BANGLADESH FLOOD ACTION PLAN

DRAFT FINAL REPORT

Appendices

FLOOD RESPONSE STUDY (FAP 14)

Prepared for

The Flood Plan Coordination Organization (FPCO)
of the
Ministry of Irrigation Water Development and Flood Control

September 1992

ISPAN
IRRIGATION SUPPORT PROJECT FOR ASIA AND THE NEAR EAST
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AND THE NEAR EAST

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Cover Photo

The cover photo is a standard false color composite of Landsat Multispectral Scanner satellite images. A total of 11 images acquired during February-March 1984 constitute the mosaic. The image was digitally processed and produced by the Geographic Information System (FAP 19).

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BANGLADESH
ACTION PLAN FOR FLOOD CONTROL

TERMS OF REFERENCE FOR FLOOD RESPONSE STUDY
(Flood Action Plan No. 14)

FLOOD PLAN COORDINATION ORGANIZATION
MINISTRY OF IRRIGATION, WATER DEVELOPMENT
AND FLOOD CONTROL

1. BACKGROUND

1.1 The disastrous floods of 1987 and 1988 stimulated the Government of Bangladesh (GOB) to carry out a comprehensive review of flood policy. A number of studies were undertaken and, in June 1989, the GOB requested the WORLD BANK (WB) to coordinate the development and implementation of a five-year Flood Action Plan (FAP, 1990-95) as the first of several stages in the GOB's long-term flood control program. The need for coordinated international action, in support of the GOB, to find solutions to the flood problem that are technically, financially, economically and environmentally sound was endorsed at the G-7 Summit in Paris in July 1989.

1.2 The GOB seeks an approach which will provide a comprehensive and permanent solution to the recurrent flood problem and so create an environment for sustained economic growth and social improvement. The flood policy that was adopted incorporated a long-term plan for major physical works to control flooding that originates from the main rivers and a set of eleven principles to guide future development. The principles include the development of non-structural approaches to flood protection and mitigation as well as structural measures such as major embankment and river training works, including effective land and water management, strengthened flood preparedness and disaster management, floodplain zoning, coordinated planning of roads and related rural infrastructure to ensure unimpeded drainage, and increased local and individual participation in all aspects of flood control and drainage works. Minor local works also are to be considered. The Flood Policy provides a long-term framework and a plan for physical works that are to be implemented in stages. To meet the short-term need (to mobilize resources, provide as effective short-term flood-protection and mitigation as possible, and to begin work on the priority elements), the World Bank (WB), in collaboration with several donors and the GOB, prepared a Flood Action Plan (FAP) covering 26 components for the five-year plan period 1990-1995. Coordination of the FAP within the Government of Bangladesh is being undertaken by the newly-established Flood Plan Coordination Organization (FPCO). Out of the 26 FAP components, 15 are supporting activities.

1.3 The Flood Response Study is one of the supporting activities of the FAP. This study will lead to a better understanding of how individuals and communities in flood vulnerable areas respond to and adapt to the floods. It will document the present flood proofing measures practiced in Bangladesh and will identify possible new or improved approaches to flood proofing.

1.4 The US government will finance this study (FAP 14) and the Flood Proofing Pilot Project (FAP 23). These two studies are complementary to each other and cover non-structural and structural flood responses and proofing in both rural and urban areas. As conceived in the FAP Report (December, 1989), FAP 14 would study how people living in rural communities on the active flood plains respond to floods. The study will also examine agricultural and small rural community flood response, especially how people responded in the 1987 & 1988 floods. The response of private industries, local government and central government to floods affecting municipal and urban areas, and public sector infrastructure throughout the country will be examined under Supporting Study 23.

1.5 Study 14 will be carried out as one of the four FAP Supporting Activities to be financed by the US Government.

2. REGION

The Flood Response Study will cover all the regions identified in the FAP.

3. SCOPE OF WORK

3.1 The overall objective of the study is to identify effective measures to avoid or reduce the adverse human, infrastructural and economic effects of flooding, particularly in unprotected areas. The study will document present responses of individuals and communities to floods; assess the extent to which these and other approaches can be developed to improve the flood preparedness of individuals and communities in flood vulnerable areas; and develop criteria to be used in regional studies under the FAP. Large areas of the floodplains will remain unprotected for the foreseeable future and, in places, the situation of those living there may be adversely affected by flood control and drainage projects implemented as part of the FAP. In view of this, it is important that ways are developed to enhance the traditional resilience of individuals and communities living in such areas and to reduce their vulnerability to flooding.

3.2 The study will involve a review of available reports and the design of a survey of flood responsiveness in different agro-ecological zones on the flood plains of the three main rivers (the Brahmaputra, the Ganges, and the Meghna). The areas will include riverain char lands in the "active floodplain", different agro-ecological zones within the main floodplains, and the higher lands (e.g., the Barind and Madhupur tracts) that are used traditionally as a refuge during periods of severe flooding. The study will comprise seven tasks to be completed by the end of 1991. It will result, in part, in a series of recommendations and findings that will be used in designing an investment project on flood proofing to be undertaken from 1992 to 1995 under FAP 23.

3.3 The Main aims of the Study are to :

- assess the existing flood response practices of people living in the flood plain areas
- assess likely impacts of embankments and compartments on flood response activities
- evaluate flood responsiveness at selected sites in different agro-ecological zones on the flood plain zones and to suggest improved mechanisms of flood responsiveness
- prepare guidelines on ways of enhancing effective flood response and criteria for use in the planning, design and operation of FAP Projects, especially for the future investment component of FAP 23.

4. TERMS OF REFERENCE

The terms of reference outline specific tasks, staffing requirements, schedules and outputs. More detailed work plans will be developed during the inception period. These will define data requirements, data-collection methods and the topics to be covered in the different reports.

The Study will comprise following seven tasks :

4.1 Task 1 : Inception Study

- Review available reports and other literature on socio-economic and other aspects of flood response of people living on the Bangladesh floodplains, and on similar floodplains in other countries, and carry out a reconnaissance survey of farming practices and settlement patterns in flood-affected areas

- Prepare an inception report, including a detailed work plan and proposed methodology and questionnaire to be used in field work. It is expected that the draft questionnaire will be completed before the Inception Report is finalized.

4.2 Task 2 : Pilot Survey

Based on results of Task 1, design and implement a survey to evaluate the flood responses of local people and the way they adjust their lives to floods at different locations. At least six locations will be selected and would cover three sites on the Jamuna, and one site each on the Ganges, Padma and Meghna floodplains. The survey will include assessment of ways in which past and present farming systems and settlement patterns are adapted to floods. The Pilot Survey will include interviews with farmers, agricultural laborers, fishing households, traders, elected representatives, non-government organizations and other affected parties both in areas which are flooded almost every year and in areas which are flooded during major events only. The Consultant will compile and analyse the pilot survey findings, establish computer based files and store, retrieve and make available data to other FAP study teams.

4.3 Task 3 : Workshop

Based on the outcome of the pilot survey, the results will be evaluated at a workshop of selected local specialists and professionals. Based on the recommendations of the workshop, the work to be undertaken on the main study will be defined. On the basis of the results of the pilot survey, criteria will be prepared to enable planners to effectively take into account the flood response and proofing measures presently used by flooplain populations and suggest ways of enhancing flood response. Initial planning guidelines and criteria will be prepared.

4.4 Task 4 : Main Survey

The main survey of flood responsiveness will be conducted at selected sites in different agro-ecological zones on the floodplain of the three main rivers (the Brahmaputra, the Ganges, the Meghna). There will be two sub-tasks :

- survey design and implementation : the survey should be designed to assess, inter-alia, the responses of households and communities, including inter-seasonal and seasonal survival strategies and responses, to varying water regimes and resource availabilities; the dynamics of socio-economic changes resulting from disasters (e.g., increased pauperization); and the responsiveness of different socio-economic groups to floods of different origins (overbank spill, localized intense rainfall, flash flooding, drainage congestion);

- identify and assess any changes in survival strategies of different groups over time through a review of historical records and by in-depth interviews with older people;

4.5 Task 5: Finalisation of Guidelines

- In the light of the new research findings, finalise the planning criteria and guidelines as prepared in Task 3; and

- develop a plan to monitor the impacts of future floods and any structural or non-structural interventions implemented through the FAP or other programs.

4.6 Task 6: Preparation of Draft Final Report

- Prepare a draft final report summarizing the main findings of the study;

- Organize an international conference/workshop in November 1991 to review the lessons learned from the literature review and surveys, and to assess their planning implications. The seminar will guide the framing of recommendations for the future work program of the project.

4.7 Task 7: Final Report

- Prepare the final report incorporating ideas from the workshops, the findings of the main surveys and the guidelines.

4.8 Relationship to other FAP Activities

Throughout the study, the consultants will work in close consultation with the FPCO, the Panel of Experts for the FAP and with teams undertaking related supporting activities, particularly FAP 12 (FCD/I Agricultural Study), FAP 15 (Land Acquisition and Resettlement), FAP 17 (Fisheries Study) and FAP 20 (Compartmentalization Pilot Project).

In addition, the consultants will provide technical support to the activities of FAP 16, 19 and 23, and cooperate with the various groups undertaking the Regional Studies.

5. REPORTS

The following reports will be produced :

(1)	Inception Report	: end August, 1990
(2)	Pilot Survey Report	: end December, 1990
(3)	Evaluation Report after workshop	: end January, 1991
(4)	Main Survey Reports	: end September, 1991
(5)	Report on Guideline Report	: end October, 1991
(6)	Final Report after workshop	: end December, 1991

All reports will be submitted in 25 copies except for the reports for the workshops which will be produced in 100 copies.

6. STUDY DURATION AND SCHEDULE

6.1 The study will be completed in 18 months between July, 1990 and December, 1991. The schedule of seven Tasks, assuming an early July start, is as follows :

Task 1 : Inception Study, (July-August 1990)

Task 2 : Conduct Pilot Survey (September-December, 1990)

Task 3 : Evaluation of Pilot Survey and Workshop (January, 1990)

Task 4 : Conduct Main Survey (February - September, 1991)

Task 5 : Finalise Guidelines (July-October, 1991)

Task 6 : Evaluation of Main Survey and Guidelines, Preparation of Draft Final Report and Workshop (October-November, 1991)

Task 7 : Final Report (November-December, 1991)

6.2 The schedule of these activities is shown in Figure 1.

7. STAFFING AND OTHER INPUTS

7.1 Foreign Consultants	Person months
A Socio-economist with extensive experience in designing and undertaking rural social surveys, preferably in rural Bangladesh, and specializing in disaster preparedness.	6
Farming Systems Agronomist with experience in floodplain agriculture in tropical monsoon climates.	4
Water Resources Planner a senor engineer with planning and design experience on flood-control and proofing measures and agricultural project development.	4
Total	14

7.2 Local Consultants

Social Scientist (Team Leader) Preference will be given to selecting a Bangladeshi Team Leader. If a suitable candidate is not available this position will be filled by an expatriate. A Ph.D in social science with extensive experience in designing and supervising rural social surveys and analytical and proven report writing skills will be preferred.	18
Senior level Anthropologist with extensive experience in designing and supervising social surveys in rural areas, data analysis and report writing.	18
Mid-level Consultants, Eight professionals to include : One Agronomist (farming-systems or food-crop specialist), three Sociologists/Anthropologists, one Nutritionist, one Systems Analyst/Statistician, one Civil Engineer with FCD/I experience, and one Public Health Specialist (at least two of these specialists will be women)	100
Total	136

7.3 Support Staff

Junior level field survey staff	100
Secretarial staff, data processors, and field assistants	232

7.4 Project Input

Necessary project inputs, including equipment, office space and other facilities have been considered and are described in the Cost Estimates (Appendix-1).

8. RESPONSIBILITIES OF THE GOVERNMENT

8.1 Freedom from Taxation and duties :

The government/Executing Agency shall bear the cost of any taxes, duties, fees, leaves and other impositions under the laws and regulations in effect in Bangladeshi on the Consultant and expatriate personnel in respect of :

- any payments made to the consultants or their panel other than Bangladesh nationals, in connection with the carrying out of the services;

- any materials, equipment and supplies brought into Bangladesh for the purpose of carrying out the services and which after having been brought to the country will be subsequently withdrawn therefrom;

- any equipment imported for the purpose of carrying out the services and paid out from the funds provided by the Government and which is treated as property of the Government.

Provided that:

(a) The Consultant and his expatriate personnel shall follow the usual customs procedure of the Government in importing property into Bangladesh; and

(b) If the Consultant or any of the expatriate personnel does not withdraw, but disposes of any property in Bangladesh upon which custom duties and taxes have been exempted, the Consultant shall bear such custom duties and taxes in conformity with the regulations of the Government.

8.2 Other Privileges and Exemptions

The Government Shall:

- provide the expatriate personnel with work permits and such other documents as shall be necessary to enable them to perform the services including privileges specified in the Government of the People's Republic of Bangladesh notification no /RO 88-L-85/906/CUS dated the 13 February, 1985 and /RO 89-/85/907/CUS dated the 13 Feb. 1985 (circular of 1988 is to be incorporated)

- arrange for the personnel and his authorized dependents to be provided promptly with all necessary entry and exit visas, residence permits, work permits, exchange permit and travel documents required for their stay, in Bangladesh;

- facilitate clearance through customs of any property required for the services and of the personal effects of the expatriate personnel and the prompt issue to the Consultants expatriate personnel of Custom Pass Books.

- issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the services;

- exempt the consultants and the personnels for the services from any requirement to register or obtain any permit to practice the profession of Engineer or Architect or to establish himself higher individually or as a corporate entity according to the laws of Bangladesh;

- arrange for duties and taxes on the imported equipment, vehicles and other materials relating to the project which will be retained in Bangladesh to be paid by the implementing agency in Bangladesh;

8.3 Services, Facilities and Equipment

- The government shall provide as assistance to collect pertinent data, maps and information available for the performance of the Services under this Contract.

- The Govt. shall, if available, provide accommodation in the Govt. Rest House at usual rate.

- Indemnify, save and hold harmless the Consultant and its personnel from and against all claims, demands or suits, that may be made or brought against the Consultant and its personnel arising directly from the performance of the services provided that, such claims, demands or suits are not the result of negligence or willful acts of the Consultant and its personnel.

9. RESPONSIBILITIES OF THE CONSULTANT

9.1 Responsibility of Consultant

Consultant shall carry out the services as detailed in "Scope and Terms of Reference" in the best interest of the Government for the successful realization of the program with all reasonable care, skill and diligence with sound engineering, administrative and financial practices and shall be responsible to Executive Agency (FPCO) for the discharge of responsibilities.

The Consultant shall during the execution of the services appoint and designate a Team Leader to represent the Consultant in Bangladesh in all matters relating to the services.

The Consultant shall be responsible for the professional and technical competence of its employee and the personnel's behavior and shall use its best efforts to select and employ for work in Bangladesh only those persons who in its judgment will be the best and most likely to perform satisfactorily the terms of their employment.

The Consultant shall keep accurate and systematic records and accounts in respect of the services in such form and detail as is customary in the profession and shall be sufficient to accurately establish the costs and expenditures incurred for the services.

Except with the prior approval of the Government/Executive Agency the Consultant shall not any time communicate to any persons or entity not connected with the services any confidential information, disclose to them for the purpose of the services or disclosed by them in the course of their services, nor shall the Consultant or the Consultant's personnel make public any information relating to the services.

The Consultant shall be responsible in respect of life, health, accident, travel and other insurance which may be necessary for the Consultant's personnel for the purpose of the services.

All existing rules and regulations of the Govt. of Bangladesh related to the classification, custody and issue of restricted map, aerial photograph and other related data shall be maintained.

9.2 Information

The Consultant shall furnish the Executing Agency With such information relating to the services

and the Project as the Executing Agency may from time to time reasonably request.

9.3 Assignments, Subcontractors

Except with the prior written approval of the Government the Consultant shall not assign or transfer the contract or any part thereof nor engage any independent Consultant or sub-contractors to perform any part of the services other than nominated personnel listed in the contract.

The approval of the Executing Agency to the assignment of any part of the Contract or to the engagement by the Consultant of independent Consultants or sub-contractors to perform any part of the services shall not relieve the Consultant of any of his obligations under this contract.

9.4 Prohibition on Conflicting Activity

No member of the personnel assigned to this Project shall engage, directly or indirectly either in his name or through the Consultant any other business or professional activities in Bangladesh during the performance of his duties or assignment under this contract.

9.5 Laws and Regulations of Bangladesh

This Contract shall be and is deemed to be a Bangladesh contract and shall accordingly be governed by and construed according to the laws for the time being in force in Bangladesh.

The Consultant shall respect and abide by all applicable laws and regulations in Bangladesh and shall use his best efforts to ensure that the Consultant's personnel and their dependents while in Bangladesh and local employees of the Consultant shall respect and abide by all laws and regulations of Bangladesh.

9.6 Ownership of Drawings, Data and Reports

All reports and relevant data such as maps, drawings, plans, statistics and supporting records or materials compiled or prepared in the course of Services shall be the absolute property of the Government. The Consultant agrees to deliver all these materials to the Executive Agency upon completion or termination of this Agreement.

9.7 Report and Communication

All reports, communications, recommendations and general correspondence from the Consultant to the Executing Agency under the Agreement shall be in English language. One hundred copies of each report are to be submitted.

9.8 Notice of Delay

In the event when the Consultant delay in obtaining the required services of facilities set forth in this contract for the conduct of the services, or the occurrence of the event or condition that might delay or prevent completion of the services in accordance with the time schedule, the Consultant shall promptly notify the Government of such delay indicating what steps are being taken or suggested by the Consultant to meet the situation any may request an appropriate

extension of time for completion of the services.

10. COST ESTIMATES

The overall cost estimate for the study is shown in Appendix 1.

APPENDICES

1. Cost Estimates.
2 Job Descriptions.

COST ESTIMATES

		Take	APPENDIX US ($)
1.	Expatriate Consultants :		
	One Socio-economist, one Agronomist and one Water Resources Planner (14 man-months @ $ 19500)	-	2,73,000
2.	Local Consultants :		
	(a)One Social Scientist and one Anthropologist for 18 months each (36 man-months @ Tk. 80,000)	28,80,000	-
	(b) Mid-level specialists (100 man-months @ Tk. 64, 000)	64,00,000	-
3.	Support Staff :		
	(a) Junior level field survey staff (100 man-months @ 10,000)	10,00,000	-
	(b) Secretarial staff, data processor and field assistants. (232 man-months @ Tk. 8,000)	18,56,000	-
4.	Project Inputs		
	(a) Rental of office space, including operation facilities, for 18 months (1500 sft x Tk. 75.00)	20,25,000	
	(b) Vehicles :		
	i) Purchase of three motor Vehicles and two motor cycles by the expatriate consultant for the project	-	60,000
	ii) CDST to be paid by GOB for the vehicles after the project period (about 75% of new cost)	15,00,000	-
	iii) Operation and maintenance of the vehicles	5,10,000	
	(c) Computer (Local Purchases) L.S	6,50,00	-
	(d) Local and Foreign travel L.S	2,50,000	7,000
	(e) Reports reproduction and Workshops, L.S	30,00,000	
	TOTAL	20,071,000 ($590,000)	340,000

GRAND TOTAL = (590,000 + 340, 000) = $ 930,000

NOTE : About 10% of the total will be added as GOB contribution.

JOB DESCRIPTIONS

APPENDIX 2

1. Socio-economist/Team Leader (Expatriate)

He/she should have a post graduate degree, preferably a Ph.D, in Economics, or Social Science, and must have extensive experience in designing and undertaking rural socio-economic surveys in developing countries, preferably in Bangladesh. He/she should also have a specialisation in disaster preparedness.

The main responsibility of this specialist would include, but not necessarily be limited to :

- review of the available socio-economic studies of the Bangladesh floodplains and those available for floodplains in other countries;
- development of appropriate survey methodologies for use in studies of Flood responsiveness;
- analysis of the socio-economic survey findings and preparation of initial planning guidelines for regional studies, and key socio-economic indicators to be used in feasibility studies;
- preparation of socio-economic guidelines and criteria to be used in feasibility studies of Action Plan investment projects.

As the Team Leaser, he/she would have responsibility for overall management and monitoring of project activities, and for maintaining liaison with the Government of Bangladesh and the World Bank so that the project is implemented in a timely way and according to the TOR. In addition to his/her responsibility as Team Leader, he/she would be required directly to participate in the socio-economic activities of the study and to guide the other consultants.

2. Farming Systems Agronomist (Expatriate)

He/she should have a post-graduate qualification in Agriculture of Agronomy, with a minimum of 20 years relevant experience. His/her major responsibility will include, but not necessarily be limited to :

- review of current agricultural practices and farming systems in the survey areas, with special reference to the ways in which these are adapted to floods of different types;
- development, together with the Socio-economist, of appropriate survey methodologies for use in studies of the responsiveness of floodplain agriculture;
- analysis of the socio-economic survey findings relating to agriculture and preparation of initial planning guidelines for regional studies, and key indicators to be used in feasibility studies.
- assistance with the preparation of socio-economic guidelines and criteria to be used in feasibility studies of Action Plan investments.

3. Social Scientist/Team Leader (Local Consultant)

He/she should have a post graduate qualification in Social Science with a minimum of 20 years experience in designing and supervising social surveys in rural Bangladesh.

His/her main job will include, but not be limited to:

- review of existing social responsiveness to floods;
- development of social survey methodology for flood responsiveness
- analysis of survey finding and preparation of guidelines and criteria to be used in Action Plan investment projects.

If he/she is selected as the Team Leader, he/she would have additional responsibilities as mentioned in sl. 1, last para.

4. Anthropologist (Local Consultant)

The Anthropologist should have a post-graduate qualification in Social Anthropology and have at least 20 years experience, which should include village-level research. The main responsibilities of the Anthropologist would be to :

- develop appropriate survey methodologies for use in studies of flood responsiveness, including ways of identifying key indicators for use in the early planning od Action Plan Projects;
- assess the responsiveness of different socio-economic groups to floods of different kinds;
- assess changes in survival strategies and responsiveness of different socio-economic groups over time through an oral history survey and other techniques;
- supervise socio-economic survey teams in the field

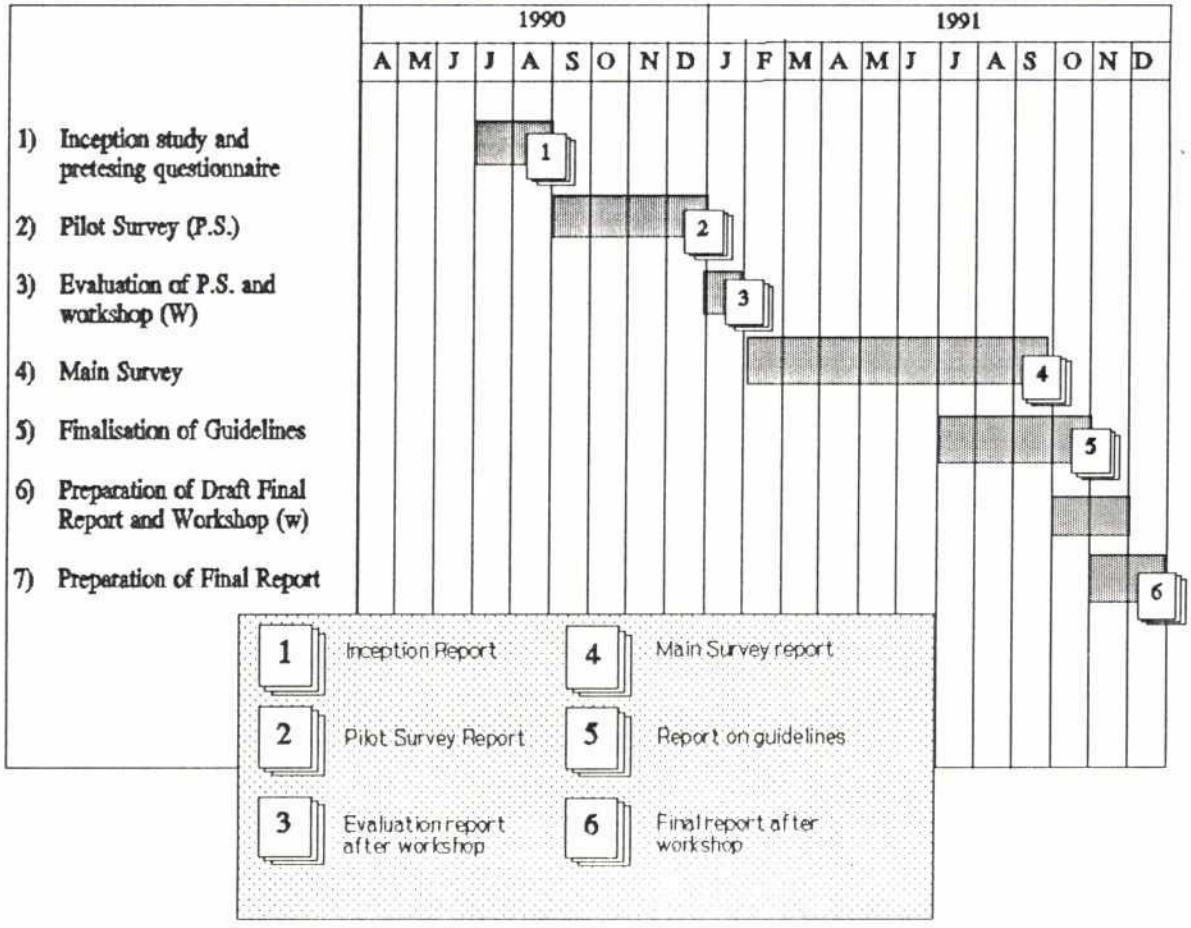


Figure A.1 : Schedule of Activities for Flood Response Study (FAP - 14)

Appendix B

A COMPARATIVE ANALYSIS OF THE PLANNED AND ACTUAL SCHEDULE OF ACTIVITIES

The study was initiated in December, 1990. However, because of the Gulf War, the actual start of the study was delayed by three months to April, 1991 with a corresponding completion date 18 months later i.e. 30 September, 1992. Figure B.1 summarizes the actual work schedule. The following sections briefly compare the planned schedule of activities as per the TOR (Fig. A.1) with the actual schedule (Fig. B.1).

1. Study Design and Inception Period

The study design and inception period included:

a. Survey design (including pretesting questionnaries) started in April and ended in May, 1992.

b. Recruitment and training of field personnel started in mid-April and ended in May, 1992.

c. Draft Inception Report was submitted to FPCO in August, 1992.

2. Pilot Survey/Phase 1 survey

According to the TOR, all the activities under this item were scheduled to be done within the period - September to December, 1990. However, the actual survey related activities were confined within the period May to August, 1991.

The activities covered under this are 100% survey, household survey, institutional survey, data analysis and literature review.

3. Evaluation of Pilot Survey/Phase 1 Survey and Workshop

The activity schedule as per TOR shows that the Workshop was to be held in January, 1991 and the Evaluation Report was to be submitted at the end of the same month.

The Workshop was actually held in mid-August, 1991 and the Evaluation Report thereof was submitted a month later.

4. Main Survey/Phase 2 Survey

The TOR provided for nearly eight months from first week of February, 1991.

Different components of this activity were completed within a duration of seven months starting in November, 1991. Meanwhile a conference was also held in early February, 1992 to share some interim findings of the study with the concerned persons and institutions. The component activities broadly included field survey, data coding and entry, and analysis.

5. Finalization of Guidelines

This is an activity that was planned to be accomplished within a period of four months starting July, 1991 culminating in the Report on Guidelines at the end of the period i.e. end of October, 1991.

The work on the Draft Guidelines started at the begining of the May, 1992 and continued up to the end of July wereafter a draft report was prepared. The report on guidlines has been submitted along with this Draft Final Report.

6. Preparation of Draft Final Report and Workshop

The Draft Final Report was planned for October and November, 1991 with the provision that the Workshop would be held towards the end of of the period.

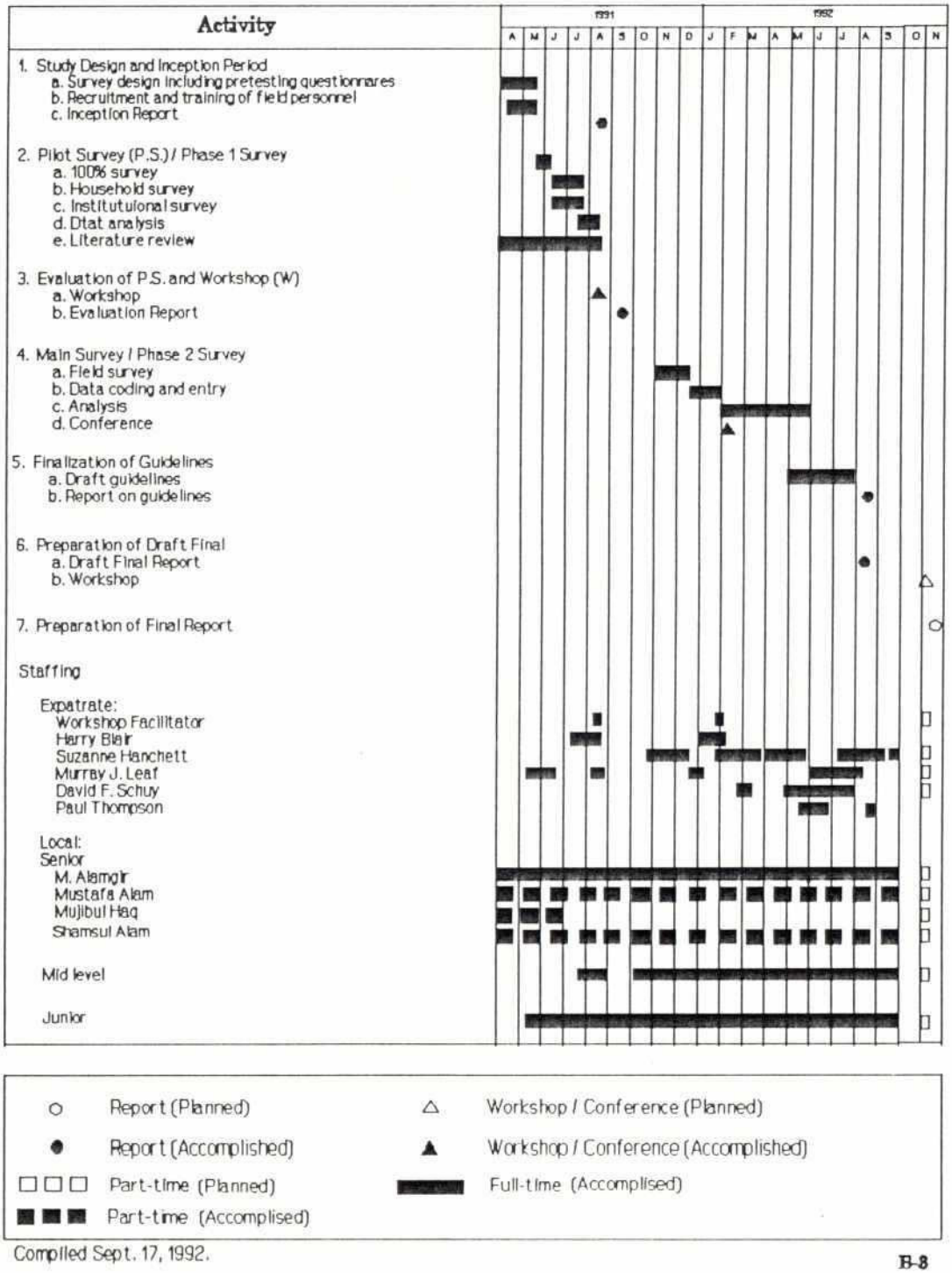
The Draft Final Report was submitted to FPCO in September and at FPCO's request the Workshop is planned to be held sometime in November, 1992.

7. Preparation of the Final Report

The TOR indicates that the Final Report was planned to be submitted to FPCO at the end of December, 1991.

The Final Report will be submitted just about one month after the Workshop planned to be held in November, 1992.

Figure B.1 : Actual Schedule of Activities for Flood Response Study (FAP-14)



Compiled Sept. 17, 1992.

Appendix C

THE STUDY METHODOLOGY

The Study and its Objectives

After the exceptionally severe floods in 1987 and 1988, there was greatly heightened international interest in assisting Bangladesh with its flood problems, and diverse programs were suggested. In mid-1989 the Government of Bangladesh (GOB) requested the World Bank to help coordinate the international donor interest and activities. Accordingly, the Bank in cooperation with GOB prepared a Flood Action Plan (WB, 1990), which was endorsed at two meetings of donors with GOB in December 1989-January 1990. The Flood Plan Coordination Organization (FPCO), under the Ministry of Irrigation, Water Development and Flood Control (MIWD&FC), was established for coordination with the Government of Bangladesh.

The Flood Action Plan (FAP) lays out eleven main components and fifteen supporting activities to be undertaken over the period 1990-1995. The Flood Response Study is one of the latter. It is one of the four supporting activities that have been funded by the United States Agency for International Development (USAID)[1].

Terms of Reference

Under the Terms of Reference (Appendix A), this study has four major aims:

a. To assess existing flood response of people living in flood plain areas;

b. To evaluate flood response practices at selected sites in different flood plain agro-ecological zones;

c. To assess the possible impact of infrastructural flood protection efforts such as embankments or polders; and

d. To formulate guidelines and recommendations on ways of enhancing effective flood response measures that will be useful in the planning, design and operation of other FAP projects, especially the regional studies and FAP-23 (flood proofing, which has since been formally concluded and in substance absorbed into other activities including this study).

The TOR did not specifically mention cyclones, although the study area was defined as the major river flood plains and not the coastal storm surge area. The scale of the study was left largely unspecified, except that the TOR called for at least six upazilas/study sites. Once the design of the study began,

[1] The other three USAID-supported efforts are the Environmental Study (FAP-16), the Geographic Information System (FAP-19), and the Flood Proofing Pilot Project (FAP-23). All four USAID-supported FAP activities are being undertaken by the Irrigation Support Project for Asia and the Near East (ISPAN), which is the USAID contracting organization. For a recent update on the progress of these and the other FAP components, see FPCO (1990b).

however, it was clear that more points would be needed to do minimal justice to the many types of distinct situations.

Thus the terms of reference call for a study to determine how people presently respond to the full range of water regimes of the Bangladesh flood plain.

The overall aim of the study is to be able to better predict the social impact of interventions, i.e. the way people will perceive them affecting their lives and livelihoods. It should thus provide a wide framework within which many types of interventions can be compared, physical and non-physical, centralized and locally originated, direct and indirect. It should provide both a broad sweep of useful information and an interdisciplinary methodological model which regional planning studies and in the long run the departments of the Government of Bangladesh will be able to utilize in their planning and feasibility assessments.

The original TOR envisioned the Flood Response Study as having two phases: an initial pilot phase followed by a main study in the form of a large scale replication of the pilot. In the course of the preparation of the initial study design, it become increasingly clear that it would be impossible to devise a single survey instrument that could cover all the important issues and yet could be administered uniformly within a reasonable amount of time. Thus at the outset two major decisions were made:

1. To bifurcate the study into a household level survey and a parallel institutional study of the organizational and social context within which households operate.

2. To conduct the household survey with a rather extensive questionnaire focussing on relatively "objective" matters such as physical resources and their uses and follow that up with a second phase that would look in greater depth at specific policy and problem issues, at whatever level appeared to be important given the concerns of the respondents interviewed in the first phase. The "pilot" phase was collapsed into the design of the survey instrument and the training program for the field interview staff. This was discussed and agreed to by the parties concerned in December-January 1990-91.

In the event, however, the first phase was completed on a somewhat larger scale than originally designed, and the second phase was not carried out as planned. There were two main reasons for this. First, because of events outside Bangladesh, the start of the study was delayed nine months and the completion date was set back correspondingly. Second, in response to the initial workshop presenting the first results of the survey, FPCO raised objections to the effect that deeply flooded and char areas were under-represented. To accommodate these objections, FAP-14 agreed to replicate the original survey in six villages in three new upazilas, without, however, putting back the final completion date. Although the questionnaire was modified and new components were added, these dealt with specific issues pertinent to chars and beels, and did not amount to a substitute for the problem-focussed type of research originally intended for the second phase. This took about six months to complete, with data analysis finished in May, 1992. However, one important activity of the sort intended for the second phase was a study of flood response in relation to gender, done concurrently with the study of the second six villages.

Objectives of Phase 1

The design of the survey questionnaires and the protocols for the institutional survey of phase 1 were based on several related factual assumptions.

1. It is not reasonable to attempt to focus on floods separately from normal responses to the annual water regime in the region. Although floods may be verbally distinguished from ordinary inundation, peoples' preparations for one cannot be sharply separated from their preparations for the other, nor can it be forgotten that many measures to eliminate flooding would also eliminate or greatly alter the normal annual inundation cycle. Thus the first priority was to determine how the annual round of rural life is adjusted to, the annual monsoon.

2. Peoples' needs, resources and plans very largely reflect the need to provide for basic household subsistence, so that resources will provide key indicators of subsistence positions, and subsistence requirements will provide an important explanatory framework within which the disposition of resources could be accounted for.

3. Householders themselves will have the best information on the way the local water regime affects their present activities, and therefore on the possible social and economic impact of modifications of that regime.

Given these assumptions, the survey had four purposes:

1. to delineate household level resources and needs,

2. to see how households plan to meet these needs,

3. to see what measures households take by way of flood preparation and flood response, and

4. to see how these household level measures are related to local level institutional responses, mainly at the level of village, union parishad, and upazila.

Complementing the household level survey, the institutional level survey sought information that could not efficiently be asked for at the household level, as well as a more regional view of the household problems and their solutions. It also collected information on the constraints which operate at the institutional levels to prevent more effective flood preparation and responsiveness, and sought responses to the evaluations and suggestions of the householders.

Selection of the Study Sites

The TOR did not rigidly specify either the subject matter or the methods to pursue. It rather laid out a set of broad requirements for both within which the study developed by an iterative process of consultation and field testing.

Selection Criteria

The TOR contained five major selection criteria for the areas which the studies were to represent. These are:

1. a representative sample from each FAP region;

2. a representative sample from different agro-ecological zones;

3. samples from flood vulnerable areas, not only from areas subject to river flooding and river erosion;

4. samples from normally flooded areas as well as areas which only experience major floods; and

5. areas subject to floods of different origin which include overbank spill, localized rainfall, flash flooding, and drainage congestion.

With these criteria, upazilas, villages (as in Map 1), and finally households were selected in successive rounds of activity.

Physiographic and flood characteristics of the upazilas are as follows:

A. Chirirbandar Upazila, Dinajpur District. Part of the Barind tract, subject to flash flooding from rainfall and overbank spill. Duration of flood 5 to 10 days during July and August. Drainage is generally good, and soils are light. Physiographic units are 35% Tista Alluvium, 30% Barind Tract, 25% mixed Barind, and 10% Piedmont Alluvium. This area has only experienced major floods and floods from localized rainfall and congested drainage.

B. Singra Upazila, Natore District. This is 50% old floodplain basins, 30% Young Ganges Floodplain, 10% Mixed Young and Old Floodplain, and 10% Barind. The Atrai Basin is a flood vulnerable area, and the area is normally deeply flooded. Parts of the upazila are also affected by flash flooding from the Barind tract, and there are problems from drainage congestions. Singra lies within the Chalan Beel polder complex. Flooding is seasonal, August-September.

C. Dhunat Upazila, Bogra District. This is 96% Karatoya-Bangali Meander Floodplain and 4% active Brahmaputra Floodplain. The eastern portion of the upazila is under the protection of the Brahmaputra Right Bank Embankment (BRE). The flood plain is almost level, but with relief formed by irregular ridges and cutoff meanders. A small area in the eastern portion of the upazila is subject to river bank erosion. There has been flooding by breaches in the BRE and from drainage congestion behind it. The area was severely affected in the 1987 and 1988 floods.

D. Sarishabari Upazila, Jamalpur District. This is 50% Old Brahmaputra Flood Plain and 50% Active and Young Brahmaputra Flood Plain. It is immediately across the river from Dhunat, offering a good comparison. The flood source is runoff from adjacent high lands of the Madhupur tract to the east, at times backed by Jamuna and Old Brahmaputra levels. It is incompletely protected by the Brahmaputra Left Embankment, and was moderately flood-affected in 1987, more severely in 1988. There is erosion in the active Brahmaputra floodplain as there are char lands.

E. Tangail Upazila, Tangail District. This is 100% Young Brahmaputra-Jamuna Floodplain. It has a complex relief of broad and narrow ridges, cutoff channels and basins. The area is normally flooded. The main flood source is overbank spill from the Dhaleshwari/Lohajang rivers during major Brahmaputra-Jamuna floods.

F. Sunamganj Upazila, Sunamganj District. This is 50% Surma-Kushiyara Floodplain, 30% Piedmont Alluvial Floodplain, and 20% Old Floodplain with Piedmont Alluvium in basins. The area is subject to early flash flooding. There are deeply flooded basins (haors), and the area has several submersible embankments, of differing age. There are also problems of localized rainfall and consequent drainage congestion.

G. Nasirnagar Upazila, Brahmanbaria District, is 80% Old Meghna Estuarine Floodplain and 20% Sylhet Basin. Part of this upazila is located in the haor area of the Northeast region, which is characterized by annual deep-water flooding and flash floods. Submersible embankments have been suggested to protect against early flash floods.

H. Brahmanbaria Upazila, Brahmanbaria District. This is 60% Old Meghna Estuarine Floodplain, 20% Titas Floodplain, and 20% Titas, Paulia, Lauha, and Kalachara Piedmont Alluvial Plain. Soils are silty and clayey, and levels almost evenly spread. The Upazila is subject to early and heavy floods, both seasonal and flashy. Flash floods are in the east; basins to the west fill early and rapidly. Overbank spill is important, as is poor drainage. There are many man-made drainage channels which need re-excavation.

I. Matlab Upazila, Chandpur District, is 70% Middle Meghna Floodplain, 20% Old Meghna Estuarine Floodplain, and 10% Lower Meghna River Floodplain. It is subject to seasonal floods, and has active river erosion. Main flood source is overbank spill from the Meghna. Within the Upazila is the Meghna-Dhonagoda Flood Control Drainage and Irrigation (FCDI) Project, completed in 1986, which empoldered most of the Upazila. It encloses some 17,000 hectares and irrigates roughly 14,000 hectares[2]. Prior to construction, the land levels are almost evenly spread. The embankment breached in 1987 and 1988, but since then protection has been effective.

J. Madhukali Upazila, Faridpur District. This is 50% Old Ganges Meander floodplain and 50% Young Ganges Meander Floodplain, with typical meander patterns. Flooding sources are ponded rainwater or raised water table, as well as overspill from the Ganges down the Madhumati and Kumar. Soils are silty loams and silty clay loams. Drainage from higher areas is rapid after flood, but the basins stay wet much longer.

K. Bhedarganj Upazila, Shariatpur District, is 75% Young Ganges Meander Floodplain and 25% Lower Meghna Estuarine Floodplain. It is normally flooded, and there are char lands and some bank erosion. This area lies across the Meghna River from Matlab, at the point where it is joined by the Padma from the West. Since the Meghna is moving east here, toward Matlab, it is creating chars on Bhedarganj side.

L. Satkhira Sadar Upazila, Satkhira District. The main rivers in the area are tidal, and the physiography is 50% Ganges meander floodplain, 20% Ganges tidal floodplain, and 30% mixed. The area comes partly under the Coastal Embankment Project. It is seasonally vulnerable to tidal flooding, but has only

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[2] See CIRDAP (1987) for project data and FPCO/HTS (1992) for an post-evaluation.

experienced major floods in 1987. Floods occur in June to November. Drainage is poor, and in part of the area there are also problems with controlling saltwater incursions.

M. Sreenagar Upazila, Munshiganj District. This contains part of Arial Beel, and is in the flood plain of the river Dhaleswari. The major problem is drainage congestion rather than over-bank spill. The area is deeply flooded in the monsoon. As the water recedes, the lands at the edge of the beel are used for boro cultivation. Fishing is also a major source of income for the people in this area.

N. Char Bhadrashan Upazila, Faridpur District. This is in the active flood plain of the Padma. The upazila, on the right bank of the river, is exposed to both severe bank erosion and substantial land accretion. The Char areas have irregular relief of broad and narrow ridges and depressions, interrupted by cut-off channels and active channels.

O. Bhuapur Upazila, Tangail District. This is located in the active flood plain of the river Jamuna. The shifting and braiding nature of the river has created a wide range of char lands where settlement takes place on the relatively stable and older ones. Sand dominates the surface soil and precludes dependable farming.

In Bangladesh as a whole, flood plains account for 67% of the land area. In the original 12 study upazilas 92% of the area is floodplain, and the three additional upazilas are 100% floodplain (see Map 2). Moreover, on average about 24.9% of Bangladesh is classified as F2, F3, or F4 (moderately or deeply flooded). The area so classified in the original 12 upazilas was 41%, and in the additional 3 upazilas it is 46%. Only Chirirbandar upazila is not in any main flood plain, although one of the villages chosen is subject to flash floods and drainage congestion and the other to secondary river flooding.

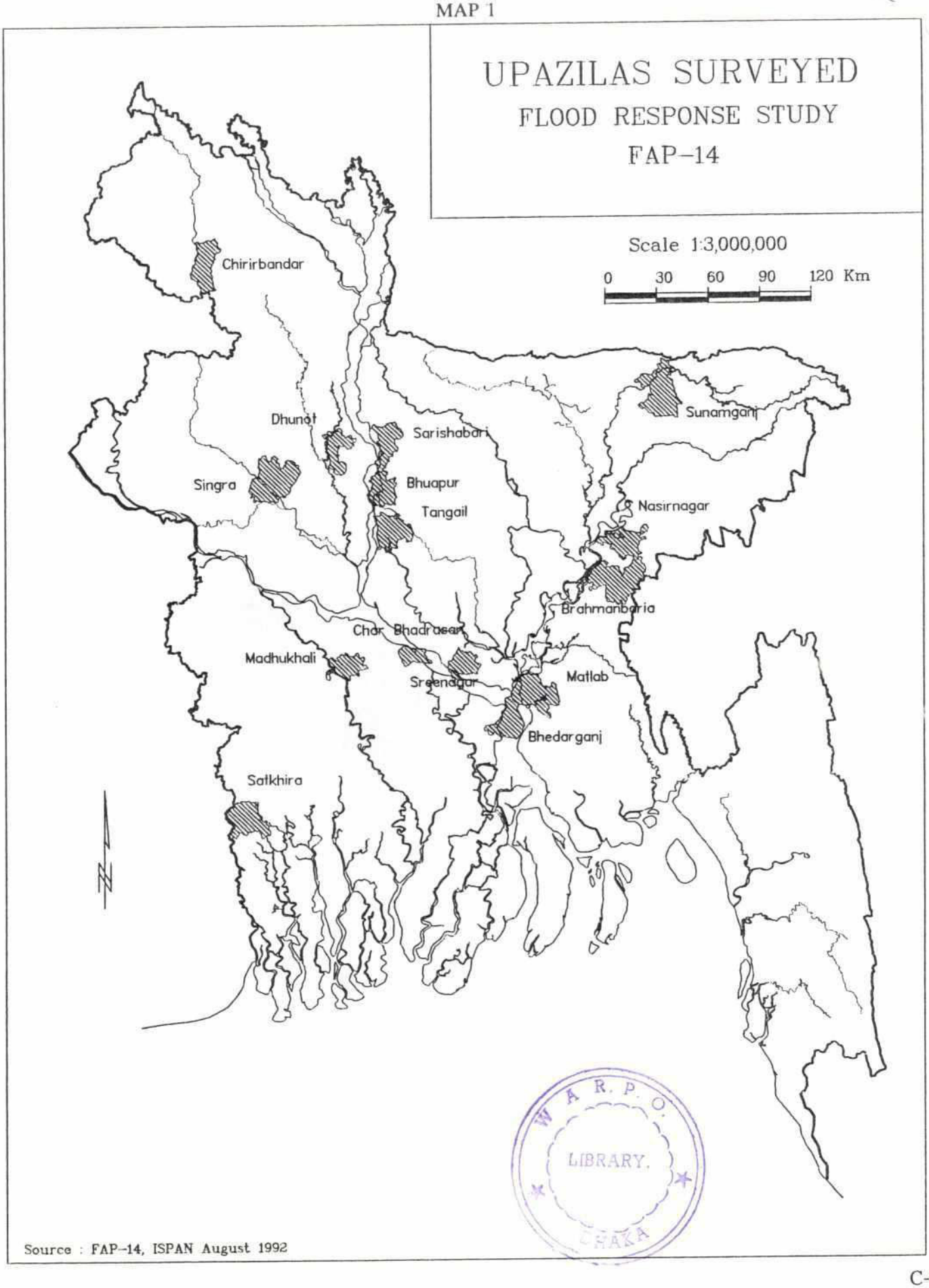
The upazilas were purposively selected to represent the more flood prone areas of Bangladesh, both in terms of area and in terms of population and the inclusion of the three new upazilas reinforces it further.

The Village Sample

After the initial selection of upazilas, reconnaissance visits were made to select villages. The aim of the selection was to represent as much contrast within the upazila as possible, with respect to features that seemed likely to affect the response to the flood plain environment, including severity of the 1987 and 1988 floods. In general, the aim was to have the villages be as representative of the upazila as possible, but also to represent contrasting pairs of attributes. For example, if in one upazila a deeply flooded and remote village contrasted with a less deeply flooded village near the upazila town, in another upazila the remote village would be selected to be less deeply flooded and that near the town to be more deeply flooded. Villages were always chosen from two different unions. Village characteristics are discussed in Chapter 1 and detailed physical and socio-economic features are given in Appendix C.

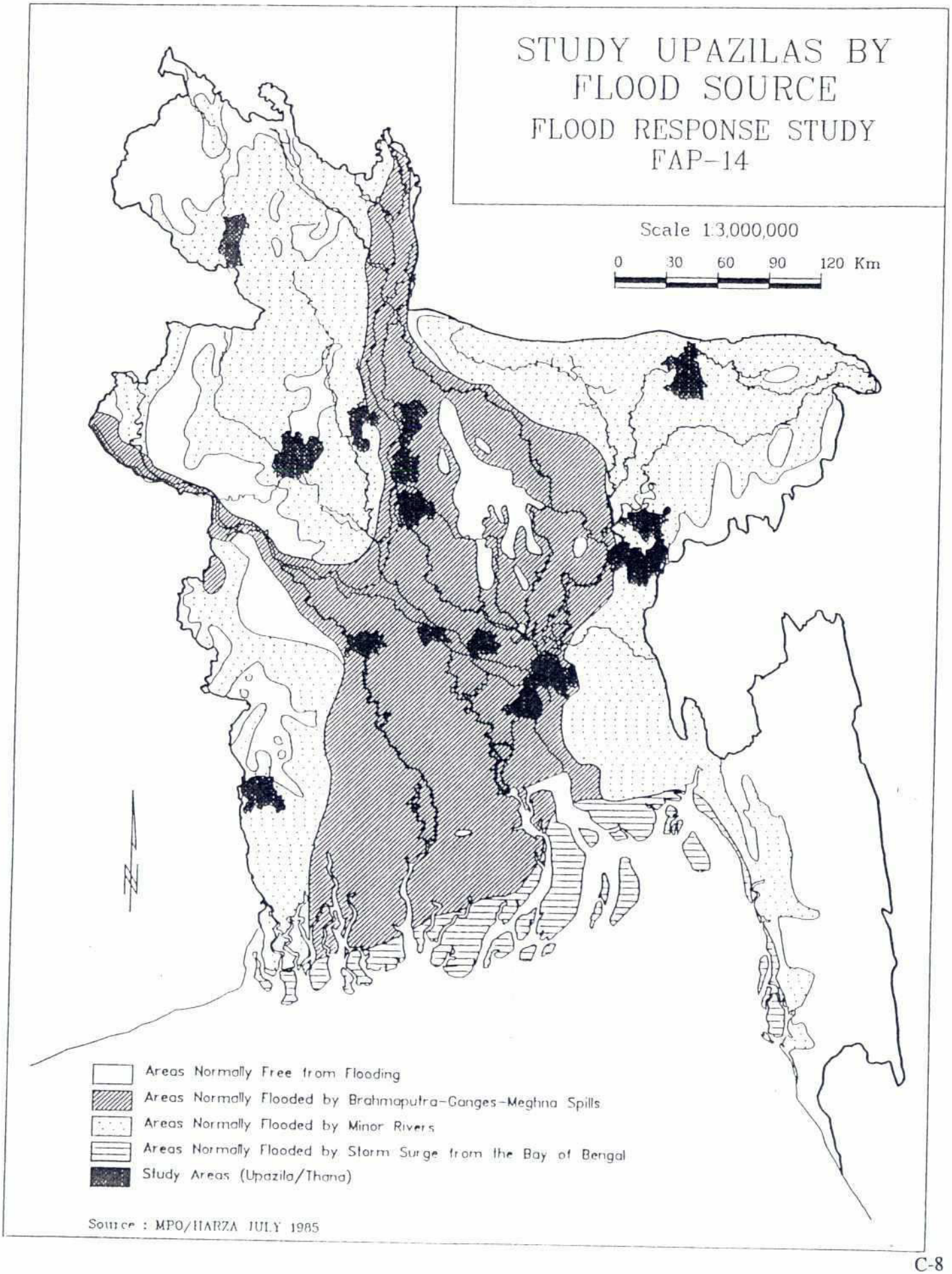
For the institutional study, each village in the survey was compared with at least one other in the same union in order to provide a more secure basis for bringing the findings of the household study to the union parishad for discussion and, in the same way, within the upazila one or two further villages were visited under different union parishads before taking the results of discussions at the union parishad level to the upazila level for discussion there.

MAP 1



Source : FAP–14, ISPAN August 1992

MAP 2


STUDY UPAZILAS BY FLOOD SOURCE
FLOOD RESPONSE STUDY
FAP-14
Scale 1:3,000,000
0 30 60 90 120 Km
N
Areas Normally Free from Flooding
Areas Normally Flooded by Brahmaputra-Ganges-Meghna Spills
Areas Normally Flooded by Minor Rivers
Areas Normally Flooded by Storm Surge from the Bay of Bengal
Study Areas (Upazila/Thana)
Source : MPO/HARZA JULY 1985

The Household Sample Within Each Village

Sample households were selected in two stages. First, a simple two-page questionnaire was administered to every household (the "hundred percent survey") to identify the house with respect to major socio-economic indicators. These results were quickly analyzed to provide the basis for the stratified random sample.

The 100 Percent Survey Questionnaire

The questionnaire for the 100% survey is attached at the end of this Appendix. It asks for the educational, religious, occupational, economic, and landholding characteristics of the households. It also assigned an identification number to each village household, which was the basis for later returning to that household and also for linking the various computer files together to create an overall household profile.

The Household Questionnaire

This instrument (attached at the end of this Appendix) is the principal data source for FAP-14's statistical analyses. Its development has been an iterative process, extending over a number of months through various reviews, revisions and a field-testing exercise that was incorporated into the training program set up for the FAP-14 field enumerators.

The household survey had four purposes:

- to determine household needs that shape household agricultural and employment strategies, including land use or employment requirements;
- to survey the major strategies presently employed to mitigate the danger of floods and exploit the floodplain water regime;
- to seek the weighting attached by householders to various dangers posed and benefits provided by ordinary and extraordinary water inundations/floods; and finally
- a group of questions to seek the householders assessments of the benefit or difficulty presented by existing institutional and infrastructural arrangements and of those which might be proposed, which the householders might be expected to have views on.

The questionnaire was initially designed in December 1990 after reviewing several survey instruments that had been used in other studies. It was modified, pretested and translated into Bangla by the study team leaders, and again pretested with the trainee enumerators. It was thought very important that they have personal familiarity with the survey instrument and the way it is responded to in a field situation, and that they adjust and modify it until they were confident. The leadership team developed extensive instructions for the enumerators, and provided codes for possible answers to a number of questions (still allowing for "other" options and explanations from respondents) to smooth data entry and analysis.

The extended questionnaire was expected to take about one-half day to administer per household.[3] The total time allowed was 30 days per village. As the enumerators and those in their study villages became familiar with the routine of administering the questionnaire, they were able to pick up their speed somewhat. Some of the teams were able to interview extra households, and were given instructions for making an unbiased choice from specialized and important but infrequently found occupations that were skipped in the main random selection. In the end the total number of households for the first twenty four villages was 1852, as against the planned 1820 which was needed for the strict 25% and 33.3% sampling proportions.

The questionnaire employed in the household survey is detailed, but it was also intended to be somewhat open ended. Allowance was made for the enumerators to record explanations of answers where appropriate, and they were encouraged to do so in their instructions. In general a very high priority was placed on letting the respondents speak for themselves through the survey, rather than imposing alien categories on them.

Conceptually, the household survey has two parts. The first part focuses on the needs and flood response by the household as a unit, and addresses successively matters of household composition (humans and animals), physical description of buildings, moveable property, market access, flood preparation and response, and household perception of institutional measures of flood protection and response. The second part is concerned with the household subsistence budget and cropping pattern. It elicits the household food/fodder consumption budget--the amounts of each food and fodder stuff which are produced on the farm, and the disposal of surpluses or the measures taken to make up deficits. This will be related to plot by plot elicitation of cropping cycles yields, and periods of flood.

The Institutional Protocol

The second major aspect of the FAP-14 survey enterprise focuses on institutional responses to flooding. In contrast to the household survey, where the methodology centered around detailed questionnaires administered to a carefully chosen sample of rural households, the approach with the institutional survey was a series of structured interviews with purposively selected individuals and groups at the village, union, upazila and district levels. Interviews were held with the general people, local knowledgeable persons and officials of governmental and nongovernmental institutions. The overall aim was to elicit local opinions and perceptions of what the various institutions have been doing in response to flood problems and what could be done in future. More specifically, the institutional survey was designed to elicit information on:

- flood response measures adopted by various institutions;
- institutional measures that might be taken to improve the situation; and
- policy implications for the various levels of institutions.

[3] In many (perhaps most) cases, the enumerator teams took longer than a half day to administer the questionnaires, because the press of household duties often did not allow a half-day of free time at one stretch. Accordingly, the enumerators might spend an hour with a given household, then come back the next day for another hour at a convenient time, and finish up on a third day.

The Study Process

It is tempting to describe the conduct of the study in terms of simple sequence of design of the study, collection of data, and analysis, but this would be misleading. Like most other scientific activities, the FAP-14 study proceeded step-wise, with some analysis at every step and next step dependent on the results of that analysis. The first such major step was to determine the criteria to use to divide the population for purposes for sampling.

The 100% survey was carried out between May 28 and June 4, 1991. The completed forms were brought back to Dhaka and data were entered into computers.

Stratification of the Sample

Statistical analysis of results from the 100% survey immediately suggested that different sizes of farm were not associated with land of different levels. The correlation between high land and total land held was .13, while the correlation between low land held and the total held was .97. Since 16.4% percent of all self-cultivated land in the survey was reported as high and 68.5% as low, it appeared that these correlations were most likely simply artifacts of the relative availability of land of the two classes, and hence actually a random association. Thus it appeared that people who owned more land simply owned more of all the types there were, without a notable bias toward one type or another.

As a double check landholding by levels was correlated with income. The correlation between income and the amount of low land self-cultivated was 0.25, while that for high land was 0.18, which is substantially no difference. Thus it was not necessary to draw a sample according to the predominance of high or low land, and if a sample was drawn by income or farm size it would be substantially random with respect to land levels.

This decision was subsequently confirmed by correlating the proportion (rather than amount) of low land to all land farmed and seeing if this correlated with measures of income, landholding, family size, or education. The correlation between most of these variables was about .02 (no correlation). For the entire sample, all thirty villages, the correlation of the percentages of high, medium, and low land self-cultivated with the total land self-cultivated was -.07, -.003, and .06, respectively -- no relation, thus clearly ruling out the possibility that those with larger farms favored or dominated any one type of land. Correlations between percentages of high, medium, and low self cultivated and total land owned were in the same range, as were percentages of high, medium, and low land let out on shares and the total land owned -- the latter being -.01, .01, and .07, respectively, thus also ruling out the possibility of owners (such as absentee owners) being involved in a different landholding strategy, with respect to land elevation, than self-cultivating farmers.

On the other hand, it did appear that stated income itself was moderately correlated to total land held: .40. (By comparison, the correlation between income and expense was .75). And finally, both income and land held were moderately strongly correlated with family size. The correlation between income and family size was .45 and between land self cultivated and family size was .37, all at significance levels of .001. All of this indicates that farming depends heavily on family labor, and is generally done by self-cultivation. Those who have more land both take more land and let more land out. Society is not bifurcated into a class of people who own land but do not farm it themselves, living instead on rents, and another class of landless or nearly landless people who do the actual farming and pay rents to the first

group. Rather, the great bulk of the population consists of owner-farmers. Landowners differ from one another in size of holding, not in the legal type of control they have over the land or in the character of the land they prefer.

Finally, crosstabulations showed that reported occupations were largely independent of landholding positions, even though farming on three different bases (self-cultivating, taking income from sharecroppers, and being a sharecropper) were among the occupational classifications. For example "jobless" was reported as an occupational category among landless people but also among those with small and large holdings. Conversely, out of 1501 people who reported themselves as owning up to 2.49 acres (1.00 ha), only 779 also reported their occupation as self-cultivating farmer. One hundred and two reported themselves as cultivating on tenancy, 339 reported their occupation as laborer, and the rest reported a variety of other occupations.

Thus one basis of stratification could be the amount of land owned, which would also involve income and family size. But since this was not clearly related to the declared occupation, and since we agreed that all occupations should be included, occupation should logically be a second basis of stratification to assure this.

Given this, the families in each village were sorted into landless (no land), small, medium, and large holders according to the BBS standards (small is up to 249 decimals, large is 750 or over, and medium is in between). Within each size category they were further sorted by occupation. This gave the strata from which the sample was to be drawn, such as 25% of small holders who were in service, 25% of small holders who were farmers, and so on. The specific houses were identified by their identification numbers, and the drawing was made from the house numbers in each landholding/ occupational stratum using a table of random numbers.

Administration of Household Questionnaire

To conduct the survey, the teams composed of two Enumerators, one Supervisor and one Institutional Surveyor remained in each village for about one month. The household questionnaire asked for about 800 items of information on each family (although in any one household some sections might be blank). To fill it in required four to five hours, and often involved discussion among members of the household. Repeated visits were often necessary to complete it. The survey team usually divided up to interview people in separate houses during the day, but gathered together to go over their results and compare notes in the evening, checking the returns and trying to identify any points that seemed implausible or otherwise worthy of more review with the informants.

By the time the household survey began there were already heavy floods in the eastern half of Bangladesh. It was difficult for the teams to find housing in some villages, and difficult to move about. But since these were precisely the type of conditions the survey was meant to look into, and it had the effect of keeping people in or near their houses, it worked to the advantage of the survey results.

Monitoring of Field Work by Study Principals

While the study was underway, all members of the Bangladeshi leadership team made circuits to visit the study villages, check on progress and on the welfare of the field teams, update instructions, hand carry research materials, and take part in some of the institutional data gathering. Generally, the field teams did excellent work under difficult conditions; supervision was more often a matter of commending them

than correcting them. These field visits were complemented by two pre-arranged visits of field staff to Dhaka. The first was the visit by Institutional Surveyors to deliver the results of the 100% survey and carry back the sample lists for the intensive surveys in the first villages. The second was a similar visit by the Field Supervisors themselves, to bring back the forms from these villages, discuss the results, and carry back the sample lists for the second group of villages. In all upazilas, the more remote village was selected to be surveyed first, and then the one nearer the major town or upazila town. This was expected to provide a better information base for the supervisor and Institutional Surveyor in approaching the Upazila personnel for institutional interviews.

Analyzing the Survey Results

The Household Survey

Following exploratory data analysis and generation of hypotheses, to find consistent underlying bases for the patterns of variation that were found. Two key factors have been identified: flood environment, which is explained in Chapter 1, and socio-economic status, which is broadly indicated by landholding. These are not salient in the same contexts, as one would expect. For a few questions or topics, other parameters such as education have also appeared to be important.

Nine flood environments have been found to be associated with distinctive patterns of flood preparation and response, and, more deeply, with different patterns of household and farm management. These are: Breach, Char, Flood Free, Flash Flood, Haor, Major Beel, Main River (the largest and internally most diverse group), Secondary River, and Semi-Saline Polder. By and large, the delineation (or reaffirmation) of these nine environments in place of the much larger number of possible permutations of flood characteristics (such as start and end dates, depth, source, suddenness, predictability, and duration) should be regarding as a major finding of the study, which should be of substantial value to other work which will follow.

The data has been organized with DBASE IV (initially DBASE III plus) and analyzed with SPSS.

The Institutional Survey

The institutional survey was not designed for statistical analysis, although the household survey provides many points of reference, particularly the measures of householders' perceptions of institutional response to floods. In the main, this part of the study has used a case study method, looking at villages, unions, upazilas and non-governmental organizations as they have prepared for or responded to flooding. More specifically, the survey first attempted to delineate "service gaps" between the needs which householders identify and what the institutions actually do. Then to as great an extent possible it has also attempted to identify possible solutions.

Workshop and Subsequent Modifications of the Study

Workshop Deliberations

The workshop to review the survey and suggest priorities for second phase of the study was held as scheduled on 13 and 14 August, 1991. A report of the proceedings has been circulated as Workshop Briefing Notes, Flood Response Study-Phase 1, in draft dated 15 September 1991.

The workshop had been intended to review the findings and produce a set of prioritized topics to guide the Phase 2 study. But computer data entry for the first phase was much slower than expected, so that the computer files only became available about August 7th, and there was insufficient time to prepare materials and circulate them. There was however, a clear consensus among the participants on the importance of follow up research on peoples participation and gender issues.

To provide more discussion, a second informal workshop was held on August 20 at the ISPAN offices primarily with other social scientists involved in the Flood Action Plan including FPCO, team leaders of the regional studies, and concerned persons from allied NGO's. This did result in a prioritized, although preliminary, list of seven promising follow-up studies that had their roots in the sample survey and were also of interest to the other concerned projects and organizations. They included the lessons to be learned from N.G.O.s, local groups, agricultural adjustment, water fuel and related needs (which would cover a large part of responsibilities and special contributions of women in household management), flood season income generation, local level planning, and the views of, impact of, and consequences of embankments.

In the meantime, however, discussion was also apparently underway in the BWDB and FPCO, and on August 22nd the FAP-14 team was called to a meeting in the BWDB offices. At this meeting repeated criticism was voiced of the initial selection of study Upazilas. This carried over into an extended exchange of correspondence and substantial public discussion. The result of which was, as noted, the repetition of the initial 100% survey and sample survey in the six new villages in three new deeply flooded and unprotected upazilas, and the deferral of the second phase studies.

To allow the new surveys to be conducted in one month instead of two, two institutional surveyors and six field investigators were recruited for each upazila. Recruitment was complete on 26 October, 1991. Training took from 27 October to 31 October. The 100% census was carried out from 4 to 12 November, and the extended household survey, after drawing a sample according to the previously established criteria for stratification, from 16 November to 15 December. To avoid some of the data coding problems that had emerged with the first survey, coding of open-ended items was undertaken by the FAP-14 staff before turning over the forms for data entry. Data entry itself took from 10 to 20 January, 1992. As a consequence of this, data was not analyzed for a second workshop, which was held on February 3 and 4, 1992. Thus there was little more information on the FAP-14 activities was available for this workshop than for the first.

Dissolution of Phase 2

While this activity was underway and the second workshop was being prepared for, nothing was done on the proposed second phase studies except for gender and community participation.

The gender study became in effect a study of women's responsibilities and concerns in the more severely flood affected villages of the sample. It was begun in November, 1991, with pretesting the survey in two of the more remote of the original 24 villages: Shanakoir (Sarishabari upazila) and Fenibeel (Sunamganj upazila). After modification, the questionnaire was administrated on 86 women in seven study villages. These interviews, unlike those of the wider FAP-14 Household Survey, were done with a sample that was intentionally focussed on the female heads of households. In selecting the sample, all female heads of household identified as such in the FAP-14 samples of five villages were interviewed, a total of 28 women. Fifty-eight other women - not household heads, but all either wives or mothers of male heads - were interviewed. Every effort was made to interview women in households already covered by the wider survey, so as to take advantage of background information already collected, and this was done in nearly all cases. In both female-headed and male-headed households only senior women were interviewed as is described in Chapter 5. These were women with important responsibilities who could be assumed to be active participants in family decision-making and thus most likely to provide partinent information in a small study.

Flood Response Study (FAP14)
Village Census Questionnaire

Name of the Enumerator :
Date :

Village : **Union :** **Upazila :** **Zila :**

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	Bari/ Para/ Mahalla	Name of House-hold Head	Father's Name	Movement of Residence (Put ✓ mark where appropriate)		Education* (Use code)	Religion	Main Occupa-tion** (Use Code)	No. of Family Members	Average Monthly Expendi-ture of the Family (Taka)	Average Monthly Income of the Family (Taka)
				Within the Village	From outside the Village						

* Education Code : 1. Illiterate 2. Can read and write but no formal education 3. Upto class V 4.Class VI to SSC 5. HSC 6. Degree and above

** Occupation Code: 1. Service 2.Business 3. Sharecrop out 4. Cultivate own land 5. Sharecrop in 6. Teaching 7. Day labour 8. Student 9. Fisherman 10. Weaver 11. Potter 12. Blacksmith 13.Unemployed 14. Household work 15. Others (specify)

1	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Sl. No.	Own Land under cultivation												Own land not under cultivation				
	Total No. of Plots	Under own cultivation				Share Cropped out/Leased out (annaul cash rental)							Cultivable				Land not cultivable, (Homestead, garden, pond etc.) (Dec)
		No. of Plots	High land (Dec) ***	Medium land (Dec) ***	Low land (Dec) ***	No. of Plots	High land (Dec)		Medium land (Dec)		Low land (Dec)		No. of Plot .	High land (Dec)	Mediu m land (Dec)	Low land (Dec)	
							Share Crop	Lease	Share Crop	Lease	Share Crop	Lease					

*** In normal monsoon, an area with a water depth up to 1 foot is considered as high, 1-3 feet as medium and over 3 feet as low land

1	30	31	32	33	34	35	36	37	38	39	40	41
Sl. No.	Land Sharecropped in /Leased in (under annual cash rental)							Land under mortgage		Total market value of homesteads and other assets (Taka)		Remarks
	No. of Plots	High land (Decimal)		Medium land (Decimal)		Low land (Decimal)		Mortg-aged in (Dec)	Mortg-aged out (Dec)			
		Share-crop	Lease	Share-crop	Lease	Share-crop	Lease			Homestead	Other assets *	

*** Specify other assets in the Col. 41**

Notes on the Village Census Questionnaire

1. Average monthly family income during the last year will include :

   a) value of crops produced;
   b) value of other commodities produced;
   c) earning from day laboring;
   d) earning from wages;
   e) profit from business;
   f) remittance received from abroad;
   g) others (do not include credit received and sale proceeds of business)

2. Average monthly family expenditure during the last year will include:

   a) expenses in food, shelter and clothing ;
   b) on medicine and other health care;
   c) on education;
   d) on entertainment (marriage etc.)
   e) on festivals;
   f) others (do not include investment and credit)

3. Head of household (respondent) is usually the father in the family in whose absence the eldest son or mother would be treated as the head of household. If the head of household is unable to answer due to old age or other reason, another member of the household could answer for the family.

4. A family (household) will comprise all members either related by blood or marriage taking food from the same kitchen.

একক তাপ পরিবার ভিত্তিক জরীপ
(বন্যা মাত্রা সমীক্ষা)

জরীপকারীর নাম------------------------
তারিখ--------------------------

গ্রাম----------------------------ইউনিয়ন----------------------------উপজেলা------------------------জেলা----------------------------

১	২	৩	৪	৫	৬	৭	৮	৯	১০	১১	১২
ক্রমিক নম্বর	বাড়ী / পাড়া / মহল্লা	খানা প্রধানের নাম	পিতার নাম	বসতবাটী ***স্থানের (✓ চিহ্ন দিন)		শিক্ষা* (কোড ব্যবহার করুন)	ধর্ম	প্রধান পেশা** (কোড ব্যবহার করুন)	পরিবারের সদস্য সংখ্যা	পরিবারের গড় মাসিক আয় (টাকা)	পরিবারের গড় মাসিক ব্যয় (টাকা)
				গ্রামের ভেতর	গ্রামের বাইরে থেকে						

* শিক্ষা কোড ১। নিরক্ষর ২। নিজে পড়তে পারে কিন্তু প্রাতিষ্ঠানিক শিক্ষা নেই ৩। পঞ্চম শ্রেণী পর্যন্ত ৪। ষষ্ঠ শ্রেণী থেকে এস,এস,সি ৫। এইচ,এস,সি ৬। বি,এ,বি,এস,সি বা সমপর্যায়ের প্রশিক্ষন প্রাপ্ত অথবা তারও অধিক শিক্ষা প্রাপ্ত।

** পেশা কোড: ১। চাকুরী ২। ব্যবসা ৩। বর্গাচাষকারী ৪। নিজ জমি চাষ, ৫। বর্গা চাষী, ৬। শিক্ষকতা ৭। দিন মজুরী ৮। মাঝি ৯। জেলে ১০। তাঁতী ১১। কামার ১২। কুমার ১৩। অন্যান্য (উল্লেখ করুন)

*** সাধারন বর্ষায় কোন স্থানের পানির গভীরতা ১ ফুট পর্যন্ত হলে তা উঁচু, ১'-৩' হলে তা মাঝারী এবং ৩' এর অধিক হলে তা নীচু বলে বিবেচিত হবে।

৪০

১	১৩	১৪	১৫	১৬	১৭	১৮	১৯	২০	২১	২২	২৩	২৪	২৫	২৬	২৭	২৮	২৯
	চাষাধীন ------- নিজ ------------ জমি ------------												চাষাধীন নয় এমন নিজ জমি				
প্রশ্নের নম্বর	নিজ চাষের অধীন					বর্গা / পত্তন দেওয়া							চাষ যোগ্য				চাষ যোগ্য নয় এমন জমি (বসতবাড়ি, [illegible])
	মোট প্লট সংখ্যা	প্লট সংখ্যা	উঁচু... জমি (হেক্টরে)	মাঝারী... জমি (হেক্টরে)	নীচু... জমি (হেক্টরে)	প্লট সংখ্যা	উঁচু জমি (হেক্টরে)		মাঝারী জমি (হেক্টরে)		নীচু জমি (হেক্টরে)		মোট সংখ্যা	উঁচু জমি (হেক্টরে)	মাঝারী জমি (হেক্টরে)	নীচু জমি (হেক্টরে)	
							বর্গা	পত্তন	বর্গা	পত্তন	বর্গা	পত্তন					

১	০০	০১	০২	০৩	০৪	০৫	০৬	০৭	০৮	০৯	৪০	৪১
এমিক নম্বর	বর্ষা / শুষ্ক মৌসুমে জমির পরিমান							বন্ধকী জমির পরিমান		বসতবাড়ী ও অন্যান্য প্রয়োজনে মোট বাজার মূল্য (টাকা)		মন্তব্য
	প্লট সংখ্যা	উচু জমি (ডেসিমেল)		মাঝারী জমি (ডেসিমেল)		নীচু জমি (ডেসিমেল)		বন্ধক দেওয়া (ডেসিমেল)	বন্ধক নেওয়া (ডেসিমেল)			
		বর্ষা	শুষ্ক	বর্ষা	শুষ্ক	বর্ষা	শুষ্ক			বসতবাড়ি	* অন্যান্য	

* অন্যান্য সম্পদের বিবরন মন্তব্যের ঘরে উল্লেখ করুন।

৪৭

গ্রামীণ সংএশন্ন বিভিন্ন বিষয়ের সংজ্ঞা

আয় (গত ১ বৎসরে)

১। উৎপাদিত ফসলের মূল্য
২। উৎপাদিত অন্যান্য পণ্যের মূল্য
৩। দিন মজুরী থেকে আয়
৪। চাকুরীর বেতন বাবদ আয়
৫। ব্যবসার মুনাফা
৬। বিদেশে চাকুরীরত সদস্য কর্তৃক প্রেরিত অর্থ
৭। অন্যান্য (গৃহীত ঋণের পরিমান ও ব্যবসা-আয় যাতে মুনাফা ব্যতীত বিএয়ু নক্ত অর্থ এর অন্তর্ভুক্ত হবে না)

ব্যয় (গত ১ বৎসরে)

১। ভরণ পোষন (অন্ন, বস্ত্র, বাসস্থান)
২। চিকিৎসা
৩। শিক্ষা
৪। আপ্যায়ন
৫। উৎসব / পালা-পার্বন
৬। অন্যান্য (বিনিয়োগ এবং ঋণ সংএশন্ন ব্যতীত)

পরিবার প্রধান (উত্তর দাতা)

১। সাধারণত পিতা
২। পিতার অবর্তমানে সাধারণত বড় পুত্র সন্তান বা মাতা
৩। পরিবার প্রধান অতি বার্ধক্যের কারণে বা অন্য কোন অসুবিধার কারণে উত্তরদানে অপারগ হলে পরিবারের অন্য কোন সদস্য তাঁর হয়ে উত্তর দিতে পারেন ।

পরিবার

রক্ত সম্পর্কে বা বৈবাহিক সূত্রে আত্মীয় এমন যে সদস্যরা একই চুলায় রান্না করা খাদ্য গ্রহণ করে থাকেন তাঁরাই একটি পরিবার হিসাবে বিবেচিত হবেন ।

FLOOD RESPONSE STUDY

Serial Number of Household:_____

Upazila: _____ Union: _____ Mouza: _____ Village: _____

Name of person (head of household) interviewed: _____

Part 1(A): HOUSEHOLD COMPOSITION

Sl. No.	Name	Age	Relation to Head	Education* (Use Code)	Occupation** (Use Code)	% time spent in main occupation

* Education code: 1) Illiterate, 2) Can read and write, no formal education, 3) Upto class V, 4) Class VI to SSC, 5) HSC, 6) B.A., B.Sc. or equivalent education and above.

** Occupation: 1) Service, 2) Business, 3) Share crop out, 4) Cultivate own land, 5) Share crop in 6) Teaching, 7) Day Laborer, 8) Student, 9) Fisherman, 10) Weaver, 11) Potter, 12) Blacksmith, 13) Unemployed, 14) Household work, 15) Others (specify).

Part 1(B) CATTLE CENSUS

Type	Number	No. sold in last 5 years	Reason of selling* Use Code	Price received
Bullock (Deshi)				
Ox (Deshi)				
Cow (Deshi)				
Improved Cow/Bullock				
Calf				
Buffalo (male)				
Buffalow (female)				
Goat (male)				
Goat (female)				
Chicken				
Duck				
Others (Specify)				

* Reason of selling code: 1) Due to floods, 2) Due to poverty, 3) For want of fodder, 4) To fetch higher prices during Eid, 5) Others (Specify)

Part 1 (C): HOUSE DESCRIPTION

Item	Unit 1	Unit 2	Unit3	Unit 4	Unit 5	Unit 6
Purpose (Use Code)*						
Number of rooms						
Number of stories						
Height of floor (From Floor to Celling)						
Roof construction						
Covered storage area under roof?						
Roof material						
Floor material						
Wall material						
Is floor dry in normal monsoon ? Yes/No						
In last 10 years, how many years						
Was water over floor?						
Was water over floor in 1988? Yes/No						
Was water up to roof in 1988? Yes/No						

Please list all additional units.

* Purpose Code: 1) Main Unit, 2) Store, 3) Kitchen, 4) Drawing,
5) Work Place, 6) Cowshed

PART 1 (D): MOVABLE PROPERTY

Item	Type	Mumber
Plow		
Joal		
Ladder		
Harrow		

Item	Type	Number
Hammer		
Shovel		
Spade/Hoe		
Sickle		
Khurpi (Hand weeder)		
Rotary weeder		
Insecticide sprayer		
Power tiller		
Metaled storage rice drum	Capacity:	
Metaled storage gur drum	Capacity:	
Tin storage drum (others)		
Other rice storage		
1		
2		
3		
4		
Other food storage		
1		
2		
3		
4		
Fish net		
1		
2		
Fish trap		
Loom		
Potters wheel		
Pump motor (HP)		

Item		Type	Number
Low lift pump	Capacity:		
Shallow tubewell	Capacity:		
Deep tubewell	Capacity:		
Hand tubewell			
Cart			
Boat			
Bicycle			
Motor cycle			
Television			
Radio			
Cassette player			
Others (Specify)			

Part 2: FLOOD RESPONSE

In this area, what are the most important sources of flooding ?

Source	Approx, month of flood initiation	Rate of rise of flood levels (Use Code)*	After how many years do you apprehend catastrophic flood?

* Codes for rate of rise of flood levels:

1) Slow: Daily rate of rise is less than 0.75 feet.
2) Medium: Daily rate of rise is between 0.75 to 1.5 feet.
3) Fast: Daily rate of rise is more than 1.5 feet.

2.1 How does the household get information when flooding seems likely?

	Normal Monsoon Yes/No	Flood Yes/No.	Catastrophic Flood Yes/No
2.1.1 Listen to radio ?			
2.1.2 Listen to television ?			
2.1.3 Public address system of Union Parishad ?			
2.1.4 Depend on neighbours for warning ?			
2.1.5 Others (specify)			

2.2 Which of the following measures are taken for flood preparation ?

	Normal Monsoon Yes/No	Flood Yes/No	Severe Flood Yes/No.
2.2.1 Building water hyacinth barrier around house			
2.2.2 Building barrier with soil around house			
2.2.3 Reinforcing walls			
2.2.4 Reinforcing corner posts			
2.2.5 Reinforcing roof			
2.2.6 Storing fodder			
2.2.7 Raising stores of fooder			
2.2.8 Storing food			
2.2.9 Raising stores of food			
2.2.10 Storing water			
2.2.11 Preparing boat			
2.2.12 Sell fish from pond			
2.2.13 Check fish from escaping ? How?			
2.2.14 Sell stored food for want of storage facilities			
2.2.15 Buy and store household items			
2.2.16 Store fuel			
2.2.17 Raise floor			
2.2.18 Prepare platform (macha)			

2.3 Which of the following measures are taken during flood ?

	Normal Monsoon Yes/No.	Flood Yes/No.	Severe Flood Yes/No
2.3.1 Harvesting crops before maturity			
2.3.2 Entire family leave for flood-free area for some time ? Where ? For how many days ?			
2.3.3 Some family members leave for some time ? Where do they go ? For how many days ?			
2.3.4 Head of household or someone remain in or near house for some time for security reasons ? For how many days ?			
2.3.5 Building a platform (macha) ?			
2.3.6 Take shelter in boat ?			
2.3.7 Moving stored grain to safe place ?			
2.3.8 Redrying stored grain soaked by rain water ?			
2.3.9 Use stored pure water ?			
2.3.10 Using water brought from distant places ?			
2.3.11 Moving house ? Where to ?			
2.3.12 Moving cattle ? Where to ?			
2.3.13 Buying fodder ?			
2.3.14 Fishing for home consumption ?			
2.3.15 Fishing for selling ?			
2.3.16 Arrange to sell pond fish ?			
2.3.17 Check fish form escaping ? How ?			
2.3.18 Sell stored food for want of storage facilities ?			
2.3.19 Buy and store household items ?			
2.3.20 Store fuel ?			
2.3.21 Sell perishable fruits and vegetables ?			
2.3.22 Engage in temporary proffession ? For How many days ? Locally ? Elsewhere ?			

2.4 If it were possible to bring about some change in the normal flood cycle what changes would you like to see ?

	Normal Monsoon Yes/No.	Flood Yes/No	Severe Flood Yes/No
2.4.1 What any change in the present flooding condition ?			
2.4.2 Full Flood-free condition ?			
2.4.3 Postpone time of arrival of flood ? For how many days ?			
2.4.4 Reduce flood depth ? How much less?			
2.4.5 Reduce the rate of rise in flood level ? How much ?			
2.4.6 Increase/decrease the rate of fall in flood level ? How much increase ? How much decrease ?			

Part 3 : INSTITUTIONAL/STRUCTURAL FLOOD PROTECTION

		Exists?	
3.1	Embankment between here and the usual source of flooding	yes/no	1 2 3 4 5
3.2	Embankment on far side from source of flooding	yes/no	1 2 3 4 5
3.3	Embankment surrounding this area that would keep out any flood	yes/no	1 2 3 4 5
3.4	Submersible embankment surrounding this area to delay the beginning of any flood, and allow the water to enter at a regular time each year	yes/no	1 2 3 4 5
3.5	Elevated road here	yes/no	1 2 3 4 5
3.6	School ground or other public area nearby where you can go in extreme flood situation	yes/no	1 2 3 4 5
3.7	Quick drainage system	yes/no	1 2 3 4 5
3.8	Advance warning for stroms	yes/no	1 2 3 4 5
3.9	Warning of breaches	yes/no	1 2 3 4 5
3.10	System to notify authorities about breaches	yes/no	1 2 3 4 5
3.11	Tubewells for domestic water	yes/no	1 2 3 4 5
3.12	Tubewells for irrigation	yes/no	1 2 3 4 5
3.13	Credit for tubewell	yes/no	1 2 3 4 5
3.14.1	Protected village (gram or mouza) cooperative grain storage for emergency use and for sale	yes/no	1 2 3 4 5
3.14.2	Use of this grain in store as collateral for securing credit	yes/no	1 2 3 4 5
3.15.1	Protected Union Parishad cooperative grain storage for emergency use and for sale	yes/no	1 2 3 4 5
3.15.2	Use of this grain in store as collateral for securing credit	yes/no	1 2 3 4 5
3.16.1	Protected Upazila Parishad cooperative grain storage for emergency use and for sale	yes/no	1 2 3 4 5
3.16.2	Use of this grain in store as collateral for securing credit	yes/no	1 2 3 4 5
3.17	Arrangements of credit for buying metal drum What should be its size ?	yes/no	1 2 3 4 5
3.18	Metalled road from village to main road	yes/no	1 2 3 4 5
3.19.1	Metalled road from village to main road on embankment	yes/no	1 2 3 4 5
3.19.2	How high should such an embankment be ?	yes/no	1 2 3 4 5
3.20	Community grain drying facility, to be operated for a fee	yes/no	1 2 3 4 5
3.21	Credit for pucca building material	yes/no	1 2 3 4 5
3.22	Other measures not listed above, or suggestions	yes/no	1 2 3 4 5

If the respondent considers an embankment moderately helpful or very helpful, would he or she be willing to pay a charge for maintenance ?

Part 4: INSTITUTIONAL PREPARATION AND RESPONSE IN NORMAL AND 1988 FLOOD

4.1 Preparations

4.1.1 Describe any flood preparation measures which your neighborhood group normally undertakes.
Group:
Measures:

4.1.2 Were these helpful ? 1 2 3 4 5
Explain, if necessary :

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.1.3 Describe any flood preparation measures which the Union Parishad normally undertakes.
Measures:

4.1.4 Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.1.5 Describe any flood preparation measures which the Upazila Parishad normally undertakes.
Measures:

4.1.6 Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.1.7 Describe any flood preparation measures which any other organization normally undertakes.
Organisation :
Measures:

4.1.8 Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2 Flood Response

4.2.1 Neighborhood groups.
Describe any flood response measures which your neighborhood group normally undertakes
Group:
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.2 Describe any special flood response measures which your neighborhood group undertook during the 1988 flood
Group:
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.3 Union Parishad
Describe any flood response measures which your Union Parishad normally undertakes:
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.4 Describe any special flood response measures which your Union Parishad undertook during the 1988 flood.
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.5 Upazila Parishad:
Describe any flood response measures which your Upazila Parishad normally undertakes:
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.6 Describe any special flood response measures which your Upazila Parishad undertook during the 1988 flood.
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

4.2.7 Other Organisation:
Describe any flood response measures which other organisations in this area normally undertakes:

First Organisation
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

Second Organisation
Measures:

Were these helpful ? 1 2 3 4 5
Explain, if necessary:

If the answer is no, do you feel that some type of measure was necessary ? yes/no
What type of measure ?

Table B.1
Household Consumption and Production

Crop	Area (Ac)	Yield		Tot. Prod		Meal per day	No. of days eates	Daily consumption	Surplus/ Deficit	Action taken to dispose surplus/ cover deficit
		Main Prod	By Prod	Main Prod	By Prod					
L. Aus										
HYV Aus										
B. Aman										
Mix. Aus-Aman										
LT. Aman										
HYV Aman										
L. Boro										
HYV Boro										
Total Rice:										
Wheat										
Potato										
Millet: China										
Koan										
Mustard										
Til										
Lentil										
Kheshari										
Gram										
Sugarcane										
Leafy Veg.										
Other Veg.										
Fish										
Meat										
Oil										
Gur										

Table B.2
Fodder Consumption

Fooder	Daily/animal		No. of days eates	Total Qnty.		Qnty. Prod.	Surplus/ Deficit	Action taken
	Need	Fed		Need	Fed			
Rice Straw								
Wheat Straw								
Cane Tops								
Pulse Residue								
Water Hyacinth								
Gathered Grass								
Oilseed Cake								
Other:								

Days of free graze expected per animal:

Buffallo _____ Days Imporoved Cow _____ Days
Oxen _____ " Goat _____ "
Desi Cow _____ " Others: _____ "

Table B.3

Flood Response to Crop Production

Elevation	Area (Ac)	Crops grown in normal years			Flood Damage		Action taken to overcome flood damage.
		Kharif-1	Kharif-2	Rabi	Crop	% of Damage	
High							
Medium							
Low							

Elevation	Area (Ac)	Crops grown in flood years			Flood Damage		Action taken to vercome flood damage.
		Kharif-1	Kharif-2	Rabi	Crop	% of Damage	
High							
Medium							
Low							

Elevation	Area (Ac)	Crops grown in the year 1988			Flood Damage		Action taken to overcome flood damage.
		Kharif-1	Kharif-2	Rabi	Crop	% of Damage	
High							
Medium							
Low							

Crop Calendar

Household no. _____ Name of Household head:_____

Plot no: 1 Amount of land: _____ Height:_____ Tenure: _____ Soil type:_____ Distance:_____

	*Bai-shak	Jais-tha	Ashar	Sravan	Bhadra	Ashwin	Kartik	Agra-hayan	Poush	Magh	Falgoon	Chaitra	Bai-shak
Crop & Type:													
Yield:													

Plot no: 2 Amount of land: _____ Height:_____ Tenure: _____ Soil type:_____ Distance:_____

	*Bai-shak	Jais-tha	Ashar	Sravan	Bhadra	Ashwin	Kartik	Agra-hayan	Poush	Magh	Falgoon	Chaitra	Bai-shak
Crop & Type:													
Yield:													

Plot no: 2 Amount of land: _____ Height:_____ Tenure: _____ Soil type:_____ Distance:_____

	*Bai-shak	Jais-tha	Ashar	Sravan	Bhadra	Ashwin	Kartik	Agra-hayan	Poush	Magh	Falgoon	Chaitra	Bai-shak
Crop & Type:													
Yield:													

* The 12 months in the Bangla Calendar.

INSTRUCTIONS

Chapter-1A : **Description of households**

Name : Write the name of the household head first, then include the names of the other members taking food from the same kitchen.

Age : According to the respondents estimate/knowledge.

Education : Use code.

Occupation : Use code and then record them in order of importance.

Chapter-1B : **Census of Household Livestock**

Number : Record the number of animals and birds the household possesses at the time of survey.

Amount of Sales Proceeds: Total Sales proceeds of animals and birds of every kind should be recorded.

Chapter-1C : **Description of homesteads**

Starting from the main unit, record all the sheds/buildings according to their respective sizes.

Number of rooms : Mention the number of rooms in the relevant unit.

Number of floors : For example, one storied, two storied.

Height of the roof : Record the height from floor to the ceiling.

Type of roof : For example, unit with single flat roof, unit with roof composed of two pieces meeting angularly on top and unit with a roof composed of four pieces meeting angularly on top.

Food storage unit with lid : Record whether there is any covered storage space in the relevant unit.

Chapter-1D : **Moveable Property**

Type : Write if applicable, otherwise leave it blank. For example, for plough write traditional or improved, for spray machine, write hand or machine operated. For harrow, spade and sickle etc., the space for type will remain blank.

Chapter-2 : **Flood Response**

Source : Where from the flood water enters the concerned area. For example, it could be by over-spilling the river banks or through the open mouth of a canal or by excessive rainfall or surface runoff from hilly areas etc. If there is more than one source, write them separately.

2.1 : How do you get to know about the arrival of flood?
-Against the items listed in the questionnaire write 'yes' or 'no'.

2.2 : As preparatory measure against flood which one of following is resorted to?

- Against each item mentioned in the questionnaire write 'yes' or 'no'.

2.3 : At the time of flood what measure do you take?
- Against each item mentioned in the questionnaire, write 'yes' or 'no' under three conditions of normal inundation, average flood and severe flood like that of 1988.

- Against 'where to' and 'for how long' describe the place and indicate the number of days. Similarly, if some one engages himself in some special occupation that has to be described too. For example, petty trading of commodities like buying from market and selling at the village.

Chapter-3 **Institutional Structural Flood Protection Measures**

For each measure, mention has to be made of its presence of absence. If present, its usefulness should be indicated according to the following scale :

1 - Very useful
2 - Somewhat useful
3 - Neither useful nor harmful
4 - Somewhat harmful
5 - Very harmful

The instruction given above has to be followed in case of absence of measures as well, so that had these measures been present one would know their expected usefulness. This means, whether a measure is present or absent, it has to be evaluated along the scale 1 to 5 defined above.

Chapter-4 **Institutional preparation and response to normal inundation and 1988 flood**

Normal Inundation : When homestead yards are not inundated during the rainy season.

Flood : When agricultural plots and some of the homesteads are inundated during rainy season.

Severe Flood : When a considerable number of houses as well as most of the agricultural plots are inundated and the usual measures for protecting homesteads proved ineffective.

Flood Preparation : Measures taken in advance so that flood time losses/damages can be reduced.

Flood Response : Measures taken during or after flood so that the household can survive through the distress situation and can effectively skip over.

As per instruction provided earlier, the measures have to be evaluated along the scale of 1 to 5.

Table B (1) : **Household Requirement and Production**

After heaving collected information on cultivated area and per acre yield for different varieties of paddy, calculations have to be made of the total levels of production. Thereafter, information on daily household requirement and number of days per year the household consumes rice would have to be entered along the row provided for total paddy. Likewise, surplus or deficit as well as any measures taken to deal with it, would again have to be entered along the same row. For other crops, information will have to be gathered on the number of days the item is consumed in a week and the quantity consumed per day so that number of days the item is consumed in a year, as well quantity consumed in year can be estimated.

Table B (2) : **Fodder Requirement**

Requirement per Pair of Bullock: Per day consumption by a pair will have to be entered in local units for each type of fodder, to be later converted into metric units.

Total Number of days : Number of days in a year that the fodder is consumed.

Free Grazing Days per Animal: Number of days per year that an opportunity exists for free grazing has to be entered.

Table B (3) : High land would mean areas that go under a maximum of one foot of water during normal rainy season. Medium land would go under one to three feet of water. Any land having higher depth of water would be called low land.

Area : Total area affected or how much of the total land owned (percent) is affected.

Kharif - 1 The Bangla months of Flagoon to Jasitha are considered to constitute Kahrif - 1 season. Crops produced within this season include Aus paddy, Broadcast Aman paddy, mixed Aus Aman paddy, Jute millet and HYV Aus paddy. If more than one crop are produced, information will have to be entered on two or three major crops.

Kharif - 2 The Bangla months of Ashar to Ashwin constitute Kharif - 2 season. Usual crops of this season are traditional transplanted Aman and HYV Aman. Aman broadcast in Kharif - 1 season mature for harvest at the end of this season. Likewise, although the Aus paddy with the Aus/Aman mixed cropping is harvested at the end of Kharif - 1 season, the Aman paddy matures for harvest at the end of Kharif - 2 season. Here also, information on two or three major crops has to be entered.

Rabi The Bangla months of Khartik to Magh are considered to constitute the Rabi season. The possible crops for this season include HYV Boro (identified by cultivators as IRRI rice), Wheat, potato, gram, pulses, mustard and peanuts. Although sugarcane is planted in this season, it stays in the field throughout the year. Since there are numerous crops produced during Rabi season, information on three to four main crops would have to be entered here.

Affected by flood:

Write the name of the affected crop in the space provided in the first column. In the second column enter the percentage loss for example , if there is total loss enter 100%, if half loss enter 50% etc. If more than one the crop damage is involved, enter the extent of loss against each one of them.

Measures taken to recover loss:

If there is only one effected crop, record the measures taken to overcome it. For example if the seedlings of transplanted Aman crop is affected, new seedlings are transplanted, if Aman is affected HYV is grown in a larger area during the next Rabi season. If there is no irrigation, then the area under other Rabi crops like pulses, mustard etc. is increased. If there are measures other than those mentioned above please record them as well.

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বন্যা মোকাবেলা সমীক্ষা

ISPAN - বন্যা ব্যবস্থা পরিকল্পনা অফিস
বাড়ী নং ২৬ সড়ক নং ৩৪
গুলশান, ঢাকা

বন্যা মোকাবেলা সমীক্ষা

খানার ক্রমিক নংঃ

উপজেলা ঃ ইউনিয়ন ঃ মৌজা ঃ গ্রাম ঃ

উত্তরদাতার (খানা প্রধান) নাম ঃ

প্রথম অধ্যায় (ক) ঃ খানার বিবরণ

ক্রমিক নং	নাম	বয়স	পরিবার প্রধানের সাথে সম্পর্ক	শিক্ষা * (কোড ব্যবহার করুন)	পেশা ** (কোড ব্যবহার করুন)	প্রধান পেশায় ব্যয়িত সময়(/-)

* শিক্ষা কোড ঃ ১) নিরক্ষর ২) লিখতে পড়তে পারে কিন্তু প্রাতিষ্ঠানিক শিক্ষা নেই ৩) ৫ম শ্রেণী পর্যন্ত ৪) ৬ষ্ঠ শ্রেণী হতে এস,এস,সি ৫) এইচ,এস,সি ৬) বি,এ; বি,এস,সি বা সমপর্যায়ের প্রশিক্ষণপ্রাপ্ত বা তারও অধিক

** পেশা কোড ঃ ১) চাকুরী ২) ব্যবসা ৩) বর্গাদানকারী ৪)নিজ জমি চাষ ৫) বর্গাচাষী ৬) শিক্ষকতা ৭) দিন মজুরী ৮) ছাত্র ৯) জেলে ১০) তাঁতী ১১) কুমার ১২) কামার ১৩) বেকার ১৪) সাংসারিক কাজ ১৫) অন্যান্য (উল্লেখ করুন)

প্রথম অধ্যায় (খ) ঃ গৃহপালিত পশুর শুমারী

বিষয়	সংখ্যা	গত ৫ বছরে বিক্রীর সংখ্যা	বিক্রীর কারণ * (কোড)	প্রাপ্ত টাকার পরিমান	মন্তব্য
বলদ (দেশী)					
ষাঁড় (দেশী)					
গাভী (দেশী)					
উন্নত জাতের গাভী/ষাঁড়					
বাছুর					
মহিষ (পুঃ)					
মহিষ (স্ত্রী)					
খাসী					
ছাগী					
ভেড়া					
মোরগ					
মোরগ / মুরগী					
হাঁস					
অন্যান্য (উল্লেখ করুন)					

* বিক্রীর কারণ কোড ঃ ১) বন্যার কারণে ২) অভাবের তাড়নায় ৩) গো–খাদ্যের অভাবে
৪) কোরবানী ঈদের সময় অধিক মূল্য পাওয়ায়
৫) অন্যান্য (উল্লেখ করুন)

প্রথম অধ্যায় (গ) ঃ বাড়ীর বর্ণনা

বিষয়	১ম ঘর	২য় ঘর	৩য় ঘর	৪র্থ ঘর	৫ম ঘর	৬ষ্ঠ ঘর	৭ম ঘর
* উদ্দেশ্য (কোড ব্যবহার করুন)							
কক্ষ সংখ্যা							
তলা সংখ্যা							
চালের উচ্চতা (ঘরের মেঝে থেকে সিলিং)							
চালের গঠন (এক চালা, দো'চালা)							
ঢাকনা বিশিষ্ট খাদ্য ভান্ডার							
চাল কি দ্বারা তৈরী							
মেঝে কি দ্বারা তৈরী							
বেড়া কি দ্বারা তৈরী							
স্বাভাবিক বর্ষায় মেঝে ডুবে কি? হাঁ/না							
গত ১০ বছরে ক'বার মেঝে ডুবেছিল?							
১৯৮৮ সালে মেঝে ডুবেছিল? হাঁ / না							
১৯৮৮ সালে চাল পর্যন্ত পানি উঠেছিল? হাঁ/না							

এ'ছাড়া অতিরিক্ত ঘর থাকলে, সেগুলো কি কাজে ব্যবহৃত হয় তাও লিখতে হবে।

* ১) প্রধান ঘর ২) ভান্ডার, ৩) রান্নাঘর ৪) বৈঠক ঘর, ৫) কাজের ঘর, ৬) পশুশালা

স্বাভাবিক বর্ষা ঃ বর্ষা মৌসুমে বাড়ীর উঠান/আঙ্গিনা জলমগ্ন না হলে তা স্বাভাবিক বর্ষা হিসাবে বিবেচিত হবে।

বন্যা ঃ বর্ষা মৌসুমে কোন কোন বাড়ীর উঠান/আঙ্গিনা ও ফসলের ক্ষেত জলমগ্ন হলে তা বন্যা হিসাবে বিবেচিত হবে।

মারাত্মক বন্যা ঃ যে বন্যায় প্রায় সমস্ত ফসলের ক্ষেত এবং উল্লেখযোগ্য সংখ্যক বাড়ীর ভিটা জলমগ্ন হয় এবং ঘরবাড়ী বন্যা থেকে রক্ষা করার জন্য গৃহীত ব্যবস্থাদি পর্যাপ্ত নয় তা মারাত্মক বন্যা হিসাবে বিবেচিত হবে।

প্রথম অধ্যায় (ঘ) ঃ বহনযোগ্য সম্পত্তি

বিবরণ	প্রকার	সংখ্যা
লাঙ্গল (হস্তচালিত)		
জোয়াল		
মই		
আচ্ড়া		
মুগুড়		
কোদাল		
শাবল		
কাস্তে		
খুরপী		
ঘূর্ণায়মান নিড়ানী যন্ত্র		
স্প্রে–মেশিন		
কলের লাঙ্গল		
ড্রাম (ধান রাখার) ঃ ধারণ ক্ষমতা		
ড্রাম (গুড় রাখার) ঃ ধারণ ক্ষমতা		
ধান সংরক্ষণের পাত্র		
১–		
২–		
৩–		
৪–		
অন্যান্য খাদ্য রাখার পাত্র		
১–		
২–		
৩–		
৪–		
মাছের জাল		
১–		
২–		

বিবরণ	প্রকার	সংখ্যা
মাছ ধরার অন্যান্য সরঞ্জাম		
১–		
২–		
তাঁত		
কুমারের চাকা		
পাম্প চালনাকারী মোটর (H.P)		
স্বল্পোত্তোলক পাম্প		
অগভীর নলকূপ		
গভীর নলকূপ		
হস্তচালিত নলকূপ		
গরুর গাড়ী		
নৌকা		
বাইসাইকেল		
রিকসা		
মটর সাইকেল		
রেডিও		
টেলিভিশন		
কেসেট প্লেয়ার		
অন্যান্য (উল্লেখ করুন)		

দ্বিতীয় অধ্যায় ঃ বন্যা মোকাবেলা

উৎস	কোন মাসে বন্যার পানি আসে?	পানি কত তাড়াতাড়ি বাড়ে (কোড ব্যবহার করুন)	মারাত্মক বন্যা কত বৎসর পর পর আশংকা করেন (যেমন ১৯৮৮ সালের বন্যা)

কোড ঃ ১) ধীর = দিনে পানি বৃদ্ধির হার $\frac{১}{২}$ হাতের কম;

২) মাঝারী = দিনে পানি বৃদ্ধির হার $\frac{১}{২}$ হাত হইতে ১ হাত;

৩) দ্রুত = দিনে পানি বৃদ্ধির হার ১ হাতের বেশী।

২.১ বন্যা আগমনের খবর কিভাবে পান?

	মাধ্যম	স্বাভাবিক হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·১·১	রেডিওর মাধ্যমে			
২·১·২	টেলিভিশনের মাধ্যমে			
২·১·৩	ইউনিয়ন পরিষদ হইতে মাইকযোগে প্রচারের মাধ্যমে			
২·১·৪	প্রতিবেশীদের মাধ্যমে			
২·১·৫	অন্যান্য ( )			

২.২ বন্যার প্রস্তুতি হিসাবে নীচে উল্লেখিত কোন ব্যবস্থা নেওয়া হয়?

	ব্যবস্থা	স্বাভাবিক বর্ষা হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·২·১	বাড়ীর চারিপাশে কচুরীপানার বাঁধ দেয়া			
২·২·২	বাড়ীর চারিপাশে মাটির বাঁধ দেয়া			
২·২·৩	ঘরের বেড়া মজবুত করা			
২·২·৪	ঘরের কোনার খুঁটি/পালা মজবুত করা			
২·২·৫	চাল মজবুত করা			
২·২·৬	গো–খাদ্য মজুত করা			
২·২·৭	গো–খাদ্য রাখার জায়গা উঁচু করা			
২·২·৮	খাদ্য মজুত করা			
২·২·৯	খাদ্য রাখার জায়গা উঁচু করা			
২·২·১০	খাবার পানি মজুত করা			

	ব্যবস্থা	স্বাভাবিক বর্ষা হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·২·১১	নৌকা তৈরী করা/কেনা			
২·২·১২	পুকুরের মাছ বিক্রীর ব্যবস্থা করা			
২·২·১৩	পুকুরের মাছ বেরিয়ে যাওয়া বন্ধ করা			
	কিভাবে?			
২·২·১৪	সংরক্ষণের অসুবিধার কারণে মজুত শস্যাদি বিক্রি করা			
২·২·১৫	পারিবারিক দ্রব্যাদি ক্রয় করিয়া মজুত করা			
২·২·১৬	জ্বালানী মজুত করা			
২·২·১৭	ভিটা উঁচু করা			
২·২·১৮	মাচা তৈরী করা			

২.৩ বন্যার সময় নিম্নে উল্লেখিত ব্যবস্থাদির মধ্যে কোন কোনটি গ্রহণ করেন?

	ব্যবস্থা	স্বাভাবিক বর্ষা হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·৩·১	ফসল পাকার আগেই কেটে ফেলা			
২·৩·২	কিছু সময়ের জন্য পরিবারের সবাই বন্যা মুক্ত এলাকায় চলিয়া যায় কোথায় যায়? কত দিনের জন্য যায়?			
২·৩·৩	পরিবারের কিছু সদস্য কিছু সময়ের জন্য চলিয়া যায় কোথায় যায়? কত দিনের জন্য যায়?			
২·৩·৪	নিরাপত্তা জনিত কারণে (গৃহকর্তা/অন্য কেউ) বাড়ীতে অথবা আশেপাশে কিছু সময়ের জন্য থাকে কতদিনের জন্য?			
২·৩·৫	মাচা তৈরী করে থাকেন কি?			
২·৩·৬	নৌকায় আশ্রয় নেন কি?			
২·৩·৭	মজুত শস্য নিরাপদ জায়গায় সরান?			
২·৩·৮	বৃষ্টি বা বন্যার পানিতে ভিজে যাওয়া মজুত শস্য পুনরায় শুকান?			
২·৩·৯	সংরক্ষিত বিশুদ্ধ পানি ব্যবহার করেন?			
২·৩·১০	দূর থেকে পানি এনে ব্যবহার করেন?			
২·৩·১১	ঘর সরিয়ে নেন কি? কোথায় সরান?			

	ব্যবস্থা	স্বাভাবিক বর্ষা হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·৩·১২	গবাদি পশু সরিয়ে নেন কি?			
	কোথায় সরান?			
২·৩·১৩	গো–খাদ্য ক্রয় করেন?			
২·৩·১৪	নিজেদের খাওয়ার জন্য মাছ ধরেন?			
২·৩·১৫	বিক্রীর জন্য মাছ ধরেন?			
২·৩·১৬	পুকুরের মাছ বিক্রীর ব্যবস্থা করা			
২·৩·১৭	পুকুরের মাছ বেরিয়ে যাওয়া বন্ধ করা			
	কিভাবে?			
২·৩·১৮	সংরক্ষণের অসুবিধার কারণে মজুত শস্যাদি বিক্রী করা			
২·৩·১৯	পারিবারিক দ্রব্যাদি ক্রয় করিয়া মজুত করা			
২·৩·২০	জ্বালানী মজুত করা			
২·৩·২১	দ্রুত পচনযোগ্য শাকশব্জি ও ফলমূল বিক্রী করে দেয়া			
২·৩·২২	সাময়িকভাবে কি ধরণের কাজ নেন?			
কতদিনের জন্য.....				
স্থানীয়ভাবে.....				

অন্যত্র.....

২.৪ যদি বর্তমান বন্যা পরিস্থিতির কোন পরিবর্তন আনা সম্ভব হয়, তাহলে নীচে উল্লেখিত বিষয়ের মধ্যে কি ধরনের পরিবর্তন চান?

	ব্যবস্থা	স্বাভাবিক বর্ষা হাঁ / না	বন্যা হাঁ / না	মারাত্মক বন্যা হাঁ / না
২·৪·১	বর্তমান বন্যা পরিস্থির আদৌ কোন পরিবর্তন চান কি?			
২·৪·২	পুরাপুরি বন্যামুক্ত চান?			
২·৪·৩	বন্যা আসার সময় পিছানো			
	কত দিনের জন্য পিছানো প্রয়োজন?			
২·৪·৪	বন্যার গভীরতা কমানো			
	কতখানি কমানো প্রয়োজন?			
২·৪·৫	বন্যা পানি বাড়ার হার কমানো			
	কতখানি কমানো			
২·৪·৬	বন্যার পানি নামার হার বাড়ানো/কমানো			
	কি হারে বাড়াতে চান?			
	কি হারে কমাতে চান?			

	ব্যবস্থা	আছে/নাই	১	২	৩	৪	৫
৩·১	আপনার বাড়ী ও বন্যা উঁচের মধ্যে কোন বাঁধ আছে কি?						
৩·২	আপনার বাড়ী কি বাঁধ ও বন্যা উঁচের মধ্যে অবস্থিত?						
৩·৩	এই এলাকার চারিপাশে বেড়ি বাঁধ						
৩·৪	এই এলাকার চারিপাশে ডুবে যাওয়ার মত নীচু বাঁধ দেওয়া যাতে বন্যার আগমন সময় কিছুটা পিছিয়ে দেয়া যায় এবং প্রতি বছর একটি সুনির্দিষ্ট সময়ে পানি ভিতরে প্রবেশ করে?						
৩·৫	এই এলাকার মধ্যে উঁচু রাস্তা						
৩·৬	স্কুলের মাঠ বা নিকটবর্তী অন্যান্য সরকারী উঁচু স্থান যেখানে বন্যার সময় আশ্রয় নেওয়া যায়						
৩·৭	পানি নিস্কাশন ব্যবস্থা						
৩·৮	ঝড়ের পূর্বাভাসের ব্যবস্থা						
৩·৯	বাঁধ ভাংগার সতর্কীকরণ						
৩·১১	গৃহস্থালির কাজে ব্যবহারের জন্য নলকূপ						
৩·১২	পানি সেচের জন্য নলকূপ						
৩·১৩	নলকূপ এর জন্য ঋণের ব্যবস্থা						
৩·১৪·১	আপদকালীন বা জরুরী অবস্থায় ব্যবহার ও বিক্রয়ের জন্য গ্রাম সমবায় পরিচালিত গুদাম						
৩·১৪·২	মজুত শস্য ঋণের নিরাপত্তার কাজে ব্যবহারের সুযোগ						
৩·১৫·১	আপদকালীন বা জরুরী অবস্থায় ব্যবহার ও বিক্রয়ের জন্য ইউনিয়ন পরিষদ পরিচালিত সংরক্ষিত শস্য গুদাম						
৩·১৫·২	মজুত শস্য ঋণের নিরাপত্তার কাজে ব্যবহারের সুযোগ						
৩·১৬·১	আপদকালীন বা জরুরী অবস্থায় ব্যবহার ও বিক্রয়ের জন্য উপজেলা পরিষদ পরিচালিত সংরক্ষিত শস্য গুদাম						
৩·১৬·২	মজুত শস্য ঋণের নিরাপত্তার কাজে ব্যবহারের সুযোগ						
৩·১৭	ধাতব ড্রাম ক্রয়ের জন্য ঋণের ব্যবস্থা কত বড় ড্রাম প্রয়োজন						
৩·১৮	গ্রাম থেকে প্রধান সড়ক পর্যন্ত পাকা রাস্তা						
৩·১৯·১	গ্রাম থেকে প্রধান সড়ক পর্যন্তউঁচু বাঁধের উপর পাকা রাস্তা						
৩·১৯·২	এইবাঁধ কতটা উঁচু হওয়া প্রয়োজন?						
৩·২০	পাড়া ভিত্তিক শস্য শুকানোর ব্যবস্থা, যা নির্দিষ্ট চাঁদার বিনিময়ে চলে						
৩·২১	পাকা দালান নির্মাণের জন্য ঋণের ব্যবস্থা						
৩·২২	উপরে উল্লেখ করা হয় নাই এমন কোন ব্যবস্থা অথবা আপনার পরামর্শ						
৩·৯০	বাঁধ হতেই যাতায়াত ব্যবস্থা কর্তৃপক্ষকে জোরালো						

যদি উত্তরদাতা মনে করেন যে, বাঁধ কিছুটা উপকার বা অত্যন্ত উপকারে লাগছে, তাহলে এর রক্ষণাবেক্ষণের ব্যয় বহনের জন্য খরচ দিতে রাজী আছে কি?

চতুর্থ অধ্যায় (ক) ঃ স্বাভাবিক ও ১৯৮৮ সালের বন্যায় প্রাতিষ্ঠানিক প্রস্তুতি ও মোকাবেলা

৪.১ বন্যা প্রস্তুতি

৪·১·১ আপনার প্রতিবেশীদের কোন গ্রুপ সাধারণতঃ বন্যার প্রস্তুতিমূলক কোন ব্যবস্থা নিয়ে থাকলে গ্রুপের নাম ও গৃহীত ব্যবস্থার বর্ণনা দিন।

গ্রুপঃ

ব্যবস্থাঃ

৪·১·২ এই ব্যবস্থা কোন উপকারে এসেছে? ১ ২ ৩ ৪ ৫

প্রয়োজনে ব্যাখ্যা করুন

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা?

৪·১·৩ ইউনিয়ন পরিষদ সাধারণতঃ বন্যার প্রস্তুতিমূলক যে ব্যবস্থা নিয়ে থাকেন তা বর্ণনা করুনঃ

৪·১·৪ এই সমস্ত ব্যবস্থা কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা

৪·১·৫ উপজেলা পরিষদ সাধারণতঃ বন্যার প্রস্তুতিমূলক যে ব্যবস্থা নিয়ে থাকে সেগুলো বর্ণনা করুনঃ

৪·১·৬ এই সমস্ত ব্যবস্থা কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা?

৪·১·৭ এছাড়া অন্য কোন সংস্থা যে সমস্ত বন্যা প্রস্তুতিমূলক ব্যবস্থা নিয়ে থাকে সেগুলো বর্ণনা করুনঃ

৪·১·৮ এই সমস্ত ব্যবস্থা কি কোন কাজে লেগেছে? ১ ২ ৩ ৪ ৫

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা?

৪.২.১ প্রতিবেশী গ্রুপ ভিত্তিক ঃ

আপনার প্রতিবেশীদের বিভিন্ন গ্রুপসমূহ বন্যা মোকাবেলামূলক যে সমস্ত ব্যবস্থা সাধারনতঃ নিয়ে থাকেন তা বর্ণনা করুন ঃ

গ্রুপ ঃ

গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

প্রয়োজনে ব্যাখ্যা করুনঃ

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল?

কি ধরনের ব্যবস্থা? হাঁ / না

৪.২.২ আপনার প্রতিবেশী গ্রুপসমূহ ১৯৮৮ সালের বন্যার সময় বন্যা মোকাবেলামূলক কোন বিশেষ ব্যবস্থাদি যদি নিয়ে থাকেন তা বর্ণনা করুন।

গ্রুপ ঃ

গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

প্রয়োজনে ব্যাখ্যা করুন ঃ

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা?

৪.২.৩ ইউনিয়ন পরিষদ ভিত্তিকঃ

আপনার ইউনিয়ন পরিষদ ভিত্তিক বন্যা মোকাবেলামূলক সাধারণতঃ যে সমস্ত ব্যবস্থা নেওয়া হয় তা বর্ণনা করুনঃ

গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

প্রয়োজনে ব্যাখ্যা করুনঃ

উত্তর না হলে আপনি কি মনে করেন কোন ব্যাবস্থা নেওয়া উচিত ছিল হাঁ / না

কি ধরনের ব্যবস্থা?

৪.২.৪ আপনার ইউনিয়ন পরিষদ ১৯৮৮ সালের বন্যাকালীন বন্যা মোকাবেলামূলক কি বিশেষ ব্যবস্থা নিয়েছিল তা বর্ণনা করুন।

গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ১ ২ ৩ ৪ ৫

প্রয়োজনে ব্যাখ্যা করুনঃ

উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না

কি ধরনের ব্যবস্থা?

৪.২.৫ উপজেলা ভিত্তিকঃ
আপনার উপজেলা পরিষদ বন্যা মোকাবেলামূলক সাধারণতঃ যে সমস্ত ব্যবস্থা নিয়ে থাকেন, তা বর্ণনা করুন।
গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ——— ১ ২ ৩ ৪ ৫
প্রয়োজনে ব্যাখ্যা করুনঃ
উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না
কি ধরনের ব্যবস্থা?

৪·২·৬ আপনার উপজেলা পরিষদ ১৯৮৮ সালে বন্যাকালীন কি বিশেষ ব্যবস্থা নিয়েছিল তা বর্ণনা করুন।
গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ——— ১ ২ ৩ ৪ ৫
প্রয়োজনে ব্যাখ্যা করুনঃ
উত্তর নাহলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না
কি ধরনের ব্যবস্থা?

৪·২·৭ অন্যান্য সংগঠন / সংস্থা ভিত্তিকঃ
অন্যান্য সংগঠন বন্যা মোকাবেলামূলক যে সকল ব্যবস্থা সাধারণতঃ নিয়ে থাকেন তা বর্ণনা করুন।

১ম সংস্থা/সংগঠন ঃ
গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ——— ১ ২ ৩ ৪ ৫
প্রয়োজনে ব্যাখ্যা করুনঃ হাঁ / না
২য় সংস্থা/সংগঠন ঃ
গৃহীত ব্যবস্থা ঃ

এগুলো কি কাজে লেগেছে? ——— ১ ২ ৩ ৪ ৫
প্রয়োজনে ব্যাখ্যা করুনঃ
উত্তর না হলে আপনি কি মনে করেন কোন ব্যবস্থা নেওয়া উচিত ছিল? হাঁ / না
কি ধরনের ব্যবস্থা?

টেবিল খ (১) ঃ পরিবারের উৎপাদন ও খাওয়ার পরিমান

	এলাকা (একর)	একর প্রতি চাল/	উৎপাদন খড়	মোট চাল/ প্রধান ফসল	উৎপাদন খড়/ পাটখড়ি	কয়বেলা খান	কতদিন খান	পরিবারের দৈনিক খাওয়ার পরিমান	উদ্বৃত্ত/ ঘাটতি	উদ্বৃত্ত/ঘাটতি পুরনের জন্য গৃহিত ব্যবস্থা
দেশী আউস										
উফ্‌সী আউস										
বোনা আমন										
মিশ্র আউস-আমন										
দেশী রোপা আমন										
উফ্‌সী আমন										
দেশী বোরো										
উফ্‌সী বোরো										
মোটা ধান ঃ										
গম										
আলু										
চিনা										
কাওন										
সরিষা										
তিল										
মশুরী										
খেসারী										
ছোলা										
আখ										
শাক										
সব্জি										
মাছ										
মাংস										
তৈল										
গুড়										

টেবিল খ (২) গো–খাদ্যের প্রয়োজনীয়তা সংক্রান্ত ছক

গো–খাদ্য	পশুপ্রতি দৈনিক		মোট দিনের সংখ্যা	মোট পরিমাণ		উৎপাদিত পরিমান	উদ্বৃত্ত/ ঘাটতি	গৃহিত ব্যবস্থা
	প্রয়োজন	খাওয়ানোর পরিমান		প্রয়োজন	খাওয়ানো			
ধানের খড়/বিচালি ঃ								
গমের খড়								
আখের ডগা								
ডালের অবশিষ্ট								
কচুরীপানা								
সংগৃহিত ঘাস								
খৈল								
অন্যান্য ঃ								

পশু প্রতি বিনা খরচে চড়ানোর দিন

মহিষ	
ষাঁড়	
দেশী গাভী	
উন্নত গাভী	
ছাগল	
অন্যান্য ঃ	

স্থানীয় একক ঃ ১) মেট্রিক

টেবিল খ (৩) বন্যার সাথে ফসল উৎপাদনের সমন্বয়

জমির অবস্থান	এলাকা (একর)	স্বাভাবিক বছরের ফসল			বন্যায় ক্ষতিগ্রস্থ		বন্যার ক্ষতি কাটানোর জন্য গৃহীত ব্যবস্থা
		খরিফ–১	খরিফ–২	রবি	ফসল	শতকরা অংশ	
উঁচু							
মাঝারি							
নীচু							

জমির অবস্থান	এলাকা (একর)	বন্যার বছরের ফসল			বন্যায় ক্ষতিগ্রস্থ		বন্যার ক্ষতি কাটানোর জন্য গৃহীত ব্যবস্থা
		খরিফ–১	খরিফ–২	রবি	ফসল	শতকরা অংশ	
উঁচু							
মাঝারি							
নীচু							

জমির অবস্থান	এলাকা (একর)	১৯৮৮ সালে উৎপাদিত ফসল			বন্যায় ক্ষতিগ্রস্থ		বন্যার ক্ষতি কাটানোর জন্য গৃহীত ব্যবস্থা
		খরিফ–১	খরিফ–২	রবি	ফসল	শতকরা অংশ	
উঁচু							
মাঝারি							
নীচু							

পরিবার সংখ্যা

পরিবার প্রধানের নাম ঃ

	বৈশাখ ১৩৯৭	জ্যৈষ্ঠ	আষাঢ়	শ্রাবন	ভাদ্র	আশ্বিন	কার্তিক	অগ্রহায়ন	পৌষ	মাঘ	ফাল্গুন	চৈত্র	বৈশাখ ১৩৯৮

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

প্লট নং ঃ
দূরত্ব ঃ
ফসল ও জাত ঃ
ফলন ঃ

জমির পরিমান ঃ উচ্চতা ঃ ভূমিস্বত্ত ঃ মাটির প্রকার ঃ

বন্যা মোকাবেলা সমীক্ষা এর তথ্য সংগ্রহের নির্দ্দেশাবলী

প্রথম অধ্যায় (ক)ঃ খানার বিবরণ

নাম ঃ খানা প্রধানের নাম প্রথম এবং তারপর একই চুলা হইতে খাদ্য গ্রহণকারী অন্য সকল সদস্যের নাম লিখিতে হইবে।
বয়স ঃ উত্তরদাতার হিসাব অনুযায়ী হইবে।
শিক্ষা ঃ কোড ব্যবহার করিতে হইবে
পেশা ঃ কোড ব্যবহার করিয়া গুরুত্ব অনুসারে পেশার ক্রমানুযায়ী লিখিতে হইবে।

প্রথম অধ্যায় (খ)ঃ গৃহপালিত পশুর শুমারী

সংখ্যা ঃ জরীপের সময় পরিবারে প্রত্যেক প্রকারের পশু কয়টি আছে লিখিতে হইবে।
প্রাপ্য টাকার পরিমাণ ঃ প্রত্যেক প্রকারের পশু বিক্রীর মোট প্রাপ্ত টাকার পরিমাণ লিখিতে হইবে

প্রথম অধ্যায় (গ) ঃ বাড়ীর বর্ণনা

প্রধান ইউনিট হইতে আরম্ভ করিয়া যে কয়টি ঘর আছে আয়তনের ক্রমানুসারে প্রত্যেকটি লিখিতে হইবে।

কক্ষ সংখ্যা ঃ সংশ্লিষ্ট ইউনিটে কয়টি কক্ষ আছে লিখিতে হইবে
তলা সংখ্যা ঃ যেমন একতলা, দোতলা ইত্যাদি
চালের উচ্চতা ঃ মেঝে হইতে সিলিং এর উচ্চতা লিখিতে হইবে
চালের গঠন ঃ যেমন একচালা, দোচালা, চারচালা ইত্যাদি
ঢাকনা বিশিষ্ট ঃ খাদ্যভান্ডার ঃ সংশ্লিষ্ট ইউনিটের ভিতরে ঢাকা দেওয়া খাদ্য ভান্ডার আছে কি নাই

প্রথম অধ্যায় (ঘ) ঃ বহনযোগ্য সম্পত্তি

প্রকার ঃ শুধুমাত্র প্রযোজ্য হইলে লিখিতে হইবে, অন্যথায় ফাঁকা থাকিবে। যেমন লাংগলের ক্ষেত্রে দেশী বা উন্নত,স্প্রে মেশিনের ক্ষেত্রে হস্ত চালিত বা যন্ত্রচালিত ইত্যাদি। আঁচড়া, কোদাল, কাস্তে ইত্যাদির ক্ষেত্রে প্রকারের ঘরে কিছু লেখার প্রয়োজন নাই।

দ্বিতীয় অধ্যায় ঃ বন্যা মোকাবেলা

উৎস ঃ বন্যার পানি সংশ্লিষ্ট এলাকায় কোথা হইতে প্রবেশ করে। যেমন নদীর তীর উপচাইয়া বা কোন খালের খোলা মুখ দিয়া বা অতিবৃষ্টির ফলে বা পাহাড়ী বৃষ্টির ঢলে ইত্যাদি। একাধিক উৎস থাকিলে প্রত্যেকটি আলাদাভাবে লিখিতে হইবে।

২·১ ঃ বন্যা আগমনের খবর কি ভাবে পান?
- সংশ্লিষ্ট বিষয়ে হাঁ অথবা না লিখিতে হইবে।

২·২ ঃ বন্যার প্রস্তুতি হিসাবে নীচে উল্লেখিত কোন কোন ব্যবস্থা নেওয়া হয়?
- একইভাবে হাঁ অথবা না লিখিতে হইবে।

২·৩ ঃ বন্যার সময় কোন কোন ব্যবস্থা গ্রহণ করেন?
- স্বাভাবিক বর্ষা, বন্যা এবং ১৯৮৮ সালের মত মারাত্মক বন্যার ক্ষেত্রেই সংশ্লিষ্ট বিষয়ের বিপরিতে হাঁ অথবা না লিখিতে হইবে। কোথায় যায় এবং কতদিনের জন্য যায়-এর ক্ষেত্রে স্থানের বিবরণ ও সেখানে কাটানো দিনের সংখ্যা লিখিতে হইবে। অনুরুপভাবে ঐ সময়ে কোন বিশেষ ধরনের কাজ বা পেশায় নিয়োজিত হইলে কাজের বর্ণনা দিতে হইবে। যেমন গঞ্জ বা হাট হইতে জিনিষ কিনিয়া আনিয়া গ্রামে বিক্রী করিয়া লাভ করা।

তৃতীয় অধ্যায় ঃ প্রাতিষ্ঠানিক/অবকাঠামোগত বন্যা নিরোধ ব্যবস্থা

প্রত্যেক ব্যবস্থা–র ক্ষেত্রে উহা আছে অথবা নাই লিখিতে হইবে। থাকিলে উহা কেমন উপকারী লেখার জন্য নিম্নলিখিত নির্দ্দেশ অনুসরণ করিতে হইবে।

১ = খুবই উপকারী
২ = মোটামুটি উপকারী
৩ = উপকার বা অপকার কিছুই নয়
৪ = মোটামুটি অপকারী
৫ = খুবই অপকারী

ব্যবস্থা–র ক্ষেত্রে (নাই) হইলে, উহা থাকিলে কেমন হইত জানার জন্যও উপরে লিখিত নির্দ্দেশ অনুসরণ করিতে হইবে। অথ্যাৎ আছে বা নাই যাহাই হউক না কেন, ১হইতে ৫–এর মধ্যে একটি ঘরে চিহ্নিত করিতেই হইবে।

চতুর্থ অধ্যায় ঃ স্বাভাবিক ও ১৯৮৮ সালের বন্যার প্রাতিষ্ঠানিক প্রস্তুতি ও মোকাবেলা

স্বাভাবিক বর্ষা ঃ বর্ষা মৌসুমে বাড়ীর উঠান/আঙ্গিনা জলমগ্ন না হলে তা স্বাভাবিক বর্ষা হিসাবে বিবেচিত হবে

বন্যা ঃ বর্ষা মৌসুমে কোন কোন বাড়ীর উঠান/আঙ্গিনা ও ফসলের ক্ষেত জলমগ্ন হলে তা বন্যা হিসাবে বিবেচিত হবে।

মারাত্মক বন্যা ঃ যে বন্যায় প্রায় সমস্ত ফসলের ক্ষেত এবং উল্লেখযোগ্য সংখ্যক বাড়ীর ভিটা জলমগ্ন হয় এবং ঘর বাড়ী বন্যা থেকে রক্ষা করার জন্য গৃহীত ব্যবস্থাটি পর্যাপ্ত নয়, তা মারাত্মক বন্যা হিসাবে বিবেচিত হবে।

বন্যা প্রস্তুতি এমন একটি ব্যবস্থা যা কোন ব্যক্তি আগে ভাগেই নেয় যাতে বন্যাকালীন ক্ষয়ক্ষতি এড়ানো যায়।

বন্যা মোকাবেলা এমন একটি ব্যবস্থা যা বন্যাকালীন বা বন্যা পরবর্তীকালে নেওয়া হয়, যাতে পরিবারটি বন্যার দূর্যোগের মধ্যে টিকে থাকতে পারে এবং দ্রুত ও কার্যকরভাবে বিপদ কাটিয়ে উঠতে পারে।

এই অধ্যায়েও সংশ্লিষ্ট অংশে ১,২,৩,৪ অথবা ৫–এর মান, ইতিপূর্বে প্রদত্ত নির্দ্দেশ অনুযায়ী বৃত্ত দ্বারা চিহ্নিত করিতে হইবে।

টেবিল খ (১)ঃ পরিবারের প্রয়োজন ও উৎপাদন

বিভিন্ন প্রকার ধানের ক্ষেত্রে আবাদকৃত এলাকা ও একরপ্রতি উৎপাদনের তথ্য সংগ্রহ করার পর মোট উৎপাদনের ঘর পুরা করিতে হইবে। অতঃপর মোট ধানের ঘরে পরিবারের দৈনিক প্রয়োজন এবং বছরে কতদিন খাওয়া হয় উহা লিখিতে হইবে। অনুরুপভাবে উদ্বৃত্ত বা ঘাটতি এবং উহা পুরনের গৃহিত ব্যবস্থা শুধুমাত্র মোট ধানের ঘরেই লিখিতে হইবে। অন্যান্য শস্যের ক্ষেত্রে দৈনিক প্রয়োজন জানা সম্ভব না হইলে, সপ্তাহে কতদিন খাওয়া হয় এবং একদিনে কি পরিমাণ খাওয়া হয় জানিয়া নিয়া বছরে মোট দিনের হিসাব করিতে হইবে।

টেবিল খ (২) ঃ গো–খাদ্যের প্রয়োজনীয়তা

হালপ্রতি দৈনিক প্রয়োজন ঃ প্রত্যেক গো–খাদ্যের ক্ষেত্রে জোড়া হিসাবে দৈনিক কতটুকু খাওয়ানো হয় উহা স্থানীয় এককে লিখিতে হইবে। পরবর্তি পর্য্যায়ে উহাকে মোট্রিক এককে রুপান্তর করিতে হইবে।

মোট দিনের সংখ্যা ঃ সারা বছরে মোট কতদিন খাওয়ানো হয়।

পশুপ্রতি বিনা খরচে চড়ানোর দিন ঃ সারা বছরে কতদিন বিনা খরচে চড়ানোর সুযোগ আছে লিখিতে হইবে।

টেবিল খ (৩) ঃ বন্যার সাথে ফসল উৎপাদনের সমন্বয়

জমির অবস্থান ঃ উঁচু অর্থ্যাৎ যেখানে স্বাভাবিক বর্ষায় একফুট পানি হয়। স্বাভাবিক বর্ষায় যে সব জমিতে এক হইতে তিন ফুট পানি হয় উহাকে মাঝারি ধরিতে হইবে। ইহার চাইতে বেশী পানি হয় এমন জমিকে নীচু ধরিতে হইবে।

এলাকা ঃ মোটামুটি পরিমাণ বা মোট জমির কত অংশ জানিয়া লিখিতে হইবে।

খরিফ–১ ঃ ফাল্গুন–জ্যৈষ্ঠ সময়কে খরিফ–১ মৌসুম ধরা হয়। এই সময়ে যেসব ফসলের চাষ করা হয় উহার মধ্যে আউস ধান,বোনা আমন ধান, মিশ্র আউস–আমন ধান, পাট, চিনা,কাওন,উফ্‌সী আউস ধান ইত্যাদি উল্লেখযোগ্য। একাধিক ফসল আবাদ করা হইলে প্রধান ২টি বা ৩টির নাম লিখিতে হইবে।

খরিফ–২ ঃ আষাঢ়–আশ্বিন সময়কে খরিফ–২ মৌসুম ধরা হয়। এই সময়ের সম্ভাব্য ফসলগুলি হইতেছে, দেশী রোপা আমন ও উফ্‌সী আমন। খরিফ–১ মৌসুমে বপনকৃত বোনা আমন ধান এই মৌসুমের শেষে কাটার উপযোগী হয়। অনুরুপভাবে মিশ্র আউস–আমনের আউস ধান খরিফ–১ মৌসুমের শেষে কাটা হইলেও আমন ধান খরিফ–২ মৌসুমের শেষে কাটার উপযোগী হয় এই ক্ষেত্রেও প্রধান ২টি বা ৩টি ফসলের নাম লিখিতে হইবে।

রবি ঃ কার্তিক–মাঘ সময়কে রবি মৌসুম ধরা হয়। এই সময়ের সম্ভাব্য ফসল উফ্‌সী বোরো (যাহা কৃষকগণ ইরি ধান নামে চিহ্নিত করেন), দেশী বোরো (যাহা কৃষকগণ বোরো নামে চিহ্নিত করেন), গম,আলু,ছোলা, মুশুরী, খেসারী, সরিষা, চিনা বাদাম, ইত্যাদি। আখ এই মৌসুমে লাগানো হইলেও ইহা সারা বছর ধরিয়া মাঠে থাকে। রবি মৌসুমে ফসলের সংখ্যা বেশী থাকে বিধায় ৩টি বা ৪টি প্রধান ফসলের নাম লিখিতে হইবে।

বন্যায় ক্ষতিগ্রস্থ ঃ

এই ঘরের প্রথম কলামে ক্ষতিগ্রস্থ ফসলের নাম লিখিতে হইবে। দ্বিতীয় কলামে ফসলহানির শতকরা বা অংশ হিসাবে লিখিতে হইবে। যেমন ফসল সম্পূর্ণ বিনষ্ট হইলে ১০০%, আধাআধি হইলে ৫০% ইত্যাদি। একাধিক ফসল ক্ষতিগ্রস্থ হইলে প্রত্যেক ফসলের নামের পার্শ্বে সংশ্লিষ্ট ফসলের ক্ষতির পরিমাণ লিখিতে হইবে।

বন্যার ক্ষতি কাটানোর জন্য গৃহিত ব্যবস্থা ঃ

একটি ফসল নষ্ট হইলে ঐ ক্ষতি পুরনের জন্য যে সকল ব্যবস্থা গ্রহণ করা হয় উহাই লিখিতে হইবে। উদাহরণ স্বরুপ বলা যায়, রোপা আমন ধানের চারা বন্যার পানিতে নষ্ট হইয়া গেলে আবারও নতুন করিয়া চারা রোপন করা হয়, আমন ধান ক্ষতিগ্রস্থ হইলে পরবর্তি রবি মৌসুমে উফ্‌সী বোরো আবাদের পরিমাণ বাড়ানো হয় এবং এই ক্ষেত্রে সেচের সুবিধা না থাকিলে মাটিতে রসের পরিমাণের উপর নির্ভর করিয়া ছোলা, মুশুরী খেসারী, সরিষা ইত্যাদি ফসলের আবাদ বেশী করিয়া করা হয়। এ ছাড়াও কোন ব্যবস্থা গ্রহণ করা হইয়া থাকিলে উহা লিখিতে হইবে।

Primary Survey on Gender Issues in Flood Affected Areas

Date of Interview: _____

1. **Background Information on Household :**

   1.1. Person(s) providing this information:
   Name : _____ Education Level : _____
   Number of living children : _____

   1.2. Interviewer Name :

   1.3. Upazila :

   1.4. Union :

   1.5. Village :

   1.6. Household Serial Number (from previous study) :

   1.6.1. Household Head Name : _____
   1.6.2. Male : _____ Female : _____
   1.6.3. Age : _____
   1.6.4. Primary Occupation : _____ (Code number)

   1.7. Previous survey done in this house? : _____ (Y/N)

   1.7.1. If yes, person interviewed previously (Name) : ___

2. **Identification of household members (For each member) :**

Serial No.	Name	Male/Female	Age	Relation to Head

3. **Is any member of this family living away from ('outside') the house at this time because he/she has moved elsewhere in search of work?** _____ (Yes/No)

   If so :
   Name : _____
   Relation to Head : _____
   Male/Female : _____
   Age : _____
   Education Level : _____
   Occupation : _____
   (Repeat if more than one.)

4.Types of Work (Work performed by members of this 'household' *khaana* only)

Column Headings: Type of Work - Name - Code Number (see below) Rows: One For Each Task

ASK: Does this individual ever perform this task? (Indicate response by entering code number: 1=Always, 2=Usually, 3=Occasionally (or previously), 4=In emergencies only, 5=Never)

4.1. Gather fuel or Collect cow dung :
Get drinking water :
Care for family members who are ill :
Care for infants or younger children :
Supervise children's homework :

4.2 Any cooking (*ranna banna*) :

4.3. Gather fodder ('animal food' *poshu khaaddo*) :
Make oil cakes or other animal food :
Put food and feed it to them while they're tied up :
Graze larger animals: that is, go out into the fields :
Take care of smaller animals (chickens, ducks) :
Butcher animals :
Large :
Small :

4.4. Prepare vegetable garden (cultivate soil) :
Plant vegetables :
Weed vegetable garden :
Water home garden (kitchen garden) :
Plant fruits :
Care for fruit trees :
Buy (self) seeds, fertilizers, or other home garden 'inputs' :

4.5. Plow fields:
with *langaal* ('plow')
with *kodal* ('spade')
Plant seeds
Control irrigation of field crops
Transplant seedlings
Pluck seedlings
Replant in new bed
Weed in the fields
Cut crops
Threshing of crops
Parboil rice
Watch after grain as it dries (after harvest) :
Dry grain after floods/rains :
Husk rice at home :
Carry grain to mill for husking :

4.6. Fishing tasks :
Make fishing nets :
Coloring nets :
Repair nets :
Repair boat :
Catch fish for any purpose (consumption or sale)-
In open waters (beel, river) :
In ponds :
With hook :
With net :
With trap :
Sell fish to brokers :
Sell fish in market (*hat/bazaar*) :
Sell fish at auction (*aroth*) :
Sell fish to other homes :
Sell nets or other products :
If anything else, please indicate:

4.7. Purchase food or other things at market :
Sell food or other things at 'market' (*hat/bazaar*) :
Sell by yourself :
Sell through another person :
Sell door-to-door (self) as *feriwali/feriwala* :
Sell goods in small shop (self) :

4.8. Do craft work for sale :
How paid? (form of pymt) :

4.9. Work for cash income :
Work for in-kind (food or other) payment :

5. Social Supports & Economic Resources

5.1. Social Supports

5.1.1. Data on female household head or wife of head only
Name : _____
Marital Status : _____
No. Children : _____
(1-Single, 2-Engaged, 3-Married, living with husband, 4-Married but separated from husband, 5-Widowed, 6-Divorced)

5.1.1.1. If married,
Was husband a relative before marriage? _____ (Y/N)
Married (this marriage) how long ago? _____ (years, months)
First married at what age? _____
Does this husband have other wife or wives? ____(Y/N)

5.1.1.2. If widowed,
At what age (woman's) : _____
How long ago? ____

5.1.1.3. If not living with husband,

a. Where is he? (Name of place, Distance--get her estimate--from here):

b. Reason for his absence_____
(1-Seeking employment, 2-Unwilling to live with wife, 3-Visiting relatives, 4-Other: _____)

c. Time he has been away: _____ (est: days or months or years)

d. Does he send any money, food, or clothing? _____ (Y/N)
How long ago last sent anything? _____ (est. time)

e. How long since you last saw him?_____ (days or months/yrs)

5.1.2. How long has this family (*paribaar*) lived in this village? _____
(1-More than two generations, 2-Betw. 20-30 yrs, 3-Betw. 10-20 years, 4-Less than 10 years)

5.1.3. How long have you (female head or head's wife) lived in this village? _____
(1-Since childhood, 2-Between 0-2 years, 3-Betw. 3-5 years, 4-Betw. 6-10 years, 5-More than 10 years)

5.1.4. Do you (female head or head's wife) have any relatives living in same neighborhood or village (*para, graam*)?
1. Own relatives?_____ (Y/N)
2. Husband's relatives?_____ (Y/N)

5.1.5. What is the approximate distance from village where you (female head or head's wife) grew up? (If did not grow up in this place)
_____ (Her est. of distance)

1. Are there parents or brothers still there? ___(Y/N)
2. Do you own any land there? ___(Y/N)
3. How long since last visit there? _____ (est. days, mo./yr.)

5.2. Is any female--any age--of this household a member of a group outside of the family? (examples, a club for school children, a Mothers Club, a political party, or special project group set up by an NGO) _____Y/N

If yes, indicate type and number of persons in each:

1- Club for school children or young people
2- Other club
3- Political party
4- Special project group set up by an NGO
5- Credit group or association
6- 'Baseless' (*bhittihiin*) laborers group or labor union
7- Religious group/association
8- Other

5.3. To what groups do the males of the house belong, [if any]?

1- Club for school children or young people
2- Other club
3- Political party
4- Special project group set up by an NGO
5- Credit group or association
6- 'Baseless' laborers group or labor union
7- Religious group/association
8- Other

5.4. Is there a mosque, temple, or church in this area (*elaka*)?___Y/N

5.4.1. Does any male person of this family go there to *namaaj* or prayer (*praathola*), or to mix with other people? ___Y/N

5.4.2. Is there a *samaj* ('faction' or 'group') on the basis of mosque, temple or church? ___(Y/N)

5.5. Have you ever had to move because of flooding conditions or water changes? ___ (Y/N)
If yes, ask about most recent move:

1. Approximately how long ago?_____
2. How did you go? ____ (1-Walked, 2-Boat, 3-Bus or train, 4-Other:explain)
3. What possessions did you take with you? _____ (1-All household items, such as beds, furniture, metal things (vessels), clothes, animals; 2-House parts only; 3-Animals/poultry only; [4-Other things, give brief list]
4. Did anyone stay behind to watch the house during flood? ___ (Y/N)
5. How many persons stayed outside the house?

6. Did you depend on assistance from some other person or family at that time?__ (Y/N)
   1. If so, Who? ____(1-Relation, 2-Neighbor, 3-Friend, 4-Wealthy person you knew, or 5-Other:explain)
   2. What types of assistance did this source provide?

      Family food____, Shelter____, Money____, Medicines____, Access to health care___
   3. For what period of time did you depend on this source of assistance? ____ (Est. days, months, or years)

6. Women's Employment

6.1. Have you or any other women in this house ever worked for payment, outside the homestead? (Y/N)

(List Names)
For each woman: Indicate --
Type of work (current or most recent, one only)_____
Who working for ('providing agency')
Presently working? (Y/N)
Form of payment: cash____, grain____, meals____, other___
If not presently working, the reason
Presently seeking employment? (Y/N)
At what age did she first begin working?
Has the income from employment of this person contributed to family support during the past year? (Y/N)

6.2. Do you or any other female members contribute to household income at flood time or rainy season? ___ (Y/N)

6.2.1. If so, what is the approximate share of the female work contribution?

7. Economic Resources

7.1. Who are the sources of economic support for you and children?
____, ___, ___, ___ in order of importance, if more than one: e.g , Husband, Self, Son, Daughter, Others (explain)

7.2. Are you fully or partially responsible for economic support of anyone else?
   1. If so, number of 'non-adults' ____(inside this household, *baari*)___(elsewhere, *paribaari*)
   2. Number of adults ___(inside this household) ____(elsewhere)

7.3. Has any percentage of the value of this house and its contents come from dowry sources? (Y/N)
If so, money value:_____

7.3.1. Has this house given dowry for the marriage of any girl of this family (*baari)?* (Y/N)
Taken any loans for this purpose? If so, still owe?____
How much still owe?_____

7.4. Female household head or wife of head only:
Was there a dowry payment associated with your marriage?___(Y/N)
1. If so, what were the agreed upon items/payment?_____
2. Do you have any idea of the cash value of this dowry?____(Y/N)
If so, what was the amount?

7.5. Other women residing here provide dowry? ___Y/N (If Y, for each):
1. Relationship to household head
2. What were the agreed upon items/payment?_____
3. Do you have any idea of the cash value of this dowry?____(Y/N)
If so, what was the amount?

7.6. Do you yourself own any domestic animals? (Y/N)
1. Can you sell them on your own, or do you need some other person's permission to sell them?
If need, What other person must give permission?

7.7. Do you (female head or wife of head only) own land?___(Y/N)

7.8. What do you consider your most valuable asset (material possession)?_____(1-Cooking vessels, 2-Jewelry, 3-Tools or other employment-related equipment, 4-Animals, or 5-Other:explain)[4]
1. Is this asset [jeopardized] by monsoon, erosion, or flooding conditions?____ (Y/N)
2. How much money would it cost to replace it if lost?
3. Have you ever had to mortgage (*bandhok*) or sell these (or equivalent) things because of floods or river erosion conditions?

7.9. Has this family suffered any important losses within the last ten years due to flood or erosion? ___ (Y/N)
How long ago?____ Explain:

7.10. Have you ever borrowed money 'at flood time'? (Y/N)
1. How long ago, last time?____
2. Reason____

8. Family Health

8.1. What is your usual drinking water supply? (Indicate type: tubewell, well, pond, river, etc.)
8.1.1. Distance from house?
8.1.2. Is it available during rainy season or flood conditions? (Y/N)
If not, what other source used?
Distance from house?

8.2. Do you think it is a good idea to boil drinking water for health reasons? ____(Y/N)
8.2.1. Do you ever boil the family's drinking water for health reasons?____ (1-Usually, 2-Sometimes, 3-No)

---

[4]Instructions: Make an effort to get the respondent's answer. Do not make suggestions unless they need ideas.

8.3. Do you have any problems with water supply during rainy season or floods? _____(Y/N)
If so, please explain:

8.4. Do health workers ever visit this village (*graam*)?____(Y/N)

8.5. Have you ever gone (or taken your children) to a clinic or hospital?___(Y/N)
(If yes,) approximate distance from here?_____
Last visit, how long ago?)_____ (month, year)

8.6. At time of childbirth, can you get a midwife (*dai*) here?____(Y/N)

9. Nutrition

9.1. Does the family's diet change (literally, 'Is there any change in the food list') in the rainy season or at times of floods? ____(Y/N)
9.1.1. If so, What change?_____
9.1.2. Reason for the change?_____
9.1.3. Any shortages of important foods at these times? ____ (Y/N)

9.2. Do your children get enough to eat throughout the year?____(Y/N)

9.3. Do you eat less than your husband?___ (Y/N)
9.3.1. How much less?_____

Fuel Used for Cooking

9.4. What is your main cooking fuel?

9.4.1. (If it is not wood, charcoal, or dung:) Is it ever used as animal fodder?____ (Y/N)
9.4.2. Do you store this fuel before the rainy season?____ (Y/N)

বন্যা উপদ্রুত এলাকায় লিংগ সম্পর্কীয় বিষয়াদির প্রাথমিক জরীপ

১. খানার তথ্য সম্বলিত পটভূমি

১.১ নিম্নোক্ত তথ্য সমূহ যে/যারা সরবরাহ করছেন তার/তাদের নাম ঃ

তারিখ ঃ_____

শিক্ষাগত যোগ্যতা ঃ

বর্তমানে কতজন ছেলেমেয়ে জীবিত আছে?

১.২ সাক্ষাতকার গ্রহণকারী নাম ঃ

১.৩ উপজেলা ঃ

১.৪ ইউনিয়ন ঃ

১.৫ গ্রাম ঃ

১.৬ খানার ক্রমিক নং (পূর্ববর্তী সমীক্ষা থেকে) ঃ

১.৬.১ বাড়ী প্রধানের নাম ঃ

১.৬.২ পুরুষ ☐ মহিলা ☐

১.৬.৩ বয়স ঃ

১.৬.৪ প্রধান পেশা ঃ
(পূর্ববর্তী সমীক্ষার পেশা রোড নম্বর ব্যবহার করুন)

১.৭ এই খানা পূর্ববর্তী জরীপে অর্ন্তভুক্ত হয়েছিল কি? হ্যাঁ ☐ না ☐

১.৭.১ উত্তর হ্যাঁ হলে ঐ জরীপকালীন সময়ে সাক্ষাৎকার প্রদানকারীর নাম

২. খানার সদস্যদের পরিচিতি

ক্রমিক নং	নাম	পুরুষ	মহিলা	বয়স	পরিবার প্রধানের সাথে সম্পর্ক

৩. চাকুরী খোঁজার জন্য অথবা চাকুরীর কারণে পরিবারের কোনও সদস্য কি এখন বাড়ীর বাইরে রয়েছেন? হ্যাঁ / না; উত্তর হ্যাঁ হলে তবে তাঁর/তাঁদের

নাম ঃ

পরিবার প্রধানের সাথে সম্পর্ক ঃ

পুরুষ/মহিলা ঃ

বয়স ঃ

শিক্ষাগত যোগ্যতা ঃ

পেশা ঃ

আরও সদস্য অনুপস্থিত থাকলে

নাম ঃ

পরিবার প্রধানের সাথে সম্পর্ক ঃ

পুরুষ/মহিলা ঃ

বয়স ঃ

শিক্ষাগত যোগ্যতা ঃ

পেশা ঃ

প্রয়োজনে চলবে ঃ

৪. কাজের প্রকৃতি (এই খানার ব্যক্তিদের জন্য প্রযোজ্য)

	কাজের প্রকৃতি	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং
৪.১	জ্বালানী সংগ্রহ বা গোবর কুড়ানো										
	খাওয়ার পানি আনা										
	পরিবারেরঅসুস্থসদস্যদের সেবা-যত্ন করা										
	শিশু বা ছোট ছেলে মেয়েদের দেখাশুনা করা										
	ছেলে মেয়েদের পড়াশুনায় সাহায্য করা										
৪.২	রান্না-বান্না										
৪.৩	পশু খাদ্য সংগ্রহ										
	খৈল বা অন্যান্য খাদ্য তৈরী										
	বাঁধা অবস্থায় পশুকে খাওয়ানো										
	পশুকে মাঠে নিয়ে গিয়ে চড়ানো										
	হাঁস/মুরগী বা অন্যান্য পশু পালন										
	পশু জবাই বড়										
	পশু জবাই ছোট										

কোড নাম্বারসমূহ :

১ = সবসময়, ২ = সাধারণতঃ, ৩ = মাঝে মাঝে বা (পূর্বে), ৪ = কেবলমাত্র বিপদে-আপদে, ৫ = কখনও না

		নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং
৪.৪	সব্জী বাগান তৈরী										
	শাকসব্জী লাগানো										
	শাকসব্জীর বাগান নিড়ানো										
	বাগানে পানি দেওয়া										
	ফলের গাছ লাগানো										
	ফল গাছের যত্ন নেওয়া										
	বাড়ীর বাগানের জন্য বীজ, সার বা অন্যান্য প্রয়োজনীয় ব্যবহার্য্য জিনিষ কেনা										
৪.৫	লাঙ্গল দিয়ে জমি চাষ										
	কোদাল দিয়ে জমি চাষ										
	সেচ কার্য পরিচালনা										
	বীজতলা তৈরী										
	বীজ বপন										
	চারা রোপন										
	মাঠে নিড়ানী দেয়া										
	ফসল কাটা										
	ফসল মাড়ানো										
	ধান সিদ্ধ করা										
	ফসল শুকানোর সময় লক্ষ্য রাখা										
	বৃষ্টি বা বন্যার পর শস্য শুকানো										
	বাড়ীতে ধান ভানা										
	মিলে নিয়ে গিয়ে ধান ভানা										

কোড নাম্বারসমূহ : ১ = সবসময়, ২ = সাধারণতঃ, ৩ = মাঝে মাঝে বা (পূর্বে), ৪ = কেবলমাত্র বিপদে–আপদে, ৫ = কখনও না

		নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং
৪.৬	জাল তৈরী করা										
	জাল রং করা										
	জাল মেরামত করা										
	জাল শুকানো										
	নৌকা মেরামত করা										
	মাছ ধরা (নিজে খাওয়ার জন্য বা বিক্রীর জন্য হোক) :										
	খোলা পানিতে (বিল, নদী)										
	পুকুরে										
	ছিপ দিয়ে										
	জাল দিয়ে										
	ফাঁদ দিয়ে										
	দালালের কাছে মাছ বিক্রি										
	বাজারে/হাটে মাছ বিক্রি করা										
	আড়তে মাছ বিক্রি করা										
	অন্যের বাড়ীতে মাছ বিক্রি করা										
	জাল অথবা অন্যান্য মাছ ধরার সরঞ্জাম বাজারে বিক্রি করা										
	(অন্যান্য কিছু থাকলে উল্লেখ করুন) _____										

কোড নাম্বারসমূহ :

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		নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং	নাম	কোড নং
৪.৭	বাজার/হাটে খাদ্যদ্রব্য অথবা অন্য কিছু কেনা										
	বাজার/হাটে খাদ্য দ্রব্য অথবা অন্য কিছু বিক্রয়										
	নিজে বিক্রয়										
	অন্য কারও মাধ্যমে বিক্রয়										
	নিজে ফেরী করে বিক্রি করা										
	ছোট–খাট দোকানদারী করা										
৪.৮	হস্ত শিল্পের সামগ্রী তৈরী ও বিক্রি করে কি না? হ্যাঁ/না										
	যদি হ্যাঁ হয়; কিসের বিনিময়										
	নগদ অর্থে										
	শস্যের বিনিময়ে										
	অন্যান্য (উল্লেখ করুন) _____ _____ _____										
৪.৯	নগদ আয়ের জন্য কাজ/চাকুরী										
	খাদ্য অথবা অন্য কিছুর বিনিময়ে কাজ/চাকুরী										

কোড নাম্বারসমূহ ঃ

১ = সবসময়, ২ = সাধারণতঃ, ৩ = মাঝে মাঝে বা (পূর্বে), ৪ = কেবলমাত্র বিপদে–আপদে, ৫ = কখনও না

৫. সামাজিক সহায়তা এবং অর্থনৈতিক সম্পদ সমূহ

৫.১ সামাজিক সহায়তাসমূহ ঃ

৫.১.১ খানার মহিলা সম্পর্কিত তথ্য
(মহিলা প্রধান অথবা পরিবার প্রধানের স্ত্রীর জন্য কেবলমাত্র প্রযোজ্য)

নাম ঃ

বৈবাহিক অবস্থা ঃ_____

১ = অবিবাহিতা

২ = বাগদত্তা

৩ = বিবাহিতা, স্বামীর সাথে বাস করে

৪ = বিবাহিতা কিন্তু স্বামীর সাথে বসবাস করছে না

৫ = বিধবা

৬ = তালাকপ্রাপ্তা

৫.১.১.১ যদি বিবাহিতা হন

বিবাহের পূর্বে স্বামী কি আত্মীয় ছিল ☐ হ্যাঁ ☐ না

বিবাহের (বর্তমান বিবাহ) কতদিন হয়েছে _____ বৎসর _____ মাস

প্রথম বিবাহের সময় আপনার বয়স কত ছিল?

সতীন আছে কি? ☐ হ্যাঁ ☐ না

৫.১.১.২ যদি বিধবা হন

কত বৎসর বয়সে বিধবা হন _____ বৎসর

কত দিন আগে বিধবা হয়েছেন _____ বৎসর

৫.১.১.৩ যদি স্বামীর সাথে বসবাসরতা না হন

(ক) স্বামী কোথায় আছেন?

জায়গার নাম ঃ_____

এখান থেকে কত দূরে _____

(খ) স্বামীর অনুপস্থিতির কারণ _____

১) চাকুরীর খোঁজ

২) স্ত্রীর সাথে বসবাসে অনিচ্ছুক

৩) আত্মীয়ের বাড়ীতে বেড়ানো

৪) অন্যান্য (কারণ উল্লেখ করুন)

গ) কতদিন থেকে বাহিরে আছেন
_____ দিন _____ মাস _____ বৎসর

ঘ) তিনি কি খাদ্য, কাপড় বা টাকা পয়সা পাঠান ঃ হ্যাঁ ☐ না ☐

কতদিন আগে কিছু পাঠিয়েছেন _____ দিন

_____ মাস

_____ বৎসর

ঙ) কতদিন পূর্বে আপনার স্বামীকে শেষ দেখেছেন? _____ দিন _____ মাস _____ বৎসর

৫.১.২ এই পরিবার কতদিন থেকে এই গ্রামে বাস করছে?

১ = দুই পুরুষের বেশী

২ = ২০ থেকে ৩০ বৎসর

৩ = ১০ থেকে ২০ বৎসর

৪ = ১০ বৎসরের নীচে

৫.১.৩ আপনি এই গ্রামে কতদিন থেকে বাস করছেন? (মহিলা প্রধান বা বাড়ীর প্রধানের স্ত্রী)

১ = ছোট বেলা থেকে

২ = ০ থেকে ২ বৎসর থেকে

৩ = ৩ থেকে ৫ বৎসর থেকে

৪ = ৬ থেকে ১০ বৎসর থেকে

৫ = ১০ বৎসরের বেশী

৫.১.৪ (জিজ্ঞাসা করুন মহিলা প্রধান বা বাড়ীর প্রধানের স্ত্রী এই পাড়ায়/গ্রামে বড় হয়েছেন কিনা) যদি না হয়ে থাকেন তবে যে পাড়ায়/গ্রামে বড় হয়েছেন এখান থেকে তার মোটামুটি দূরত্ব কতটুকু?

_____ তাঁর হিসাবে দূরত্বের পরিমাপ

১. সেখানে কি আপনার পিতামাতা বা ভাই এখনও আছেন হ্যাঁ ☐ না ☐

২. সেখানে কি আপনার কোনও জমির মালিকানা আছে হ্যাঁ ☐ না ☐

৩. কতদিন আগে আপনি সেখানে গিয়েছেন? _____ দিন _____ মাস _____ বৎসর

৫.১.৫ এই পাড়ায়/গ্রামে কি আপনার (মহিলা প্রধান বা বাড়ীর প্রধানের স্ত্রী) কোনও আত্মীয় বাস করে

১. নিজের আত্মীয় হ্যাঁ ☐ না ☐

২. স্বামীর আত্মীয় হ্যাঁ ☐ না ☐

৫.২ এই বাড়ীর কোনও মহিলা (যে কোন বয়সের) কি এই পরিবারের বাইরের কোনও দলের সদস্যা? মোট সংখ্যা ঃ _____

১ = স্কুলের ছেলেমেয়েদের বা তরুণ ছেলে মেয়েদের ক্লাব; সংখ্যা ঃ _____

২ = অন্যান্য ক্লাব; সংখ্যা _____

৩ = রাজনৈতিক দল; সংখ্যা _____

৪ = বেসরকারী প্রতিষ্ঠানের কোনও বিশেষ প্রকল্প; সংখ্যা _____

৫ = ঋণদাতা সংস্থা যেমন, গ্রামীণ ব্যাংক, ইত্যাদি সংখ্যা _____

৬ = শ্রমিক সংঘ বা ভিত্তিহীন সমবায় সমিতি, সংখ্যা _____

৭ = ধর্মভিত্তিক দল, সংখ্যা _____

৮ = অন্যান্য (উল্লেখ করুন) সংখ্যা ঃ _____

৫.৩ এই বাড়ীর কোনও পুরুষ (যে কোন বয়সের) কি এই পরিবারের বাইরে কোনও দলের সদস্য? মোট সংখ্যা ঃ

১ = স্কুলের ছেলেমেয়েদের বা তরুণ ছেলেমেয়েদের ক্লাব, সংখ্যা _____

২ = অন্যান্য ক্লাব; সংখ্যা _____

৩ = রাজনৈতিক দল; সংখ্যা _____

৪ = বেসরকারী প্রতিষ্ঠানের কোন বিশেষ প্রকল্প; সংখ্যা _____

৫ = ঋণদাতা সংস্থা যেমন, গ্রামীন ব্যাংক, কৃষি ব্যাংক ইত্যাদি; সংখ্যা _____

৬ = শ্রমিক সংঘ বা ভিত্তিহীন সমবায় সমিতি; সংখ্যা _____

৭ = ধর্মভিত্তিক দল; সংখ্যা _____

৮ = অন্যান্য (উল্লেখ করুন); সংখ্যা _____

৫.৪ এই এলাকায় কি কোন মসজিদ/মন্দির/গীর্জা আছে হ্যাঁ ☐ না ☐

৫.৪.১ এই বাড়ীর কোনও পুরুষ কি সেখানে নামাজ পড়তে বা প্রার্থন করতে বা অন্যান্য লোকের সাথে মেলামেলা করতে যায়?

হ্যাঁ ☐ না ☐

৫.৪.২ মসজিদ/মন্দির/গীর্জা ভিত্তিক কি কোনও সমাজ আছে? হ্যাঁ ☐ না ☐

৫.৫ বন্যাজনিত কারণে অথবা (নদী ভাঙ্গনের) কারণে আপনাকে কোনও সময় কি সরে যেতে হয়েছে? হ্যাঁ ☐ না ☐

উত্তর হ্যাঁ হলে

৫.৫.১ মোটামুটি কত দিন আগে অন্যত্র সড়তে হয়েছে (সময়) _____ দিন

_____ মাস

_____ বৎসর

৫.৫.২ কিভাবে আপনি অন্যত্র সরছেন_____

১ = হেঁটে

২ = নৌকায়

৩ = বাসে অথবা ট্রেনে

৪ = অন্যান্য (ব্যাখ্যা করুন)

৫.৫.৩ কি কি জিনিষপত্র আপনি সঙ্গে নিয়েছিলেন?_____

১ = বাড়ীর সকল ব্যবহৃত জিনিষপত্র যেমন, বিছানাপত্র, আসবাবপত্র, কাঁসার বা এ্যালুমিনিয়ামের জিনিষপত্র, কাপড় চোপড়, গৃহপালিত পশু-পাখী

২ = ঘরবাড়ী তৈরীর উপকরণসমূহ (যেমন- টিন, বাঁশ, কাঠ বেড়া, চাল ইত্যাদি)

৩ = পশু-পাখী

৪ = অন্যান্য ঃ (উল্লেখ করুন)

৫.৫.৪ বাড়ী দেখাশোনার জন্য কেউ কি রয়েগিয়েছিলেন ? হ্যাঁ ☐ না ☐

৫.৫.৫ কতজন সদস্য/সদস্যা সরে এসেছিলেন? সংখ্যা _____

৫.৫.৬ এ সময় আপনি কি অন্য কোনও মানুষ বা পরিবারের সাহায্যের উপর নির্ভর করেছেন? হ্যাঁ ☐ না ☐
যদি হ্যাঁ হয় তবে

৫.৫.৬.১ তারা কে? _____

১. আত্মীয়

২. প্রতিবেশী

৩. বন্ধু

৪. পরিচিত ধনী ব্যক্তি

৫. অন্যান্য জানাশোনা কেউ (চিহ্নিত করুন)

৫.৫.৬.২ এই জানা শোনা উৎসগুলি কি ধরণের সাহায্য/সহযোগিতা দিয়েছে
১. পারিবারিক খাদ্য সরবরাহ, ২. থাকার স্থান, ৩. দরকারী টাকা, ৪. স্বাস্থ্যরক্ষাকারী ঔষধ, ৫. সেবাযত্ন, ৬. অন্যান্য (উল্লেখ করুন)

৫.৫.৬.৩. এই উৎসগুলির সহযোগিতার উপর আপনি কতদিন/কতসময় নির্ভরশীল ছিলেন? _____ দিন _____ মাস _____ বৎসর

৬. মহিলাদের চাকুরী

৬.১ আপনি কিংবা এ বাড়ীর অন্য কোনও মহিলা কি কখনও কোন কাজ করেছেন যে কাজের বিনিময়ে নগদ অর্থ বা খাদ্য পেয়েছেন?

হ্যাঁ ☐ না ☐

এই বাড়ীতে যে সকল মহিলা বর্তমানে বা অতীতে কখনও বাইরে কাজ করে উপার্জন করেছে তাদের নাম সমূহের একটা তালিকা দিন।

ব্যক্তির নাম ঃ

সম্প্রতি কি ধরনের কাজ করছেন বা করেছেন (কেবলমাত্র ১টি ধরণ উল্লেখ করুন)

উদ্যোক্তার নাম (সংগঠন বা ব্যক্তির নাম)

বর্তমানে কি কাজ করছেন ? হ্যাঁ ☐ না ☐

উ ঃ হ্যাঁ হলে মজুরী কিভাবে পাচ্ছেন

১. মজুরী নগদ অর্থে

২. শস্যে

৩. আহারের মাধ্যমে

৪. উপরে উল্লিখিত একাধিকভাবে অথবা অন্যভাবে (উল্লেখ করুন)

আপনি কত বছর বয়সে কাজ শুরু করেছেন?

বিগত বৎসরে আপনার / তার অর্জিত অর্থ পারিবারিক ভরণপোষনের কাজে ব্যবহৃত হয়েছে কি হ্যাঁ ☐ না ☐

৬.২. আপনি/আপনি কি বন্যার সময়ে বা বর্ষাকালে উপার্জন করেন? হ্যাঁ ☐ না ☐

৬.২.১. বর্ষাকালে বা বন্যার সময়ে আয়ের কত অংশ মহিলাদের কাজের মাধ্যমে যোগান দেয়া হয়?

৭. অর্থনৈতিক সম্পদসমূহ

৭.১. আপনার এবং আপনার সন্তানদের অর্থনৈতিক ভরণপোষনের প্রধান ব্যক্তি কে? গুরুত্ব অনুসারে উল্লেখ করুন

১. স্বামী

২. নিজে

৩. অন্যান্য (ব্যাখ্যা করুন) _____

৭.২. আপনি কি আংশিক বা সম্পূর্ণভাবে অন্যান্য লোকের ভরণপোষনের দায়িত্ব বহন করেন? হ্যাঁ ☐ না ☐

যদি হ্যাঁ হয় তবে

এই পরিবারের অপ্রাপ্তবয়স্কদের সংখ্যা _____

অন্য পরিবারের অপ্রাপ্তবয়স্কদের সংখ্যা _____

এই পরিবারের প্রাপ্তবয়স্কদের সংখ্যা _____

অন্য পরিবারের প্রাপ্তবয়স্কদের সংখ্যা _____

৭.৩. এই বাড়ীর কেউ কি যৌতুকের অর্থ গ্রহণ করেছেন? হ্যাঁ ☐ না ☐

যদি হ্যাঁ হয় তবে এর আনুমানিক পরিমাণ কত? _____

৭.৩.১ এই বাড়ীর কোন মেয়ের বিয়েতে কি যৌতুক দিয়েছেন? হ্যাঁ ☐ না ☐

এই যৌতুক দিতে গিয়ে কি কোন ধার করতে হয়েছে? হ্যাঁ ☐ না ☐

হ্যাঁ হলে এখনও কত টাকা দেয়া বাকী আছে _____

৭.৪. (বাড়ীর মহিলা প্রধান/কর্ত্রী বা পরিবার প্রধানের স্ত্রী) আপনার বিবাহের সাথে কি কোন যৌতুকের ব্যাপার সম্পর্কিত ছিল?

হ্যাঁ ☐ না ☐

যদি থাকে তবে কি কি প্রদানের ব্যাপারে আপনারা / অভিভাবকরা সম্মত হয়েছিলেন?

নিম্নে যৌতুকের জিনিষপত্রের একটা তালিকা দেয়া হলো :

১ = গহনাপত্র
২ = নগদ অর্থ
৩ = জমি
৪ = রান্না-বান্নার জিনিষপত্র (হাঁড়ি পাতিল)
৫ = বিছানার জিনিষপত্র (যেমন- বালিশ, লেপ, কাঁথা)
৬= গৃহপালিত পশু/পাখী
৭ = অন্যান্য (১টির নাম উল্লেখ করুন)

৭.৪.২ এই যৌতুকের পরিমাণ নগদ অর্থে কত, সে সম্বন্ধে আপনার কি কোনও ধারণা আছে?

অর্থের পরিমাণ _____

জানি না _____

৭.৫. এই বাড়ীর অন্য কোন মহিলা যারা এখন এখানে বসবাস করছেন তারা কেউ কি বিবাহের সময় যৌতুকের অর্থ এনেছেন?

হ্যাঁ ☐ না ☐

২০৪

৭.৫.১ যদি এনে থাকনে তবে তাদের নাম/নামসমূহের তালিকা

৭.৫.২ যদি এনে থাকনে তবে সেগুলো কি কি (তালিকা দেয়া হলো)

১ = গহনাপত্র
২ = নগদ অর্থ
৩ = জমি
৪ = রান্না-বান্নার জিনিষপত্র (হাঁড়ি পাতিল)
৫ = বিছানার জিনিষপত্র (যেমন- বালিশ, লেপ, কাঁথা)
৬= গৃহপালিত পশু/পাখী
৭ = অন্যান্য (১টির নাম উল্লেখ করুন)

৭.৪.২ এই যৌতুকের পরিমাণ নগদ অর্থে কত হতে পারে বলে আপনার ধারণা?

অর্থের পরিমাণ _____

জানি না _____

৭.৬ আপনার নিজস্ব মালিকানায় কি কোন গৃহপালিত পশু আছে হ্যাঁ ☐ না ☐

৭.৬.১ এই পশুগুলি বিক্রি করতে আপনার কি কারো অনুমতি নেয়ার প্রয়োজন হয়? হ্যাঁ ☐ না ☐

উত্তর হ্যাঁ হলে কার কাছ থেকে অনুমতি নিতে হয়

১. স্বামী

২. অন্যান্য (উল্লেখ করুন)

৭.৭. আপকি কি (যে বাড়ীর প্রধান মহিলা বা বাড়ীর প্রধানের স্ত্রী) জমির মালিক হ্যাঁ ☐ না ☐

৭.৮. বর্তমানে বস্তুগত সম্পদের/সম্পত্তির মধ্যে কোনটিকে আপনি সবচেয়ে মূল্যবান বলে মনে করেন?

১. রান্নার হাড়ি পাতিল সমূহ

২. গহনাপত্র

৩. চাকুরী/কাজের জন্য প্রয়োজনীয় সরঞ্জামাদিসমূহ

৪. গৃহপালিত ছোট/বড় পশু

৫. অন্যান্য (ব্যাখ্যা দিন)

(সাক্ষাত গ্রহণকারীর প্রতি নির্দেশ যে সে নিজে কিছু বলতে সাহায্য করবেন না বরং দেখবেন যে, উত্তরদাত্রী নিজের থেকে বিকল্পগুলি বলছেন।)

৭.৮.১ আপনার এই সম্পদ কি বৃষ্টি, ঝড়, বন্যা, নদী ভাঙ্গন দ্বারা ক্ষতিগ্রস্থ হয়? হ্যাঁ ☐ না ☐

৭.৮.২ এই ধরনের ক্ষতি পূরণে কত টাকা খরচা হবে বলে আপনি মনে করেন?

টাকার পরিমাণ _____

৭.৮.৩ বন্যা বা নদী ভাঙ্গনজনিত কারণে এই সম্পত্তি বা এর সমপরিমাণ সম্পদ কি আপনি কখনও বন্ধক বা বিক্রি করতে বাধ্য হয়েছেন? হ্যাঁ ☐ না ☐

৭.৯ গত দশ বছরে বন্যা, ঝড়, বৃষ্টি বা নদী ভাঙ্গন দ্বারা আপনি বড় ধরনের কোন কিছু হারিয়েছেন কি? হ্যাঁ ☐ না ☐

৭.৯.১ কতদিন আগে হারিয়েছেন? _____ বৎসর

৭.৯.২ আপনি কি হারিয়েছেন?

৭.১০ বন্যা বা নদী ভাঙ্গনজনিত কারণে আপনি কি কখনও টাকা ধার করেছেন ? হ্যাঁ ☐ না ☐

৭.১০.১ কত দিন আগে ধার করেছেন? _____ বৎসর

৭.১০.২ কি কারণে ধার করেছেন _____

০০৫

৮. পারিবারিক স্বাস্থ্য

৮.১. সাধারণতঃ আপনি কোথা থেকে খাবার পানি সরবরাহ করেন?

৮.১.১. বাড়ী থেকে তার দূরত্ব কত ঃ

৮.১.২. বন্যার সময় বা বর্ষাকালে সেখান থেকে কি পানি পাওয়া যায় হ্যাঁ ☐ না ☐

না হলে তবে কোথা থেকে পানি সংগ্রহ করেন?

ঐ স্থানের দূরত্ব কত?

৮.২. আপনি কি মনে করেন স্বাস্থ্য রক্ষার জন্য পানি ফুটিয়ে পান করার দরকার আছে? হ্যাঁ ☐ না ☐

৮.২.১ আপনি কি পরিবারের অন্যান্য সদস্যের জন্যে পানি ফুটিয়ে পান করান_____
১. সাধারণতঃ, ২. মাঝে মাঝে, ৩. না

৮.৩. বন্যার সময় বা বর্ষাকালে পান করার পানি নিয়ে কি কোন সমস্যা হয়? হ্যাঁ ☐ না ☐

হ্যাঁ হয় তবে সমস্যাটি কি? (উল্লেখ করুন)

৮.৪. স্বাস্থ্যকর্মীরা আপনাদের গ্রামে কখনও আসে কি? হ্যাঁ ☐ না ☐

৮.৫. আপনি কখনও আপনার সন্তানের জন্য বা আপনার নিজের জন্য কোন ক্লিনিক বা হাসপাতালে গিয়েছেন কি?

হ্যাঁ ☐ না ☐

হ্যাঁ হলে আপনার বাড়ী থেকে ঐ ক্লিনিক/হাসপাতালের আনুমানিক দূরত্ব_____

সর্বশেষ কখন নিয়েছিলেন _____ মাস _____ বৎসর

৮.৬. সন্তান জন্মকালীন সময়ে কি এখানে কোন দাই পাওয়া যায় ? হ্যাঁ ☐ না ☐

৯. পুষ্টি

৯.১. বর্ষা ঋতুতে বা বন্যার সময় পরিবারের খাদ্য তালিকা কি পরিবর্তিত হয়? হ্যাঁ ☐ না ☐

৯.১.১. যদি হয় তবে কি পরিবর্তন হয়?

৯.১.২. পরিবর্তনের কারণ কি?

৯.১.৩. প্রধান খাদ্যসমূহের কি কোন অভাব হয়? হ্যাঁ ☐ না ☐

উল্লেখ করুন _____

প্রাপ্যতা, মূল্য, চাকুরী না থাকার কারণে খাদ্য কেনার অসুবিধা সমূহের পরিবর্তনগুলি যাচাই করে দেখুন

৯.২. আপনার সন্তানরা কি সারা বছর প্রয়োজনীয় খাদ্য খেতে পায়? হ্যাঁ ☐ না ☐

৯.৩. আপনি কি আপনার স্বামীর থেকে কম খান ? হ্যাঁ ☐ না ☐

৯.৩.১. উত্তর হ্যাঁ হলে কতখানি কম খান ?

৯.৪ রান্নার জন্য আপনি প্রধানতঃ কোন ধরনের জ্বালানী ব্যবহার করেন?

৯.৪.১ (এই জ্বালানীটি কাঠ, কয়লা বা গোবর না হলে) এটা কি পশু খাদ্য হিসাবে ব্যবহৃত হয়? হ্যাঁ ☐ না ☐

৯.৪.২ বর্ষাকালের পূর্বেই কি আপনি এই জ্বালানী সংগ্রহ করে রাখেন? হ্যাঁ ☐ না ☐

Appendix D

UPAZILA AND VILLAGE PROFILES

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Dhunat

Dhunat Upazila, Bogra District. This is 96% Karatoya-Bangali Meander Floodplain and 4% active Brahmaputra Floodplain. The eastern portion of the upazila is under the protection of the Brahmaputra Right Embankment (BRE). The flood plain is almost level, but with relief formed by irregular ridges and cut-off meanders. A small area in the eastern portion of the upazila is subject to river bank erosion. There has been flooding by breaches in the BRE and from drainage congestion behind it. The area was severely affected in the 1987 and 1988 floods.

Village 1: Baraitali

Baraitali is a village under active Jamuna flood plain partly protected by the Brahmaputra Right Embankment (BRE). The occupants are vulnerable to severe flooding and bank erosion. More than 80 percent of the occupants own land less than 0.12 ha (<50 Dec) in size. Accelerated river erosion is stated to be the reason for such a high percentage of landlessness.

Village 2: Panchthupi

Unlike Baraitali, the village **Panchthupi** is more stable in the sense that the villagers are neither affected by bank erosion nor by severe flood; although at times it suffers from drainage congestion. The farmers are relatively welloff.

Basic Data		Village 1 Baraitali			Village 2 Panchthupi		
Flood Environment	:	Main River Flood Plain			Breach		
Flood Source	:	Overbank Spill+Breach			Breach		
Flood Protection	:	Partially Protected			Fully Protected		
Last Severe Flood Year	:	1984, 1987 & 1988			1984, 1988 & 199		
Susceptibility to River Erosion	:	Yes			No		
Proximity to Urban/Semi-Urban Area	:	Not Close (6-10 km)			Distant (11+ km)		
A. Data from 100% Census	:						
Total Land Area (ha)	:	27.28			172.30		
Net Cultivated Area (ha)	:	18.68			148.36		
Fallow Land (ha)	:	2.04			0.07		
Land not Avai. for Cult. (ha)	:	6.56			23.87		
Land Types (%)	:						
High F_0 (30 cm)	:	21			49		
Medium F_1 (30-90 cm)	:	17			10		
Low F_2+F_3 (>90 cm)	:	62			41		
Number of Households	:	222			344		
Land Ownership(% of Households)	:						
Landless (<50 Dec)	:	86			62		
Small (50-249 Dec)	:	13			24		
Medium (250-749 Dec)	:	1			13		
Large (750+ Dec)	:	0			1		
Av. Land Owned/Household (ha)	:	0.12			0.50		
Demographic Information	:						
Area (sq km)	:	0.27			1.72		
Population	:	1157			1874		
Density/sq km	:	4285			1089		
B. Data from Sample Households	:						
Demographic Information	:	M	F	T	M	F	T
Population	:	177	152	329	228	237	465
Percentage	:	54	46	100	49	51	100
Dependency Ratio	:	0.77			0.72		
Occupation of Persons 15+ Years:		M	F	T	M	F	T
Total Number 15+ Years	:	104	96	200	147	138	285
% Agriculture	:	21	3	13	35	0	18
% Day Labor	:	37	2	20	29	1	15
% Business & Trading	:	8	0	4	3	0	1
% Fishing	:	1	0	1	0	0	0
% Weaving	:	0	0	0	1	0	0
% Potter	:	0	0	0	0	0	0
% Household Work	:	2	85	42	2	80	40
% Others	:	21	3	13	10	3	7
% Unemployed	:	4	4	4	2	8	5
Total % (excluding students)	:	93	97	97	82	92	86
Children's Schooling (age 5 to 14.9)	:	M	F	T	M	F	T
Number	:	49	41	90	61	77	138
Number at School	:	38	29	67	47	62	109
% at School	:	78	71	74	77	81	79
Education Level (Adults)	:	M	F	T	M	F	T
(Age 15+) Number	:	104	96	200	147	138	285
% with No Formal Education	:	58	1	69	52	71	61
% with Class I to V	:	19	0	14	12	12	12
% with Class VI to SSC	:	15	0	13	19	14	16
% with HSC +	:	8	0	5	17	4	11

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Tangail Sadar

Tangail Upazila, Tangail District. This is 100% Young Brahmaputra-Jamuna Floodplain. It has a complex relief of broad and narrow ridges, cut-off channels and basins. The area is normally flooded. The main flood source is overbank spill from the Dhaleshwari/Lohajang rivers during major Brahmaputra-Jamuna floods.

Village 1: Chhoto Bashalia

Chhoto Bashalia represents a lowland village in the upazila. The village is well connected with the upazila and the district headquarters. Nearly 70 percent of the cultivated land in the village is double cropped. The village suffers from drainage congestion. Available irrigation facilities are not adequate.

Village 2: Bararia

Bararia village is protected by a flood protection embankment, which has been extensively used as flood time refuge/ shelter during the floods of 1987 and 1988. The low-lying areas of the village are affected by drainage congestion from mid August to around November although actual flood conditions last for 10 to 15 days. In 1988 nearly 90 percent of the village was affected and the flood lasted for about 15 to 20 days.

Basic Data	Village 1 Chhoto Bashalia			Village 2 Bararia		
Flood Environment	: Main River Flood Plain			Main River Flood Plain		
Flood Source	: Overbank Spill+Rainfall			Overbank Spill+Rainfall		
Flood Protection	: None			Partially Protected		
Last Severe Flood Year	: 1988			1987 & 1988		
Susceptibility to River Erosion	: No			No		
Proximity to Urban/Semi-Urban Area	: Not Close (6-10 km)			Not Close (6-10 km)		
A. Data from 100% Census	:					
Total Land Area (ha)	: 140.74			48.54		
Net Cultivated Area (ha)	: 118.74			32.10		
Fallow Land (ha)	: 0.45			0.33		
Land not Avai. for Cult. (ha)	: 21.56			16.11		
Land Types (%)	:					
High F_0 (30 cm)	: 17			60		
Medium F_1 (30-90 cm)	: 10			13		
Low F_2+F_3 (>90 cm)	: 73			27		
Number of Households	: 347			321		
Land Ownership(% of Households)	:					
Landless (<50 Dec)	: 62			86		
Small (50-249 Dec)	: 29			12		
Medium (250-749 Dec)	: 7			2		
Large (750+ Dec)	: 1			0		
Av. Land Owned/Household (ha)	: 0.41			0.15		
Demographic Information	:					
Area (sq km)	: 1.41			0.49		
Population	: 1897			1589		
Density/sq km	: 1345			3243		
B. Data from Sample Households	:					
Demographic Information	:	M	F	T	M	F	T
Population	:	269	231	500	215	205	420
Percentage	:	54	46	100	51	49	100
Dependency Ratio	:	0.74			0.71		
Occupation of Persons 15+ Years:		M	F	T	M	F	T
Total Number 15+ Years	:	160	144	304	138	129	267
% Agriculture	:	26	1	14	7	0	3
% Day Labor	:	22	1	12	5	2	4
% Business & Trading	:	5	1	3	14	0	7
% Fishing	:	4	1	2	1	0	1
% Weaving	:	4	1	3	2	0	1
% Potter	:	4	1	3	0	0	0
% Household Work	:	3	83	41	4	76	39
% Others	:	16	3	10	39	14	27
% Unemployed	:	4	5	5	6	3	4
Total % (excluding students)	:	87	97	93	78	95	86
Children's Schooling	:	M	F	T	M	F	T
(age 5 to 14.9)	:	77	57	134	53	50	103
Number	:	67	46	113	46	42	88
Number at School	:	87	81	84	87	84	85
% at School							
Education Level (Adults)	:	M	F	T	M	F	T
(Age 15+) Number	:	160	143	303	138	129	267
% with No Formal Education	:	48	1	59	62	81	71
% with Class I to V	:	14	0	17	14	11	12

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Bhedarganj

Bhedarganj Upazila, Shariatpur District, is 75% Young Ganges Meander Flood-plain and 25% Lower Meghna Estuarine Flood-plain. It is normally flooded, and there are char lands and some bank erosion. This area lies across the Meghna River from Matlab, at the point where it is joined by the Padma from the West. Since the Meghna is moving east here, toward Matlab, it is creating chars on Bhedarganj side.

Village 1: Shibsen

Shibsen is a char land village. It has surfaced just about three years ago. As the chars are not stable, the occupants also move quite frequently. Nearly 50 percent of the people of Shibsen do fishing and ply boats to make a living during the monsoon. The lands are mostly (95 percent) single cropped.

Village 2: Shingjala

Shingjala is located almost adjacent to the Upazila headquarters at Bhedarganj. The largest part of the village used to be the river itself about 30 years ago. The river, a seasonal branch of the Padma and a khal that exists here, cut the village into three pieces. The village is affected by seasonal flooding in the months from July to October and high water level stays for about 25 to 30 days.

Basic Data	Village 1 Shibsen			Village 2 Shingjala		
Flood Environment	: Char			Main River Floo		
Flood Source	: Overbank Spill			Overbank Spill		
Flood Protection	: None			None		
Last Severe Flood Year	: 1987 & 1988			1987 & 1988		
Susceptibility to River Erosion	: Yes			Yes		
Proximity to Urban/Semi-Urban Area	: Distant (11+ km)			Close (1-5km)		
A. Data from 100% Census	:					
Total Land Area (ha)	: 83.85			51.68		
Net Cultivated Area (ha)	: 80.27			40.50		
Fallow Land (ha)	: 0.31			1.20		
Land not Avai. for Cult. (ha)	: 3.27			9.97		
Land Types (%)	:					
High F_0 (30 cm)	: 2			26		
Medium F_1 (30-90 cm)	: 2			26		
Low F_2+F_3 (>90 cm)	: 96			49		
Number of Households	: 390			123		
Land Ownership(% of Households)	:					
Landless (<50 Dec)	: 76			63		
Small (50-249 Dec)	: 17			30		
Medium (250-749 Dec)	: 7			4		
Large (750+ Dec)	: 0			3		
Av. Land Owned/Household (ha)	: 0.21			0.42		
Demographic Information	:					
Area (sq km)	: 0.84			0.52		
Population	: 2345			798		
Density/sq km	: 2792			1535		
B. Data from Sample Households	:					
Demographic Information	:	M	F	T	M	F	T
Population	:	294	302	596	112	103	215
Percentage	:	49	51	100	52	48	100
Dependency Ratio	:	0.89			0.94		
Occupation of Persons 15+ Years:		M	F	T	M	F	T
Total Number 15+ Years	:	175	159	334	68	50	118
% Agriculture	:	16	0	8	18	4	12
% Day Labor	:	17	1	9	13	0	8
% Business & Trading	:	5	0	2	25	0	14
% Fishing	:	39	0	20	1	0	1
% Weaving	:	0	0	0	0	0	0
% Potter	:	0	0	0	0	0	0
% Household Work	:	1	91	44	3	86	38
% Others	:	18	6	13	28	10	20
% Unemployed	:	2	0	1	7	0	4
Total % (excluding students)	:	98	98	97	95	100	97
Children's Schooling (age 5 to 14.9)	:	M	F	T	M	F	T
Number	:	92	81	173	29	37	66
Number at School	:	78	68	146	25	35	60
% at School	:	85	84	84	86	95	91
Education Level (Adults)	:	M	F	T	M	F	T
(Age 15+) Number	:	175	159	334	68	50	118
% with No Formal Education	:	79	1	86	53	68	59
% with Class I to V	:	13	0	9	29	18	25
% with Class VI to SSC	:	7	0	4	13	14	14

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Singra

Singra Upazila, Natore District. This is 50% old floodplain basins, 30% Young Ganges Floodplain, 10% Mixed Young and Old Floodplain, and 10% Barind. The Atrai Basin is a flood vulnerable area, and the area is normally deeply flooded. Parts of the upazila are also affected by flash flooding from the Barind tract, and there are problems from drainage congestions. Singra lies within the Chalan Beel polder complex. Flooding is seasonal, August-September.

Village 1: Lalua & Others

Lalua and others are located well inside the deeply flooded Chalan Beel. The occupants raise their homesteads high, so that except during severe flood, these are not flooded. Accessibility is easier during monsoon but difficult during dry season. Nearly 95 percent of the villagers are dependent on farming. Since aman remains susceptible to damage by flood, boro has gradually taken over as the main crop.

Village 2: Pakisha

Pakisha lies at the edge of the Chalan Beel. Like Lalua, almost 100 percent of the cultivable land is low (F_2 + F_3). Although, the village is protected by an embankment, man-made/natural breaches cause serious damage to Kharif 2 crops and capture fisheries almost every year. The village lacks high grounds for refuge. The village is accessible all the year round.

Basic Data	Village 1 Lalua & Others			Village 2 Pakisha		
Flood Environment	Beel			Beel		
Flood Source	Overbank Spill+Rainfall			Breach		
Flood Protection	None			Partially Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Distant (11+ km)			Distant (11+ km)		
A. Data from 100% Census						
Total Land Area (ha)	204.42			182.21		
Net Cultivated Area (ha)	190.40			169.54		
Fallow Land (ha)	3.88			0.66		
Land not Avai. for Cult. (ha)	10.15			12.02		
Land Types (%)						
High F_0 (30 cm)	4			3		
Medium F_1 (30-90 cm)	1			2		
Low F_2+F_3 (>90 cm)	96			95		
Number of Households	158			197		
Land Ownership(% of Households):						
Landless (<50 Dec)	30			43		
Small (50-249 Dec)	25			30		
Medium (250-749 Dec)	34			20		
Large (750+ Dec)	11			7		
Av. Land Owned/Household (ha)	1.29			0.92		
Demographic Information						
Area (sq km)	2.04			1.82		
Population	981			1000		
Density/sq km	480			549		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	179	160	339	198	165	363
Percentage	53	47	100	55	45	100
Dependency Ratio	1.01			0.77		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	94	85	179	114	104	218
% Agriculture	47	0	25	38	0	20
% Day Labor	17	0	9	23	2	13
% Business & Trading	10	0	5	5	0	3
% Fishing	0	0	0	8	0	4
% Weaving	0	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	3	98	48	3	95	47
% Others	6	0	3	11	2	7
% Unemployed	3	0	2	4	0	2
Total % (excluding students)	86	98	92	92	99	96
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	49	58	107	57	45	102
Number at School	43	49	92	49	39	88
% at School	88	84	86	86	87	86
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	94	85	179	114	104	218
% with No Formal Education	30	1	49	48	69	58
% with Class I to V	33	0	28	11	14	13
% with Class VI to SSC	29	0	18	28	14	22
% with HSC +	9	0	4	12	2	7

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Madhukhali

Madhukhali Upazila, Faridpur District. This is 50% Old Ganges Meander floodplain and 50% Young Ganges Meander Floodplain, with typical meander patterns. Flooding sources are ponded rainwater or raised water table, as well as overspill from the Ganges down the Madhumati and Kumar. Soils are silty loams and silty clay loams. Drainage from higher areas is rapid after flood, but the basins stay wet much longer.

Village 1: Kamaldia

Kamaldia is a low lying village just outside a beel called the Beel Chapadia. Boat constitutes the main means of transport during monsoon. Drainage congestion causes flood in Kamaldia, that also precludes cultivation of crops in both the Kharif seasons.

Village 2: Rukuni

Rukuni is located in a higher elevation and, therefore, relatively flood free. The nearby river Chandana has silted up and carries water from the Padma only during the monsoon. The village rarely faced the problem of flood. Even in 1988 many homesteads were not submerged in this village. Nevertheless, the damage was quite extensive due mainly to inexperience of the people of this village with floods.

Basic Data	Village 1 Kamaldia			Village 2 Rukuni		
Flood Environment	: Sec. River Flood Plain			Sec. River Flood		
Flood Source	: Overbank Spill+Rainfall			Overbank Spill		
Flood Protection	: Partially Protected			Partially Protec		
Last Severe Flood Year	: 1988					
Susceptibility to River Erosion	: No			No		
Proximity to Urban/Semi-Urban Area	: Not Close (6-10 km)			Close (1-5 km)		
A. Data from 100% Census	:					
Total Land Area (ha)	: 207.18			119.80		
Net Cultivated Area (ha)	: 189.43			99.34		
Fallow Land (ha)	: 1.37			1.36		
Land not Avai. for Cult. (ha)	: 16.38			19.11		
Land Types (%)	:					
High F_0 (30 cm)	: 4			63		
Medium F_1 (30-90 cm)	: 42			23		
Low F_2+F_3 (>90 cm)	: 54			14		
Number of Households	: 271			214		
Land Ownership(% of Households)	:					
Landless (<50 Dec)	: 31			52		
Small (50-249 Dec)	: 44			33		
Medium (250-749 Dec)	: 23			14		
Large (750+ Dec)	: 2			1		
Av. Land Owned/Household (ha)	: 0.76			0.56		
Demographic Information	:					
Area (sq km)	: 2.07			1.20		
Population	: 1755			1231		
Density/sq km	: 847			1026		
B. Data from Sample Households	:					
Demographic Information	:	M	F	T	M	F	T
Population	:	299	269	568	227	236	463
Percentage	:	53	47	100	49	51	100
Dependency Ratio	:	0.98			1.10		
Occupation of Persons 15+ Years	:	M	F	T	M	F	T
Total Number 15+ Years	:	165	139	304	125	116	241
% Agriculture	:	39	1	22	34	1	18
% Day Labor	:	16	0	9	30	0	15
% Business & Trading	:	1	0	1	6	0	3
% Fishing	:	2	0	1	0	0	0
% Weaving	:	0	0	0	0	0	0
% Potter	:	0	0	0	0	0	0
% Household Work	:	2	83	39	1	93	45
% Others	:	23	5	15	17	1	9
% Unemployed	:	4	9	7	9	5	7
Total % (excluding students)	:	87	98	94	97	100	99
Children's Schooling (age 5 to 14.9)	:	M	F	T	M	F	T
Number	:	99	94	193	59	75	134
Number at School	:	87	85	172	59	75	134
% at School	:	88	90	89	100	100	100
Education Level (Adults)	:	M	F	T	M	F	T
(Age 15+) Number	:	165	139	304	124	116	240
% with No Formal Education	:	55	1	66	71	94	82
% with Class I to V	:	16	0	14	15	3	10

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Sunamganj Sadar

Sunamganj Upazila, Sunamganj District. This is 50% Surma-Kushiyara Floodplain, 30% Piedmont Alluvial Floodplain, and 20% Old Floodplain with Piedmont Alluvium in basins. The area is subject to early flash flooding. There are deeply flooded basins (haors), and the area has several submersible embankments, of differing age. There are also problems of localized rainfall and consequent drainage congestion.

Village 1: Muradpur

Muradpur is located in the haor area. Nearly 95 percent of the land in this village is low ($F_2 + F_3$) and the depth of inundation of the cultivable land varies from 3 m to 3.5 m. During monsoon, the occupants need protection of the homesteads and house floors from wave actions from the haor. Due to long duration flooding for 5-6 months, only one crop (local boro) in partly Rabi and partly Kharif 1 seasons (February to May) can be grown.

Village 2: Fenibeel

Fenibeel, a piedmont plain, lies at the southern edge of the Meghalaya foot hills. The flashy river Chalti passes nearby and causes extensive damage to crops through sand washing and rendering most of its lands useless for growing crops. The flash flood that creates havoc in the village does not, however, last for more than three to four hours.

Basic Data	Village 1 Muradpur			Village 2 Fenibeel		
Flood Environment	Haor			Flash Flood		
Flood Source	Flash+Overbank Spill			Flash Flood		
Flood Protection	None			Partially Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Distant (11+ km)			Distant (11+ km)		
A. Data from 100% Census						
Total Land Area (ha)	215.35			97.56		
Net Cultivated Area (ha)	203.60			75.58		
Fallow Land (ha)	4.65			6.31		
Land not Avai. for Cult. (ha)	7.09			15.66		
Land Types (%)						
High F_0 (30 cm)	2			59		
Medium F_1 (30-90 cm)	2			23		
Low F_2+F_3 (>90 cm)	97			18		
Number of Households	386			142		
Land Ownership(% of Households):						
Landless (<50 Dec)	70			52		
Small (50-249 Dec)	18			37		
Medium (250-749 Dec)	9			7		
Large (750+ Dec)	3			4		
Av. Land Owned/Household (ha)	0.56			0.69		
Demographic Information						
Area (sq km)	2.15			0.98		
Population	2439			894		
Density/sq km	1134			912		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	314	285	599	133	117	250
Percentage	52	48	100	53	47	100
Dependency Ratio	0.94			0.91		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	165	157	322	71	64	135
% Agriculture	30	1	16	28	2	16
% Day Labor	40	3	23	34	0	18
% Business & Trading	3	0	2	11	0	6
% Fishing	7	0	3	0	0	0
% Weaving	4	1	2	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	1	76	38	1	87	42
% Others	8	6	7	11	9	10
% Unemployed	7	11	9	4	3	3
Total % (excluding students)	100	98	100	89	101	95
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	105	85	190	43	32	75
Number at School	88	71	159	37	29	66
% at School	84	84	84	86	91	88
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	164	157	321	70	64	134
% with No Formal Education	90	1	95	71	89	80
% with Class I to V	5	0	3	4	5	4
% with Class VI to SSC	3	0	2	17	6	12
% with HSC +	1	0	1	7	0	4

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Brahmanbaria Sadar

Brahmanbaria Upazila, Brahmanbaria District. This is 60% Old Meghna Estuarine Floodplain, 20% Titas Floodplain, and 20% Titas, Paulia, Lauha, and Kalachara Piedmont Alluvial Plain. Soils are silty and clayey, and levels almost evenly spread. The Upazila is subject to early and heavy floods, both seasonal and flashy. Flash floods are in the east; basins to the west fill early and rapidly. Overbank spill is important, as is poor drainage. There are many man-made drainage channels which need re-excavation.

Village 1: Budhal

Budhal represents the relatively flood-prone areas of the upazila. The village is usually affected by the over bank spill of the Meghna and Titas rivers although occasionally by flash floods too. The main crops grown are HYV boro followed by transplanted aman mostly of Locally Improved Variety (LIV). Although normal monsoon inundation does not cause much harm to crops, at times early flash floods damage crops to the extent of 30 percent.

Village 2: Bhitidaudpur

Bhitidaudpur is located at the foot of the Tippera Hills. The homesteads of the occupants are above flood level. Occasional flash flood cause extensive damage to the standing boro rice (both HYV and local). Rice being not so much a dependable crop, the people in this village have switched over to vegetable and other horticulture crops for cash.

Basic Data	Village 1 Budhal			Village 2 Bhitidaudpur		
Flood Environment	Main River Flood Plain			Flash Flood		
Flood Source	Overbank Spill			Flash Flood		
Flood Protection	Partially Protected			None		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Close (1-5 km)			Distant (11+ km)		
A. Data from 100% Census						
Total Land Area (ha)	80.35			155.19		
Net Cultivated Area (ha)	71.83			107.71		
Fallow Land (ha)	0.04			5.85		
Land not Avai. for Cult. (ha)	8.49			41.63		
Land Types (%)						
High F_0 (30 cm)	7			41		
Medium F_1 (30-90 cm)	2			3		
Low F_2+F_3 (>90 cm)	90			56		
Number of Households	299			368		
Land Ownership(% of Households):						
Landless (<50 Dec)	61			61		
Small (50-249 Dec)	36			31		
Medium (250-749 Dec)	4			8		
Large (750+ Dec)	0			1		
Av. Land Owned/Household (ha)	0.27			0.42		
Demographic Information						
Area (sq km)	0.80			1.55		
Population	1723			2264		
Density/sq km	2154			1461		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	231	205	436	297	302	599
Percentage	53	47	100	50	50	100
Dependency Ratio	0.88			1.05		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	128	118	246	168	145	313
% Agriculture	37	4	21	35	2	20
% Day Labor	27	2	15	21	1	12
% Business & Trading	9	0	5	7	0	4
% Fishing	0	0	0	1	0	0
% Weaving	1	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	2	92	46	2	88	42
% Others	16	0	9	22	2	13
% Unemployed	3	0	2	4	3	4
Total % (excluding students)	95	98	98	92	96	94
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	64	56	120	97	94	191
Number at School	55	50	105	83	85	168
% at School	86	89	88	86	90	88
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	128	116	244	168	145	313
% with No Formal Education	66	1	75	46	77	60
% with Class I to V	23	0	19	24	11	18
% with Class VI to SSC	10	0	6	25	12	19
% with HSC +	1	0	0	5	0	3

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Sarishabari

Sarishabari Upazila, Jamalpur District. This is 50% Old Brahmaputra Flood Plain and 50% Active and Young Brahmaputra Flood Plain. It is immediately across the river from Dhunat, offering a good comparison. The flood source is runoff from adjacent high lands of the Madhupur tract to the east, at times backed by Jamuna and Old Brahmaputra levels. It is incompletely protected by the Brahmaputra Left Embankment, and was moderately flood-affected in 1987, more severely in 1988. There is erosion in the active Brahmaputra floodplain as there are char lands.

Village 1: Goalbathan

Goalbathan represents the more flood vulnerable of the two villages studied in Sarishabari. This is near the left bank of the Jamuna. In 1988, the embankment on the Jamuna left bank breached and the village suffered badly. The canal that passes through the village has silted up causing drainage congestion in the village that could be significantly improved through re-excavation of the canal.

Village 2: Shanakoir

Shanakoir is located on a higher terrain at the western edge of the Madhupur tract. Flood affected the village two times in the course of the last 10 years the worst being in 1988 when nearly every piece of land went under water causing 100 percent damage to all crops.

Basic Data	Village 1 Goalbathan			Village 2 Shanakoir		
Flood Environment	Main River Flood Plain			Main River Flood Plain		
Flood Source	Overbank Spill+Rainfall			Overbank Spill+Rainfall		
Flood Protection	Partially Protected			Fully Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Distant (11+ km)			Distant (11+ km)		
A. Data from 100% Census						
Total Land Area (ha)	96.61			200.71		
Net Cultivated Area (ha)	85.59			165.08		
Fallow Land (ha)	1.04			0.06		
Land not Avai. for Cult. (ha)	9.98			35.57		
Land Types (%)						
High F_0 (30 cm)	13			44		
Medium F_1 (30-90 cm)	18			15		
Low F_2+F_3 (>90 cm)	68			41		
Number of Households	203			539		
Land Ownership(% of Households):						
Landless (<50 Dec)	51			68		
Small (50-249 Dec)	35			23		
Medium (250-749 Dec)	13			8		
Large (750+ Dec)	1			1		
Av. Land Owned/Household (ha)	0.48			0.37		
Demographic Information						
Area (sq km)	0.97			2.01		
Population	1100			2563		
Density/sq km	1134			1275		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	137	156	293	323	289	612
Percentage	47	53	100	53	47	100
Dependency Ratio	0.79			0.75		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	92	80	172	198	168	366
% Agriculture	39	0	21	26	0	14
% Day Labor	21	0	11	26	1	14
% Business & Trading	4	0	2	11	0	6
% Fishing	3	0	2	1	0	0
% Weaving	0	0	0	1	0	0
% Potter	0	0	0	0	0	0
% Household Work	4	96	47	3	86	41
% Others	14	1	8	17	1	10
% Unemployed	3	3	3	4	5	4
Total % (excluding students)	88	100	94	89	93	89
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	30	52	82	90	85	175
Number at School	25	41	66	80	70	150
% at School	83	79	80	89	82	86
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	91	80	171	197	167	364
% with No Formal Education	65	1	73	64	75	69
% with Class I to V	8	0	8	10	12	11
% with Class VI to SSC	19	0	15	18	11	15
% with HSC +	9	0	5	9	2	5

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Nasirnagar

Nasirnagar Upazila, Brahmanbaria District, is 80% Old Meghna Estuarine Floodplain and 20% Sylhet Basin. Part of this upazila is located in the haor area of the Northeast region, which is characterized by annual deep-water flooding and flash floods. Submersible embankments have been suggested to protect against early flash floods.

Village 1: Rampur

Rampur is an isolated village in the active floodplain of the Meghna. The area is deeply flooded and most of the agricultural land of the village falls in the Masma Haor. An earthen road that connects the village with some others remains under water for almost as long as the agricultural land (end April to late October). The villagers grow only HYV or local boro in the Rabi season.

Village 2 : Chatipara

Chatipara is located at a relatively higher location although within close proximity to the Akashi Haor. Its location at relatively higher elevation causes inmigration here from the surrounding low lying areas. The village is affected by early flash flood. The crops grown are mainly HYV or local boro with a small percentage of T. aman, Jute and wheat.

Basic Data	Village 1 Rampur			Village 2 Chatipara		
Flood Environment	Haor			Haor		
Flood Source	Flash+Overbank Spill			Flash+Overbank Spil		
Flood Protection	Not Protected			Partially Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Not Close (6-10 km)			Close (1-5km)		
A. Data from 100% Census						
Total Land Area (ha)	308.29			116.81		
Net Cultivated Area (ha)	295.22			99.31		
Fallow Land (ha)	6.90			2.74		
Land not Avai. for Cult. (ha)	6.17			14.76		
Land Types (%)						
High F_0 (30 cm)	1			29		
Medium F_1 (30-90 cm)	0			20		
Low F_2+F_3 (>90 cm)	99			51		
Number of Households	317			202		
Land Ownership(% of Households):						
Landless (<50 Dec)	41			54		
Small (50-249 Dec)	42			34		
Medium (250-749 Dec)	11			9		
Large (750+ Dec)	5			2		
Av. Land Owned/Household (ha)	0.97			0.58		
Demographic Information						
Area (sq km)	3.08			1.17		
Population	1806			1245		
Density/sq km	586			1064		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	236	235	471	175	164	339
Percentage	50	50	100	52	48	100
Dependency Ratio	1.06			0.87		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	133	118	251	101	94	195
% Agriculture	58	5	33	34	2	18
% Day Labor	17	3	10	16	0	8
% Business & Trading	1	0	0	19	0	10
% Fishing	5	0	2	1	0	1
% Weaving	0	0	0	2	0	1
% Potter	0	0	0	0	0	0
% Household Work	11	89	47	1	93	45
% Others	3	1	2	15	1	8
% Unemployed	2	2	2	6	1	4
Total % (excluding students)	97	100	96	94	97	95
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	71	74	145	52	50	102
Number at School	59	66	125	44	41	85
% at School	83	89	86	85	82	83
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	133	118	251	100	94	194
% with No Formal Education	71	1	80	59	73	66
% with Class I to V	13	0	10	8	12	10
% with Class VI to SSC	13	0	9	27	13	20
% with HSC +	3	0	2	6	2	4

Characteristic Features of the Upazila & Villages in Brief:

Upazial : Matlab

Matlab Upazila, Chandpur District, is 70% Middle Meghna Floodplain, 20% Old Meghna Estuarine Floodplain, and 10% Lower Meghna River Floodplain. It is subject to seasonal floods, and has active river erosion. Main flood source is overbank spill from the Meghna. Within the Upazila is the Meghna-Dhonagoda Flood Control Drainage and Irrigation (FCD/I) Project, completed in 1986, which empoldered most of the Upazila. It encloses some 17,000 hectares and irrigates roughly 14,000 hectares. The embankment breached in 1987 and 1988.

Village 1: Paschim Durgapur

Paschim Durgapur village falls within the Meghna-Dhonagoda FCD/I project area. The village is fully protected from flood but extension of irrigation facilities as a component activity of the project has not yet reached the village. However, lack of drainage canals causes drainage congestion for nearly four to five months a year. The polder breached in 1987 and in 1988 and the people there do not feel fully protected any more.

Village 2: Uttar Shankibhanga

Uttar Shankibhanga located just outside of the Meghna-Dhonagoda FCD/I Project, has lost nearly 70 percent of its land to the Meghna due to erosion. The village is subject to annual monsoon inundation due to over spills of the nearby Meghna and standing water remains for five to six months in the low lands (F_2 + F_3). The floods of 1987 and 1988 submerged the entire village and many took shelter on the Project embankment.

Basic Data	Village 1 Paschim Durgapur			Village 2 Uttar Sankibhanga		
Flood Environment	Breach			Main River Flood Plain		
Flood Source	Breach			Overbank Spill		
Flood Protection	Fully Protected			Not protected		
Last Severe Flood Year	1987 & 1988			1987 & 1988		
Susceptibility to River Erosion	No			Yes		
Proximity to Urban/Semi-Urban Area	Distant (11+km)			Distant (11+km)		
A. Data from 100% Census						
Total Land Area (ha)	124.21			53.68		
Net Cultivated Area (ha)	105.58			40.97		
Fallow Land (ha)	1.53			0.07		
Land not Avai. for Cult. (ha)	17.11			12.64		
Land Types (%)						
High F_0 (30 cm)	42			17		
Medium F_1 (30-90 cm)	26			37		
Low F_2+F_3 (>90 cm)	32			47		
Number of Households	288			252		
Land Ownership(% of Households)						
Landless (<50 Dec)	51			76		
Small (50-249 Dec)	40			21		
Medium (250-749 Dec)	8			3		
Large (750+ Dec)	1			0		
Av. Land Owned/Household (ha)	0.43			0.21		
Demographic Information						
Area (sq km)	1.24			0.54		
Population	1790			1530		
Density/sq km	1443			2833		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	254	221	475	234	186	420
Percentage	53	47	100	56	44	100
Dependency Ratio	0.77			0.76		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	152	131	283	145	112	257
% Agriculture	24	1	13	12	0	7
% Day Labor	13	1	7	22	1	13
% Business & Trading	12	0	6	10	0	5
% Fishing	0	0	0	1	0	1
% Weaving	0	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	11	80	43	8	90	44
% Others	26	2	15	30	2	18
% Unemployed	1	3	2	2	4	3
Total % (excluding students)	87	87	86	85	97	91
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	74	58	132	65	54	119
Number at School	68	55	123	61	49	110
% at School	92	95	93	94	91	92
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	152	131	283	145	111	256
% with No Formal Education	38	0	42	48	68	57
% with Class I to V	17	0	19	17	17	17
% with Class VI to SSC	33	0	30	26	14	20
% with HSC +	13	0	8	9	2	6

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Satkhira Sadar

Satkhira Sadar Upazila, Satkhira District. The main rivers in the area are tidal, and the physiography is 50% Ganges Meander Floodplain, 20% Ganges Tidal Floodplain, and 30% mixed. The area comes partly under the Coastal Embankment Project. It is seasonally vulnerable to tidal flooding, but has only experienced major floods in 1987. Floods occur in June to November. Drainage is poor, and in part of the area there are also problems with controlling saltwater incursions.

Village 1: Goalpota

Goalpota is situated northeast of the Betna river and is protected against saline water by an embankment. People in the village used to make a living by doing fishing. The embankment has transformed life. Particularly, the introduction of HYV seeds in the village has helped it to become an important farming village.

Village 2: Bakchara

Bakchara is a village where about 70 percent of the total land area falls in a beel area locally known as the Bakchara Beel. No river exists in and around the village. Drainage congestion is the biggest problem here. The flood of 1987 caused maximum damage to crops.

Basic Data		Village 1 Goalpota			Village 2 Bakchara		
Flood Environment	:	Semi-Saline Polders			Semi-Saline Polder		
Flood Source	:	Rainfall			Rainfall		
Flood Protection	:	Fully Protected			Fully Protected		
Last Severe Flood Year	:	1987			1987		
Susceptibility to River Erosion	:	No			No		
Proximity to Urban/Semi-Urban Area	:	Not Close (6-10km)			Close (1-5km)		
A. Data from 100% Census	:						
Total Land Area (ha)	:	189.30			177.58		
Net Cultivated Area (ha)	:	165.40			156.56		
Fallow Land (ha)	:	3.01			0.00		
Land not Avai. for Cult. (ha)	:	20.89			21.02		
Land Types (%)	:						
High F_0 (30 cm)	:	27			25		
Medium F_1 (30-90 cm)	:	25			18		
Low F_2+F_3 (>90 cm)	:	48			57		
Number of Households	:	185			412		
Land Ownership(% of Households)	:						
Landless (<50 Dec)	:	33			64		
Small (50-249 Dec)	:	39			24		
Medium (250-749 Dec)	:	21			11		
Large (750+ Dec)	:	7			2		
Av. Land Owned/Household (ha)	:	1.02			0.43		
Demographic Information	:						
Area (sq km)	:	1.89			1.78		
Population	:	1210			2447		
Density/sq km	:	640			1375		
B. Data from Sample Households	:						
Demographic Information	:	M	F	T	M	F	T
Population	:	159	142	301	312	294	606
Percentage	:	53	47	100	51	49	100
Dependency Ratio	:	0.76			0.95		
Occupation of Persons 15+ Years	:	M	F	T	M	F	T
Total Number 15+ Years	:	101	82	183	174	155	329
% Agriculture	:	43	2	25	33	1	18
% Day Labor	:	22	5	14	34	4	20
% Business & Trading	:	2	0	1	9	0	5
% Fishing	:	0	0	0	1	0	1
% Weaving	:	0	0	0	0	0	0
% Potter	:	0	0	0	0	0	0
% Household Work	:	5	80	39	3	82	40
% Others	:	7	1	4	5	1	3
% Unemployed	:	9	10	9	7	11	9
Total % (excluding students)	:	88	98	92	92	99	96
Children's Schooling	:	M	F	T	M	F	T
(age 5 to 14.9)							
Number	:	46	55	101	91	91	182
Number at School	:	36	42	78	79	69	148
% at School	:	78	76	77	87	76	81
Education Level (Adults)	:	M	F	T	M	F	T
(Age 15+) Number	:	101	82	183	174	155	329
% with No Formal Education	:	48	1	66	62	86	73
% with Class I to V	:	13	0	10	13	6	9
% with Class VI to SSC	:	34	0	21	22	8	15
% with HSC +	:	6	0	3	3	1	2

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Chirirbandar

Chirirbandar Upazila, Dinajpur District. Part of the Barind tract, subject to flash flooding from rainfall and overbank spill. Duration of flood 5 to 10 days during July and August. Drainage is generally good, and soils are light. Physiographic units are 35% Tista Alluvium, 30% Barind Tract, 25% mixed Barind, and 10% Piedmont Alluvium. This area has only experienced major floods and floods from localized rainfall and congested drainage.

Village 1: Kismat

Kismat is located at a high elevation and hence is not affected by flood. The villagers do not involve themselves in any flood response activities either at individual family or at community levels.

Village 2: Auliapukur

Auliapukur is a floodplain village lying between the two rivers Atrai and Kakra and occasionally affected by overbank spills of these two rivers. The poor drainage existing in the village worsens the situation. The railway running across the village in an east-west direction also stands against the north to south drainage flow. The northern part of the village, therefore, suffers most.

Basic Data	Village 1 Kismat			Village 2 Auliapukur		
Flood Environment	Flood Free			Secondary River Plain		
Flood Source				Overbank Spill+ Rain		
Flood Protection				Partially Protected		
Last Severe Flood Year				1988		
Susceptibility to River Erosion				No		
Proximity to Urban/Semi-Urban Area	Close (1-5km)			Close (1-5km)		
A. Data from 100% Census						
Total Land Area (ha)	158.35			102.59		
Net Cultivated Area (ha)	130.67			95.32		
Fallow Land (ha)	5.24			0.00		
Land not Avai. for Cult. (ha)	22.43			7.27		
Land Types (%)						
High F_0 (30 cm)	62			46		
Medium F_1 (30-90 cm)	34			41		
Low F_2+F_3 (>90 cm)	4			13		
Number of Households	332			174		
Land Ownership(% of Households)						
Landless (<50 Dec)	67			59		
Small (50-249 Dec)	20			24		
Medium (250-749 Dec)	9			12		
Large (750+ Dec)	4			5		
Av. Land Owned/Household (ha)	0.48			0.59		
Demographic Information						
Area (sq km)	1.58			1.03		
Population	1687			823		
Density/sq km	1068			799		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	186	228	414	128	126	254
Percentage	45	55	100	50	50	100
Dependency Ratio	0.96			0.85		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	107	117	224	72	70	142
% Agriculture	32	0	15	38	1	20
% Day Labor	39	0	19	32	0	16
% Business & Trading	6	0	3	8	1	5
% Fishing	0	0	0	0	0	0
% Weaving	0	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	2	92	49	1	91	46
% Others	14	1	7	7	1	4
% Unemployed	4	3	4	3	0	1
Total % (excluding students)	97	96	97	89	94	92
Children's Schooling	M	F	T	M	F	T
(age 5 to 14.9)						
Number	55	75	130	36	36	72
Number at School	55	74	129	33	36	69
% at School	100	99	99	92	100	96
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	107	117	224	72	70	142
% with No Formal Education	77	1	81	58	80	69
% with Class I to V	5	0	6	17	9	13
% with Class VI to SSC	14	0	11	19	11	15
% with HSC +	5	0	2	6	0	3

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Sreenagar

Sreenagar Upazila, Munshiganj District. This contains part of Arial Beel, and is in the flood plain of the river Dhaleswari. The major problem is drainage congestion rather than overbank spill. The area is deeply flooded in the monsoon. As the water recedes, the lands at the edge of the beel are used for boro cultivation. Fishing is also a major source of income for the people in this area.

Village 1: Lashkarpur

Lashkarpur is located at the northeast edge of the Arial Beel. The villagers settle on high mounds in the midst of low cultivable lands that go under more than 2 m of water during normal monsoon inundations. Most of the crop land in the village is irrigated. The occupants are opposed to the idea of a polder project, instead they would prefer a submersible embankment as this would minimize risk of crop loss due to early flood.

Village 2: Gadighat

Gadighat is lying closer to the central areas of the Arial beel. There is no adjacent river in this village. Water from the Padma and the Dhaleswari start accumulating in the beel through the canals. As the monsoon progresses water level gradually rises and submerges the freshly harvested boro (H) lands and the village takes a look of an isolated islands disconnected by a large water area. Like Laskarpur, the homesteads are on artificially raised mounds. Fishing is an important occupation for the people of this village.

Basic Data	Village 1 Lashkarpur			Village 2 Gadighat		
Flood Environment	Beel			Beel		
Flood Source	Overbank Spill+Rain			Overbank Spill+Rai		
Flood Protection	Not Protected			Not Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	No			No		
Proximity to Urban/Semi-Urban Area	Distant (11+km)			Close (1-5km)		
A. Data from 100% Census						
Total Land Area (ha)	168.53			309.03		
Net Cultivated Area (ha)	152.15			287.17		
Fallow Land (ha)	0.00			4.60		
Land not Avai. for Cult. (ha)	16.38			17.26		
Land Types (%)						
High F_0 (30 cm)	5			3		
Medium F_1 (30-90 cm)	0			0		
Low F_2+F_3 (>90 cm)	95			97		
Number of Households	401			434		
Land Ownership(% of Households):						
Landless (<50 Dec)	71			54		
Small (50-249 Dec)	18			29		
Medium (250-749 Dec)	9			14		
Large (750+ Dec)	2			4		
Av. Land Owned/Household (ha)	0.42			0.71		
Demographic Information						
Area (sq km)	1.69			3.09		
Population	2524			2768		
Density/sq km	1493			896		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	252	217	469	290	244	534
Percentage	54	46	100	54	46	100
Dependency Ratio	0.83			0.79		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	155	121	276	183	135	318
% Agriculture	28	0	16	34	1	20
% Day Labor	14	0	8	13	0	7
% Business & Trading	2	0	1	9	0	5
% Fishing	10	0	5	3	0	2
% Weaving	0	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	4	90	42	2	90	39
% Others	22	2	13	24	3	15
% Unemployed	8	3	6	2	0	1
Total % (excluding students)	88	95	91	87	94	89
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	84	64	148	87	83	170
Number at School	80	61	141	79	79	158
% at School	95	95	95	91	95	93
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	155	121	276	183	135	318
% with No Formal Education	52	1	59	46	71	57
% with Class I to V	15	0	16	15	13	14
% with Class VI to SSC	28	0	22	31	14	24
% with HSC +	5	0	3	9	2	6

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Bhuapur

Bhuapur Upazila, Tangail District. This is located in the active flood plain of the river Jamuna. The shifting and braiding nature of the river has created a wide range of char lands where settlement takes place on the relatively stable and older ones. Sand dominates the surface soil and precludes dependable farming.

Village 1: Gopalganj

Gopalganj is a relatively new char land village. Erosion is a serious problem here. About 2/3 of the land of Gopalganj has disappeared during the flood of 1991. Most of the agricultural land in the village (80 percent) is single cropped and the rest is double cropped. The village has acute shortage of fuel. In 1988 the occupants not only lost their crops but also suffered an unprecedented loss of 70 heads of cattle.

Village 2: Jangipur

Jangipur is also a charland village, though the settlement is relatively older. The Jamuna surrounds it on all sides. The land is more settled compared with Gopalganj. About 75 percent of the agricultural land in the village is single-cropped and the rest 25 percent is double-cropped. An NGO works in this village for the socio-economic upliftment of the village in general, and economic rehabilitation of the disadvantaged in the village, in particular.

Basic Data	Village 1 Gopalganj			Village 2 Jangipur		
Flood Environment	Char			Char		
Flood Source	Oberbank Spill			Overbank Spill		
Flood Protection	Not Protected			Not Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	Yes			Yes		
Proximity to Urban/Semi-Urban Area	Not Close (6-10km)			Distant (11+km)		
A. Data from 100% Census						
Total Land Area (ha)	74.87			96.79		
Net Cultivated Area (ha)	73.24			85.24		
Fallow Land (ha)	0.00			7.16		
Land not Avai. for Cult. (ha)	1.63			4.39		
Land Types (%)						
High F_0 (30 cm)	2			6		
Medium F_1 (30-90 cm)	14			36		
Low F_2+F_3 (>90 cm)	84			58		
Number of Households	115			109		
Land Ownership(% of Households):						
Landless (<50 Dec)	62			44		
Small (50-249 Dec)	22			37		
Medium (250-749 Dec)	10			13		
Large (750+ Dec)	7			6		
Av. Land Owned/Household (ha)	0.65			0.89		
Demographic Information						
Area (sq km)	0.75			0.97		
Population	776			616		
Density/sq km	1035			635		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	209	187	396	186	161	347
Percentage	53	47	100	54	46	100
Dependency Ratio	0.92			0.89		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	116	99	215	100	95	195
% Agriculture	34	0	18	50	2	27
% Day Labor	31	1	17	16	0	8
% Business & Trading	9	0	5	4	0	2
% Fishing	2	0	1	1	0	1
% Weaving	3	0	1	0	0	0
% Potter	1	0	0	2	0	1
% Household Work	1	93	43	7	88	47
% Others	10	1	6	14	3	9
% Unemployed	4	5	5	3	2	3
Total % (excluding students)	95	100	96	97	95	98
Children's Schooling	M	F	T	M	F	T
(age 5 to 14.9)	67	57	124	61	43	104
Number	57	50	107	53	36	89
Number at School	85	88	86	87	84	86
% at School						
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	116	99	215	100	95	195
% With No Formal Education	82	1	90	81	85	83
% with Class I to V	10	0	6	4	8	6
% with Class VI to SSC	6	0	3	12	6	9
% with HSC +	2	0	1	3	0	2

Characteristic Features of the Upazila & Villages in Brief:

Upazila : Char Bhadrasan

Char Bhadrashan Upazila, Faridpur District. This is in the active flood plain of the Padma. The upazila, on the right bank of the river, is exposed to both severe bank erosion and substantial land accretion. The Char areas have irregular relief of broad and narrow ridges and depressions, interrupted by cut-off channels and active channels.

Village 1: Gopalpur

Gopalpur is a newly accereted char land village. Most of the settlement took place only about three years ago. The earlier settlement of this village was lost to the river Padma. Transportation is difficult. During monsoon it becomes worse as at times due to strong current, it becomes difficult to cross the Padma by boat. The village does not have a hat (weekly market place) within it; nor does it have any other public facility. Usual duration of flood is just about a month. Most of the land remains fallow during Kharif 2.

Char Salehpur is a relatively old char settlement. The river Padma surrounds the village and virtually touches its settlement in the western and north-western end where the village is eroding again. Communication is very difficult both during the dry and monsoon seasons. Fishing is an important occupation in this village for those who almost invariably do not own any land. The villagers would like a public high ground for use as emergency shelter created by government assistance.

Basic Data	Village 1 Gopalpur			Village 2 Char Salehpur		
Flood Environment	Char			Char		
Flood Source	Overbank Spill			Overbank Spill		
Flood Protection	Not Protected			Not Protected		
Last Severe Flood Year	1988			1988		
Susceptibility to River Erosion	Yes			Yes		
Proximity to Urban/Semi-Urban Area	Not Close (6-10km)			Distant (11+km)		
A. Data from 100% Census						
Total Land Area (ha)	15.61			41.91		
Net Cultivated Area (ha)	11.38			23.06		
Fallow Land (ha)	0.00			6.84		
Land not Avai. for Cult. (ha)	4.23			12.01		
Land Types (%)						
High F_0 (30 cm)	16			18		
Medium F_1 (30-90 cm)	8			32		
Low F_2+F_3 (>90 cm)	76			50		
Number of Households	46			300		
Land Ownership(% of Households):						
Landless (<50 Dec)	76			85		
Small (50-249 Dec)	11			14		
Medium (250-749 Dec)	13			0		
Large (750+ Dec)	0			0		
Av. Land Owned/Household (ha)	0.34			0.14		
Demographic Information						
Area (sq km)	0.16			0.42		
Population	246			1577		
Density/sq km	1538			3755		
B. Data from Sample Households						
Demographic Information	M	F	T	M	F	T
Population	96	95	191	214	206	420
Percentage	50	50	100	51	49	100
Dependency Ratio	1.03			0.95		
Occupation of Persons 15+ Years:	M	F	T	M	F	T
Total Number 15+ Years	51	48	99	118	113	231
% Agriculture	33	0	17	8	0	4
% Day Labor	49	4	27	34	2	18
% Business & Trading	0	0	0	2	1	1
% Fishing	8	0	4	37	0	19
% Weaving	0	0	0	0	0	0
% Potter	0	0	0	0	0	0
% Household Work	0	85	41	3	86	44
% Others	4	4	4	8	3	5
% Unemployed	6	6	6	3	7	5
Total % (excluding students)	100	99	99	95	99	96
Children's Schooling (age 5 to 14.9)	M	F	T	M	F	T
Number	29	30	59	59	63	122
Number at School	23	25	48	46	57	103
% at School	79	83	81	78	90	84
Education Level (Adults)	M	F	T	M	F	T
(Age 15+) Number	51	48	99	118	113	231
% with No Formal Education	82	1	91	87	94	90
% with Class I to V	10	0	5	6	6	6
% with Class VI to SSC	8	0	4	6	0	3
% with HSC +	0	0	0	1	0	0