Library

achment 1. Date November 24, 1988

ETHICAL REVIEW COMMITTEE, ICDDR,B.

ncipal Investigator Michael A. Strong

lication No. 88-030

le of Study Demographic Surveillance stem (DSS) - Matlab and Teknaf.

Trainee Investigator (if any) _____

Supporting Agency (if Non-ICDDR,B) CIDA

Project status:
( ) New Study
(✓) Continuation with change
( ) No change (do not fill out rest of form)

cle the appropriate answer to each of the following (If Not Applicable write NA).

Source of Population:
(a) Ill subjects — Yes (No)
(b) Non-ill subjects — (Yes) No
(c) Minors or persons under guardianship — (Yes) No

Does the study involve:
(a) Physical risks to the subjects — Yes (No)
(b) Social Risks — Yes (No)
(c) Psychological risks to subjects — Yes (No)
(d) Discomfort to subjects — Yes (No)
(e) Invasion of privacy — (Yes) No
(f) Disclosure of information damaging to subject or others — Yes (No)

Does the study involve:
(a) Use of records, (hospital, medical, death, birth or other) — (Yes) No
(b) Use of fetal tissue or abortus — Yes (No)
(c) Use of organs or body fluids — Yes (No)

Are subjects clearly informed about:
(a) Nature and purposes of study — (Yes) No
(b) Procedures to be followed including alternatives used — (Yes) No
(c) Physical risks — Yes (No)
(d) Sensitive questions — Yes (No)
(e) Benefits to be derived — Yes (No)
(f) Right to refuse to participate or to withdraw from study — (Yes) No
(g) Confidential handling of data — (Yes) No
(h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure — Yes (No)

5. Will signed consent form be required:
   (a) From subjects — Yes (No)
   (b) From parent or guardian (if subjects are minors) — Yes (No)
6. Will precautions be taken to protect anonymity of subjects — (Yes) No
7. Check documents being submitted herewith to Committee:
   ✓ Umbrella proposal - Initially submit an overview (all other requirements will be submitted with individual studies).
   ✓ Protocol (Required)
   ✓ Abstract Summary (Required)
   ___ Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
   ___ Informed consent form for subjects
   ___ Informed consent form for parent or guardian
   ✓ Procedure for maintaining confidentiality
   ✓ Questionnaire or interview schedule *

* If the final instrument is not completed prior to review, the following information should be included in the abstract summary:
1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific questions to be asked in the sensitive areas.
3. An indication as to when the questionnaire will be presented to the Cttee. for review.

(PTO)

ree to obtain approval of the Ethical Review Committee for any changes ving the rights and welfare of subjects before making such change.

22/11/88 — NOV 24 1988

Principal Investigator — Trainee

SECTION I : RESEARCH PROTOCOL

(1) Title: Demographic Surveillance System (DSS) - Matlab and Teknaf

(2) Principal Investigator: Michael A. Strong

Co-Investigators:

Research:	Lokky [illegible]i, Mridul Chowdhury
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(3) Starting Date: 1 January 1989

(4) Completion Date: 31 December 1993

(5a) Total Direct Cost: US$ 5,717,200

(5b) Probable Source of Funding: Canadian International Development Agency (1989-1991)

(6) Scientific Programme Head:

This protocol has been approved by the Population Sciences and Extension Division (PSED).

Associate Director: _____

Date: 22/11/88

(7) Abstract Summary:

The ICDDR,B has operated a demographic surveillance system in selected villages in Matlab since 1966 and in Teknaf since 1975. This system has combined periodic censuses with the continuous registration of vital events. The data collected by this system has become a valuable institutional resource to the Centre. It has been vital to the conduct of many types of field studies in diarrhoeal disease and other health care research, as well as studies in the areas of population and nutrition.

This protocol states the rationale for and costs of continuing the Demographic Surveillance System for the next five years, from 1989 through 1993. The objectives of the DSS during this period are to:

a) continue to collect data in Matlab and Teknaf;
b) provide sampling and baseline information for other Centre projects;
c) initiate demographic research projects; and
d) conduct operations research projects to improve data collection methodologies;
e) transfer DSS results to the Government of Bangladesh.

The current proposal represents an umbrella protocol for the coming five year period. The specific details of activities will be worked out within the framework of the Population Science and Extension Division(PSED).

(8) Reviews:

(i) Ethical Review Committee: _____
(Approved/Not Approved)

(ii) Research Review Committee: _____
(Approved/Not Approved)

(iii) Director's signature and remarks, if any.

_____

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SECTION II : RESEARCH PLAN

A. INTRODUCTION

A.1. OBJECTIVES

The Demographic Surveillance System (DSS) is an integral part of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). The objectives of the DSS are to:

a) collect longitudinal demographic data from two rural areas in Bangladesh;

b) provide sampling and baseline information for projects within the ICDDR,B conducting medical trials and health intervention studies;

c) describe and analyze population change within the surveillance area; and

d) find ways to improve the system and to identify appropriate data collection systems for other settings;

e) work with the Government of Bangladesh to use the DSS findings and training capacity to strengthen the national population, health, and development programs.

The DSS aims to accomplish these objectives through:

a) maintaining our high quality of field operations;

b) studying how to make the field operations more cost effective and more responsive to user needs;

c) informing other Divisions within the Centre about the availability of DSS data and how to use these data for their research;

d) undertaking operations research studies to find appropriate data collection methodologies for the DSS areas and for use elsewhere;

e) studying the demography of the Matlab and Teknaf areas, describing and finding the causes of levels, changes, and differentials in fertility, mortality, and migration;

f) collaborating with other researchers, both within Bangladesh and abroad, to improve the quality of these studies, disseminate the findings, and train our own staff and others in various research techniques.

A.2. BACKGROUND

The ICDDR,B (formerly the Cholera Research Laboratory) has operated a demographic surveillance system in selected villages in Matlab upazila since 1966. This system has combined periodic censuses (1966, 1974, and 1982) of the study population with the continuous registration of vital events -- births, deaths, migrations, and, since 1975, marriages and divorces. There are now 143 villages in the DSS area with a total population of about 200,000.

The Matlab DSS has generated an enormous volume of highly reliable of data on vital events and migration as well as selected socioeconomic characteristics of individuals and households. Research using these data has included studies of cholera and other infectious diseases; vaccine efficacy; the effectiveness of oral therapy; nutritional status, growth, and development; beliefs about food, feeding, and health; social relationships and community structure; and the determinants and correlates of fertility, mortality, migration, and marriage.

Beginning in 1975 the DSS has also maintained a surveillance area in Teknaf, situated at the southeastern tip of Bangladesh. Censuses were conducted in 1975 and 1982 and vital events have been continually registered. The Teknaf surveillance area now covers a population of about 80,000. The ICDDR,B initially began a research station at Teknaf to study shigella, which is endemic to the area. The focus of much of the analytic work using DSS Teknaf data has been in support of this epidemiological work.

These studies have included the large-scale environmental field trial which studied the health and mortality effects of improving water supplies and sanitation.

A.3. RATIONALE

The DSS is one of the most valuable institutional resources of the ICDDR,B. It is vital for the conduct of many types of field studies in diarrhoeal diseases, nutrition, population, and health care. This protocol ensures the continuing operation of this resource for all relevant field studies. Some of these studies will involve analysis of demographic data; others will require census or vital events data to compute denominators; still others will utilize selected aspects of the data, either as background material or to complement a specific study. In these cases, further protocols or pilot protocols will be submitted by the relevant investigators.

Several broad areas in which the system possesses distinct comparative advantages over one-time surveys or clinic based studies can be identified:

a) the surveillance system is necessary for health, demographic, and nutrition research which requires an accurate count of the population for the computation of

rates, particularly for the assessment of the impact of various programmatic or technological interventions;

b) the dissimilarities which exist between Teknaf and Matlab (itself divided into Treatment and Comparison areas) -- culturally, ecologically, and in terms of past and current interventions -- will provide a much needed source of variance in the population which can strengthen conclusions on health and population issues;

c) the surveillance system provides accurate sampling frames to carry out sample surveys, in-depth studies, and health interventions;

d) the longitudinal nature of the data set and the fact that precise ages are known for a large fraction of the population will strengthen research projects using these data;

e) the continuous relationship of the ICDDR,B with the people of Matlab and Teknaf, including the provision of health services, may facilitate studies requiring client cooperation;

f) the longitudinal nature of the surveillance system facilitates prospective research designs, including the documentation of trends over time;

g) the data show demographic trends and patterns which may provide an indication of national tendencies, as well as allowing an assessment of the determinants and consequences of various changes; in both of these ways the data may be useful for national policy makers and administrators; as with any small area study, care must be taken when local results are projected to the national level;

h) the surveillance areas are also very useful as field training areas in epidemiological, population, health care, and nutrition research.

B. SPECIFIC AIMS

B.1. COLLECT FIELD DATA

The major task to be undertaken by this protocol will be to continue to collect vital event data in Matlab and Teknaf. The elements of this activity are outlined below. These are presented in terms of the activities, elements, and sub-elements which appear in the CIDA workplan.

B.1.1. Collect Matlab Treatment Area DSS Data

The field data collection effort in the treatment area is tied in with the provision of health and family planning interventions. Community health workers in the treatment area provide interventions as well as collect information. This leads to more total work to do per visit, on average, in exchange for the greater value of the data collected. There are more data to collect and to pre-edit in the field.

Two basic levels of efficiency will be involved during the project, because activity elements B.3.3 and B.3.6 should lead to the use of more efficient collection methods.

The steps in activity element B.1.1 are:

B.1.1.1 Collect data via existing microcomputer-based methods

B.1.1.2 Collect data via new more cost-effective methods

Result: Field data collected from treatment area for 1989 through 1993.

B.1.2. Collect Matlab Comparison Area DSS Data

The comparison area is so called because no health or family planning interventions other than those of Government of Bangladesh take place in the area, for statistical evaluation purposes in relation to data collected from the treatment area. Data collection in the comparison area therefore requires less labour per visit than in the treatment area, because field workers in the area neither do interventions nor collect data about them.

The steps in this activity element parallel those of activity element B.1.1 above and are:

B.1.2.1 Collect data via existing microcomputer-based methods

B.1.2.2 Collect data via new more cost-effective methods

Result: Field data collected from comparison area for 1989 through 1993.

B.1.3. Collect Teknaf DSS Data

The data collection task in Teknaf is somewhat like that in the Matlab treatment area, but is more difficult because of the more conservative character the area.

There will be three levels of collection efficiency in Teknaf during the project, because changes will be introduced early in the project (but not from the outset) in order to implement the same microcomputer-based methods in Teknaf that will already exist in Matlab when the project starts.

The steps in this activity element are:

B.1.3.1 Collect data via existing un-automated methods

B.1.3.2 Collect data via existing microcomputer-based methods

B.1.3.3 Collect data via new more cost-effective methods

Result: Field data collected from Teknaf for 1989 through 1993.

B.2. COMPUTERIZE FIELD DATA AND EXTEND DATABASE

This activity consists of entering the field data being continuously collected at Matlab and Teknaf into the DSS database, plus extending the scope of the database through the addition of related data from 1974 through 1982 and the addition of rolling census and MRDS results for the same areas. As well, non-DSS datasets will be added when they relate to Matlab and/or Teknaf and their addition will enhance the usefulness of the DSS database.

It should be noted that, while Matlab and Teknaf field data are being collected under this project for the calendar years

1989 through 1993, the necessary and inevitable lag in the entry of these data into the DSS database means that under this "Computerize Field Data...." activity, the data that will be entered will be data from 1988 through the middle or third quarter of calendar year 1993.

B.2.1. Add Matlab Data to the Database

The data to be added to the database will have been pre-edited to screen out obvious inconsistencies in the data, but considerable editing will remain to be done in Dhaka. Some of the errors detected will be capable of correction in Dhaka using existing correct DSS and other data, while other types of errors require that the offending data record be returned to the field for correction there.

Lastly, when the data are correct, updated data lists and turnaround data entry forms can be created for distribution.

The steps in this activity element are:

B.2.1.1 Add data to database

B.2.1.2 Edit and correct data in Dhaka

B.2.1.3 Correct data at Matlab for re-entry

B.2.1.4 Produce and distribute updated lists, forms

Result: DSS database contains edited Matlab field data for 1989 through 1993.

B.2.2. Add Teknaf Data to the Database

This activity element relates to Teknaf data. Its work content parallels the work done under activity element B.2.1 above for Matlab. The steps in this activity element are:

B.2.2.1 Add data to database

B.2.2.2 Edit and correct data in Dhaka

B.2.2.3 Correct data at Teknaf for re-entry

B.2.2.4 Produce and distribute updated lists, forms

Result: DSS database contains edited Teknaf field data for 1989 through 1993.

B.2.3. Add 1974-1982 Data

This portion of the project involves extending the Matlab database back in time beyond the creation of the current relational database, by adding to it the DSS Matlab data collected during the period 1974 until 1982. There are two basic groups of such data, one being a set known as "Yeti", created jointly by the ICDDR,B and Johns Hopkins University. The second group of data contains information on marriages and divorces during the period. (The 1974 to 1982 data to be added will not include data from Teknaf because Yeti data were not created for Teknaf.)

Only minimal editing of these Matlab datasets will be done prior to their addition to the DSS database, since it will be assumed that their originators have already done extensive editing of the data.

The existing post-1982 database and the pre-1982 Yeti file are each internally consistent in that, for example, a person will not marry after he or she dies. But there may be inconsistencies between them, and so quality checks will be made to alert data users to possible inconsistencies between the two datasets.

The steps in this activity element are:

B.2.3.1 Create pre-1982/post-1982 linkage dataset

B.2.3.2 Edit and add 1974-1982 Yeti data to database

B.2.3.3 Edit and add other 1974-1982 data to database

B.2.3.4 Produce data quality analysis and report

Result: DSS database contains Matlab data for 1974 through to 1989 and beyond.

B.2.4. Add Other DSS Data

This portion of the project involves extending the DSS database by adding other DSS data to be collected during the project via two new, experimental types of statistical data collection: a rolling census and a Multi-Round Demographic Survey (MRDS).

The tasks involved in creating these two surveys and collecting their data appear within project activities B.3.4 and B.3.5.

The steps in this activity element are:

B.2.4.1 Edit, correct and add rolling census data

B.2.4.2 Edit, correct and add MRDS data

Result: DSS database contains new Matlab/Teknaf data from a rolling census and an MRDS

B.2.5. Introduce Recording Standards for Non-DSS Data

Many surveys and interventions have taken place in both Matlab and Teknaf. The database would be much richer and more useful for analysis if these other data sets could be incorporated into it. It would then be possible, for example, to extract all women who had ever received a tetanus toxoid and examine the health consequences.

This portion of the project is a necessary precursor step to the addition to the DSS database of Matlab and Teknaf data collected by non-DSS projects of the Centre. To do so without damaging the integrity of the existing database requires that the newly-added datasets adhere to certain quality standards related to their record formats, data editing and documentation.

The steps of this activity element are:

B.2.5.1 Develop record structure and edit standards

B.2.5.2 Develop documentation standards

B.2.5.3 Implement standards

B.2.5.4 Monitor implementation success

Result: Quality standards for non-DSS data are in place.

B.2.6. Add Non-DSS Data

With quality standards in place, it is possible to add non-DSS data to the database without compromising its usefulness. This portion of the project involves extending the DSS database in such a manner.

Before adding any dataset, however, it is first necessary to ensure that DSS quality standards have been met and to help data suppliers to meet those standards when they have not done so in advance.

The steps in this activity element are:

B.2.6.1 Ensure dataset quality

B.2.6.2 Review dataset documentation quality

B.2.6.3 Help users document non-DSS datasets

B.2.6.4 Edit and add datasets to database

B.2.6.5 Add dataset documentation to DSS user manual

Result: DSS database extended to include other, non-DSS Matlab and Teknaf data.

B.3. CONDUCT OPERATIONS AND OTHER RESEARCH

This activity encompasses several efforts to improve upon the effectiveness and efficiency of data collection in Matlab and Teknaf.

B.3.1. Automate Teknaf Data Collection

The data collection procedures now used in Matlab are automated to the extent that they use microcomputers for the recording of vital event data. It is intended that this procedure be extended to Teknaf.

The steps in this activity element are:

B.3.1.1 Install acquired Teknaf equipment

B.3.1.2 Train Teknaf Staff

B.3.1.3 Introduce PC-based data collection

Result: Microcomputer-based vital event recording in Teknaf.

B.3.2. Review Data Needs

The types of data being collected in the field will be reviewed annually for their continued relevance and the most effective method of their specification on data collection documents. This will include a review of the classification

schemes used and the codes assigned to each variable. For example, the classification of the various causes of death will be reviewed for consistency between Matlab DSS, Matlab MCH-FP, and Teknaf DSS, as well as for consistency with international standards and usefulness for researchers. Types of substantive questions which this review will probably recommend for inclusion in the rolling census and Multi-Round Demographic Survey will be those concerning family planning and immunization status.

The steps in this activity element are:

B.3.2.1 Review data types to collect

B.3.2.2 Review data definitions, classifications

B.3.2.3 Adjust field and Dhaka procedures as needed

B.3.2.4 Train field and Dhaka staff as needed

Result: More relevant data collection.

B.3.3. Develop Better DSS Data Collection Methods

The data collection procedures at this point in the project will be making use of microcomputers at both Matlab and Teknaf, but will not be doing so in a manner that is as efficient as it could be.

This activity element will include:

-rationalizing record-keeping and interviewing methods with respect to DSS and MCH-FP field procedures,

-improving upon database editing and cross-checking procedures,

-reducing field visitation frequency if operations research indicates that this is feasible, and

-relocating to the field as much of the edit process as feasible, and

-examining the data for possible biases introduced by the differences in event reporting between the treatment and comparison areas.

The steps in this activity element are:

B.3.3.1 Develop baseline collection cost rates

B.3.3.2 Develop new data handling methods

B.3.3.3 Train Matlab staff

B.3.3.4 Train Teknaf staff

B.3.3.5 Monitor new cost levels against baseline data

Result: More-efficient data collection at Matlab and Teknaf.

B.3.4. Conduct Rolling Census

This project includes provision for the conduct of a "rolling census" in which one systematically rotates through the population gaining valuable information not part of normal DSS data collection. This exercise will be part of experiments with alternative methods of collecting data for the estimation of demographic parameters.

As with the MRDS of activity element B.3.5 below, the rolling census will be conducted in Matlab, and if necessary, concurrently in Teknaf.

This rolling census will permit evaluation of the DSS system and call for input from and comparison with the Sample Registration System developed by the MCH-FP Extension Project of ICDDR,B in two other non-DSS areas of the country.

The steps in this activity element are:

B.3.4.1 Design rolling census

B.3.4.2 Conduct pilot and adjust design

B.3.4.3 Collect rolling census data

B.3.4.4 Analyze data

Result: Matlab and Teknaf DSS data collected via a rolling census.

B.3.5. Conduct MRDS

This project includes provision for the conduct of a Multi-Round Demographic Survey (MRDS), in order to experiment with an alternative method of collecting data for the estimation of demographic parameters. The MRDS will be introduced in Matlab and, if needed, concurrently in Teknaf.

The existing DSS field data collection of vital events in Matlab and Teknaf will enable researchers to evaluate the effectiveness of the MRDS approach and potentially recommend its implementation in other parts of Bangladesh.

The steps in this activity element are:

B.3.5.1 Design survey

B.3.5.2 Conduct pilot and adjust design

B.3.5.3 Collect MRDS data

B.3.5.4 Analyze data

Result: Matlab and Teknaf DSS data collected via an MRDS.

B.3.6. Conduct Other Operations Research

This project includes provision for research into ways to improve the collection of demographic data in general, especially in other areas of Bangladesh. This includes:

-choice of sampling unit,

-frequency of visitation,

-rules for associating persons and events with sampling units,

-variance effects and other statistical aspects of DSS data collection.

The overall goal of such research is to build upon DSS experience and construct generally-applicable rules for field data collection in Bangladesh and elsewhere.

The steps in this activity element are:

B.3.6.1 Design research

B.3.6.2 Study statistical methodology

B.3.6.3 Conduct limited field experiments

B.3.6.4 Prepare reports

Result: Matlab and Teknaf DSS data collected via more cost-effective means

B.3.7. Prepare Demographic Indicators

Annually, DSS data collection results are used to prepare a set of demographic indicators for Matlab and for Teknaf. These are then published and disseminated to DSS users and to Government of Bangladesh interested parties for policy formulation and research. Each year's reporting refers to data from the previous calendar year.

The steps in this activity element are:

B.3.7.1 Estimate fertility, mortality, migration rates

B.3.7.2 Prepare reports

Result: Matlab and Teknaf demographic indicators prepared for each calendar year.

B.3.8. Conduct Other Demographic and Health Research

Substantive DSS research is planned on other demographic and related health topics. Research on the status of women will be particularly important in the Teknaf area due to its markedly conservative character.

Anticipated DSS/ICDDR,B research of interest in this context will include:

-studying the social and economic activities of women in relation to health and morbidity factors;

-examining the interactions among family planning, fertility and infant mortality;

-examining the consequences of particular health interventions on the morbidity and mortality status of everyone in the study area;

-studying how migration,and especially rural to urban migration, affects rural development.

Before beginning work on these research topics a careful evaluation of the research priorities will be undertaken. This

review will first list research questions of special importance to Bangladesh, other developing countries, and the mission of the Centre. We will then identify those questions where DSS data are available to attack these questions. Finally we will see which DSS staff, complimented by other Centre and outside collaborators, have the skills and interests for various topics.

Steps in this activity element are:

B.3.8.1 Study trends and correlates related to maternal and child survival

B.3.8.2 Study contraceptive prevalence and implications

B.3.8.3 Study family structure and status of women

Result: Completed demographic and health research relating to Matlab and Teknaf.

B.4. ENHANCE DSS DATA USAGE AND APPLICATION

This activity is aimed at extending the number of users of DSS data and population/health indicators, as well as extending the scope of the applications involved.

B.4.1. Implement Data Sharing Policy

It would prove mutually beneficial to both DSS and non-DSS scientists and policymakers to share data of mutual interest that have been generated by them in the field, and generally to widen the use of DSS data. This is particularly important now that the DSS relational database has been introduced and manipulation of DSS and other data has been made significantly easier.

Integration of other datasets with the DSS database requires special planning, however, to avoid damaging the longitudinal and inherent integrity of the database that has been carefully constructed. It is desirable to extend the content of the DSS database, but not at the expense of its current usefulness.

For this reason, ICDDR,B and its DSS component have begun the development of a policy which will govern the circumstances

and procedures under which the DSS database will be augmented by other non-DSS field datasets.

Also importantly, the policy will describe procedures for release of DSS data to non-DSS users.

The steps in creating and implementing such a data sharing policy are:

B.4.1.1 Complete and negotiate policy details

B.4.1.2 Implement and monitor policy, and

B.4.1.3 Provide DSS data to others inside and outside ICDDR,B.

By the content of B.4.1.2 above is meant monitoring the extent of satisfaction with the conditions under which data are shared, the degree of adherence to the policy, and the extent to which changes are desired in the policy and by what user types they may be desired.

Result: DSS data sharing policy and procedures in place.

B.4.2 Create Bridges to Other Projects

This is a key step in making the DSS database available to other projects of the Centre. Technical interfaces and bridges are necessary to permit data extraction, downloading to end-user databases, retention of retrieval definitions and adaptation of other projects to the requirements of the DSS database design.

Users of the DSS database, as well as those supplying non-DSS data to it, often require technical assistance in defining the nature of these interfaces. Once developed, however, these interfaces are then used to easily transfer data to and from other projects.

The steps in this activity element are:

B.4.2.1 Carry out user requirements analysis

B.4.2.2 Specify new interfaces

B.4.2.3 Develop and test interfaces

B.4.2.4 Document interfaces

Result: Capability for downloading, extraction, and uploading of data related to other projects of the Centre.

B.4.3. Prepare Database Documentation

Increasing usage of DSS data and sharing of datasets requires that the existing datasets be documented to a degree that will permit a potential user to find out what data exist, in what form it exists, and where further information as to access and utilization can be obtained.

It is also necessary that formal user data retrieval procedures be documented in a reference format for DSS users to facilitate the provision of data to those wishing to use it.

The steps in this activity element are:

B.4.3.1 Prepare DSS dataset descriptions

B.4.3.2 Prepare DSS user procedures manual

B.4.3.3 Issue DSS documentation to current and potential DSS users

Result: Completed user-oriented documentation on DSS content and procedures for access.

B.4.4. Participate in Government of Bangladesh Policy Formulation

Within its limitations, DSS will continue to participate in, and advise on, the formulation of Government of Bangladesh national policies in family planning and public health. To do this we will concentrate on transferring that which the DSS does best -- collecting accurate demographic data. This project element is aimed at extending such use and influence of DSS techniques and data.

In addition to identifying potential new areas for this participation, DSS will endeavour to further provide data to Government of Bangladesh institutions for monitoring and evaluation of their health and family planning programs, as well as for input to policy development and five-year planning. DSS also intends to provide on-the-job training and other skills transfer to Government of Bangladesh professionals desiring to incorporate DSS lessons and experience into their own Government of Bangladesh programs.

The steps in this activity element are:

B.4.4.1 Identify new areas for participation

B.4.4.2 Participate on advisory bodies

B.4.4.3 Transfer DSS data, skills and experience to Government of Bangladesh

Result: Increased use of DSS data and experience in the formulation of Government of Bangladesh policies.

B.4.5. Conduct DSS Workshops

Workshops will be one of the important means by which the results of operations research and substantive research under this project will be communicated to policy developers and to other researchers and evaluators. This knowledge will be at the top of the agenda in such seminars and workshops and will be presented together with other aspects of DSS knowledge and experience.

Workshops will be held at both the national and international levels, with suitable in-country trainees being invited. The timing of these workshops will depend in part upon the needs assessment of B.4.5.1 below, the availability of target audiences and the availability of appropriately-skilled workshop leaders.

The steps in this activity element are:

B.4.5.1 Define workshop needs

B.4.5.2 Define audiences

B.4.5.3 Conduct workshops

B.4.5.4 Conduct post-workshop reviews

Result: Additional dissemination of DSS knowledge and training of Bangladesh professionals.

B.4.6. Confirm and Extend Existing Research Links

DSS has existing research and information-transfer links with several Bangladesh institutions, among them the Bangladesh Bureau of Statistics, the Planning Commission, and the Ministry of Health and Family Planning. These links will be strengthened

during the project and other links will be established. Existing international links with institutions such as the Johns Hopkins University, the Universities of Pennsylvania and Michigan, the Population Council, and the Centers for Disease Control, will be maintained.

These links involve sharing field, computer, and research resources as well as transfer of experience. The availability of senior scientific staff may limit this activity until the return of DSS members studying abroad.

The steps in this activity element are:

B.4.6.1 Confirm and extend BBS links

B.4.6.2 Confirm and extend NIPORT links

B.4.6.3 Confirm and extend Planning Commission links

B.4.6.4 Confirm and extend other existing links

Result: Additional dissemination of DSS knowledge and training of Bangladesh professionals.

B.4.7. Establish New Institutional Links

The full transfer of DSS knowledge involves taking steps to further widen the scope of cooperation with Bangladesh institutions. Specific steps will be taken during the project to identify and build upon new potential in this area.

This will be particularly valuable with respect to the establishment of links with appropriate international institutions. Concrete steps have already been taken in this regard toward the creation of research links with the University of Western Ontario. It is hoped that other international links will follow.

The steps in this activity element are:

B.4.7.1 Identify new areas for linkage

B.4.7.2 Establish new Bangladesh research and training links

B.4.7.3 Establish international research links

B.4.7.4 Establish international training links

Result: Additional dissemination of DSS knowledge, training of Bangladesh professionals, and creation of links with international institutions.

B.4.8. Disseminate DSS Results

This project element consists of all publication activities with respect to DSS research and field data collection and analysis. It includes annual DSS data reports, the results of planned scientific and operations research, workshop results, scientific reports and journal publications. The results of this element will improve as staff members studying abroad return to DSS, as other staff members receive local training, and as collaboration with other institutions begins.

The central steps in this part of the project plan are related to publication of results of research identified for inclusion with activity B.3 of the project plan.

The steps in this activity element are:

B.4.8.1 Disseminate annual Matlab and Teknaf reports

B.4.8.2 Disseminate rolling census results

B.4.8.3 Disseminate MRDS results

B.4.8.4 Disseminate results of other operations research

B.4.8.5 Disseminate results of substantive research

B.4.8.6 Disseminate workshop results and other scientific reports and papers

Result: Additional dissemination of DSS knowledge to Government of Bangladesh institutions and others.

B.5. DEVELOP FUNDING AND COST SHARING BASE

A major objective of this protocol is to develop a basis for operation of the DSS on a self-sustaining basis after the completion of this project. The strategy proposed at this point has two main elements:

-implementation of a policy of partial sharing with DSS users (inside or outside the ICDDR,B) of the costs of providing computing, data collection, and other services; and

-development of other ICDDR,B and non-ICDDR,B sources of funding.

B.5.1 Develop Cost Sharing Policy

The basic approach to cost sharing will be founded on the mechanisms now in place within the ICDDR,B for cost sharing for other Centre service units such as the Department of Diagnostic Services. The special nature of data processing cost structures everywhere will make this less straightforward, however.

The particular mechanism to be used will need to be carefully chosen because the large fixed-cost elements of computing services make cost sharing universally difficult to accomplish successfully for computing service operations. The

effects upon users of unit costing versus distributed costing, for example, can be very complex.

While some budgeting moves toward introduction of partial cost sharing will be made by the Centre by the beginning of 1990, any proposed cost sharing mechanism will need to be reviewed with representative DSS users and their views accommodated.

It will be necessary to establish baseline data for the period prior to cost sharing, in order to later be able to assess any effects the policy may be having upon the amount and type of usage being made of DSS services.

The steps in this activity element are:

B.5.1.1 Establish costing mechanism

B.5.1.2 Review with client base

B.5.1.3 Adjust proposed policy as needed

B.5.1.4 Develop baseline client activity data

Result: Selection of a basis upon which to partially recover DSS service costs from DSS users.

B.6. CONDUCT STAFF TRAINING

B.6.1. Provide Staff Development

A number of DSS professionals were given advanced training through a systematic staff development program during the last protocol. This will continue under this protocol. A strong DSS research and technical capability now exists, but the need for specialized training continues, and also the need to offer junior researchers a scope for career advancement.

Retention of DSS skills and experience within Bangladesh will require that careful career planning take place for DSS staff, with respect to career paths within DSS and the ICDDR,B.

Career planning will be augmented and the capabilities of DSS strengthened in the near term through a coordinated program of training both in Bangladesh and internationally. This training will particularly emphasize increased staff abilities with respect to the creation and use of computer systems and equipment, but also include topics in operations research and quantitative research methods.

The steps in this activity element are:

B.6.1.1 Provide career planning

B.6.1.2 Provide computer-related out-of-country training

B.6.1.3 Provide other DSS-related out-of-country training

B.6.1.4 Upgrade computer-related skills in-country

B.6.1.5 Upgrade other DSS-related skills in-country

Result: Upgraded DSS staff skills and career planning provided.

C. METHODS AND PROCEDURE

C.1. FIELD OPERATIONS

C.1.1 Matlab Vital Event Registration

The current Matlab Demographic Surveillance System is a program which runs continuously throughout the year collecting information on all vital events -- births, deaths, marriages, divorces, and migrations -- in the 143 villages of the registration area. The base-level workers in the Matlab DSS are the Community Health Workers (CHWs), women 20 to 40 years old with a minimum of seven years of education. The primary responsibility of a CHW is to detect vital events occurring in the households assigned to her. Each CHW is responsible for about 1,200 people in the half of the DSS area where MCH-FP services are provided (called the Treatment Area) and for some 3,300 people in the remaining (Comparison) area. A CHW in the Treatment Area visits about 25 families a day while a CHW in the Comparison Area visits about 70 families a day. All CHWs now visit each household in her area once every two weeks. The CHW writes down all demographic events which she has detected in her family visitation book. The actual recording of vital events onto standard registration forms is performed by Health Assistants (HAs), who are males with at least a high school education. These HAs visit each household in their area once a

month with the CHW assigned to that area. Each HA is responsible for about 2,500 households, visiting about 100 per day. Every two weeks the HAs visit the Matlab Field Station where they deliver completed forms and update the field census volume. The field work of the HAs is checked by the Senior Health Assistants (SHAs), who are responsible for the work of two HAs and visit every household in his area three times a year. All of these workers are supervised by the Field Manager, the Senior Field Research Officer, and the Field Research Officers, who prepare the field work schedule for the entire system and randomly check on the quality and completeness of the field work.

The completed forms are now being checked and coded in Matlab, with careful supervision from the Dhaka DSS office. By the end of 1988 all forms will be entered into a microcomputer in Matlab as well, using a DSS-written program which checks data as they are being entered. Moving data entry to the field should improve both the quality and timeliness of the data. Diskettes of data will then be sent to Dhaka where they will be uploaded to the mainframe and carefully checked against the longitudinal data base. Only after they have been tested for consistency with the last census and all vital events since then will these new vital events be added to the data base. Reported events which fail these tests will be sent back to the field for resolution.

As noted in Section B, Specific Aims, modifications to the Matlab field procedures may be made after the results of various methodological studies are known, as well as after periodic

reviews of what kind of data we need to collect. These changes will be carefully thought out and only infrequently made to avoid large disruptions to the field operations. Existing vital event registration forms will be reviewed annually and modified as appropriate. The draft forma for 1989, for both Matlab and Teknaf, are shown in Figures 1 through 6.

Collaboration with the MCH-FP project has already begun in order to monitor any government-sponsored EPI (Expanded Programme of Immunization) intervention in the area. While an EPI project may complicate data collection and analysis, the benefit to the people of the surveillance area far outweighs any such problems.

Figure 1. Draft Birth Registration Form

R89

BIRTH REGISTRATION FORM
DSS, ICDDR,B

eporting
illage/Unit ¦__¦__¦__¦

eported by ¦__¦__¦

A _____ ¦__¦__¦
HA _____ ¦__¦__¦

Place of birth __ __ __
In DSS: Village/Para ¦__¦__¦__¦
Village/town _____
Upazila _____
District _____

__ __
¦__¦__¦

Date of birth ¦__¦__¦__¦__¦__¦__¦
Reported ¦__¦__¦__¦__¦__¦__¦
Office entry ¦__¦__¦__¦__¦__¦__¦
day month year

Name	Current Id	Registration Number
other _____	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦
ather _____	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦
ead of household	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦
hild _____	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦	¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦
if live birth)		

regnancy and Delivery

uration of pregnancy ¦__¦__¦ months
(unknown = 99)

Duration of labor ¦__¦__¦ hours
(unknown = 99)

as this birth:
singleton ¦__¦
twins ¦__¦
triplets ¦__¦

Prenatal care(one or more):
None ¦__¦
ICDDR,B midwife ¦__¦
ICDDR,B clinic ¦__¦
Government hospital ¦__¦
Other (specify)
_____ __ __ ¦__¦__¦

Birth attended by(one or more):
Government dai ¦__¦
Trad. Birth Attendant ¦__¦
Trained LFPV etc. ¦__¦
ICDDR,B/Red Cr. midwife ¦__¦
Hospital/clinic
which? _____ __ __ ¦__¦__¦
Other attendant
specify _____ __ __ ¦__¦__¦

omplications
of pregnancy: _____ __ __ ¦__¦__¦

of delivery: _____ __ __ ¦__¦__¦
(including excessive bleeding, difficult or unusual labor)

Figure 1 (cont.) Draft Birth Registration Form

Which is this child? Singleton 1 ¦__¦ 1st twin 1 ¦__¦ 2nd twin 2 ¦__¦ 1st triplet 1 ¦__¦ 2nd triplet 2 ¦__¦ 3d triplet 3 ¦__¦

At birth baby:

(one or more)__) one or more
cried ¦__¦)
breathed ¦__¦) ticked? }----------> Live birth 1 ¦__¦
had pulse ¦__¦) Still birth (7+ months) 2 ¦__¦
moved ¦__¦) Miscarriage (spontaneous) 3 ¦__¦
(on own) Miscarriage (induced) 4 ¦__¦
method used to induce _____ ¦__¦__¦

==========

This section for LIVE BIRTHS ONLY

Relationship of child to head of household _____ ¦__¦__¦

Sex:
male 1 ¦__¦
female 2 ¦__¦
unknown 3 ¦__¦

Presentation:
head 1 ¦__¦
face 2 ¦__¦
breech 3 ¦__¦
limb 4 ¦__¦
unknown 5 ¦__¦

Crying induced?
spontaneous 1 ¦__¦
unknown 2 ¦__¦
induced 3 ¦__¦
by _____ ¦__¦__¦

Cord cut by (one only):
Safe Delivery Kit SDK ¦__¦
other new/boiled blade ¦__¦
other blade ¦__¦
bamboo split ¦__¦
hospital methods ¦__¦
other (specify)
_____ ¦__¦__¦

Cord dressing(one or more):
tied with thread ¦__¦
ashes ¦__¦
unburnt material ¦__¦
medicated powder ¦__¦
non-med. powder ¦__¦
liquid, ointment ¦__¦
other (specify)
_____ ¦__¦__¦

Complications of baby:
_____
_____
_____
_____
_____ ¦__¦__¦

Remarks _____ ¦__¦

Figure 2. Draft Death Registration Form

DR89

DEATH REGISTRATION FORM
DSS, ICDDR,B

Reporting Village/Unit ¦__¦__¦__¦

Reported by ¦__¦__¦

HA _____ ¦__¦__¦
SHA _____ ¦__¦__¦

Place of death ¦__¦__¦__¦
In DSS: Village/Para
Village/town _____
Upazila _____
District _____

¦__¦__¦

Date of death ¦__¦__¦__¦__¦__¦__¦
Reported ¦__¦__¦__¦__¦__¦__¦
Office entry ¦__¦__¦__¦__¦__¦__¦
day month year

==========

Current Id

Registration Number

Name _____ ¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦ ¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦

Date of birth ¦__¦__¦__¦__¦__¦__¦
day month year

Sex:
male 1 ¦__¦
female 2 ¦__¦
unknown 3 ¦__¦

Which were consulted? (one or more):

Allopath	¦__¦	Allopath quack	¦__¦	Dai/midwife	¦__¦
Hospital inpatient	¦__¦	Homeopath	¦__¦	Spiritual	¦__¦
Hospital outpatient	¦__¦	Kabiraj	¦__¦	None	¦__¦
				Other (specify) _____	¦__¦__¦

==========

Figure 2 (cont.) Draft Death Registration Form

Description of events and symptoms leading to death:

Cause of death: _____ |__|__|__|

Teknaf only |__|__|__|

Coded by _____ |__|__|__|

Reviewed by _____ |__|__|__|

Notes:

Remarks _____

Figure 3. Draft Marital Status Registration Form

MR89

MARITAL STATUS REGISTRATION FORM
DSS, ICDDR,B

Reporting
Village/Unit |__|__|__|

Reported by |__|__|

A _____ |__|__|
HA _____ |__|__|

Place of marriage
In DSS: Village/Para |__|__|__|
Village/town _____
Upazila _____
District _____

|__|__|

Date of marriage |__|__|__|__|__|__|

Reported |__|__|__|__|__|__|

Office entry |__|__|__|__|__|__|
day month year

==========

Name | Current Id | Registration Number

ale _____ |__|__|__|__|__|__|__|__|__|__| |__|__|__|__|__|__|__|__|__|__|

emale _____ |__|__|__|__|__|__|__|__|__|__| |__|__|__|__|__|__|__|__|__|__|

==========

vent is: Marriage |__|
Divorce |__|

LE:

te of birth: |__|__|__|__|__|__|

ucation:
Type: _____ |__|__|
Years completed: |__|__|

cupation: _____ |__|__|
_____

Usual residence:
In DSS:
Village/Para |__|__|__|
or
Outside DSS:
Village/town _____
Upazila _____
District _____

|__|__|

atus before event
narried |__| ------> How many other wives? |__|__| (excluding this wife)
never married |__|
widowed |__| ------> How long widowed
divorced |__| ------> or divorced? |__|__| months

Figure 3 (cont.) Draft Marital Status Registration Form

FEMALE:

Date of birth: |__|__|__|__|__|__|

In DSS:
Village/Para |__|__|__|
or
Outside DSS:
Village/town _____
Upazila _____
District _____ |__|__|

Education:
Type: _____ |__|__|
Years completed: |__|__|

Occupation: _____ |__|__|

Status before event:
never married |__|
married |__|
widowed |__| ------> How long widowed
divorced |__| ------> or divorced? |__|__| months

==========

This section for MARRIAGE ONLY

Marriage initiated by:
partners |__|
guardians |__|
others |__|
specify: _____

Are partners:
not related |__|
first cousins |__|
second cousins |__|
step bro/sister |__|
other relative |__|
specify: _____

Are partners from same bari?
yes |__|
no |__|

Event registered by:
by Quazi?
yes |__|
no |__|

==========

This section for DIVORCE ONLY

Divorce initiated by:
husband |__|
wife |__|
others |__|
specify: _____

Duration of marriage |__|__| years

Duration of separation before divorce |__|__| months

Remarks _____

Figure 4. Draft Out-Migration Registration Form

R89

OUT-MIGRATION REGISTRATION FORM
DSS, ICDDR,B

eporting
illage/Unit |__|__|__|

eporting by |__|__|

A ________ |__|__|
HA ________ |__|__|

FROM:
In DSS: Village/Para |__|__|__|

Household |__|__|__|__|

Date of event |__|__|__|__|__|__|

Reported |__|__|__|__|__|__|

Office entry |__|__|__|__|__|__|

day month year

):
Village/town ________
Jpazila ________
District ________
Country ________

|__|__|

---

nd	Name	Registration Number	Cause of Movement	
|__|__|	________	|__|__|__|__|__|__|__|__|__|__|__|	________	|__|__|

ex: male 1 |__| female 2 |__|

---

nd	Name	Registration Number	Cause of Movement	
|__|__|	________	|__|__|__|__|__|__|__|__|__|__|__|	________	|__|__|

ex: male 1 |__| female 2 |__|

---

nd	Name	Registration Number	Cause of Movement	
|__|__|	________	|__|__|__|__|__|__|__|__|__|__|__|	________	|__|__|

ex: male 1 |__| female 2 |__|

---

nd	Name	Registration Number	Cause of Movement	
|__|__|	________	|__|__|__|__|__|__|__|__|__|__|__|	________	|__|__|

ex: male 1 |__| female 2 |__|

Figure 4 (cont.) Draft Out-Migration Registration Form

ıd	Name	Registration Number	Cause of Movement
☐☐	_____	☐☐☐☐☐☐☐☐☐☐☐☐	_____ ☐☐

ex: male 1 ☐ female 2 ☐

ıd	Name	Registration Number	Cause of Movement
☐☐	_____	☐☐☐☐☐☐☐☐☐☐☐☐	_____ ☐☐

ex: male 1 ☐ female 2 ☐

ed	Name	Registration Number	Cause of Movement
☐☐	_____	☐☐☐☐☐☐☐☐☐☐☐☐	_____ ☐☐

ex: male 1 ☐ female 2 ☐

d	Name	Registration Number	Cause of Movement
☐☐	_____	☐☐☐☐☐☐☐☐☐☐☐☐	_____ ☐☐

x: male 1 ☐ female 2 ☐

ar Family/Household _____

marks _____

more? yes 1 ☐
no 2 ☐

Figure 5. Draft In-Migration Registration Form

R89

IN-MIGRATION REGISTRATION FORM
DSS, ICDDR,B

eporting
illage/Unit ¦__¦__¦__¦

eported by ¦__¦__¦

\ _____ ¦__¦__¦
HA _____ ¦__¦__¦

TO:
In DSS: Village/Para ¦__¦__¦__¦
Household ¦__¦__¦__¦__¦
Bari(MATLAB) ¦__¦__¦__¦
Near H/F _____

Date of event ¦__¦__¦__¦__¦__¦__¦
Reported ¦__¦__¦__¦__¦__¦__¦
Office entry ¦__¦__¦__¦__¦__¦__¦
day month year

==========

ROM:
/illage/town _____ District _____ ¦__¦__¦
Upazila _____ Country _____

==========

oup type: __
Individual ¦__¦
Partial HH ¦__¦
Whole HH ¦__¦

New household?
yes ¦__¦ -------> Head of New Household Reg. No. ¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦
no ¦__¦

==========

EW HOUSEHOLDS ONLY

eligion __
Islam ¦__¦
Hindu ¦__¦
Other ¦__¦
specify _____

Assets

Land owned	¦__¦__¦	decimals	Lep	¦__¦
Fishing boat	¦__¦__¦	number	Hurricane	¦__¦
Betel nut garden	¦__¦__¦		Bicycle	¦__¦
Betel leaf garden	¦__¦__¦		Watch	¦__¦
Cattle	¦__¦__¦	number	Radio	¦__¦

==========

Figure 5 (cont.) Draft In-Migration Registration Form

d Sex Name Registration Number

male 1
female 2

egnancy history Last birth: spouse

iving sons
iving daug
eceased sons
eceased daug
till b/miscr

Date
day month year

mother

Still alive?
yes
no

ucation:
Type:
Years completed:

cupation:

Marital status
single 1
married 2
divorced 3
widowed 4

Cause of movement

---

d Sex Name Registration Number

male 1
female 2

egnancy history Last birth: spouse

iving sons
iving daug
eceased sons
eceased daug
till b/miscr

Date
day month year

mother

Still alive?
yes
no

ucation:
Type:
Years completed:

cupation:

Marital status
single 1
married 2
divorced 3
widowed 4

Cause of movement

---

ar Family_____

marks _____

Figure 6. Draft Internal Movement Registration Form

R89

INTERNAL MOVEMENT REGISTRATION FORM
DSS, ICDDR,B

eporting
illage/Unit ¦__¦__¦__¦

eported by TO: ¦__¦__¦
FROM: ¦__¦__¦

IA _____ ¦__¦__¦
SHA _____ ¦__¦__¦

TO:
In DSS: Village/Para ¦__¦__¦__¦

Household ¦__¦__¦__¦__¦

Bari(MATLAB) ¦__¦__¦__¦
Near H/F _____

Date of event ¦__¦__¦__¦__¦__¦__¦
Reported ¦__¦__¦__¦__¦__¦__¦
Office entry ¦__¦__¦__¦__¦__¦__¦
day month year

==========

ROM:
n DSS: Village/Para ¦__¦__¦__¦

Household ¦__¦__¦__¦

==========

Head of New Household Reg. No.

roup type:
Individual ¦__¦
Partial HH ¦__¦
Whole HH ¦__¦

New household?
yes ¦__¦ -------->
no ¦__¦

¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦__¦

==========

EW HOUSEHOLDS ONLY

eligion
Islam ¦__¦
Hindu ¦__¦
Other ¦__¦
specify _____

Assets

Land owned	¦__¦__¦	decimals	Lep	¦_¦
Fishing boat	¦__¦__¦	number	Hurricane	¦_¦
Betel nut garden	¦__¦__¦		Bicycle	¦_¦
Betel leaf garden	¦__¦__¦		Watch	¦_¦
Cattle	¦__¦__¦	number	Radio	¦_¦

==========

Figure 6 (cont.) Draft Internal Migration Registration Form

nd (NEW) Sex
male 1
female 2
Name
Registration Number

elationship
o head (NEW)

spouse

mother

ause of
ovement

---

nd (NEW) Sex
male 1
female 2
Name
Registration Number

elationship
o head (NEW)

spouse

mother

ause of
ovement

---

nd (NEW) Sex
male 1
female 2
Name
Registration Number

elationship
o head (NEW)

spouse

mother

ause of
ovement

---

nd (NEW) Sex
male 1
female 2
Name
Registration Number

elationship
o head (NEW)

spouse

mother

use of
vement

---

ar Family_____

marks _____

C.1.2. Teknaf Field Operations

Registration of vital events in Teknaf is carries out by twelve DSS teams. Each team is made up of a male Health Assistant and a female Community Health Worker. The HAs have at least a high school education and some training on data collection methodology, whereas the CHWs are usually without any formal training. Each team visits every household in their area once a month. The main responsibility of the CHWs is to interview female informants, since women in Teknaf usually will not talk to male outsiders. Each team is responsible for about 1,300 households, visiting 60 to 80 a day depending on the density of the population and geographic location of the area. The work of the HAs and CHWs is supervised by a Senior Field Research Officer (SFRO), Field Research Officers (FROs), and Senior Health Assistants (SHAs). An SHA collects the registration forms from the HAs and visually checks them. In addition, the SHAs independently visit each household every three months to verify HA visits and check for missed data.

The registration forms are currently being sent to Dhaka, where the DSS/CIS staff codes the variables, enters, checks, and cleans the data, and adds the vital events to the data base. We plan to begin microcomputer entry of data in the field as soon as the system is completed and tested in Matlab.

As in Matlab, a government-sponsored EPI intervention may begin in Teknaf in 1989. The DSS plans to collaborate with BRAC,

the implementing agency, to ensure that immunization data are added to the database.

C.1.3 Rolling Census

In addition to the usual registration of vital events, as outlined above, this protocol also includes the provision for the conduct of a "rolling census". In this type of census we will systematically rotate through the entire population with a periodicity of about two years. Some problems may be created for researchers wishing a cross-sectional "snapshot" of socioeconomic status at one moment in time. The advantages of continually monitoring the population and quickly noticing changes as they occur, rather than waiting several years until the next census, appear to outweigh any such problems.

The census unit for this enumeration in Matlab will be the village; there we will interview all of the households in about six villages each month. In Teknaf, where the villages are much larger the census unit will be the para. The villages or paras chosen each month will be fairly randomly distributed. The census questions will be of three types. First will be the questions designed to validate the vital registration system. Second will be a standard core of demographic, health, and socioeconomic questions which will update the last socioeconomic survey in 1982. Third will be the special module questions, designed to focus on topics of current interest in the area

(e.g., post-flood economic or health questions) or to gather data needed for individual research projects.

This rolling census will be beneficial for the following reasons:

a) since the sampling units will be randomly distributed we will, within a very few months, be able to detect important changes in socio-economic conditions in the field areas;

b) since it will be ongoing it will avoid the peak-load problem of mounting a standard census, with its need for a large staff for a short period of time; instead a much smaller permanent staff will have year-round work;

c) by comparing the results of this type of census with the DSS itself and with more traditional censuses we can see if a rolling census approach would be a valid and cost-effective way to collect the data needed for demographic estimation and health evaluation in many parts of the developing world;

d) it will be an independent check on the DSS field work and data base system, since the results of each month's census will be compared with the data base and inconsistencies reported; this will be one of the first true validations of the DSS data base.

C.1.4 Multi-Round Demographic Survey

Another project included in this protocol which combines operations research with more substantive issues will be the Multi-Round Demographic Survey. In this type of survey longitudinal and period information are collected by interviewers who visit each household once per round, with rounds taking place every few months. In spite of the fact that these surveys represent a very important class of surveys in LDCs, the available literature on them is conspicuously deficient in the information necessary for good sample design, efficient execution, and unbiased estimation of demographic rates. As a consequence of this lack (and also, of course, because of their intrinsic difficulty) most of these surveys have met with limited success and, indeed, many have failed altogether. The major methodological questions to be addressed here are:

a) the choice of the ultimate sampling unit;

b) the frequency of visitation necessary to achieve the optimal cost/error compromise;

c) the precise rules of association by which individuals and events are associated with the ultimate sampling units;

d) the choice of estimators for demographic rates and the demonstration of the sampling properties of these estimators;

e) the magnitude and effect of response variance, particularly that component referred to as correlated response variance, both within rounds and within interviewer assignments;

f) appropriate survey organization and management, data collection instruments and training, data processing and editing, etc..

In addition to these operations research issues, substantive questions relating to the demographic, health, and economic status of the survey area will also be examined. These questions will depend on the population(s) we decide to follow. Many Multi-Round Demographic Surveys, for example, have identified the children born during the base year and followed these children through their first few years of life. If we choose to follow a birth cohort such as this we will not only provide methodological answers about conducting this type of survey but also valuable insights into infant and child morbidity, mortality, growth, and development.

C.2. COMPUTER OPERATIONS

The major computer activity to be undertaken by this protocol will be the consolidation of Matlab and Teknaf data into a relational database system. The centre of this system will be the IBM 4361 mainframe computer at the ICDDR,B and the Structured

Query Language (SQL) database software running on that computer. The backbone of the database is the longitudinally linked series of censuses and vital events, data which have been collected in the past and which will continue to be collected under this protocol. This system allows a researcher to identify all of the people alive in the surveillance area at any point in time, along with various demographic characteristics such as age, sex, and marital status. During the next five years we will be making this system even more useful by adding the following types of data:

a) DSS data from the period 1974 up to the 1982 census, the so-called "Yeti" file of births, deaths, and migrations as well as supplementary information about marriages and divorces;

b) data collected by the Rolling Census and the Multi-Round Demographic Survey projects of the DSS outlined above;

c) other DSS data sets collected in the past; and

d) data form other Centre protocols, both in the past and during the next five years.

In this way a researcher will be able to analyze the results of many past interventions, for example, or draw a sample of the population which has certain well-defined characteristics. The DSS will also continue to work with the Centre to develop a policy on the ownership and management of Matlab and Teknaf data so that these data sets can be used in the most scientifically responsible way possible.

C.3. SEQUENCE OF EVENTS

This section contains a description of the sequence and timing of each task within the project. At the highest level, the project is divided into activities. Each activity is then further subdivided into elements and sub-elements. These are the task subdivisions used within CIDA's PMBA project management system.

Each sub-element of the project appears in this section, showing its intended start and end date or dates where intermittent activity is planned. The schedule is provided by calendar quarter, linked to the Government of Canada fiscal year as well as to calendar years. The sub-element numbers are those assigned in Section II B, "Specific Aims," above.

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B111- Collect Matlab T.A. by existing methods	X	X	X	X								
B112- Collect Matlab T.A. by better methods					X	X	X	X	X	X	X	X
B121- Collect Matlab C.A. by existing methods	X	X	X	X								
B122- Collect Matlab C.A. by better methods					X	X	X	X	X	X	X	X
B131- Collect Teknaf data by manual methods	X											
B132- Collect Teknaf data by PC-based methods		X	X	X								
B133- Collect Teknaf data by better methods					X	X	X	X	X	X	X	X
B211- Add Matlab data to DSS database	X	X	X	X	X	X	X	X	X	X	X	X
B212- Edit and correct in Dhaka	X	X	X	X	X	X	X	X	X	X	X	X
B213- Correct data at Matlab for re-entry	X	X	X	X	X	X	X	X	X	X	X	X
B214- Distribute updated Matlab lists, forms				X				X				X
B221- Add Teknaf data to DSS database	X	X	X	X	X	X	X	X	X	X	X	X
B222- Edit and correct in Dhaka	X	X	X	X	X	X	X	X	X	X	X	X
B223- Correct data at Teknaf for re-entry	X	X	X	X	X	X	X	X	X	X	X	X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B224- Distribute updated Teknaf lists, forms				X				X				X
B231- Create pre-1982 to post-1982 linkages	X											
B232- Edit, add 74-82 Yeti data to database		X	X	X								
B233- Edit and add other 1974-82 DSS data		X	X	X	X							
B234- Produce quality analysis and report		X		X	X							
B241- Edit, correct, add rolling census data				X	X	X	X	X	X	X	X	X
B242- Edit, correct, add MRDS data					X	X	X	X	X	X	X	X
B251- Develop structure and edit standards			X									
B252- Develop standards for documentation			X	X								
B253- Implement standards					X							
B254- Monitor success of implementation					X	X	X	X	X	X	X	X
B261- Ensure quality of non-DSS dataset					X	X	X	X	X	X	X	X
B262- Review quality of data documentation					X	X	X	X	X	X	X	X
B263- Help non-DSS users to document dataset					X	X	X	X	X	X	X	X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
8264- Edit, add non-DSS datasets					X	X	X	X	X	X	X	X
8265- Add documentation to DSS user manual						X	X	X	X	X	X	X
8311- Install Teknaf PC equipment on hand	X											
8312- Train Teknaf staff	X											
8313- Introduce PC-based methods to Teknaf		X										
8321- Review data types to collect			X				X				X	
8322- Review data classes and definitions			X				X				X	
8323- Adjust field and Dhaka procedures				X				X				X
8324- Train field and Dhaka staff				X				X				X
8331- Develop baseline data costs	X											
8332- Develop new data handling methods		X	X									
8333- Train Matlab staff				X								
8334- Train Teknaf staff				X								
8335- Monitor new costs against baseline					X	X	X	X	X	X	X	X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B341- Develop rolling census	X	X										
B342- Conduct pilot and adjust if needed		X										
B343- Collect rolling census data			X	X	X	X	X	X	X	X		
B344- Analyze rolling census data				X	X	X	X	X	X	X	X	X
B351- Develop MRDS design and field methods	X	X										
B352- Conduct pilot and adjust if needed		X	X									
B353- Collect MRDS field data				X	X	X	X	X	X	X		
B354- Analyze MRDS data					X	X	X	X	X	X	X	X
B361- Design other operations research					X	X						
B362- Study statistical methodology						X	X					
B363- Conduct limited field experiments						X	X	X	X			
B364- Prepare research reports									X	X	X	
B371- Estimate important demographic rates	X		X				X				X	
B372- Prepare research reports	X			X				X				X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B381- Study survival trends, correlates	X	X	X	X	X	X	X	X	X	X	X	X
B382- Study contraceptive prevalence	X	X	X	X	X	X	X	X	X	X	X	X
B383- Study women status, family structure	X	X	X	X	X	X	X	X	X	X	X	X
B411- Complete data share policy details	X	X	X									
B412- Implement and monitor policy				X	X	X	X	X	X	X	X	X
B413- Provide DSS data to others					X	X	X	X	X	X	X	X
B421- Analyze needs for DSS user bridges	X	X	X									
B422- Specify new user interfaces		X	X	X								
B423- Develop and test new interfaces			X	X	X							
B424- Document new interfaces				X	X	X	X	X	X	X	X	X
B431- Prepare DSS dataset descriptions		X	X									
B432- Prepare DSS user procedures manual		X	X									
B433- Issue user manuals to DSS users				X								
B441- Identify GOB areas for participation	X	X	X	X	X	X	X	X	X	X	X	X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS:	FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:		1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B442- Participate on GOB advisory bodies	X	X	X	X	X	X	X	X	X	X	X	X
B443- Transfer DSS data, experience to GOB	X	X	X	X	X	X	X	X	X	X	X	X
B451- Define DSS workshop needs	X				X				X			
B452- Define workshop audiences		X				X				X		
B453- Conduct workshops			X				X				X	
B454- Review workshop results				X				X				X
B461- Confirm, extend BBS links	X	X	X	X	X	X	X	X	X	X	X	X
B462- Confirm, extend NIPORT links	X	X	X	X	X	X	X	X	X	X	X	X
B463- Confirm, extend Planning Com. links	X	X	X	X	X	X	X	X	X	X	X	X
B464- Confirm and extend other existing links	X	X	X	X	X	X	X	X	X	X	X	X
B471- Identify areas for new instit. links	X	X	X	X	X	X	X	X	X	X	X	X
B472- Establish new links in Bangladesh		X	X	X	X	X	X	X	X	X	X	X
B473- Est. international research links	X	X	X	X	X	X	X	X	X	X	X	X
B474- Est. international training links				X	X	X	X	X	X	X	X	X

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS:	FY 88/89	FY 1989/90			FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B481- Prepare annual DSS reports				X				X				X
B482- Disseminate rolling census results							X	X	X	X	X	X
B483- Disseminate MRDS results								X	X	X	X	X
B484- Disseminate results of other opns. res.											X	X
B485- Disseminate results of substantive res.	X	X	X	X	X	X	X	X	X	X	X	X
B486- Disseminate other DSS results, papers	X	X	X	X	X	X	X	X	X	X	X	X
B511- Establish costing mechanism	X	X										
B512- Review costing base client base		X										
B513- Adjust proposed policy as needed		X	X									
B514- Develop baseline client activity data		X										

PROJECT IMPLEMENTATION SCHEDULE
DEMOGRAPHIC SURVEILLANCE SYSTEM

GOC FISCAL YEARS: FY 88/89	FY 1989/90				FY 1990/91				FY 1991/92			
CALENDAR YEARS:	1989				1990				1991			
CALENDAR QUARTERS:	1	2	3	4	1	2	3	4	1	2	3	4
B611- Provide staff with career planning	X	X	X	X	X	X	X	X	X	X	X	X
B612- Do computer-related out-country training		X				X				X		
B613- Provide other out-of-country training	X	X	X	X	X	X	X	X	X	X	X	X
B614- Do computer-related in-country training		X		X		X		X		X		X
B615- Provide other in-country training	X	X	X	X	X	X	X	X	X	X	X	X

D. SIGNIFICANCE

The Demographic Surveillance System Matlab and Teknaf is an invaluable institutional resource of the ICDDR,B. The DSS provides a base for scientific research unparalleled in other developing countries. The research programs which have depended on the DSS in the past have included the cholera vaccine trials, the MCH-FP program, the measles survey, and the water and sanitation project. As long as the ICDDR,B continues to undertake major research undertakings such as these it will need the data base resource which the DSS provides.

The DSS will continue to be funded by a specific project grant from the Canadian International Development Agency during 1989-1991.

E. FACILITIES REQUIRED

No special facilities will be required to undertake this protocol. The Dhaka-based staff will continue to use office space provided by the ICDDR,B in the main building and in the Computer Centre. It is assumed that the ICDDR,B will provide the Matlab staff with facilities in the new field station building commensurate with our requirements. It is hoped that the ICDDR,B will undertake the necessary upgrading of the office facilities available in Teknaf.

F. COLLABORATIVE ARRANGEMENTS

Within the Population Science and Extension Division, where the Demographic Surveillance System is located, close collaboration will be maintained with the Maternal and Child Health - Family Planning (MCH-FP) Extension Project. In addition, collaboration with the Community Medicine Division will be maintained with respect to the Matlab MCH-FP service and research component, and in particular with the ongoing Recordkeeping System (RKS). As noted in Section II above, the DSS will initiate a major initiative during its next phase to collaborate with all relevant divisions of the ICDDR,B in two ways. First, we will seek to make the DSS more responsive to the needs of the entire Centre by furnishing data and results in a more relevant and timely manner. Second, we will assist other researchers to incorporate their data into the mainframe data base system, allowing future studies to build on this wealth of data.

REFERENCES

Demographic Surveillance System - Matlab: Vital Events and Migration Tables (Annual Reports, various authors).

Demographic Surveillance System - Matlab: Organization and Operation, 1966-86. Abdur Razzaque et al.

Demographic Surveillance System - Teknaf: Vital Events and Migration Tables (Annual Reports, various authors).

Demographic Surveillance System - Teknaf: Methods and Procedures. Mizanur Rahman et al.

Demographic Surveillance System - Teknaf: Instruction Manual for Data Collection. Mizanur Rahman et al.

Demographic Surveillance System - Teknaf: Code Plan, 1976-85. Mizanur Rahman et al.

System Manual for Demographic Surveillance System Data Base. Ashraf Hira et al.

Technical Manual for DSS DB System. Ashraf Hira et al.

ABSTRACT SUMMARY

1. The population for the DSS of necessity includes all people living in the study area, since a census approach has been adopted.
2. The only potential risk is the invasion of privacy.
3. Subjects are fully informed of the kinds of information needed, of their right to refuse to participate, and of the confidentiality of their responses.
4. Only the staffs of the Matlab and Teknaf Field Stations, the DSS Dhaka staff, and investigators working under approved protocols have access to source documents that display an individually identifying information. The staff members are trained and aware of the confidential nature of the information they handle. Data that are published are in aggregate form; there will be no possibility of identifying individuals from published data.
5. Although the DSS involves some invasion of privacy -- for example, information about marital status is asked -- the nature of the demographic data collection operation is such that no information will be collected which is unknown to the near neighbors of the respondent.
6. As explained in the preceding sections, the DSS will involve a number of interviews. In order to register vital events frequent short interviews will be necessary. The Rolling Census and the Multi-Round Demographic Survey

interviews will be somewhat longer, perhaps 30 minutes, but will be much less frequent. On average, an individual in the surveillance area may spend a total of 15 to 20 minutes per year being interviewed by DSS personnel.

7. There is no immediate benefit from the DSS to the individual subject except for the delivery of ORS to people with diarrhoea, but the benefit to society as a whole of continuing this collection of basic demographic information is immeasurable.

8. The proposed activity will require the use of records.

SECTION III : BUDGET

The budget for this protocol is attached. The detailed budget is shown for the first year only. Budgets for all five years, showing year to year incremental costs, are shown in the summary budget.

The Canadian International Development Agency has agreed in principle to fund the first three years (1989-1991). Funding for the final two years (1992-1993) will be sought in due course from donors such as CIDA.

A. DETAILED BUDGET

Summary of local Personnel Cost - 1989		in US$
Matlab-DSS:		
- Existing Staff	3,64,926	
- New recruitment	27,816	
- MRDS and rolling census	22,396	
	---	4,15,138
Teknaf-DSS:		
- Existing	1,85,298	
- New recruitments	9,072	
	---	1,94,370
Total		6,09,508
	Say:	US$6,09,500

LOCAL STAFF: EXISTING

	A	B	C	D	E
Job Title	Pay level	No. of position	Man month per year	Rate per month in 1989	First year requirement in US $
DSS-MATLAB:					
1. Assoc. Scientist	NOC	1	12	1044	12528
2. Asst. Scientist	NOB	1	12	967	11604
3. Sr. Stat. Officer	GS6	1	12	607	7284
4. Sr. Data Mgt. Officer	GS6	1	12	473	5676
5. Research Officer	GS5	1	12	376	4512
6. Data Mgt. Officer	GS5	3	36	402	14472
7. Data Processing Asst.	GS4	2	24	317	7608
8. Coding Asst.	GS3	2	24	274	6576
9. Head, DMB.- 50%	NOC	1	6	1044	6264
10. Proj. Office Manager	NOA	1	12	780	9360
11. Secretarial Asst.	GS4	1	12	304	3648
12. Office Attendant	GS1	1	12	194	2328
13. Field Manager	NOB	1	12	1002	12024
14. Sr.Field Res. Officer	GS6	1	12	665	7980
15. Field Res. Officer	GS5	3	36	502	18072
16. Sr. Health Asst.	GS4	9	108	429	46332
17. Paramedics	GS4	1	12	377	4524
18. Health Asst.	GS3	17	204	322	65688
19. HA/Data Entry Tech.	GS3	2	24	322	7728
20. CHW	-	30	360	93	33480
21. CHW - 25%	-	86	258	93	23994
22. ORS Prod. Helper	GS1	1	12	182	2184
23. Admin. Asst	GS4	1	12	440	5280
24. Country Boatman	-	3	36	60	2160
25. Matlab Stn. Head-10%	NOD	1	1.2	1830	2196
26. Sr. System Analyst	NOC	1	12	1044	12528
27. System Analyst	NOB	1	12	783	9396
28. Sr. Programmer	GS6	1	12	474	5688
29. Computer Oper. Supvr.	NOA	1	12	768	9216
30. Sr. Dat Entry Tech.	GS4	1	12	383	4596
			0		0
			0		0
		177	1333.2		361926

LOCAL STAFF: EXISTING

Job Title	A Pay level	B No. of position	C Man month per year	D Rate per month in 1989	E First year requirement in US $
DSS-TEKNAF:					
1. Assoc. Scientist	NOC	1	12	1008	12096
2. Sr. Stat. Officer	GS6	1	12	583	6996
3. Data Mgt. Officer	GS5	1	12	402	4824
4. Data Processing Asst.	GS4	1	12	419	5028
5. Coding Asst.	GS3	2	24	285	6840
6. System Analyst	NOB	1	12	726	8712
7. Sr. Data Entry Tech.	GS4	1	12	326	3912
8. Sr.Field Res. Officer	GS6	1	12	460	5520
9. Field Res. Officer	GS5	2	24	450	10800
10. Sr. Health Asst.	GS4	4	48	377	18096
11. Health Assistant	GS3	12	144	290	41760
12. CHW	-	12	144	90	12960
13. Clerk, Grade I	GS3	1	12	359	4308
14. Auto Driver	GS2	1	12	332	3984
15. Speedboat Driver	GS1	1	12	276	3312
16. Motor boat Driver	GS1	1	12	276	3312
17. Messenger	GS1	1	12	287	3444
18. Attendant	GS1	2	24	224	5376
19. Security Guard	GS1	2	24	282	6768
20. Cleaner	GS1	1	12	298	3576
21. Teknaf Head - 50%	NOC	1	6	1392	8352
22. Medical Officer - 50%	NOA	1	6	624	3744
23. Admin. Asst. - 50%	GS4	1	6	263	1578
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
			0		0
		52	606		185298

LOCAL STAFF: NEW RECRUITMENTS

	A	B	C	D	E
Job Title	Pay level	No. of position	Man month per year	Rate per month in 1989	First year requirement in US $
DSS-MATLAB:					
1. Senior Scientist	NOE	1	12	1562	18744
2. Demogr.-Statistician	NOB	1	12	756	9072
MRDS and Rolling Census:					
1. Sr.Field Res. Officer	GS6	1	4	518	2072
2. Field Res. Officer	GS5	2	8	352	2816
3. Sr. Health Asst.	GS4	3	12	263	3156
4. Health Asst.	GS3	12	48	219	10512
5. CHW	-	12	48	80	3840
DSS-TEKNAF:					
1. Demogr.-Statistician	NOB	1	12	756	9072
			0		0
			0		0
		33	156		59284

INTERNATIONAL PERSONNEL

	Job Title	A Pay level	B No. of position	C Man month per year	D Rate per month in 1989	F First year requirement in US $
1.	Project Director	P-5	1	12	6000	72000
2.	Demographer-Scientist	P-4	1	12	5275	63300
3.	Sys. Dev. Manager	P-4	1	12	5358	64296
				0		0
				0		0
			3	36		199596

CONSULTANTS - 1989

Name & Job Title	Travel From-To-From	No. of Days	Per Diem		Honorarium		Travel Cost	Total $ Amount
			Rate	Total	Rate	Total		
		(A)	(B)	(C)	(D)	(E)	F=(C+E)	G=(AxF)
1. Scientist	USA/Canada/Europe	21	25	525	175	3675	2000	6200
2. Scientist	Local	21	25	525	175	3675	0	4200
3. Demographer	USA/Canada/Europe	21	25	525	175	3675	2000	6200
4. Statistician	USA/Canada/Europe	21	25	525	175	3675	2000	6200
5. Demographer-50%	Local	6 months			965 per month		0	5790
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
				0		0		0
TOTAL								24590

TRAVEL PLAN (LOCAL) - 1989

Job Title	Travel From - To - From	No.of trips	Person/ days	Per diem Rate	Per diem Amount	Transport Air	Transport Ground	Total in US$
NO & GS level staff	Dhaka/Matlab/Dhaka	96	288	6	1728	-	-	1,728
"	Matlab/Dhaka/Matlab	48	144	10	1440	-	240	1,680
"	Dhaka/Teknaf/Dhaka	18	126	6	756	1020	80	1,856
"	Teknaf/Dhaka/Teknaf	8	56	10	560	453	296	1,309
TOTAL					4484	1473	616	6,573

Say: US$6,600

TRAVEL PLAN (INTERNATIONAL) - 1989

Name & Job Title	Travel From-To-from	Estim. Travel Days (A)	Per Diem Rate (B)	Per Diem Amount (C = AXB)	Transportation Air (D)	Transportation Ground (E)	Other Cost (F)	Total $ Amount G=(C+D+E+F)
1. Project Director	USA/Europe [1]	6	100	600	1500	50	50	2200
2. Junior Scientists	Asia Region[3]	15	80	1200	1400	100	100	2800
3.				0				0
4.				0				0
5.				0				0
6.				0				0
7.				0				0
8.				0				0
9.				0				0
10.				0				0
11.				0				0
12.				0				0
13.				0				0
14.				0				0
15.				0				0
16.				0				0
17.				0				0
18.				0				0
19.				0				0
20.				0				0
21.				0				0
21				0				0
22.				0				0
23.				0				0
24.				0				0
25.				0				0
26.				0				0
27.				0				0
28.				0				0
29.				0				0
TOTAL				1800				5000

SUPPLIES AND MATERIALS - 1989

A/C Code	Item Description	$ Amount
3704	Stationery and Office Supplies (Battery, book register, binders, files, pencil, fastener, paper, ribbon, stapler etc.)	4200
3706	Materials for Uniform (Cloth, button etc required for making uniforms)	300
3709	Housekeeping SUpplies (Aerosol, battery, wiping cloth, duster, lock and key etc.)	200
3710	Janitorial Supplies (Bleaching powder, brush, detol, detergent, insecticide, soap etc.)	100
3811	Tools and Spares (Automobile spares, tyres, tubes, battery, stores required for maintenance services etc.)	800
3712	Non-stock Supplies (Materials not normally kept in stock and purchased only against specific requisitions)	9000
	Sub Total	14600
3713	Freight and other charges (Add 30% to above sub total)	4380
	TOTAL	18980

Say: US$ 19,000

OTHER COST - 1989

A/C Code	Item Description	$ Amount
3800	Repairs and Maintenance (Maintenance and repairs of vehicles, equipments, furniture and building)	3500
3900	Rent, communication and utilities (Postage, telephone, telegram, electricity etc.)	14000
4100	Bank charges	500
4200	Legal and Professional Expenses (Professional membership fee, legal fee, audit fee etc.)	300
4300	Printing and Publication (Printing of forms, books, journals, reprints etc.)	7000
4400	Hospitality and Donation (Guest house accommodation, donations, hospital food, lunch, refreshment etc.)	3500
4500	Service Charges (porter, labour, washing, laundry and other misc. expenditure)	200
4600	Staff Development and Training (Training course fee, training materials, stipend, scholarship, subsistance paid to the staff)	10000
	TOTAL	40000

INTER-DEPARTMENTAL SERVICES - 1989

A/C Code	Service Area	$ Amount
1801	Computer	97000
1802	Transport Dhaka	2000
1803	Transport Matlab	700
1804	Water Transport Matlab	7500
1805	Transport Teknaf	0
1806	Xerox and Mimeograph	800
1807	Pathology	1000
1808	Microbiology Tests	200
1809	Biochemistry	200
1810	X-Ray	200
1815	Medical Illustration	200
1817	Telex	500
1819	Maintenance Charges	1000
1820	Vehicle Maintenance Charges	1000
1821	Library Service Charges	200
1822	Staff Clinic Charges - Dhaka	1500
1823	Staff Clinic Charges - Matlab	200
1824	Bacteriology Test	200
1830	Transport Subsidy	500
1830	Generator Charges	3500
	TOTAL	118400

CAPITAL EXPENDITURE - 1989

	Item Description	Manufacturer	No.of Units	Cost+Freight $ Amount
1.	Micro computer	Singapore	1	2500
2.	Photocopier	Singapore/Japan	1	3000
3.	Misc. items	Local/foreign	-	3500
6.				
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20.				
	TOTAL			9000

B. SUMMARY BUDGET: 1989-1993

Expense Category	Project Requirements					
	1989	1990	1991	1992	1993	Total
1. Local Salaries	609,500	670,500	737,600	811,400	892,500	3,721,500
2. International Salaries	199,600	239,600	94,400	103,800	114,200	751,600
3. Consultants	25,600	30,600	32,600	35,900	39,500	167,200
4. Travel - Local	6,600	7,100	7,600	8,100	9,200	38,900
5. Travel - International	5,000	5,000	5,000	6,000	6,000	27,000
6. Supplies & Materials	19,000	19,200	19,500	21,500	23,700	102,900
7. Other (Contractual) Cost	10,000	41,000	42,000	45,000	50,000	218,000
8. Inter-departmental Serv.	118,100	122,100	126,400	139,000	152,900	659,100
OPERATING COST	1,026,700	1,135,400	1,065,100	1,171,000	1,288,000	5,686,200
CAPITAL EXPENDITURE	9,000	0	0	10,000	12,000	31,000
TOTAL PROJECT COST	1,035,700	1,135,400	1,065,100	1,181,000	1,300,000	5,717,200

22/11/88
Associate Director, RSED

22/11/88
Project Director, DSS

Reviewed by Budget Office

CONSENT FORMS

Since the DSS has been going on since 1966 in Matlab and since 1975 in Teknaf, the entire populations of the areas are well aware of the nature of the project. Every household in the two areas has a Family Visitation card; the fact that these cards are carefully maintained indicates an implied type of consent. As approved by the RRC and ERC in the past, no consent form will be used during the continuation of this protocol.