 1970s. The assessment was shared by two-thirds of the responding directors. Only three respondents (13 per cent) felt that the capability had remained about the same and only two, a director and a joint director, said that it had improved. It is significant that none of the deputy or assistant directors, i.e. , the younger members of the faculty, shared the minority perception of improvement.

Table 3

FACULTY'S SELF-PERCEPTION OF ITS ACTION RESEARCH CAPABILITY

Question = Do you think that, since the 1970s, BARD's capability in doing high quality action research has :	Director	Joint Director	Deputy Director	Assistant Director	Total
* Substantially improved	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
* Improved	1 (33.3)	1 (16.7)	0 (0.0)	0 (0.0)	2 (8.7)
* Remained about the same	0 (0.0)	1 (16.7)	0 (0.0)	2 (18.2)	3 (13.0)
* Deteriorated	2 (66.7)	3 (50.0)	2 (66.7)	7 (63.6)	14 (60.9)
* Substantially deteriorated	0 (0.0)	1 (16.7)	1 (33.3)	2 (18.2)	4 (17.4)

All responses	3 (100.0)	6 (100.0)	3 (100.0)	11 (100.0)	23 (100.0)

Source : Questionnaire Survey : November, 1991.

Faculty members were also asked to give three reasons each in support of their answers. As many as 53 reasons of varied nature were received from 18 respondents which I have grouped into 10 reasonably homogeneous categories. The results are presented in table 4. It is interesting that only 20.7 per cent or one-fifth of the answers attributed the perceived decline of the Academy's research capability to exogenous reasons (external factors, lack of funds or lack of in-service training opportunities); fully four-fifths situated the reasons within the Academy itself. Nearly one-third put the blame on the inadequacies of the faculty members themselves, probably an indication of low morale or frustration or both. One-fifth put the responsibility directly at the door of the leadership, a number of other reasons cited (interpersonal equity issues, low priority given to research/ action research, lack of linkages with other research institutions) could also be indirectly attributed to those who control the decision making mechanism. On the other hand, those responding to the questionnaire may not have been fully aware of the constraints under which decision makers have to make their decisions.

Table 4

REASONS FOR THE PERCEIVED DETERIORATION OF THE ACADEMY'S ACTION RESEARCH CAPABILITY AS GIVEN BY ITS FACULTY MEMBERS

Category of reasons	Some of the cited reasons	Frequency	Percentage
1. Own inadequacies of faculty members	Lack of conceptual clarity, lack of dedication and commitment, sub-standard recruitment, resistance to new ideas, self isolation, conformism, absence of innovative spirit	16	30.2
2. Inadequacies of leadership	Lack of dynamism in leadership, growing groupism and mistrust due to weak leadership, leadership's failure to lobby sponsoring agencies, unresponsiveness	10	18.9
3. External factors	Lack of political support, political instability, loss of control on the laboratory area, NGO operations, repeated changes in government policies	7	13.2
4. Neglect of the rural contact	Discontinuance of contacts with rural institutions, lack of interest in working in rural areas, neglecting to visit rural people	5	9.4
5. Lack of fund and in-service training opportunities	Lack of funds leading to inadequate skill developments, lack of funds for doing research	4	7.5
6. Low priority given to research/action research	Low priority to scholarly as well as field-oriented research	3	5.7
7. Interpersonal equity issues	Lack of equity in promotions and in access to funded research and consultancy opportunities	3	5.7
8. Lack of linkages with other research institutions	Lack of linkages with other research institutions	2	3.8
9. Institutional weaknesses	Faculty forum not used as a forum of decision making, internal conflict	2	3.8
10. Excessive involvement in training activities	Excessive involvement in training activities	1	1.9
All categories		53	100

Source : Questionnaire Survey, November 1991.

Whether the perceptions of the faculty members are well founded or not is not a particularly relevant question. The important thing is that these perceptions are held and, therefore, need to be openly discussed in the faculty forum. The Academy's ability to play the role of a robust agency of implementing a socio-economic research master plan will, to a great extent, depend on its will to speedily address the problems indicated by the questionnaire survey.

✓ 4.7. The Research Output

Producing a chronological and subject based disaggregation of the Academy's research outputs since its establishment proved to be a difficult and tedious task. The typed and annotated register of research reports compiled by the Research Division does not list the items chronologically, subjects mentioned in the summary table do not tally with the subject labels under which detailed lists appear and the labels used are too broad and too undifferentiated to yield a useful taxonomy for analysis. The latest publication list published in December, 1991 has left out many of the older publications, probably because they are out of print. It does not provide the titles of the outputs published in the BARD's in-house English and Bangla journals and it does not differentiate between routine reports and publications of research worth. The table of the published research outputs of BARD that I have produced, therefore, is no more than a best estimate derived after a tiresome process of piecing together the information that became available. The

statistics could change after more detailed delving. The table also takes no account of the research outputs of the BARD faculty members published elsewhere. This accounting will have to be done to get a more complete picture.

The preliminary subject and chronological analysis of the Academy's research output summarised in table 5 and a selective contents analysis of some of the publications yield a number of significant findings.

Firstly, there has been a progressive decline in the quantity of the research output since the 1960s; 41 per cent of the total output was produced during the first decade, 28 per cent in the second and only 26 per cent in the third decade. The decline in output is particularly noticeable in such areas as crop production technology, agricultural extension, cooperation and credits and family planning and demography.

Secondly, a small number of faculty members trained in political science and public administration have produced quality outputs in subjects like democratisation of cooperatives, decentralisation policies and programmes, politics and development in transitional societies, corruption in public places and decentralisation and public participation. In view of the fact that politics continues to be at the very core of the development process in most developing countries, the Academy needs to encourage political economy studies like the aforementioned ones at the macro as well as the micro level.

Table-5

PUBLISHED RESEARCH OUTPUTS OF BARD

Broad Subject Areas	1960-69	1970-79	1980-89	1990 and after	Total	Percent
1. Crop and farm management surveys	12	8	6	3	29	8.79
2. Crop production technology	25	3	2	-	30	9.09
3. Agricultural extension	6	4	-	1	11	3.33
4. Livestock studies	2	1	1	-	4	1.21
5. Fisheries studies	-	-	2	-	2	0.61
6. Rural nonfarm activities	1	-	-	1	2	0.61
7. Cooperatives and credits	27	20	9	-	56	16.97
8. Small farmers	-	1	2	1	4	1.21
9. Agrarian reform	-	-	2	-	2	0.61
10 Social impact of floods	-	-	2	-	2	0.61
11. Communication	4	-	-	-	4	1.21
12. Family planning and demography	12	4	3	1	20	6.06
13. Health and nutrition	-	1	12	2	15	4.55
14. Irrigation and farm mechanisation	7	13	4	1	25	7.58
15. Politics and administration of rural institutions	19	9	10	3	41	12.42
16. Rural education	7	4	3	1	15	4.55
17. Village studies (mainly micro-sociology)	9	21	13	1	44	13.33

Broad Subject Areas	1960-69	1970-79	1980-89	1990 and after	Total	Percent
18. Women in development	5	4	15	-	24	7.27
Total	136	93	86	15	330	100.00
Percentage	41.21	28.18	26.06	4.55	100	

Sources : Research Division Records, BARD Publication Lists, Discussions with Faculty Members

Thirdly, the sociological effort of the Academy has mainly been concentrated on micro level studies focusing on one village or a group of villages. The main thrust of these studies have been the documentation and presentation of observed factual information, often without adequate attention to conceptualisation, theorisation and use of the documented information as building blocks for constructing broader structures of generalisation and abstraction. As a first generation effort, the corpus of micro-level studies already produced are useful, some are also of good quality. But the Academy needs to encourage its sociologists to gear up to a second generation of activities which will include organising the hitherto fragmented scatter of information gathering studies into broader structures of theory related knowledge, using these theoretical structures for understanding, and designing action programmes for addressing, concrete problems like poverty, gender differentials in the quality of life, institutional and attitudinal rigidities, environmental degradation and facing disasters. This will require a substantive reorientation on their part towards a greater appreciation of the major issues and

debates of contemporary sociology, a greater attention to the need for conceptualisation and methodological rigour and a greater willingness to situate local phenomena in broader canvasses of thought. It is important that the sociologists of the faculty make sure they do not miss the wood in their pursuit of studying individual trees.

Fourthly, outputs by the agriculturists of the faculty on crop production technologies and agricultural extension methods nearly dried up in the decade of the 1970s; the Academy needs to ask why ? On the positive side, however, one senior agriculturist member of the faculty has produced several excellent reports on small farmers in recent years which have stemmed from the involvement of the Academy in the execution of the donor funded Small Farmer Development Project. These studies can provide the nucleus for a major interdisciplinary research initiative in the field of poverty alleviation.

Fifthly, among the four irrigation engineers in the faculty, one has produced a series of quality research outputs on irrigation, biogas and mechanised paddy drying ; one of these studies has been undertaken in partnership with an economist, another, with a management studies person. He has also a proven record of academic and consultancy work in the field of environmental management. There is an opportunity here to encourage other engineers in the faculty to become as productive as him and use the available engineering resources as a nucleus for launching multidisciplinary research initiatives in fields like the management of the environment and land and water management.

debates of contemporary sociology, a greater attention to the need for conceptualisation and methodological rigour and a greater willingness to situate local phenomena in broader canvasses of thought. It is important that the sociologists of the faculty make sure they do not miss the wood in their pursuit of studying individual trees.

Fourthly, outputs by the agriculturists of the faculty on crop production technologies and agricultural extension methods nearly dried up in the decade of the 1970s; the Academy needs to ask why ? On the positive side, however, one senior agriculturist member of the faculty has produced several excellent reports on small farmers in recent years which have stemmed from the involvement of the Academy in the execution of the donor funded Small Farmer Development Project. These studies can provide the nucleus for a major interdisciplinary research initiative in the field of poverty alleviation.

Fifthly, among the four irrigation engineers in the faculty, one has produced a series of quality research outputs on irrigation, biogas and mechanised paddy drying ; one of these studies has been undertaken in partnership with an economist, another, with a management studies person. He has also a proven record of academic and consultancy work in the field of environmental management. There is an opportunity here to encourage other engineers in the faculty to become as productive as him and use the available engineering resources as a nucleus for launching multidisciplinary research initiatives in fields like the management of the environment and land and water management.

Inputs from geographers, soil scientists, economists and other social scientists will also be needed.

Sixthly, the two nutritionists in the faculty have produced a series of reports on public health and nutrition, rural education and women in development. Many of their reports on public health and nutrition have been produced without the partnership of Social Scientists. As a result the economic and the social contents of these studies are rather diffused. One of the two nutritionists was promoted to a senior management post about one decade before and since then he had to keep himself busy in management of training activities and also personnel management of the Academy. Since public health, nutrition, rural education and women in development are important areas related to human development, the Academy should give more attention to studies on these areas and recruit more appropriate personnel in this field. The nutritionist in the senior management post also should spend a considerable slot of his time in various studies in these areas. Such studies, however, should also involve social scientists, specially economists and sociologists to improve the contents.

Seventhly, the economics content in the Academy's outputs, particularly those of the 1980s, is extremely weak and needs to be strengthened.

BUILDING A RESEARCH NETWORK FOR RURAL DEVELOPMENT IN BANGLADESH

5.1 Nature of the Need

In the modern world, no institution, however well-established and well-regarded, can exist as an island unto itself. This is particularly so if the institution's principal responsibility is to carry out socio-economic research for rural development. A large number of public sector research institutions as well as research units of non-governmental organisations are currently carrying out socio-economic research on a wide range of matters which impinge on various aspects of rural development. At the present time much of this activity is localised to specific institutions and there is very little inter-institutional collaboration. The stock of research outputs which is being built in Bangladesh today is therefore, fragmented across the country. There is no systematised information or access system on the basis of which any individual researcher or a team of researchers can get to know at any given point in time who else in the country are also working on similar or allied problems and what stock of research findings has already been built up in that specific field of specialisation. At the present time, it is impossible to assess how much of the work which is going on is duplicative and inadequately targeted to the felt needs of the country's development process. There is no standardised information base on research capability that exists in the country and no basis to assess the quality level of that capability. For funded research in this country to produce the

best value for money and to secure the mobilisation of the best resources for the right jobs, it is important to facilitate the growth of a nationwide free and competitive market for research. BARD can take the lead in organising the sector of that market which deals with socio-economic research for rural development.

5.2 How to Build the Network

A market needs an access system. The network that I am proposing here will be the access system of the market sector relating to socio-economic research for rural development. The building of the network could proceed in steps and a tentative timetable for completion of the steps could also be set. This could be as follows:

- | | |
|---|--------------------------------|
| (i) Nomination by the Director General of BARD of a 3-member network initiatives committee(NIC) | End of August, 1992 |
| (ii) Identification by the NIC of core, support and the link institutions which will form part of the network | End of August, 1992 |
| (iii) Discussion of the list in a faculty meeting and finalisation of the list | End of August, 1992 |
| (iv) Convening a network meeting of the representatives of the identified institutions for agreement of policy issues; nomination of an interinstitutional network management committee (NMC) with the Director General of BARD as its chairperson. | Middle of September, 1992 |
| (v) An exchange of curriculum vitae of the research staff of all the participative institutions in a standardised format | End of September, 1992 |
| (vi) Screening of curriculum vitae by a committee of eminent scholars (CES) on the basis of pre-determined quality control criteria | Middle to end of October, 1992 |

- | | |
|---|-----------------------|
| (vii) Putting the screened cvs on a consolidated diskette and the distribution of the diskette copies to all participative institutions | End of November, 1992 |
| • | |
| (viii) Preparation, printing and publication of an index of researchers cross-classified by their employing institutions, areas of specialisation and disciplinary backgrounds | End of December, 1992 |
| (ix) Preparation, printing and publication of a consolidated list of research projects, both completed and in progress, in which network researchers had participated/are participating, cross-classified by areas of specialisation | End of December, 1992 |
| (x) Annual meetings of the CES and the NMC for updating the network files every year so that new names are added, cvs on the file are suitable revised and names of people who are no longer available are deleted | |
| (xi) Annual publication of the updated register of researchers and the updated consolidated list of research projects | |
| (xii) Annual circulation of the two publications to all network institutions, all link institutions of CIRDAP, all international and donor agencies located at Dhaka and all Secretaries of the Ministries dealing with matters relating to rural development | |

5.3 Identification of Institutions

First, a list of core institutions could be drawn up. In this category will be the institutions which represent main concentrations of social science scholars with interests in various aspects of rural development. The following is a tentative list :

1. Bangladesh Academy for Rural Development (BARD), Comilla,
2. Bangladesh Institute of Development Studies (BIDS), Dhaka,
3. Rural Development Academy (RDA), Bogra,
4. Rural Development Training Institute(RDTI), Sylhet,
5. Economics, Political Science, Public Administration, Business Administration, Geography and Sociology Departments/Institutes of Dhaka and Chittagong Universities (section 6 of the BARD Ordinance of 1986 expects the Academy to undertake experimental schemes in Dhaka and Chittagong divisions),
6. National Institute of Local Government (NILG), Dhaka,
7. Bangladesh Agriculture Research Council (BARC), Dhaka,
8. Bangladesh Rural Development Board (BRDB), Dhaka,
9. Palli Karma Sahayak Foundation (PKSF), Dhaka.

Second, a list of support institutions also needs to be identified. Relationships with these institutions will have to be established on the basis of complementarities of professional interests between social scientists and other scientists like agriculturists, livestock, fisheries and forestry experts, irrigation engineers, soil scientists and other experts who have contributions to make to strengthen the production base of the rural economy. Following is a recommended list :

1. Bangladesh Agricultural Research Institute (BARI), Joydebpur, Gazipur,
2. Bangladesh Rice Research Institute (BRRI), Joydebpur, Gazipur,
3. Bangladesh Jute Research Institute (BJRI), Dhaka,
4. Bangladesh Agricultural University (BAU), Mymensingh,
5. Bangladesh Forest Research Institute (BFRI), Chittagong,

6. Bangladesh Livestock Research Institute (BLRI), Savar, Dhaka,
7. Fisheries Research Institute, Mymensingh,
8. Sugarcane Research and Training Institute, Ishurdi, Pabna,
9. Bangladesh Tea Research Institute (BTRI), Srimangal, Sylhet,
10. Soil Resources Development Institute (SRDI), Dhaka.

Third, the network will also include a list of NGOs and international funding agencies. A number of NGOs in Bangladesh today have developed considerable experience in grass-roots level rural development as well as an impressive level of organisational and research capability. BARD will gain a great deal by working in active and close collaboration with these NGOs. They know better than BARD the art of survival in the market place and can therefore provide a source of fresh ideas.

During the period of my work as the Chief Technical Adviser of this project I have had wide ranging discussions with the executives of the international agencies located at Dhaka. I have noticed a great deal of interest in these agencies for working in collaboration with BARD. There also exists a great deal of frustration amongst them about the delays that take place in the collaborative arrangements getting approved through the government system.

BARD should negotiate, as soon as possible, with the Ministry of the LGRD and C, a degree of autonomy for itself in directly interacting with international agencies located at Dhaka

with a view to developing credible research proposals in the areas of priority interest identified in this document. If the proposals are developed through this process, they will be more likely to attract funds. Some of these proposals can also be developed jointly on a tripartite basis involving BARD, an NGO and a potential funding agency. BARD's interactions with NGOs and international agencies should take place on a continuing basis so that an environment of professional trust and goodwill is created on which the proposed extended network can be founded.

5.4 Screening of CVs by a Committee of Eminent Scholars

The impression I get after staying at BARD for ten months and interacting with a broad cross-section of academics and researchers in a large number of institutions is that there is a very wide range of variations in the capability levels of personnel employed in these institutions. Most institutions have researchers who are remarkably bright, productive and forward looking while some of the others are much less so. Publication lists in some cvs contain quality outputs published in prestigious journals, others may include indifferently written mimeographed or photocopied papers presented in seminars or published in-house. Unless a mechanism of quality control is introduced for the inclusion of names in the network files, these files may not have much operational value.

The CES needs to include at least one scholar from each of the disciplines represented in BARD's faculty. It may wish to operate a point system for grading the research outputs of the

individual researchers. The following is an illustrative point system :

- | | | |
|--------|--|--|
| (i) | A book published by a major market-based publisher (e.g. UPL). | 10 points |
| (ii) | A book published by an institutional publisher supported by budget subsidies (e.g., NILG), provided the author is not employed by the publishing institution | 7 points |
| (iii) | An article published in a prestigious internationally circulated professional journal (the list to be drawn by the CES) | 5 points |
| (iv) | A major consultancy report (not the outputs of data collection and data processing subcontracts) involving conceptualisation, design and policy analysis | 5 points |
| (v) | A book published in-house | 3 points |
| (vi) | An article published in a less well known journal | 2 points |
| (vii) | An article published in an in-house journal | 1 point |
| (viii) | Unpublished seminar papers, outputs of data gathering and preliminary data processing exercises, in-house survey reports presenting descriptive material without analysis and outputs of data gathering subcontracts | Should count as training in research and not as research outputs |

If any of the above outputs results from shared authorship, the points will be shared equally, irrespective of seniority. For instance if two authors produce a category (i) output, each will get 5 points.

The CES may determine a minimum threshold of points for including a name in the network file. This threshold may be determined after assessing the supply side of the market.

PRIORITY SUBJECT AREAS FOR A PROGRAMME OF ACTION RESEARCH ON THE
SOCIO-ECONOMIC ASPECTS OF RURAL DEVELOPMENT

6.1. A participative Approach to the Identification of Priority
Subject Areas

In accordance with the revised Work Plan earlier submitted to the UNDP and the Ministry of Local Government, Rural Development and Cooperatives of the Government of the People's Republic of Bangladesh, the identification of subjects to be researched/investigated, target groups/ communities to be covered and research methodologies to be applied and/or tested by the BARD faculty within the framework of the research master plan for rural development under preparation was completed on schedule between 15 October 1991 to 31 March 1992. This was done in a series of methodical and participative steps and in collaboration with policy and action counterparts of the BARD faculty. Steps leading to the completion of the activity were as follows :

- (a) A presentation by the CTA on the identification of main issues of rural development to be addressed in the proposed research plan in a special faculty meeting convened on 5.11.1991, i.e. within three weeks of joining his post as the CTA,
- (b) Circulation of a paper to the members of the faculty and consultants of the ADB Project, listing and further elaborating these issues on 1.12.1992,

- (c) Further discussion of the list of subject areas in a formal meeting of senior faculty on 8.2. 1992 which was chaired by the National Project Director,
- (d) A detailed discussion on appropriate methodologies during the in-service training course organised by the CTA in March in which all available faculty members participated and
- (e) Informal discussions with faculty members, chief executives/senior researchers of leading research institutions of Bangladesh, international agencies, donor agencies and national and foreign non-governmental organisations. Among the institutions/agencies visited were (i) Bangladesh Institute of Development Studies, Dhaka, (ii) National Institute of Local Government, Dhaka (iii) Bangladesh Forest Research Institute, Chittagong, (iv) Fisheries Research Institute, Cox's Bazar, (v) Soil Resources Development Institute, Comilla Regional Office, (vi) Bangladesh Bureau of Statistics, Comilla Regional Office, (vii) Survey of Bangladesh, Dhaka , (viii) Economics and Sociology Departments of Chittagong University, (ix) Zila Parishad, Cox's Bazar, (x) Ford Foundation, Dhaka, (xi) Swedish International Development Agency, Dhaka, (xii) UK Overseas Development Administration, Dhaka, (xiii) Japan International Cooperation Agency, Dhaka, (xiv) Oxfam, Dhaka, (xv) Proshika, Dhaka, (xvi) Food and Agriculture

Organisation, Dhaka, (xvii) South Asia Partnership, Dhaka, (xviii) Bangladesh Agriculture University, Mymensingh, (xix) Grameen Bank, Dhaka, (xx) Fisheries Research Institute, Mymensingh, (xxi) Bangladesh Agricultural Research Council, Dhaka and several others. In selecting subject areas of research, the CTA has taken on board the views expressed by the chief executives/officials/researchers of the organisations he visited.

In drawing up the list of subject areas to be included in the research master plan, the CTA had taken into account the priorities expressed in the Bangladesh Fourth Five Year Plan as well as in the Reports of the Task Forces sponsored by the country's Interim Government in 1990-91.

An effort has also been made to make the list sensitive to the necessity of understanding the nature of the intellectual shifts in the current international environment in which the development planning processes of Third World countries are having to be situated and to bring BARD closer to international mainstream thinking on current priorities of social science research.

The list stems from a premise that BARD's continued viability and sustainability and future development as an institution of excellence in research will depend, to a considerable extent, on its ability to define for itself a distinctive research space which does not overlap or conflict too

much with other research institutions which too are contributing to the national development effort. In defining its own distinctive research space it will need to consolidate its strength in those areas where it has enjoyed, and continues to enjoy, comparative advantages and not deploy too many resources in those areas where it does not. The task will become easier if the following set of principles is accepted at the policy level:

6.2. Principles of Identification

BARD will continue to retain its predominant character as an institution of research and training rooted in social sciences.

It will promote interdisciplinarity in all its research endeavors, i.e, encourage its economists, sociologists, anthropologists and other single discipline based social scientists to collaborate with each other in addressing specific problems.

It will not seek to compete with other research institutions in those areas of research in which it does not enjoy comparative advantage, viz., genetics, biological, biochemistry and other life science aspects of crop, fish and livestock production. Research in these areas are best left to organisations like the Bangladesh Agricultural Research Institute, the Bangladesh Rice Research Institute, the Bangladesh Livestock Research Institute and the Fisheries Research Institute. What BARD needs to do instead is to seek collaborative

arrangements with these institutions so that it could receive pure science inputs from them and offer good quality socio-economic inputs to them in return.

It will encourage those of its faculty members who are trained in disciplines other than social sciences to organise their research activities in collaboration with those of their colleagues who are trained in social sciences. This collaboration has to stem from a realistic appreciation of the fact that, for instance, the lone fisheries expert in the BARD faculty cannot gainfully seek to compete in quality and range of his research outputs with those of the Fisheries Research Institute at Mymensingh. A more pragmatic approach would be for BARD to encourage this member of its faculty to play the role of a bridgehead of collaboration with the professionals of the Fisheries Research Institute on the one hand and his social science colleagues in the BARD faculty on the other. This way BARD's fisheries man will not be marginalised and at the same time credible research projects on fisheries development will emerge which are sound in life science as well as socio-economic aspects. Similar arrangements will also have to be made for BARD's biochemists, livestock experts and engineers. In making these arrangements, it will be necessary to ensure that neither the social scientists nor the others feel marginalised.

In practical social science research, selection of information handling, analysis and interpretation techniques are usually embedded in the selection of the methodology itself. The specific item of the technique to be used depends on the

particular nature of the research problem in hand. An in-service training course on socio-economic research methodologies and techniques was organised for the benefit of the BARD faculty as an integral part of this project.

The identification exercise reported here is not, and cannot be, a one-shot exercise. The exercise has to be seen as an on-going, iterative and developing process which will have to be sensitive to shifts in national and institutional priorities and BARD's own continuous reassessment of its role and its faculty's career development needs.

6.3 List of Priority Subject Areas Identified for a Programme of Action Research on the Socio-Economic Aspects of Rural Development

- 0 Continuing appraisal and further development of economic, political, social and spatial theories for building, testing and replicating macro and micro models of rural development, possibly leading on to the development of a New Comilla Model -Mark II.
- 0 The global context of rural development -how the action frame is determined in a regime of structural adjustment, liberalisation and privatisation.
- 0 State, local state and class as agencies of change-forces of the differentiation of peasantry within the village communities, comprehensive village development versus target groups oriented village development, role of rural elites and the structure of power in rural communities, understanding the political dimension of rural development and identifying areas of intervention.
- 0 Rural poverty and measures of its alleviation - village level longitudinal surveys on poverty profiles and impact of rural programmes on poverty.
- 0 Quality of rural life - literacy, access to health services, nutrition including nutrition status of children and pregnant and lactating women.

0 Women in development - role and status of women in rural society; extent and nature of participation in income generating activities; extent of their own control on the income they generate; extent of their effective participation in decision making in matters like marriage, number and spacing of children, use of family planning measures and differentiated access to schooling for the boy and the girl child.

0 Land concentration and distribution-size of holdings and extent of their fragmentation as factors influencing agricultural productivity, conditions of small and marginal farmers and of landless labour.

0 Village level studies and surveys on aspects of agricultural production - land use surveys with a view to devising more effective ways of land use planning; present status of water resources and irrigation management and the ways to improve it; organisation and management of timely and affordable supply of agricultural inputs like seeds, pesticides, essential tools and credit; adaptation of technologies related to small-scale farm implements under varying field conditions; use of intermediate technology related to rural energy equipments; ways of extending the acreage under multiple cropping and better and more efficient management of common rural property resources (land and water); ways of increasing agricultural yields;

0 Development and more effective management of livestock resources.

0 Development and more effective management of fisheries resources

0 Village level studies and surveys on aspects of agricultural marketing and pricing - shifts in differential distribution of gains between different categories of land owning households, agricultural labourers and traders; function and growth-inducing role of rural market centres.

0 Current status of rural cooperatives and ways of strengthening them - their managerial, organisational and financial needs; identification of weaknesses and ways of removing them; their survivability in the face of market forces.

0 Socioeconomic condition of labour in tea gardens.

0 Rural industries and other sources of off-farm employment - role of periurban enterprises in absorbing rural surplus labour; organisation, structure and labour processes in these enterprises.

- * O Extent and nature of rural-to-urban migration of labour and its impact on rural development.
- O People's participation in disaster management.
- O People's participation in the management of the environment - prevention of the degradation of the rural environment; planning intervention to break the vicious cycle of environmental degradation and deepening rural poverty.
- O Population Studies
- ✓ O Social forestry
- ✓ O Extension and development support communication

RECOMMENDATIONS

The following is a set of recommendations for the Government of the People's Republic of Bangladesh to consider. If these are accepted at the policy level, it should be possible to implement them within a two-year period. The recommendation for the medium and the long term is that it should stay at a steady growth trajectory as a world class institution.

1. BARD will continue to retain its predominant character as an academic institution rooted in the theoretical grounds of the social sciences. It will do so without marginalising any of the disciplines represented in its faculty.
2. It will pay adequate attention to each of the eight functions listed in section 8 of the BARD Ordinance of 1986. Each of its academic divisions will report previous year's performance and next year's planned activities for each of the eight functions in the annual planning conference (APC):
 - the system of separate reporting by each academic division on functions 1,2,3 and 7 will begin immediately and
 - similar reports on functions 4,5,6 and 8 will begin in the medium term.

3. It will promote interdisciplinarity in all its research and action research endeavours. Career advancement prospects of the faculty members will be directly linked with their efforts in knowledge-deepening, i.e., consolidation of their own discipline based knowledge, as well as knowledge-widening, i.e., familiarisation with conceptual structures and applications of at least two other disciplines.
4. It will take steps to build a nationwide socio-economic research network along the lines suggested in this document.
5. It will not seek to compete with other research institutions in those areas of rural development research in which it does not enjoy comparative advantage, e.g., fundamental research in crop culture and livestock and fisheries production. Instead, it will seek collaborative arrangements with those research institutions which specialise in those fields.
6. It will encourage those of its faculty members who are trained in disciplines other than social sciences to organise their research activities in collaboration with those who are trained in social sciences. It will also encourage them to play the roles of BARD's bridgeheads of collaborations with other research institutions specialising in their respective disciplines.

7. It will undertake a systematic appraisal of the academic record of all members of the faculty with a view to setting in motion a carefully managed professional specialisation forward plan which will involve all faculty members. It will also explore ways of linking the career advancement prospects of members more closely with their academic records and performance than with their seniorities. It will introduce a point system for evaluating the research outputs of all faculty members.
8. It will introduce similar point systems for assessing the level and quality of the participation of the faculty members in other seven functions which the Ordinance of 1986 requires them to perform. The points received for all the eight functions will be combined together for arriving at a unified score for each faculty member. Performance in research and action research will be given a higher weightage than in other functions and will account for at least 60 per cent of the points in the unified points system.
9. The resource appraisal exercise of the faculty will be carried out by an expatriate consultant working in association with a team comprising the Director General of BARD and three eminent Bangladeshi scholars drawn from outside BARD.
10. It will apply strict quality control on all its future recruitments to the faculty. Existing vacancies will be

filled only after a careful assessment of needs for specialist inputs and existing disciplinary gaps in the faculty.

11. It will consider the desirability of reorganising its existing co-ordinating and academic division for the purpose of releasing faculty posts for creating new subject-matter divisions for such priority areas on environment and disaster management and women in development.
12. The total member of divisions and Faculty members, however, may not be increased for the sake of overall management of the Academy.
13. It will take active steps to debureaucratise its mode of functioning. Academic divisions should have no need for retaining note sheets in their filing systems. Necessary office orders could be drafted and signed on the basis of brief and business-like meetings between the divisional directors concerned and the Director General. Brief and informal discussions should replace the submission of written notes and their passage through several tiers of the hierarchy as a method of arriving at decisions.
14. It will undertake, over a six-month period, a strict time accounting exercise for finding out how much time is spent on inaugural and closing ceremonies of courses,

other ceremonial functions, coordination committee meetings and faculty meetings. A stricter time budgeting could result in at least 50 per cent saving on time spent on these items of business without any loss of efficiency or solemnity.

15. It will create a separate budget line for each of its nine divisions. Each of the academic divisions will also have eight separate budget sub-lines for each of the mandatory functions. The administrative division will have a separate budget sub-line for the library. At least 3 per cent of the revenue budget will be spent on the purchase of books and periodicals. Directors of divisions will be personally responsible for drawing up appropriate lists.

16. It will consider limiting its training activities to
managable proportions in order to release resources for
strengthening its research and action research
activities. It will do so because it believes that its
future viability will depend on its regaining the
initiative as a leader in research and action research
in the field of rural development.

17. The Ministry of Local Government, Rural Development and Cooperatives will consider granting BARD a much greater degree of autonomy than it enjoys at the moment. Once the policy measures are approved by the Board of Governors the Director General should be left to get on

with the job of managing BARD without having to refer all administrative decisions back to the Ministry.

18. BARD's location within one of the sectoral ministries, i.e., the LGRD&C, limits its effectiveness of action in those areas of rural development which fall outside the jurisdiction of its controlling ministry. The Government may therefore consider moving it to a more central location like the Ministry of the Establishment or the Prime Minister's Secretariat. If that takes time, an inter-ministerial standing committee, comprising representatives of all ministries in charge of rural development related functions, needs to be created quickly for processing BARD's research and action research projects.
19. The Government may consider creating an endowment fund for BARD similar to the one that exists for the Bangladesh Institute for Development Studies. It can then meet its revenue expenditures from the interest earnings of that fund.
20. BARD needs to be allowed to raise additional funds by directly entering the consultancy and commissioned research market. It can then meet a part of its revenue expenditure from that source.
21. The Government will consider encouraging and supporting BARD to establish itself as a strong competitor in the

consultancy and commissioned research market. As a part of this encouragement, BARD faculty members will need to be allowed to receive market rate incomes. BARD will then draw a levy from these market rate incomes which will be redeployed for institutional strengthening.

READING LIST

Bell, Judith (1987) Doing Your Research Project: A Guide for First Time Researchers in Education and Social Science, Milton Keynes: Open University.

Brown, Sally and Donald, McIntyre (1981) "An action-research approach in innovation in centralised education systems", European Journal of Science Education, Vol. 3, No.3, pp. 243-58.

Cohen, L. and L. Manion (1980) Research Methods in Education, London: Croom Helm.

Conyers, Diana, D.M. Warren and Peter van Tilburg (1990) The Role of Integrated Rural Development Projects in Developing Local Institutional Capacity, Studies in Technology and Social Change, No. 2, Amess, Iowa: Iowa State University.

Demery, Lionel and Tony Addison (1987) The Alleviation of Poverty under Structural Adjustment, Washington D.C. : World Bank.

Dey, S.K. (1964) Community Development: A Brief-Eye View, Bombay: Asia Publishing House.

Dervis, Kemal, Jaime de Melo and Sherman Robinson (1982) General Equilibrium Models for Development Policy : A World Bank Research Publications, Cambridge : Cambridge University Press.

Ferroni, Macro and Ravi Kanbur (1990) Poverty Conscious Restructuring of Public Expenditures, Social Dimensions of Adjustment in Sub-Saharan Africa Working Paper No. 9, Washington DC : World Bank.

Food and Agriculture Organization (1979) FAO Rural Organizations Action Programme (ROAP), Rome: Food and Agriculture Organization of the United Nations.

Friedmann, J.P.(1966) Regional Development Policy: A Case Study of Venezuela, Cambridge, Massachusetts: MIT Press.

Government of Bangladesh and World Bank (1981) Bangladesh Integrated Rural Development Program : A Joint Review by Government and the World Bank, Dhaka: Ministry of Local Government, Rural Development and Co-operatives and External Resources Division, Ministry of Finance.

Griffin, Keith and Azizur Rahman Khan (1978) "Poverty in the Third World : Ugly Facts and Fancy Models", World Development, Vol. 6, No. 3, pp. 295-304.

Heck, Bernard van (1977) The Involvement of the Poor in Development through Rural Organizations: Framework for Research-cum-Action for the FAO Rural Organization Action Programme (ROAP), Rome: Food and Agriculture Organisation of the United Nations.

Hirschman, A.O. (1958) The Strategy of Economic Development, New Haven: Yale University Press.

Hye, Hasnat Abdul (1989) Integrated Rural Development: Bangladesh, sponsored by Centre on Integrated Rural Development for Asia and the Pacific, New Delhi: Sterling Publishers.

Huyzer, Gerrit (1975) Applied Social Science and Social Action: A Note on New Approaches, Nimeguen: Third World Centre.

Ishaque, H.S.M. (1947) ABC of Rural Reconstruction, Dhaka: Director of Public Administration.

Jahan, Rounaq; Manowar Hussain; S.A. Qadir and Milton Barnett (1979), Comilla After Twenty Years: A Preliminary Review, Dhaka: The National Foundation for Research on Human Resource Development.

Johnson, Omotunde and Joanne Salop (1980) "Distribution aspects of stabilization programs in developing countries", IMF Staff Papers, Vol. 27, No. 1.

Khan, Akhter Hameed (1960); Director's Speech, First Annual Report, Comilla : Pakistan Academy for Village Development.

Khan, Akhter Hameed (1991) " My Development Education", Asia-Pacific Journal of Rural Development, Vol. 1, No.2, PP.16-34.

Lele, Uma (1990) "Structural Adjustment, Agricultural Development and the Poor: Some Lessons from the Malawian Experience", World Development, Vol. 18, No. 9. pp. 1207-19.

Lipton, Michael (1988) The Poor and the Poorest : Some Interim Findings, World Bank Discussion Paper, Washington DC: World Bank.

Myrdal, G. (1957) Economic Theory and Under - Developed Regions, London: Gerald Duckworth.

Pakistan Academy for Village Development (1960) Pakistan Academy for Village Development, Comilla : Pakistan Academy for Village Development.

Raper, Arthur F. (1970) Rural Development in Action: The Comprehensive Experiment at Comilla, East Pakistan, Ithaca: Cornell University Press.

Ruttan, Vernon W. (1984) "Integrated Rural Development Programmes: A Historical Perspective", World Development, Vol. 12, No. 4, pp-393-401.

Saha, Suranjit Kumar (1977) Spatial Impact of Growth Poles in the Context of Regional Development Planning, Ph.D. Thesis, Cardiff : University College of Wales Institute of Science and Technology.

Saha, Suranjit Kumar (1978) "Explanation in Regional Planning", Oriental Geographer, Vol. XXII, Nos. 1 and 2, pp. 37-56.

Saha, Suranjit Kumar (1980) "Rationale and Organisation of Environmental Education for River Basin Planning", a research paper presented in the Second European Conference on Environmental Education, held at Berne, Switzerland, 30 March -2 April, 1980, and published in Science and Public Policy: Journal of Science Policy Foundation, London, Vol. 7, No.4, pp. 241-51.

Saha, Suranjit Kumar (1983) "River Basin Planning as a Field of Study: Design of a Course Structure for Practitioners" in Saha, S.K. and C.J. Barrow (eds.), River Basin Planning: Theory and Practice, Chichester: John Wiley and Sons.

Saha, Suranjit Kumar (1991) "Role of Industrialisation in Development of Sub-Saharan Africa", Economic and Political Weekly, Vol. XXVI, No. 48, pp. 2753-62.

Sen, Amartya (1981) Poverty and Famines: An Essay on Entitlement and Deprivation, Oxford: Clarendon Press.

Stewart, Frances (ed) (1983) Work Income and Inequality : Payment Systems in the Third World, London : Macmillan.

Tagore, Rabindranath (1915) "Polleer Unnati" (Rural Development), in Polli Prokriti, Rabindra Rachonaboli, Vol. 17, Calcutta: Vishvabharati, pp. 515-23.

Tagore, Rabindranath (1918) "Bhoomilokkhi" (Wealth of Land), in Polli Prokriti, Rabindra Rachonaboli, Vol. 17, Calcutta : Vishvabharati, pp. 524-27.

Tepper, Elliot (1966) Changing Patterns of Administration in Rural East Pakistan, East Lansing : Asian Studies Centre.

V-AID Administration (1959) Village AID Five Year Plan : 1955-56 to 1959-60, Government of Pakistan, Ministry of Economic Affairs, Karachi : Government Press.

World Bank (1975) Rural Development Sector Policy Paper, Washington DC : World Bank .

World Bank (1986) Poverty and Hunger : Issues and Options for Food Security in Developing Countries, Washington DC : World Bank.

World Bank (1992) Bangladesh : Selected Issues in External Competitiveness and Economic Efficiency, South Asia Country Department I; Country Operations, Industry and Finance Division, Report No. 10265-BD, Dhaka: World Bank.

Yagci, Fahrettin, Steven Kamin and Vicki Rosenbaum (1985)
"Structural adjustment lending, an evaluation of program design"
World Bank Staff Working Paper No. 735, Washington DC: World Bank.

DIMENSIONS AND INDICATORS OF DEVELOPMENT

The concept of development has different dimensions and meanings. It has been defined as a process of change involving the whole society -its economic, socio-cultural, political and physical structures, as well as the value system and way of life of the people. The concept of development has subjective evaluative, and objective empirical meanings (Arndt, H. W. 1987). From the former perspective, it can be viewed as a process of realising certain goals and values, such as prolonged life, improved health, improved housing, better nutrition, more communications, improved transportation, improved command over resources. On the other hand, "more developed" and "less developed" countries can be comparatively studied, and the empirically found differences between them can be adopted to indicate the meaning of development. Such comparisons generally focussed on variations in per capita income, percentage of population living in rural and urban areas, percentage of workers in primary, secondary and tertiary sectors, literacy rate, mortality and fertility rate, etc. Apart from such economic variables, there are sociological variables like division of labour and social differentiation, rationalization of values and modernization of outlook, and political variables like mobilisation and participation, which are associated with the development of societies. Even though there may be some degree of autonomy among the evaluative and empirical dimensions of development, it has been found that at the empirical level there

was a certain degree of correspondence between the two, implying an integral relation among the various dimensions of development. For example, when the per capita income of a country reaches certain high level, majority of the people are likely to be engaged in the non-agricultural sector, educational level of the people is likely to be high, and mortality and fertility rates are likely to be low. Though socio-economic development is thus a holistic process having different interrelated dimensions, for greater conceptual clarity, it may be examined from economic, welfare, and socio-political perspectives.

ECONOMIC DIMENSION

Per Capita Income. It was around the time of Second World War that economic development of poor countries became an international concern. Around this time, there was also the question of measurement and indicators of development. National income was first adopted by Pigou as an indicator of welfare and well-being and he described economic welfare as a measurable part of human welfare. Income was also a record of economic activities, particularly of the production of goods and services already achieved. Though the pioneers of measuring national income and output were concerned with its importance for social welfare also, in course of time, increase in national income became the main focus of measuring development, and development began to be understood and measured in terms of per capita income. With the identification of development with increase in national income and its other derivatives like per capita income, increase in GNP became the goal of development. With this, the

importance of promoting individual welfare receded. It was assumed that well-being would automatically follow from economic growth. The over-emphasis on increase in per capita income led to certain insensitivity to the pattern of distribution of national income. Thus income, in its per capita form, moved from a partial monetary well-being, to the centre of the stage, as an indicator of welfare (UNDP, 1990). With increase in national income, particularly per capita income, becoming the main criteria of development, the main efforts in developmental activities turned from measures to raise the welfare of the entire population to measures for increasing national and per capita incomes, believing that this would enable each individual to consume more. With this, development came to be understood as a process by which the economy was transformed from one whose rate of growth of per capita income was small or negative, to one in which a significant self-sustained increase in per capita income was a permanent long run feature. (Adelman, Irma, 1961).

Structure of Economy and Work Force. It was recognised quite early that increase in per capita income led to structural transformation of the economy and society. With economic development and increased per capita income, the share of the manufacturing and service sectors of the economy expanded, and that of agricultural sector shrunk. As a result, economically underdeveloped societies had a larger proportion of the labour force in the agricultural sector, and lower proportion in the manufacturing and service sectors, while economically developed countries had a lower proportion of the workforce in the primary

(agricultural) sector, and larger proportion of the work force in the secondary (manufacturing) and tertiary (service) sectors. Similarly, the share of the agricultural sector in the national product is large in under developed societies, while in developed countries it is vary small. On the other hand, the shares of the manufacturing and service sectors in the GNP is large in developed countries, while the shares of these two sectors in GNP are rather low in less developed countries. Based on these structural characteristics of the economy, the proportions of the workforce in the primary, secondary and tertiary sectors, and the relative contributions of these sectors to GNP, were adopted as indicators of economic development. (Kuznets, Simon, 1959, 1965).

Urbanization: The shift in economic structure away from agriculture to industries implied the associate process of urbanization: dense human settlements with large proportion of population engaged in non-agricultural pursuits. In developed countries, the proportion of population living in urban areas are more, while in under-developed countries a greater proportion of the people live in rural areas. This makes the proportion of urban population another indicator of development. (Kuznets, Simon, 1959).

Saving Rate : Because of the predominance of manufacturing activities in the developed countries, economic development in the early phase was thought to be synonymous with industrialization. Industrialization required capital for building factories, installing machines, and operating the

factories; for constructing the infrastructure; and various other activities required for the sustenance of manufacturing activities. This made some scholars to identify capital formation as the main engine of economic development. Since capital formation is dependent upon the rate of savings in the community, the saving rate became another indicator for measuring development. (Nurkse, Ragnar, 1953).

Human Resource Development : In course of time, it was recognised that human resource played an important role in development, leading to emphasis on human resource development. It was recognised that the fundamental problem in development was not the creation of wealth, but the creation of the capacity to create wealth, which was located in the people of the country, particularly in their intellectual capacity. Following the works of Harbison and Myers (1964), and Theodore Schultz (1982), investment in human capital was identified to be an important source and result of economic development. The level of education was identified as the indicator of the level of development of human resource, and this led to the adoption of the educational level of the population as another indicator of development. It may be mentioned that even at this point, the emphasis on human resource development was not as an end in itself, but as a means of achieving higher GNP and per capita production, which continued to be the main objective of development. But in it, the economic dimension merged with the welfare aspect.

WELFARE DIMENSION

Equity. Experience with the social consequences of planned development in Third World Countries led to rethinking on the objectives of development. Early in the sixties, Dudley Seers (1972) emphasised that development was basically a normative concept synonymous with improvement, and its objective was creating appropriate conditions for the realization of the full potential of human personality. He, therefore, stressed that development was to be understood and measured in terms of reduction in poverty, unemployment and inequality, and not through growth in GNP and per capita income. GNP may grow rapidly without any improvement in any of these criteria.

The most important requirement for the realization of the potential of human personality was the satisfaction of the food requirements. Below certain levels of nutrition, a person lacked not merely bodily energy and good health, but even interest in anything besides food. He could not rise significantly above an animal existence. There were other basic necessities like clothing, shelter, etc. also. Another basic necessity without which personality could not develop was a job. To be chronically dependent upon another person even for food was incompatible with self-respect for a non-senile adult, especially for somebody who was preparing for an economically active life.

Both poverty and underemployment are associated in various ways with income. But even a fast increase in per capita income in itself was not enough to reduce either poverty or

unemployment. Poverty would be eliminated much more rapidly if economic growth was accompanied by a declining concentration of income. Equity should be considered an objective of development. The social barrier and inhibitions of an unequal society distorted the personalities of those who are poor. Therefore, a programme for development should seek to achieve reduction in poverty, unemployment and inequality, along with increase in GNP and per capita income.

Physical Quality of Life Index: Morris D. Morris (1979) put forward another approach to understand the important dimensions of development, particularly the welfare dimension, through his concept of Physical Quality of Life Index (PQLI). According to Morris, even in a monetized economy, increase in GNP may occur without improving well-being. The poorest groups of the society may not benefit much from rising national income. On the other hand, a country can be made better off in terms of social security, social harmony, longevity of life, mortality rate, etc. through appropriate programmes, without any increase in GNP. Morris, therefore, emphasised that the objective of development should be the satisfaction of essential human needs, along with increasing the output of goods and services. Such an approach to development required the measurement of the total output of the economy as well as the composition of output and its distribution, which the per capita income measures were unable to reflect. Two very good indicators which captured the advances on the welfare dimension were life expectancy at age one and infant mortality. Another relevant factor was the educational level

prevailing in a community. Morris, therefore, adopted life expectancy, infant mortality rate, and literacy rate as the three most universal and important components of development. Based on these three components, he developed a composite indicator of development called the Physical Quality of Life Index (PQLI). He believed that by this approach, it was possible to get a better picture of the quality of life than was possible with per capita income or GNP alone.

Human Development Index : The United Nations Development Programme (1990) emphasised that the objective of development was improving the quality of human life, by creating an enabling environment for people to enjoy long, healthy and creative lives, and not accumulation of commodities and financial wealth. With this shift in the emphasis of development to human development, development was defined as a process of enlarging people's choices. Based on this approach, three factors were identified to be the essential components of development, viz. long and healthy life, expansion of knowledge, and increase in resources needed for a decent standard of living. If these essential choices were not available, many other opportunities remained inaccessible. Additional choices, highly valued by many people, ranged from political, economic, and social freedoms to opportunities for being creative and productive, and enjoying personal self-respect and guaranteed human rights. Human development has two sides, viz. the formation of human capabilities, such as improved health, knowledge and skills, and the use people make of their acquired capabilities for leisure,

prevailing in a community. Morris, therefore, adopted life expectancy, infant mortality rate, and literacy rate as the three most universal and important components of development. Based on these three components, he developed a composite indicator of development called the Physical Quality of Life Index (PQLI). He believed that by this approach, it was possible to get a better picture of the quality of life than was possible with per capita income or GNP alone.

Human Development Index : The United Nations Development Programme (1990) emphasised that the objective of development was improving the quality of human life, by creating an enabling environment for people to enjoy long, healthy and creative lives, and not accumulation of commodities and financial wealth. With this shift in the emphasis of development to human development, development was defined as a process of enlarging people's choices. Based on this approach, three factors were identified to be the essential components of development, viz. long and healthy life, expansion of knowledge, and increase in resources needed for a decent standard of living. If these essential choices were not available, many other opportunities remained inaccessible. Additional choices, highly valued by many people, ranged from political, economic, and social freedoms to opportunities for being creative and productive, and enjoying personal self-respect and guaranteed human rights. Human development has two sides, viz. the formation of human capabilities, such as improved health, knowledge and skills, and the use people make of their acquired capabilities for leisure,

productive purposes, or being active in cultural, social, and political affairs. Income is only one option that people would like to have, while earlier its increase was identified to be the main concern of development.

Longevity of life as an indicator of development is based on three considerations, viz, the intrinsic value of longevity, on its value in helping people pursue various goals, and its association with other characteristics, such as good health and nutrition. Life expectancy at birth is the indicator of longevity. For the second key component of knowledge, literacy figures are a crude reflection of access to education. For deriving the indicator of command over resources needed for decent living, GNP per capita is the best available indicator. Combining the three components, an over all index of Human Development (HDI) is constructed.

Economic growth is essential for human development, but it may not automatically lead to human progress. Growth accompanied by an equitable distribution of income appears to be the most effective means of sustained human development. On the other hand, mere extensions of welfare programmes devoid of measures for increasing per capita income, cannot be sustained.

SOCIOLOGICAL DIMENSION

Development affects the structure and character of societies in many ways. Transformations in occupational structure, urbanization, decline in fertility, etc. are also sociological indicators of development.

As societies develop, there appears greater division of labour and functional specialisation in them. Performance of economic activities are separated from social structure, and with this the traditional modes of distribution like reciprocity are replaced by market transactions. (Parsons, Talcott, 1967; Polanyi, Karl, 1957).

Developed and under developed societies are distinct in many aspects of their culture. Evolution of universalistic values and norms is an important feature of developed societies. As societies develop, their members reject passivity, traditionalism and fatalism, and become modern in outlook.

POLITICAL DIMENSION

Developed societies are characterized by distinctive political characteristics, such as the existence of specialised political institutions, effectiveness of government to utilize human and material resources of the country for achieving national goals, degree of national integration and sense of national unity, extent of political stability, strength of democratic institutions, participation of the masses in the political process, etc. Structural differentiation of the political system is another long run requirement and characteristic of political development.

As under developed societies are characterized by the predominance of racial, linguistic, ethnic and other particularistic differences resulting in frequent eruption of conflicts and tensions, mobilisation of human and material

resources for realizing national goals is a formidable task in them. The transformation of traditional societies with such attributes into modern states required the creation of coherent political forces, integrating the people with the state. The ability of the political regime to control and mobilize its population and adapt to the stresses and tensions of socio-economic changes were dependent upon the development of political institutions, which create a political community. Historically, political institutions emerged out of the interaction and disagreement among various social groups, and the development of procedures and organisational devices for resolving these disputes. Related with the development of community feeling was the institutionalization of trust. When socio-economic development undermined and destroyed the traditional bases of association, the achievement of a high level of political development depended upon the capacity of people to develop new forms of association, which was impaired if there was not a minimum amount of trust among people belonging to disparate social groups. But traditional societies being fragmented in terms of regional, ethnic, tribal and religious bases, the members of these societies generally interact with each other on a conflictual rather than cooperative basis. Loyalties to parochial groups superseded loyalty to the state (Huntington, and Nelson, 1976).

HOLISTIC NATURE OF DEVELOPMENT

While it is possible to analytically separate the various dimensions of development into economic, welfare, sociological,

political, etc., it must be emphasized that the progress of development, involving different dimensions and variables, is not a uniform linear progression of all variables, but they change at different rates. Different variables become more critical for development at different stages of development, and in different types of countries. Even though there can be different patterns of socio-economic development, as socio-economic development is a single process, there is a certain degree of "correspondence" among the various components. Through a process of successive approximations and through inter-correlations, the United Nations Research Institute for Social Development (UNRISD, 1972), identified a set of 18 core indicators of development. In Table 1 these 18 indicators with the average correlation of each indicator to all other core indicators are given. These core indicators include normative components like life expectancy, educational enrollment, and structural components like the percentage of urban population, composition of work force, etc. indicating the importance of both normative and structural dimensions for understanding the process of development. It was found that these indicators, constituting a core set of variables, tended to change as a group with development.

The UNRISD study indicated that it was quite possible to identify what levels of social development went with given levels of economic development. This meant that particular level of social development might correspond empirically with a given level of economic development. Examination of the correspondence among various indicators of development indicated that at the

Table 1.

Core Indicators of Development Identified by UNRISD

Items/ Indicators	Average correlation with other items.
1. Expectation of life at birth	.744
2. Percentage of population in localities of 20,000 and over	.730
3. Consumption of animal protein/ capita/day	.791
4. Combined primary and secondary enrolment	.777
5. Vocational enrolment ratio	.788
6. Average number of persons per room	.783
7. Newspaper circulation per 1,000 pop	.823
8. Telephone per 1,000 pop	.762
9. Radio receivers per 1,000 pop	.737
10. Percentage of E.A.P. in electricity, gas, water, etc.	.769
11. Agricultural production per male agricultural worker	.839
12. Percentage of adult male labour in agriculture	.809
13. Electricity consumption, kwh, per capita	.687
14. Steel consumption, kg, per capita	.765
15. Energy consumption, kg of coal per capita	.760
16. Percentage of GDP derived from manufacturing	.752
17. Foreign trade per capita	.737
18. Percentage of salaried and wage earners to total E.A.P	.750

(Source: Contents and Measurement of Socio-economic Development, Geneva, UNRISD, 1972).

early stage of development, the faster changing constituents were social and cultural, while at higher stages, the economic indicators gained prominence as the faster going constituents of development. For example, while mortality decline and spread of literacy were higher in developing countries, increase in per capita income was higher in developed countries. Examination of correspondence among various indicators of development suggested that at a per capita income of around \$400 to 500 at 1961 price, there was a threshold or point of change in the interrelations of indicators where social and cultural indicators tended to slow down, while economic development indicators tended to speed up. It was also found to be the level at which fertility and population structure also underwent rapid change. Therefore, it was suggested that a per capita income of \$400-500 at 1961 price level might be adopted as a line to separate the developed from the less developed countries.

The foregoing examination of the dimensions and indicators of development indicates that the process of development has divergent inter-related characteristics mutually influencing each other. For understanding the process and extent of development, as well as for understanding the influences of different factors on the process of development, it is necessary to study the problems of development of specific societies from different perspectives.

SUMMARY AND CONCLUSION

The foregoing examination of the concept of development indicates that over the years its meaning has expanded from a

narrow focus of mere expansion in the size of the economy or per capita income. There was increasing concern with the problems of the weaker sections of the society, and the distribution of the gains of development to them. The concern of development also expanded beyond the narrow economic dimension of increase in resources and their equitable distribution, to problems of development of human capacity, both physical and intellectual, and realization of human potential to the fullest extent possible. There was also recognition of the importance of political dimension of development, reflected through such concerns as opportunity for participation in the political and social processes. This expansion in the meaning of development has implications for developmental programmes and research. Though problems connected with the generation and distribution of resources are important, problems of human resource development, such as expansion in literacy and knowledge, improvement in health level, reduction in morbidity, reduction in fertility, and other aspects of human welfare are also important. It was also found that the process of development was accompanied by distinct sociological and political characteristics. The former comprised of urbanization, transformation in occupational structure, social differentiation, growth of market, evolution of universalistic values and norms, and modernization in outlook. Political development was characterized by the development of specialized political institutions, increased mobilization and participation of citizens, and development of trust among the people. Development is a holistic process. As a result, there is a certain degree of correspondence among its various

components, though there may also have some degree of autonomy. With such a transformation in the concept of development that has occurred during the last few decades, the research concern also need to be changed. Rural development should be understood as meaning much more than the development of agriculture, rural industries, livestock and pisciculture. It involves a variety of other activities concerned with human welfare, realization of human potentials, and exercise of human freedoms. As such, the research activities of an academy devoted to the holistic development of rural society needs to have a similarly broad and holistic approach in its research efforts. From this perspective, the following broad areas may be identified for the research efforts of BARD :

- (1) Problems of generation of increased resources (income).
- (2) Distribution of resources among different sections.
- (3) Satisfaction of basic needs by weaker sections.
- (4) Problem of women's development.
- (5) Education, health, fertility control, and other dimensions of human resource development.
- (6) Urbanization.
- (7) Development of market.
- (8) Rural infrastructural facilities.
- (9) Occupational structure.
- (10) Social differentiation.
- (11) Modernization of beliefs and values.
- (12) Participation of the masses in Political process.
- (13) Effectiveness of administrative agencies and institutions.

THEORIES OF SOCIOECONOMIC DEVELOPMENT

In the previous chapter different dimensions and indicators of development were examined. It was seen that development was a multi-dimensional process, touching the economic, social, sociological and political dimensions of life. There are various views on how a society moves or can be pushed forward, in these dimensions. They may be examined briefly in order to have an understanding of the problems involved in the development of societies.

DUALISTIC THEORIES

There are certain scholars like J.H. Boeke (1953: 1961) who believe that the socio-cultural processes in under-developed societies are different from those of developed societies, making it difficult to bring about development in them. People in these societies do not behave as "economic men", as their needs are determined by social status. The result is a pervasive, inverse elasticity of supply, resulting in backward sloping supply curve. There is also the immobility of the factors of production. It is believed by these scholars that it is not possible to transform the cultural forces operating in these societies, and therefore, introduction of western developmental models in these societies may be abandoned. In stead, these societies may be reconstructed through basic socio-cultural principles operating in them.

The Russian economist A.V. Chayanov (1986) also held a more or less similar view. According to him, peasant farmers of under-

developed societies were fundamentally different from the capitalist farmers of developed countries. The peasant was not a profit maximizer, but a minimizer of risks. The high risk of harvest failure made the peasants to be reluctant to make any change to the unknown, whether it be growing of new crops, or adopting new methods. The peasant could not afford failure, for failure meant not merely poverty, but often death. This made peasants to minimize risks rather than maximize profits. Another character of the peasant was his preference for leisure to the irksomeness of labour. As a result, a peasant might not increase labour inputs in order to equate marginal inputs with marginal outputs, but preferred instead more leisure. Such problems made agricultural development and transformation of peasant societies problematic. (Griss, David, 1982; Hunt, Diana, 1979).

POPULATION GROWTH AND DEVELOPMENT

The dualist economists believed that the introduction of developmental programmes in traditional societies would only lead to increase in population, rather than an improvement in living conditions. However, the positive consequences of population growth for economic growth has been identified by scholars like Ester Boserup (1981), Marvin Harris (1977). They argued that population growth was a major cause of agricultural development, particularly in underdeveloped societies. It was argued that at any given stage of agricultural intensity, farmers were satisfied with the amount of food per head produced by them, and would work harder to produce more food only if forced to do so by an increase in their numbers. They preferred to maximize leisure

rather than profit. Farmers at any given stage of development were aware of a wide range of traditional farming techniques, but only used those that required few labour inputs. Only with an increase in population, they resorted to more labour-intensive techniques in order to increase output. Harris (1977) believed that but for the severe costs involved in controlling reproduction, human species might have remained for ever organized into small, relatively peaceful, egalitarian bands of hunter collectors. However, lack of effective and benign methods of population control rendered this mode of life unstable, and the resulting increasing population pressure necessitated communities to develop more and more intensive agriculture and other productive activities.

ECONOMIC THEORIES

Stagnation: Classical economists emphasised the importance of land, capital and labour, as the three important factors of production, the use of which significantly affected the variation in production, and therefore, the rate of economic growth. However, due to the law of diminishing returns, successive inputs of one or two of these factors against a constant supply of the other was less and less productive. In operational terms this meant that as the supply of land was limited, increased use of capital and labour used in production increased additional production at a lower rate, and at certain stage would not yield any further increase in production. On this basis, Ricardo and Malthus assumed that any increase in wage above subsistence level caused an increase in population, increase in labour force,

increase in competition for jobs, which reduced wages back to the subsistence level. As a result, in the long run wages could seldom increase beyond the subsistence level, making the societies to remain at a stagnant subsistence level of equilibrium (Meier, Gerald and Baldwin, R.E., 1962).

Role of Capital. Neoclassical economists like Alfred Marshall, Leon Walras, Roy Harrod, Evsey Domar, emphasised the contribution of capital to economic growth. Investible capital is basically dependent upon the rate of savings of a society, and Arthur Lewis (1957) pointed out that rate of savings was the key difference between under-developed and developed countries. Based on this approach, Harrod and Domar estimated the capital requirements of less developed countries, and advocated large scale export of capital to these countries for their development. (Ranis, Gustav, 1968).

Human Resource Development: Though the pioneers of economics like Adam Smith and Alfred Marshall had emphasised the role of education as an investment, subsequently there was a lack of concern about its role in development. Arthur Lewis pointed out that besides efforts for accumulation of capital, accumulation of knowledge was an important proximate cause of economic growth. Economic growth depended both upon technical knowledge about things and living creatures, and also upon social knowledge about man and his relations with his fellowmen. The former is often emphasised, but the latter is also important. Knowledge grows because man is by nature curious and experimental. Because each generation builds upon the knowledge of its forefathers, the most

important invention which has helped the accumulation of knowledge was the invention of writing. The second invention which made all the differences to the rate of growth of knowledge was the invention of scientific method. Combining these two factors determining the rate of growth of knowledge, Lewis classified under developed societies to belong to three stages, viz. preliterate societies, societies which are literate, but without scientific outlook, and societies which are literate and with scientific method. It was in literate societies with a scientific outlook to life and reality where rapid accumulation of knowledge took place (Lewis, Arthur, 1957).

The importance of human resource in economic development received a fillip through the works of Theodore Schultz (1964). His studies on production function indicated that the proportion of GNP that could be attributed to measurable inputs of capital and labour was much smaller than was expected, only 10-20 percent of the growth of total output, and the remaining was contributed through improvement in human capacity. He thus stressed the pre-eminent position of human resource development in economic development. He pointed out that skills and knowledge acquired by the people are a form of capital and that this capital was in substantial part the product of deliberate investment. The notion of the classical economists that labour was only a capacity to do manual work, requiring little knowledge and skills, a capacity with which labourers were equally endowed, was not correct. The quality of labourers was greatly enhanced in developed countries through the acquisition of knowledge and skill, which were

products of investment, and this combined with other human investment, predominantly contributed to the productive superiority of technically advanced countries.

Schultz emphasised that the acquired capabilities of farm people are of primary importance in modernizing agriculture, and improvement of this capability was the outcome of investment in human capital. Educated farmers were more capable of acquiring and using effectively some modern factors of production, like improved methods of cultivation, more productive inputs, etc. Even though several factors like irrigation, mechanization, etc. contributed to increased agricultural production, much more could be achieved from these sources through expansion of education.

Among the various levels of education, primary schooling was the most profitable of all. It entailed the lowest cost per child of schooling as children were still too young to do any appreciable amount of useful farm work. Literacy had a pervasive value in reducing costs, and in improving the productivity of the economy.

The importance of education for economic development was stressed by other scholars like Frederick Harbison and Charles Myers (1964). According to Harbison (1973) human resource - not capital, nor income, nor material resources - constituted the ultimate basis of the wealth of nations. A country which was unable to develop the skills and knowledge of its people, and to utilize them effectively in the national economy would be unable to develop anything else.

Frederick Harbison (1973) classified the human resource development problems of under-developed countries into two broad categories, viz. under development of skills and knowledge of persons in the labour force, and the under-utilization of human energies and capabilities. The two problems were interrelated. A less developed country was one characterized by the general under development of its human resources. A large proportion of the population was illiterate; there was critical shortage of nearly all strategic skills; man's mastery over nature was limited; and, as a consequence, the productivity of the masses was very low. The level of living of most people in the less developed countries have advanced only slightly for centuries, largely because of the under development of their skills and knowledge.

MARXIST THEORIES

Karl Marx believed that through the process of capitalistic development, the process of development would speed to under developed countries, incorporating them in a wholly capitalistic world economy. However, Marxist scholars were primarily concerned with the growth of inequalities within countries, and between countries, in the process of growth, rather than with the process of development. Like the classical economists, Marx believed that the main factor of economic growth was the accumulation of capital. The true price of any good was measured by the amount of labour embodied in it. But, capitalists were able to charge a price for goods above their true price, appropriating for themselves the resulting "surplus value". Because of this, income received by the workers were not sufficient to take all goods of

the market, resulting in inadequacy of demand, and unemployment and the misery that arose from it. Because a reserved army of unemployed workers always existed, capitalists could hold wages to the subsistence level. Another character of the capitalists was their search for markets for their goods in farflung parts of the world, resulting in imperialist colonialism. Thus, capitalistic development brought with it misery for the poor at home, and colonialism abroad.

Until the Second World War, Marxism had little to say about economic development in the third world. This situation changed with the post-war independence of colonial countries, and the emergence of economic development as a major issue in world affairs. Paul Baran was one of the first to explain under development. He found that the momentous expansion of productivity and welfare created by capitalism in the nineteenth century was confined to Western Europe, and a few countries of European settlement, leaving the rest of the world in the deep shadow of backwardness. He saw the answer to their problems in economic growth. But he believed that a process of development could not be sustained in underdeveloped countries because of the political and social background of the governments in power. What has been produced by the intrusion of capitalism into backward feudal societies was not capitalist development, but an economic and political amalgam combining the worst features of both worlds, blocking effectively all possibilities of economic growth.

Paul Prebisch (1971) developed the idea of "centre periphery" to explain under-development. He found that the benefits of capitalist economic growth had been very unevenly shared between the developed centre and under-developed periphery. A secular decline in the terms of trade for primary products exported by the under-developed countries was a major cause of their continued under-development. Celso Furtado (1976) pointed out that the relationship between the centre and the periphery was not only one merely of unequal sharing of the benefit of development, but also of dependence involving domination and economic exploitation. As the life of a small minority in the peripheral countries is modernized through transplantation of western consumption patterns, the transnational corporation could get a base, and from this base they controlled the access to modern technology. This resulted in "peripheral capitalism", a capitalism unable to generate innovations, and depended for transformation upon decisions from the outside. External dependence became a feature of these countries, retarding their development.

According to A.G. Frank, (1978), it was capitalism, world and national, which produced under-development in the past, and which generated under-development in the present. Frank, in striking contrast to Marx's view that capitalism was a necessary stage in lifting the under-developed world out of its backwardness, maintained that under-development was caused by capitalism. His argument was that economic development in the metropolitan capitalist countries took place at the expense of

under-developed countries through the exploitation of the surplus of these countries. Therefore, the satellite countries remained under-developed for lack of access to their own surplus. Similarly, the satellites introduced and maintained the same kind of polarization and exploitative contradictions in their own domestic economic structure. The combination of these contradictions, once firmly implanted, reinforced the process of development in the increasingly dominant metropolis and under-development in the ever more dependent satellites until they were solved through the abandonment of capitalism by one or both interdependent parts.

SOCIO PSYCHOLOGICAL THEORIES

The role of attitudes, values and related psychological and cultural variables in economic development was emphasized by many scholars, like Max Weber (1962), David McClelland (1961). These scholars pointed out that values like hard work, frugality, disciplined behaviour, contributed to economic development. Harvey Leibenstein (1978) emphasized that effectiveness of the use of resources depended simultaneously on both efficiency of allocative decisions, and the actual performance based on these allocations. The efficiency of actual performance depended on the personality of individual actors, which determined the degree to which they were interested in exerting themselves in their work. This made effort, which was presumed to be pre-determined in neoclassical theory, to become a significant discretionary variable.

Even though values are relatively stable, and moulded the character and structure of societies, studies have indicated that they could be changed, and value orientation congenial for economic development could be created. The point that values need not be an unsurmountable barrier in the development of traditional societies was emphasised by Alex Inkles (1974). Inkles found that men changed in quite fundamental ways even after they reached adulthood. Education was found to be the most powerful force shaping a man's modernity, followed by occupational experience, and mass media exposure, sharing the second rank more or less equally. City (urban influence) failed to qualify as an important modernizing force. Ethnic origin and religion also proved to be relatively unimportant. When men changed under the influence of modernizing institutions, they incorporated the norms of such organisations into their own personality, and expressed them (norms) in their own attitudes, values and behavior. The main thrust of individual modernity was to have more instrumental kind of attitude and behaviour.

Joseph Schumpeter (1955) emphasised the role of innovative persons in economic development. The business entrepreneur often acted to found a private kingdom and a dynasty. Its fascination was especially strong for people who had no other chance of achieving social distinction. They had the will to conquer, the impulse to fight, to prove themselves superior to others, to succeed for the sake, not of the fruits of success, but of success itself. According to Schumpeter, it was the

entrepreneurial spirit and motivation for outstanding achievement which was the most important factor for economic development.

Harvey Leibenstein (1957) emphasised that apart from accumulating and investing capital, economic development required constant striving of human agencies involved in it. There was considerable difference in attitudes towards work, accumulation, taking risks, etc. between the masses of people in developed and under-developed countries. These attitudes were culturally determined, and were conditioned by the socio-cultural environment of the society. Leibenstein believed that accelerated economic development of modern times could only be explained in terms of changing human attitudes to risk taking and profit making. It was the result of the replacement of subsistence orientation and traditional outlook by market orientation and money making as the chief interests in life, by men who were out to make a fortune, rather than just a living. Compared to such a situation, in under-developed countries, there was a conspicuous lack of enterprise.

Leibenstein also emphasised that in addition to motivation, there must be profit making and income earning opportunities. But these should be opportunities which more than generated income for the individual entrepreneur such as through hoarding, but should generate activities which increase the total wealth of the community, enabling the entrepreneur also to gain profits in the process. From the perspective of economic development, the former kind of activities were "zero sum activities" in contrast

to activities which contributed to increase in production called "positive sum activities".

The activities which led, directly or indirectly, to the expansion of growth agents were critically important for economic development. The stock that was relevant for development was not merely the number of entrepreneurs, but the quantum of capacities. Entrepreneurship could grow through the expansion of the number of people with entrepreneurial abilities and through expansion in the capacities of the entrepreneurs. The acquisition of entrepreneurship depended on a combination of innate ability, training, motivation, and access to opportunities. The drive of people to acquire entrepreneurial capacity was also conditioned by the rewards for such activities, on the interests in such rewards, and on the disappearance of alternative sources of rewards. The greater the rewards, the greater the number that will enter the entrepreneurial group. But the nature of rewards itself depended upon the attitudes of the community. In a society where attitudes are still of a traditional nature, when the most highly prized rewards became economic, a condition was created for a shift in attitudes towards economic aspirations, helping to expand the numbers entering this group. Therefore, the drying of alternative social and economic opportunities either in agriculture, civil service, or in other non-entrepreneurial categories, would help faster economic growth.

THE PROBLEM OF EQUITY

As the development process moved on, there was increasing recognition that the fruits of development were not equitably distributed among various sections of the population, particularly among the weaker section. There was also increasing concern about the non-economic dimensions of development. In the mid-sixties, there was vigorous denunciation of the growth oriented development economics. Dudley seers (1972) emphasised that the three essential criteria of development were reduction in poverty, increase in employment, and reduction in inequality, and that development should lead to the realization of the full potential of human personality. Beyond certain level of nutrition, a person lacked not merely bodily energy and good health, but even interest in much besides food. He could not rise significantly above an animal level of existence. To be chronically unemployed was incompatible with self-respect. Poverty could be eliminated much more rapidly if economic growth was accompanied by a declining concentration of incomes.

In 1970 David Morse, then D.G. of ILO, pleaded for the dethronement of GNP and to make employment a major goal and criterion of development. However, it was soon brought to light that in developing countries, open unemployment was largely confined to young, urban, relatively educated middle class people, who could afford to wait for better jobs than what were readily available. It was found that people often worked extremely hard and very long hours, and it was absurd to describe them as under-employed. It was realised that the working poor,

working long hours, for low incomes, was the most pervading and basic issue. This brought to prominence the low productivity of the working poor. Therefore, the task of development policy was as much as to find jobs as to increase the productivity of the people in work as also to create more productive employment opportunities. This necessitated economic growth. (Arndt, H.W., 1987).

Since McNamara became the President of the World Bank, he and the World Bank greatly advocated measures to increase the productivity and earnings of the poor forty percent of the population in developing countries. This put emphasis not on redistribution of income and wealth, but rather on increasing the productivity of the poor, thereby providing for a more equitable sharing of the benefits of growth. This led to greater emphasis on reduction of absolute poverty, rather than relative poverty, as the policy objective. Thus, a situation where all sections could benefit from growth, even though the rich benefited more than the poor, was accepted to be not undesirable, and the idea of redistribution with growth emerged. These ideas led to the formulation of "basic needs" approach. It aimed at the achievement of a certain minimum standard of living by the poorest group. This covered food, shelter, clothing, access to essential services such as safe drinking water, sanitation, transport, health, education, and adequately remunerated job for everyone willing to work. (Arndt, H.W., 1987).

The U.N. Social Affairs Division, New York, and the U.N. Research Institute for Social Development at Geneva, advocated a social approach to development. The starting point of the unified approach was the rejection of growth of national income as the sole objective of development planning. It stressed the need to plan directly and simultaneously for all objectives of development. Based on this, it was attempted to develop a unified approach to development, but the efforts dissipated (UNRISD, 1980). Despite this failure, there was the realization of the need for integrating social development with economic development, in the absence of which economic development itself might be affected. Population growth was an important factor that needed to be tackled in this connection.

IMPORTANCE OF PER CAPITA INCOME

The problem of economic development of under-developed countries was not merely one of increasing aggregate production, but one of achieving increase in per capita income. Very often the income increasing forces activated the working of income suppressing forces, bringing back the per capita income back to the subsistence level. Leibenstein (1957) explained it as follows : when increased resources (capital and land) is used in production, there is an increase in total output (growth). Growth in incomes is transformed into consumption, which leads to reduction in mortality rates. There is also improvement in water supply, sanitation, and other public health measures, which in their turn reduce mortality. As a result, there is an increase

in population size and consequent reduction in per capita income. The reduction in per capita income proceeds apace until it reaches the subsistence level. As a result, in the early stage of economic growth, population growth and economic growth tend to be very close, with population growth neutralizing much of the gains of increased production, without much transformation in the level of living. This makes demographic factor an important problem in the development of backward countries, which can be tackled only through social development, particularly the spread of education.

SUMMARY AND CONCLUSION

The foregoing examination of the theories of development indicates that different factors play different roles in the process of development of societies. At one extreme is the view that values and motives of traditional, under-developed, societies are entirely different from those of developed societies making it almost impossible to develop the under-developed societies. However, it has been found that though traditional attitudes and values constitute a formidable barrier to development, it can be changed with the spread of education and people can be made modern in their outlook. Education also contributes to improvement in human capacity and through it to increase in productivity. Though capital plays a crucial role in the process of socio-economic development, it is not the sole factor. Entrepreneurship, innovation, capacity for hard work, etc., are also very important requirements. However, mere economic growth championed by entrepreneurs, limiting its

benefits to a small section of the society, may not be sustainable, both on moral grounds, and political and economic considerations. The resulting concentration of wealth, leaving the vast majority as paupers, may lead to political upheavals, retarding economic development, apart from limiting the market for goods and services, adversely affecting the process of development. This necessitates the adoption of measures to achieve a certain degree of equity and social justice in the society, even though such measures might appear to be not making a direct contribution to development. Therefore, the measures for development of under-developed countries or communities are required to be multi-dimensional, easing the cultural constraints, promoting investments and productivity, and achieving equity in the distribution of the fruits of development. Based on these considerations the following themes are suggested as relevant themes for research :

1. Values, attitudes, and motivation of rural population for development, and factors, contributing to variation in it.
2. Production function analysis.
3. Household income, expenses and savings.
4. Investment Pattern of rural households.
5. Problems affecting the spread of education in rural area.
6. Impact of schooling on agricultural productivity.
7. Rural entrepreneurs.
8. Social security measures for the weaker sections.
9. Satisfaction of basic needs in rural communities.
10. Income and consumption disparities in the society.

11. Problems faced by small scale entrepreneurs.
12. Perception of prestige structure in the society.
13. Fertility behaviour and factors affecting fertility behaviour.
14. Aspiration level of the population.

RURAL DEVELOPMENT EFFORTS IN BANGLADESH

In this chapter the efforts that have been made in Bangladesh to achieve socio-economic development are discussed. This discussion is made with reference to the efforts for increasing food production, reduction in poverty, achieving equity in income distribution, development of local institutions, human resource development and fertility reduction, development of special groups, and provision of irrigation, and other inputs*.

Soon after its Independence, Bangladesh embarked upon planned efforts for improving the living conditions of its population. A country in the early stage of its development being predominantly agrarian and rural in character, an important component of the country's efforts for development was in the area of rural development. The various five year plans are remarkably consistent in their efforts on rural development, and it continued to remain the central focus of the development efforts made by the country during four plan periods, spanning two decades. The main efforts of rural development during the plans might be discussed in terms of : (1) increase in agricultural production, (2) expansion of irrigation resources, (3) reduction in poverty, (4) development of local institutions, (5) human resource development, (6) reduction of fertility, and (7) rural development training and research.

* This chapter is based on information derived from the four five year plan documents.

INCREASE IN FOOD PRODUCTION

The period prior to independence was characterized by stagnant or slow growth in food production and rapid increase in population, widening the availability and requirement of food. During the fifties the average annual growth in agricultural production was 0.1 per cent while population increased at 2.9 percent, widening the gap between food production and the requirement for food. The sixties saw increase in agricultural production at 2.5 per cent per annum, while population growth was 3 percent per annum, again widening the gap between the availability and requirement of food. In such a context, the annual import of food grain increased from 8.5 lakh tons in the early part of sixties to 11 lakh tons per year during 1966-70, 15 lakh tons in 1969 -70, and 25 lakh tons in 1972 and 1973. This made rapid increase in agricultural production the predominant objective of the First Plan.

Agricultural output accounted for 55 to 58 percent of GDP in early seventies. Approximately, 40 per cent of GDP was derived from major crops, 28 per cent from rice, 6 per cent from fisheries, 6 percent from livestock, and 1 percent from forestry. Among the cropped area, 78 per cent was under rice. This made the rapid growth of agriculture, particularly the growth of rice production, crucially important for the economic development of the country.

Two broad strategies adopted during the First Plan to achieve increase in agricultural production were (1) increase of

yield rates and (2) increase in cropped area by multiple cropping, made possible through the extension of irrigation. It was sought to achieve increase in yield through the introduction of High Yielding Variety (HYV) crops in areas with irrigation facilities, and other areas favourable for their extension. This was to be complemented with the extension of technical information and distribution of credit and inputs in these areas. Through such a strategy, it was sought to increase food grain production from 113 lakh tons to 154 lakh tons during the First Plan period.

Livestock Development :

Development of livestock was important as it contributed drought power, milk, and meat, apart from manure and fuel. In Bangladesh about 80 per cent of the animal protein consumed by the population came from fish alone. Fishery was a source of employment for 8 per cent of the population. The First Plan sought to increase fish production by about 26 percent to 10.2 lakh tons, mainly to be achieved through the expansion of inland fishing capacity.

The performance of the economy during the First Plan period was rather dismal. Against a target of 15.14 million tons of food grain production in 1977-78, only 13.11 million was achieved. While foodgrain production increased at 1.9 percent per year, population grew at 3 per cent, necessitating larger import of foodgrain. Between 1973-74 and 1978-79, per capita availability of essential consumer goods declined as follows : cereals from 413 lbs to 388 lbs; pulses from 5.7 to 5.6 lbs; fish

from 23.7 lbs to 21.7 lbs; milk from 27.1 lbs to 20.0 lbs; sugar from 18.5 lbs to 16.6 lbs. During this period over 80 percent of the population remained below the poverty line of 2122 cal per capita per day. The percentage of population below the extreme poverty line of 1805 calories per day during this period was estimated to be 54 percent.

The central theme of the Second Five Year Plan was reduction of poverty by a significant extent, and creation of such conditions as would eliminate it in an objective way by the end of the century. The Plan envisaged an annual growth rate of 7.2 per cent in GDP, in a context of 2.23 per cent growth of population, resulting in per capita income growth of 4.85 per cent. Agricultural production was envisaged to increase by 7 per cent per year facilitating an increase in foodgrain consumption from 15.5 ounces per capita per day to 17.0 ounces, apart from providing a more balanced diet.

The main strategy of increasing food grain production was to expand the area under irrigation from 3.6 million acres to 7.2 million acres, and substantially expand the areas under HYV rice and wheat, in both irrigated and rain-fed areas, intensification of cultivation through provision of appropriate package of HYV seed, fertilizer, credit, pest management, extension and farmer training, etc.

Fisheries and Livestock development were also important components of agricultural development programme of the Second Plan.

The growth rate of GDP during the Second Plan period (1980-85) was 3.8 per cent per annum and food production reached a level of 15.8 million tons, showing 3.5 per cent annual growth. However population grew at 2.4 per cent per annum, leaving little scope for substantial increase in per capita income and savings. During the second plan period, overall per capita intake of food item increased slightly, from 1943 calories in 1981-82 to 1950 calories in 1984-85. But protein intake declined from 48.4 grams to 45.5 grams.

The strategy of the Third Plan (1985-90) was formulated in the above context, and its emphasis was on (1) control of population, (2) increased employment, (3) development of education and (4) increased access to food, nutrition, and other basic needs. The Third Plan envisaged an increase in food grain production to 20.7 million tons, as well as increase in the output of protein food, oil seeds, vegetables, potato, sugarcane, milk and other dairy products. For this purpose, the irrigated area was to be expanded from 6.12 million acres to 9.64 million acres, and attempts were to be made for maximum utilization of existing irrigation facilities and improvement in area already covered by irrigation. Area under HYV was to be increased, along with the intensity of cropping. Since agricultural development envisaged increased use of various inputs, it was necessary to extend commercial credit to the farmers.

Livestock and fisheries development were also sought to be achieved during the Third Plan.

During the Third Plan period GDP increased at the rate of 3.8 percent per annum. A household expenditure survey conducted in 1985-86 indicated that 51 percent of rural population and 65 percent of urban population were "Poor".

The Fourth Plan envisaged increase in food grain production from 18.5 million tons in 1989 -90 to 22.2 million tons in 1994 - 95. As in the past, the main strategy for achieving this goal was based on the modern technology consisting of irrigation water, HYV seeds and fertilizer. To accelerate the rate of technological diffusion, the farmers were to be organised into groups and provided with complete package of inputs and credit. Agricultural extension system was to be restructured in line with the T&V system. In order to achieve the maximum results from the inputs, efforts were to be concentrated in areas of high potential, particularly in irrigated areas. Since extension of irrigation was the key to the cultivation of HYVs, irrigated area was to be increased from 3.1 million hectares in 1989 - 90 to 4.8 million hectares in 1994 - 95 and the use of fertilizer from 2.0 million tons to 3.6 million tons. Most of the planned expansion in foodgrain output was to come from HYVs and local improved varieties (LIVs) of rice and wheat, cultivated mainly during the winter season.

Since the use of various agricultural inputs was greatly influenced by the availability of credit facilities to buy these

inputs, credit availability was to be adequately extended. It was seen that in credit disbursements in the past, 85 percent of the small farmers had no access to institutional sources of credit, limiting their capacity to contribute to agricultural development in proportion to their potentials. In the Fourth Plan it was envisaged to have a restructuring of the formal credit system, aiming to better serve the needs of the farmers, particularly the small farmers. It was also expected that measures for greater integration of the small farmers and women in agricultural development would make valuable contribution to increase in agricultural production.

Fisheries Development failed to keep pace with the increase in the demand for fish. As a result, per capita availability of fish has declined over the years, causing nutritional and other problems. In such a context, aquaculture was given a high priority for development in the Fourth Five Year Plan.

Livestock Development also was to be developed in the Fourth Plan. It was proposed to develop livestock on a commercial basis, based on large commercial livestock farmers, rather than its present basis upon subsistence oriented peasant farmers.

Poultry development also was sought to be achieved rapidly, for increasing the supply of eggs and meat.

DEVELOPMENT OF WATER RESOURCES

An essential requirement for increasing agricultural production was better use of resources. Though Bangladesh is on

the delta of three mighty river systems, characterized by very rich alluvial soil, the uneven spread of rain received in the country has put certain constraints on agricultural development. Of the annual rainfall of 70 inches, more than 80 percent occurred between May and October causing widespread flooding, whereas drought conditions existed in the remaining six months of the year. About 33 percent of the cultivated land was flooded to depths exceeding 3 feet in an average year and the rest (67 percent) constituted intermediate and high lands suitable for irrigation development. As vast tracts of land were affected by flood, along with irrigation, there was also the need for drainage and protection of lands from flood.

Studies by experts suggested embankment and channel improvement for flood protection and control. By the time of the First Plan, there were 2,270 miles of embankments, mainly in the coastal belt. Irrigation covered one million acres, which increased to 13.60 lakh acres by 1973. Of this, 1,22,000 acres were under large scale projects (LSP), over 1 million acres under low lift pumps (LLP), 1,75,000 acres under 2,900 deep tube wells (DTW), and 16,000 acres under 2000 shallow tube wells (STW).

As the construction and gestation of major multipurpose water projects were long, the emphasis was on short term irrigation, drainage and flood protection measures. These included 45,000 single stage low lift pumps, 15,000 shallow tube wells, apart from dug wells, tank irrigation, etc.

the delta of three mighty river systems, characterized by very rich alluvial soil, the uneven spread of rain received in the country has put certain constraints on agricultural development. Of the annual rainfall of 70 inches, more than 80 percent occurred between May and October causing widespread flooding, whereas drought conditions existed in the remaining six months of the year. About 33 percent of the cultivated land was flooded to depths exceeding 3 feet in an average year and the rest (67 percent) constituted intermediate and high lands suitable for irrigation development. As vast tracts of land were affected by flood, along with irrigation, there was also the need for drainage and protection of lands from flood.

Studies by experts suggested embankment and channel improvement for flood protection and control. By the time of the First Plan, there were 2,270 miles of embankments, mainly in the coastal belt. Irrigation covered one million acres, which increased to 13.60 lakh acres by 1973. Of this, 1,22,000 acres were under large scale projects (LSP), over 1 million acres under low lift pumps (LLP), 1,75,000 acres under 2,900 deep tube wells (DTW), and 16,000 acres under 2000 shallow tube wells (STW).

As the construction and gestation of major multipurpose water projects were long, the emphasis was on short term irrigation, drainage and flood protection measures. These included 45,000 single stage low lift pumps, 15,000 shallow tube wells, apart from dug wells, tank irrigation, etc.

High priority was accorded to increasing the efficiency of operation and management of existing irrigation projects.

The Second Plan gave high priority to expand irrigation coverage from 3.6 million acres to 7.2 million acres. During the later part of the plan, under new strategy for rural development, priority was given for the development of irrigation, minor drainage and flood control works, and these were implemented in 13 districts in the country. A major portion of the funds utilised for rural works programme was on irrigation, flood control, and related activities. During the Third Five Year Plan, the programme for irrigated agriculture envisaged distribution of minor irrigation equipments and implementation of minor irrigation programmes. Under the programmes, 6488 deep tube wells and 2786 low level pumps were covered.

The Fourth Plan proposed to extend irrigation coverage to 53 percent of the total cultivable area, and about 90 percent of the potential area of irrigation. For rapid expansion of minor irrigation, it was proposed to keep at abeyance all the restrictions on the import of deisal engines, and private trade on irrigation equipments were encouraged.

In the Fourth Plan, it was proposed to focus on the following issues with respect to minor irrigation : (1) promotion of new improved technologies for distribution of minor irrigation through modern type tubewells; (2) increased land use under irrigation through increased supply and usage of irrigation equipment; (3) upgrade pumping efficiency; (4) reduce the cost

of water through credit; abandonment of unnecessary restrictions, improved extension services, etc. (5) develop appropriate institutional framework for dealing with water related problems and conflicts; (6) organise irrigation groups and their training in wellplacement, preventive maintenance, command area layout and construction, irrigation scheduling, and group management process; (7) prepare appropriate guidelines for adoption by irrigation groups for management of water and establishment of individual rights and responsibilities; (8) reduce the gap between the proportion of small and large farmers in their ability to adopt irrigation, (9) and adopt the measures for the development of wide-spread and effective irrigation sector, including marketing of irrigation pumps.

It was also proposed in the Fourth Plan to bring shallow and medium flooded land under controlled flooding to permit environmentally desirable integrated agricultural and aquacultural development through construction of dykes and polders with regulators and other structures. In suitable deep flooded areas construction of dwarf submersible embankments to facilitate safe harvest of winter crops was to be undertaken.

Measures were to be taken at upazila level for improving drainage facilities, creation of appropriate institutional framework for operation and maintenance of schemes on a self-sustaining basis, and assigning local bodies at union/ upazila levels the responsibility of maintaining and managing small schemes. It was also proposed to increase the effectiveness of

existing schemes. In the case of big projects, there was to be emphasis on their implementation in a modular manner. Efforts were also to be made for achieving local participation in the formulation, implementation and maintenance of irrigation projects.

REDUCTION IN POVERTY, PROVISION OF EMPLOYMENT AND EQUITY IN INCOME DISTRIBUTION

One of the important objectives of the First Five Year Plan was to reduce rural poverty and promote equity in income distribution. It also sought to improve the nutritional standards of the population through increased supplies of cheap calories and proteinous food, including fish, animal products, fruits, vegetables, etc. The plan also proposed to create employment opportunities for the rural unemployed and under-employed so as to enable them to attain a basic minimum level of living. People in areas of special nutritional risk were to be helped by encouraging the consumption of groundnut protein and fish protein concentrates. As a part of the Rural Works Programme (RWP) a large number of labour intensive projects were to be taken up in all parts of the country. These programmes were expected to generate a substantial volume of employment, and to benefit both large and small farmers through the construction of better drainages, irrigation and transport facilities, etc.

During the first plan period, the RWP had five components, namely : (1) a Thana-based integrated work programme, (2) a Programme for the reclamation of derelict tanks; (3) Thana

irrigation programme ; (4) Thana Training and Development Centre building Programme; and finally, (5) a Programme for the development of important hats and bazars.

The Rural Works Programme continued during the Second Plan period also on more or less the same lines. A review of the employment position at the end of the Second Plan indicated that under-employment and unemployment continued to be the major problems of the country, and about one-third of the labour force remained unemployed. The main reasons for this were identified to be heavy pressure of population on agricultural land, low level of investment, and rapid growth of population. A characteristic of rural unemployment problem was the use of large percentage of children of school going-age in various income generating activities. According to Manpower Survey, between 1980 and 1984, labour force participation in the age group of 10 to 14 years (ie. child labour) has increased from 33 percent to 40 per cent among males; and among females, from 4 per cent to 9 per cent. On the other hand, the participation rate among the working age group of 15 to 64 years, declined during the period, indicating that more able-bodied labour force had less opportunity for employment. In 1983-84, there was over a million child labour in the age group of 5-14 years, and one-sixth of this was in the age group of 5-9 years. Child labour constituted 13 per cent of the total employment of 29 million in Bangladesh in 1983-84. The inescapable conclusion of this was that the adults were able to earn less and less, necessitating them to

make their children also to work for the subsistence of the family.

The main strategy identified in the Third Plan for mitigating the employment problem was the rapid expansion of irrigated agriculture, which was envisaged to be increased from 6.12 million acres to 9.64 million acres. However, still there would be considerable unemployment and under-employment, and it was thought that some portion of the labour could be absorbed in rural industries. Expansion of rural industries was expected to stimulate development of infrastructure, such as roads, civil structures, which can provide substantial employment in the construction of the assets as well as their maintenance. It was also expected that the policy of administrative decentralization would also contribute to the development of local infrastructure, and through it to employment generation.

During the Third Plan, government also proposed to promote self-employment in the rural non-farm sector. For achieving this goal, it was proposed to select, motivate and organize the target population into small productive groups, and to equip them with necessary skills, technology, appropriate vocations, credit and guidance, and to provide training, technology and information on investment possibilities in different areas.

A special provision was made for poverty alleviation and employment generation under rural development sector also. It was made an objective of rural development to prevent further immiserization of the rural population, and to bring about 10

percent of the rural poor above the povertyline, by means of (1) increasing gainful employment and income earning opportunities on a sustained basis, through the expansion of the productive sectors; (2) Ensuring better access for the rural poor to the means of production, farm and non-farm, through their organisation for productive activities; (3) Greater access to local resources through their participation in development process; and (4) Improvement in the quality of life of the poor people in respect of basic physical infrastructures and social service needs.

The goal of equitable income distribution for the poor also suffered in the past, and the process of immiserisation continued. For stopping this deteriorating process, increase in labour productivity was required. This called for improvement of both technology and capital bases of the rural economy through investment in human resources development and technology. The rural development programmes generally benefited those with land, widening the disparity between the landless and those who owned land. In such a context, increase in labour productivity was a requirement for increasing the benefit derived by the labour from the development process.

Alleviation of poverty and generation of employment opportunities, particularly through human resources development was recognised as an important objective of the Fourth Plan also. Therefore in the Fourth Plan programmes were to be developed for the creation of employment opportunities for the rural poor, including women, during the lean period. It also envisaged

stabilisation of food prices through public distribution system and provision of relief support to distressed groups and areas. However, these basically relief oriented programmes were to be made relief- cum - developmental programmes. It was also recognised that as the economy was increasingly becoming market oriented, there should be endeavors to keep the poorer section at the centre of the development process, rather than their being marginalised.

It was recognised in the Fourth Plan that in the past agriculture, especially crop sector, had played a dominant role in the generation of employment opportunities. As such, the major share of further increase in agricultural employment was to come from the non-crop agricultural sector. This might be pursued, both as formal and in-formal, family level self-employment activities. There was also possibility of increased employment in cottage industries, and in transport and communication sectors.

The Fourth Plan proposed the innovation of integration of group based with sector based approach for development planning. The group based approach was emphasized in the Fourth Plan as in the sector based approach, as the relatively poor and the disadvantaged remained scattered in the economy, and it was difficult to integrate them with the planning process. Therefore, sector based plans were integrated with group based plans in order to achieve poverty alleviation along with economic growth. With this end, the population in the country were divided to ten economic classes. At its lower level were groups like landless

agricultural labour, small farmers, medium farmers. It was expected that the poor and the disadvantaged would be organised and through their organisations, they would be able to formulate projects for their upliftment. Credit and related input delivery system for them could be expanded through appropriate institutional framework, enabling the poorer sections to actively participate in productive activities. To achieve this, each sectoral plan should contain programmes and policies to help and support the disadvantaged groups. This required implementation of group based planning with macro planning. In this way, the villagers would be able to identify their own problems and priorities, and prepare their desired projects. Integration of Union based programmes at the upazila level would lead to decentralised upazila plans. If such upazila plan were properly integrated with the national level plan, it would help to ensure regional balance in the country's macro planning process. The plan also laid down that the categorisation of the population of the country into ten groups would be used in analysing the economic performance of different categories of the population. In evaluating the impact of the investments on various socio-economic groups, particular attention was to be given to the impact on the lower half of the population. And while organising the rural population at the village level for local planning, emphasis was to be given more on functional groups.

It was expected that it would be possible to render substantial assistance to small farmers through the formation of functional groups, and it would enable them to use to the maximum

many of the techno-economic opportunities and potentials. It could be expected that the small farmers development facilitated in this process would contribute to agricultural development, alleviation of poverty, prevention of further rural immiserisation, and overall economic growth.

It was envisaged in the Fourth Plan that NGOs' activities would supplement government activities in the area of poverty alleviation. Therefore, it was proposed to coordinate all activities of the NGOs at the Union level. Where the NGO activities have to be specific target group oriented, it was thought advisable to fix income generating targets for the respective income groups and to specify the strategies through which the poorer income groups could graduate to selfreliance over a specific period of time.

Programmes for Development of Special Groups : From Second Plan onwards, there have been concern with the problems of women resulting in the formulation of steps for removing the disabilities under which they suffered, and raising their status in the society. In this connection a number of steps were taken to reduce the exploitation of women by men, such as giving Muslim women greater knowledge about their rights, that marriage was a civil contract, that ploygamy was not normally allowed in Islam; that Muslim inheritance law gave women right to inherit the property of the father, education in Islam was obligatory for both males and females, and that purdha meant modesty, to be applicable to both males and females. Government had made

education up to eighth grade free for female students. Job reservation was also made for women in government services.

It was found that the poor and the disadvantaged women could play very useful role in development by getting themselves organised into functional groups. Therefore, the Fourth Plan proposed measures to organise the poor women into functional groups and to give them assistance to pursue various income-generating activities. In order to integrate women within the main stream of development, it was proposed to strengthen all rural institutions, both government and NGO, and to make them more effective in reaching poor women and to make these organisations more sensitive to their needs. In order to achieve this goal, it was proposed (1) that credit would be made equally accessible to women members, and the size of the loans for the women would be sufficiently large so that that they were able to utilize the loan for more profitable self-employment; (2) credit disbursements would be accompanied by skill training; (3) collective enterprises were to be undertaken by groups of landless men and women; (4) staff members of institutions mandated to work for rural women would be motivated to live and work in rural areas.

D. DEVELOPMENT OF LOCAL INSTITUTIONS :

Development of appropriate rural institutions was an important component of rural development programme in Bangladesh. Rural institutions prevailing in the British period were primarily administrative bureaucracy for collection of taxes and

maintenance of law and order. Since 1952, a community development programme known as the Village Agricultural and Industrial Development Programme (VAID) was implemented, but it failed to make any significant contribution to agricultural and rural development of the country, necessitating its abandonment in 1960. In 1959 Bangladesh Academy of Rural Development (BARD) was established and since then the Academy began to experiment with various agricultural development and institution building programmes, such as Rural Works Programme, Thana Training and Development Centre, Thana irrigation Programme, and the Integrated Rural Development Programme.

As was mentioned earlier, the main task of the Rural Works Programme (RWP) was to contribute to increased food production by constructing and maintaining irrigation and drainage structures and also providing labour for the unemployed. During the First Plan there was also an effort for mobilization of rural labour for undertaking various nation building projects in rural areas. Local government institutions were expected to play a key role in the mobilization and productive use of this labour.

The Integrated Rural Development Programme developed by BARD, has made modest progress in the sixties. By 1972, 33 Thana Central Cooperative federations and 6,6007 village cooperative societies were established. However, the cooperatives primarily served the interest of medium and large farmers, leaving out the small farmers, share-croppers and landless cultivators. Naturally, the cooperatives were dominated and controlled by relatively well to do and influential landowners, money lenders,

and traders. It was observed in the First Plan document that the Thana Central Co-operatives (TCCAs) had yet to show signs of self-reliance and self-management. The procurement and distribution of modern agricultural inputs like pumps, HYV seeds, fertilizer was the responsibility of Bangladesh Agricultural Development Corporation (BADC). On the other hand, the marketing of agricultural produces was handled by private traders through existing market centres in rural areas. In such a context, there was rethinking on the new local institutions that should be evolved to achieve the developmental needs of the country.

New Institutional Policy and Programmes : The institutions which would serve the small farmers and landless labourers were of paramount importance. It was proposed to build local government and cooperative institutions on a broader basis, as representatives of different categories of people capable of being self-managed and self-financed, within a specified period of time, free from bureaucratic control, and fully oriented towards increasing production and facilitating equitable distribution of income. The local government institutions were to be responsible for building and maintaining the infrastructure of roads, drainage and irrigation system, provide public health, sanitation, educational and social welfare services, assist the central government in the maintenance of law and order, and collecting taxes, rents, rates, dues, etc. Local government institutions were also to promote such organisations as cooperatives, associations, clubs, etc. of local communities.

The local government institution was expected to ensure affective planing, coordination and mass participation in development programmes at the lowest possible level. For this purpose provision was made for informal people's council at the village level, consisting of all voters in the village, meeting once in every month. At these meetings various problems effecting the villages were to be discussed and decisions taken, and plans of action for village development, within the broad framework of development plans and policies. The village council was expected to provide a forum for the members of the community to express their ideas and opinions, and to share the responsibility of making decisions.

The main focus of development administration was proposed to be at the Thana level. The institutions of Thana Training and Development Centre (TTDC) was to be fully utilised to bring together all the thana level officers of various nation-building departments, into a single development team under the control of the local government. Long term and short-term Thana plans were to be prepared and inventories of all locally available material and human resources were to be prepared, and schemes for mobilization and utilisation of such resources were to be made with the help of union panchayat and people's council at the village level.

Cooperativisation of the weaker section was another idea taken up during the first plan period. It was thought that the existing scheme of institutions did not take adequate care of the

The local government institution was expected to ensure affective planing, coordination and mass participation in development programmes at the lowest possible level. For this purpose provision was made for informal people's council at the village level, consisting of all voters in the village, meeting once in every month. At these meetings various problems effecting the villages were to be discussed and decisions taken, and plans of action for village development, within the broad framework of development plans and policies. The village council was expected to provide a forum for the members of the community to express their ideas and opinions, and to share the responsibility of making decisions.

The main focus of development administration was proposed to be at the Thana level. The institutions of Thana Training and Development Centre (TTDC) was to be fully utilised to bring together all the thana level officers of various nation-building departments, into a single development team under the control of the local government. Long term and short-term Thana plans were to be prepared and inventories of all locally available material and human resources were to be prepared, and schemes for mobilization and utilisation of such resources were to be made with the help of union panchayat and people's council at the village level.

Cooperativisation of the weaker section was another idea taken up during the first plan period. It was thought that the existing scheme of institutions did not take adequate care of the

lower stratum of the society. Therefore, the deprived sections of the society were encouraged to organise themselves into cooperatives and to become a dominant productive force through a system of integrated multipurpose worker cooperatives. The experience gained by the BARD in the development of the Integrated Rural Development Programme (IRDP) was to be utilised in the development of these cooperatives.

Integrated Rural Development Programme (IRDP) : The present IRDP, having village level cooperative societies and their federation at the thana level, and association at district and national level, was to be modified, strengthened and expanded to cover 250 Thanas. The village level cooperatives were to have a broad base, by bringing in it the landless labourers who practically were without any means of production and depended entirely on their own labour and worked as hired hands; those who have small means of production and mainly depended on their own labour, though occasionally employed labourers and worked as labourers; and the richer section of the society with appreciable means of production, who, mainly employed laborers, and worked as managers. These societies were to be managed by managing committees whose members were to be elected in such a way that the three categories of their members got proportional representation. The primary cooperatives were to be given dealership for distribution of inputs like fertilizers, nylon twine for making fishing net yarns, etc. supplied by the government and nationalised industries. Equipments and machinery like pumps, tractors, looms, nets, etc. supplied by the

government as grants or loans were given to the cooperatives for joint use by the members. Credit was also supplied through the cooperatives. The landless labourers were to be encouraged and helped jointly to own and operate implements and machineries like sprayers, threshers, pumps, tillers, boats, transport vehicles, etc. They were also to be trained in the skill of using these equipments. In addition to their normal production oriented functions, the cooperatives were to help the local government institutions in organising its members to work in labour intensive projects like roads, irrigation canals, etc. undertaken by the local government. Through these activities, the cooperatives were expected to provide employment opportunities to its members and facilitate productive utilisation of the unused labour force.

The federating body of Thana Central Cooperative Association (TCCA) was to operate as a supporting organisation to assist in the planning and supply of inputs and services, organising, processing, storage and marketing of outputs, arranging regular training and extension services, providing organisational consultation and advisory services. Its functions were to promote the growth of primary cooperatives as self-managed and self-reliant bodies, and integrate them into the cooperative system. The TCCA was to gradually withdraw from directly operating credit business. It was to assist thrift deposits by cooperative members, assist the cooperatives in assessing their credit requirements and planning credit utilisation. The managing committee of the TCCA was to be elected on the same

principle of proportional representation, as in the case of primary cooperatives.

Local Government. During the Second Plan, a beginning was made for instituting local governments from grass roots level of the village upto the district, through Union and Thana levels. At the Zila, Thana, Union and Village levels, there were to be democratically elected bodies, and governments. While the elected members were to constitute the local government, the staff was to be either appointed by the local government or officers of concerned government departments deputed to the local government bodies. Local governments were to be developed into self-sustaining organic units, with proper horizontal and vertical linkages amongst them. The village government was to be responsible for land use production plan, employment planning, education, family planning, and environmental health.

As the two-tier cooperative system was dominated by medium and large farmers, efforts were made in the middle of the Second Plan to develop appropriate rural institutions for the landless and the disadvantaged women. Organisations called Bita Yaheen Samabaya Samity (BSS) and Mohila Samabaya Samity (MSS) were developed to provide support service in terms of skill development, credit and input supplies to the members in farm and non -farm activities. About 10,000 BSS with a membership of 2.9 lakhs and 8,000 MSS with a membership of 2.60 lakhs were organised during the Second Plan period. Some of the economic activities undertaken by the BSS and MSS were cane and bamboo

works, bee keeping, handicrafts, coir making, pottery, rice husking, pond fisheries, oil milling, goat, cattle and poultry raising, net making, rikshaw pulling, etc.

During the Second Plan, a number of semi-government and non-government organisations were also active in rural areas, particularly for the alleviation of rural poverty and unemployment. One such organisation was the Grameen Bank. By the end of the Second Plan, it had a capital of Tk. 3 crore, and 164 rural branches, covering five districts. The Grameen Bank depended on group initiative and consciousness rather than on formal cooperatives. As its focus was on the rural population, the activities covered by the bank have close resemblance with those of BSS and MSS of BARB. The main limitation of their activities were that they were less rewarding than even the unskilled farm labour, though they helped the poor to eke out a living. Attempts of the Grameen Bank to introduce improved technology with focus on individual enterprise have not been successful so far.

During the Third Plan period, 5,400 KSSs with 1.27 lakh members were formed. For the meeting needs of the poorer section of the society, 160,090 BSS, and MBSS and informal groups were organised with 3.76 lakh members. Also, 568 cluster villages were established housing 21,000 homeless and landless households.

During the Fourth Plan, it was sought to achieve improved access of rural households, especially the small and the landless farmers, to resources, inputs, extension services, and

employment. It was also sought to formulate appropriate institutions at grass root level to mediate supply of resources to the landless/poor without much leakages, to increase their income, employment, and self-reliance, through preferential and adequate allocation of resources for the purpose. It was also sought to form wider organisations of landless and the small farmers into informal groups for self-employment, and wider participation of women in wage employment schemes!

By the Fourth Plan a variety of target and programme oriented works were being implemented in rural areas of Bangladesh, creating conditions of overlapping of projects and proliferation of institutions. Therefore, an experimental programme for comprehensive village development that would seek the objectives of increased production, employment and social upliftment and equitable distribution of benefits based on local level planning and implementation within a common institutional framework was proposed to be taken up. The objective of this programme, called "Comprehensive Village Development Programme" (CVDP) was the development of common village facilities and services (physical, social and economic), as well as economic activities for the villages, and through them to improve the socio-economic condition and quality of life of all groups of people in the village through a common institutional framework. Within this broad framework the CVD programme tried :

- (1) Development of common village facilities and making available at the village level various socio-economic services relating to literacy and education, population

control, minimal health care and nutrition, income generating activities, and others.

- (2) Increase in production, in both farm and non-farm sectors, productive employment, and increase in household income, utilising all available resources, maximally.
- (3) Encourage capital formation in cooperative society.
- (4) Develop human resources.
- (5) Promote greater participation of women in development activities.
- (6) Ensure equitable distribution of benefit to all.

For implementing the "Comprehensive Village Development Programme", in each village, there was to be a village-based cooperative called "CVD cooperative society" (CVDCS), covering all the villagers, males and females and children. The members of these societies were to be divided into a number of homogenous functional groups. The CVDCS were to be managed by a committee, having proportionate representation from each functional group, and elected by the respective group members. The CVDCS were to be developed as economically viable and self-reliant institutions, by means of resource mobilization and commercial / business activities within the cooperative discipline. The existing cooperative societies and informal groups in the village were to be gradually amalgamated with the CVDCS, based on the extent of their assets and liabilities.

The CVDCS were to be federated to the existing central cooperative association at upazila level within the cooperative system. The other linkage was with the local government bodies at different tiers for the purpose of development of common village facilities and services and obtaining support services available at the upazila.

The CVDCS were to prepare development plans based on an inventory of the resources available with its member households. Based on this, plans for the economic activities of the group members of the society (economic plan) and for the development of common village facilities (Village Development Plan) and service were to be prepared. These plans were to be consolidated at higher union and upazila levels and implemented by CVDCS with credit from banks arranged through its Central Society at upazila level. The central associations were to provide support services like technology and skill training, agricultural extension, livestock and fisheries services, non-farm activities, marketing, etc. The Village Development Plan was to be implemented by the upazila Parishad through Union Parishads in coordination with the programmes of various nation building departments. Initially the CVDCS were to be implemented in four upazilas of four districts on an experimental basis by BARD and RDA.

HUMAN RESOURCE DEVELOPMENT

It was mentioned earlier that human resource development was an objective as well as means of development. An important objective of developmental efforts in Bangladesh was to increase the educational level of the population.

The Second Plan recognised the imperative need for removing illiteracy prevailing among the masses at the earliest. As resources were limited, it was realized that educational level cannot be expanded at all levels simultaneously. Therefore, it was proposed to expand primary and middle level education at public cost, and to depend on private sector for the expansion of higher education. It was expected that massive strides would be made during the plan to achieve compulsory primary education for the 5 to 10 age group. It was also recognised that there was very high proportion of dropout among the children from the poorer section. Therefore, it was necessary to have widespread non-formal programmes of literacy and skill training also.

During the Third Plan also the importance of education and skill formation was stressed in the poverty alleviation Programme. Mention was made earlier of the finding that between 1980 and 1984, labour force participation of child labour (10-14 years) has increased from 33 to 40 per cent among males; and among femals, from 4 per cent to 9 per cent, while the participation rate among the adults (15 to 64 age groups) has declined. In 1983-84, there was over a million child labourers

of the age group of 5-14 years, about one-sixth of which was in the age group of 5-9 years. Obviously, more children in the school going age group now work than before. It was realized that there was low enrollment and high drop out at primary school level, and an important cause of this was rural poverty.

The increase in literacy rate has been very slow in Bangladesh. Literacy rate increased from 17.0 per cent in 1961- to 19.7 per cent in 1981, showing an increase of 2.7 per cent in two decades. There was great disparity in the level of education in rural and urban areas, and between males and females. Factors like limitation of resources, shortage of trained teachers, administrative weakness and lack of a favourable attitude among the population to education were found to be affecting the progress of education in the country.

The total plan allocation for education over the First Plan period together was Tk. 454 cores, but actual expenditure was only Tk. 259 crore, accounting for 3.3 per cent of the total developmental outlay in the public sector. The Second Plan accorded topmost priority to the introduction of universal primary Education by 1985 and with this end in view, about 47 per cent of the total allocation of the education sector was earmarked for this purpose. Of the total allocation of Tk. 707 crore, Tk. 331.7 crore, constituting 46.9 per cent, was allotted for the development of primary education. However, the actual expenditure on universalization of primary education was Tk. 211 crore, or 41.4 per cent of the estimated expenditure on education. The plan envisaged an increase in the primary school

enrollment from 82.86 lakh students in 1979-80 to 130 lakh students in 1984-85.

There was substantial shortfall in the creation of physical facilities for the universalization of primary education. Only 47 per cent of the target for constructing class rooms was realized; supply of benches was realized to the extent of 74.38 per cent; tube-well sinking by 30.73 per cent; toilet construction by 15.41 per cent. The unsatisfactory performance in respect of class room construction might be one of the causes for the short fall in the expansion of enrollment in primary schools. Against the planned target of 47 lakh student enrollment, the achievement was 6.34 lakh students only, showing a success of 13 per cent, while expenditure stood at 63.5 per cent. The number of primary schools increased by 10 per cent, from 40,445 to 44,220 in 1984-85. Decline in the intensity of the use of physical facilities and high rate of drop out was the characteristic feature of primary education. The problem was not only of economic reasons like the poor families requiring children at home to assist in farming and other activities, but also one of attitude. There was no literate person in about one-third of the households.

Removal of illiteracy through mass education was another important measure for educational advancement taken up during the Second Plan. Against a target to make 400 lakh illiterates in the age group of 10-45 years literate by the year 1985, only 7 lakh people could be made literate. This poor performance of the

Programme revealed both the weakness of the strategy and in - adequacy of the programme. Its implication for primary education was serious, as children from illiterate families had higher drop out rate. It was also found that areas with low literacy were areas with low enrollment rate in primary schools. This made mass literacy programme essential for the success of primary school education also.

The Third Plan envisaged an enrollment of 70 per cent of the primary age-group children estimated to to be 116 lakhs by 1990 and their retention in the school, with a view to achieving universal primary education by the end of the century. It also sought to reduce the incidence of illiteracy among the adults. The strategies formulated to achieve these goals envisaged expansion of physical facilities for enrollment of 70 per cent of primary agegroup children, as also efforts to retain children in the school, to avoid wastage. It was also proposed to localise mass education programme, with the responsibility for their organisation being given to upazila prishads. Upazilas will receive books and other learning materials, and financial grants, for this purpose from the national government.

A review of the achievement in primary education made during the Third Plan period given in the Fourth Five Year Plan document indicated that by January 1990 enrollment has increased to 117 lakhs from 77 lakhs in December 1985 and the dropout rate also has substantially come down=in class 1 from 26 percent to 14 per cent, and in class V for 19 per cent to 14 per cent. By the end

of the plan a primary school was available within 3.20 sq.km, and it was proposed to make it available within an area of 2 Sq.km during the Fourth Plan .It was proposed to implement compulsory primary education in a phased way from January 1991 on wards. First all children belonging to the age cohort who are eligible for enrolment in class 1 in 1991 were to be brought under the programme, covering the entire section and population by the year 2000.

The basic strategy to be followed for compulsory primary education included optimum utilization of existing facilities including double shifts, rather than creating new facilities. Where required, existing facilities were to be strengthened with the addition of new class rooms. Enrolment was to be maintained at the rate of 50 students per class. It was also proposed to use cement concrete benches and desks, rather than wooden and steel furniture to keepdown costs. The primary responsibility for the construction and maintenance of the school building was to be given to upazilas. In order to attract and retain children in schools, schemes like free uniform for girls, free lunch, were proposed in the Fourth Plan.

Under the scheme for mass education, efforts were to be concentrated on the illiterates in the age group of 8-15 years. The mass education programme was to be implemented through upazila and union parishads. Efforts of NGOs and other local level community organisations were also to be attracted for mass literacy programme.

FERTILITY REDUCTION

The need for reduction in fertility was too apparent in a highly dense country like Bangladesh. As a result, right from the First Plan onwards, there were efforts to reduce fertility and to achieve stability in the growth of population. The second plan realized that the prevailing increase in population of 2.7 per cent per annum was too high and it diluted the efforts to improve the standard of living in the rural areas. Therefore, it was emphasised that population control should be pursued with a priority as equal in importance as rural development. It was recognized that the delivery system of the family planning programme was rather weak, affecting the implementation of the programme. It was also realized that there was need to achieve greater participation of the community in the implementation of the family planning programme, and this was sought to be achieved through local organisations like village cooperatives.

In the Third Five Year Plan, reduction in population growth was listed as the first objective of the Plan, and it sought to bring down population growth from 2.4 per cent to 1.8 per cent by the end of the plan. This required a contraceptive practice rate of 40 per cent of the eligible couple, against the prevailing rate of 25 per cent. Planning to achieve a net reproduction rate of 1 by the end of the century, the Third Plan envisaged a reduction in crude birth rate from 39.0 per cent in 1985 to 31.0 in 1990; reduction in crude death rate from 15.0 to 13.4; and reduction in the rate of increase in population from 2.4 to 1.8

per cent; and increase in contraceptive practice from 25 to 40 per cent. Review of the achievements made during the Third Plan given in The Fourth Five Year Plan indicated considerable achievement in the sphere of family planning. The couple protection rate reached 35.5 per cent and crude birth rate declined to 35.2, resulting in the decline in population growth from 2.4 percent to 2.16 per cent. It is now expected that it would be possible to reach a net reproduction rate of 1 by 2005 instead of 2000. The main factor causing the decline in fertility rate was increased use of contraceptive pill and injections by rural women. But in the MCH based family planning Programme, the desired progress was found to be slow.

RURAL DEVELOPMENT TRAINING AND RESEARCH

From the early stage of planned development, the importance of training and research for the effective implementation of developmental programmes was realised. The Second Plan recognised that training and research were to be important programmes for developing skill and expertise in planning, programming, resource management and leadership. In this connection, it was proposed to intensify cooperative education and training at the grass root level. Special functional groups like artisans, fishermen, weavers, women, youth, were to be trained at the village level to help build up their organisations and skill. The members and office bearers of the village union, thana and district parishads were also to be given proper training for discharging their duties.

For field level training, Thana Training and Development Centre (TTDC) was envisaged to be the main centre. Thana level officers were to offer training courses at TTDC to develop trainers in different fields, who in turn were to impart training at the villages.

The physical and training facilities at several training institutes were to be developed, and at the national level a training and co-ordination cell was to be established to monitor and evaluate training programmes.

The rural development institutes followed a flexible training policy to serve a wide range of clientele. The courses conducted for them comprised of orientation, preservice, and in-service training. Apart from personnel belonging to different nation building departments, organisations, and local bodies, the institutes also conducted training of model farmers, cooperative managers, members of local project committees, etc. In Third and Fourth Plans also similar types of trainings were offered by the different rural development institutes.

SUMMARY AND CONCLUSION

In this chapter a brief review of the important dimensions rural development programmes implemented in Bangladesh was made. These efforts have been discussed under the headings of efforts for increase in food production, expansion of water and irrigation resources, reduction in poverty, development of local institutions, human resource development, reduction of fertility,

and rural development training and research. The effort for increase in agricultural production encouraged rapid expansion of area under irrigation, multiple cropping, increased cultivation of HYV seeds, and intensive use of agricultural inputs. To facilitate the spread of irrigation facilities, tubewell marketing and installation were privatized. There were efforts also to increase livestock and piscicultural production. There were several types of programmes like formation of special cooperatives, employment generation programme, etc. to mitigate the problems of the poor. Efforts were made over the years to build up local institutions like cooperatives and decentralize administration. Attempts have been going on, rather unsuccessfully, to spread primary education, and bring down fertility rate. While there has been increase in food production and reduction in the proportion of people living below poverty line, a similar breakthrough has yet to be achieved in respect of fertility reduction and spread of literacy. On the basis of this brief examination of the developmental efforts of the country, the following themes are identified for research studies.

- 1) Adaptation of technology to meet the requirements of rural society, and problems of their extension to rural communities.
- 2) Farmers' level of knowledge about best agricultural practices.
- 3) Extension requirements for increased use of inputs, cultivation of HYV crops, multiple cropping, and diversification of crop production.

- 4) Extension and other requirements for development of cattle production, poultry production, and piscicultural production.
- 5) Sources of credit, requirements of credit, cost of credit, and management of credit for various sections of the society.
- 6) Recovery of credit and related problems.
- 7) Problems of rural markets, and marketing of rural produces.
- 8) Measures for flood protection.
- 9) Better use of flood affected areas.
- 10) Method for integrated use of flood-prone areas through piscicultural/ rice growing/ other methods.
- 11) Impact of privatisation of irrigation equipment market on expansion of irrigation.
- 12) Economic, social, administrative and other problems affecting rapid expansion of irrigation facilities.
- 13) Irrigation requirements of small farmers.
- 14) Institutional arrangement for dealing with water related problems.
- 15) Organisation and training of irrigation groups.
- 16) Market of irrigation equipment.

- 17) Incidence of poverty, its variation by social strata and by region.
- 18) Poverty syndrome - characteristics associated with poverty like lack of education (knowledge), traditional orientation, unemployment, lack of asset, large family.
- 19) Effectiveness of different inputs in helping the poor.
- 20) Working of various poverty eradication programmes and their effectiveness.
- 21) Effectiveness of institutions for the weaker sections.
- 22) Percentage of coverage of rural households by RWP, FWP, CVDP, SFDP, etc.
- 23) Functioning of cooperatives and their effectiveness in increasing production, creating employment, and achieving their goals.
- 24) Percentage of local population participating in various cooperatives.
- 25) NGOs and their activities in different parts of the country.
- 26) Pattern of interaction and division of functions among local institutions at different levels.
- 27) Pattern and problems of coordination among various nation building departments at different levels.

- 28) Mobilization of resources by local institutions.
- 29) Pattern of decentralization of administration and implementation of development programmes at different levels.
- 30) Working of CVD cooperatives - organisational structure, pattern of activities, degree of participation, and benefit to members.
- 31) Degree of involvement of beneficiaries in CVD and other cooperatives, and the degree to which their needs are satisfied through these cooperatives.
- 32) Reasons for low progress in primary education.
- 33) Measures necessary to retain children in school.
- 34) Problems affecting the implementation of educational programmes.
- 35) Scope of literacy movement among youth, females, etc.
- 36) Problems of education of females.
- 37) Factors promoting contraceptive acceptance and limitation of fertility.
- 38) Training requirements of beneficiaries of various programmes.
- 39) Reasons of ineffectiveness of TTDC training.

Chapter 11

ROLE OF BARD IN THE IMPLEMENTATION OF DEVELOPMENT PROGRAMMES

The importance of training and research in the implementation of developmental programmes was early recognised in Bangladesh. It was realized that functionaries planning and implementing developmental programmes as well as the beneficiaries of the programmes need to be trained. For field level training of the beneficiaries, Thana Training and Development Centre (TTDC) was to be the main centre. At this level, thana level officers offered training courses to various functionally organised beneficiary groups. On the other hand, there was the need to train government officers and people's representatives implementing the developmental programmes, and this responsibility is being discharged by the Bangladesh Academy for Rural Development (BARD). Since its inception in 1959, the Academy has emerged as an institution of a unique type, combining training with research and pilot experimentation (action research) in the field of rural development. Apart from training, research and experimentation became important activities at BARD. While the Academy now annually trains over two thousand personnel, it carries out over a dozen research and over half a dozen action research projects. In this chapter the main research and action research works at the Academy in the immediate past are discussed, as the training contribution of the Academy has already been separately dealt with (Sen, D, 1992).

It was recognised by the Academy that socio-economic research, both fundamental and applied, related to rural development and evaluation studies were of crucial importance for planning and implementing effective socio-economic development programmes for the rural areas. In this connection the academy identified and analysed the problems of rural areas, examined the impact of development programmes, and recommended conceivable solutions to the problems and constraints of rural development through its research and evaluation studies. The results and findings of research and evaluation studies were also used to build up training materials. Research and evaluation findings also suggested necessary modifications to be implemented in the on-going programmes, as also new Programmes that might be taken up.

D. Sen (1992) made a content analysis of all the major 270 research projects completed at the Academy, and classified them to belong to the following thematic areas : (1) productivity, (2) institution building, (3) human resource development, (4) transfer of technology / extension, (5) development communication, (6) poverty alleviation, (7) village studies, (8) agrarian reform, (9) women development, and (10) environment. He found that research focus on productivity related issues gradually died down in recent years. The concern of 'institution building' was earlier on cooperatives, and recently on local government. Human resource development has become an important theme of research by 1988. A few thematic areas like poverty alleviation, environment, agrarian reform, though very important in respect of contemporary development scene in Bangladesh, did

not receive any notable emphasis in the research agenda of the Academy, while the topics of disaster management, local level planning, rural industries, were never addressed by the faculty. He found that the current research agenda of the Academy lacked decisiveness in focus, and that as much as 92 per cent of the research studies were concentrated in and around Comilla.

For getting deeper understanding the type of research works carried on at the Academy, the research works completed in the Academy and reported in the Annual Reports of the Academy for the years 1980-81, 1981-82, 1982-83, 1983-84, 1984-85, 1985-86, 1988-89, 1989-90, and 1990-91 were examined. The studies reported in the Annual Reports of 1986-87, and 1987-88 could not be examined, as the Reports of these two years were in Bengali. During the nine years of work covered in this examination, 113 studies were reportedly undertaken. These studies could be classified into eight broad categories of (1) diagnostic studies of prevailing conditions and resources, (2) local institutions, local government, development personnel and leadership, (3) administration and delivery system, (4) development of special groups of women, youth and the disadvantaged, (5) human resource development, (6) farm management studies, (7) studies on inputs, credit and irrigation, and (8) monitoring, evaluation and impact studies. The number of studies in each of these categories conducted at the Academy during the nine years were as follows :

<u>Areas of study</u>	<u>No</u>
1. Diagnostic studies of prevailing conditions and resources	20
2. Local institutions, local government, development personnel and leadership	22
3. Administration and delivery system	11
4. Development of special groups of women, youth and the disadvantaged	12
5. Human resource development	10
6. Farm management studies	7
7. Studies on inputs, credit and irrigation	2
8. Monitoring, evaluation and impact studies	29

The objectives and methodology of these 113 studies may be seen to have an understanding of the broad research goals pursued at the Academy, and the methodology followed in conducting them.

✓ DIAGNOSTIC STUDIES OF PREVAILING CONDITIONS AND RESOURCES

There were 20 studies which might be included in this broad area. For more detailed analysis, they were classified into those concerned with (1) crop, (2) livestock, (3) fish ponds (4) energy, (5) time allocation, (6) irrigation water quality, (7) paddy straw (8) rural women, (9) food habits, (10) nutrition, (11) child birth, (12) BARD campus life, and (13) layabouts.

Crops : There were three studies on cropping and land use pattern, carried out during the period under review. These yearly surveys were conducted by the Academy in Comilla Kotwali Thana to estimate the total area under crops, coverage under different varieties, per acre yield, total production in Boro,

Aus and Amon rice seasons, landholding pattern, tenancy status and cropping intensity. The survey also inquired into average landholding, landlessness, adoption of HYV crops, etc.

Livestock : The objectives of three diagnostic surveys on livestock carried out during this period was to enumerate the number of livestock population in villages and their management, including the prevalence of diseases. Complete enumeration of all families in four villages of Comilla Kotwali Thana was made, and the reports gave information on the possession of various kinds of livestock by the villagers, the common diseases which affected them, their yields, etc.

Pisciculture: There were three studies on fish pond and problems of pisciculture, reported during 1982-83, 1984-85 and 1985-86. All these studies were carried on in Comilla, and had the objectives of knowing the status of pond fish culture and its potential in the area, and to identify the problems related to fish culture in the village ponds. One of the studies also looked into the past history of fish cultivation, and role of village institutions and other agencies in fish cultivation. Information was collected through questionnaire from select villages.

Energy : The objective of this research (1989-90) was to learn about the energy situation and its depletion, particularly to find out (1) different sources of rural energy, (2) utilization pattern of rural energy sources, (3) causes of depletion of rural energy sources, (4) status of commercial

utilization of energy in the villages, and (5) to suggest appropriate method for development of forest resources. The information for the study was collected through questionnaire and observation from Comilla Sadar upazila and Daudkhandi upazila.

Irrigation water : The objectives of this study (1988-89) were to find out (1) different soluble salts present in water used for irrigation, (2) concentration of salts in water, (3) suitability of water for irrigation, (4) suitability of the crop, and (5) to suggest remedial action against adverse effects.

Straw : The objectives of the study " Availability and use of straw" (1988-89) were to ascertain" the trend in the production of HYV straw over the years, the extent to which it could be used as cattle feed, and to grade different kinds of straw according to their suitability as fodder.

Rural Women : A study on " the Household Situation of Rural Women (1982-83) in Bangladesh" was sponsored by FAO with BARD. The objectives of the study were to (1) identify the extent to which the rural women were defined as target group, (2) to review the current information and data and the extent to which the role and contribution of women in rural development is reflected at the national level, (3) and to review rural women's participation in farm and non-farm activities. Primary data collected from two villages in Comilla Kotwali Thana and secondary data were utilized in the preparation of the report.

Food habits and Nutrition : During 1981-82 and 1982-83, three studies on food habits and nutrition were reported. The objectives of the study of "Food habits in Bangladesh - changing pattern and adversities" were (1) to review the prevalent consumption pattern and food habits of people, (2) to assess the short comings, if any, in the food habits in relation to recommended dietary allowances, (3) to analyse the changing trend of consumption pattern, and (4) to recommend measures for alleviating the identified short comings. The study showed that ignorance, change of farming practice, unplanned urbanization, and urban influence, intrafamily distribution of food and the practice of food sharing created some adverse effects on nutritional status of the people, particularly of the women and children. A "survey on nutritional status of mothers and children in a Comilla Village" was reported in 1981-82. It was intended to assess the nutritional status of under-five children and mothers so that suitable measures could be taken in the health and nutrition programme in the thana. Both socio-economic and clinical data were collected for the study. The study reported in 1982-83 found that the prevalence of malnutrition was indirectly proportional to family income and directly to family size.

The study "Child birth and infant mortality in a village in Comilla Kotwali Thana" (1981-82) sought to look into the rate of child birth and infant mortality and the factors responsible for such mortality in one village.

The study of "layabouts" (1988-89) sought (1) to identify the characteristics of layabouts, (2) learn about their life style, attitude and behaviour, (3) highlight the problems created by them, and (4) identify the ways and means to engage layabouts in productive activities.

The above examination of the diagnostic studies conducted during the past decade indicates a wide coverage. They broadly tried to identify broad economic and social conditions, like landholding and cropping pattern, condition of livestock, utilization of fish ponds, availability of fuel, fodder, etc. There were also studies on the nutritional condition of the population, women's problems, infant mortality, and social deviants like "layabouts".

LOCAL INSTITUTIONS, LOCAL GOVERNMENT, DEVELOPMENT PERSONNEL AND LEADERSHIP

Another broad area where a large number of researches were undertaken during this period was concerned with local institutions, local government, development personnel and leadership. During this period, 21 studies were conducted under this broad heading. They could be further divided into studies concerned with local government (6 studies), cooperatives (4 studies), other institutions (6 studies), interrelation among institutions (3 studies) and leadership (2 studies). The goals sought to be achieved through these studies may be found out by studying their objectives:

Local Government: As the title indicates, the objective of the study of "local government in rural Bangladesh- A Study on the performance of three Union Parishads in Comilla District", (1980-81) was to understand the changes in the structure, leadership pattern, performance and problems of Union Parishads. Information for the study was collected through informal discussions with the chairmen, members, and secretaries of the upazila parishads, and from official records. The objective of another study of the same year, "A Study of Thana Parishad, Thana Development Committee and Thana Training and Development Centre"(TTDC) (1980-81) was to understand the working and interrelationship among the Thana Parishad, Thana Development Committee and the TTDC. The working of different thana level committees and training programmes of the TTDC were also covered under this study. Data were collected mainly from official records. The objective of the "Study on the Functions of TTDC" (1981-82) was to find out the functions of TTDC, and was conducted in three thanas of Comilla district. Through " Case Studies of Some Successful and Unsuccessful Thana Central Cooperative Associations (TCCAs) of IRDP" (1981-82 and 1982- 83), it was sought to find to the causes of success and failure of TCCAs. The study followed comparative approach and covered two TCCAs of Comilla districts.

The objectives of the study of "IRD Model in Bangladesh: Case Study of three upazilas" were to examine the mechanism of planning and implementing rural development programmes in the Integrated Rural Development Model, (2) assess the extent of

integration achieved, (3) impact of each of the institutions and programmes under the models, (4) identifying the lapses and deviation, and (5) finding out the present problems and bottlenecks of integration of different rural development programmes under the IRD model evolved by BARD. The study was based on the information collected from three upazilas selected from three districts.

Cooperatives: There were four studies on cooperatives. The objectives of "Case Study of a Women's Cooperative Society in Comilla Kotwali"(1982 - 83) were (1) to observe the management situation of the society, (2) to know the reasons for forming separate women's cooperative society, and (3) to look into the socio-religious problems faced by the women in the management of the cooperatives. The study "Cooperatives as Institutions for the development of the rural poor: Case studies in Bangladesh" was conducted to find out the (1) impact of cooperatives on the socio-economic development of the poor and the disadvantaged, (2) role of cooperatives as a vital component for integrated rural development, and (3) factors affecting the success and failure of cooperatives. The study involved two village cooperative societies, one successful and one non-successful. Another similar study was "Good and Weak Central Cooperative Associations: A Comparative Study" (1989-90). This study attempted to investigate the factors associated with economic viability of UCCA with special emphasis on their financial and management conditions. Two good UCCAs and three weak UCCAs were covered in this study. The study of "Activities of Bangladesh

National Fishermen cooperative Society: An evaluation" was conducted to (1) review the performance of the society and the cooperatives, (2) identify the causes of its weakness and failures, and (3) recommend measures to make the organisation effective and strong.

Other Institutions: There have been a few studies on other institutions. The study of "Swanirvar Gram Sarkar in Bangladesh - A preliminary observations on three villages" (1980-81) was one such study. Its objectives were to understand the evolution of Swanirvar Gram Sarkar, role of rural power structure in it, its activities, ability to ensure people's participation in development process and people's reaction to it. Information was collected through informal interviews with Gram Sarkar representatives and villagers. Another similar study was "A Study on Proshika" (1980-81). Its objectives were to understand the management pattern of the local offices in Dacca and Comilla, landless groups' sources of funds, impact of the programme activity on group members, and replicability of the programme. Structured questionnaires were used in collecting information from both the Proshika officials and group members. Official records, audit report, and published and unpublished materials were also used in the study. Similarly the objectives of the study "Administration and achievements: A Case of Deedar Cooperative Society in Comilla" were to keep in record the operational procedures of Deedar Cooperative Society, and observe the roles played by different categories of members in the operation and management of the society. Consultation of records

and documents, interviews with sample group of members, discussion with the key leaders and office staff and observation of the activities of the society formed the basis of the study. "A study on the rural development activities of BRAC" (1980-81) sought to bring into focus the Bangladesh Rural Advancement Committee's (BRAC) approach to rural development, with particular reference to the range of programme activities, planning and implementation process, resource mobilization, expenditure pattern, potential beneficiary groups and the nature of benefits derived by these groups. Information was collected through interviews with the project administrators, field workers and beneficiaries, and from official records and published reports.

The study of "Farmer's Organizations in Bangladesh: Case studies" (1985 - 86) covered the cooperatives, small farmers development programme, and grameen bank. The main objectives of the study were to find out factors responsible for the success and failure of these organisations. One successful and one unsuccessful organisations under each of these categories were selected and studied from three districts. Another similar study was "Group activities for rural development in Bangladesh"(1988-89). Its objectives were to map out the type of group activities followed by the organisations, their process of capital accumulation and credit regime, and the role played by sponsoring organisations. Information was collected through structured questionnaire.

Leaders: There was one study dealing with leaders, entitled "leaders in the management of KTCCA and non-agriculture co-

operative federation (NACF)" (1981- 82). Its objective was to know the characteristics of the managing committee members of these organisations.

Interrelation among Institutions: The objectives of the study of "Inter-organisational relationship among Union Parishad, KSS and Gram Sarkar" were to find out existing relationship among upazila parishad , Krishi Samabaya Samity (KSS), and Gram Sarkar, (2) Problems of performing respective functions, and (3) the reactions of the representatives of the respective organisations over the nature and extent of relationships among these three. Another selected study was "Multiplicity of organisations at the villages: Case Study of three villages". Its objectives were (1) enumerating the number and type of organisations, (2) identifying the duplications and overlapping of activities and their impact on families, (3) analysing the contradictions and conflicts that the sectoral programmes might have created, and (4) how far the target groups have been approached through the formation of separate organisations. Three villages, from three districts, were purposively selected for the study.

ADMINISTRATION AND LOCAL PLANNING

There were 11 studies during this period dealing with rural development administration and Local Planning. They could be classified to fall into two broad categories of administration (8 studies) and local planning (3 studies). The objectives of these studies and the methodology followed in them may be briefly examined.

Administration: The objectives of the study of "Management of Rural Hats and Bazars" (1980- 81) were to find out the management system, income collection methods, and account keeping system of rural hats and bazars. Information from six hats and bazars of Comilla district was analysed in this study. Another study of similar nature was "Accounts Keeping of Village Cooperatives: A Case Study" (1985 - 86). This was undertaken with the objectives of finding out the type of accounts keeping followed by village cooperatives, the problems of existing system of accounts keeping, and remedial measures to be undertaken for the solution of the problems. The study covered thirteen village cooperatives.

The objective of the study of "TTDC - KTCCA relationship- quarter century of coordination efforts and problems of rural development administration" were to find out the (1) nature of relationship that existed between the KTCCA and the TTDC in the sixties, (2) nature and mechanism of involvement of different nation building departments and agencies with different programmes of KTCCA in the sixties, (3) the lapses that occurred in the relationship between KTCCA and the TTDC and also between the KTCCA and the development agencies in the past, particularly during the period of liberation war. Data was collected from secondary sources.

"Case study on the organisation and management of agricultural supplies for small farmers in Bangladesh" (1990 - 91) sought to find out the participation, availability, access

and use of agricultural services and inputs by the small farmers from the agricultural delivery system; to evaluate the extent of decentralization of authorities and sources of inputs and service delivery system and the extent of coordination necessary to achieve effective delivery system and developing of the same; and to examine the small farmers resource endowment, extent of use of agricultural inputs and services, and their accessibility to the sources of inputs and services. The study was conducted in three districts, two from southern coastal belt and one from north western area. The study "Management of irrigation Technology by landless groups" (1982-83) sought to understand how to incorporate the landless in the development process. The study looked into the management of irrigation technology by the landless groups, costs and returns and the prospects of this system of irrigation. Though the groups could earn profit by selling water, the land owners were not found willing to use the water of the groups, and intended to dig their own shallow tube wells.

The objective of the study of "Role of female block supervisors in agricultural extension" (1988-89) was to identify the strength and weaknesses of female extension service in order to suggest modifications for increasing their effectiveness.

The objective of the study of "Effects of Flood, 1954 in Bangladesh, Survey of Nine Villages in Comilla District", were (1) to find out the effects of flood on crops and livestock, and on the socio-economic situation of different categories of

villages, (2) to analyse the long term effects of flood both in terms of farm practices and the socio-economic life of the villagers, and (3) to find out the measures taken by the government and government agencies to rehabilitate the affected people and control of food in future. The survey was conducted in nine purposively selected flood affected villages of three upazilas of Comilla District.

Local Planning : There were three studies during this period dealing with local planning. The objectives of the study of "Local level planning and mobilization of resources : The planning process and people's participation in Rural Works Programme (RWP) and Thana Irrigation Programme (TIP)" were to look into (1) the existing system of local level planning in RWP and TIP, (2) mobilization of resources by the Union Parishads and Cooperatives, (3) problems faced by the union parishads in local level planning and mobilization of resources, and (4) to assess the effectiveness of RWP and TIP. Information was collected from two Union Parishads in two districts. The reports of the study (1982-82) indicated that big farmers were mostly the beneficiaries of the development projects. Irregular and inadequate resources and input supplies, corruption, lack of skilled manpower, non cooperation, poor leadership, lack of people's awareness and interests, hindered better plan formulation and implementation. A "Manual on formulation, implementation, monitoring and evaluation of IRD projects for Bangladesh" (1985-86) was prepared with the objective of helping

the planners and implementors of rural development at middle level in performing the jobs more effectively.

From the above examination it can be seen that the studies in this group tried to understand the problems of effective implementation of rural development programmes by finding out the hurdles and solving them and through better planning of the programmes.

DEVELOPMENT OF SPECIAL GROUPS : WOMEN, YOUTH, DISADVANTAGED

There were 12 studies dealing with special groups and problems of their development. Among these, nine studies were concerned with women and their development, and one each with youth, labour, and rural poor.

Women : The objective of the study of "Rural Women's Programme : Comilla experience" (1983-84) was to find out whether women were as good social actors as men, in seeking power, security and other values in the society, and whether they could be integrated into the development process. An account of the experiences of 'women's programme' in Comilla Sadar Upazila was taken to find answers to some aspects of this question. It was found that it was those women who were destitutes, widows, divorcees, who participated in these programmes and they carried out the work with the assistance and support of male members. Another study in this category was " Involvement of educated women of Bangladesh in agricultural activities" (1988-89). Its objectives were (i) to know the role of educated women in different fields of agriculture, (2) to identify the involvement

of educated women in agricultural production and its management, as unskilled and skilled labourers, and as managers, (3) to compare the involvement of different categories of educated women in agricultural activities, and (4) to find out the attitude of educated women regarding their involvement in agricultural production. The objective of another study entitled "Women in milch cow rearing : A study in two villagers" (1988-89) had the objective of discussing the involvement of women in milch cow rearing. Similarly the study "Poultry rearing by women: problems and prospects" sought to examine the extent of involvement of rural women in poultry keeping in terms of land holding and occupation, variation in poultry keeping in different climatic zones, management pattern, cost and benefit of poultry raising by women, mode and type of support provided by government, constraints in poultry keeping and ways and means of overcoming them. The objective of the study of "Women entrepreneurs of rural industries in Comilla" tried to (1) identify factors contributing to adoption of income generating industrial activities by rural women, (2) to identify problems faced by rural women entrepreneurs at different phases of their entrepreneurial functions; (3) assessing the socio-economic impact of those entrepreneurial ventures on women entrepreneurs; and (4) assessing the success of rural women entrepreneurs in increasing income and employment for rural women.

Youth : The one study related to youth was entitled "Employment in livestock rearing : An overview of youth development activities". The livestock-rearing activities of the

rural youths were poultry and duck-rearing , beef fattening and dairy farming .

Rural Labour : There was one study of rural labour entitled "Immigrant farm labour market in few Comilla villages" (1990-91). Its objectives were (1) to know about the areas of original residence of the immigrant labourers, their socio-economic conditions, and the reasons for migration to Comilla, (2) to get an idea about the wage rate, nature and terms of work, total mandays of employment in a year, average income, provision of food and lodging, etc.; and (3) opinion of local employers, farm labour, and other key informants about the immigration of farm labourers into Comilla. Information was collected through questionnaire from 50 immigrant labourers and 50 employer farmers from 6 market areas in Sadar Upazila.

Poor : There was participation of BARD along with other institutions in the "Case study of socio-economic disabilities and disadvantages from which the rural poor suffer and alternative strategies for reducing these".

HUMAN RESOURCE DEVELOPMENT

Ten studies were conducted during this period, touching different dimensions of human resource development such as rural health and nutrition (3 studies), family planning (2 studies), education (1 study), and training of officers (four studies).

Health and Nutrition : The objective of the study of "Ganashastha Kendra : A study of rural health and general

development at Savar, Bangladesh" (1980-81) was to look into the working mechanism, actual achievements, and attitude of the people towards the project. The study was based on discussion with project leaders and observation of the activities of the project in two project villages. Another study falling in this category was "Nutrition in rural communities with seasonal variation" (1989-90). It sought to (1) assess the socio-economic conditions of the responding households and production and management pattern of crops, vegetables and livestock in those households; (2) assess the dietary habit, health care practices and the common nutritional diseases, especially among the women and children of the responding households and their variations during the peak and lean seasons of agricultural production, (3) relate the extent of nutritional diseases and their seasonal variations to the socio-economic condition of the households, and (4) to provide useful recommendations to the policy planners and implementors of action programmes in these fields for planning and execution of appropriate interventions at appropriate time. The study was conducted in areas with different ecological characteristics, and the sample of respondents were selected through random sampling method from households with different sizes of landholdings and during the lean and peak agricultural seasons. Another study belonging to this theme was "Nutritional situation in rice, and rice and vegetable growing villages in Comilla" (1989-90). The study was carried out with the objectives of (1) assessing the major socio-economic conditions of households in rice, and rice and vegetable growing areas; (2) finding out the influence of household food

production for consumption on the nutritional status of the people in rice, and rice and vegetable growing areas; to identify the variation in nutritional status of children with variation in the production of rice and vegetables; and (4) to find out the influence of nutritional knowledge of mothers on nutritional status of their children. The study was conducted in two villages, one where rice was the major food crop and the other where rice and vegetables were the major food crops. From complete enumeration of all households of the villages, forty sample households were selected from each village, through random sampling procedure on the basis of land ownership. Structured questionnaire was used to collect data from the individual household head and wife. Nutritional status of the children were determined by anthropometric measurements.

Family Planning : "The study of primary health care and family planning services at upazila and union levels" (1985-86) tried to understand the problems of upazila health and family welfare centres, the area of reach of these institutions, and the facilities available at them. Another study conducted in this area was "Demographic process in four villages of Comilla : a review of the 1980s decade". Its objectives were to (1) identify the trends in demographic process like fertility and mortality, age at marriage, contraceptive practices etc., and their association with the literacy level of the respondents.

Education : Only a single study was conducted during this period concerned with education. The objective of the study

entitled "Universal primary education: an experiment at Meher, Comilla" was to look into the mechanism of enrolling and keeping all children of five years of age in the experimental schools, attitude and participation of local people, scope for employment creation, per student cost, and the possibility of the replication of the model of universal primary education developed at Meher to other parts of the country. Information was collected through formal interviews of teachers and managing members of the schools, and the employees of local office of universal primary education Programme.

Training : Training is a very important activity at BARD and there have been been studies on issues related to this. A study of "Training of upazila officers on administrative reorganization/ reform" (1984-85) was conducted. The objective of this study was to compile various issues that emerged in the 19 orientation courses that were organised at BARD for training upzilla officers. It covered the broad areas of decentralized administration, local level planning and resource mobilization, institutional approach to rural development, and socio-economic development of a village. Similarly, there was a compilation on the training courses conducted for the officials of Bangladesh Rural Development Board. It contained information on the background of the participants and their opinions regarding various aspects of the course, such as duration, course content, training methodology, teaching aid, examination system, etc.

The objective of the "Study on Post training utilization-case of Audit Training Courses for the officials of the Cooperative Department" (1990-91) were (1) to know some background information about the participants and their views about the course, (2) to assess the training inputs, immediate outputs and their utilization in the job situation of the participants along with the related problems; and to (3) identify specific factors related to post training utilization and extent of the effect of those factors on each other. The study was conducted through a set of questionnaire administered on 275 participants, empirical verifications through field visits and direct discussions with auditors, trainers, and supervisory officials. A similar study was the "Study on training of women extension workers in Bangladesh" (1983-84). Its objectives were to review the socio-economic situation and major development programmes for women in Bangladesh, the major extension approaches in practice, assessment of the number of women extension workers, analysis of the syllabi of the training programmes and evaluation of the impact of the training programmes on women extension workers and the beneficiaries of their work.

FARM MANAGEMENT STUDIES

Seven studies conducted during this period were concerned with different dimensions of farm management. Among these, two were farm management surveys. The objectives of the "Farm management survey in Comilla Sadar Upazila 1984" (1985-86) were to find out (1) landholding and tenancy pattern, (2) cultivation

of HYVs and local varieties in Boro, Aus, and Amon seasons; (3) per acre yield and total production. Data were collected from 12 villages by following two-stage random sampling method. The objectives of another farm management survey reported during 1988-89 were to find out (1) landholding, land-use and tenancy pattern, (2) areas under homestead, pond and orchard, (3) coverage and yield of different crops, (4) cropping intensity, (5) relationship between size of operational holding and yield, (6) cost, return, and benefit cost ratio of paddy, vegetables, homestead production, poultry and livestock, and average propensity to consume farm products. This study was also conducted in Sadar upazila.

A "study of productivity and employment implications of small scale farming in Bangladesh" (1984-85) sought to identify the constraints in increasing the productivity of small farmers, evaluate the impact of new technology on productivity and employment, and examine the role of policy and institutions on technological innovations for the improvement of small-scale farming in Bangladesh. The study was based on secondary data, review of earlier research reports, and case studies conducted in two villages of Comilla Sadar Upazila.

The objectives of the study "Subsistence farm household income and resource allocation" (1988-89) were to (1) review the changes over time in socioeconomic characteristics of the rural people at the macro-level, (2) examine government policies and programmes towards agricultural development with special

reference to serving the needs of subsistence farmers, (3) analyze current levels of income and resource allocation pattern of subsistence households, and (4) identify some areas of training on planning techniques for optimization of farm income. Data were collected from secondary sources to obtain a macro picture. Further information was collected from three agro-ecological Zones, with 30 households from each area, through the use of structured questionnaire. Another related study was "Productivity differential and input use efficiency: A study of rice cultivation in different agro-ecological zones of Bangladesh" (1989-90). The objectives of this study were to (1) estimate the productivity rate of rice; (2) estimate the cost and return on rice production; (3) study the functional relationship between inputs and outputs; (4) estimate the marginal value of products of various factors of production; and (5) to test the returns to scale. The study was conducted through collection of primary data from six villages, belonging to different agro ecological zones.

A "study on cattle fattening programme by landless and youths" (1982-83) was undertaken with the objectives of (1) knowing the pattern of cattle fattening programme taken up by the landless and youths; (2) to know the management system; and (3) to find out the cost and returns of the programme. Data for the study was collected from landless and youth cooperatives of Comilla Kotwali Thana. A "Study of fish seed production and marketing system in Comilla Sadar Upazila" (1989-90) was conducted with the objectives of (1) knowing the amount of fish

seed production in Comilla Sadar Upazila, (2) to identify the problems associated with fish seed production, and (3) to document the current fish seed marketing system and the problems associated with it.

IRRIGATION, INPUTS, AND CREDIT

During this period, there were only two studies related to irrigation, inputs, credit and related topics though these were very pertinent to achieving fast economic growth. The objective of the study of "Rural credit programmes in Bangladesh: A comparative case study" (1983-84) was to analyze the credit programmes of the TCCA (cooperative) system, state owned commercial banks, SFDP and Comilla Proshika (NGO). The sources, purpose, amount, procedures and utilization of credit in the case of each of the programmes was discussed and a comparative analysis made.

The study of "Multilevel information system for rural development in Bangladesh - A study of the communication channels" (1982-83) was conducted to find out the effectiveness of various communication channels in reaching the message to the rural poor.

MONITORING, EVALUATION, IMPACT, SOCIAL CHANGE

Twenty-nine studies conducted during this period dealt with monitoring, evaluation, impact of developmental programmes and social change. They were concerned with the monitoring of rural development programmes (2 studies), evaluation of rural

development programmes (9 studies), impact of delivery system (4 studies), evaluation of rural institutions (6 studies), evaluation of agrarian reform (3 studies), evaluation of environmental impact (1 study), evaluation of the work of voluntary organisation and one study was concerned with social change.

Monitoring Rural Development : The objectives of the study "Monitoring rural development programme at upazila level" (1988-89) were : (1) to investigate the monitoring mechanisms and techniques followed by the upazila parishad in implementing development programmes; (2) knowing the monitoring indicators for identifying the implementation of the programme; (3) assess the problems and difficulties in monitoring the development programme, and (4) make recommendations for proper monitoring system at the upazila level.

The objective of another related study entitled "Development of monitoring and evaluation mechanism for studying the impact of cooperatives in Bangladesh" was to examine the present monitoring and evaluation system with a view to assessing the impact of cooperatives at member level, test the system and indicators developed in the field for monitoring and evaluation of the impact at member level.

Evaluation of Rural Development Programmes : There were 8 studies concerned with the evaluation of rural development programmes. The study entitled "Annual evaluation of small farmers and landless labourers development programme, 1979-80",

(1980-81), was an evaluation of the action research for small farmers and landless labourers initiated in 1976 called SFDP. Through this project efforts were made initially in two villages of Comilla Kotwali Thana to organize small farmers and landless labourers into small groups. Through credit support, the groups were also encouraged to undertake various farm and nonfarm activities for income generation and employment.

The study "Agricultural and rural development in Bangladesh" (1988-89) discussed the changes in the landholding pattern, water sources, agricultural, economic, and social life of the villages. The study "Impact of small scale irrigation on the rural poor and its prospects in South Asia" sought to obtain perspective on problems and issues of small scale irrigation. For this purpose, two small scale irrigation projects were studied. The objective of the study of "Distribution of benefits from irrigation according to ownership and management of irrigation equipment", (1988-89) examined the socioeconomic background of the owners, managers, and beneficiaries of irrigation equipment, investigated the differences in the utilization of irrigation technology under various ownership management system, (3) determined the forms of benefits and the categories of beneficiaries using irrigation technology, and (4) examined the differences in the rates of irrigation water that existed under different ownership and management systems. Survey research methodology was used in the study.

The objectives of the study entitled "Evaluation of mass literacy programme in some Thanas of Comilla district" (1981-82) were to look into the enrollment in mass literacy campaign, (2) its curriculum, involvement of upazila parishads and other organisations, (3) problems of its implementation, etc. For the study, information was collected from four thanas of Comilla district. The study "Evaluation of rural health and nutrition project in Comilla" (1982-83) sought to (1) enumerate and review the activities carried out under rural health and nutrition project, (2) to have a critical insight into the strategy adopted by the programme and its acceptability by the people of the programme villages, (3) to assess the impact of implementing the programme at the village level on the basis of some nutrition oriented criteria, and (4) to identify the problems in the implementation of the programme.

The objective of the study of "impact of decentralization on rural poverty in Bangladesh" (1990-91) was to find out the socio-economic impact of decentralization programme on the rural poor at the grass roots level in Bangladesh, and to analyse the extent of participation of the rural poor in planning and implementing the decentralization programme. The study had two parts, first a macro study based on a review of existing literature on decentralization, and secondly, a microlevel study on the basis of case study approach.

Evaluation of Input Delivery : There were four studies evaluating the input delivery. All these studies entitled

"Mixtol-Rice trial" (1984-85) reported the results of the field testing of the effect of mixtol on rice production.

Evaluation of Rural Institutions: Evaluation of the working of rural institutions was an important area of research. Six studies related to this theme were conducted during this period. The objective of the study of "Evaluation of Grameen Bank project" (1980-81) was to look into the extent to which the objective of the Grameen Bank Project (GMP) in Tangail district has achieved its objective of making banking service available to the members of the disadvantaged group. Data for the study was collected through interview with project functionaries and 100 sample beneficiaries, and also information derived from the project records. Another related study was the evaluation of a study dealing with cooperative marketing of paddy entitled "An evaluation of Mukta Paddy marketing project". (1980-81). The cooperative was started as an experimental cooperative rice marketing project with the a view (1) to providing fair price to the paddy growers, (2) to develop grading, storing and selling facility to the consumers, and (3) to eliminate middlemen from the marketing channel. This evaluation was undertaken to find out the extent of the fulfillment of the objectives. The study was done by obtaining information from the members, managing committee members, and official records of the cooperatives.

The objectives of the study of "BRDB-DANIDA project in Noakhali - An Evaluation" were to look into (1) the extent of lending to the more well-to-do and the poorer segments of

cooperators, (2) extent of other benefits reaching the poorer members through the TCCA- KSS system, and (3) the extent of participation of the poorer section in the management of cooperatives. Information was collected from the Thanas where the DANIDA's work was going on.

The objective of the study of "Impact of multiple institutions and programme in rural development" was to look into the impact of multiple organisations being developed in some villages by various agencies, both government and non-government, to reach the various segments of rural population on the basis of age, sex, land-ownership, etc. Data was collected through case study method from five villages of five district.

The study " Performance evaluation of KTCCA as a model UCCA" tried to evaluate the performance of KTCCA as a model UCCA. The study of "Experience of rural development in Sadar Upazilas of Comilla, Noakhali and Laxmipur districts : A comparative study" tried to compare the performance in the three upazilas in respect of rural development, to identify the differences in development, and to provide an explanation for differential experiences. The study was based on secondary sources of information.

Agrarian Reform : There were two studies related to this area. The objectives of the study "Agrarian reform : The prospect in Bangladesh" (1980-81) were to locate the gravity of the problem of land concentration, tenancy, and land fragmentation, and to record the opinion of both share croppers and land owners on the issues of tenancy and land reform. Both

primary and secondary data were used in the study. Primary data were collected from both share croppers and landowners of six districts of Bangladesh. The study "Rural development through three-share-farming : A study on Nobajug Tebhaga Khamar at Zobra, Bangladesh" (1980-81) dealt with the production, distribution, employment, and participation of people in the khamar management.

Environmental Impact: The objectives of the study of "Brick-making and its effect on agricultural land" were (1) to identify the circumstances under which farmers allow the land and soil to be used for brick making; (2) to determine the extent and type of damage crated on land by brick manufacturing firms; (3) to find out the awareness of farmers about land damage and future recovery of soil quality; (4) to assess the feasibility of shifting brick fields to the banks of canals and rivers; and (5) to evaluate the extent of flood control support that can be provided by shifting the brick firms on the banks of canals and rivers. The study was conducted in two upazilas, from where brick fields were randomly selected.

Evaluation of Voluntary organisations : There were three studies concerned with the activities of voluntary organisations. The objective of the "Evaluation of the rural development activities of Christian commission for Development of Bangladesh(CCDB)" (1980-81) was to understand the structure of its programme among the fishermen community and the rural poor, and to examine its replicability in other parts of the country. Information was derived from the beneficiaries of the programme

and official records. Similarly, the study "Village development training programme. A study of the IVS project in Sylhet" tried to understand the planning, resource mobilization, and programme impact on the beneficiaries and amenability to replication of the Village Development Training Programme undertaken by the International Voluntary Service (IVS) in Sylhet. Information was collected through discussions with functionaries, heads of institutions using the training facilities, and published reports. Another study on voluntary organisation was the "Study on Evaluation of Sabuj Sangha Programme" (1983-84) conducted with the objective of enumerating the activities of the organisation in the light of its objectives.

Social change : There were two studies on social change. One was entitled "Long term village study" and its objectives were to (1) analyse the changes taking place in the socio-economic condition of villagers in different agro-ecological Zones of the country; (2) to identify the impact of external influences, especially government policies and programmes and natural events such as floods and storms; (3) to help decision makers and planners to formulate more appropriate development policies and programmes. The study was conducted in six villages from six purposively selected upazilas, representing six agro-ecological Zones of Bangladesh, viz. floodprone, flood-free, haor, hill tract, barind, and coastal. The study covered seven broad aspects of investigation concerning different socio-economic issues of rural life. Complete enumeration of all households was completed. In the case of population and family

planning aspects, a separate questionnaire was administered on sample households.

Another study dealing with social change was "Changes in the social environment in rural society", (1990-91), conducted with the objectives of knowing the village in a broad perspective, to study the economic and social changes in the study villages, and to find out the extent and nature of change. The study was based on a field survey of one village of Comilla Sadar Thana, where most of the development programmes have been functioning.

ACTION RESEARCH

The academy has emerged as an institution of a unique type combining training with research and pilot experimentation in the field of rural development. It has been engaged in several types of pilot experimentation to find out replicable models of institutions, programmes and methods of works conducive to the development of rural areas. The pilot projects have also served as demonstrations for the trainees and the villagers. In the sixties, BARD has undertaken the following pilot projects :

- (1) Thana Training and Development Centre (TTDC)
- (2) Rural Works Programme (RWP)
- (3) Thana Irrigation Programme (TIP)
- (4) Two - tier cooperatives.

Their salient features may be briefly seen.

Thana Training and Development Centre(TTDC). The TTDC was designed as a mode of decentralized and coordinated rural

administration for the sake of development. TTDC aims at effective coordination between the nation building departments and the organisations of the rural people (local councils, cooperatives, etc.). The Thana level officers of various departments have been brought in one centre, and all the necessary service inputs have also been located in the same centre. The departmental experts train the representatives and leaders of the people in the process of planning, coordination, and carrying out various productive activities like improved agriculture. Thus, within a few years of the establishment of TTDC, the Thana Centre has become a hub of training and planning resource centre, and coordination in the field of rural development. The TTDC was a radical departure from the rural administration inherited from colonial days.

Rural Works Programme. RWP was designed and executed with the objective of building the rural infrastructure like roads, bridges, culverts, embankments, drainage channels for water control regulators, sand dams, etc. and creating employment opportunities during the slack work seasons for the rural manpower through local government institutions. The Thana and Union Parishads were responsible for planning the development projects on the basis of local needs, and local labourers were involved in its implementation. The programme protected agriculture and provided employment to labourers. The common villagers participated through their local government institutions in development work.

Thana Irrigation Project. To increase food production, controlled irrigation system was found to be necessary. The TIP was designed to meet the requirements for rapid increase of agricultural production. It was an interdepartmental programme involving different nation building departments and agencies. TTDC was the base for the implementation of the programme.

Two-tier Cooperatives. Experiments on a new cooperative system was started in Comilla in 1960 with the aim of creating a self-reliant organisation of the farmers. The basic structure of this is a two-tier cooperative system of primary cooperatives at the village level and a federation of these primary societies at the Thana level called Thana Central Cooperative Association (TCCA). Weekly thrift savings by the cooperators, training and educational programme of socio-economic development and supply of inputs were the important functions of two-tier cooperative. Members of the primary association discussed their problems in the weekly meetings and accumulated their own capital by collecting savings and buying shares. The Central Association (TCCA) and the government officers at the Thana level provided training to the model farmers and managers of the primary cooperative societies about ways and means of increasing agricultural production and management of cooperatives. They went back to the villages and shared their knowledge with other members of their society. In this way villagers acquired new knowledge and adopted new technology.

The experiences of Comilla Kotwali thana was replicated in other Thanas of Comilla District under the name of Comilla

District Integrated Rural Development Programme (CDIRDP). This was replicated throughout the country since 1972 under the name of Integrated Rural Development Programme (IRDP), subsequently renamed into Bangladesh Rural Development Board.

TTDC, RWP, TIP, and two-tier cooperatives were integrated in nature and produced the maximum effect when undertaken in a coordinated manner. Together they constituted a model of rural development popularly known as Comilla development model. The cooperatives organised the people, particularly the farmers, and by encouraging thrift deposits, freed them from the clutches of money lenders. Rural works programme protected land from flood, provided drainage facilities, and through development of rural physical infrastructure facilitated increase in agricultural production, while TIP helped the use of water resources for irrigation during the dry seasons. The TTDC coordinated the development activities, trained the villagers to develop the skill and provided services and supplies. The four components were thus inter-linked and mutually reinforcing.

BARD ~~has~~ undertaken the following action research projects also:

1. Family planning and population control.
2. Land use planning.
3. Feeder school (Imam Teacher).
4. Poultry farming project.
5. Dairy farming project.
6. Joint farming project.
7. Bamboo tubewell project.

8. Mechanized paddy drying project.
9. Biogas project.
10. Total village development project.
11. Village child development Programme.
12. Rural health and nutrition programme.
13. Women's programme.
14. Cooperative marketing programme.
15. Communication through village team.

The following experimental projects are now under implementation.

- 1) Comprehensive Village Development Programme(CVDP):
Comprehensive Village Development Programme was started with the objective of improving the socio-economic conditions and quality of life of all sections of the people in the village under one institutional framework with the utilization of local level resources and creating linkage with higher level developmental institutions. Work on this project is going on now in 40 villages of Comilla Kotwali Thana, Sylhet Kotwali Thana and Sonargaon Thana of Narayangunj district.
- 2) Small Farmers and Landless Labourers Development Project(SFDP): The general objectives of this project are to involve the small farmers and landless labourers of the rural areas in production activities, to augment employment opportunities, to raise their income with a view to developing their quality of life and to develop a sustainable credit / input utilization mechanism for

the rural poor. The project is being implemented in Comilla, Mymensingh, Bogra, Patuakhali and Barguna districts.

- 3) Model Village in Rural Development: The main objectives of the project are (i) to develop an organizational infrastructure for rural development through peoples participation, and (2) to help the government in making a strategy of integrated rural development in the country. In three villages of Comilla Kotwali and Daudkhani Thana of Comilla district, the project is being implemented.
- 4) Homestead Agriculture and Food Processing Project : The objectives of this project are to organise and train the rural women for vegetable cultivation in the available homestead land, food processing and preservation, and to create new avenues for generation of employment and income for them. It is now being implemented in two villages under Comilla Kotwali Thana.
- (5) Comprehensive Population and Family Planning Activities in Integrated Rural Development: The objective of this programme is primarily to assist national action by making the IRD ideologies and strategies more comprehensive by incorporating population and family planning component. The project is implemented in two villages of Comilla Kotwali Thana.

6. Developing the Village Community Area by Integrating Basic Needs and Ecological Resource Perspective: The main objectives of this action research project are to (i) locate a place for ecology and environment in the existing development activities of the villages, and (ii) to assess the impact of development on the rural ecology and to suggest improvement according to the internal and external resource inputs within the given environment. The project is implemented in two villages of Sylhet Sadar Thana.

In order to have an understanding to how action research projects are formulated, the project proforma for "Comprehensive Village Development Programme" phase II (January, 1992) was examined. This was found to be basically an administrative proforma. No theoretical explanation has been given explaining in what respect the CVDP is going to be an improvement of over the the earlier two-tier co-operatives or the target group oriented programme. The following are the 12 listed objectives of the CVDP project.

- 1) To ensure overall socio economic development of all groups of people living in the village by maximum utilization of all resources through the village co-operative and to develop the co-operative as the self-reliant rural institution.

6. Developing the Village Community Area by Integrating Basic Needs and Ecological Resource Perspective: The main objectives of this action research project are to (i) locate a place for ecology and environment in the existing development activities of the villages, and (ii) to assess the impact of development on the rural ecology and to suggest improvement according to the internal and external resource inputs within the given environment. The project is implemented in two villages of Sylhet Sadar Thana.

In order to have an understanding to how action research projects are formulated, the project proforma for "Comprehensive Village Development Programme" phase II (January, 1992) was examined. This was found to be basically an administrative proforma. No theoretical explanation has been given explaining in what respect the CVDP is going to be an improvement of over the the earlier two-tier co-operatives or the target group oriented programme. The following are the 12 listed objectives of the CVDP project.

- 1) To ensure overall socio economic development of all groups of people living in the village by maximum utilization of all resources through the village co-operative and to develop the co-operative as the self-reliant rural institution.

- 2) To increase production and to create employment opportunities in different sectors in order to raise productivity and income of the families.
- 3) To own assets under joint ownership and maximize the gap between the rich and the poor.
- 4) To encourage capital formation through village cooperatives and to invest the capital in ways that benefit the villagers.
- 5) To remove illiteracy and arrange education for all, especially for the children.
- 6) To improve skills and technology for the members of the co-operative society.
- 7) To undertake programmes for health, nutrition and family planning for all.
- 8) To develop leadership and trained village level development workers.
- 9) To encourage and develop women as partners in the society and allow them to participate in development efforts.
- 10) To prepare an annual plan through mutual discussion and implement it with the cooperation of the members.
- 11) To hold annual general meeting and other scheduled meetings in a regular and proper pattern.

- 12) To develop special programmes for the disadvantaged section of the rural population.

As such, there was no attempt through the action research to find out a theoretical basis for introducing CVDP.

The reports about various action researches given in the annual reports of the Academy were examined. The annual report on each project was found to be basically an administrative report. For example, the reports about Small Farmers Development Project given for various years covered subheadings like capital formation, credit operation, associations and activities, training, union forum, etc. (1980-81 Annual Report). In these reports no examination of the general principles about the development of small farmers was made. In SFDP as in other action projects of BARD, group formation was the central aim. However, no attempt has been made to understand factors contributing to the formation of successful and dynamic groups, and factors adversely affecting group formation and their effectiveness. In sociology and social psychology there are a lot of ideas about the working of groups, but nobody seems to be concerned about the application or examination of those ideas to the practical situation. In no action research, there was an analysis of the costs involved for forming groups, managing them, and making them effective. It is rather strange to assume that overhead expenses are free. Economic viability is as important, if not more, as social acceptability in the implementation of the project.

It appears that there is a weakness of critical approach about the effectiveness of the institutions like two-tier cooperatives, Thana Training and Development Centers' activities, etc. The poor attendance at the TTDC training classes seems to be an indication that it has lost its relevance as a means of development. These institutions might have been functional for a society at one stage of development. But during the last thirty years, Bangladesh society has undergone substantial changes, and even a generation of the population has changed. It was reported in the Fourth Five Year Plan that with the freeing of the sale of fertilizer and installment of tubewells, from the control of these agencies, their consumption has substantially increased, and costs have come down. However, the Academy has developed a kind of reified attitude towards these institutions, crippling its ability for skeptical attitude towards experimental activities, which is the basis of scientific outlook.

It seems that one reason for the deficiency of scientific framework for action research is that they are centrally planned and implemented by the project division. Planning of project should be made a regular responsibility of academic divisions, giving the opportunity for faculty members to examine the problem from the perspective of their academic disciplines, and formulation of action researches with sound theoretical bases, so that at the end of a project certain propositions about human action are either proved or disproved. In the absence of such an effort, the present action research projects cannot be described to be experimental projects. It only gives experience to the

those who participate in it, about implementation of the Programme. This is, of course, a useful experience which can be utilized in the training Programme.

SUMMARY AND CONCLUSION

During the past decade a large number of research studies were conducted at BARD. They covered a broad spectrum of themes, and could be classified broadly as covering (1) diagnostic studies of prevailing conditions, (2) local institutions, (3) local administration and delivery systems, (4) development of special groups like women, (5) human resource development, (6) farm management studies, (7) studies on inputs, credit, and irrigation, and (8) monitoring, evaluation, and impact studies. While the coverage of the themes was large, most of these studies were descriptive studies, ones with limited geographical coverage of Comilla, following case study method. As such, though these studies have given insights into the working of various aspects of rural development programmes, scope for the generalization of these insights were limited. The studies were also marked for lack of theoretical framework, which could enable a researcher to understand the specific problem or phenomena he was studying, as the operation of some general socio-economic, political, or natural principles. Though the studies had a wide coverage, studies were weak in respect of the following themes :

- (1) Understanding of attitudes, values, motivations, and related socio-psychological attributes of rural population.

(2) Studies on human resource development, particularly literacy, knowledge, fertility, and status of women in society.

(3) Inequality, unequal benefit from development programmes, both in terms of social strata and in terms of region.

The studies also did not try to identify the causes of various socio-economic problems so that these causes can be tackled through appropriate programmes. Actually in an academy where socio-economic research and action researches are carried out, programmes evolved on the basis of identified causes of socio-economic problems, can be the appropriate themes for experimentation. But such a relation between research and action research was not built up.

The other suggestions are given with reference to the broad themes into which the researches were classified :

A. Diagnostic studies of prevailing conditions.

Studies in this series are desirable, but they may try to find out ways and means through which the local resources can be made more productive and economically valuable. For example, paddy straw may be used as fuel, feed for animals, or industrial raw material. It is for the researchers to find out more valuable uses of local resources.

The following studies are also suggested :

1. Requirements and sources of fuel of households at different socio-economic levels.

2. Changes in consumption pattern at different income levels.
3. Incidence and pattern of mental ill-health in rural area.

B. Local Institutions

Studies in this group may be extended to different parts of the country, and may cover large samples. Studies on the following themes may be considered.

1. Role of cooperatives in the context of market oriented free trade.
2. Comparison of benefits reaching rural poor under different systems of cooperatives.
3. Activities of NGOs.
4. Interaction and pattern of relation between bureaucrats and elected leaders at union, thana, and Zilla levels.
5. Problems experienced by citizens in receiving services from local bodies.

C. Administration and Local Planning.

There is need to take more imaginative studies examining the effectiveness of local administration at various levels, and the problems citizens of different categories confront in their relation with local administration, with a view to making this relation more productive.

D. Special groups of Women, Youth and Disadvantaged.

The studies about women should also try to examine the division of labour and specialization of role in different strata of society, so that its variation is understood, and developmental efforts required to enable them to discharge those responsibilities can be studied.

Studies on youth may try to understand the basic problems experienced by the youth, like unemployment, psychological recognition, participation in political process, etc. These problems vary among youth belonging to different strata of society, as well as different sex.

Rural labour constitutes an important section of the society, but there was only one study about them. Since they constitute the core section of the poor, they may be adopted as an important group to be studied. The incidence of unemployment, its variation in different seasons, indebtedness, relation with employers, and programmes through which the labourers can be helped may become an important area of study.

E. Human Resource Development.

Studies on human resource development was dominated by nutritional studies. The scope of the studies may be extended to cover personal hygiene, use of clean water, pattern of defecation, etc. also. There is urgent need to undertake more studies on various aspects of fertility behaviour in different parts of the country. This is an area where action researches also may be undertaken. Similarly there is urgent need to

undertake studies on various dimensions of rural illiteracy, high rate of dropout, and other problems connected with the spread of education. This is an area where useful action researches can be undertaken.

There is need to assess the training requirements of various categories of rural youths so that through appropriate training programmes their productivity can be enhanced. Similarly, there is need to undertake studies of the training requirements of various categories of rural development personnel implementing various rural development programmes.

F. Farm Management Studies.

There have been several farm management studies. It would be desirable to undertake more studies in this area, with particular emphasis on the analysis of production function, covering cropping, dairying, poultry, pisciculture, vegetable cultivation, and various other diversified agricultural activities, in different parts of the country.

G. Irrigation, Inputs and Credit.

Studies on the management of irrigation system may be undertaken. Rural credit needs also has to be studied more extensively. The accessibility of the weaker sections to obtain credit and use of inputs for productive activities need to be studied.

H. Monitoring, Evaluation, and Social Change.

A variety of monitoring and evaluation studies have been undertaken. Such studies may be undertaken on a broader scale in future.

SOCIOECONOMIC CHARACTERISTICS OF BANGLADESH

In this chapter the salient characteristics of the socioeconomic condition of Bangladesh is briefly examined in order to have an understanding of the main developmental problems of the country, particularly those in the rural areas.

PREDOMINANCE OF AGRICULTURE

Bangladesh is a country at low level of development, with a per capita income of \$ 180 in 1989. Between 1965 and 1989, the GNP of the country increased at a low rate of 0.4 per cent per year (W.B, 1991). It is a predominantly agrarian and rural society, with 69 per cent of the workers in agriculture and 87 per cent of the population living in rural areas. Between 1970 and 1989 the proportion of workers in agriculture declined from 81 to 69 per cent, while the population in rural areas declined from 92 to 87 per cent (ADB, 1991). Rice is the predominant crop in Bangladesh. In spite of the richness of the soil, the output of paddy per hectare in Bangladesh was 2774 kg against 4385 in Indonesia and 6080 kg in Korea (ADB, 1991). The productivity of other crops was also correspondingly low - jute 1321 lbs per acre; sugarcane 16 tons per acre; pulses 600 lbs per acre, and oil seeds 678 lbs per acre (BBS, 1991).

The low yield of the principal crop of paddy, the cultivation of which was the predominant activity of the majority of the population, resulted in very low per capita income. The per capita agricultural production at constant (1984-85) price was Tk. 1637 in 1986-87, and Tk. 1710 in 1989-90. (BBS, 1991).

When per capita output is so low, the scope for increased incomes is limited.

The share of agriculture in GDP was 53 per cent in 1965 and it has come down to 44 per cent in 1989, according to World Bank, (1991). But according to Bangladesh Bureau of Statistics (1991) the share of agriculture in GDP was 40 per cent in 1986-87 and it declined to 38 per cent in 1989-90. During this year out of a total agricultural production of 190,354 million Taka, 79 per cent was contributed by crop production, 7 per cent each by forestry, livestock, and by fisheries. Thus, in the economy of the country, crop production, particularly paddy production, was critically important.

The low yield of agriculture is an outcome of low quantity of various agricultural inputs used in production, as well as poor agricultural practices. Even though considerable progress has been made in the extension of irrigation, still there is considerable scope for expansion of irrigation facilities. On the other hand, considerable proportion of land is flooded during the monsoon season. By protecting this land from flood through construction of embankments and other devices, agricultural production can be increased. Farmers' capacity to use various agricultural inputs like fertilizer, insecticide, at the optimum quantity is limited due to their liquidity problem. The high rate of illiteracy prevailing in rural areas seriously limits the spread of agricultural and other technological innovations among the farmers. As a result, in spite of very good soil and other

favourable ecological factors, agricultural productivity in Bangladesh is very low.

Ecological, social and market conditions vary widely among regions in Bangladesh, leading to significant differences in agricultural performances in different regions. Since most of the land area consists of high and medium high land, and as these are the areas where diverse variety of crops can be grown, the agricultural production strategy is concentrated to the requirements of these areas. HYV rice and jute are suitable crops for these areas. Vegetables, ginger, onions, chillies, garlic, potatoes, and bananas can also be grown in these areas. But there should be scope for their marketing.

The pattern of landholding is given in Table 1: It is seen that 70 per cent of the farmers are small farmers, holding on an average 0.9 acres, and holding 29 per cent of the total land. Twentyfive percent of the farmers are medium farmers, with 2.5 to 7.49 acres. Their average holding is 4.1 acres, and they possess 45 percent of the land. On the other hand, five per cent farmers own 26 per cent of the total area, with an average holding of 11.8 acres. Since 1983-84 landholding may have been further subdivided, reducing the average size of the holdings. The fact that as much as 70 per cent of the farmers are small farmers is a reflection of the extreme pressure on land, mainly resulting from the inability of the economy to provide alternative sources of livelihood for the people. In the absence of developed manufacturing and service sectors, and poor development of

education, there is no immediate likelihood of any reduction in the pressure on land, as it would continue to be the principal source of livelihood. However, in this otherwise gloomy situation, there are some bright spots as well. One is that as per capita income is increasing, there is scope for the agricultural economy to slowly extend the production of livestock, pisciculture, poultry, orchards, vegetables, etc., which are more paying, and where the scope for labour utilization is also larger. Secondly, there is considerable scope for increasing the productivity of the main crop of paddy. If its productivity can be taken to a level of productivity of rice in Indonesia (4385 kg/HA), then even a small farmer can be made into a farmer with surplus production of paddy which he can sell in the market and purchase his other requirements, enabling him to have a better level of living.

Agriculture in Bangladesh is characterized by low utilization of capital. Various kinds of tube-wells and use of tractor for ploughing are the main mechanization that has taken place in agriculture. Though the country is surplus in fertilizer, use of fertilizer per hectare was only 77 kg against 236 kg in China and 106 kg in Indonesia. (W.B, 1991). Use of other kinds of inputs and tools are also very low in Bangladesh agriculture.

The limited use of capital in agriculture is the result of various causes : peasants should have strong motivation to increase the output of their fields, and should have some idea of

the technology and tools through the application of which increased production could be achieved. They should have the resources to buy the tools and related accessories. This required their exposure to markets, traders, etc. requiring capacity to interact with such categories of people. Very often these conditions were weekly available to the rural folk, resulting in poor utilization of improved technology and capital in the production process.

Though the use of capital in agriculture is small, there is an uneconomic use of whatever capital existed due to the exceedingly small size of plots and fragmentation of holdings. Joint ownership of ponds made about half of the fishing ponds in Comilla inoperative. All this resulted in poor utilization of resources, and poor earnings.

AGRICULTURAL CREDIT

Availability of institutional credit for agriculture continues to be low, though recently its disbursement has increased substantially, from Tk. 32.5 crore in 1970-71 to Tk. 1131 crore in 1984-85. Institutional sources provided about 8 - 24 per cent of the credit needs of rural population, and the share of agricultural credit in institutional credit never exceeded 15 per cent in any year. Some major factors affecting the flow of credit to agriculture are fund constraint due to poor credit recovery, increase in defaulter farmers, improper credit utilization due to poor supervision, etc. In the present agricultural credit disbursement, small farmers who form 50 per cent of rural households, are excluded. Eightyfive per cent of

small farmers have no access to institutional sources of credit. The amounts they received are also small. A study showed that while 1.2 per cent of the small farmers owning land upto 1 acre got loans from institutional sources, 7.7 per cent of medium farmers and 7.2 per cent of large farmers got such loans.

Rural people owning less than 0.5 acre of land are excluded from the farmers co-operatives - KSS. Separate cooperatives of BSS and MSS have been established for them under the rural poor programme, which mainly promotes non-farm activities. The Grameen Bank and some NGOs have shown that the rural poor are credit worthy, and institutional credit could be very useful in poverty alleviation. The important problem with respect to small farmers relate to socio political environment of the villages which is hostile to small farmer development. Therefore, they need to be organised. They are not only resource poor, but along with credit they need education and training. (Task Force, 1991, Vol. 2).

LIVESTOCK.

Livestock is an important asset in rural communities. In Bangladesh, livestock contributed 6.5 per cent of GDP, generated 13 percent of foreign exchange, and provided full time employment to 20 per cent of the rural population. In terms of livestock population, Bangladesh is very densely populated. Livestock population consists of 23 million cattle, 2 million buffaloes, 10.9 million goats, 1.15 million sheep, 85 million chicken, and 33 million ducks. However, there is a shortage of milk, meat and

eggs, and per capita availability of animal protein declined from 2.03 gms per day to 1.82 gms. Poor quality and low productivity of livestock are responsible for this. At present, the milk production of a cattle is 0.65 kg per day and a native hen lays 40-50 eggs in a year. There is an acute shortage of animal power for tilling. The average body weight and power output of cattle in Bangladesh is currently the lowest in the world. (Task Force, 1991, Vol. 1).

NONFARM SECTOR

Related to low development of agriculture is the low development of non-agricultural sectors, and their slow growth. Between 1965 and 1989, the share of industrial production in GNP increased from 11 to 14 per cent; that of manufacturing from 5 to 7 per cent. On the other hand, the service sector continued to dominate the economy, its share increasing from 36 to 41 per cent. In the context of poor growth of industrial and manufacturing activities in the country, the pressure for employment continued to be on the agricultural sector. This, in a context of rapidly increasing population, further increased the pressure on land as the main source of livelihood of the people.

INEQUALITY

Landholding, the principal source of income in a rural society, is very unequal in Bangladesh, and its distribution is given in Table 1 :

Table 1: Landholding Pattern, 1983-84
(in 000 units).

Category	Number	Area (acres)	Average (acres) Holding
1. Small farmer (0.05 - 2.49 acres)	7,066 (70)	6,573 (29)	0.9
2. Medium farmer (2.5 - 7.4 acres)	2,483 (25)	10,226 (45)	4.1
3. Large farmer (7.5 + acre)	496 (5)	5,879 (26)	11.8
Total	10,045 (100)	22,678 (100)	2.2

(Source : B.B.S, 1991)

Apart from those who own some land, nearly half of the households are functionally landless, and their proportion is growing faster than the growth of population. In Table 2 income shares of households at different time intervals are given. It is seen that there has been no significant change in the distribution of income over the last two decades. Similarly, there is significant difference in the life chances of rural and urban population, as well as those of the males and females.

Table 2: Income Shares of Households

Income groups	1963-64	1973-74	1985-86
Bottom 40 percent	18.4	18.3	19.4
Middle 40 percent	35.9	37.9	35.8
Top 10 percent	31.0	28.4	31.5

Source : Report of the Task Force on Bangladesh Development Strategies for the 1990s, Vol. 4, p. 20.

EMPLOYMENT

Labour force is estimated to be 35.6 million in 1991, constituting 30.4 percent of the working age population, of 10 years and more. Females constituted 10 per cent of labour force. However, female labour force participation is increasing rapidly in recent years. Over all annual growth of labour force is 2.7 percent due to the high birth rate of 3 per cent experienced in the seventies.

About 60 per cent of the labour force is employed in agriculture. The second largest employer is trade, hotels, and financial services absorbing about 15 per cent of the labour force. The rapid transformation of labour force from agricultural to non-agricultural activities is taking place in a context of urbanization. There has been increase in non-farm activities in rural areas also, as agricultural growth has increased demand for nonfarm goods and services. Agricultural surplus has generated trading and transport activities. Rapid rural urban migration is also creating jobs in the rural non-farm sector. The enlarged urban market has necessitated an increased flow of food from rural to urban areas, and urban goods to rural areas. The marketed surplus of rice increased from 10 per cent in the early 1960s to nearly 40 per cent in 1984-85. The volume of freight traffic is estimated to be increasing by 5 per cent a year while passenger traffic is increasing at 7 per cent a year. The demand for trading and transport is increasing accordingly.

Estimates indicate that about 25-30 per cent of the labour force is not productively employed. When more jobs are created in

the future, these will be largely in sectors which require some skills from the workers. Agriculture, construction and transport operations are the sectors mainly to generate manual work, that may be performed by illiterate workers. Even in agriculture, the efficient application of the new techniques will require some education on the part of the worker. The jobs in sectors such as industry, trade and service will demand education and skills. The share of these sectors in total employment will show a rapid increase. This suggests that there is need to give priority to primary, secondary and vocational education so that lack of skills does not pose a constraint to expansion of productive employment.

Bangladesh faces a shortage of skilled manpower. It is estimated that nearly three fourths of employed semi-skilled manpower had developed their skills on the job, rather than through training in formal sector institutions. (UNDP, Dhaka, 1992).

Even though 25-30 per cent of labour force is not productively employed, surveys indicate low incidence of unemployment in Bangladesh. This is due to low productivity of labour and low wages. As wage rates are so low, a household dependent upon wage earning cannot earn a poverty level income, even if the working age men are fully employed. So family members have to take up additional work beyond normal working hours, often in self employed activities, such as cottage industry,

livestock, and poultry raising either to save on household expenditure, or to generate additional income(UNDP, Dhaka, 1992).

LOW HUMAN DEVELOPMENT

The poor development of the economy is to a great extent a reflection of the low condition of human development, and resulting human capacity. Per capita agricultural production in 1988-89 was Tk. 1588 giving a daily per capita income of Tk. 4.4. With such low level of income, the level of food and other things that the average people could consume was rather low. The average calorie supply in 1988 in the country was only 1925 (W.B. 1991). Poverty line is drawn in Bangladesh at a capacity to take the very low level of 2122 calories of food, and even by this criterion, 51 per cent of the population are below poverty line (BBS, 1991). A person required 1500 calories for biological metabolism, and after this the energy that is available for him / her for physical work and other activities is very low. As a result, a large proportion of people are devoid of capacity for hard physical labour.

Literacy rate is generally adopted as an indicator of human resource development achieved through education. Bangladesh has one of the lowest literacy rates in the world. Literacy rate of the population above 5 years of age in 1987-88 was 23.8 per cent, indicating that over three-fourths of the population are illiterate and uneducated. Education for the poor is constrained by lack of adequate incentives, such as food, clothing, and scholarships, which might induce the poor to send their children

to school. For females, there are negative attitudes of society about education for girls, destined to become "house wives". Dependency on child labour also causes females to dropout. There are insufficient female teachers, and poorly motivated teaching staff. UNDP, Dhaka, (1992) estimated the enrollment in primary schools in Bangladesh at 50 per cent, with regular attendance around 35 per cent. About one in five children completes primary school. Other estimates place the completion rate at 15 per cent for both sexes, and two-to-three per cent for girls. Over 50 per cent of the dropouts take place in the first year of school. The commonly stated reasons for high dropouts in the primary school are:

- i) Inconvenient school hours and calendars, which clash with children's economic role at home.
- ii) Illiterate parents, unable to assist with homework.
- iii) Schools too far away from home, particularly for girls.
- iv) Parents of older girls (8 years plus) feeling insecure in sending girls to schools with no female teachers.
- v) High teacher absenteeism and lack of community involvement.

The very young population structure of Bangladesh calls for substantial attention to the education of children in the primary schools age; in order to avoid a much larger number of illiterates by the turn of the century. But under-funded, under-managed, and poorly staffed, the weak primary education system cripples the country's entire human resource development base, and erodes prospects for the future. The bulk of those who proceed for higher education are poorly equipped for it,

compromising the country's future stock of educated workers, planners, managers and parents.

Primary education has direct and positive effects on income, agricultural productivity, and fertility, as well as positive effect on child health and nutrition. However, it is estimated that in Bangladesh between 1992 and 1998, 32 million children of 6-10 years of age will never enter primary school, or will drop out early. Hence the importance of non-formal primary education (UNDP, Dhaka, 1992).

The percentage of age group enrolled in education in Bangladesh in 1988 was only 59 as against 134 in China and 107 in Srilanka. The percentage of enrollment in the secondary school level in these countries were 18, 44 and 71, respectively (W.B. 1991). These figures indicate not only the low development of human capacity currently prevailing in the country, but that in the near future also, the prospect of any rapid improvement in educational level of the population is bleak. Whereas the low per capita income of the households prevented them from giving minimum level of education to their children, the poor resource position prevented government to provide educational facilities for all, or to adopt measures for the eradication of illiteracy. Government has been able to allocate only 2 per cent of the GNP and 10.5 per cent of total government expenditure for education. The resulting low development of human capacity limited the ability of the people to rationally carry on various productive activities, including agricultural activities, at the optimum

level. It limited the capacity of the people to push forward the process of industrialization, and diversify the economy into non-agricultural sectors. Low educational development of the population and low level of skill prevailing among them is a serious constraint to development. Whatever little education is prevalent in the society is among the well to do sections of the society, leaving the landless labourers, artisans, etc. to be illiterate. This seriously limited their capacity to improve their skills and earn higher incomes through better performance of jobs.

Various scholars, including Theodore Schultz (1964), have greatly emphasised the importance of education for agricultural and economic development. Schultz emphasised that the acquired capabilities of farm people are the outcome of investment in human capital. Investment to develop human resource has several components, like schooling, improvement in health. Adult education and removal of illiteracy make significant contribution to human resource development. Where technically superior factors of production are the principal sources of agricultural growth, schooling of farmers is very important. Adoption of improved technologies is a continuous process, and it is greatly dependent upon the educational level of the farmers. The extension process is greatly facilitated by the education of the farmers, as they can read literature, and follow recommended practices.

As the pay off from schooling lasts over many decades, increase in of life expectancy of the population is an important

factor determining the rate of return on human capital. Because of the inadequacy of food intake, deficiency in medical facilities, inadequate sanitary conditions, etc. longevity of life in Bangladesh is rather low.

While the government plays an important role in the direct provision of education and health services to individuals, human development basically remains the responsibility of the household. This is achieved through intermediation of gainful employment of family workers so that a part of the income generated is allocated for providing education to children and meeting health needs of household members. Since food, clothing and shelter are the most basic human needs which must be satisfied first, the capacity of the household to finance human development increased more than proportionately with the growth of income, which itself is a function of the level of human development of adult members. (UNDP, Dhaka), 1992).

A major factor behind pervasive poverty and low levels of human development in Bangladesh is large scale under employment of labour force and low wages. Therefore, provision of jobs to the under and un-employed would be making a valuable contribution to human development. This leads to priority for programmes which increase household incomes directly, because they lead to more household resources for human development. But under the present circumstances, a majority of the population will need to rely on the government or the NGOs to take responsibility for the provision of human development services, at little or no cost.

Crude death rate is 14 in Bangladesh against 11 in India and 7 in China, and 6 in Srilanka. Infant mortality per 1000 live births is 106 in Bangladesh, against 30 in China and 20 in Srilanka. In Bangladesh 31 per cent of the babies born in 1985 were with low birth weight, against 6 per cent with the same problem in China. (W.B. 1991).

The Task Force (1991, Vol. 1) emphasised that the existing health status in Bangladesh is poor. This is due to a variety of reasons like inadequate medicare, both in quality and quantity, insufficient nutrition, insanitary condition including non-availability of potable water, inappropriate treatment and inadequate availability of standard essential drugs. Inadequate medicare indicates insufficient immunization effort, less than adequate effort for prevention of locally endemic diseases, inappropriate treatment of common diseases, and use of sub-standard drugs, supported by ill-balanced and ill-trained manpower. Inadequate medicare is complicated by lack of consciousness about health amongst common people, and bad environmental sanitation, including water supply and night soil disposal. Insufficient nutrition is primarily caused by poverty, partially by ignorance. The state of poor health in Bangladesh is caused by the low state of economic development which in turn limits the effort for improvement of health status. The scenario is further complicated by increasing population, socio-economic inequality influencing access to health services, and lack of health information.

Fertility rate is generally related with the level of human development. It is when mortality rate, particularly infant mortality, declines and education spreads among the population, that the fertility rate declines. Fertility rate in Bangladesh declined from 47 in 1985 to 34 in 1989 (ie 10 points), and in China from 38 to 22 (16 points). The percentage of married women of child bearing age using contraception constituted 32 per cent in Bangladesh against 74 percent in China. According to the Task Force (1991, Vol. 4), if the population continues to grow at the present rate, it will double in another thirty-three years. National production has to grow at least by 2.4 per cent per annum to keep per capita income at a constant level, which would require investment at the rate of about 7 per cent per annum.

According to World Bank by 2015 the net reproduction rate of population may reach the rate of 1 in Bangladesh. However, it is estimated that the country's population may stabilize at a level of 295 million. This means, that even if fertility sharply declined, still population would grow at a high rate, due to decline in mortality and resulting longevity of life. (W.B. 1991). The implication of this is that the population would more than double and the pressure on land for livelihood will continue, without any mitigation.

LEVEL OF LIVING

The living condition of the most of the population is very low in Bangladesh. The average daily calorie intake per capita in 1988 was only 1,925 against a poverty line intake of 2122

calorie, which itself was much below the poverty line in the neighbouring country. This means a vast majority of the people are not able to have two square meals a day and satisfy their hunger. When the basic need for food is not satisfied, the urge for the satisfaction of higher level needs remain submerged. (W. B., 1991).

In Table 3 the number and proportion of population below the poverty line of 2122 cal/day/person, and those below the "Hard Core" poverty line of 1805 cal/day/person are given.

Table 3 : Number and proportion of Population below the intake of 2122 cal and 1805 cal. per person per day.

Yr.	Below 2122 cal				Below 1805 cal			
	Rural		Urban		Rural		Urban	
	No. (Million)	Percent	No. (Million)	Percent	No. (Million)	Percent	No. (Million)	Percent
1973-74	57	83	6	81	31	44	2	29
1981-82	61	74	6	66	43	52	3	31
1983-84	47	57	7	66	31	38	4	35
1985-86	44	51	7	56	19	22	2	19

(Source : BBS, 1991, p. 663).

The figures in Table 3 show that 22 percent of the population live under extremely poor conditions, with an intake of less than 1805 calories. Those living below the poverty line of 2122 calories in 1985-86 was 51 per cent, ie. more than half of the population. Thus, the country has to make substantial

progress in agricultural production and its distribution to eradicate the grinding poverty of the majority of the population.

In Table 4 the per capita availability of essential food items and cloth in Bangladesh in recent years is given. It shows increasing availability of all those items except milk, indicating considerable improvement in the living condition of the population in recent years.

Table 4 : Per capita Availability of Essential Items

Years	Food grain	Pulses (kg.)	Edible oil (kg.)	Sugar (kg.)	Meat (kg.)	Milk (kg.)	Newclothes (Metre)
1977-78	160.5	2.7	1.49	1.78	2.18	13.2	6.9
1981-82	161.8	2.2	1.29	2.19	3.69	13.1	6.0
1986-87	161.2	2.1	1.20	2.87	4.70	10.0	7.9
1987-90	167.3	5.6	3.90	3.00	3.17	9.8	11.3

(Source : BBS, 1991)

While the availability of foodgrain increased only by 4 percent, that of pulses increased by 107 percent, edible oil by 162 per cent, sugar by 69 per cent, meat by 45 per cent and cloth by 64 per cent.

The type of houses in which the population live is a good indicator of their economic condition and level of living. Dwelling houses in the country have been classified on the basis of the material used for constructing walls into houses with bamboo and thatch walls, houses with mud and unburnt brick walls, houses with iron sheet and wood walls, and houses with cement and brick walls. According to this classification, walls of 63

per cent houses in the country were made with straw and bamboo, 20 percent with mud and unburnt brick, 12 per cent with wood and iron sheet, leaving only 5 per cent of houses with cement and brick walls. (BBS, 1991 p. 94).

Considerable proportion of the population live in unhygienic condition. Only a small percentage of 3.6 per cent of the households were having the facility of tap water in 1991. While, 53 per cent availed of tubewell water, 38 per cent used pond water and 6 per cent used water from river, stream, or canal. Similarly, the percentage of households with hygienic toilet facilities also were low. Only 6 per cent of the households had modern toilet facilities. While 49 per cent defecated in the open, 45 per cent were with "other" arrangements.

Village and its surroundings are maintained in unhygienic condition. This breeds mosquitoes, flies, etc. resulting in diseases like cholera.

In Bangladesh, in 1982 households with radios formed 14 per cent, those with T.V. 1 per cent, bicycle 8 per cent and motor vehicles 1 per cent. Kerosene was used for lightening purpose in 93 per cent households, and electricity in 7 per cent households. Cooking was done with straw, leaves or cowdung in 72 per cent households; wood in 24 per cent households; and kerosene, gas, electricity, etc. in the remaining small proportion of the households. (BBS, 1991).

A UNDP study emphasized that significant progress can be made in social development, even in limited time frames, without sacrificing economic growth. In large part, the government and donors in Bangladesh has been creating a supply system, but it is under- utilized. The investments made in the social sectors of health, family planning, education and water supply, over the past 15 years have established a substantial potential that can bring about significant change, despite the current low level of human capital formation. NGOs are already facilitating community organization to interface with government services and are creating demand for and utilization of services of education and health. Reduction of poverty consists of the enhancement of the capabilities of all people to live a healthy, active and dignified life. Employment and income are the means of achieving this end, but not an end in itself.

CHILD LABOUR :

Another characteristic of underdeveloped economy is the widespread prevalence of child labour. Examination of age-specific participation indicated that in 1981, 35.2 per cent of male children in the age group of 10-14 years, and 65.6 per cent of adolescents in the age group of 15-19 years were workers, implying the widespread practice of child labour. On the other hand, 70 per cent of males aged 65 years and more also participated in work. It was noted earlier that the Planning Commission had found that participation of children in work was increasing, while employment rate of male adults was decreasing. The necessity to send children for work adversely affected the

scope for their attending to educational requirements, resulting in high rate of drop out and the perpetuation of high rate of illiteracy in the country.

IMPORTANCE OF AGRICULTURAL SECTOR

The low productivity of the primary agricultural sector limited the proportion of the population that can be released for non-agricultural activities. For example, when 70 per cent of the workers in 1989 were absorbed in agriculture, one worker could produce food for only 0.4 extra person facilitating the release only that much labour for non-agricultural activities. On the other hand, the low productivity of the agricultural sector, in which 70 per cent of the work force were absorbed, limited the market for the absorption of manufactured goods and services, limiting the scope for the expansion of the manufacturing and service activities. For example, children can not afford to go to school, even though schools are available. In such a context, increase in the productivity of the agricultural sector is critically important for stimulating the overall process of development.

In 1989 in Bangladesh though 70 per cent of the workers were engaged in the agricultural sector, its contribution to GDP was only 44 per cent, indicating that income level of those engaged in agriculture is considerably less than those engaged in the non-agricultural activities.

The percentage of workers in 1981 in the manufacturing sector was 7 per cent, 11 per cent in the business sector, and 23 per cent in other sectors. (BBS, 1991).

In countries with low per capita income the proportion of a person's income spent on food items (food rate) is very high. In Bangladesh the percentage share of food in total household consumption is 59 per cent, against 13 in U.S.A. and 11 in Canada. Of this, as much as 36 per cent is spent on cereals in Bangladesh against 2 per cent spent on it in Canada and U.S.A. The percentage of expense on clothing is 8 per cent in Bangladesh, against 6 per cent in Canada and U.S.A; on medical care 2 per cent, 5 per cent and 14 percent; on education 1 per cent, 12 per cent and 8 per cent; on transportation and communication 3 per cent and 14 per cent; and other consumption including consumable durables 10 per cent , 32 per cent and 27 per cent. (W.B. 1991). These figures show the low level of consumption of non-food items in Bangladesh. Even in respect of food, it is dominated by cereals. On the other hand, with development, the consumption of cereals declines to very low proportions, and the major expense on food becomes on more palatable items like meat, fish, fruits, etc.; expenses on services like education and medical care expand; and there is substantial increase in the expense on transportation and communication and other forms of consumption. It may be mentioned that as per capita income in Canada and U.A.S. are about hundred times higher than in Bangladesh, the actual expenses incurred in these countries on these items are of very high quantity. This resulted in substantial activities in

those (non-agricultural) sectors of the economy, freeing the work force from land, while several decades will have to be passed before Bangladesh reaching such a stage.

With low development of non-agricultural manufacturing and service activities, the capacity of these sectors to absorb labour is severely limited. On the other hand, with very low level of education and poor skill formation, the ability of most of the young people to be useful for non-agricultural activities is also limited. Lack of acquaintance with non-agricultural activities also make it difficult for those with savings to invest in non-agricultural activities. All this makes land the main source of livelihood in the society, and it results in an almost insatiable hunger for land. In many developing societies, the hunger for land has led to serious social tensions and political problems.

In modern societies distribution of goods and services are facilitated through market transactions, making its development an essential characteristic of development. However, in less developed countries, production is basically subsistence oriented, with households consuming a major share of what they produce, and with very little consumption of items bought from the market. For example, household requirements like rice, vegetables, fish, etc. are domestically produced in most of the households in Bangladesh. Most of the households are not able to buy manufactured items beyond basic necessities like clothes, medicine, etc. This limited the scope for marketing activities in developing countries. But once agricultural production

increased and surpluses became available, the scope for marketing activities expanded.

PROBLEMS OF WOMEN

Women constitute the weakest among the weaker section. In Bangladesh they form only 48.5 per cent of the total population. An over whelming majority of them are illiterate, malnourished, poor and deprived. By tradition and cultural norms, women have a lower status compared to men. Gender inequality is established through socio-economic inequality and distribution of authority and assets between the sexes. All this has resulted in shorter female life span in the country.

Official statistics about women's participation in work indicate that they participate only nominally in productive work. In 1981 only 2.8 per cent of females reported to be workers. However, women in Bangladesh substantially participate in family based agriculture, non-farm activities, and in industries also. Currently the traditional roles of women in Bangladesh are changing fast due to increasing landlessness, poverty and male emigration, making a large number of women to enter into the labour market. (Task Force, 1991, Vol. 1).

The Task Force (1991, Vol. 1), on women's development has listed the following as the major constraints to women in development :

1. Due to gender inequality, and inferior status, women in and outside the family remain vulnerable, subordinate,

and dependent. Traditional socio-institutional norms, customs and beliefs deter women from participating in socio-economic activities.

2. Official statistics have failed to capture woman's participation in economic activities, though they make substantial contribution to activities related to agriculture, livestock, poultry and fisheries. This has pushed women to the periphery of development programmes.
3. It is difficult for women to get paid jobs and equal wage for equal work. Majority of the female labourers are involved in unskilled and semiskilled jobs with low returns and wages. When new technologies are introduced women are the first to be affected.
4. Female literacy is half of male literacy, which limits their opportunity for training and skill development.
5. Due to inadequate data base, it is difficult to design multi-sectoral programmes for mainstreaming women.

In the light of the above problems, the Task Force identified the following major areas of concern for women's development :

Economic Sector: Women's participation in paid employment is now increasing. In the context of growing landlessness and increasing impoverishment of landless and small farmers, in the absence of sufficient selfemployment and off-farm opportunities

to support their families, women members are increasingly joining the labour force to work outside the family and in field agriculture. Increasing male migration from rural areas is necessitating many women to look after their family farms. Various development programmes and availability of bank credit has further widened the scope for women to be employed. However, the institutional support for women's effective participation in agriculture in the form of group organization or cooperatives, credit and extension services, are extremely inadequate.

In Bangladesh deforestation is increasing, leading to shortage of vegetation, firewood, fodder, building wood etc. The impact of such environmental degradation is more on women than on men.

Social Problem: Women in Bangladesh are very backward in education. Female literacy is less than half (16 per cent) of that of male literacy (36 percent). Only 50 per cent of the school age girls are enrolled in the primary schools compared to 90 per cent boys. The drop out rate of female children at the primary stage is 80 per cent, compared to 40 per cent among male children. In secondary education, female share is only one-fifth of that in primary edition. Only 10 per cent of the females in the age group of 11-15 years are enrolled, with half dropping out before the S.S.C. examination. Skill development and technical training opportunities for girls and women are extremely limited.

A narrow base of female education results in the predominance of superstition, poor spirit of enterprise and

initiative, stagnation and excessively subordinate position in the family. Female illiteracy is synonymous with uncontrolled fertility, accompanied by high incidence of maternal and child mortality. Economically, limited female access to education means exclusion of women from organized and informal labour market. Politically, it results in ineffective public opinion. All this emphasises the importance of education for women. For any medium and long term development plan, education is the most important means for integrating women in the process of socio-economic development.

In spite of an overall improvement in life expectancy in Bangladesh between 1974 and 1985, female expectancy of life (53.4 years) is less than that of the males (54.2 years). Complications during pregnancy and child birth are the leading causes of morbidity of women : Maternal mortality accounts for nearly 27 per cent of all female deaths. Eightyfive per cent of women suffer from iron and protein deficiency. The sole emphasis on females in family planning has limited the success of fertility control programmes. In such a context, the major areas of concern include -

- 1) Lack of general awareness about the importance of women's health care, particularly about the health and nutritional needs of expectant and lactating mother;
- 2) Lower nutritional status and life expectancy of women compared to men;

- 3) Non-availability of services during child-birth from trained midwives.
- 4) General lack of awareness about the importance of personal hygiene, maternal and child health and sanitation.

Land and Housing : Gender-differentiated right to land is the single most important factor affecting gender inequality in Bangladesh, since in most cases the wealth is composed of land only. Therefore, a gender unbiased land policy will be one of the most important instrument in overcoming the gender differential that exists in the society. Equal right to land for both men and women will have a strong positive impact on the socio-economic status of women.

Special Concerns : The Task Force has listed a number of issues of special concerns related to women. It has been pointed out that definitional anomalies in national statistics has resulted in marked skewness about female participation in work. The resulting misconceptions have serious repercussions on the perception of women's role in the economy and society.

Another issue of concern is gender violence, prostitution and traffic in women. Women become the victims in all these cases and the process of deprivation leads them to such a situation. The common denominating factor behind all these phenomena is economic marginalization and lack of access to resources.

The process of main-streaming women requires a strong commitment to gender equity, supported by careful operational plans to ensure women's participation in all sectors. Reforms of the laws which infringe on women's rights will provide the necessary framework of formal equality within which this process can occur.

ENVIRONMENTAL PROBLEM

Development has its impact on environment in different ways, due to the inter linkage-between the air, water, land and living organisms. Therefore over-exploitation of natural resources will greatly affect the environment.

An important factor which is creating tremendous pressure on natural resources is the high rate of population growth. Despite the recent decline in fertility rate, the rate of growth of population continues to be beyond a sustainable level. The population has built up tremendous growth potential, as population below the age of 15 years is around 46 per cent of the total population, and females within the reproduction age (15-49 years) formed 48.4 per cent of the total female population. Even in 1990 the proportion of population of 0-4 years to total population has not changed compared to the 1981 level. World Bank has estimated that the the population of Bangladesh would be 145 million in 2000, 177 million in 2010, and 232 million in 2030. Population of this magnitude would put tremendous pressure on environment.

High population pressure has already started affecting the sustainability of agricultural development. Because of intensive use of land, shortage of biomass and increasing use of modern varieties of crops, the cultivated soils are now being depleted of essential nutrients, particularly sulphur and zinc. Fish production in the flood plain is affected by flood control projects, indiscriminate use of pesticides, overfishing, industrial pollution, etc.

With increasing human pressure on land, land is becoming scarce to produce enough feeds and fodder for the large concentration of livestock existing in the country. This has affected livestock productivity in the country.

Biomass plays an important role in rural life. With increasing pressure of human and livestock population, acute shortage of biomass fuel has developed in Bangladesh. The per capita supply of biomass fuel is declining. There is an increased use of crop residue and dung as fuel, which is diverting valuable nutrients and organic matter away from the soil. The efforts required to obtain fuel for basic needs already constitute a major burden on a large part of rural population, especially landless and marginal farmers. There is also extreme shortage of animal feed and fodder, building material for housing and organic material for land. Thus the agricultural resources of the country are already under severe pressure.

Provision of clean water and improved sanitation are basic requisites for improved health. In spite of some progress in this sphere, there is mixed use of tube well water and polluted water, indiscriminate defecation practices, and very little improvement in personal hygienic practices. Faecal pollution of the environment and poor hygienic practices provide ample opportunities for the spread of many disease like diarrhoea. In order to benefit from the best water resource in the world available in Bangladesh, the bacterial contamination of water has to be eliminated by safe disposal of domestic wastes.

SOCIOLOGICAL AND PSYCHOLOGICAL CHARACTERISTICS

Sociologically, under-developed societies are characterized by low degree of division of labour, and low level of socio-economic differentiation. For example a person may be doing every day a variety of activities like looking after the crops, looking after cattle and other livestock, looking after fish ponds, repairing house, training children in the skills required for agriculture, etc. Many of the items required for agricultural activities and for household requirements may be made at home. There is considerable degree of homogeneity in the society in socio economic terms. Even though there is the rich, the middle and the poor sections of the society, there is patron-client and other kinds of relations among them, concealing the nakedness of the exploitative relations in the society, resulting in social harmony.

Scholars have indicated that the beliefs and values of less developed societies are quite different from those of developed societies. The culture of these societies is predominantly traditional in orientation. Lack of education, limited exposure to and consumption of mass media, lack of spatial mobility and contact with urban areas etc. limited the scope for the modernization of beliefs and values and resulting modernization in outlook in life.

In a study of Indian peasants in Allahabad district, Durganand Sinha (1966) found that their motivation was largely centered on immediate problems of subsistence and daily living. Urge for collective effort was weak and little evidence was found about the villagers having any community feeling, village consciousness, or much concern for problems of the state or of the country at large. Their horizon was close to them. Their lives were circumscribed within the limits of personal ken and the village folk, and their hopes, aspirations, and fears seldom transcended the purely personal or family spheres. They were imprisoned in rural isolation, confining their activities and interests largely to the matters of immediate economic necessities. They were individualistic and ego-centric in outlook, and not agitated by problems of the village, community or the nation. They exhibited limited interest in risk taking and tended to tie their goals very close to their last performance. One of the factors which has contributed to the development of the habit of playing safe was poverty, which has plagued the rural population for thousands of years, killing the

enterprise and urge to innovate. The Russian agricultural economist Chayanov(1986) described that peasants preferred the avoidance of risk to the maximization of profit.

Sinha (1966) also pointed out that as villagers' community consciousness was weak, their mobilization for undertaking developmental activities was a difficult process. In the absence of community consciousness, cooperative endeavor became impossible. A person who was functioning near the subsistence level or who was deprived of many of his wants, was found to be less sociable and weak in group cohesion. During semi-starvation, the social relationships of the deprived individuals got altered. Deprivation produced social demarcation, decreased sociability, and weakened group consciousness. It was only with the satisfaction of basic physiological needs like hunger, higher level needs like the need for belonging, love, group feeling, etc. came to the prominence. People were so much preoccupied with the problems of their subsistence and daily life, that community consciousness and other high level needs have either remained anaemic or dormant. Generations of poverty has stunted the growth of aspiration and made it into a static phenomenon and has harmstrung and paralyzed rapid development.

Passivity : Alex Inkles (1974) pointed out that the members of traditional societies were characterized by passive acceptance of fate and general lack of efficacy; fear of innovation and distrust of the new; isolation from outside world and lack of interest in what went on in it; dependence on traditional

authority and the received wisdom of elders and customary leaders; pre-occupation with personal, especially family affairs, to the exclusion of community concerns; exclusive identification with purely local and parochial primary groups; the shaping and damping of ambition to fit narrow goals, and the cultivation of humble sentiments of gratitude for what little one had; rigid hierarchical relations with subordinates and others of low social status and under-valuing of education, learning, etc. not related to the practical business of earning one's daily bread; traditional beliefs and values, rather than rationality providing the basis for selection. Such social and psychological characteristics made it exceedingly difficult to initiate and sustain a process of development in traditional societies.

POLITICAL AND ADMINISTRATIVE CHARACTERISTICS

Political and administrative problems in the implementation of development programmes are more insurmountable than the economic and social problems confronted in the process of development. Characteristics like homogeneity in language, religion, weakness of ethnic division, etc. in Bangladesh weakened the political problems which the country has to confront in the process of development. However, in Bangladesh, political institutions are in an incipient stage of development, limiting their capacity to integrate the population and to mobilize resources for the realization of national goals. Development of political institutions is an essential requirement for mobilization of resources and for achieving political stability. If men are to remain civilized, the art of associating people

together must grow and improve, commensurate with the creation of opportunity for participation in the political process. But in developing countries, the opportunity for political participation is growing much rapidly than the art of associating people together. The resulting lag between political mobilization and participation on the one hand, and the development of political organisation and institutionalization on the other, often resulted in political instability and disorder (Huntington, Samuel, 1968).

The capacity of bureaucracy in developing countries to be an effective instrument of development is limited. The attitudes and behaviour of bureaucrats are not often conducive to either innovation or to the efficient administration of the affairs of the state. The family, ethnic and religious ties of large segments of the population are of greater intensity than corresponding ties with the state.

The problems of bureaucrats are further compounded by the difficulties of gaining confidence of the masses. Bureaucrats are always the objects of doubt and suspicion. Bureaucratic efficiency is also affected by the frequent interferences from politicians, adversely affecting the goals of rationality and professionalism. Reform minded regimes have cranked out welfare and reform legislations at a pace far exceeding the capacity of their bureaucratic systems to administer them. The incidence of political and bureaucratic corruption is also high in developing countries. As long as the supervisor's personal security is not

jeopardized, rule violations, petty corruption, and non-performance, have generally gone unpunished. While such attitudes of "live and let live" ease some of the pressures on the under paid lower bureaucracy, they do little to upgrade the quality of his performance.

The Task Force (1991, Vol. 2), on administering the development process found that in Bangladesh the administrative system concerned with development has deteriorated alarmingly due to a variety of factors. Factors like lack of trust, excessive reliance on hierarchy, complex as well as conflicting rules and procedures have given rise to a highly centralised system in which even minor decisions go to the top and are inevitably delayed. The pervasive sense of distrust has resulted in excessive checks and controls paralyzing initiative and drive. A situation has developed in which every one looks up to his boss for guidance or approval before initiating any action. Second, allocation of responsibility and authority at different tiers of the administration has broken down. While field officers remain responsible for administration, much of their power and authority has been taken away. Where responsibility was given, the required authority was not vested. The upward concentration of power and authority at the ministry level and above has sapped drive and dynamism at the field level where it is most needed.

Misuse of development resources for kick-backs and patronage has become quite common in recent years. The malaise was exacerbated by total lack of public accountability. While paying lip-service to the delegation and decentralization and

vaunting the upazila system as its symbol, power was centralised to a unprecedented degree. Such a system inevitably generated corruption, cronyism and misuse of power. Rules and procedures were blatantly violated in pursuit of money and extra favour or benefits. Conscientious objectors within the government were over-ruled, silenced with threat, or removed from positions of importance. Corruption and abuse followed a similar path in rural areas. A significant portion of the resources meant for the poor was syphoned off and misappropriated by people with power and authority, the very group from whose clutches the poor were intended to be saved. Institutional checks on misuse and corruption were weakened and cynicism replaced idealism and public morality.

Apart from corruption, the quality of administrative manpower has declined due to the gradual deterioration of the education system and its standards.

Motivation, morale and discipline in public services have significantly declined in recent years. Conscientious work and merit no longer carry any premium. To earn rapid promotion or good posting, one has either to cater to personal interests of the boss or, at a minimum, adopt a policy of least resistance to his wishes. Understandably, a new administrative culture of subservience and phsycophancy has replaced old values of pride of performance and upholding of public interest. The trend has been reinforced by the eager participation of a section of senior officials in a rat race to curry favour or amass wealth.

Pressure from employee/labour unions and local political activists and 'mastans' is now a serious hindrance to efficient management, particularly at the field level. Interference in staff recruitment, tendering, contract award and work execution has become quite common and many officials feel helpless because of general deterioration in the law and order situation. Even disciplinary action against delinquent staff, particularly corrupt one in league with local thugs, is considered hazardous.

~~SUMMARY AND~~ CONCLUSION

In this chapter a brief review of important socio-economic characteristics of Bangladesh was made. The country's economy is dominated by lowproductive rice production. Productivity of the two other related sectors of livestock production and pisciculture ^{is} ~~was~~ also very low. Though the country is endowed with the best soil and water resource in the world, due to various causes, the capacity of the people to exploit these resources and achieve high agricultural production has yet to develop. The low productivity of the agricultural sector is accompanied by under developed manufacturing and service sectors. Such characteristic ~~made~~ ^{made} wide spread poverty a distinctive characteristic of Bangladesh. While about 70 per cent of the farmers are small farmers, about half of the rural population ^{are} ~~were~~ landless. The proportion of population below poverty has recently come down, yet more than half of the population are below poverty line, and about one-fifth are below ~~grinding~~

poverty. Unemployment is high, while productivity and wages are low, resulting in low earnings. ✓

Human resource is very much under developed, and is characterized by ill-health, high rates of morbidity, mortality, and fertility. Infant mortality is high while the proportion of population using contraceptives are low. Education and literacy levels are low, with less than one-fourth of the people able to read and write. Women's condition is particularly low in the society, resulting in shorter span of life, and lower proportion in the population. Social norms are against women doing work outside their homes. Not only illiteracy was higher among women, but the rate of enrollment and retention of female children in schools continue to be very low.

The level of living of the population is very low, characterized by low intake of food, majority of the population living in thatched houses, using agricultural wastes as fuel for cooking food. Only a small proportion have access to protected sources of drinking water, and few have access to sanitary toilets. Defecation in the open is the common practice. Child labour is widespread, adversely affecting their education.

In the absence of education and exposure to mass media, people have low level of knowledge, and are superstitious and tradition oriented. Their aspirations are limited, and motivation for better living is weak. Development of political institutions are in an incipient stage, and administration is characterized by inefficiency and corruption.

10/10/10

On the basis of this review of socio-economic characteristics of the society, the following themes may be identified for socio-economic research :

- (1) Factors contributing to low productivity of crops, particularly major crops like rice, wheat, jute, with a view to identify methods and practices through which their yields can be increased.
- (2) Irrigation studies, examining ways and means through which irrigation coverage can be expanded rapidly, and efficiency of irrigation system can be improved. Identification of ways and means to extend irrigation facilities to small farmers.
- (3) Studies on flood control and drainage requirements.
- (4) Land use studies, trying to find better use of land.
- (5) Rural indebtedness, assessment of credit needs of various categories of farmers, sources of credit, and cost of credit. Also studies on credit utilization, recovery of credit. Availability of credit, and use of inputs and agricultural productivity.
- (6) Non-farm activities in rural areas, type of activities that are emerging, social background of the entrepreneurs, the economics of these activities, and problems confronted in their development.

- (7) Sections of society which are achieving social mobility and moving out of the rural system.
- (8) Rural markets.
- (9) Incidence of poverty in different regions and among different social strata.
- (10) Studies on health, morbidity, and mortality, intake of nutrition and physical strength.
- (11) Infant mortality, immunization, and related problems.
- (12) Education, knowledge, beliefs, values, attitudes, etc.
- (13) Problems of education of females, and people in rural areas, and among the weaker sections.
- (14) Fertility studies, with a view to identify measures through which it can be reduced drastically.
- (15) Household consumption patterns, and their variation.
- (16) Housing condition and housing problems, particularly problems of landless people.
- (17) Knowledge about, attitude to, and practice of hygienic practices like use of toilets, personal cleanliness.
- (18) Energy requirements, type of energy used, efficiency in the use of fuels, new sources of fuel, and related issues.
- (19) Child labour. Incidence of the problem. Social background of households resorting to child and

adolescent labour. Type of activities in which child and adolescent labourers are engaged. Remuneration for child and adolescent labour. Ways and means through which the incidence of child labour can be reduced and children can be retained in schools.

- (20) Rural-urban emigration. Characteristic of emigrants. Influence of urban migration on rural life; nature of linkage maintained by migrants with rural area.
- (21) Rural entrepreneurs. Characteristics and background of people moving out of agriculture into non-farm activities like trade, service, small manufacturing, etc.
- (22) Degree of market dependence and self-sufficiency of different sections of rural society in connection with local production and disposal of goods, as well as for domestic requirements. Places from where different goods and services are purchased/obtained. Temporal and spatial interlinkages among markets.
- (23) Problems of women's development. (1) Social values and attitudes about women's role in the society and at home, prevailing among different sections of society. (2) Time utilization of different categories of household members in areas varying in level of development, and estimation of value of the contribution of different categories of household members. (3) Problems of female education. (4) Institutional support required for integrating women

in the development process, such as organisation, credit, etc. (5) Facility and support for child birth, family planning advice, immunization of children, etc. (6) Details of food consumption within households, gender and age-wise. (7) Inheritance of property by males and females: law, social norms and social practices. (8) Dowry and related problems. Gender violence, prostitution, traffic in women. (9) Comparative study of main stream development approach and target group development approach on women. (10) Effects of technology and innovation on men and women. (11) Environmental degradation and the role of women. (12) Impact of women's programmes on the socioeconomic development of women.

(24) Environmental problems, particularly degeneration of environment, availability of clean water, sanitation facilities, personal hygiene. Disaster management.

(25) Sociopsychological characteristics.

- a) Nature of knowledge, beliefs, attitudes, motives, hopes, and aspirations.
- b) Perception of social relations.
- c) Freedom from subsistence orientation. Interest in maximization of profit.
- d) Urge for development, acquisition, social mobility, etc.

26. Political problems.

- a) Efficiency of rural development delivery system.
- b) Nature of difficulties experienced by beneficiaries to receive services from government agencies.
- c) Political awareness and participation of villagers in political activities.

RURAL DEVELOPMENT PERSPECTIVES

In the previous chapter essential characteristics of the economy and society of Bangladesh were examined. In this chapter it is proposed to examine how these characteristics are likely to change in the near future. The attempt is to give a kind of prognostic description of the scenario likely to emerge in the country, as the rural development programmes and researches supporting them will have to be undertaken in the context of these changes.

INCREASING POPULATION PRESSURE

It was seen earlier that though the rate of fertility has come down, still population of Bangladesh is increasing at a high rate, due to the prevailing biological and social conditions. Biologically, about half of the population are in the reproductive age group, particularly females. Secondly, the social condition of illiteracy, and lack of education of the vast majority of the population, the widespread illiteracy among the females and their low status in the society are likely to continue for many more years, adversely affecting any rapid reduction in fertility. Other factors like early marriage, high rate of infant mortality, etc. also adversely affect fertility reduction. Thus, a vicious combination of poverty, unemployment, malnutrition, illiteracy, poor primary health care facilities along with social apathy and lack of awareness is plaguing the prospect of planned parenthood in Bangladesh. (Task Force, 1991, Vol. 4).

There are different projections of the population of Bangladesh in 2000, and 2010, based on different assumptions about the fertility rate. According to these projections, the population of Bangladesh by 2000 year is likely to be 140 million, 137 million, and 133 million, and by 2010 161 million, 155 million and 146 million. (Task Force, 1991, Vol. 4). According to World Bank estimate, the population of Bangladesh is likely to be 139 million in 2000 and 196 million by 2025. The World Bank estimated that the population of Bangladesh is likely to stabilise around a population level 295 million. (W.B., 1991). Thus, the future population scenario of the country appears to be rather bleak, with little chance of its stabilization in the near future.

The increasing population would increase the pressure on land. Population growth has reduced the land-man ratio in Bangladesh to 0.29 acre in 1990 from 0.33 in 1981. With further increase in population, it will further decline. This will lead to a variety of adverse consequences. One immediate impact will be increase in the proportion of landless population, which was 52 per cent in 1988. It will also lead to ecological imbalances, leading to environmental hazards. Apart from the pull factor of urban opportunities, increase in rural density may increase rural to urban migration, leading to a variety of urban problems, including social problems like crime and delinquency and political problems like social tension and unrest.

Rapid fertility Reduction : In order to have sustainable development, it is essential to achieve inter-temporal balance between population and environmental capacities. The present growth rate of population in the country must be reduced rapidly in order to achieve such a balance. The value of human resources must be enhanced through rapid rise in literacy rate and proper education, skill training, greater attention to female education and the increased participation of women in the labour force. Effective population and family planning programmes have to be designed and implemented within the comprehensive framework of human resource development encompassing the significance of population planning for environmental improvement. This makes it necessary to have detailed studies of demographic problem of the country. In these studies, special emphasis should be given to understand the appropriate channels and measures through which the small family norm can be made acceptable by the vast masses of illiterate people living in rural areas. It would be also necessary to find out measures through the adoption of which couple protection rate can be substantially increased and the population growth can be stabilized at a very early time.

Intensification of Agricultural Production. The continued growth of population in a context of fixed agricultural land base, necessitates increase in the intensity of agricultural production, both to retain the food consumption at the present low level, and for increase in its intake, for diversification of food items, which will occur with the increase in level of living envisaged in the future. It was seen that a variety of

programmes are implemented in the country for increasing agricultural, particularly, food-grain production. The main strategy involved in this sphere is rapid expansion of irrigation, cultivation of HYVs, increased application of fertilizers. In spite of these, the per acre yield in Bangladesh continues to be very low. Still there is vast potential to expand irrigation facilities and to bring more land under crop cultivation. As such, though the population is increasing, the country has the inherent capacity to meet the increased demand for food that would arise in future from increase in population and increase in the level of living. Increase in the consumption of food is actually being experienced at present in Bangladesh. The Task Force (1991, Vol. 2) found that the stability in the production of rice and of all grains was greater in the 1980s than in the 1970s, and Bangladesh foodgrain production was becoming less and less variable, and consumption variability has also been reduced. The overall availability of foodgrain and the average food grain consumption have increased, leading to decline in the percentage of population below the poverty levels of 2122 calories and 1805 calories. The percentage of population below the poverty level of 2122 calories in rural areas declined from 83 per cent in 1973-74 to 51 per cent in 1985-86. Those below the hard core poverty line of 1805 calories declined in rural areas from 44 per cent to 22 per cent.

Thus, of late there has been an improvement in the nutritional condition of the population at large. The households in the lowest quartile had returned the fastest rate of increase

in food consumption among all rural quãrtiles. Such a development was facililated by the country becoming a multi-harvest cereal economy, with more frequent harvests. Thus the country is reaching, if not already reached, a stage where the basic foodgrain requirements of the population can be met.

DIVERSIFICATION OF CROPING

It can be said that by the Third Five Year Plan the country has broken the vicious circle of population growth out pacing economic growth, particularly growth in food grain production. The Fourth Five Year Plan indicated that during the previous plan period the economy grew around four per cent per year, while population grew at 2.2 per cent per year, which can result in an increase in per capita income of around 1.8 per cent per year. With further reduction in population growth, as it is happening, it can be expected that the per capita income in Bangladesh may increase around two per cent per year in the near future. With this rate of increase in per capita income and with further decrease in the rate of growth of population, larger per capita investment of resources is likely to occur, and this is likely to increase the rate of growth per capita income. Such an increase in per capita income will have several effects on the economy and the society.

Though the elasticity in the demand for food items is less than unity, still it is very high in developing countries. Therefore, along with increase in per capita income, there will be more consumption of food grain, resulting in the demand for

food grain increasing faster than the rate of increase in population. This necessitates that continued attention need to be given to keep foodgrain production at a high growth rate.

Secondly, with increase in per capita income, the consumption pattern of food items would change. While at low level of income, the pattern of food consumption is dominated with inferior starchy food items like rice, tubers, with increase in income consumption of more palatable and nutritious food items would increase, and the relative expense on cereals, etc. would decrease. In the context of Bangladesh, this implies that the demand for pulses, fish, meat, milk, fruits, etc. may be increasing at a higher rate than the increase in the demand for cereals. As a result of this, condition is likely to emerge for diversification in agricultural production, particularly increase in the production of more palatable and nutritious products. Such a trend is already evident. While the index of per capita consumption of cereals increased from 96.0 in 1977-78 to 100.3 in 1989-90, that of tea increased from 113.3 to 214.3; onion from 82.2 to 120.0; pulses from 93.5 to 199.5; meat from 2.18 kg to 2.64 kg. This implies that with increases in per capita income, there is need and scope, for substantial changes in the traditional pattern of agriculture and its branching into new crops and products, where there is likely to be greater demand, and hence greater scope, for profitability for the farmers. As a result, the agricultural sector would continue to be an important and dynamic sector of the economy, and need to be taken care of in the coming decades as well. While adoption of agricultural

innovations in crop production would continue to be important, the need and scope for innovations and investments would be greater in non-crop sectors of agriculture, such as livestock, pisciculture, horticulture, etc. It is necessary through studies to identify which section of the farming community in which areas of the country are best suited to be on the vanguard of such a transformation, so that they can be helped to change over to new agricultural products. Studies are needed to understand the requirements of these farmers, both in terms of materials and in terms of extension inputs. This will enable the agencies associated with agricultural development to equip themselves with the new demands created with the modernization of agriculture.

Changing Communication Strategy : With modernization of agriculture and rural life, the channels through which information flow into the rural areas may change. There may be several rural households now with radios and transistors, facilitating fast communication of messages. Other medias like newspaper, television, cinemas, etc. also many have made more inroads into rural areas. A portion of the farmers may be now able to read and understand information passed through printed media. The political process, characteristic of democratic societies necessitating periodic elections, is another source of information for the rural masses. A variety of such communication channel are now operating in the country and it would be desirable to understand through studies which section of the society is exposed to which media of communication, and the intensity, effectiveness, and impact of these exposures. This

would facilitate the selection of appropriate media for taking the message to various target groups. The training received by the leaders of the farmers at TTDC was a channel of communication relevant for the sixties. At that time, there was hardly any extension service available in the country side. Modern media was also either absent or weak. The emphasis was mainly on crop production and associated activities, and the efforts were concentrated on well to do sections of the society. But as agriculture is becoming a dynamic sector, increasingly becoming market-oriented, with the non-crop segments like vegetable, livestock, pisciculture, and horticulture steadily increasing, there is need for the adoption of innovative extension and communication techniques. Therefore, there is need for studies about appropriate communication and extension techniques relevant for a context where agriculture is becoming modernized and diversified.

In a context of diversification in the demand for agricultural products, there is need to find out through appropriate studies new products that can be raised in specific areas. It is the responsibility of the extension department to show the farmers innovative agricultural practices, by adopting which they are able to gain new sources of income or higher income.

EXPANSION OF NON-AGRICULTURAL SECTOR

With increase in income and satisfaction of the basic need of food, a greater proportion of the increased incomes would be

spent on manufactured goods and services, like clothing, small household goods, education of children, better medical facilities, etc. This would give increased scope for the sustenance of non-agricultural activities in the rural areas, and rural growth centres, scattered around the countryside. Though the general principle that with increased incomes, the demand for non-food, non-agricultural, products would increase at a higher rate is well known, through appropriate studies the specific goods and services demanded by the population in different social strata, with increase in their incomes, have to be found out. Based on these findings, appropriate programmes have to be developed for the supply of these goods and services. This basically involves the diversification of the rural economy. It is likely that rural entrepreneurs supplying basic non-agricultural requirements may emerge at the rural growth centres, or at higher level centres, either as producers, or as traders.

With increase in agricultural productivity and increase in per capita income, the scope and necessity for marketing activities would expand in a number of ways. Increase in agricultural productivity would make even a small farmer, with an acre of land, a surplus farmer. With irrigation facilities, it may be possible for him to cultivate two crops, and with each crop giving an output of 1.5 or 2 tons per acre, he is likely to have substantial surplus grain for sale. On the other hand, with increase in per capita income there would be increased demand for various agricultural products, not produced within one's own household, as well as for non-agricultural goods.

Thus, for buying farmers' surpluses and other rural produces and for supplying the requirements of the rural population, traders and marketing activities would expand in the rural areas. Traders dealing with basic necessities are likely to appear at rural growth centres of the lowest level, while consumer durables and more valuable services like specialist medical services may appear at higher level centres, like Thana and district towns. Through studies, the centres suitable for the location of various goods and services may be identified so that facilities can be created for the provision of these goods and services at these centres.

Market is not only a physical setting where sellers and buyers meet to sell and purchase goods, but is a social institution with norms of behavior structuring the interaction and relation between the buyers and sellers. Therefore, for an understanding of the full mechanism of the working of the market, along with the study of the details of various commodities sold in the market, their prices, details about those who buy and sell the goods, there is also the need to study and understand the institutional values and norms within which market transactions take place. For example, there may be "Mastans" and other criminals who dominate the market, and acting beyond the control of local law enforcing agencies. Their activities may substantially affect the normal working of the market, with adverse repercussions on the whole process of production and development.

Development of market is an essential feature of economic development. While procuring local commodities for disposal elsewhere, it brings goods from elsewhere for local consumption. This process necessitates the role of traders, store houses for the goods to be disposed, and other related activities, expanding employment in the service sector. Therefore, a good understanding of the working of the market is necessary for its efficient management.

SPATIAL MOBILITY

Economic development and increase in per capita income bring about spatial mobility of the population. People are required to move out of their villages into market centres for buying and selling goods, and availing various services. Agricultural produces have to be evacuated from rural areas, while various consumer requirements of the rural population have to be supplied from urban centres. This necessitates the development of infrastructural facilities, for moving goods and people. If such facilities are ill-developed, the moving out of goods from villages would be affected. Once the transportation system is clogged down, affecting the market for sale of agricultural produces, it would depress agricultural process and may affect agricultural production itself. For example, if there is no good road network, transportation of grain, vegetables, etc. may become difficult; if livestock and dairy activities have to develop among the villagers, there should be facility for fast transportation of milk to urban centres. Similarly for

piscicultural development also, there is need for fast movement of fish to the consuming centres. All this necessitates the development of rural infrastructure as an essential requirement for the sustenance of a developed agriculture. Therefore, it would be necessary to undertake studies on the infrastructural problems and requirements that emerge with development.

URBANIZATION

The process of development is accompanied by urbanization and urban ward emigration from rural areas. There are several elements involved in this process. First, with increase in agricultural productivity achieved through more efficient cultivation of crops, and other components of agriculture including livestock production and pisciculture, less number of people are required to satisfy the food requirements of the population. This makes the people who become surplus from agriculture, to look for alternative avocations. Secondly, with increasing rural purchasing power generated through increase in rural productivity, it becomes possible for the population to consume more manufactured goods and services, which are generally produced in urban areas. The increase in the opportunity for employment provided by the manufacturing of these goods and services lead to the emigration of the population from rural to urban areas, where these manufacturing and servicing activities are located. The higher wage rates in urban areas pulls rural workers to urban area. Further, to avail of the various facilities like higher education of children, better medical facilities, etc. which are available only in urban centres,

those who can afford it prefer to live in urban areas. A variety of such factors promote the growth of urban areas along with development. As urbanization occurs in a context of population growth, the emigration of population to urban areas does not lead to depletion of population in rural areas.

With rapid growth of urban population, various urban problems appear. Urban infrastructural facilities are often unable to cope with rapid increase in urban population leading to the growth of slums. The nature of social relations in urban areas is quite different from the nature of relations in rural areas, and emigration to urban areas often creates problems like anomie and personality disorganization for the migrants. There are other social problems like delinquency, crime, which are associated with urbanization. This makes the process of urban migration, the social and psychological changes of the migrants, the problems which the migrants face in the urban areas, and their adaptation to urban life, important areas of concern for students of development.

EDUCATION

Improvement in level of living created through economic development has its impact on literacy and educational level of the population. With increased resources it becomes possible for the state to devote increased resources for education. On the other hand, with increase in household income, it becomes possible for the households to devote more resource for human development, and to release their children from income earning

responsibilities and devote their time and energy for education. In this context, it may be recalled that the Fourth Five Year Plan has made compulsory education of children of primary school age an important objective of the Plan. As such, it would be necessary to understand how the Programme is progressing, and what are the problems which limit the realization of this important goal. It can be the poverty and related problems of the parents; lack of interest and motivation on the part of the parents to educate their children; lack of awareness on the part of parents about the importance of educating their children. Or, it can be physical problems like inaccessibility of schools, inadequate interest on the part of school teachers to generate interest among the children for education. There may be various other factors resulting in high drop out, particularly of the female children, even at the primary school level. As such, problems connected with education, particularly primary school education, must be an important area of concern for research and action research.

Apart from the spread of primary education among young children, it would be desirable to incorporate adolescents and young adults also into the educational system through appropriate adult education programmes. Such a programme is necessary for making this vital section of the population at least literate, and through it to increase their capacity to carry on various economic activities at a higher level of efficiency. It is also necessary to make a further impact on fertility rate, and reduce the rate of growth of population. As such, there is an urgent

need to undertake studies to understand the ways and means through which adult education can be spread at least among a limited section of the population, say those between 15 to 25 years of age. These studies may include the development of appropriate pedagogy, and teaching material, ways and means through which the target group can be attracted to adult education centres and can be retained there, and similar related problems. Spread of rural education being critically important for the socio-economic development of the country, it may be recognized as an important theme for the Academy's work for some time to come.

CHANGES IN BELIEFS AND VALUES

With steady increase in per capita income, weakening of subsistence base, penetration and expansion of marketing, spread of education, increased spatial mobilization, increased exposure to various mass media and related developments, the traditional beliefs and values and social relations based on them are likely to be affected. While Daniel Lerner (1964) found that urbanization was the main source of change of traditional values and modernization of outlook, Alex Inkles (1974) stressed the predominant role of education in bringing about such a change. These changes are a part of the process of development, and understanding the changes in the pattern of beliefs, values, and attitudes is necessary for understanding the changes in the structure and character of the society.

With even small farmers producing agricultural surpluses and disposing of them through market channel rather than

distributing it among kith and kin and neighbours and friends, market orientation will emerge among the people. People will start thinking of their personal gain from each transaction, making it the predominant basis of social relations. With changes in beliefs and values, and the basis of social relations, the nature of social fabric will be changing, and it is necessary to understand the pattern of these changes.

SOCIAL MOBILITY

With the expansion of income earning activities through increased agricultural production, utilization of newly arising opportunities like trade, transport, it becomes possible for many persons to accumulate wealth and rapidly improve their socio-economic condition. They may try to achieve social status commensurate with their wealth by acquiring political positions, for which the democratic elections provide ample opportunity. Thus, economic development brings in its wake social mobility.

PERCEPTION OF INEQUALITY

In a democratic society spread of education, modernization of outlook, spread to political activities and the continuing process of political churning coagulate the political consciousness of the masses and make them a political force. Once the poor section of the society constituting more than half of the population become conscious of their deprived condition, they are likely to get mobilized, and initiate political measures for redressing their deprivations and advancing their interests. Currently factors like lack of education, predominance of

traditional ideology, conservative beliefs, etc. have blunted the exploitative relation prevailing in the society making the poor to mutely accept their position in the society. They are having a false consciousness about social relations. But once the development process makes certain head way, the poor also will make efforts to advance their interests, which may create political problems. In such a context, there is need to monitor the perceptions of the weaker sections of the society, to study the ideological transformations in them, and the efforts being made by them to advance their interests. Such studies would give advance warning to those in authority about the changing perceptions and aspirations of the masses.

Studies of the impact of developmental programmes in different parts of the world had indicated that all sections of the society do not benefit in equal measure from development. It has been found that the main beneficiaries of programmes exclusively meant of the benefit of rural poor, like food for work programme, employment programme, are the landowners, and not the landless poor. As a result, developmental programmes often widen the disparity prevailing among various sections of the society rather than bridging it. Therefore, it would be necessary to take up studies to understand the distribution of the gains of development among various sections of the society, so that appropriate programmes can be formulated and implemented for those sections not able to derive benefits through the existing programmes.

It would be also necessary to examine the regional variation of the gains of the developmental programmes. Are all areas gaining from these programmes in more or less similar measure? Or, are some areas deriving greater benefit while other areas do not derive benefits in equal measure from the developmental programmes? If there is such variation, it would be desirable to find out the causes of such inequitable distribution of benefits so that measures can be undertaken for mitigating the problem.

ADMINISTRATIVE SYSTEMS

There are a lot of criticisms at the official and non-official levels about the inadequacy of the administrative system built up and functioning for the implementation of developmental programmes. Some of these like T.T.D.C. developed in the sixties have now become well institutionalized having become regular organs of the administrative network. On the other hand, the developmental needs have changed with the passage of time, and with the solution of problems earlier faced by the country. In such a context, new developmental problems and issues need to be identified. There is also need to examine critically the organization, functions and relevance of institutions like cooperatives, constituting the pillars of the rural development administration. In early stage of development when there were no agencies to provide such inputs as fertilizers, pesticides and carry on other activities, like the construction of irrigation works required for agricultural and rural development, local institutions like cooperatives performed critical functions. But

once the economy developed and institutions of market and private agencies developed, they may be able to render better services to the farmers than the state sponsored agencies. As such, there is need to critically examine the role and functioning of the various state and semi-state agencies carrying on various rural development programmes.

It may be also necessary to examine the working of the development administration at the cutting edge, where ordinary citizens come into contact with the administration. This will give an understanding of the problems experienced by the citizens in dealing with state agencies.

With the decentralization of administration, particularly development administration, the bureaucratic functionaries may have to work in cooperation with and some times under the direction of elected representatives. The relation between the two sets of functionaries are not as smooth as it ought to be, affecting the working of rural institutions. Various problems affecting the smooth cooperation and interaction between non-officials and officials need to be understood so that measures can be devised for the solution of these problems.

WOMEN'S PROBLEMS

Women in Bangladesh suffer from many social and economic problems. Among these, a major problem is the invisibility of their work at home and outside, assigning them a negligible role in the developmental programmes. As such, there is need to study the roles of different categories of females, namely, child,

adolescent, adult and the old. If such a study is undertaken in areas varying in level of development, and also covering the males, it would be possible to obtain a picture of the family roles of different categories of household members, and its variations with development. Based on such a study, it would be possible to estimate the amount of time devoted by females for various categories of work, such as domestic chores, income generating activities, looking after children and other household activities, time devoted for entertainment, etc. Based on this information, it would be possible to estimate the money value of such activities. Such a study would also bring to light the predominant roles played by females in different kinds of households, so that appropriate programmes can be taken up to help them to perform these roles in a better way.

Various attempts are made to integrate women in the production process. However, women can also be the main channel through which various other developmental measures can spread in the community. Fertility reduction is one such case. Women can also play an important role in the adoption of various hygienic practices, improved dietary habits, improvement in sanitary conditions at house and its environment, nutritious cooking of food, home gardening, immunization and proper upbringing of children. An important function of the family, which is not at all recognized by development workers, is the satisfaction of the emotional needs of its members. Whereas many other needs satisfied currently through family can be satisfied through other channels, family still remains the institution for satisfying the

emotional needs of individuals. As such, it has to be studied and seen how this need also can be best realized within family. The increase in the rate of divorce in the society may be an indication of the failure of many households to meet this need.

The process of development affects the institution of family in different ways. It has increased the emigration of males from villages to urban areas, leaving the responsibility of looking after family agriculture and other related activities on the shoulders of the wife. The emigration of males and other modern influences seem to be weakening of family ties, leading to dissolution of marital relations and making women to look after the entire family. This phenomenon is more pronounced among the poorer section of the society, where the number of children are large and economic burden is great. This may cause serious survival problems for the family, and may affect children's socialization and education. As such it is necessary to conduct studies and understand the ramifications of emerging family problems.

SOCIAL CONTROL

The problems witnessed at the family level are one dimension of the weakening of traditional social institutions that occur in the process of modernization. Another dimension of this change is the weakening of the traditional mechanisms of social control in the society at large. Institutionalization of social values and their sustenance through appropriate rewards and punishments is the basic mechanism of social control, which control deviant

behaviour. The village social structure provides another level of social control. When the process of modernization advances, there is the weakening of traditional social values and social norms, weakening the mechanisms of social control at personality level. At the same time, the traditional village institutions are losing their effectiveness as they are being replaced by various elected bodies, and other apparatuses of the state. In such a context, many developing societies are in a transitional stage, wherein the traditional institutions have become ineffective, while the institutions and structures of the modern state are not well established, and have not become effective in rural areas. This kind of transitional societies are characterized by social tension, violence, and breakdown of law and order, particularly in rural areas where the presence of the state is rather weak. Such a situation may make those with capital and entrepreneurial ability diffident to invest their money in rural areas. Therefore, it is necessary to have an understanding of the problems of law and order and social control in rural areas.

CHANGING DEVELOPMENTAL IDEOLOGY

During the last three decades, the theory or rather ideology of development has undergone drastic change. In the period immediately following the liquidation of colonialism, there was considerable enthusiasm on planning, collectivization or at least cooperativisation of rural communities, prioritisation in investment in infrastructure and other physical aspects of development. There was a negligence of human development. Most of the postcolonial countries following these and other

components of socialist ideology of development, are now finding themselves to be laggards in the process of development. On the other hand, adoption of market oriented capitalistic policies and practices by the erstwhile communist and socialist countries, have made the advocates of central planning and controlled economy, defenseless. The new policy of market-oriented, free-enterprise based, development policy is advocated and some times compelled to be adopted by international agencies like the World Bank, I.M.F, on which many of the developing countries are dependent for the support and management of their economies. This has created drastic changes in the development policies, including rural development policy, of countries like Bangladesh, greatly dependent upon international lending agencies. Under its impact free trade has now come to play an important role. Supply of agricultural inputs like fertilizers, pesticides, seeds, and installation of tubewells, and other facilities, is now done through free markets. This is marginalizing the activities of agencies like Bangladesh Rural Development Board (BRDB). In such a context, there is need to study the impact of new development policy pursued under the rubric of "structural adjustment" on rural development programme, and on various sections of the rural society, particularly on the rural poor.

An important component of structural adjustment policy is to ease out subsidies given for various developmental activities like the installation of tubewells. What are the impact of easing subsidies and withdrawing government agencies from such activities? Would it adversely affect rural development

programmes ? There are several other questions to be asked and answered. Therefore, the impact of the process of structural adjustment on various aspects of rural development need to be studied.

HUMAN DEVELOPMENT

In view of its importance as an objective and means of development, UNDP has been emphasizing the importance of human development. Households, the central government, the local government at different levels, the NOGs and the community are the major actors which play a role in human development in Bangladesh. However, the majority of the households are not able to make significant contribution in this respect, due to their low incomes. Therefore, measures such as provision of employment, which would enhance household incomes would be contributing to human development by the households. This makes the role of the other partners in this effort more important. Local governments or communities themselves may formulate and implement human development projects and formulate and maintain them. For achieving this, individuals have to join hands and minds collectively and work together through appropriate social institutions.

As the capacity of the state to contribute significantly to socio-economic development, including human development, is limited, effective development strategies may foster alignments among various forces operating in it, which can bring society closer to its major aims. Even a strong state cannot do without the cooperation of these forces, whether they are formally

recognized or not. As such, a major part of the development efforts concerns the construction of alliances which can foster progress towards common goals. Private organisations, whether or not operating with a profit motive, NGOs etc. should be partners in this alliance.

In Bangladesh human development programme concerns both the provision of social services and the targeted generation of income and employment for the lowest income strata and it is emerging as a shared concern of both the government and the NGOs. Their activities at the micro level comprise of education, research, training, health services, awareness raising, institution building, credit support, extension services, and other activities promoting employment and income opportunities. This raises the question of how can the government, the NGOs and the people themselves through their own organizations become true partners in development, and in human development in particular? A possible model may be to recognize the strengths and weaknesses of each of the potential partners and then bring them together in a functional network within which they can play roles which are respectable to their own views and in the eyes of the wider public. This requires trust among the partners, as it is the basic ingredient of any form of cooperation (UNDP, Dhaka, 1992). As NGOs have become dominant actors in the rural development scenario, the Academy may try to find out ways and means through which complementary relation between NGOs and government can be built up.

ASSESSMENT OF TRAINING NEEDS:

An important activity of BARD is training of various categories of personnel connected with the implementation of rural development programmes. However, studies in this areas are conspicuous by their absence at the Academy. There is need to have periodic assessments of the number of personnel (official and non-official), to be trained, as also the training requirements of personnel at different levels.

SUMMARY AND CONCLUSION

This chapter attempted to explore the process of change likely to occur in different dimensions of society in the course of development, with a view to anticipate the changing requirements of rural development, and rural development research. This examination indicated that the demographic pressure will continue for one or two more generations, more than doubling the population. Though population growth would pose a formidable problem, the country has the inherent strength to feed the increasing population, at a higher level of living, as there is tremendous scope for increasing agricultural productivity and production. With increase in crop productivity, leading to increase in per capita income, the demand for more palatable and nutritious food items is likely to increase creating conditions for agricultural diversification. Along with this the demand for non-farm, manufactured products and services also may increase, leading to the expansion of non-farm activities. These are likely to be located in rural growth centres. Along with these developments, marketing activities may

expand steadily for evacuating agricultural and other rural products, and for supplying the increased demands of rural households.) With increase in agricultural productivity, even small farmers may be having extra produces for sale, and extra cash for purchasing new items of consumption.

Economic development is accompanied by urbanization, resulting in rural-urban migration, and growth of towns and cities.

With increase in income and satisfaction of the basic need for food, it becomes possible to utilize more resources for education, health, housing, water supply, sanitation and other dimensions of social development. It also becomes possible to devote resources to take up special measures for helping the weaker sections of the society, who in the normal course of development receive only marginal benefits from development. Similarly, it may be possible to address the problem of regional inequality. Such programmes are not only socially desirable ones, but the politicisation and mobilization of the poor likely to occur at certain stage of the process of development, is likely to make poor oriented programmes a necessity. Apart from the poor, there are other disadvantaged sections like women. Special programmes are required for their socio-economic development.

With advancement of knowledge and modernization of beliefs and values, traditional social institutions and mechanisms of social control based upon them may weaken. This may be having

its impact on the weakening of family ties, and other traditional basis of social control, leading to increase in crimes, etc.

With the collapse of communism, the development ideology is undergoing rapid change. The impact of the new market oriented, free-enterprise based, development models may affect the development programmes of Bangladesh, heavily dependent on foreign donors.

✓ Keeping in mind such a perspective of development, the following themes are likely to be relevant for studies in the near future at BARD :

- (1) Study of demographic problem, with a view to contribute to increased acceptance of contraceptive practice, and rapid reduction in fertility rate. This may include large scale studies of knowledge, attitude and Practice (KAP) of birth control practices in different areas of the country, and different sections of the society. The study may identify socio-economic factors with which fertility behaviour is associated, and identify measures through which fertility rate can be drastically reduced. In view of the importance of reduction in fertility, action researches may also be taken up in this area.
- (2) With increase in income, the agricultural sector will become a more dynamic sector, leading to increase in productivity and diversification. As such, there is need to undertake studies on the adoption of various

agricultural innovations by the farmers. Studies may also be undertaken to understand the structure of demand for different agricultural products with increase in income levels. Other pertinent studies are identification of areas and sections of society who are in the vanguard of agricultural modernization. Various requirements of these farmers may be identified so that agricultural development can be sustained at a high level.

- (3) As non-farm activities are likely to become important with increased incomes, various aspects connected with their developments need to be studied.
- (4) With economic development, marketing expands rapidly for disposal of rural produces, and satisfaction of rural requirements, both for production and for consumption. Apart from various dimensions of trade and market in different parts, factors constraining the growth of market, infrastructural requirements, their development, maintenance, etc. also need to be studied. It would be desirable to enquire as to which section of the population are attracted to different kinds of marketing activities. With development market network emerges, with variation in the frequency of markets for different kinds of goods in different areas. It would be desirable to study the market pattern. There is also need to study the norms and values structuring the relation among different sections involved in market.

Markets generally are located in growth centres. There is need to study their location.

(5) As urbanization is an essential component of development, growth of urban centres and towns need to be an area of concern for study. While urban problems may be left out, rural urban migration and its impact on rural society need to be studied. Answers may be found to questions like who are the migrants to urban centres? What do the households do with their remittances? How urban influences affect rural life? etc.

(6) With satisfaction of the basic need for food, it is likely that education, particularly lower level education, may become an intensive area of concern. Already compulsory and universal primary education has been made a national goal. Various problems affecting the implementation of this programme need to be studied in great detail. This may include studies on admission to schools, dropouts, measures through which children can be retained in the school, problems of lower educational institutions, and ways and means through which education and literacy can be spread. Other topics that may be covered are attitudes and values of parents about children's education, including those discounting the importance of education, interest and efforts of teachers to enroll and retain children in

school, teaching methods, contents, etc. used in schools, and adult education centres. Adult education and problems related with it also need to be an important area of research.

- (7) It would be also necessary to study problems of rural health, nutrition, environmental sanitation, public health and hygiene, water supply, and related problems.
- (8) When education, urbanization, exposure to mass media, etc. spread, traditional beliefs and values and social relations based on them, change. New beliefs and values are assimilated. These need to be understood so that the way the society changes can be understood.
- (9) Education increases the scope for social mobility. Which section of the society are moving up and which section moving down ? what are the factors contributing to upward and downward mobility? Do the upwardly mobile get a status commensurate with their incomes?
- (10) The early stage of development is characterized by widening of economic disparity. As such, there is need to study the variation in the gains of development percolating to different sections of society, and different regions of the country. There is need to identify programmes through which the weaker sections of the society can be helped, as also programmes which are required for the development of the backward areas.

- (11) It would be desirable to study the perception of inequality and its causes by different sections of the society. The perceptions about governmental efforts to mitigate the problems and help the weaker sections also may be examined.
- (12) Expansion of developmental programmes involves the expansion of governmental activities, institutions, and bureaucracy. Some of these institutions were evolved when the level of socio-economic development was of a different order. As such, it is necessary to critically examine the role of governmental bureaucracy involved in rural development, their effectiveness, problems experienced by citizens in getting benefits from government agencies, and how their functioning can be made more effective. With the change in the role of the government, and emphasis on free market, many of the activities performed by government and its agencies may now become dysfunctional.
- (13) With democratic decentralization, elected bodies have come into existence at Zilla, Thana and Union levels. Elected leaders and government officials are required to interact and work together at these levels, and their interaction is not always smooth. Therefore, there is need to study the relation between elected representatives and governmental officers in their day to day work. Special attention may be given to find out the areas and causes of conflict.

- (14) Women's problem are especially important for Bangladesh. Though they toil, probably more than men, their contribution is not recognized even in government statistics. As such, there is urgent need to study the activities in which different categories of household members, in areas of country varying in level of development, are engaged, to find the time devoted for these activities, and estimating their costs.
- (15) While the importance integrating women in economic development programmes is well recognized, it has to be found out how they can be made more effective in respect of programmes in which they are the key actors, such as fertility control, spread of hygiene, upgrading nutrition level of the household, environmental sanitation, etc. There may be also studies on the social status of women in the family and society, the condition of their health, facilities for getting help for maternity, etc.

The problems of children, particularly those related to their health and nutrition, immunization, etc. also need to be studied.

It would be also desirable to study beliefs and values about women's role in the family and in the larger society.

Since the institution of family is under stress among the lower sections of the society, various aspects related to it may be an area of study at the academy.

(13) It was seen that traditional institutions and agencies of social control are disintegrating. This has adverse impact on law and order situation in the villages. Various aspects connected with it may be an area of study.

(14) Development ideology and following it development policies are undergoing rapid change all over the world. It will have its impact on development programmes. As such, there is need to study changes in rural development policies and programmes and its influence on the working of rural institutions at microlevel.

Chapter 14

AREAS, THEMES AND TOPICS FOR RESEARCH

In this Chapter the themes for researches derived through discussion of different developmental problems in general, and those of Bangladesh in particular, are classified into broad areas and themes, and are presented. As a background to it, the salient points made in the earlier discussions are recapitulated.

RECAPITULATION

The objective of this study is to identify research themes relevant for BARD's research work in the near future. In this connection the earlier socio-economic research consultant had identified a set of 20 research themes. In the present work, efforts are made to expand this list and to make it more comprehensive and future oriented. This was done by examination of changes in the concept of development, and identifying the new areas of researches warranted by these changes; by examining the various theories of development and identifying themes for research on this basis. Examination of the rural development programmes pursued by Bangladesh during the four five year plans suggested many new areas for study. The studies on rural development conducted at the academy in the recent past were also examined and on this basis certain areas where more studies are needed were identified. This was followed by an examination of the socio-economic characteristics of the country, facilitating the identification of important areas of enquiry. Finally, an attempt was made to prognosis the likely developmental trend in

AREAS, THEMES AND TOPICS FOR RESEARCH

In this Chapter the themes for researches derived through discussion of different developmental problems in general, and those of Bangladesh in particular, are classified into broad areas and themes, and are presented. As a background to it, the salient points made in the earlier discussions are recapitulated.

RECAPITULATION

The objective of this study is to identify research themes relevant for BARD's research work in the near future. In this connection the earlier socio-economic research consultant had identified a set of 20 research themes. In the present work, efforts are made to expand this list and to make it more comprehensive and future oriented. This was done by examination of changes in the concept of development, and identifying the new areas of researches warranted by these changes; by examining the various theories of development and identifying themes for research on this basis. Examination of the rural development programmes pursued by Bangladesh during the four five year plans suggested many new areas for study. The studies on rural development conducted at the academy in the recent past were also examined and on this basis certain areas where more studies are needed were identified. This was followed by an examination of the socio-economic characteristics of the country, facilitating the identification of important areas of enquiry. Finally, an attempt was made to prognosis the likely developmental trend in

the country in the coming decade or so and on this basis, topics which are likely to be relevant for researches in the near future were also identified. Thus, using a variety of approaches, a large number of research themes and topics relevant for work at BARD in the near future were identified.

The international context in which development programmes are implemented in developing countries like Bangladesh is changing. In a context wherein the emphasis is on structural adjustment and market orientation, the rural development policies are changing. This is likely to have differential impact on different sections of the society, necessitating it to be an important area of BARD's research efforts.

Over the years, there has been important changes in the meaning of development it expanding from a narrow focus concerned with the growth in the size of the economy and per capita income, to increasing concern with the general welfare of all sections of the society. This made problems of the weaker sections of the society, and the gains of development reaching them, an important objective of development. The concern of development also went beyond the narrow economic dimension to problems of developing human capacity and realization of human potential to the maximum extent possible. There was also recognition of the importance of political dimension of development, reflected through such concerns as opportunity for participation in the political and social processes. Such an expansion in the meaning of development has implications for developmental programmes and developmental researches. Though problems connected with the

generation and distribution of resources are important, problems of human resource development, such as expansion in literacy and knowledge, improvement in health level, reduction in morbidity and mortality, control of fertility, and other aspects of human welfare are important objectives of development. For various reasons, the development of women became an important concern, both as an objective of development and as a means of development. The process of development is also accompanied by structural characteristics like urbanization, transformation in occupational structure, social differentiation, growth of market, and modernization of outlook. In the political sphere, development is accompanied by the emergence of specialized political institutions, increase in the capacity of the state to mobilize resources, participation of the citizens in the political process, and development of trust among the people. Such an expansion in the meaning of development necessitates similar expansion in the focus of development research.

Development theories emphasized the role of several factors contributing to development. Change in traditional beliefs, values and attitudes was accepted to be a necessary requirement, and the main factor contributing to this change was found to be education. Education also contributed to improvement in human capacity and through it to increased production, reduction in fertility, etc. Though capital resources play a crucial role in the process of socio-economic development, it is not enough. Entrepreneurship, innovation, capacity for hard work, etc. are also important requirements. Equitable distribution of wealth

also is an important requirement, both to promote consumption, and for realising equity. Therefore, measures for development of underdeveloped societies have to be multi-dimensional. This requires that rural development research also has to address a variety of related issues.

The rural development efforts made by Bangladesh included efforts to increase agricultural production, expansion of irrigation facilities, reduction in poverty, development of local institutions, human resource development, and reduction in fertility. While food production has increased and poverty ratio has come down, similar improvements have not occurred in the spread of education, fertility reduction, and improvement in the status of females, necessitating the concentration of research efforts in these areas.

Though the country has made progress in respect of food production, still the economy is dominated by agricultural production, particularly the production of rice. Diversification of crop production, and diversification of agriculture continues to be an important concern. Human resource is under-developed, characterized by ill-health, high infant mortality, short life span and the predominance of illiteracy. The level of living of the population is low, with less than the required quantity of calorie intake, poor housing, poor water supply, poor public health and waste disposal facilities. People are traditionally oriented, and have limited aspiration. Development of political institutions are in an incipient stage and administration is

also is an important requirement, both to promote consumption, and for realising equity. Therefore, measures for development of underdeveloped societies have to be multi-dimensional. This requires that rural development research also has to address a variety of related issues.

The rural development efforts made by Bangladesh included efforts to increase agricultural production, expansion of irrigation facilities, reduction in poverty, development of local institutions, human resource development, and reduction in fertility. While food production has increased and poverty ratio has come down, similar improvements have not occurred in the spread of education, fertility reduction, and improvement in the status of females, necessitating the concentration of research efforts in these areas.

Though the country has made progress in respect of food production, still the economy is dominated by agricultural production, particularly the production of rice. Diversification of crop production, and diversification of agriculture continues to be an important concern. Human resource is under-developed, characterized by ill-health, high infant mortality, short life span and the predominance of illiteracy. The level of living of the population is low, with less than the required quantity of calorie intake, poor housing, poor water supply, poor public health and waste disposal facilities. People are traditionally oriented, and have limited aspiration. Development of political institutions are in an incipient stage and administration is

characterized by less responsive to changes. Such characteristics of the society calls for a variety of researches.

Bangladesh has come out of stagnation, and its economy has started growing. However, the demographic pressure is continuing and will continue for several more decades. The country has vast potential for increase in food production through increase in productivity, and intensive use of land. With the increase in per capita income resulting from this, agricultural production may diversify, and manufacturing and service activities also may expand. This may lead to expansion of non-farm activities in rural areas. These development may be accompanied by the expansion of marketing activities, expansion of roads, communication net work, and other components of infrastructure, and increasing urbanization. With the satisfaction of the basic need of food, it becomes possible to spend more incomes on education, health, water supply, housing, sanitation, etc. It also becomes possible to adopt special measures for helping the weaker sections of the society. Anticipating these and other associated changes, a number of research themes have been suggested.

The examination of various aspects of rural development led to the identification of a large number of topics and themes. They have been reclassified into more homogeneous groups, which were further classified to belong to seven broad areas of (1) human resource development, (2) economic growth, (3) administration, (4) monitoring and evaluation, (5) rural institutions, (6) environment and (7) social characteristics.

This list was circulated among the senior faculty members, who suggested some new themes and topics. The final list contained 38 themes, and 178 topics, and these are listed below, in an order of priority. Prioritization has been made keeping in mind the principle that higher priority has to be given to a theme contributing to the objectives of development, second priority to requirements of economic growth, third priority to administrative/ political requirements, and fourth priority to the understanding of socioeconomic conditions.

AREAS AND THEMES IDENTIFIED FOR SOCIOECONOMIC RESEARCH

A. Human Resource Development

1. Poverty and deprivation
2. Education
3. Women's development
4. Fertility control
5. Inequality
6. Basic needs
7. Nutrition, hygiene, sanitation

B. Economic Growth

8. Technology
9. Irrigation
10. Factors contributing to increase in productivity
11. Agricultural development
12. Markets
13. Agricultural extension
14. Rural credit
15. Non-farm activities

16. Rural entrepreneurs
17. Flood control
18. Savings and investment
19. Value addition to local resources

C. Administration

20. Administrative problems and effectiveness at different levels
21. Rural training.

D. Evaluation

22. Evaluation of the impact of rural development programmes and working of institutions.

E. Rural Institutions

23. Rural Co-operatives
24. Local institutions
25. NGOs

F. Environment and Disaster Management

26. Soil and water pollution
27. Social forestry
28. Rural sanitation
29. Disaster Management

G. Social Characteristics

30. Changing consumption pattern
31. Urbanization
32. Communication and media studies.
33. Socio-economic changes in rural society
34. Youth problems
35. Housing problem

- 36. Rural labour
- 37. Mental ill-health
- 38. Rural energy.

TOPICS FOR RESEARCH

Within each of these themes a variety of appropriate topics suitable for studies are identified, almost reversing the process through which the themes were identified. They are presented below :

A. HUMAN RESOURCE DEVELOPMENT

1. Poverty and Deprivation
 - a. Poverty syndrome: Economic, socio-cultural, political, psychological and other characteristics associated with poverty.
 - b. Rural under- and unemployment.
 - c. Living strategies of the poor, and measures, programmes, and institutions through which the poor can be helped.
 - d. Effectiveness of various poverty eradication programmes.
 - e. Effectiveness of institutions for weaker sections.
 - f. Percentage of rural poor households benefiting from RWP, FWP, CVDP, SFDP, etc.
 - g. Working of various poverty eradication programmes and their effectiveness.
 - h. Poverty and life chances in female headed households.
2. Education
 - a. Review of existing education facilities and literacy situation in rural areas.
 - b. Problems of rural education
 - c. Measures necessary to retain children in school

- d. Problems of education of children of poor households
- e. Problems of education of female children
- f. Effectiveness of satellite school programme in rural areas
- g. Comparative study of the effectiveness of government schools and NGO schools
- h. Adult education programme
- i. Scope of literacy movement among male and female youths.

✓ 3. Women's Development

- a. Study of socio-economic characteristics of rural women, with a view to identify sections of women to be included in women's development programmes.
- b. Identification of income generating activities for rural women
- c. Household time allocation of different categories of household members and its variation with economic development.
- d. Division of labour and specialisation of role in households belonging to different social strata.
- e. Institutional support required for integrating women in the development process, such as organization, credit, marketing support, etc.
- f. Social norms and values among different sections of society about the status and role of women.
- g. Problems of education of female children
- h. Family instability
- i. Dowry, gender violence, prostitution, traffic in women
- j. Law, norms, and practice of inheritance of property by males and females.
- k. Facility and support for child birth, family planning advice, immunization of children, etc. in rural areas.
- l. Comparative analysis of mainstream development approach and target group approach for women development.
- m. Role of women in policy planning and decision making process.

- n. Effects of technology and innovation on men and women.
- o. Environmental degradation and role of women.
- p. Socio-economic impact of women's development project.
- q. Social structure, female autonomy and demographic behaviour.

4. Fertility control

- a. Fertility behaviour and variables influencing fertility behaviour among different sections of society
- b. Factors promoting contraceptive acceptance
- c. Knowledge, attitude, and practice (KAP) of family planning measures.
- d. Identification of measures through which fertility can be reduced rapidly
- e. Sources of supply of contraceptives.
- f. Couple protection rate among different sections and different parts of the country.

5. Inequality

- a. Inequality in the possession of assets among different sections of society
- b. Inequality in the distribution of income among different sections of society
- c. Benefits derived by different sections of society through developmental programmes
- d. Incidence of poverty - its variation by social strata and by region
- e. Socio-economic and other characteristics associated with poverty
- f. Incidence of poverty in different regions of the country
- g. Perception of inequality and its causes by different sections of society
- h. Regional imbalances in development
- i. Law of inheritance and its role in inequality

6. Basic Needs

- a. Satisfaction of basic needs by weaker sections.
- b. Satisfaction of basic needs by rural communities.

7. Nutrition, Hygiene, Sanitation

- a. Studies on food intake and nutritional balance condition among different sections of society.
- b. Knowledge about and attitude to, and practices of hygienic practices, defecation practices, personal cleanliness, etc.
- c. Environmental problems, particularly environmental sanitation, availability of clean water, sanitation facilities, etc.
- d. Studies on health, morbidity, mortality, and physical strength.
- e. Infant mortality, child care practices, immunization and related problems.
- f. Impact of rural development programmes/projects on nutritional well-being of people.
- g. Community participation in primary health care.
- h. Role of local bodies in preventive health care.
- i. Studies on health and nutrition programmes implemented by government and non-government agencies.
- j. Prospect of integration of health and nutrition interventions in different government and non-government programmes.
- k. Economic growth and its impact on health and nutrition of rural people.
- l. Implications of government macro and micro policies on health and nutrition of the rural people.

B. **ECONOMIC GROWTH**

1. Technology

- a. Adaptation of technologies to meet the requirements of rural society, and problems of their extension.

2. Irrigation

- a. Irrigation studies, examining ways and means through which irrigation coverage can be expanded rapidly, and efficiency of irrigation projects can be improved.
- b. Economic, social, administrative and other problems affecting rapid expansion of irrigation facilities.
- c. Impact of privatisation of irrigation projects on rate of expansion of irrigation.
- d. Problems of irrigation of the fields of small farmers.
- e. Organization and training for irrigation management.
- f. Institutional arrangements for dealing with water related problems, like disputes.
- g. Management of irrigation works.

3. Factors Contributing to Increase in Productivity

- a. Identification of the causes of the low productivity of major agricultural crops, with a view to fill the deficiencies and achieve increase in productivity.
- b. Farm management, including cost-benefit, studies for different crops, livestock, fish culture, vegetable production, etc.
- c. Studies to find out ways and means through which value addition can be achieved for rural products.
- d. Impact of schooling, and level of knowledge on agricultural productivity.
- e. Case studies of farmers achieving significantly higher yields and profits.

4. Agricultural Development

- a. Study of areas of the country and sections of the population in the vanguard of agricultural modernization.
- b. Identification of areas for growth of different components of agriculture.
- c. Land use development.
- d. Problems of development of livestock, poultry, pisciculture, apiculture, etc.

5. Markets

- a. Various aspects and problems of the functioning rural markets.
- b. Market dependence of households in areas varying in level of development.
- c. Geographical spread of markets and their linkage in terms of space and time.
- d. Problems of the marketing of different produces.
- e. Infrastructure, credit, law and order, and other problems of rural markets.
- f. Market for agricultural inputs, like irrigation equipments, fertilizer, insecticides, etc.
- g. Sociology of rural markets.

6. Agricultural Extension

- a. Studies in agricultural innovations, facilitating increase in productivity and diversification of agricultural productivity.
- b. Extension and related requirements for development of cattle production, poultry production, and piscicultural production.
- c. Extension requirements for increased use of inputs, cultivation of HYV crops, multiple cropping, and diversification of crop production.
- d. Farmers level of knowledge about improved agricultural practices.

7. Rural Credit

- a. Sources of credit, requirements of credit, cost of credit, and management of credit for various sections of society.
- b. Relation between the availability of credit and agricultural productivity.
- c. Recovery of credit and related problems.
- d. Assessment of credit needed for diversification of agriculture by various categories of farmers.

8. Non-farm Activities

- a. Study of various non-farm activities in rural areas, their economics and problems.
- b. Pattern of rural industrialization.
- c. Social background of people pursuing non-farm activities.

9. Rural Entrepreneurs

- a. Social background of rural entrepreneurs.
- b. Social background of rural traders.
- c. Problems faced by small scale entrepreneurs in rural areas. //
- d. Scope for new trading activities and supports required.

10. Flood control

- a. Identification of ways and means through which flood affected areas can be more productively used.
- b. Identification of flood control measures.
- c. Studies on flood control and drainage requirements.
- d. Impact of flood on production and day to day living.

11. Savings and Investment

- a. Household income, expenses and savings.
- b. Investment patterns of rural households.
- c. Scope for gainful investment in rural areas.

12. Value Addition to Local Resources

- a. Ways and means of value addition to local resources.

C. **ADMINISTRATION**

1. Administrative Problems and Effectiveness at Different Levels

- a. Interaction and pattern of relation between bureaucrats and elected leaders at union, thana and zilla levels.

- b. Pattern of decentralization of administration and implementation of development programmes at different levels.
- c. Effectiveness of administrative agencies and institutions in rural areas.
- d. Efficiency of rural development delivery system.
- e. Identification of ways and means through which the effectiveness of rural development bureaucracy can be improved.
- f. Problems experienced by citizens in receiving services from local government agencies.
- g. Scope for privatization of rural services.
- h. Political awareness and participation of villagers in political activities.
- i. Weakening of traditional agencies of social control, and its impact on law and order in rural areas.

2. Rural Training

- a. Training requirements of beneficiaries of various programmes.
- b. Training requirements of rural youth for more productive work.
- c. Training requirements of various categories of personnel implementing rural development programmes.
- d. Effectiveness of TTDC training.

D. **EVALUATION**

- 1. Evaluation of the impact of rural development programmes and working of rural institutions.

✓ E. **RURAL INSTITUTIONS**

1. Rural Co-operatives

- a. Problems of two-tier co-operatives, particularly in relation to their viability and management.
- (b) Role of cooperatives in the context of market oriented free trade.

- c. Functioning of cooperatives and their effectiveness in increasing production, creating employment, and achieving other goals.
- d. Working of CVD cooperatives, organisational structure, pattern of activities, degree of participation, and benefit to members.
- e. Percentage of local population participating in various cooperatives.
- f. Degree of involvement of beneficiaries in CVD and other cooperatives, and the degree to which their needs are satisfied through these cooperatives.
- g. Comparison of benefits reaching the rural poor under different systems of cooperatives.

2. Local Institutions

- a. Pattern of coordination and division of functions among local institutions at different levels.
- b. Pattern and problems of coordination among various nation building departments.
- c. Mobilization of resources by local institutions.
- d. Changes in macrodevelopment policies and their impact on rural institutions.
- e. Local government units at zilla, thana, and union levels.

✓ 3. NGOs

- a. Problems of building coalitions among governmental agencies and NGOs in the implementation of developmental programmes.
- b. NGOs and their activities in different parts of Bangladesh.
- c. Comparative study of the method of implementing programmes by government and NGOs.

F. **ENVIRONMENT AND DISASTER MANAGEMENT**

1. Social and water pollution

2. Social Forestry

- (a) People's participation in afforestation.

3. Rural Sanitation

4. Disaster Management

- (a) People's participation in disaster preparedness and management

✓ G. **SOCIAL CHARACTERISTICS**

1. Changing Consumption Pattern

- a. Changes in consumption pattern at different income levels.
- b. Structure of demand in rural households with change in income levels.
- c. Household consumption pattern in different regions of the country.

2. Urbanization

- a. Urbanization of local town's and growth centres.
- b. Spread of urban influence in rural area.

3. Communication and media studies.

- (a) Forms of media and their effects on rural people
- (b) Socialization and media
- (c) Processes of media effects
- (d) Learning through media
- (e) Infrastructure of the information society

4. Socio-economic changes in rural society.

- a. Rural urban migration. Characteristics of emigrants. Influence of urban migration on rural life. Nature of linkage maintained by migrants with rural areas.
- b. Social mobility, its causes, sections experiencing it, and social acceptance of the upwardly mobile.
- c. Spatial mobility of population in areas varying in development.

- d. Changes in occupational structure and mode of livelihood in rural areas with economic development.*
- e. Social differentiation emerging with economic development.
- f. perception of prestige structure in the society.
- g. Values, attitudes, and motivation of rural population and factors contributing to variation in it.
- h. Aspirational level of the population.
- i. Knowledge and awareness of rural population.
- j. Parents' values and attitudes about children's education.
- k. Socio-psychological characteristics like nature of knowledge, beliefs, attitudes, motives, hopes and aspirations.
- l. Perception of social relations.
- m. Freedom from subsistence orientation and interest in maximization of profit.
- n. Urge for development, acquisition, social mobility, etc.

5. Youth Problems

- a. Problems experienced by youth in terms of training, employment, psychological acceptance, etc.

6. Housing Problem

- a. Housing condition, and housing problems, particularly among the landless.

7. Rural Labour

- a. Employment, unemployment, migration, and related characteristics of rural labour.
- b. Pattern of relation between labourers and their employers.
- c. Wage rates of rural labourers.
- d. Child labour.

8. Mental Ill-health

- a. Incidence and pattern of mental ill-health in rural areas.

9. Rural Energy

- a. Requirements and sources of fuel of households at different socio-economic levels.
- b. Fuel requirements, type of fuel used, efficiency in the use of fuel, new sources of fuel, and related issues.
- c. Energy requirements for productive activities in rural areas.
- d. Rural electrification.

RESEARCH METHODOLOGIES AND ANALYSIS PLANS

In the previous chapter the themes and topics relevant for research at BARD in the near future were indicated. In this chapter, the outlines of research methodologies that may be followed in the study of select topics are briefly described. It also contains the plan of analysis of a few of the topics.

A. HUMAN RESOURCE DEVELOPMENT

1. Poverty and Deprivation

Poverty Syndrome

Studies under the theme of poverty and deprivation may be broadly divided into those concerned with finding out the causes of poverty and those dealing with the effectiveness of various poverty alleviation programmes and institutions. For understanding the causes of poverty, and formulating effective programmes for mitigating it, the first step necessary is to find out the socio- economics attributes associated with poverty. From these associations, one has to infer that such and such characteristics are causing poverty. It is lack of possession in income streams which results in deficiency in incomes and generating resultant low levels of living. Such income streams can be assets like land, cattle, which give products on which one can live, or whose products have a market, so that through the sale of their products one can derive an income. Apart from primary products, variations in knowledge, skill, psychological attributes, political power, etc. are also pertinent

characteristics associated with variation in income levels. Though poverty is generally understood and measured in economic terms like per capita income, or possession of land and other income generating assets, understanding the associated educational, psychological, sociocultural and political dimensions are also important for evolving integrated poverty alleviation programmes.

Survey research is an appropriate method for understanding the syndrome of characteristics associated with poverty. Since per capita income is the generally accepted index of development, it may be adopted as a criteria for selecting a sample of respondents. Since majority of the people are poor in the country, a simple random sample may not get respondents belonging to different income/ asset groups. Therefore, a quota sample may have to be selected, taking respondents from high, middle and low income groups. They may be interviewed with a questionnaire containing items about the economic, social, welfare, political and psychological, and other related characteristics.

The analysis should try to identify characteristics associated with poverty. For this purpose, the respondents may be divided into various income strata, and the various characteristics associated with different income levels may be identified. Simple associations can be identified through cross tabulations, while more rigorous statistical analysis can give results indicating the relative strength of different characteristics.

The relative influence of factors causing low incomes may vary from region to region. Therefore, these studies may be conducted in different parts of the country.

As poverty is a multi-dimensional phenomenon, measures for its solution is likely to be most effective when they are also multi-progned. Therefore, having understood the syndrome of characteristics associated with poverty, multi-progned programmes for poverty alleviation may be planned and experimented through action research. The study may be conducted by Rural Economics Division.

Effectiveness of Poverty Eradication Programmes

Another set of studies suggested under the theme of poverty and deprivation are concerned with the impact of various anti-poverty programmes in helping the poor, and uplifting them above the poverty level on a permanent basis. To be able to achieve this, and to have a level of living above the poverty level, the beneficiaries should be provided with higher sources of incomes through assets, skills, or labour. On the other hand, the level of living of a household is also influenced by the number of mouths to be fed. Therefore, the impact of poverty alleviation programmes have to be evaluated against a framework comprising of household income and household size.

Studies about the impact of poverty alleviation programmes may be conducted through different methods. Through rapid rural appraisal technique, it would be possible to make quick assessment of the impact of various programmes. Case study and

survey research methods also may be used to understand the impact of various anti-poverty programmes.

Generally such evaluation studies have the limited objective of examining whether the specific programmes have contributed to an immediate increase in income. Though the achievement of even a small increase in income is beneficial for a poor household, mitigation of poverty on a permanent basis involves acquisition of the sources of income. It is here that the effectiveness of an integrated approach involving higher earnings and limitation in the size of the family becomes relevant.

2. Education

Review of Existing Educational facilities and literacy situation in rural areas. This study may be undertaken through survey research.

Problems of Rural Education

Spread of literacy and education is very crucial for the development of societies, both as an objective of development, and as a means of development. During the various plan periods, spread of primary education was an important objective, but the achievements in spreading literacy has been far from satisfactory. As such, various problems affecting the implementation of this programme need to be studied in great detail.

The various topics under the theme may be combined, and a large project studying the various problems of primary education may be taken up. If a large study is proposed, it may be planned

for a period of two or three years, and may be conducted. The study may be conducted in different parts of the country so that conditions in which education is spreading and conditions adversely affecting it can be understood.

In such a large study, the first step is to prepare a comprehensive bibliography of published works dealing with various aspects of primary education. Utilizing the bibliography, a comprehensive study of published material available on the problems of education may be made, and this would suggest to the researchers gaps in knowledge and the type of questions to be asked, and the hypotheses to be formulated for the study. These questions may be divided into broad areas, such as those concerned with accessibility to school, interest teachers take in making teaching interesting for the children and retaining them in the school, parents' economic condition to feed the children and meet other costs of education, their attitude and interest in the education of their children, school facilities like class room, sitting arrangement, drinking water, etc.

Different research techniques have to be used in this study. Through case study method, a preliminary understanding of the basic issues to be studied, and field problems likely to be confronted may be understood. This may be followed by the development of questionnaire for getting the required information on the problem being studied. Survey research method is an

appropriate research technique that can be employed for collecting the required information.

The question whether distance is a factor hindering attendance and retention of children in the school can be studied by comparing the participation and dropout rates of children belonging to households similar in socio-economic characteristics, but are located at significantly various distances from the school. Facilities like road to walk conveniently to the school, and hindrances like canal and river, affecting easy accessibility to school also may be noted. From the selected households information may be obtained on children of school going-age attending and not attending schools. By comparing the percentage of children from households belonging to different distances attending school, it would be possible to identify whether distance to schools is a factor hindering school attendance and contributing to drop out. This analysis is represented in Table-1.

Table - 1. Percentage of children attending and not attending schools, by the distance of their houses from schools.

Attendance of School	Distance between School and House			
	upto 1 km.	1-2 km.	2-3 km.	3+ km.
Total Number of children of school going age	-	-	-	-
Percentage attending school	-	-	-	-
Percentage not attending school	-	-	-	-
Total				

The degree of interest teachers take in their work and the school, may be an important factor facilitating the retention of the children in the school. For measuring it, suitable objective criteria have to be developed. The study of literature on the topic would give relevant ideas about the basis on which this can be developed. Parents' perception of teachers interest can be found by interviewing them.

The economic condition of the parents, their perception of the utility of the education, their attitudes and values about the future role of their children and the contribution of education in realizing that goal, can be important variables influencing the efforts they make to keep their children in the school. Information on these items can be best collected through survey method, interviewing a fairly large sample of parents. Such a large sample would give an idea of the variation prevailing in this respect in the society.

Parents' perception about the utility of education can be found out by asking simple, straight forward questions. However, for understanding their values and attitudes about education, appropriate instruments to measure attitudes and values may be developed. These can be attitude /value orientation indexes or scales. Utilising these scales, parents can be classified into those with favourable attitude to children's education, those with unfavorable attitude to children's education, and those who fall in-between these two groups. By finding out through cross tabulation of the percentage of children in the school going age

from these households attending the school, it can be found out whether parents' values and attitudes about children's education make significant contribution in the educational attainment of their children. An outline of the analysis is given in Table 2.

Table 2: Percentage of children of Parents with Different Levels of Favourable Attitude to Education Attending School.

Attendance of School	Level of Attitude to Education		
	Favourable	Medium Favourable	Unfavorable
Total Number of children of school going age	-	-	-
Percentage attending school	-	-	-
Percentage not attending school	-	-	-

The analysis can be made more detailed by dividing the children of school-going age into two or three broad age groups, say those who can attend classes 1 and 2, those who can attend class 3 and 4, and those who can attend class 5. Through chi-square tests the statistical significance in the variations can be tested.

Parents' socio-economic condition can be an important factor influencing their ability to send the children to school. Through simple observation of the economic condition of the households and the children of poor households either participating or not

participating in educational activities, an understanding can be made on the relation between household's economic condition and children's participation in education. For more accurate measurement, per capita household income may be calculated. This includes the income derived by all the members of the household in a month from all sources, divided by the number of household members. Utilizing this criteria, households may be classified to belong into different income groups, say five income groups. The sample of households may be classified into these income groups, and the percentage of children of school going-age attending schools and not attending schools, may be computed, Chisquare test may be conducted to find out whether children's participation in schools is related with variation in households income at statistically significant level. The outline of the analysis is given in Table 3 :

Table 3: Percentage of children of school going age attending schools from households with different levels of per capita incomes.

Per capita Incomes	Attendance of School		Total N & Percent
	Not Attending	Attending	

1

2

3

4

5

Details of various economic problems affecting the parents' desire to send their children to school may be found out. This can include such basic necessities like ability to give food before a child going to school, some clothing, book, slate, pencil, and such other unavoidable pre-requisites.

Since female participation in education is less than half of that of males, there may be special enquiry to find out the causes of this.

In this connection, parents' perception of the future status and role of their daughters, and status and role of women in general, may be studied. Other problems like the necessity to do domestic work or look after younger siblings may be also affecting their participation. These factors also may be studied.

This kind of analytical studies bring to light different factors underlying or causing specific social problems. If the negative attitudes and values of parents about their children's education is found to be related with poor participation of children in schools, then along with the opening of more schools, there is also need to take measures to change the attitudes and values of the parents, and to create interest in them in the education of their children. If poor participation is found to be due to the economic incapacity of the parents to meet basic pre-requisites to send their children to school, then measures to meet these requirements, through provision of school meals, free supply of uniforms, essential stationery, etc. also may be taken

up. The analysis will show the characteristics of households which require this kind of special support, so that the limited resource available for education, can be targeted to these specific groups. It is strongly felt that primary education is an appropriate area for undertaking action research.

Adult Education/Scope for Literacy Movement.

The objective of these studies is to understand the scope for adult education, particularly among male and female youths, a formidable proportion of whom are illiterate. Case study method is the appropriate method, through which various dimensions of the problem can be studied.

3. Women's Development

Socio-economic characteristics of Rural Women. This study may be conducted through survey research methods.

Identification of income generating activities for rural women.

Though women's participation in work is rather nominal, the deteriorating economic condition of the households is compelling many households to look for the earning of additional incomes through women's work. Due to the prevailing social stigma about women's labour outside their houses, these income earning activities have to be carried out within the four walls of their households. Secondly, in the absence of developed trade in rural areas, they have to be activities for producing goods for which there is local demand. Therefore, the potential income generating

activities which can be followed by women are the supply of goods which can be made at home through simple processing activities, and which can be locally disposed off.

The best method of identifying these activities is to find out from the target group women about the type of activities which they believe can be undertaken by them. However, it may be possible to start new income generating activities in an area, about which they have little idea. In such cases, it may be inquired whether women are willing to take up these activities, if training and requisite facilities are provided to them. By and large, case study method is the most appropriate research technique for this kind of study.

Household time allocation of different categories of household members and its variation with economic development.

Division of labour and specialization of role in households belonging to different social strata.

Social norms and values among different sections of the society about the status and role of women.

The above aspects can be best studied through a combination of case study and survey research methods, obtaining both qualitative and quantitative information. Through case study method, preliminary ideas about these aspects may be obtained. Based on this information, questionnaire covering the above aspects may be made for a survey research and it may be finalized after pre-testing. Detailed information for the study may be obtained by interviewing with the questionnaire a large sample of respondents selected on random sampling basis. If the

study area can cover two areas markedly varying in their level of development, then it would be possible to examine the impact of economic development on women's condition.

Social relations, including a person's status and role in the society, or in an organisation like family, are based on the norms and values held by the members of the society, both females and males. Norms and values about women's status and role can be understood by seeking responses to questions /statements like the following:

- (1) A women should be mainly concerned with household work - Agree/ Disagree.
- (2) If women go out for work, children's health would suffer - Agree/ Disagree.

A large number of such statements / questions must be made touching various aspects of women's role in society, including domestic work, earning responsibilities, responsibilities for household farm, etc.

Through similar questions the norms and values prevailing in the society about husband-wife relationship and the responsibilities of husband and wife also may be obtained. An understanding of these norms and values is a pre-requisite for undertaking comprehensive measures for improvement of women's status in the society.

Collection of information on the amount of time typically used in a day by different categories of household members would be useful for various purposes. The typical categories of

household members are male and female children (5-11 years), adolescents (12-17 years), adults (18-60 years), old (61 years and more of age). Their typical activities can be broadly classified into (a) economic or income earning activities, (b) household activities, (c) human resource development activities, and (d) entertainment activities. Under each of these broad categories, there can be a number of sub-activities, like looking after cattle, fishing, working in the farm, and other income generating activities under economic activities. Bringing water, cleaning vessels, cooking, grinding, cleaning house, etc. under household activities. Teaching children, attending school, studying, etc., under human resource development activities. Gossiping, playing games, listening to radio, etc. under entertainment activities. Through case study method, an inventory of all possible activities in which different categories of household members are engaged may be made. This may be used for preparing a questionnaire for collecting further detailed information. For further study a large sample of households belonging to different social strata may be selected through appropriate sampling procedure, from areas varying in level of development. The members of these households may be interviewed, and it may be recorded how much time is utilized in a typical day on each of these activities by different categories of household members. An outline is given in Proforma 1.

Proforma 1 : Please indicate how much time in a typical day is spent on the following activities by female adults (18-60 years of age) in your house.

Activities	Amount of Time (Minutes)
A. <u>ECONOMIC ACTIVITIES</u>	
1) Looking after Cattle	
2) Looking after Birds	
3) Looking after fish farms	
4) Work related to crop production	
5) Trade	
6) Manufacturing/Artisanal activities.	
7) Rickshaws pulling	
8) Employment related to farm work.	
9) Employment related to trade, transport.	
10) Employment related to manufacturing.	
11) Purchases for various production purpose.	
12) Regular employment.	
13) Other activities.	
B. <u>DOMESTIC ACTIVITIES</u>	
1) Cleaning of utensils	
2) Bringing water	
3) Collecting fuel	
4) Collecting food items	
5) Preparation of food items	
6) Dehusking of grain	
7) Cooking food items	

Activities	Amount of Time (Minutes)
8) Cleaning house	
9) Domestic purchases	
10) Washing of clothes	
11) Applying cowdung on floor and other house maintenance activities.	
12) Other domestic activities.	

C. Human Resource Development Activities.

1) Looking after children	
2) Teaching children.	
3) Attending school/education.	
4) Reading and studies at home.	
5) Looking after sick family members.	

D. Entertainment

1) Gossiping	
2) Playing games	
3) Playing music	
4) Listening to Radio/ Watching T.V. etc.	
5. Other entertainments	

Plan of Analysis: A study of this may type have the objective of giving a descriptive account of the prevailing condition and/or the objective of finding out the causes of the prevailing condition through analytical study. For understanding the social norms and values about women's role in the society, the responses to the various questions/ statements trying to find

out the value orientation of the respondents may be coded. Coding is giving one particular arithmetic number for responses of one pattern. For example, a code of '0' may be given to a response indicating belief in a conservative value about women's role in the society. And a code of 1 may be given to a response indicating belief of liberal/ progressive value about women's role in the society. It is important to keep the same code for the same type of value orientation. Subsequently, the number of respondents giving a particular type of response on an item may be found out, either through physical counting or through mechanical counting or through computer counting. This will give a picture of the type of beliefs and values prevailing in the society about various aspects of the status and role of women at home and in the wider society. If social norms and values emphasise a subordinate status for females in the society, a necessary condition for improvement in the status of women in the society is the modification of these values. For this purpose, it is necessary to understand factors contributing to conservative value orientation and those contributing to changes in it.

For identifying factors contributing to changes in norms and values, appropriate statistical analyses have to be used. For this purposes the degree of traditionalism or modernity of the respondent about attitude about women's status and role in the society has to be obtained. This is done by scoring the responses obtained on the various questions/ statements enquiring the attitude to the status and role of women in the society. A score value of '0' may be given to a response indicating belief in a

traditional, subordinate, value for women in society and at home; and a value of 1 may be given to a response indicating belief in a modern value or norm, assigning equal status for man and woman in the society. The scores on individual responses may be totalled up, and this total score is the dependent variable for further analysis. The variation in the total scores obtained by different individuals are likely to be related to variation in their socio personal characteristics like education, exposure to mass media, urban experience, wealth, membership in associations, participation in the activities of political parties, membership in religious organizations, etc. These socio-economic characteristics constitute the independent variables of the study. Simple relation between variation in socio-personal characteristics and variation in norms and values can be understood through cross-tabulations. For this purpose the respondents may be divided into different groups, say three or four, on the basis of the average scores obtained by them on the various questions/statements about the status and role of women, and variation in the scores with variation in socio-economic characteristics may be examined through cross tabulation. Through more sophisticated statistical; analyses, like multiple regression analysis, factor analysis, the relative influence of different socio-personal characteristics to variation in the value orientation score can be made. Once the main factors causing change in values and norms are identified through this kind of analysis, changes in values and norms can be brought about by promoting those factors.

For understanding the time-allocation by different categories of household members, information has been obtained on the time they use for each individual activities. It is preferable to obtain this information in minutes, as the time devoted for several individual activities is relatively small. Utilizing the information of the time devoted for each activity, the time devoted for economic (income generating) activities, household activities, human resource development activities, and entertainment in a typical day by male and female old, adult adolescent, and child can be calculated. Utilizing this basic information, various other information can be derived. For example, by multiplying the time devoted by adult females, for work in their farms with the wage rate of female labourers doing corresponding work, the contribution of females to household economic activities can be calculated. Similarly, the economic contribution of women for domestic activities can be also calculated.

Studies have shown that the amount of time devoted by different categories of household members is influenced by households income. Therefore, households may be classified into appropriate income groups, and the amount of time devoted by male and female old, adult, adolescent, and child for various individual activities, and for the broad categories of activities of economic activities, household activities, human resource development activities, and entertainment, may be calculated. As the number of different categories of household members vary from

house to house, this information may be standardised for 100 persons of the same category. This analysis would give a picture of time- allocation of households belonging to different income levels and time allocation of different categories of household members belonging to these income levels.

Institutional support required for integrating women in the development process, such as organisations, credit, marketing support, etc.

The information required for this study may be collected through case study method.

Studies on family instability, dowrry, gender violence, prostitution, and traffic in women may be conducted through case study method.

The study of law, norms and practice of inheritance of property by males and females may be conducted through case study method.

Facility and support for child birth family planning advice, immunization of children, etc. in rural areas.

An inventory of the availability of these facilities in rural areas, both in the private sector and governmental sectors, may be made. Through case study method and through survey method, problems experienced in the full utilization of these facilities by the poorer section of the society may be found out.

4. Fertility Control

Four dimensions of the theme of fertility behaviour were suggested for study. The main objective of all these studies

should be to find out the main factors which sustain high fertility and factors which contribute to reduction in fertility, so that appropriate policies can be formulated for achieving rapid reduction in fertility rate in the country.

Fertility behaviour is one of the most studied phenomenon in social science. Therefore, a study of the literature on the topic would give sufficient understanding of the problems to be studied. However, before embarking upon large studies, it would be desirable for the researchers to undertake case studies to understand the operation of the general principles in the context of the country, as also to develop familiarity with the field problems. Even though the study of fertility behaviour is relevant for all sections of the society, because of practical considerations, the study may be limited to the poorer sections, belonging to a limited age group, say eighteen to twenty five or thirty years, when the reproduction rate is at its peak. Education is generally found to be the most important factor contributing to decline in fertility, but as it would take long time to achieve fertility reduction through spread education, the attempt should be to find out more practical measures through which fertility can be reduced.

Survey research is an appropriate methodology for obtaining information on various dimensions of fertility behaviour. However, this may be supplemented by observations, discussions, etc. to obtain special insights about fertility behaviour. Such insights may be tested through quantitative analysis of data.

On the basis of the findings and hypotheses derived through the study, appropriate action research programmes may be designed. For example, is it possible to link membership in a beneficiary group to women who restrict their fertility? Once some of the findings of the researches are verified and confirmed through action researches, they can be recommended for replication all over the country.

The questionnaire may contain information on the socio-personal characteristics of the respondents, appropriate items for developing attitude scales; knowledge, attitude, and practice of fertility control measures; and accessibility to fertility control programmes, personnel, and facilities.

The analysis plan is concerned with the identification of factors related with variation in fertility behaviour, particularly the characteristics contributing to sharp reduction in fertility. For this, the fertility rate may be treated as the dependent variable, and various socio-economic and attitudinal variables related with it may be treated as independent variables and examined, and relevant factors contributing to reduction in fertility may be identified. Studies on this theme may be conducted by Rural Sociology Division.

7. Nutrition, Hygiene, Sanitation

Studies on Food intake and Nutrition Balance

Food intake in balanced proportions is a basic requirement for a healthy, long life. Economic condition is one condition

affecting food intake. It is also influenced by the dietary values and knowledge of the population. As such, the study may be conducted to understand the various factors influencing nutrition intake. The research method of rapid rural appraisal, case study methods, and survey research method may be used to collect the required information for the study.

In this study the food intake is the dependent variable. It may be examined how its intake at per capita level varies along with variation in various independent variables like economic condition, household size, knowledge about dietary requirements, and values about dietary practices.

Knowledge about, and attitude to, and Practice of Hygienic Practices, and Environmental and Sanitation Problems. Poor hygienic practices continue to be widespread in the country contributing much to the high mortality rate and short longevity of life of Bangladesh, making it an important area for continued attention. Therefore, it would be desirable to undertake KAP (Knowledge, attitude and practice) studies on different dimensions of sanitary and hygienic practices in different parts of the country. Survey research is an appropriate methodology for obtaining information.

Studies on health, Morbidity, Infant Mortality, and Child care practices. These topics may be studied through case study method and survey research method.

B. ECONOMIC GROWTH

1. Irrigation

Different irrigation studies have been suggested. Case study is an appropriate methodology for collecting the required information. However, once detailed information on different problems involved in the extension and management of irrigation is understood, questionnaire can be developed on this basis and survey researches covering more areas can be conducted.

Factors Contributing to Increase in Productivity.

Four topics have been suggested under this theme. Among these, the first one is the identification of the causes of low productivity of major agricultural crops. The productivity of paddy per acre in Bangladesh is only about half of that of Indonesia and one third of Korea. Similarly, other crops and live-stock activities are characterized by low productivity in the country. Increase in the productivity of various agricultural activities is a basic requirement for economic development of Bangladesh. Therefore, studies on this theme may constitute an important area of research at the Academy.

Studies on this topic may be undertaken by the division of Agricultural Development and Agricultural Economics, either jointly or separately.

In this study the productivity of rice farm, as measured through yield per acre of land, is the dependent variable. The variation in the yield is assumed to be the result of various

factors, or independent variables. The independent variables assumed to influence the yield of rice are efficiency in the preparation of rice field, type of seed used, efficiency in the use of various inputs, regularity in irrigation, removal of weeds, efficiency in various practices involved in rice cultivation. These factors though called independent variables, are themselves the outcome of different socio-economic factors. As a result, they can be treated as dependent variables, and different factors contributing to their variations can be identified. For example, the efficiency in the preparation of the field may be the outcome of knowledge about the importance of efficient preparation of rice fields, availability of equipments and other facilities and resources for this purpose, availability of money to buy or to hire and use these facilities, motivation to prepare the field to the best possible degree, etc.

Similarly the type seed used also may be influenced by various factors. A variety of HYV rice seeds, suitable for various seasonal crops have been developed by scientists and are available. But the process of adoption of new seeds is a slow process. While some farmers are leaders in the adoption of HYV seeds, some others are laggards, and some may fall in between. The adoption behaviour may be related to farmers' educational level, their motivation to obtain high outputs from their fields, knowledge about sources for procuring HYV seeds, availability of HYV seeds, availability of money to buy the seeds, etc.

The efficiency in the use of various inputs, regularity of irrigation, removal of weeds, efficiency in various other plans

involved in rice cultivation, etc. are also the outcome of various factors. The review of literature on studies dealing with variation in farm yields would give several ideas about the variables influencing the efficiency of the use of various factors. Based on this understanding a list of variables to which the variation in the yield rate can be traced may be made. For convenience of analysis, they may be classified into dependent variables, intermediate variables, and independent variables. This would give the following theoretical formulation for the enquiry.

Independent Variables	Motivation for achieving best output. Education and Knowledge. Financial resources. Availability of required materials. Availability of equipments and facilities
Intermediate Variables	Efficiency in the preparation of field. Type of Seed Used Efficiency in the use of various inputs. Regularity in irrigation. Efficiency of weeding. Efficiency of other practices.
Dependent Variable	Yield of rice per acre.

Data for such a study can be best collected through survey research method, using a questionnaire. Through quantitative analyses like correlation tests and multiple regression analyses, factors associated with variation in yield may be first identified, while a factor analysis can give an idea of the

relative contribution of different factors for variation in crop yields. Once a picture of the relative contribution of different factors has been isolated, recommendations can be made about measures to be taken for achieving rapid increase in the yield of rice.

Farm Management Studies for different crops, livestock, Pisculture, vegetable production, etc.

Information required for farm management studies may be collected through survey research method using questionnaire. Information is analysed through quantitative methods, trying to find out the cost benefit ratio and profitability of different kinds of agricultural activities.

Value addition to rural products.

Value additions to local products can be derived through a variety of methods like market linkage, processing, etc. Ideas about the methods through which value addition for local products can be achieved may be conducted through case study method.

Impact of Education on agricultural productivity.

Spread of education and knowledge is generally believed to be an important contributor for agricultural development. This hypotheses may be tested through survey research.

4. Agricultural Development.

Two studies were suggested under this theme, namely study of areas of the country and sections of the population in the

vanguard of agricultural modernization, and identification of areas for growth of different components of agriculture. These studies may be conducted through rapid rural appraisal and case study methods.

5. Markets

Market dependence of rural households.

As the economy develops, and per capita income increases, the level of consumption of rural households also increases. Along with this more and more items are procured from the market, resulting in the decrease in the self-sufficiency of rural households in the utilization of their own produces. The extent of market dependency for various goods and services will give an idea of the structure of demand for various goods and an idea of new economic activities that can be taken up in rural areas. Survey research is the appropriate research methodology.

Functioning of Rural Markets

Efficient working of rural markets is important for the efficiency of the rural economy. Therefore, various aspects related to the functioning of rural markets need to be studied. This may be done through case study method.

Geographical spread (network) of rural markets, and their linkages may be studied through case study method.

Problems of marketing of different produces may be studied through case study method.

Markets for agricultural inputs may be studied through a combination of case study and survey research methods.

Sociology of rural markets may be studied through case study method.

6. Agricultural extension

Problems of agricultural extension vary from region to region as well as from agricultural produce to produce. Therefore, there is need to conduct studies on problems of adoption of innovations, in various parts of the country, and for different produces. Case study and survey research methods are appropriate techniques for collecting information. However, rapid rural appraisal may be used where quick information is required for planning and implementation programmes. These studies may cover all sections of the farming community.

Studies in agricultural innovations.

Agricultural innovations and development is an essential requirement of economic development. Therefore, factors facilitating increase in productivity and diversification of agricultural production should constitute a topic of research at the Academy. These studies may be carried out by the Agricultural Development and Agricultural Economics Divisions. Case study and rapid rural appraisal methods may be used in these studies.

Extension requirements for improved agricultural production.

These studies may be carried out by the Agricultural Development Division. Case study and survey research methods may be used in these studies. Through these studies extension requirements for increased crop and livestock production may be identified. Through action research it may be experimented whether the implementation of measures on the basis of the identified findings would lead to increase in production. If found to be so, the findings may be recommended for implementation on a national scale.

Farmers level of knowledge about improved agricultural practices.

An understanding of the prevailing level of knowledge about pertinent agricultural practices is a requirement for initiating appropriate extension activities. The required information may be obtained through survey research method.

7. Rural Credit

With the development and diversification of the agricultural activities, and it becoming a dynamic sector, the requirement of credit for agricultural activities is likely to increase substantially, and unless provision is made for it, the growth of the agricultural sector may be adversely affected. Hence the need to assess the credit requirements of the various components and sections of the agricultural sector.

Through rapid rural appraisal method preliminary understanding of the areas of the country and sections of the agriculture and population becoming modernized may be identified. More rigorous studies may be conducted through survey research method. A modular approach may be adopted in these studies, covering a particular component of agriculture like crop production, or fish production, in a specific study. Since the level of development of different agricultural activities in different parts of the country vary these studies may be undertaken in different parts of the country. The studies may be undertaken by the Agricultural Economics Division, either alone, or with the collaboration of Agricultural Development Division.

Sources and Cost of Credit

The general approach in the past was to meet the credit requirements of the agricultural sector from government agencies. The emphasis was on giving subsidised credit, rather than giving credit at cost. But studies have shown that only a small portion of the agricultural credit requirements are provided by the organized sector, indicating that farmers are meeting their credit requirements from other sources, and at different costs. Therefore, there is need to understand the sources of credit of different sections of farmers, for different kinds of agricultural activities, and the cost of the credit paid by them. The required information for the study may be collected through survey research. The sample of respondents may be selected on the basis of quota sample, covering various sections of farmers. Study on this topic may be conducted in different parts of the

country, as the problems are likely to vary from area to area. The study may be conducted by Agricultural Economics Division.

Recovery of Credit

Non-recovery of credit from beneficiaries is a major factor constraining the circulation and flow of credit into the rural sector. Therefore, it is necessary to study factors adversely affecting the recovery of credit. Since the topic is a sensitive one, it would be desirable to conduct the study through case study method, on the basis of which basic insights may be derived about the problem. Subsequently large scale studies may be conducted using survey research methodology. Since non-recovery of credit has become a serious problem in the country, action research projects may be formulated on the basis of the findings and appropriate recommendations may be formulated for wider implementation. Studies on this problem may be conducted by Agricultural Economics Division.

8. Non-Farm Activities

With increase in per capita income, the consumption of non-farm products would be increasing, providing scope for their manufacturing in rural areas. The type of non-farm activities emerging in the rural areas, their location, the social background of people who are pushing forward these activities, etc. may be studied in order to have a picture of the diversification of economy occurring in rural areas. Case study method may be adopted for gathering information, as these are

activities in which only some section of the society and in only in some areas, are engaged.

Once a picture of various non-farm activities is obtained, information on their economics, etc. may be obtained through survey research method. These studies may be conducted by Agricultural Economics or Rural Sociology Division.

9. Rural Entrepreneurs

Social Background of Entrepreneurs

The diversification of the economy is pushed forward by rural entrepreneurs, making their activities a key factor in the process of development of societies. The social background of these entrepreneurs pursuing various non-agricultural activities, and even innovative agricultural activities, may be studied, with a view to understanding the attributes which make them innovators, as also to understand the various problems faced by them, so that appropriate measures can be taken for their solution. The study may be conducted through case study method, and may be conducted by faculty members of Rural Sociology, Rural Economics, or Business Management divisions.

Problems Faced by Rural Entrepreneurs

Development of nonfarm activities in rural areas and growth centres is not always a smooth process, as various factors interfere with their development. These may be economic, administrative, infrastructural, social or others. An understanding of these problems will enable one to take measures for their solution. The study of this topic may be conducted

through case study method by Rural Sociology Division or Business Management Division.

10. Flood Control

Studies of various problems of flood control and better use of flood affected areas may be conducted through case study method. Agricultural Development and Agricultural Engineering Divisions may conduct these studies.

11. Savings and Investment

As the rate of economic growth and income of rural households increase, saving rates also increase. Traditionally, rural communities invested their savings in secure assets like gold and silver ornaments, land, etc. which often did not contribute to further growth of the economy. However, the various factors which contributed to this kind of situation is changing, with security of other assets and increasing scope for non-agricultural activities. Therefore, studies on savings and investments by rural households will provide information for formulating appropriate policies for encouraging savings and their productive investment.

This study may be conducted through survey research method. However, as rural households are generally reluctant to give correct information on their incomes and savings, case study method also may be used, particularly for counter-checking the reliability of the information. Since the difference between household incomes from various sources and household expenditure

on various accounts is the savings, the questionnaire may cover questions to get detailed information on these two aspects. The study may cover rural households belonging to different strata, and the sample may be drawn on quota sampling basis, so that a picture of the income, expenditure, and saving patterns of households at different income levels can be obtained. The study may be conducted by Agricultural Economics and /or Business Management Divisions.

12. Value Addition to Local Resources

Many resources available in rural areas can be made more valuable through processing and taking to areas where there is demand for them, involving both technical and commercial activities. It is for the researchers to find out how value can be added to rural products, which are either wasted, or which give only very low prices. Case study method may be used for these studies.

C. ADMINISTRATION

1. Administrative problems and Effectiveness at Different levels

Relation Between Bureaucrats and Elected Leaders

With decentralization of administration, and elected bodies at union, thana, and zilla levels, the point of contact between people's representatives and bureaucrats has increased substantially. Even though there are rules regulating the relation between the two, the interaction between the two may not be always smooth, though it is an essential requirement for efficient administration. The objective of the study is to find

out the pattern of relation between the elected representatives of the people and government officials, at the zilla, thana and union levels, particularly the points of friction and causes of friction between the two. Identification of these points and causes may help the solution of these problems, making the relation smooth.

A combination of case study and survey research methods may be considered to be appropriate for this study. Through intensive case studies, a basic picture of the pattern of interaction between the elected leaders and the bureaucrats, the issues and patterns of conflict between the two at different levels, the way the conflict is manifested, and its impact on the efficiency of administration, may be studied. Once these basic insights have been obtained, an appropriate questionnaire for studying the issue in a larger context, covering a district, or a region of the country covering several districts, may be formulated. Appropriate samples of both elected representatives and bureaucrats may be drawn and interviewed with the questionnaire. In the course of the study, the researcher is likely to come across cases of conflict between the elected representatives and bureaucrats. Such cases may be studied in depth to develop greater understanding of the issue.

The topic is relevant for developing case studies for classroom discussions.

The study may be conducted by the Public Administration Division.

Decentralization of Administration and Implementation of Development Programmes

Study of decentralization of administration, particularly with reference to the effectiveness of the implementation of developmental programmes, may be taken up to understand the problems of decentralization. As this requires in-depth understanding of the situation, case study is an appropriate method for collecting the information. Based on this understanding, different objective criteria of administrative effectiveness may be developed and information on them may be obtained through survey research.

Effectiveness of Administrative Agencies and Institutions; problems experienced by citizens in receiving services for local government agencies.

It is necessary to have an understanding of problems experienced by citizens in receiving services from local government agencies. Though government officials are supposed to serve the citizens, it remains a dictum rather than the practice, leaving the citizens with various problems in their dealings with government. Their problems are likely to accentuate with the spread of government activities to rural areas, particularly for the poor people, who are ill-endowed for dealing with government officials. As such, an understanding of the problems the weaker sections of the citizens experience in their dealings with government agencies, particularly developmental agencies, may be studied. Case study method is the appropriate methodology for

studying this topic. People are unlikely to give correct information on a sensitive subject like this, if survey method is used, making the case study method the preferable one.

Political Awareness and Participation of Villagers in Political Activities.

Political awareness and participation of citizens in political activities are good indicators of political development. For taking up a study of this kind, the first requirement is to identify and select the indicators of political awareness and participation. This may be done through study of literature, and through case study of this aspect of rural life, and based on this a questionnaire containing various aspects of political awareness and participation may be made. Utilizing this instrument information may be collected from a relatively large sample, through survey research method.

Impact of the Weakening of Traditional Agencies of Social Control on Law and Order.

Weakening of traditional agencies of social control is a part of the process of socio-economic modernization of societies. While this process takes place, the extension of the governmental apparatus to rural areas does not occur in the same measure, creating a gap in the institutions and mechanisms of social control in rural areas. This may have adverse impact on the law and order problem in the rural areas, adversely affecting investment and development of the countryside. The research methodology of the study of this problems may combine case study

and survey methods. Through case study method, a picture of the pattern of lawlessness in the study area may be obtained. Even though the frequency of such incidents may not be very high, the apprehension they create in the minds of the people about the safety of life and property is important. This aspect can be studied through a survey research.

2. Rural Training

Training Requirements of Beneficiaries

An important component of several rural development programmes is giving financial assistance to members of the disadvantaged sections to take up income-generating activities. In doing so, it is assumed that the beneficiaries have the requisite knowledge and skill to carry on successfully certain activities. But it is not always true, leading to the failure of the schemes taken up by these beneficiaries, despite their best efforts. Hence the need to give them appropriate training, and to have an understanding of the training requirements of the beneficiaries.

Studies in this area can be of two kinds. One is assessing the training requirements of beneficiaries for programmes currently under implementation. For this purpose, the various activities, such as dairying, cattle fattening, net-making, etc. being taken up by the beneficiaries may be found out. The potential target group of these programmes may be identified, and their knowledge and skill to carry on these activities may be

assessed. Survey method using questionnaire is the appropriate method for collecting the requisite information.

Economic development creates different potentials in the economy for new activities. Through studies, such activities may be found out, and the requirements of training to carry out those activities may be assessed.

Training Requirements of Development Personnel

Training of developmental personnel is an important activity of BARD. However, few studies have been taken up to assess the training requirements of these personnel. Effective performance of their duties requires development personnel to have knowledge and skill in various tasks to be performed by them, knowledge of rules, regulations and procedures within which developmental programmes have to be implemented, and appropriate attitude to implement the programme in a spirit of sympathy to the beneficiaries. Since the type of works to be performed by a specific category of personnel are similar, through case study method information can be obtained about the type of knowledge, skill, and orientation required by them. Through dairy keeping method, a picture of the activities performed by the personnel can be obtained and based on this, the various activities of the personnel can be arranged in an hierarchical order, and emphasis in training can be given to those areas of work which are more important in their day to day discharge of duties.

Effectiveness of TTDC Training

It seems that the effectiveness of TTDC training has considerably weakened. Its causes may be studied. The study may be done through case study method.

D. EVALUATION STUDIES

Different methodologies can be used in evaluation studies. Generally survey research method is used in this kind of studies. As rapid rural appraisal is now becoming popular, it can be also used fruitfully to obtain quick understanding of the progress of projects and their impact on the beneficiaries. Wherever the situations required intensive and deep understanding of a situation, they may be studied through case method.

E. Rural Institutions

1. Rural Cooperatives.

Role of cooperatives in the context of Market oriented free trade

Cooperatives were conceived to be an important instrument of various aspects of rural development programme in the country. They were conceived in a context when the developmental ideology, and various institutional arrangements in rural areas of the country were entirely different, and market had little penetrated. But now many of these conditions have changed. Therefore, there is a need to enquire about the relevance of cooperatives in a market-oriented and market driven developmental model. The main criteria with which an institution is to be evaluated is its effectiveness. Therefore, it may be

studied how effective are the cooperatives in delivering the services expected of them, and whether these services are being delivered in a more cost effective way by other agencies, like free trade and open market. For assessing the effectiveness of cooperatives, appropriate indices have to be developed. The items for this may be selected through case study of a few cooperatives. Once these indices are evolved, larger studies can be done through survey research method.

Working of Cooperatives

Studies on the working of different types of cooperatives and the benefits accruing to their members through them have been also suggested. These studies may be conducted through survey research and case study methods. One issue that needs to be looked into is the cost of organizing and sustaining the cooperatives, which also need to be included in calculating the relative efficiency of the cooperatives.

2. Local Institutions

Over the years a number of governmental agencies are working in the rural areas implementing different rural development programmes. Some of them are similar and work among the same group of people. For effective and economic implementation of various programmes, coordination among the departments and personnel is necessary. Similarly with the NGOs becoming a major actor in the field, there is need to coordinate with them also. As such, various aspects of the problems of coordination in the implementation of development programmes need to be studied.

Through case study method, various problems involved in coordination may be understood, and on this basis, questionnaire may be made and through survey research method the prevalence of the identified problems in different parts of the country may be assessed.

Local institutions are expected to play a key role in the mobilization of resources, and use it for developmental purposes. It would be desirable to assess to what extent they are able to do so. This may be done through case study and survey research methods.

Macro-developmental policies are changing, with potential impact on rural development institutions. These changes and their impact may be studied through a combination of case study and survey research methods.

3. Non-Governmental Organisations

NGOs have become major players in the area of rural development in Bangladesh. In some respects their programmes appear to be more effective than government programmes. The activities of NGOs may be studied to understand them. They may be studied in comparison with governmental activities, particularly to understand factors which make their activities more effective. These studies may be done through case study and survey research methods.

F. Environment and Disaster Management

Social Forestry

For protection of environment and for meeting fuel requirements, social forestry has become an important necessity. Studies may be conducted with a view to find out people's awareness of the importance of social forestry. Case study and rapid rural appraisal methods are appropriate techniques for collecting the required information.

Rural sanitation

Rural sanitation has various dimensions, like people's knowledge and practice of various hygienic practices, factors with which the variation in these practices are related, opportunity for availing various sanitary practices, etc. KAP information on sanitation can be obtained through survey research. But the items to be included, questions to be asked, etc. have to be understood, and this can be best achieved through case study method. Through field observation, practices like the defecation practices, sources from which people draw water, frequency of bathing, the practice of washing of hands before taking food, etc. may be observed and recorded.

As improved sanitary practices can contribute to significant reduction in mortality rate, rural sanitation may be adopted as an area relevant for action research.

G. Social Characteristics

1. Changing consumption pattern with economic development

Three topics have been suggested under this theme. They are related and may be studied either jointly or separately.

Bangladesh has come out of the stagnation in per capita income, characteristic of societies in the early stage of development and per capita income has started increasing. Due to their low incomes, the expenditure pattern in less developed countries is dominated by expenses on food through the cheapest sources of food, such as rice and other cereals, on which they spend a major portion of their incomes. Consumption of more palatable food items like vegetables, pulses, fruits, fish, eggs, meat, milk, etc. is beyond the financial capacity of ordinary people, though they also very much like such items. As a result, when per capita income increases in the course of economic development, the demand for more palatable and socially prestigious food items increases. Apart from food items, people are able to buy more of manufactured items like clothes, and consumer durables like cycle, radio, wrist watch, and avail of more services like that of doctors, education of children, entertainments like cinemas, etc. Though the elasticity in the demand for food products is less than 1, still there is considerable increase in the demand for food products with increase in incomes. An understanding of the changes in the structure of demand with income levels would give a picture of new agricultural and other products and services that are likely to be in demand, as the process of economic growth advances. The findings of the study would enable the Academy to suggest the pattern of agricultural diversification that may be planned for meeting future demands, as well as to suggest the non-agricultural activities for which demands are likely to arise.

The basic requirement of the study is to obtain information on the consumption of various goods and services in households at different income levels. This information can be best collected through survey method, using a questionnaire.

The study may have a large sample of about 500 respondents, who may be drawn from areas varying in level of development. This would give enough number of households of different income levels. Alternatively, quota sampling procedure may be followed, taking equal number of respondents from different income levels.

The information required for the study may be basically classified into sources of income, pattern of expenditure, and rate of savings or indebtedness. The various sources of income may be carefully listed, and incomes from them may be collected. It would be preferable to collect this information in such units of time convenient for the respondents to give the information. For example, in the case of daily labourers, information may be obtained on daily or weekly basis, and it may be converted into an appropriate unit of time, say a month, applicable to all categories of respondents. In the case of farmers, the income information may be collected in accordance with cropping season, and converted into monthly income. In the case of traders and those in service, income information may be collect on a monthly basis.

For understanding the expenditure pattern, it would be desirable to divide the items into different categories, such as

food, clothing house maintenance, etc. on which expenses are incurred on a regular basis. Information on food consumption may be obtained in a detailed manner, covering the items consumed, frequency of their consumption in a unit of time, quantity cooked in a unit of time, the cost of these items, items derived from domestic sources, items obtained from the market and prices paid. An outline of the way in which this part of the questionnaire may be formed is given below :

Food consumption and Its value

Items of Food	Frequency of consumption	Unit of Time	Quantity cooked	Total value	Share Bought	Share from Domestic source	Price per unit
Rice							
Fish							
Chicken							
Beef							
Egg							
Vegetables							
Pulses							
Oil							
Tea, Coffee							
Sweets							
Bread							
Biscuit							
Fruits							

Information of the expenses on clothing, household durable like furniture, may be obtained in greater time intervals like yearly basis, or five year basis.

Expenses on various services like education, health services, entertainment, etc. also may be obtained. Information may also be obtained on savings, its investments, and indebtedness and sources from which money or things are borrowed.

For analysing the expenses on food items, an appropriate unit of time, over which the expenses on food can be conveniently calculated may be selected, and all quantities may be calculated with reference to this time unit. It can be a day, a week, a month or an year. Since the income has been collected on monthly basis, details of consumption may be finally calculated on monthly basis. The quantity of food items consumed and the value of these items may be calculated for this unit of time. Subsequently the quantity of items consumed and their value may be divided by the number of persons per household, which would give the per capita quantity and value of consumption of different items.

The basic purpose of the analysis is to find out the variation in the consumption of different items with variation in income levels. For this purpose, the respondents may be divided into different income levels - say five groups. Through cross tabulation the frequency of consumption, per capita amount of consumption, and per capita value of consumption of different

items, may be found out. This analysis will give a series of cross tables. Two typical examples are given below :

Quantity of Rice Cooked per Head per day in Households with Different Levels of per Capita Income	
Per capita Income levels	Quantity of Rice Cooked per Head
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----

Quantity of Fish Cooked per Head in a week in Households with Different Levels of Per Capita Income	
Per capita Income levels	Quantity of Fish Cooked per Head / Week
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----

Similar tables may be made for frequency of consumption, value of each item consumed, and the share of the food item from domestic source and the share of the item purchased. From these tables, it would be possible to identify the rate at which the consumption of different items increases with increase in income levels. Those items the consumption of which is increasing at a higher rate will have larger market in future, and farmers may be advised to switch over to the production of those items.

It may be found through the analysis the items procured from the market in large quantities. These are also the items for which there is greater scope for production in future.

2. Urbanization

Urban growth

Information on the growth of urban areas and percentage of population in urban areas can be obtained from the analysis of census data. Such analysis using data from different censuses with time-series information would give a picture of the change of urban-rural balance in different parts of the country.

Spread of urban influence

Urbanization also implies the spread of urban culture, which is a modernizing force, bringing change in traditional society. The appropriate methodology for their study is survey research, conducted in areas at varying distances from urban centres.

2. Socio-economic Changes in Rural Society

Rural urban Migration

With development, migration becomes an important social phenomenon. It has different effects on rural life. Various aspects of migration behaviour, and its impact on social life may be studied. While case studies will give insights about various aspects of the problem, survey method is the appropriate method, as large samples have to be covered in these studies.

Social Mobility

With economic development and emergence of new social, economic and political opportunities, scope for social mobility increases. For these studies a combination of case study method and survey research method can be appropriately used.

Spatial Mobility

Economic development leads to increase in spatial mobility of people and goods. Understanding of its magnitude and pattern would be desirable, as transportation is an important source of employment in developed societies. Survey method using questionnaire is the most appropriate research methodology for this study.

Changes in Occupational Structure

With economic development, changes take place in occupational structure, social differentiation emerges, and prestige structure of occupations change. An understanding of these changes would help to plan new occupations for the disadvantaged sections. The required information for these studies can be obtained through comparative studies done through survey method in areas with different levels of development. However, use of case study method is necessary for obtaining information for making questionnaire, to be used in the survey method.

Study of Beliefs, Values, Attitudes and Motivation

Various studies have been suggested under this broad heading. These studies may be considered to be similar to soil

testing, conducted to find out the quality and deficiencies of soil, for various cropping activities. Similarly, human nature also varies, and an appreciation of beliefs, values, attitudes and motivation of rural people is necessary for implementing programmes where they are the key actors. Unfortunately, studies in this area have been completely absent at the Academy. Therefore, it would be desirable to initiate studies in this broad area.

This kind of studies generally involves large samples and therefore, survey research is the generally used method. However, for developing the instruments for the survey, one should have an understanding of the nature of beliefs, values, attitudes, aspirations, and motivation, and this can be derived through case study method. Instruments of psychological testing is commercially available, and they may be obtained and used with necessary changes to suit the local culture.

6. Youth Problems

With rapid growth in population, the size of the youth population has increased steadily. While adolescence has its own psychological problems, the economic problems of the youth are more acute in developing countries like Bangladesh. As such, the main emphasis of the study must be on providing productive employment to the youth. Occupational aptitude, and requirements of training to take up new avocations can be found through survey research.

7. Housing problem

This may be studied through survey research method. Sample may be drawn from the weaker sections of the society, who are the most seriously affected by this problem.

8. Study of Rural Labour

Several factors are contributing to rapid increase in the number of landless rural labourers. They constitute the most deprived section of the society. Seasonality in employment, low wages, patron-client relation, etc. are some of the problems from which they suffer. In view of their low socio-economic condition, severity of their problems, and their numerical predominance, rural labour must constitute an important area of study at the Academy. For implementing programmes seeking to mitigate their problems, the required information may be obtained through rapid rural appraisal. However, their problems may be studied and understood in greater detail through case studies and survey researches.

9. Mental Health

Those with mental problems are only a small per cent in the rural society. Therefore, their problems may be studied through case study method.

10. Rural Energy

These studies require quantitative estimates of fuel requirements of different sections of the society. Therefore, survey method is an appropriate method for collecting information. However, this may be supplemented by case studies

to understand the details of how the lower sections of the society meet their fuel requirements.

A MANUAL OF SOCIOECONOMIC RESEARCH METHODS

CONTENTS

	<u>Page</u>
1. Outline of a course on Socioeconomic Research Methods	389
2. The research process	390
3. Exploratory and descriptive studies	394
4. Studies testing causal hypotheses	397
5. Measurements	398
6. Data collection through observational method	400
7. Data collection through, questionnaires and interviews	406
8. Use of statistical records	414
9. Coding of data	416
10. Tabulation of data	420
11. Preparation of research report	425
12. Preparation of questionnaire	431
13. Sampling	439
14. Rapid rural appraisal	447

1. OUTLINE OF A COURSE ON SOCIO-ECONOMIC RESEARCH METHODS

1. Dimensions and indicators of development
2. Rural development problems
3. Social science research
4. Research process and formulation of research design
5. Sources of social science information
6. Methods of collecting data
7. Secondary sources of data
8. Time series analysis
9. Questionnaire and schedules
10. Interview Methods
11. Content analysis
12. Participant observation
13. Case study method
14. Survey research
15. Sampling
16. Evaluation studies
17. Coding of data
18. Tabulation of data
19. Statistical analysis of data
20. Rapid rural appraisal
21. Preparation of research report

2. THE RESEARCH PROCESS

The purpose of research is to discover answers to questions through the application of scientific procedures. These procedures are necessary to increase the likelihood that the information gathered will be relevant to the question asked and will be reliable and unbiased.

Research always starts from a question or problem of some sort. The nature of the question varies, and may be seen to fill a gap in knowledge or with testing a hypothesis, or with checking whether some proposition which is generally believed is in fact tenable.

In order to be answerable by research, questions must be such that observation or experimentation in the natural world can provide the needed information. But in certain situations, answers to questions depends not only on factual information, but values of the researcher. Research, particularly social science research, may not always emerge with answers.

The reasons for asking research questions may be either intellectual based on the desire to know or understand for the satisfaction of understanding (pure science), or practical, based on the desire to know for the sake of being able to do some thing better (applied science). Historically, the scientific enterprise has been concerned both with knowledge for its own sake and with knowledge for what it can contribute to practical concerns.

MAJOR STEPS IN RESEARCH

The research process consists of a number of closely related activities that overlap continuously rather than following a strictly prescribed sequence. So interdependent are these activities that the first step of a research project largely determines the nature of the last. If subsequent procedures have not been taken into account in the early stages, serious difficulties may arise and prevent the completion of a study. These difficulties cannot be remedied at the time they become apparent as they may be rooted in the earlier procedures. Hence the need to follow strict procedures in research.

SELECTION AND FORMULATION OF A RESEARCH PROBLEM

The general topic of research study may be suggested by some practical concern or by some scientific or intellectual interest, or it may be an evaluation of the impact of the implementation of a programme. Or it may try to understand the probable consequences of various courses of action in deciding among proposed alternatives. Prediction of some future course of events for appropriate action may be another objective of a research. Among such important considerations determining the choice are one's own personal inclinations and value judgments.

Formulating the Research Problems. Scientific inquiry is finding solutions to problems. Therefore, the first step in the formulation of research is to make the problem concrete and explicit. Although the selection of a research topic may be

determined by other than scientific considerations, the formulation of the topic into a research problem is the first step in the scientific enquiry, and therefore, should be influenced primarily by the requirements of scientific procedure. Study of literature, first hand observation, discussions with experts, etc. facilitate formulation of significant research problems. The first step in the formulation of a research problem is the discovery of a problem in need of solution.

Once the problem of a research is formulated, the next step is the formulation of hypotheses. The role of hypotheses in scientific research is to suggest explanations for certain facts and guide in the investigation of others. Hypotheses may be developed from various sources. It may be a hunch, may be based on the findings of another study, or may stem from a body of theory. Regardless of its sources, it serves to guide the kind of data that must be collected in order to answer the research question, and the way in which they can be organised most efficiently in the analysis. However, in many areas relevant for social research, significant hypotheses do not exist. Much exploratory research must be done before hypotheses can be formulated.

Defining Concept. In order to organize data to perceive the relationship among variables, one has to make use of concepts. A concept is a shorthand representation of a variety of facts. Its purpose is to simplify thinking by subsuming a number of events under one general heading. In order to avoid misrepresentation, concepts must be defined both in abstract terms giving the

general meaning they are intended to convey, and in terms of the operations by which they will be represented in the particular study.

Relating Findings to Other Knowledge. Even though single studies are frequently carried out by individual investigators working alone, each study rests on earlier ones and provides a basis for future ones. One way of doing this is to examine the research and the thinking that has already been done on the given research problem and to plan the study so that it ties with this existing work. The second is to formulate the research problem at a level sufficiently abstract so that the findings from the study may be related to findings from other studies concerned with the same concepts. Only when a problem is formulated in generally meaningful terms, can the social scientist hope to transfer to other problems the knowledge gained from the study of a unique event.

3. EXPLORATORY AND DESCRIPTIVE STUDIES

Once the research problem has been formulated clearly enough to specify the types of information needed, the investigator must work out his research design. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research designs will differ depending on the research purpose. The purpose of research can be to gain familiarity with a phenomenon or to achieve new insights into it; to portray accurately the characteristics of a particular individual, situation or group; to determine the frequency with which some thing occurs; or to test a hypotheses of a causal relationship between variables.

In formulative or exploratory studies, the major emphasis is on discovery of ideas and insights. Therefore, the research design must be flexible enough to permit the consideration of many different aspects of a phenomenon. In studies trying to understand the characteristics and frequency of occurrence, a major consideration is accuracy. Therefore, in the design, avoiding bias and maximizing the reliability of the evidence, is required. Such studies are called descriptive studies. Studies testing causal hypotheses require procedures which will reduce bias, increase reliability, and will also facilitate reliability about causality. However, in practice, any given research may have in it different elements or functions.

FORMULATIVE OR EXPLORATORY STUDIES

The objective of many exploratory studies is to formulate a problem for more precise investigation, or for developing hypotheses. An exploratory study may have other functions like increasing the investigator's familiarity with the phenomenon he wishes to investigate in subsequent more elaborate studies; clarifying concepts; establishing priorities for further research, or providing a census of problems.

Survey of Literature. One of the simplest ways of economising effort in an enquiry is to review and build upon the work already done by others. Frequently an exploratory study is concerned with an area in which hypotheses have not yet been formulated. The task then is to review the available material with sensitivity to the hypotheses that may be derived from it. The first step for survey of literature is the preparation of a bibliography by going through relevant journals, books etc.

Descriptive Studies. Many studies are concerned with describing the characteristics, such as the people of a community, their age distribution, racial and ethnic back ground, etc. Many studies are concerned with estimating the proportion of people in a specified population who hold certain attitudes or who behave in certain ways. Such descriptive studies may use a variety of data collection techniques. However, as the aim in a descriptive study is to obtain a picture of various characteristics, the procedure to be used in descriptive studies must be carefully planned.

Selecting the Sample. Through sampling, substantial saving of time, effort and cost can be saved. It is important that the study findings based on one sample should be a reasonably accurate representation of the state of affairs in the total group, or population. To bring this about considerable attention has to be paid to problems and methods of sampling. The research purpose determines appropriate sampling unit. Whatever the sampling unit, it is important to have a basis for identifying the total population of such units and a specified method of selecting units from that population.

Data Collection and Analysis. To obtain consistent data free from errors introduced by individual interviewers, it is necessary to supervise the staff of field workers closely as they collect and record information.

In the data analysis, considerations of economy and safeguards against errors must be kept in mind.

4. STUDIES TESTING CAUSAL HYPOTHESES

A hypotheses of causal relationship asserts that a particular characteristic or occurrence (x) is one of the factors that determines another characteristic or occurrence (y). Studies designed to test such hypotheses must provide data from which one can legitimately infer that x does or does not enter into the determination of y.

The Concept of Causality. The concept of causality is complex. In modern science, the emphasis is rather on a multiplicity of "determining conditions", which together make the occurrence of a given event probable. Awareness of the multiplicity of contributory causes leads also to an interest in alternative conditions that may make the occurrence of a phenomenon more likely.

Most hypotheses in social science are concerned with contributory or alternative conditions and the contingencies under which they operate. However, it is impossible to demonstrate directly that a given characteristic or occurrence (x) determines another characteristic or occurrence (y), either by itself or in combination with other characteristics or occurrences (A, B, C, etc.) Rather, we are in the position of inferring from observed data that the hypotheses that x is a condition for the occurrence of y is or is not tenable with some specified degree of confidence.

5. MEASUREMENTS

The quality of research depends not only on the adequacy of the research design, but also on the fruitfulness of the measurement procedures employed. Basic to any meaningful measurement are an adequate formulation of the research question and clear definitions of the concepts involved. In other words, one must first know what is it he wants to measure. Such specification of what is to be measured is a prerequisite to deciding how it is to be measured; i.e. the establishment of measurement procedures. A measurement procedure consists of a technique for collecting data plus a set of rules for using data. The purpose of various data collection techniques is to produce trust worthy evidence that is relevant to the research questions being asked.

The data collection techniques and the rules for using the data to be useful must produce information that is not only relevant, but free of systematic errors; i.e. they must produce valid information. A good measurement procedure must also be reliable; i.e. independent, but comparable measures of the same object should give similar results. The research instrument should be also capable of making distinctions fine enough for the purpose it is to serve.

Variation in Scores on Measuring Instruments. Measurement always takes place in a more or less complex situation in which innumerable factors may affect both the characteristic being measured and the process of measurement itself. One attempt is to control or keep constant the more important of these variables

and hope that the variation of uncontrolled factors will operate so as to cancel out one another's effects. The measurement of any psychological or social characteristic presupposes a constant set of known conditions among the factors relevant to it and to the process of measuring it.

Certain basic questions must be asked about any measuring instruments such as, what does it measure? Are the data it provides relevant to the characteristic in which one is interested? Do differences in scores represent true differences on the characteristics one is trying to measure, or do they reflect also the influence of other factors? The validity of a measuring instrument may be defined as the extent to which differences in scores on it reflect true differences among individuals, groups, or situations in the characteristics which it seeks to measure, or true differences in the same individual, group, or situation, from one occasion to another, rather than constant or random errors.

6. DATA COLLECTION THROUGH OBSERVATIONAL METHOD

Observation is not only one of the most pervasive activities of daily life, it is a primary tool of scientific enquiry. Observation becomes a scientific tool to the extent that it (1) serves a formulated research purpose, (2) is planned systematically, (3) is recorded systematically and related to more general propositions rather than being presented as a set of interesting curiosities, and (4) is subjected to checks and controls on validity and reliability. Many types of data required by social scientists can be obtained through direct observation. In addition to direct observation of behaviour, scientists also obtain information through interviews and questionnaires, projective techniques and records. Compared with other methods of data collection, observation has some advantages and some disadvantages.

The main advantage of observational technique is that they make it possible to record behaviour as it occurs. It yields data that pertain directly to typical behavioral situations. In investigations on subjects who cannot report their behaviours, such as small children, the investigations have to be through observational method. Observation is also independent of a subject's willingness to report.

On the other hand, observation technique has its specific limitations. It may not be possible for the researcher to observe an event which erupts almost spontaneously. Many events occur infrequently and it may not be desirable to wait too long to

observe them. Unless there are good reasons for engaging in direct observation, the method of interviewing is more economical. As the possibility of applying observational techniques is limited by the duration of events, information on life histories, etc. cannot be obtained through this method.

Observation may serve a variety of research purposes. It may be used in an exploratory fashion, to gain insights that will later be tested by other techniques. It may be used to gather supplementary data that may help to interpret findings obtained by other techniques. Observational procedures may range from almost complete flexibility to the use of detailed formal instruments developed in advance. In general, the degree of flexibility, participation and structure, vary with the purpose of the study. In an exploratory study, the observational procedures are likely to be relatively unstructured.

In using the observational technique, four broad questions confront the investigator: (1) What should be observed; (2) How should observations be recorded; (3) What procedures should be used to try to assure the accuracy of observation? (4) What relationship should exist between the observer and the observed, and how can such a relationship be established? These questions are discussed separately for relatively unstructured and relatively structured observations.

UNSTRUCTURED OBSERVATION

The technique of unstructured observation has been contributed mainly by social anthropology, where it has taken the

form of participant observation. In this form of observation, the observer takes on, to some extent, the role of a member of the group and participates in its functioning.

The Content of Observation. The first question the observer must face is, What should be observed? It is impossible to record all the details in a process. From the start one must face the difficult problem of selection. In more highly structured studies, the formulation of the research problem indicates what kinds of data will be most relevant. But in an exploratory study, where unstructured observation is most likely to be used, one does not know in advance which aspects of the situation will prove to be most relevant. Since unstructured observation is often used as an exploratory technique, the observer's understanding of the situation is likely to change as he goes on. This, in turn, may call for changes in what he observes, at least to the extent of making the content of observation more specific. Such changes are not undesirable also.

The shift in focus often goes hand in hand with narrowing the scope of observation. But still the question remains, among the features of a social situation, which should be noted? Though hard and fast rules can not be laid down, one may make observation with reference to (1) participant, (2) the setting, (3) the purpose, (4) the social behaviour and (5) frequency and durations.

Recording Unstructured Situation. Two important considerations in recording unstructured observations are, when

should the observer make notes, and how should notes be kept? The best time for recording is on the spot and during the event. This results in minimum of selective bias and distortion through memory. However, there may be practical difficulties in this. Therefore, the researcher may acquire the habit of jotting down significant key words in an almost imperceptible manner. However, the observer should write up as soon as possible a complete account of everything in the situation that he wishes to remember.

As the records of observations accumulate, it may become difficult or impossible to remember which records contain information on a particular topic, and which do not. Therefore, some indexing system is essential.

While writing notes, the researcher may indicate which statements refer to actual events and which represent his interpretations. Interpretations of the meaning of a situation must be present to some extent in the observer's mental set during the act of observation. Otherwise, it would be impossible for him to perceive the relationship among discrete movements, gestures, statements, and objective conditions of the situation. When the observer participates with the people he is observing, his own tentative interpretation of a situation may lead him to ask certain questions.

The participant observer faces especially severe difficulties in maintaining objectivity. Full recording helps to restore objectivity. Becoming involved in a situation may

lessen the sharpness of observation, not only because the investigator identifies with his informants, but also because he becomes accustomed to certain kinds of behaviour.

Relation of observer and observed. In field observation, a faulty approach to a key person may have dire consequences for the entire enquiry. Since the method is applied in the actual life sphere of the subjects, the observer is talked about, and his mistake cannot remain isolated incidents. The researcher must decide whether to reveal his identity. It seems desirable to reveal one's identity.

STRUCTURED OBSERVATION

In more systematic studies, the investigator knows what aspect of the group activity are relevant for his research purposes, and is therefore, in a position to develop a specific plan for making and recording of observations before he begins data collection.

Structured observation may take place either in field settings or in controlled experiments. In order to measure the amount and direction of relevant types of behaviour, it is first necessary to develop a set of reliable categories for systematic observation and recording.

Structured of observation is used mainly in studies starting with relatively specific formulations. Since the situation and the problem are already specified, the observer is in a position to set up in advance the categories in terms of which he wishes to analyse the situation. During the first attempts to use an

observational instrument, it is useful to check, by means of interviews with persons observed, whether according to their own account they are doing or feeling what the observer has described them as doing or feeling.

An observer may categorize the behaviour of a person in terms of the assumed reactions of other group members, or he may categorize it in terms of the intention the speaker probably had. The general practice in coding verbal behaviour is to code each complete thought separately. Thus one sentence may include thoughts that fit several categories or none at all. The recorded acts of group, on the other hand, are usually decisions, or certain phases of the meeting.

There is no one best method of recording observations, although certain procedures yield certain kinds of data that others can not.

The Relation of Observer and Observed. Unless the observer is concealed behind a one-way screen, the nonparticipant observer faces the same kinds of problems as the participant observer in establishing relations with the people he is observing. He too, must carefully prepare his entry into the situation and make sure that all members of the group are willing to accept him. Whenever possible, the investigator may attempt to create an impression of neutrality and as a psychologically nonvisible person.

7. DATA COLLECTION THROUGH QUESTIONNAIRES AND INTERVIEWS

Observational methods are less effective in giving information about a person's perceptions, beliefs, feelings, motivations, anticipations, or future plans. They provide no information about past behaviour or private behaviors. To obtain such information, the interview, the questionnaire, and the projective method have been devised.

In the interview and questionnaire approach, heavy reliance is placed on the subjects verbal report for information about the stimuli, or experiences to which he is exposed and of knowledge of this behaviour. The subject's report may or may not be taken at face value. It may be interpreted in the light of other knowledge about him or in terms of some psychological theory. Inferences may be drawn about aspects of his functioning which he has not reported. However, as the starting point is the subject's self report, these approaches can ordinarily obtain only material that the subject is willing and able to report.

Comparison of Interview and Questionnaire. Although both interviews and questionnaires place heavy reliance upon the validity of verbal reports, there are important differences between the two methods. In a questionnaire, generally being self-filled by the respondents, the information one obtains is limited to the written responses of subjects to prearranged questions. In an interview, there is greater scope for greater flexibility in eliciting information.

Question Content. In both questionnaires and interviews, information is obtained by asking questions. Questioning is suited to obtaining information about what a parson knows, believes or expects, feels or wants, intends, and about his explanations.

Often the simplest and most economical method of obtaining "facts" is to go directly to the people who are in a position to know them and to ask for the desired information. A sizable proportion of most questionnaires and interviews is directed toward obtaining such facts. Questions about the person's age, education, religion, income, nationality marital status, occupation, etc. are of this type. So too are questions about behaviors, beliefs, feelings, desires, intentions, etc. Questions about events, circumstances, policies, etc. known to the respondents are also of this nature. However, reported "facts" must always be evaluated in terms of credibility.

When the focus is on description or understanding of an event, a situation or a community, rather than on information about the individual respondents, it is possible to check the accuracy through comparison of the reports of several respondents. If respondents occupying widely differed positions in the community agree on a statement, it may be accepted as true than if only one of these respondents makes the statements. On the other hand, contradictions between the reports of apparently reliable informants provide important leads for further investigation. Wherever possible, statements should be checked against statistical records.

In stead of asking questions to find out the objective facts from people in a position to know, the investigator may wish to know what people believe to be "facts". The distinction between an enquiry into "facts" and an enquiry into beliefs must be kept clearly in mind by the investigator. Distortions in perception and beliefs, as well as gaps in knowledge, are often clues to a person's desires or fears. In addition to discovering the content of a person's beliefs, a questionnaire or interview may provide information about the characteristics and interrelationships or structure of the beliefs.

The contents of a questionnaire can be to ascertain feelings. A person's beliefs about what the facts are will often give very clear indicators of his feelings and his desires. Some times an emotional reaction may reveal beliefs that a subject is unable to verbalize. In questionnaires the most common method of investigating feelings is to include items that bear directly on various possible emotional reactions like fear, distrust, disgust, contempt, hate, envy, sympathy, admiration, etc.

Questions may be asked to find out the standards of action. An individual's definition of appropriate behavior in various social stations are of interest both as a reflection of the prevailing climate of opinion and as a basis for predicating his probable behaviors in such situations. Definitions of appropriate action frequently have two components, namely ethical standards of what should be done, and practical considerations of what is feasible to do.

Questions may be asked to find out present or past behaviors. It is a social fact which he himself is able to observe. In asking about present or past behaviors, experience has demonstrated that the most valid answers are obtained by specific rather than general questions. Specifying a concrete situation and then asking whether this instance is typical or atypical provides the subject with more cues for recall.

TYPES OF INTERVIEWS AND QUESTIONNAIRES

The form of interview and questionnaires may vary widely. Interviews may range from rigidly Standardized in which both the questions and the alternative responses permitted on a subject are predetermined, to the completely unstructured, in which neither the questions to be asked, nor the responses permitted, are determined before the interview. Although the possible range of questionnaire structured is more limited, there too some variation is possible.

Standardized Interviews and Questionnaires. In standardized interview or questionnaire, questions are presented with exactly the same wording, and in the same order, to all respondents. The reason for standardization is to ensure that all respondents are replying to the same questions. Differences in question order can also influence the meaning and implications of a given question. However, standardized questionnaire may differ in the amount of structuring of the questions used. They may present fixed alternative answers or they may leave the respondent free to answer in his own words.

A fixed alternative, or closed, question is one in which the responses of the subject are limited to stated alternatives. These alternatives may be simply 'Yes' or 'No' or they may provide for indicating various degrees of approval or agreement, or they may consist of a series of replies of which the respondent picks one as being closest to his position.

Questions of this type are essentially the same whether they are used in interviews or in questionnaire. The only reason for using interviews rather than written questionnaires is to reach subjects who are either not willing or not able to fill out questionnaire.

Open-ended questions are designed to permit a free response from the subject, rather than one limited to stated alternatives. The distinguishing characteristic of an open-ended question is that they merely raise an issue, but do not provide or suggest any structure for the respondent's reply. The respondent is given the opportunity to answer in his own terms and in his own frame of reference.

Fixed alternative questions have the advantages of being "standardizable", simple to administer, quick and relatively inexpensive to analyze. The analysis of responses to open-ended questions is often difficult and expensive. Categories for analysis must be built up, coders must be trained, and the responses must be coded into one of the categories before they can be tabulated and statistically analyzed. Compared to the simple process of tabulating the pre-coded responses to closed

questions, the analysis of opinion-ended questions is complex and often trouble some.

From the point of view of obtaining the information needed for a given investigation, each type of question has certain advantages and certain disadvantages. A closed question may help to ensure that answers are given in a frame of reference that is relevant to the purpose of the inquiry and in a form that is usable in the analysis. On the other hand, it may force a statement of opinion on an issue about which the respondent does not have any opinion. Open-ended questions, especially when they are used in an interview and can be followed by probes, provide a much better indication of whether the respondent has any information about the issue, whether he has clearly formulated opinion about it, and how strongly he feels about it.

It would be desirable that the development of closed-question interview schedule is pre-coded by more intensive, free interviews with a sub-sample of the population in order to discover the range of probable responses, the dimensions that are seen as relevant, and the various interpretations that may be made of the question wording. On the basis of such preliminary exploration, more meaningful closed questions can be formulated. It may be also desirable to conduct more intensive interviews with a sub-sample, after a survey using closed questions, covering areas that may appear to be significant.

Less Structured Interviews. For some research problems, a still more flexible approach that that provided a standardized

interview with open-ended questions is appropriate. Such interviews called "focussed interview", "depth interview", etc. are commonly used for a more intensive study of perceptions, attitudes, motivations, etc. than standardized interviews. This type of interview is inherently more flexible, and it requires more skill on the part of the interviewer than do the standardized types. The flexibility of the unstructured or partially structured interview helps to bring out the affective and value-laden aspects of the subjects responses and to determine the personal significance of his attitude.

THE SOCIOMETRIC METHOD

Sociometry is concerned with the social interactions among any group of people. The data collection is geared to obtaining information about the interaction or lack of interaction among the members of any group. The interaction that is investigated may be behavioral, or it may only be desired, or anticipated, or fantasied. The content or type of interaction studied may be any one of a variety of social behaviors - sitting next to, eating with, buying from, lending to, visiting, playing with, having as a friend, talking to, living next to, etc.

Sociometric studies most commonly use questionnaires, although observational data or other kinds of records may provide the gist for a sociometric analysis.

When interest is in actual behaviour, one may observe the participants in an action, the nature of the action, and the relationship of the participant to one another. Both the

initiation and the reception of social behaviour are of interest. When interest is in desired interaction, or in feelings about interaction with specified individuals, verbal reports are called for. The sociometric questionnaire or interview involves simply asking each member of a group, to indicate which other members he would like to have as a companion in some activity and which ones he would not like to have as a companion. Some times, the individual is allowed to name as many members as he wishes, more frequently he is limited to naming a specific number.

Sociometric questionnaires are easy to administer and are adaptable to many different types of setting. Studies of the reliability of sociometric data indicate that patterns of interaction are stable. Despite the ease of administration, the analysis of Sociometric data is complex. sociometric data can profile information about the individual's position in the group, the social subgrouping within the group, the relationship among the subgroups, the group's cohesiveness, etc.

8. USE OF STATISTICAL RECORDS

A considerable amount of statistical data on the behaviour of the members of a community is available in every literate community. They include census of population giving information about age, sex family size, occupation, residence, etc. Health statistics give birth and death rates, and the like. Various agencies publish data on wages, hours of work, productivity, etc. Many voluntary organisations have records of their members, and of members they serve. As such data are collected periodically, it would be possible to establish trends over time. The collection of such data does not require individual's cooperation, nor are they likely to be affected by interviewers' biases.

The use of available statistical records require that the social scientist be familiar with better known sources of such data. On the other hand, if a research idea or hypothesis can be formulated in such a manner that the available recorded material bases can be used to answer the question, the use of such material becomes possible.

However, there are matters to be taken care of in the use of available statistics. The definitions of categories used in statistical material frequently do not coincide with those used in social research.

Mass communication is another rich source of data for investigating a variety of research questions. They may be used to throw light on some aspects of the culture of a given group,

to compare different groups in terms of some aspects of culture, to trace cultural change, etc.

The main technique used in mass communication studies is content analysis. It is defined as a research technique for the objective, systematic, and qualitative description of the manifest content of communication.

9. CODING OF DATA

Coding is the technical procedure by which data are categorized. Through coding, the raw data are transformed into symbols, usually numerals that may be tabulated and counted. The transformation is not, however, automatic. It involves judgement on the part of a coders.

Categorization of complex data is usually done by coders after the data have been collected. This procedure allows time for reflection and do the categorization carefully.

There are many things that may operate to make the judgments of coders unreliable. These factors may arise from data to be categorized, from the nature of the categories that are to be applied, from the coders themselves, etc.

Many difficulties in coding result from the inadequacies of the data. Often the data do not supply enough relevant information for reliable coding. This may be the consequence of inadequate data collection procedures, like poorly worded questions, untrained observers, etc. However, many of these difficulties can be corrected through careful editing of data. When the interviewer or the observer hands in his material, the possibility of eliminating many potential coding difficulties still exists. A careful examination of the data as soon as they are collected, and a systematic questioning of the interviewer or observer, will avert many coding problems. The process of scrutinizing the data to improve their quality for coding is commonly called editing. Not only does editing help to avoid

later coding problems, it may also markedly improve the quality of data collection by calling attention to points at which the interviewers or observers have mis-understood instructions, are not recording data in sufficient detail, etc. To serve this function, editing should be done in the course of pre-testing the interview or observation schedule, and of training the interviewers or observers, as well as throughout the period of data collection. If editing is to remove coding problems, it must be done while the interviewers or observers are still available for clarification.

Each interview or observation schedule should be checked for completeness, legibility, comprehensiveness, consistency, uniformity, and appropriateness of responses.

The value of the categorization of data depends entirely on the soundness of the categories employed. Categories must be well defined from a conceptual point of view and must be relevant to the purpose of the research. Each set of categories must also meet certain formal requisites. It must be based on a single classificatory principle, the categories must be mutually exclusive and they must be exhaustive. Even if the categories satisfy all these conditions, however, coding will be unreliable if the categories are not clearly defined in terms of indicators that are applicable to the immediate data. Usually the categories are defined by means of examples from the data. The examples should include not only responses that typify the category, but also, if possible, responses that help to distinguish the boundary line between similar categories.

Training in Coding. The reliability of coding is affected by the competence of the coders. Training of coders usually proceeds by the following steps: (i) The various codes are explained and illustrated with example from the material to be categorized. (ii) The coders then all practice on a sample of data. Problems that arise are discussed by the coders as a group with the researcher in order to develop common procedures and definitions. (iii) Frequently as a result of the practice, coding categories are revised to make them better applicable to the material and to put in writing the procedures and definitions that have evolved during the preliminary coding. (iv) At the point in the practice period when relatively few new problems arise, the coders work on an identical portion of the data without consulting one another or the researchers. The consistency or reliability of the coding is then computed to determine whether it is feasible to begin coding in earnest.

In computing the consistency of coding, one may use the coding of the researcher as a criterion against which to test the various coders, or compare each coder with every other coder. Depending upon the results of the reliability checks, one may decide to eliminate categories that seem too unreliable to be of value, or to spend more time in training, or to eliminate the coders who are the most inconsistent, or to use special procedures with more difficult items. (v) After the coding of material has begun, periodic consistency checks are necessary to ensure that the coders do not become careless as they become more experienced and that they do not develop idiosyncratic methods

of handling new problems in the material. The researcher must insist that all new problems be discussed with him. To ensure uniformity, any decisions that are made after coding has begun in earnest have to be instantly communicated to all coders.

10. TABULATION OF DATA

Tabulation is a part of the technical process in the statistical analysis of data. The essential operation in tabulation is counting to determine the number of cases that fall into the various categories. The term cross tabulation is employed to refer to the tabulation of the number of cases that occur jointly in two or more categories. Cross-tabulation is an essential step in the discovery or testing of relationship among the variables in the data.

Tabulation may be done entirely by hand, or it may be done by machine or computer. Each method has advantages and disadvantages. Manual tabulation is generally less expensive and less time consuming, when there is only a small number of cases, when the number of category sets to be counted is small, and only a few cross tabulations are to be done. As the number of cases or the number of cross tabulations increases the use of mechanical and electronic data analysis becomes more economical. The number of cross tabulations is the most important factor in determining the relative efficiency of one rather than the other procedure in tabulation.

DESCRIPTION OF DATA

In giving an adequate description of a mass of data, one of the following is done :

(1) To Characterize what is typical in the group. The various measures of central tendency make different assumptions about the nature of data. The arithmetic mean may be thought of as the

point of the scale around which the cases balance. One case at one extreme of the distribution may be counterbalanced by one or more cases at the other extreme. If the cases are not symmetrically distributed around this point, the arithmetic mean may be very misleading in certain respects.

The use of the mode dispenses with the idea of a point of balance. It is possible to have several modes in one distribution. In certain distributions there may not be no mode at all. In this case, as in the bimodal case, it is perhaps misleading to speak of central tendency, a term suggesting that the cases tend to cluster around some point more or less in the middle of the distribution.

(2) To indicate how widely the individuals in the group vary. As with measures of central tendency, each of the measures of variability makes assumptions about the nature of measurements and gives somewhat different kinds of information. The range shows the extremes of variation in the group. As the range is affected by extreme cases, it may be misleading as a picture of the groups as a whole. To avoid this difficulty, other measures of variation focus on the limits within which half of the group fall, or on the average distance of individuals from the group mean.

3. To show other aspects of how the individuals are distributed with respect to the variable being measured.

4. To show the relation of the different variables in the data to one another. There the attempt is to know whether a

variation in one characteristic is associated with or paralleled by variations in another characteristic.

5. To describe the differences between two or more groups of individuals. Although such comparisons most commonly involve measures of central tendency, they need not be limited to this. They may include comparison of measures of variation within the groups or of the relations among variables in the two groups.

GENERALIZATION TO THE POPULATIONS FROM WHICH THE SAMPLES WERE DRAWN

When samples are constrained and the differences between experimental and control groups are studied, we are testing some hypotheses about the nature of the true differences between the larger populations represented by the samples. Various statistical techniques, called statistical tests of significance, have been devised which tell whether the difference between two samples is due to chance. This is called the null hypothesis.

Since statistical statements are always statements of probability, one can never rely on statistical evidence alone for a judgement of whether or not the hypotheses can be accepted as true. Confidence in the interpretation of a research result requires not only statistical confidence in the reliability of the finding, but also evidence about the validity of the presuppositions of the research. This evidence is necessarily indirect. It comes from the congruence of the given research findings with other knowledge about which there is considerable

variation in one characteristic is associated with or paralleled by variations in another characteristic.

5. To describe the differences between two or more groups of individuals. Although such comparisons most commonly involve measures of central tendency, they need not be limited to this. They may include comparison of measures of variation within the groups or of the relations among variables in the two groups.

GENERALIZATION TO THE POPULATIONS FROM WHICH THE SAMPLES WERE DRAWN

When samples are constrained and the differences between experimental and control groups are studied, we are testing some hypotheses about the nature of the true differences between the larger populations represented by the samples. Various statistical techniques, called statistical tests of significance, have been devised which tell whether the difference between two samples is due to chance. This is called the null hypothesis.

Since statistical statements are always statements of probability, one can never rely on statistical evidence alone for a judgement of whether or not the hypotheses can be accepted as true. Confidence in the interpretation of a research result requires not only statistical confidence in the reliability of the finding, but also evidence about the validity of the presuppositions of the research. This evidence is necessarily indirect. It comes from the congruence of the given research findings with other knowledge about which there is considerable

assurance. Even in the most rigorously controlled investigation, the establishment of confidence in the interpretations of one's results or in the imputation of causal relationships requires repetition of research and the relating of the findings to those of other studies.

It is important to recognize that even when statistical tests and the findings of a number of studies suggest that there is indeed a consistent difference between two groups, or a consistent relationship between two variables, this still does not constitute evidence of the reason for the relationship. If we want to make causal inferences, we must meet assumptions over and above those required for establishing the existence of a relationship.

INFERRING CAUSAL RELATIONS

If one wishes to draw the inference that one variable (x) is the cause of another (Y), three types of evidence are necessary : (1) that X and Y vary together in the way predicted by the specific hypothesis, (2) that Y did not precede X in time; and (3) that other factors did not determine Y. Carefully controlled experiments provide evidence relevant to all these points. In nonexperimental studies designed to test causal hypotheses, however, the investigator must find substitutes for the safeguards that are built into experimental studies. Many of these safeguards enter at the time of planning data collection, often in the form of providing for the gathering of information about a number of variables. By introducing those additional variables into the analysis, the investigator approximates some

of the controls that are inherent in experiments. However, the drawing of inferences of causality remains hazardous, necessitating the examination of the problems.

If a relationship or association between two variables has been established in a study that did not follow a rigorous experimental design, and if the research interest is in causal relationships rather than in the simple fact of association between the two variables, the analysis has taken only the first step. The investigator must consider whether Y might have occurred before X, in which case it cannot be the "effect" of X. Assumptions about the time relations between X and Y rest either on logical considerations, or on attempts to establish that the groups being compared did not differ in-terms of Y before exposure to X, or on both.

Spurious Relationship. An apparent relationship between two variables, X and Y, is said to be spurious if their concomitant variation stems, not from a connection between them, but from the fact that each of them is related to some third variable, or combination of variables, that does not serve as a link in the process by which X leads to Y.

The time sequence of the variables is an important consideration in deciding whether an apparent causal relationship is spurious. Besides, on logical considerations also, a judgement can be made whether a relationship is spurious or not.

11. PREPARATION OF RESEARCH REPORT

A research task is not completed until the report has been prepared. The most important point to be kept in mind when writing a report is that its purpose is not communication with oneself, but communication with the audience. Emphasis on communication with an audience demands that one be clear about the type of reader for whom a given report is intended. A report directed to fellow social scientists will be different in many ways from one addressed to administrators who may take action on the basis of the findings. Both will differ in some respect from a report whose purpose is to inform the general public. Whatever the audience, two broad questions should be considered in planning the report: (i) what does this audience want or need to know about the study? How can this information be best presented?

What the Report should Contain : The reader of a social science research report needs to be told enough about the study so that he can place it in its general scientific context, judge the adequacy of its methods and and thus form an opinion of how seriously the findings are to be taken. In order to give the necessary information, the report must cover the following points:

- (1) Statement of the problem with which the study is concerned.
- (2) Research procedures: The study design, the method of manipulating the independent variables, the nature of the

sample, the data collection techniques, the method of statistical analysis, the results, and the implications drawn from the results.

Statement of the Problem : The research report starts with the statement of the issue on which the study was focused. Enough background should be given to make clear to the reader why the problem was considered worth investigating. In addition to indicating the practical or theoretical importance of the question investigated, the statement of the problem should include : a brief summary of other relevant research so that the study may be seen in context; the hypotheses of the study, if any; and definitions of the major concepts employed; the connections among these elements should be made clear, giving the logical sequence of ideas leading from the existing theory and relevant research findings to the hypotheses and concepts of the study.

The Research Procedures. It is necessary to describe in considerable detail how the study was carried out, such as its basic design, details of measurements, etc. If the data were collected by means of questionnaires or interviews, exactly what questions were asked. There is also need to know how the observations or replies to questions, were translated into measures of the variables with which the study was concerned.

Details of the sample of the study, such as their characteristics, numbers, selection procedures, need to be described. These questions are crucial for estimating the

probable limits of generalizability of the findings. There is also need to give details of the statistical analysis of data.

The Results. The basic rule in presenting finds is to give all the evidence relevant to the research question asked, whether or not the results are in accordance with the investigators views. This is the cardinal rule of scientific reporting. Unlike other writers, the scientific author is not free to choose what he will include and what he will leave out in terms of effects he wishes to create.

However, the researcher must make some selection in terms of what is relevant. Guidance comes primarily from the research problem and from the hypotheses, with which the study was concerned.

It may not be possible to fully formulate a study at the beginning itself. During the course of the investigation, a more adequate statement of the problem itself may be developed, new hypotheses may emerge, unforeseen relationships may appear. Therefore, while the original formulation provides the basic point of reference for the report, there must also be room to include subsequent developments.

For every finding that involves a comparison between groups or a relationship between variables, the level of statistical significance should be reported. Ordinarily, in a detailed report for a scientific audience, every finding that is considered sufficiently important to be stressed is accompanied

probable limits of generalizability of the findings. There is also need to give details of the statistical analysis of data.

The Results. The basic rule in presenting finds is to give all the evidence relevant to the research question asked, whether or not the results are in accordance with the investigators views. This is the cardinal rule of scientific reporting. Unlike other writers, the scientific author is not free to choose what he will include and what he will leave out in terms of effects he wishes to create.

However, the researcher must make some selection in terms of what is relevant. Guidance comes primarily from the research problem and from the hypotheses, with which the study was concerned.

It may not be possible to fully formulate a study at the beginning itself. During the course of the investigation, a more adequate statement of the problem itself may be developed, new hypotheses may emerge, unforeseen relationships may appear. Therefore, while the original formulation provides the basic point of reference for the report, there must also be room to include subsequent developments.

For every finding that involves a comparison between groups or a relationship between variables, the level of statistical significance should be reported. Ordinarily, in a detailed report for a scientific audience, every finding that is considered sufficiently important to be stressed is accompanied

also, either in the text or in an appendix, by a table or a graph, or a chart, showing the relevant data.

Discussion of Implications. A bare statement of findings is usually not enough to convey their meaning. Usually the reader is interested in their implications for the general understanding of the human behavior. Discussion of these implications is sometimes combined with the presentation of the data. Some times it is placed in a separate section. Wherever the discussion appears, it usually includes three major aspects:

- (1) A statement of the inferences drawn from the findings in this particular situation, which may be expected to apply in similar circumstances.
- (2) As a qualification of these inferences, the investigator may note conditions of his study that limit the extent of legitimate generalization. He would, for example, remind the reader of the characteristics of his sample and the possibility of it differing from a larger population to which one might want too generals.
- (3) The discussion of implications of the findings may include relevant questions that are still unanswered or new questions raised by the study, perhaps with suggestions for the kinds of research that would help to answer them.

The Summary. It is customary to conclude a report with a very brief summary, restating in the barest outline the problem,

the procedures, the major findings, and the major conclusions drawn from them.

The Style of the Report. The basic qualities of good scientific writings are accuracy and clarity. A style that is pleasing from a literary or aesthetic point of view is an "extra".

The first step is to decide just what information one wants to convey and how the various points are related to one another. Writing a detailed outline is an invaluable aid at this stage. Preparing a detailed outline allows one to concentrate exclusively, at first, on what is to be said, without worrying how to say it. Looking at the bare bones of the report, one can more easily see whether any important points have been left out. Further, the outline form, with its clear indication of major topics, subtopics, and still further subdivision, almost forces attention to logical relationships within the material.

Once a detailed outline is prepared, it is better to complete the writing of the report as early as possible, without too much worry about the style and literary excellence. Once a draft report is on the paper, one can go back, and re-write sentences and paragraphs.

The preparation of tables, graphs, etc. also require care. All tables and graphs should be clearly labeled. The title should state briefly the subject matter of the table. Row and column headings should be as short as is consistent with identifying the data being presented. Both axes of a graph should be clearly labeled to show both the variables

represented and the units of measurements. The number of cases on which the findings are based should be indicated in the table or graph as well as in the text. This is especially important when figures are given in percentages. Although the tabular or graphic presentation should be clear enough so that a reader can identify the major points it is intended to convey, it is customary to state the major findings in the text as well.

12. PREPARATION OF QUESTIONNAIRE

Questionnaire is a widely used instrument in social science research. It is the principal tool in survey research, which is a popular technique of data collection.

A questionnaire consists of a group or sequence of questions, designed to elicit information upon a subject, or sequence of subjects, from an informant. It may contain questions, statements, and performas, to elicit and record the required information.

PREPARATION OF CONTENT

Preparation of questionnaire comes at a certain stage in the research process. By this time the researcher had surveyed the literature, made preliminary visits to the study / problem area, and based on these, had formulated the frameworks of the research, delineating the independent and dependent variables. At this stage, he is able to specify the type of information required to measure these variables or to describe them. Therefore, the researcher will be able to note down the type of information required for the full realization of each of the independent and dependent variables.. This list of items constitute the basic list on the basis of which a questionnaire is constructed. The researcher may examine each of these items carefully and decide how the appropriate information may be collected, whether through questions, statements, or tabular proformas.

It preparing a practical questionnaire, the principle that is to be kept in mind is, "what is the minimum" we need to know. It is desirable to examine again and again the need for each specific item of data sought. The tendency is to play safe and to include items that are thought to be useful rather than to take the risk of leaving an item. Therefore, the researcher should ask himself the question whether that question is necessary and how it will be useful for the study. For example, in stead of asking the age of every child in the family, would it be sufficient to know the number of children below certain age, say 10 years of age ? On the other hand, one should also ask whether several questions are needed to get the required information. For example, to get a correct picture of household income, it may be necessary to ask information on incomes from different sources and incomes derived by different household members, and totalling these figures, instead of asking a single question. One aid to discipline in questionnaire content is the preparation of a tabulation programme in advance of the finalization of the questionnaire.

There are several issues that may be kept in mind while preparing the questionnaire. One such point is whether the respondents have the information necessary to answer the question. Many questionnaires contain questions which the respondent possibly cannot answer. This is due to the attempt to get a lot at little cost. This makes the quality of data very poor. If the question is such that the respondent is expected to remember each event, together with associate particulars, the

weight of evidence is that the level of reporting errors varies directly with the period of recall. Therefore, the recall period may be kept as short as possible. The ideal recall will vary according to the significance of the item being recalled, and its frequency of occurrence. Recall of expenditure on major items must cover relatively long period. But short recall period may be appropriate for recording consumption patterns. The reference period that the respondent is asked to recall should be closed.

The design of the questionnaire should also take account of the possibility that the respondent will be reluctant to give the answer to the question even when it is known. The researcher must take care to identify the question to which the respondent never knew the answer.

Accuracy of responses generally declines with the length of interview. Interviews that extend beyond one hour may cause fatigue to both the enumerator and the respondent. It would be ideal to complete an interview in 30-45 minutes, which affects the number of questions that can be put. The greater the depth of questioning, the more limited should be the field study. It may be reasonable to probe deeply actions and motivations regarding one aspect of behaviour.

TYPE OF QUESTIONNAIRES

(1) Household Questionnaires. The main issues in designing a household questionnaire are, (a) Column headings and widths; (b) Pre-coding, whether completely or partially; (c) The sequence of questions; (d) The appropriate choice of questions.

Column width would vary according to the demands of the answer. The unit in which the answer is to be given must be specified in the column heading.

Pre-coding, whenever feasible, is desirable. The size of the boxes for recording the answers and codes must be adequate for the enumerator to write a number clearly and completely within the box.

(2) Verbatim Questionnaire. The main reason for a rigidly structured questionnaire is that it is seen as vital to the answer to be received from the respondents. A verbatim questionnaire must take account of the different channels a problem may follow, according to variations in response at each step. Some of the points that may be kept in mind in this connection are :

- (a) Can the question be misunderstood? Does it contain difficult or unclear phraseology? Are the words simple enough to be understood even by an uneducated respondent? Is there any looseness or ambiguity as to what is referred to ? Is the meaning clearly distinguished from other ideas the respondent may think the question asks?
- (b) Does the question adequately expresses the alternatives in respect of the point asked about? Is the question misleading by reason of unstated assumptions or unseen implications? Is the frame of reference clear and uniform for all respondents?

- (c) Is the wording biased? Is it emotionally loaded or slanted toward a particular kind of answer?
- (d) Is the question wording likely to be objectionable to the respondent in any way?
- (e) Does the question need to be more concrete, specific, and closely related to the respondents' personal experience ?
- (f) Is the question content sufficiently general and free from spurious concreteness and specificity?
- (g) Is the question content biased or loaded in one direction?
- (h) Will the respondents give the information that is asked for?

(3) Tabular Questionnaire. This type of questionnaire may contain no actual questions at all. It is in the form of a two - or three - way table to be filled in by the enumerator. It is the type most commonly used in agricultural surveys. If the questions related to numeric information, the dangers inherent in this procedure may not be too great. If income is to be assessed, it must be itemised, so that the enumerator has a checklist of components of income to be probed, explained and recorded. Total income must be obtained by a process of addition. The other common form of questionnaire that fits within this category is the listing of items for a consumption or expenditure survey.

The Attitudinal Questionnaire. It is possible to ask a respondent his attitude to a phenomenon that is within his experience. In such cases, pretesting should lead to a list of options which can be precoded. Questions that demand a judgment by the respondent that he is not in a action to make should not be put. Both questions and statements can be used to elicit attitudes. Using both gives the researcher greater flexibility in the design of items.

Open-ended and closed ended Questions. In the open ended questions, the respondent is asked to provide his own answer to the question. In the closed - ended questions, the respondent is asked to select his answer from a list provided by the researcher. Closed-ended questions provide a greater uniformity of responses and can be more easily processed. The chief short coming of closed-ended questions lies in the researcher's structuring of responses. Where the relevant answers are clear, there may not be a problem. In other cases, the researcher's structuring of responses may overlook some important responses. In the closed-ended questions, the response categories provided should be exhaustive, including all possible responses. The answer categories must be mutually exclusive, and the respondent should not feel compelled to select more than one.

Questionnaire items should be clear and unambiguous. Combination of questions should not be asked. As a general rule, whenever the word "and" appears in a question or statement, the researcher should check whether he is asking a combination question. Questions asked in a questionnaire should be relevant

to most of the respondents. Short questions are the best. Long and ambiguous questions must be avoided.

FORMAT OF QUESTIONNAIRE

Some items which need care in the preparation of questionnaire include (1) quality of paper and printing, (2) Appropriate size of questionnaire, (3) Printing on one side only, and (4) Standard headings. A cyclostyled questionnaire produced on cheap absorbent paper, with poor typing, smudged headings, sloping lines, or dots all over the places, will affect the quality of the enumerator's work. A fool-scrap or A-4 size sheet, which when opened fits the dimensions of the clipboard issued to the enumerator, is the appropriate size.

The heading, including the name of the survey, year and executing agency should be clearly shown at the head of the questionnaire. Every page in the questionnaire should be numbered.

As a rule, the questionnaire should be spread out and uncluttered. Squeezed together questionnaires are disastrous. Putting more than one question on a line is to be avoided. Abbreviating questions will result in misinterpretations. For indicating responses, marked lines or boxes may be provided. The researcher may also consider entering code numbers besides each response and the codes to the appropriate response may be circled.

In laying out the format of a questionnaire, the researcher should give special attention to the method of data processing that will be used. It would be desirable to precode the questionnaire. Items of data should be assigned to cards and columns in advance, and notations in the questionnaire should indicate those assignments. There are two aspects of precoding. First, card and column assignments should be indicated. The second precoding is the codes for the responses. Card and column assignments should be so designed as to begin each card at the top of a questionnaire page.

Every questionnaire must contain clear instruction and introductory comments, where appropriate. This may contain the objectives and scope of the study and the type of questions in the questionnaire. The format of instructions to the interviewer must be different from that of the items to be asked.

13. SAMPLING PROCEDURE

In this chapter an attempt is made to give an intelligent appreciation of the considerations involved in sampling.

A "population" is the aggregate of all the cases that conform to some designated set of specifications. A stratum may be defined by one or more specifications that divide a population into mutually exclusive segments. A single member of a population is referred to as a population element. A census is a count of all the elements in a population and/ or a determination of the distributions of their characteristics, based on information obtained for each of the elements.

It is generally much more economical in time, effort and money to get the desired information from only some of the elements than for all of them. When some of the elements are selected with the intention of finding out some thing about the population from which they are taken, the selected group of elements is referred to as a sample. It is hoped that what is found about the sample is true of the population as a whole. We can never guarantee that the sample returns do reflect the population with respect to the characteristics we are studying unless we have simultaneously conducted a complete comparable census. We can, however, devise sampling plans which, if properly executed, can guarantee that if we are to repeat a study on a number of different samples selected from a given population, our findings would not differ from the true

population figures by more than a specified amount in more than a specified proportion of the samples. A sampling plan that carries such insurance may be referred to as a representative sampling plan.

The use of such a sampling plan is not the only kind of insurance that can be taken out to decrease the likelihood of misleading sample findings. Another involves taking steps to guarantee that the inclusion in the sample of diverse elements of the population and to make sure that those diverse elements are taken account of in the proportions in which they occur in the population.

The basic distinction in modern sampling theory is between probability and nonprobability sampling. The essential characteristic of probability sampling is that one can specify for each element of the population the probability that it will be included in the sample. Each element has the same probability of being included. In nonprobability sampling, there is no way of estimating the probability that each element has of being included in the sample, and no assurance that every element has some chance of being included. Probability sampling is the only approach that makes possible representative sampling plans. It makes it possible for the investigator to estimate the extent to which the findings based on his sample are likely to differ from what he would have found by studying the population. The major advantages of nonprobability sampling are convenience and

economy, advantages that may out weigh the risks involved in not using the probability sampling.

Major forms of nonprobability samples are: accidental samples, quota samples, and purposive samples. Major forms of probability samples are: simple random samples, stratified random samples, and various types of cluster samples.

NON PROBABILITY SAMPLING

Accidental Samples. In accidental sampling one simply reaches out and takes the cases that fall to hand, continuing the process, until the sample reaches a designated size. Thus, one may take the first one hundred people one meets on the street who are willing to be interviewed. If one uses an accidental sample, one can only hope that one is not being too grossly misled.

Quota Samples. Quota sampling ensures to guarantee the inclusion in the sample of diverse elements of the population and to make sure that these diverse elements are taken account of in the proportions in which they occur in the population. The basic goal of quota sampling is the selection of a sample that is a replica of the population to which one wants to generalize. Hence the notion that it represents the population. The critical requirement in quota sampling is not that the various population strata be sampled in their correct proportions, but rather that there be enough cases from each stratum to make possible an estimate of the population stratum value, and that we know the

proportion that each stratum constitutes in the total population. If these conditions are met, the estimates of the values for the various strata can be combined to give an estimate of the total population value.

Purposive Samples. The basic assumption behind purposive sampling is that with good judgement and an appropriate strategy, one can hand pick the cases to be included in the sample and thus develop samples that are satisfactory in relation to one's needs. A common strategy of purposive sampling is to pick cases judged to be typical of the population in which one is interested, assuming that errors of judgement in the selection will tend to counter balance each other.

PROBABILITY SAMPLING

Probability samples involve the first kind of insurance against misleading results by specifying the chances that the sample findings do not differ by more than a certain amount from the true population values. They may also include the second insurance, that enough cases are selected from each relevant population stratum to provide an estimate for that stratum of the population.

Simple Random Sample. Simple random sampling is the basic probability sampling design. It is incorporated in all of the more complex probability sampling designs. A simple random sample is selected by a process that not only gives each element in the population an equal chance of being included in the sample, but

also makes the selection of every possible combination of the desired number of cases equally likely.

In principle, one can use this method for selecting random samples from populations of any size. Random samples are selected using a list of random numbers such as may be found in most text books of statistics. One interesting feature of simple random sampling ought to be mentioned, though it is hard for most people to believe it without mathematical proof. When the population is large compared to the sample size, the variabilities of sampling distributions are influenced much more by the absolute number of cases in the sample than by the proportion of the population that is included.

Stratified Random Samples. In stratified random sampling as in quota sampling, the population strata may be based on a single criterion, or on a combination of two or more criteria. In stratified random sampling, a simple random sample is taken from each stratum, and the subsamples are then joined to form the total sample. In general, stratification contributes to the efficiency of sampling if it succeeds in establishing classes that are internally comparatively homogeneous with respect to the characteristics being studied. That is, if the differences between classes are large in comparison with the variation within classes. The general principle is that, if one has reason to believe that stratifying according to a particular criteria, or set of criteria, will result in internally homogenous strata,

them it is desirable to stratify. If the process of breaking the population down into strata that are likely to differ sharply from one another is costly, then one has to balance this cost against the cost of a comparable gain in precision obtained by taking a larger simple random sample. The issues involved in the decision whether to stratify have, basically, nothing to do with trying to make the sample a replica of the population. They only have to do with the anticipated homogeneity of the defined strata with respect to the characteristics being studied and the comparative cost of different methods of achieving precision. Both simple and stratified random sampling involve representative sampling plans.

Sampling from different strata need not be in the same proportion. Even with respect to the criteria selected for stratification, it is not necessary that the sample reflect the composition of the population. Thus, in sampling from a population in which the number of males equals the number of females, it is permissible to sample nine, or five, or two, or some other number of females to every male. When this is done, it is necessary to make an adjustment in order to find the mean score for the sample which will be the best estimates of the mean score of the total population of males and females.

There may be several reasons for sampling the various strata in different proportions. Sometimes it is necessary to increase the proportion sampled from classes having small numbers of cases in order to guarantee that these classes are sampled at

all. Another reason is that one may want to subdivide the cases within each stratum for further analysis.

Cluster Sampling. Except when dealing with small and spatially concentrated populations, there are enormous expenses associated with simple and stratified sampling. Therefore, large scale survey studies seldom make use of simple or stratified random samples. Instead, they make use of the methods of cluster sampling. In cluster sampling, one arrives at the ultimate set of elements to be included in the sample by first sampling in terms of larger groupings (clusters). The clusters are selected by simple or stratified random sampling methods. If all the elements in these clusters are not to be included in the sample, the ultimate selection from within the clusters is also carried out on a simple or stratified random sampling basis. Characteristically, the procedure moves through a series of stages hence the common term, "multi-stage" sample, from more inclusive to less inclusive sampling units, until one finally arrives at the population elements that constitute the desired sample.

With this kind of sampling procedure, it is no longer true that every combination of the defined number of elements in the population is equally likely to be selected as the sample of the population. One pays a price here in terms of sampling efficiency. In a per-case basis, effective cluster sampling is much less efficient in obtaining information than comparably effective stratified random sampling. Moreover, the correct

statistical handling of the data is likely to be much more complicated. These handicaps are, however more than balanced by the associated economy, which permits the sampling of a sufficiently larger number of cases at a smaller total cost. Stratified sampling principles may be used to select the clusters and what is lost in efficiency because of the clustering effects may be regained by this stratification.

COMBINATIONS OF PROBABILITY AND NON PROBABILITY SAMPLING

If sampling is carried out in a series of "stages" it is possible to combine probability and non-probability sampling in one design. That is, one or more stages can be carried out according to probability sampling principle and the balance by nonprobability principles. The advantage of such a design is that the major economy, of quota sampling occur in obtaining the particular cases for the sample. It is relatively inexpensive to select the areas within which the final stage of sampling will take place by probability sampling, and one thereby gains the advantages of probability sampling, at least for the areas. By using probability sampling to select the areas, one can gain an extra measure of security at relatively little cost.

14. RAPID RURAL APPRAISAL

THE BACK GROUND

Rapid Rural Appraisal (RRA) is a new approach to research in the field of social sciences, and as the name implies, aims at a rapid assessment of 'problem situations' in the rural areas, affecting the development process.

The traditional research methods, more particularly the survey method, does not seem to reflect the urgency and swiftness essential for monitoring rapid change.

LARGE SCALE SURVEY : LONG AND LOST

The sample survey, which is the most used and abused method in rural social research, is a complex, lengthy and inflexible method, where preference is for larger samples, selected through rigorous sampling procedures with no provision for replacement. Information is collected through unduly lengthy questionnaires or schedules, prepared in advance, and often precoded and standardized. Conducting large scale surveys, therefore, places enormous demands on the skills and resources of the researcher, as it involves preparation of schedules, defining a population, developing a sampling frame, selection of sample, administration of tools, processing of data, and finally interpretation of results.

This naturally, is quite an ordeal, and requires a lot of resources in terms of time, money and trained personnel. The

This paper was prepared by M. Aneesuddin

quality of the final outcome depends upon the availability and adequacy of these resources, which are quite scarce in the developing countries.

Further, the entire process is quite time consuming and finally, when the findings are made available, much of it would lose relevance and therefore, could not have much utility for the planners and programme implementers. As a result, over the years many development projects have been implemented, before information about the area, the issues and implications was adequately obtained and understood. Thus, it is not surprising that many projects started with the best of intentions nevertheless failed or were not accepted by the people they were intended to help. The reason for such a state of affairs is assigned to the preoccupation with complex, lengthy and inflexible research methods that aim at achieving levels of precision which are neither realistic nor necessary (Chambers, 1987).

The massive effort and scarce resources invested in these large scale surveys and the marginal utility of this exercise has been aptly described by Chambers in a classic paragraph. "In its still not uncommon pathological form, the survey questionnaire has thirty or more pages (multidisciplinary, each discipline with its questions) which if asked are never coded, or if coded never punched, or if punched never processed, or if processed and printed out never examined, or if examined, never analysed and written-up or if written-up never read, or if read, never

understood, if understood and remembered, never actually used to change action". He concludes "Large scale multi-disciplinary rural surveys must be one of the most inefficient industries in the world" (Chambers, 1987).

THE QUICK SURVEY : RURAL DEVELOPMENT TOURISM

The so-called 'Quick Surveys' which are so popular because of the ease with which they are usually conducted do not seem to be an answer. Though lesser time is involved in their execution, they are counter productive, as much of the rigour, which is the very essence of survey methodology is grossly compromised, giving rise to biases which render the research very misleading, superficial and unreliable. These biases have been elaborately outlined and discussed by Robert Chambers (Chambers, 1987) who describes the 'Quick Rural Survey' as rural development tourism. According to him 'Rural Development Tourism' exerts against perceiving rural poverty, reinforcing underestimates of its prevalence and failing to understand its nature". These anti-poverty biases are :

1. Spatial Bias : This is reflected in the preference of the researcher to visit villages which are located on the road side, near the urban centres, to the neglect of remote villages, located away from the urban centres.

2. Project Bias : More often researchers tend to visit places where projects are implemented; they are guided to centres of activity, where something is happening, rather than to non-project areas or villages.

3. Personal Bias : Also, there is a tendency to seek those who are influential (elite, talkative, etc.) educated, of the same gender, caste, religion, and age (generally excluding children) adopters and users of services. These personal biases insulate one from the silent, i.e. less articulate, uneducated, illiterate, belonging to lower castes, women, children, migrants, non-adopters and non-users of services - in short those who are poor.

4. Seasonal Bias : Researchers generally tend to visit rural areas in seasons that suit them; i.e., when it is convenient to work and move in the rural areas, rather than when it is difficult, especially in the wet season.

These biases often inter-lock the net effect; the researcher is pulled towards the better off region and people and away from those who are poor and more deprived.

Apart from these biases, the very attitude of 'Quick Survey' researcher that he 'knows it all', wants to teach rather than learn, acts as a barrier to his understanding the perspective of the local people, which is essential for formulating programmes and services meant for their development.

NEED FOR ENLISTING THE LOCAL PERSPECTIVE

With the accent on participatory development, it is essential to understand the perception of the rural people, particularly the poor, with respect to various dimensions of development, viz., economic, social, administrative,

infrastructure. It is also essential to appreciate the dynamics of their behaviour. An understanding of the cognitive and motivational dimensions would help in planning rural development programmes and services in a way, which would be in harmony with their expectations and hence promote their participation in the development process.

The important role rural social research can play in creating bridges of understanding between the cognitive structures of the planners, development administrators, agricultural scientists, rural development researchers and the rural community, cannot be overestimated. Further, a diagnosis of rural problems, and a search for their solution, could be done more fruitfully by consulting the very people who are experiencing the problems, and have, if not better, atleast a firsthand knowledge of the situation, by virtue of generations of exposure and interaction with the social and rural eco-systems. Failure to listen to rural people would be denying oneself the benefit of a wealth of information. The 'Quick Survey' investigator, who does not have the time, patience or inclination to listen to the rural poor, would never be able to see the truth as perceived by them.

NEED FOR RAPID FEED-BACK

In developing countries where enormous financial, human and administrative inputs have been introduced in the rural socio-economic milieu to accelerate the process of development, it is essential to create mechanism that would generate rapid feed-

back, to know whether these inputs are creating the desired impact, in the desired direction, and at the desired pace. The stakes are so high that a delayed feed-back may adversely affect the destiny of a generation - a nation.

The green revolution is an example where it took more than a decade to realize, after the implementation of IADP (Intensive Agricultural District Programme) in India that it by-passed the small and marginal farmers, and has in fact widened the gap between the haves and the have nots in the programme area. The examples could be multiplied. This, however, underscores the necessity for rapid and timely information which is essential for promptly applying the correctives and steering development on the desired path.

From the foregoing concerns it is clear that the two most important considerations for rural social research in the development context would be : (a) to develop a local perspective by becoming more responsive to local people, local situations and the local eco-system, and (b) to evolve methodologies which would provide rapid, i.e., timely and cost-effective, information on the above perspectives. This, it is felt, would enhance the usability of the information.

It is evident that 'Rural Survey' both in its short and long versions, appear to be inadequate to meet these requirements. The large scale survey seems to err on the side of time and cost, whereas its shorter version is insensitive to the local people and regions. Further, the basic characteristics

of the survey method, i.e., its fixed nature and non-adaptability, renders it unsuitable for understanding dynamic processes viz., development of change.

SEARCH FOR NEW METHODS & APPROACHES

This growing dissatisfaction with conventional methods of rural social research, led to active search for a middle zone between these extremes (long and short surveys), i.e., methods be developed which would involve the target groups in the research process, and provide accurate information at appropriate levels of precision in a timely manner.

Emergences of RRA: These methodological considerations played an important role in the emergences of RRA, which is supposed to be 'fairly clean' and 'fairly efficient. It attempts to make social research more responsive, not only to the needs of the decision makers, but also to those of the rural poor. It is geared to overcome the limitations inherent in the conventional methods.

Definition : RRA refers to a research approach developed and adopted, to learn in a fairly quick and cost effective manner, about rural areas, and its people, their problems, issues, opportunities and needs, from a multiple perspective, using multiple methods involving multi-disciplinary team.

The phrase "Rapid Appraisal" is taken from the title of a workshop in October, 1978 at the Institute of Development Studies, University of Sussex, U.K. The work 'rapid' is used in

its literal sense viz., 'quick' i.e. in a limited time, and 'appraisal' simply refers to assessment. It is not used in any specific or restricted sense, as in evaluation parlance where it refers to pre-programme feasibility assessment.

The purpose of RRA is to expedite the learning process from a local perspective. Certain principles are evolved to achieve these basic objectives.

CORE PRINCIPLES OF RRA

Trade Offs. The core principle of RRA that addresses the problem of obtaining information that is necessary, relevant, timely and at necessary levels of precision, is "trade off". It aims at affecting a compromise between the quantity, relevance and accuracy of information on one hand, and timeliness, cost and actual use of information on the other. These trade offs are facilitated by the twin principles of (i) Optimal ignorance; and (ii) Appropriate imprecision.

i) Optimal Ignorance: It refers to "the importance of knowing what is not worth knowing". (Chambers 1985) Here, the emphasis is on collecting only that information which is essential to answer the research questions. Information which involves extra time and expenditure, but does not generate any significant extra understanding, can be safely ignored. Such ignorance, if not actually a 'bliss' would sure prove to be a 'blessing in disguise'.

its literal sense viz., 'quick' i.e. in a limited time, and 'appraisal' simply refers to assessment. It is not used in any specific or restricted sense, as in evaluation parlance where it refers to pre-programme feasibility assessment.

The purpose of RRA is to expedite the learning process from a local perspective. Certain principles are evolved to achieve these basic objectives.

CORE PRINCIPLES OF RRA

Trade Offs. The core principle of RRA that addresses the problem of obtaining information that is necessary, relevant, timely and at necessary levels of precision, is "trade off". It aims at affecting a compromise between the quantity, relevance and accuracy of information on one hand, and timeliness, cost and actual use of information on the other. These trade offs are facilitated by the twin principles of (i) Optimal ignorance; and (ii) Appropriate imprecision.

i) Optimal Ignorance: It refers to "the importance of knowing what is not worth knowing". (Chambers 1985) Here, the emphasis is on collecting only that information which is essential to answer the research questions. Information which involves extra time and expenditure, but does not generate any significant extra understanding, can be safely ignored. Such ignorance, if not actually a 'bliss' would sure prove to be a 'blessing in disguise'.

ii) Appropriate Imprecision : This is concerned with the problem of measurement. More often we are interested in broad trends rather than precise gradation of the units sampled, where order of magnitude and direction of change is what is often sufficient. It is, therefore, suggested that the degree of accuracy aimed at or insisted upon in data collected through survey's is generally unrealistic and unnecessary. A realistic approach would help in economizing scarce time and money, as also precious research energy.

Trade-offs and the link principles of 'optimal ignorance' and 'appropriate imprecision' would not only help in speeding up the research process, but also make it cost effective by economising on material as well as human resources. RRA, however, not only aims at rapid learning but also progressive learning. We all know that learning is a dynamic and adaptive process, as acquisition of new knowledge affects modification in our cognitive structures which might necessitate a readjustment in our attitude, outlook and behaviour, the extent of adjustment or change depending upon the nature and range of new learning. In a research situation, it may range from modification of a few hypotheses or questions to changing the entire research design, involving a partial or complete change in the research methods, tools, study area or sample.

Such a progressive learning requires an open ended approach to research to enable the researcher to find the unexpected, and redirect research to examine it. For rapid and progressive

learning to occur, the opportunities for acquisition of new knowledge should be multiplied. Varied learning, or multiple perspective, is attained through two important principles, of 'triangulation' and 'iteration'.

Triangulation: Triangulation facilitates the collection of information from a multiple perspective. Preferably the research topic should be viewed from as many angles as possible, or as the problem necessitates. However, for most rapid appraisals, at least three dimensions are triangulated : 1. Team composition; 2. Units of observation; 3. Research methods

Triangulation of team composition is achieved by having team members belonging to three different disciplines, e.g., one agricultural scientist, one economist and one behavioral scientist, so that they could view the same piece of information from three different perspectives. Triangulation of research units is essential and beneficial in more than one way. It would help in understanding variations. Since RRA aims at saving time and cost in the collection of data, small purposive samples are drawn, with a preference for respondents located at three different points on one or more pertinent dimensions. Similarly, villages located at different distances from a project site, or a social facility, etc., or villages that have attained different levels of development, could be selected through triangulation of sites.

Triangulation of methods, tools and techniques is used to improve the quality of information and cross checking it; e.g.,

application of different methods for the appraisal of a trait, by examining existing data, use of semi-structured interview and 'direct observation' of key indicators. In addition, numerous other simple tools, many of them graphic, such as maps, aerial photographs, sketches and crop calendars designed to portray key relationships and patterns are employed.

Triangulation is a kind of a rough approximation to stratification but without its usual rigour, as observed in formal surveys. However, it may be even advantageous than some form of formal sampling as choices can be made when RRA is in progress, allowing investigation of things that were not anticipated ahead of time: e.g., shifting selection of variables when some variables are found to be more important than expected.

Iteration: Opportunities for learning new things are maximised and expedited by 'iteration' or cyclical learning. This concept comes from systems theory and characterizes how an open system uses feed back to learn from its environment and progressively change itself. Iteration process is highly suited to 'exploratory learning' as it allows for changes in direction based on information obtained during the learning process itself, so that progressive understanding can occur. Rapidity in learning is achieved by maximising the frequency of the iteration or cycles.

The only known research method which could accommodate rapid iterative learning, with the flexibility to adapt and readapt the research design in the light of the new information learnt as the

research progresses, is the semi-structured interview method. It is, in fact, the heart of RRA. How the various principles of RRA come into operation as the semi-structured interview progresses is outlined below.

SEMI-STRUCTURED INTERVIEW

Rapid Appraisal assumes that it is impossible to identify all relevant questions in advance as it is difficult to anticipate site specific problems. Hence instead of using detailed structured questionnaires or schedules as is customary in formal surveys, RRA employs the semi-structured interview with maximum flexibility, as its major methodological tool.

Preparatory work : Multidisciplinary team and subtopics.

Preparations before the field work involve selection of a multidisciplinary team appropriate for the research topic and, exploration and analysis of all the available relevant background material by the team members, viz., maps, photographs, published and unpublished reports, government statistics, etc. A multidisciplinary team has the advantage of picking up potentially important relationships that may not fall into a particular disciplinary realm. A thorough assessment of the back-ground material related to the topic by such a team would help in identifying sub-topics which would serve as guidelines on which information is to be gathered. These subtopics are factors initially identified, based on their possible relationship to the topic.

Sample Selection: As mentioned earlier given the time limitations and need for information which is unbiased, RRA studies take recourse to purposive sampling affecting the required or appropriate level of representativeness through triangulation of research units and research sites.

Key Informants: Apart from individual respondents identified based on their differential location on some important dimensions, key informants are also used. Often these are, better off, better educated, better informed and powerful people. To deliberately offset the bias created destitute women, children, etc., are contacted and included in the study.

The individual respondents can tell about what they actually do, with their role in the system being investigated, while the key informants with their more extensive knowledge, can talk about the system, beyond their own limited participation. They are expected to answer questions about the knowledge and behaviour of others, especially about the operations of the broader system. They can be identified by asking villagers who, or which group of people, are more knowledgeable. Often trouble makers, that is those who supposedly know anything and everything, are identified and used as key-respondents.

Key Indicators. In addition, 'Key Indicators' are also identified as they integrate several variables. Calibration or systematic observation of such indicators may then provide a short cut avoiding more expensive, direct and time consuming investigations. e.g., 'Type of house' would serve as a good

proxy for level of economic well being. Several studies have documented that in rural India most of the poor live in huts or kutcha houses, the middle class live mostly in either partly pucca or pucca houses, whereas the upper classes live in pucca houses or mansions. Similarly, birth weight of children indicate health and nutrition status of an area. shop inventories in village shops indicate changes in purchasing power. Direct observation of key indicators often provides more valid and less costly information than other research methods. That is why RRA depends upon walking, seeing and asking questions.

ORGANISATION OF FIELD WORK

Plans for interviewing trip schedule (including travel, interviewing and group meetings) should be made ahead of time. The schedule should have a lot of slack time to handle unforeseen problems, to allow the team to visit additional villages if the need arises. The organisation of timing and activities includes the composition of interview team, i.e., subdivision of the group if more than three or four members are involved, time for revision of notes after each interview, team meetings, group meetings, etc. Time to think alone and as a team, through frequent discussions is as important as time spent during interview. Otherwise, the whole trip becomes too much of a data gathering activity and not enough learning or appraisal takes places.

PROTOCOLS

Semi-structured interviewing is more of an art than a scientific method. However, it can be made more productive through training and practice, tools, techniques and rules. Certain rules called protocols can be agreed upon ahead of time to guide team members behaviour and interaction during the interview. The interview would be most productive if the protocols result in the observation of three conditions: (1) every team member gets to complete his or her questions on a subtopic or interest area before the interview moves to another one. (2) No interruption by other team members. (3) Every team member takes chronological notes on every-thing said.

The observation of the first protocol provides the chance for everyone in the team to ask questions, especially new questions, arising from other team members' questions and villagers' answers.

Refraining from interrupting each other could be achieved by writing down any question that one thinks of during other member's questioning period and waiting for one's turn. This measure smoothen the flow of the interview.

The third protocol allows reviewing the notes so that better questions can be generated, and inconsistent information can be checked and gaps can be filled. This allows the researchers to iterate during the interview by reviewing the notes and filling in gaps occurring in previous rounds of learning. During the day, between interviews, the interview sub-teams review notes

and discuss what they have learned and what they need to find out next. Thus questions of other colleagues and answers given by the respondents generate further questions, which would generate new answers, which again will lead to new questions and so on, that is how progressive learning occurs, in a cyclic or iterative manner resulting in rapid learning.

COMPLETING THE RRA

Information in RRA is obtained through informal interviewing, observation, and note taking in the field. It is impossible to really record all the ideas exchanged among the team members. It is important that the RRA team should meet to revive and consolidate field notes, and this should take place immediately following field work. Writing up consolidated field notes and a preliminary report as soon as possible (in the field) therefore is necessary to prevent loss of information and analytical ideas, and in fact will generate new ideas for discussions. The report can be written either jointly by the team or by one individual in consultation with other team members.

APPLICATION OF RRA

The range of potential application of RRA is quite broad, reflecting the many spheres in which development is undertaken (e.g., agriculture, forestry, fisheries, water management, health, nutrition, education) and the variety of development activities which require timely, cost-effective, and focussed information.

Although the potential use of RRA are numerous and wide ranging, certain considerations should be taken into account in deciding whether or not RRA is appropriate for particular situations or projects. Perhaps the most important considerations are the availability of appropriate people to conduct the study, the degree to which project structure and decision making are sufficiently flexible to make use of new and increasingly refined information, and the intended use of the findings.

RRA can be potentially useful, when (a) time is short, (b) purposive sampling is employed as it is more effective for capturing social and cultural traits and (c) more intensive qualitative field-work methods are required which can provide guidelines for survey.

It can also be used as a means of checking non-sampling errors, and for increasing awareness of the context of the target groups as surveys are insensitive to the context.

LIMITATIONS OF RRA

1. Where representativeness is an important issue, RRA by itself is an inadequate substitute for data based on random sampling.
2. Where quantification is an important issue as in the analysis of experimental results, an informal method by itself must be inadequate.

In conclusion it may be added that through the application of RRA, we come to realize more fully the role of feed-back in appreciation of dynamic systems. It also enhances greater sensitivity to and respect for local people, their problems, goals, values and knowledge, thereby bridging the cognitive gap between 'out side' researchers and the rural community.

References :

1. Chambers, Robert, 1979, 'Rural Development Tourism: Poverty Unperceived' paper for the RRA Conference, December 4-7, at the Institute of Development Studies, University of Sussex, Brighton.
2. Chambers, Robert, 1985, "short-cut Methods in Social Information Gathering for Rural Development Projects" Paper presented in the International Conference on RRA, September 2-5 in Khon Kaen University, Thailand.
3. Granstas, Term B, 1985, "Semi-Structured Interviewing by Inter - disciplinary Teams in RRA", Paper for the International Conference on RRA, September 2-5 in Khon Kaen University, Thailand.
4. Jamision, Nest, 1985, "The Paradigmatic Significance of Rapid Rural Appraisal", paper presented in the International Conference on RRA, September 2-5 in Khon Kaen University, Thailand.

SUMMARY OF THE REPORT

SUMMARY OF THE REPORT

May 26
Considered

The Socioeconomic Research Methodology Consultant-cum-CTA was to prepare a detailed and realistic programme of research on socioeconomic aspects of rural development for implementation by BARD within national rural development strategy. Dr. S. K. Saha was originally appointed as the CTA for a 16-month period, but he resigned the position, after 10(ten) months, without completing his full term. During his tenure he prepared a report entitled "Towards a Socio-economic Research Master Plan" containing mostly a review of the BARD's past research activities, the global perspectives now-a-days and a broad outline on some priority areas of research in future. But since he could not complete the Socio-Economic Research plan and some other tasks as assigned to him, the Academy found it necessary to appoint a new CTA to prepare a fresh "Master Plan of Socioeconomic Research at BARD" and accomplish other tasks along with the plan. The responsibility was taken up by Dr. K.C. Alexander, who joined the CTA's post in January, 1993.

Dr. Alexander examined the rural development scenario of the country from different perspectives. He pointed out that over the years there has been important changes in the meaning of development, it expanding from a narrow focus concerned with the growth in the size of the economy and per capita income, to increasing concern with the general welfare of all sections of the society. With this shift in the objective of development, problems of human development, such as satisfaction of basic needs, expansion in literacy and knowledge, improvement in

health, reduction in morbidity and mortality, control of fertility, development of women, etc. became important areas of concern for research.

There has been also shift in development theories. The earlier emphasis on the role of capital accumulation was complemented with theories emphasising the importance of changes in traditional beliefs, values and attitudes, and reduction in fertility rate, which are achieved through education. Education also contributed to improvement in human resource development, making it an important requirement for development. Equitable distribution of wealth also is an important requirement, both to promote consumption, and for realising equity. The expansion of development theories made studies on education, fertility reduction, reduction in inequality, etc. important areas of concern.

Rural development efforts made in Bangladesh comprised of efforts to increase agricultural production, expansion of irrigation facilities, reduction in poverty, development of local institutions, human resource development, and reduction in fertility. While food production has increased and poverty ratio has come down, similar improvements have not occurred in the spread of education, fertility reduction, and improvement in the status of females, necessitating the concentration of research efforts in these areas.

Examination of BARD's research activities in the recent past indicated certain gaps, and relevant themes were identified to fill this gap. Examination of the socio-economic conditions in the country indicated that though the country has made progress in respect of food production, still the productivity of the agricultural sector is low. Diversification of agriculture continues to be an important area of concern. Human resource is under-developed. Level of living is low and people are traditionally oriented. Political institutions are in an incipient stage and administration is characterized by less responsive to changes. These characteristics of the society warrant studies of related problems.

Examination of the development perspectives indicated that though per capita income is increasing, the demographic pressure is continuing. With increasing per capita income, the economy may diversify, and manufacturing and service activities may expand. This may lead to expansion of non-farm activities in rural areas. As a result, marketing activities are likely to expand. This may lead to infrastructural development, and increasing urbanization. It may become possible to spend more incomes on basic needs and to adopt special measures for helping the weaker sections. Anticipating these and related changes, a number of research themes have been suggested.

The examination of various aspects of rural development led to the identification of a large number of topics. They were circulated among the senior faculty of BARD, who suggested a few more topics, which were also included. The final list comprised

of the following 178 topics and 38 themes divided into seven broad areas.

A. HUMAN RESOURCE DEVELOPMENT

1. Poverty and Deprivation

- a. Poverty syndrome: Economic, socio-cultural, political, psychological and other characteristics associated with poverty.
- b. Rural under- and unemployment.
- c. Living strategies of the poor, and measures, programmes, and institutions through which the poor can be helped.
- d. Effectiveness of various poverty eradication programmes.
- e. Effectiveness of institutions for weaker sections.
- f. Percentage of rural poor households benefiting from RWP, FWP, CVDP, SFDP, etc.
- g. Working of various poverty eradication programmes and their effectiveness.
- h. Poverty and life chances in female headed households.

2. Education

- a. Review of existing education facilities and literacy situation in rural areas.
- b. Problems of rural education
- c. Measures necessary to retain children in school
- d. Problems of education of children of poor households
- e. Problems of education of female children
- f. Effectiveness of satellite school programme in rural areas
- g. Comparative study of the effectiveness of government schools and NGO schools
- h. Adult education programme
- i. Scope of literacy movement among male and female youths.

3. Women's Development /

- a. Study of socio-economic characteristics of rural women, with a view to identify sections of women to be included in women's development programmes.
- b. Identification of income generating activities for rural women
- c. Household time allocation of different categories of household members and its variation with economic development.
- d. Division of labour and specialisation of role in households belonging to different social strata.
- e. Institutional support required for integrating women in the development process, such as organization, credit, marketing support, etc.
- f. Social norms and values among different sections of society about the status and role of women.
- g. Problems of education of female children
- h. Family instability
- i. Dowry, gender violence, prostitution, traffic in women
- j. Law, norms, and practice of inheritance of property by males and females.
- k. Facility and support for child birth, family planning advice, immunization of children, etc. in rural areas.
- l. Comparative analysis of mainstream development approach and target group approach for women development.
- m. Role of women in policy planning and decision making process.
- n. Effects of technology and innovation on men and women.
- o. Environmental degradation and role of women.
- p. Socio-economic impact of women's development project.
- q. Social structure, female autonomy and demographic behaviour.

4. Fertility control /

- a. Fertility behaviour and variables influencing fertility behaviour among different sections of society

- b. Factors promoting contraceptive acceptance
- c. Knowledge, attitude, and practice (KAP) of family planning measures.
- d. Identification of measures through which fertility can be reduced rapidly
- e. Sources of supply of contraceptives.
- f. Couple protection rate among different sections and different parts of the country.

5. Inequality

- a. Inequality in the possession of assets among different sections of society
- b. Inequality in the distribution of income among different sections of society
- c. Benefits derived by different sections of society through developmental programmes
- d. Incidence of poverty - its variation by social strata and by region
- e. Socio-economic and other characteristics associated with poverty
- f. Incidence of poverty in different regions of the country
- g. Perception of inequality and its causes by different sections of society
- h. Regional imbalances in development
- i. Law of inheritance and its role in inequality

6. Basic Needs

- a. Satisfaction of basic needs by weaker sections.
- b. Satisfaction of basic needs by rural communities.

7. Nutrition, Hygiene, Sanitation

- a. Studies on food intake and nutritional balance condition among different sections of society.
- b. Knowledge about and attitude to, and practices of hygienic practices, defecation practices, personal cleanliness, etc.

- c. Environmental problems, particularly environmental sanitation, availability of clean water, sanitation facilities, etc.
- d. Studies on health, morbidity, mortality, and physical strength.
- e. Infant mortality, child care practices, immunization and related problems.
- f. Impact of rural development programmes/projects on nutritional well-being of people.
- g. Community participation in primary health care.
- h. Role of local bodies in preventive health care.
- i. Studies on health and nutrition programmes implemented by government and non-government agencies.
- j. Prospect of integration of health and nutrition interventions in different government and non-government programmes.
- k. Economic growth and its impact on health and nutrition of rural people.
- l. Implications of government macro and micro policies on health and nutrition of the rural people.

B. ECONOMIC GROWTH

1. Technology

- a. Adaptation of technologies to meet the requirements of rural society, and problems of their extension.

2. Irrigation

- a. Irrigation studies, examining ways and means through which irrigation coverage can be expanded rapidly, and efficiency of irrigation projects can be improved.
- b. Economic, social, administrative and other problems affecting rapid expansion of irrigation facilities.
- c. Impact of privatisation of irrigation projects on rate of expansion of irrigation.
- d. Problems of irrigation of the fields of small farmers.
- e. Organization and training for irrigation management.

- f. Institutional arrangements for dealing with water related problems, like disputes.
- g. Management of irrigation works.

3. Factors Contributing to Increase in Productivity

- a. Identification of the causes of the low productivity of major agricultural crops, with a view to fill the deficiencies and achieve increase in productivity.
- b. Farm management, including cost-benefit, studies for different crops, livestock, fish culture, vegetable production, etc.
- c. Studies to find out ways and means through which value addition can be achieved for rural products.
- d. Impact of schooling, and level of knowledge on agricultural productivity.
- e. Case studies of farmers achieving significantly higher yields and profits.

4. Agricultural Development

- a. Study of areas of the country and sections of the population in the vanguard of agricultural modernization.
- b. Identification of areas for growth of different components of agriculture.
- c. Land use development.
- d. Problems of development of livestock, poultry, pisciculture, apiculture, etc.

5. Markets

- a. Various aspects and problems of the functioning rural markets.
- b. Market dependence of households in areas varying in level of development.
- c. Geographical spread of markets and their linkage in terms of space and time.
- d. Problems of the marketing of different produces.

- e. Infrastructure, credit, law and order, and other problems of rural markets.
- f. Market for agricultural inputs, like irrigation equipments, fertilizer, insecticides, etc.
- g. Sociology of rural markets.

6. Agricultural Extension

- a. Studies in agricultural innovations, facilitating increase in productivity and diversification of agricultural productivity.
- b. Extension and related requirements for development of cattle production, poultry production, and piscicultural production.
- c. Extension requirements for increased use of inputs, cultivation of HYV crops, multiple cropping, and diversification of crop production.
- d. Farmers level of knowledge about improved agricultural practices.

7. Rural Credit

- a. Sources of credit, requirements of credit, cost of credit, and management of credit for various sections of society.
- b. Relation between the availability of credit and agricultural productivity.
- c. Recovery of credit and related problems.
- d. Assessment of credit needed for diversification of agriculture by various categories of farmers.

8. Non-farm Activities

- a. Study of various non-farm activities in rural areas, their economics and problems.
- b. Pattern of rural industrialization.
- c. Social background of people pursuing non-farm activities.

9. Rural Entrepreneurs

- a. Social background of rural entrepreneurs.
- b. Social background of rural traders.

- c. Problems faced by small scale entrepreneurs in rural areas.
- d. Scope for new trading activities and supports required.

10. Flood control

- a. Identification of ways and means through which flood affected areas can be more productivity used.
- b. Identification of flood control measures.
- c. Studies on flood control and drainage requirements.
- d. Impact of flood on production and day to day living.

11. Savings and Investment

- a. Household income, expenses and savings.
- b. Investment patterns of rural households.
- c. Scope for gainful investment in rural areas.

12. Value Addition to Local Resources

- a. Ways and means of value addition to local resources.

C. ADMINISTRATION

1. Administrative Problems and Effectiveness at Different Levels

- a. Interaction and pattern of relation between bureaucrats and elected leaders at union, thana and zilla levels.
- b. Pattern of decentralization of administration and implementation of development programmes at different levels.
- c. Effectiveness of administrative agencies and institutions in rural areas.
- d. Efficiency of rural development delivery system.
- e. Identification of ways and means through which the effectiveness of rural development bureaucracy can be improved.
- f. Problems experienced by citizens in receiving services from local government agencies.

- g. Scope for privatization of rural services.
- h. Political awareness and participation of villagers in political activities.
- i. Weakening of traditional agencies of social control, and its impact on law and order in rural areas.

2. Rural Training

- a. Training requirements of beneficiaries of various programmes.
- b. Training requirements of rural youth for more productive work.
- c. Training requirements of various categories of personnel implementing rural development programmes.
- d. Effectiveness of TTDC training.

D. EVALUATION

- 1. Evaluation of the impact of rural development programmes and working of rural institutions.

E. RURAL INSTITUTIONS

1. Rural Co-operatives

- a. Problems of two-tier co-operatives, particularly in relation to their viability and management.
- b. Role of cooperatives in the context of market oriented free trade.
- c. Functioning of cooperatives and their effectiveness in increasing production, creating employment, and achieving other goals.
- d. Working of CVD cooperatives, organisational structure, pattern of activities, degree of participation, and benefit to members.
- e. Percentage of local population participating in various cooperatives.
- f. Degree of involvement of beneficiaries in CVD and other cooperatives, and the degree to which their needs are satisfied through these cooperatives.
- g. Comparison of benefits reaching the rural poor under different systems of cooperatives.

2. Local Institutions

- a. Pattern of coordination and division of functions among local institutions at different levels.
- b. Pattern and problems of coordination among various nation building departments.
- c. Mobilization of resources by local institutions.
- d. Changes in macrodevelopment policies and their impact on rural institutions.
- e. Local government units at zilla, thana, and union levels.

3. NGOs

- a. Problems of building coalitions among governmental agencies and NGOs in the implementation of developmental programmes.
- b. NGOs and their activities in different parts of Bangladesh.
- c. Comparative study of the method of implementing programmes by government and NGOs.

F. **ENVIRONMENT AND DISASTER MANAGEMENT**

1. Soial and water pollution

2. Social Forestry

- (a) People's participation in afforestation.

3. Rural Sanitation

4. Disaster Management

- (a) People's participation in disaster preparedness and management

G. **SOCIAL CHARACTERISTICS**

1. Changing Consumption Pattern

- a. Changes in consumption pattern at different income levels.
- b. Structure of demand in rural households with change in income levels.

- c. Household consumption pattern in different regions of the country.
- 2. Urbanization
 - a. Urbanization of local towns and growth centres.
 - b. Spread of urban influence in rural area.
- 3. Communication and media studies.
 - (a) Forms of media and their effects on rural people
 - (b) Socialization and media
 - (c) Processes of media effects
 - (d) Learning through media
 - (e) Infrastructure of the information society
- 4. Socio-economic changes in rural society.
 - a. Rural urban migration. Characteristics of emigrants. Influence of urban migration on rural life. Nature of linkage maintained by migrants with rural areas.
 - b. Social mobility, its causes, sections experiencing it, and social acceptance of the upwardly mobile.
 - c. Spatial mobility of population in areas varying in development.
 - d. Changes in occupational structure and mode of livelihood in rural areas with economic development.
 - e. Social differentiation emerging with economic development.
 - f. perception of prestige structure in the society.
 - g. Values, attitudes, and motivation of rural population and factors contributing to variation in it.
 - h. Aspirational level of the population.
 - i. Knowledge and awareness of rural population.
 - j. Parents' values and attitudes about children's education.
 - k. Socio-psychological characteristics like nature of knowledge, beliefs, attitudes, motives, hopes and aspirations.

1. Perception of social relations.
- m. Freedom from subsistence orientation and interest in maximization of profit.
- n. Urge for development, acquisition, social mobility, etc.

5. Youth Problems

- a. Problems experienced by youth in terms of training, employment, psychological acceptance, etc.

6. Housing Problem

- a. Housing condition, and housing problems, particularly among the landless.

7. Rural Labour

- a. Employment, unemployment, migration, and related characteristics of rural labour.
- b. Pattern of relation between labourers and their employers.
- c. Wage rates of rural labourers.
- d. Child labour.

8. Mental Ill-health

- a. Incidence and pattern of mental ill-health in rural areas.

9. Rural Energy

- a. Requirements and sources of fuel of households at different socio-economic levels.
- b. Fuel requirements, type of fuel used, efficiency in the use of fuel, new sources of fuel, and related issues.
- c. Energy requirements for productive activities in rural areas.
- d. Rural electrification.

Research methodologies for the study of different themes/topics and analysis plans of a few themes/topics were also discussed.

RESEARCH METHODOLOGY COURSES

As part of the efforts to upgrade the research capabilities of the faculty members, two research methodology courses were conducted for faculty members. A Manual on Socio Economic Research Methodology was also prepared by the CTA.

REFERENCES

- ADB, Asian Development Bank, 1991, Key Indicators of Developing Asian and Pacific Countries, Manila, Asian Development Bank.
- Adelman, Irma, 1961, Theories of Economic Growth and Development, Stanford, Stanford University Press.
- Arndt, H.W; 1987, Economic Development : The History of an Idea, Chicago, The University of Chicago Press.
- Baran, Paul A; 1958, Political Economy of Growth, New Delhi, Peoples Publishing House.
- BARD, 1982, Twenty Second Annual Report, July 1980-June 1981.
- BARD, 1983, Twenty-Third Annual Report, July 1981-June, 1982.
- BARD, 1983, Twenty Fourth Annual Report, July-June 1983.
- BARD, 1984, Twenty-Fifth Annual Report, July 1983-June 1984.
- BARD, 1987, Twenty-Seventh Annual Report, July 1985-June, 1986.
- BARD, Annual Report, (1988-89).
- BARD, 1991, Third-First Annual Report, July 1989 - June 1990.
- BARD, 1992, Thirty-Second Annual Report, July 1990 - June 1991.
- BBS, Bangladesh Bureau of Statistics, 1991 Statistical Year Book of Bangladesh, Dhaka, Government of Bangladesh.
- Boeke, J.H, 1953, Economics and Economic Policy in Dual Societies, New York, Institute of Pacific Relations.
- Boeke, J.H, 1969, "Dualistic Economics", in W.F. Wertheim, Ed. Indonesian Economics : the Concept of Dualism in Theory and Practice, The Hague, W. Van Hoeve.
- Boserup, Ester, 1983, Population and Technological Change, Chicago, Chicago University Press.
- Brown, Sally and Donald, McIntyre, 1981, "An Action Research Approach in Innovation in entralized Education Systems", European Journal of Science Education, Vol. 3, No. 3.
- Chayanov, A.V., 1986, Theory of Peasant Economy, Ed. by Daniel Thorner, Manchester, Manchester University Press.
- Frak, A.G, 1978, Dependent Accumulation and Underdevelopment, London, Macmillan.

RESEARCH METHODOLOGY COURSES

As part of the efforts to upgrade the research capabilities of the faculty members, two research methodology courses were conducted for faculty members. A Manual on Socio Economic Research Methodology was also prepared by the CTA.

REFERENCES

ADB, Asian Development Bank, 1991, Key Indicators of Developing Asian and Pacific Countries, Manila, Asian Development Bank.

Adelman, Irma, 1961, Theories of Economic Growth and Development, Stanford, Stanford University Press.

Arndt, H.W; 1987, Economic Development : The History of an Idea, Chicago, The University of Chicago Press.

Baran, Paul A; 1958, Political Economy of Growth, New Delhi, Peoples Publishing House.

BARD, 1982, Twenty Second Annual Report, July 1980-June 1981.

BARD, 1983, Twenty-Third Annual Report, July 1981-June, 1982.

BARD, 1983, Twenty Fourth Annual Report, July-June 1983.

BARD, 1984, Twenty-Fifth Annual Report, July 1983-June 1984.

BARD, 1987, Twenty-Seventh Annual Report, July 1985-June, 1986.

BARD, Annual Report, (1988-89).

BARD, 1991, Third-First Annual Report, July 1989 - June 1990.

BARD, 1992, Thirty-Second Annual Report, July 1990 - June 1991.

BBS, Bangladesh Bureau of Statistics, 1991 Statistical Year Book of Bangladesh, Dhaka, Government of Bangladesh.

Boeke, J.H, 1953, Economics and Economic Policy in Dual Societies, New York, Institute of Pacific Relations.

Boeke, J.H, 1969, "Dualistic Economics", in W.F. Wertheim, Ed. Indonesian Economics : the Concept of Dualism in Theory and Practice, The Hague, W. Van Hoeve.

Boserup, Ester, 1983, Population and Technological Change, Chicago, Chicago University Press.

Brown, Sally and Donald, McIntyre, 1981, "An Action Research Approach in Innovation in centralized Education Systems", European Journal of Science Education, Vol. 3, No. 3.

Chayanov, A.V., 1986, Theory of Peasant Economy, Ed. by Daniel Thorner, Manchester, Manchester University Press.

Frak, A.G, 1978, Dependent Accumulation and Underdevelopment, London, Macmillan.

REFERENCES

ADB, Asian Development Bank, 1991, Key Indicators of Developing Asian and Pacific Countries, Manila, Asian Development Bank.

Adelman, Irma, 1961, Theories of Economic Growth and Development, Stanford, Stanford University Press.

Arndt, H.W; 1987, Economic Development : The History of an Idea, Chicago, The University of Chicago Press.

Baran, Paul A; 1958, Political Economy of Growth, New Delhi, Peoples Publishing House.

BARD, 1982, Twenty Second Annual Report, July 1980-June 1981.

BARD, 1983, Twenty-Third Annual Report, July 1981-June, 1982.

BARD, 1983, Twenty Fourth Annual Report, July-June 1983.

BARD, 1984, Twenty-Fifth Annual Report, July 1983-June 1984.

BARD, 1987, Twenty-Seventh Annual Report, July 1985-June, 1986.

BARD, Annual Report, (1988-89).

BARD, 1991, Third-First Annual Report, July 1989 - June 1990.

BARD, 1992, Thirty-Second Annual Report, July 1990 - June 1991.

BBS, Bangladesh Bureau of Statistics, 1991 Statistical Year Book of Bangladesh, Dhaka, Government of Bangladesh.

Boeke, J.H, 1953, Economics and Economic Policy in Dual Societies, New York, Institute of Pacific Relations.

Boeke, J.H, 1969, "Dualistic Economics", in W.F. Wertheim, Ed. Indonesian Economics : the Concept of Dualism in Theory and Practice, The Hague, W. Van Hoeve.

Boserup, Ester, 1983, Population and Technological Change, Chicago, Chicago University Press.

Brown, Sally and Donald, McIntyre, 1981, "An Action Research Approach in Innovation in centralized Education Systems", European Journal of Science Education, Vol. 3, No. 3.

Chayanov, A.V., 1986, Theory of Peasant Economy, Ed. by Daniel Thorner, Manchester, Manchester University Press.

Frak, A.G, 1978, Dependent Accumulation and Underdevelopment, London, Macmillan.

Griss, David, 1982, The Dynamics of Agricultural Change, London, Hutchinson.

Harbison, frederick and chasles Myers, 1984, Education, Manpower, and Economic Growth, New York, McGraw Hill.

Harbison, Frederick H; 1973, Human Resources as the Wealth of Nations, New york, Oxford University Press.

Harris, Marvin, 1977, Cannibals and Kings: The Origin of Cultures, New York, Random House.

Hunt, Diana, 1979 "Chayanov's Model of Peasant Household Resource Allocation", The Journal of Peasant Studies, Vol. 6, No. 3, April 1979.

Huntington, Samuel, P., and Nelson, Joan M., 1976, No Easy Choice : Political Participation in Developing Countries, Cambridge, Harvard University Press.

Inkles, Alex, and Smith, David, Becoming Modern : Individual Change in Six Developing Countries, London, Heinemann.

Jahan, Rounaq; Manowar Hussain; S.A. Qadir and Milton Barnett, 1979, Comilla after Twenty years : A Preliminary Review, Dhaka, The National Foundation for Research on Human Resource Development.

Kuznets, Simon, 1959, Six Lectures on Economic Growth, New York, The Free Press.

Leibenstein, Harvey, 1957, Economic Backwardness and Economic Growth, New York, John Wiley.

Leibenstein, Harvey, 1978, General X-Efficiency Theory of Economic Development, New York, Oxford University Press.

Lewis, W. Arthur, 1957, Theory of Economic Growth, London, Allen and Unwin.

McClelland, David, C. 1961, The Achieving Society, New York, D. Van Nostrand.

Meier, Gerald, M., and Baldwin, 1962, Economic Development, Bombay, Asia Publishing House.

Morris, Morris D, 1979, Measuring the Conditions of the World's Poor : The Physical Quality of Life Index, New York, Pergamon Press.

Nurkse, Ragnar, 1958, Problems of Capital Formation in Under developed countries, Oxford, Blackwell.

Parsons, Talcot, 1967, "Evolutionary Universals in Society" in Sociological Theory and Modern Society, New York, The Free Press.

Planning Commission, Bangladesh, 1973, The First Five Year Plan, 1973-78, Dhaka.

Planning Commission, Bangladesh, The Second Five Year Plan, Dhaka.

Planning Commission, Bangladesh, The Third Five Year Plan, 1985-90, Dhaka.

Planning Commission, Bangladesh 1990, The Fourth Five Year Plan, 1990-95, Dhaka.

Polanyi, Karl, 1957, The Great Transformation, New York, Rinehart & Co.

Prebisch, Paul, 1971, Change and Development : Latin America's Great Task, New York, Praeger.

Ranis, Gustav, 1968, "Economic Growth Theory", in International Encyclopedia of the Social Sciences, Vol. 4, New York, Macmillan.

Raper, Arthur F., 1970, Rural Development in Action : The Comprehensive Experiment at Comilla, East Pakistan, Ithaca, Cornell University Press.

Sinha, Durgananda, 1966, Villages in Transition : A Motivational Analysis, Department of Psychology, University of Allahabad, Allahabad.

Schultz, Theodore, W., 1964 Transforming Traditional Agriculture, New Haven, Yale University Press.

Schumpeter, Joseph, A., 1955, Theory of Economic Development, Cambridge, Harvard University Press.

Seers, Dudley, 1972, What are we Trying to Measure, IDS Reprints, Brighton, Institute of Development Studies.

Task Force, 1991, Report of the Task Forces on Bangladesh Development Strategies for the 1990s, Vol. 1, Dhaka, University Press Ltd.

Task Force, 1991, Report of the Task Force on Bangladesh Development Strategies for the 1990s, Vol. 2, Dhaka, University Press Ltd.

Task Force, 1991, Report of the Task Force on Bangladesh Development Strategies for the 1990s, Vol. 3, Dhaka, University Press Ltd.

Task Force, 1991, Report of the Task Force on Bangladesh Development Strategies for the 1990s, Vol. 4, Dhaka, University Press Ltd.

UNDP, United Nations Development Programme, 1990, Human Development Report, 1990, New York, Oxford University Press.

UNDP, Dhaka, 1992, Human Development in Dhaka : Local Action under National Constraints, UNDP, Dhaka.

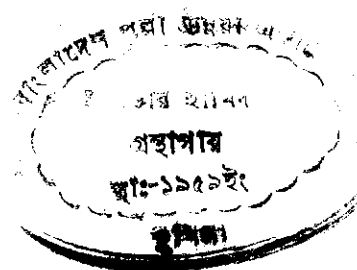
UNRISD, United Nations Research Institute for Social Development, 1972, Contents and Measurement of Socio Economic Development, by D.V. Mc Granham, C.Richard Proust, N.V. Sovani, and M. Subramaniam, New York, Praeger Publishers.

UNRISD, United Nations Research Institute for Social Development, 1980, The Quest for a Unified Approach to Development, Geneva, UNRISD.

W.B., World Bank, 1991, World Development Report 1991 : The Challenge of Development, New York, Oxford University Press.

Weber, Max, 1962, Protestant Ethic and the Spirit of Capitalism, London, Allen and Unwin.

A 3456



17 Feb 94

02 Jun 94

24 Aug 94

20 Apr 96

23 Jun 97

5 Aug 97

16 JUL 2005

14 AUG

15 SEP 2011

28 NOV 2013

A Master Plan of Socio-Economic
Research at Bangla...



EG35836

658.46
BAT
C-2

A 34 BB