INTRODUCTION 1

1.1 GEOGRAPHY AND ECONOMY

Bangladesh, a small country of 147,570 square kilometers and more than 120 million people, gained independence on March 26, 1971 after a war of liberation from Pakistan. The country is almost entirely surrounded by India, except for a short southeastern frontier with Myanmar and a southern coastline on the Bay of Bengal.

The most significant feature of the landscape is the extensive network of large and small rivers that are of primary importance to the socioeconomic life of the nation. Chief among these, lying like a fan on the face of the land, are the Ganges-Padma, Brahmaputra-Jamuna, and Megna rivers.

The climate of Bangladesh is dominated by seasonal monsoons. The country experiences a hot summer season with high humidity from March to June; a somewhat cooler but still hot and humid monsoon season from July through early October; and a cool, dry winter from November to the end of February. The fertile delta is frequented by natural calamities such as floods, cyclones, tidal bores, and drought.

For administrative purposes, the country is divided into 6 divisions, 64 districts, and 490 *thanas* (subdistricts) (BBS, 1997a:3). Muslims constitute almost 90 percent of the population of Bangladesh, Hindus constitute about 10 percent, and others constitute less than 1 percent. The national language of Bangladesh is Bangla, which is spoken and understood by all.

Agriculture is the most important sector of the nation's economy. It accounts for 30 percent of the gross domestic product (GDP) and employs 64 percent of the workforce (BBS, 1997a:270,159). Jute is the main nonfood crop and the main cash crop of Bangladesh. Less than 20 percent of the cropped land area is used for crops other than jute and rice (BBS, 1997a:187,188). Industry, although small, is increasing in importance as a result of foreign investments. Prospects for mineral resources, gas, coal, and oil appear to be bright. However, the per capita income is only US$275 and half of Bangladesh's population entered the 1990s with an income below the poverty line (GOB, 1994:2; World Bank, 1995:xvii). Unemployment/underemployment is a serious problem, and pressure on the land in rural areas has led to movement of people from rural to urban areas.

1.2 POPULATION

The population of the area that now constitutes Bangladesh has grown from about 42 million in 1941 to about 120 million in 1995 (BBS, 1997a:149,140), making the nation the ninth most populous country in the world and one of the most densely populated. The intercensal population growth rate peaked in the early 1970s at about 2.5 percent per annum, followed by a decline to 2.2 percent during the 1981-1991 period (BBS, 1997a:149). The relatively young age structure of the population indicates continued rapid population growth in the future; according to the 1991 census, 45 percent of the population is under 15 years of age, 52 percent are between 15 and 64 years, and 3 percent are age 65 or over (BBS, 1997a:139). This young age structure

constitutes a built-in "population momentum," which will continue to generate population increases well into the future, even in the face of rapid fertility decline. For example, in 1992, Bangladesh had about 22 million married women of reproductive age; by the year 2001, this number is projected to rise to 31 million (GOB, 1994:8). Even if replacement-level fertility is achieved by the year 2005—as targeted by government policy—the population will continue to grow for 40 to 60 years. One projection suggests that the population of Bangladesh may stabilize at 211 million by the year 2056.

Bangladesh has undergone a remarkable demographic transition over the last two decades. The total fertility rate has declined from about 6.3 in the early 1970s (MOHPC, 1978:73) to 3.3 in the mid-1990s (Mitra et al., 1997:31). The crude death rate has also fallen dramatically, from about 19 per 1,000 population in 1975 to 8 in 1995 (GOB, 1994:4; BBS, 1997a:144). Although infant and under-five mortality rates are declining, they are still high. The infant mortality rate was 150 deaths per 1,000 live births in 1975 and fell to 87 in the 1989-1993 period (GOB, 1994:5; Mitra et al., 1994:92). Maternal mortality has declined from 6.2 deaths per 1,000 births in 1982 to 4.4 in 1995. This small but important decline is mainly attributed to increased availability of family planning and immunization services, improved antenatal and delivery care, and a reduction in the number of births to high-risk mothers (GOB, 1994:5; BBS, 1997a:144). Because of the mortality decline, there is evidence of modest improvement in life expectancy during the past decade. Life expectancy at birth was 46 years for males and 47 years for females in 1974 (UN, 1981:60). It increased to 59 years for men and 58 years for women in 1995 (BBS, 1997a:145).

Striking changes have also been observed in the fertility preferences of married Bangladeshi women. In 1975, when married women were asked how many children they would ideally like to have, the response was an average of 4.1 children (Huq and Cleland, 1990:53,54). By 1993-1994, the mean ideal family size had dropped to 2.5 (Mitra et al., 1994:88).

1.3 Population, Family Planning and Maternal and Child Health Policies and Programs

Family planning was introduced in the early 1950s through the voluntary efforts of social and medical workers. The government, recognizing the urgency of moderating population growth, adopted family planning as a government-sector program in 1965.

The policy to reduce fertility rates has been repeatedly reaffirmed since liberation in 1971. The First Five-Year Plan (1973-1978) of Bangladesh emphasized "the necessity of immediate adoption of drastic steps to slow down the population growth" and reiterated that "no civilized measure would be too drastic to keep the population of Bangladesh on the smaller side of 15 crore (i.e., 150 million) for sheer ecological viability of the nation" (GOB, 1994:7). From mid-1972, the family planning program received virtually unanimous, high-level political support. All subsequent governments that have come into power in Bangladesh have identified population control as the top priority for government action. This political commitment is crucial in understanding the fertility decline in Bangladesh. In 1976, the government declared the rapid growth of the population as the country's number one problem and adopted a broad-based, multisectoral family planning program along with an official population policy (GOB, 1994:9). Population planning was seen as an integral part of the total development process, and was incorporated into successive five-year plans. Policy guidelines and strategies for the population program are formulated by the National Population Council (NPC), which is chaired by the prime minister.

Bangladesh's population policy and programs have evolved through a series of developmental phases and have undergone changes in strategies, structure, contents, and goals. In the mid-1970s, the government instituted the deployment of full-time, local Family Welfare Assistants (FWAs)—community-based family planning motivators and distributors who numbered almost 24,000 at the height of the program a few years ago. A social marketing program to promote the sale of birth control pills and condoms was also initiated in the mid-1970s. Another characteristic of the population program is the involvement of more than 200 nongovernmental organizations.

Since 1980, the program has stressed functionally integrated health and family planning programs. The goal is to provide an essential package of high-quality, client-centered reproductive and child health care, family planning, communicable disease control, and limited curative services at a one-stop service point. The Fifth Five-Year Plan (FFYP) has been formulated keeping in view the principles of the Health and Population Sector Strategy (HPSS) with a single sector for both health and population. The main objective of the FFYP is to ensure universal access to essential health care services of acceptable quality and to further slow population growth. The most important basis of the FFYP will remain the reduction of infant mortality and morbidity, reduction of maternal mortality and morbidity, improvement of nutritional status, and reduction of fertility to reach replacement-level fertility by the year 2005 (GOB,1998:7).

The government's policy of providing health care is based on the principles of universal coverage and accessibility; optimum utilization and development of human resources for health; appropriate use of technology; gender equity; improvement of the quality of life; priority service for the most vulnerable groups including women, children, and the poor; and promotion of health as an integral part of overall socioeconomic development. Although no comprehensive health policy has been formulated since independence, development of such a policy is a high priority of the current administration. Private-sector involvement in both health and population services is being encouraged.

Numerous factors have contributed to the increase in contraceptive use over the past 20 years. The elements identified as having contributed to the success of the program are 1) strong political commitment to family planning programs by successive governments, 2) successful promotion of a small family norm through information and educational activities and other multisectoral programs, 3) establishment of a widespread infrastructure for delivering family planning and health services down to the village level, 4) increased involvement of nongovernmental organizations to supplement and complement the government's efforts, 5) flexibility to make policy and programmatic adjustments in response to emerging needs, and 6) strong support of the program by the international aid community (GOB, 1994:36).

The success achieved so far in the national family planning program is encouraging and has increased the confidence that it is possible to achieve further progress. But there remain several issues of concern, such as the tremendous growth potential built into the age structure as a consequence of past high fertility. Due to the increasing population entering childbearing age, the program will have to expand efforts substantially just to maintain the current level of contraceptive use. If demand for family planning also increases, that will put even more strain on the program. Other concerns are lack of a steady supply of contraceptives from external sources, which affects program performance; the need for further improvement in access to and quality of facilities and services; and the need for men to participate more actively in family planning acceptance.

1.4 ORGANIZATION OF THE 1999-2000 BANGLADESH DEMOGRAPHIC AND HEALTH SURVEY

SURVEY OBJECTIVES AND IMPLEMENTING ORGANIZATIONS

The Bangladesh Demographic and Health Survey (BDHS) is intended to serve as a source of population and health data for policymakers and the research community. In general, the objectives of the BDHS survey are to—

- Assess the overall demographic situation in Bangladesh
- Assist in the evaluation of the population and health programs in Bangladesh
- Advance survey methodology.

More specifically, the objective of the BDHS survey is to provide up-to-date information on fertility and childhood mortality levels; nuptiality; fertility preferences; awareness, approval, and use of family planning methods; breastfeeding practices; nutrition levels; and maternal and child health. This information is intended to assist policymakers and administrators in evaluating and designing programs and strategies for improving health and family planning services in the country.

The 1999-2000 BDHS survey was conducted under the authority of the National Institute for Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare. The survey was implemented by Mitra and Associates, a Bangladeshi research firm located in Dhaka. Macro International Inc. of Calverton, Maryland, provided technical assistance to the project as part of its international Demographic and Health Surveys program, and financial assistance was provided by the U.S. Agency for International Development (USAID)/Bangladesh.

SAMPLE DESIGN

Bangladesh is divided into 6 administrative divisions, 64 districts (*zillas*), and 490 *thanas*. In rural areas, thanas are divided into unions and then *mauzas,* a land administrative unit. Urban areas are divided into wards and then *mahallas*. The 1999-2000 BDHS survey employed a nationally representative, two-stage sample that was selected from the master sample maintained by the Bangladesh Bureau of Statistics for the implementation of surveys before the next census (2001). The master sample consists of 500 primary sampling units (PSUs) with enough PSUs in each stratum except for the urban strata of the Barisal and Sylhet divisions. In the rural areas, the primary sampling unit was the *mauza*, while in urban areas, it was the *mahalla*. Because the primary sampling units in the master sample were selected with probability proportional to size from the 1991 census frame, the units for the BDHS survey were subselected from the master sample with equal probability to make the BDHS selection equivalent to selection with probability proportional to size. A total of 341 primary sampling units were used for the BDHS survey (99 in urban areas and 242 in rural areas).[1]

Since one objective of the BDHS survey is to provide separate survey estimates for each division as well as for urban and rural areas separately, it was necessary to increase the sampling rate for the Barisal and Sylhet divisions and for urban areas relative to the other divisions. Thus,

[1] The proportion urban was 12 percent in the previous BDHS surveys (1993-1994 and 1996-1997). Both these surveys were based on the Integrated Multi Purpose Master Sample (IMPS) of the Bureau of Statistics, which categorized "other urban" areas (Thana headquarters, smaller town) as rural areas. So, comparison of rural-urban differentials with the 1993-1994 and 1996-1997 surveys is not possible).

the BDHS sample is not self-weighting and weighting factors have been applied to the data in this report.

Mitra and Associates conducted a household listing operation in all the sample points from September to December 1999. A systematic sample of 10,268 households was then selected from these lists. Every third household was selected for the men's survey, meaning that in addition to interviewing all ever-married women age 10-49, interviewers also interviewed all currently married men age 15-59 in those selected households. It was expected that the sample would yield interviews with approximately 10,000 ever-married women age 10-49 and 3,000 currently married men age 15-59.

QUESTIONNAIRES

Four types of questionnaires were used for the BDHS survey: a Household Questionnaire, a Women's Questionnaire, a Men's Questionnaire, and a set of questionnaires for the Service Provision Assessment (SPA) (community, health facilities, fieldworkers). The contents of these questionnaires were based on the MEASURE *DHS*+ Model A Questionnaire, which is designed for use in countries with relatively high levels of contraceptive use. These model questionnaires were adapted for use in Bangladesh during a series of meetings with a small Technical Task Force (TTF) that consisted of representatives from NIPORT; Mitra and Associates; USAID/Dhaka; the International Centre for Diarrheal Disease Research, Bangladesh (ICDDR,B); Dhaka University; and Macro International Inc. (see Appendix A for a list of members). Draft questionnaires were then circulated to other interested groups and were reviewed by the BDHS Technical Review Committee (see Appendix A). The questionnaires were developed in English and then translated into and printed in Bangla.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including his/her age, sex, education, and relationship to the head of the household. The main purpose of the Household Questionnaire was to identify women and men who were eligible for individual interview. In addition, information was collected about the dwelling itself, such as the source of water, type of toilet facilities, materials used to construct the house, and ownership of various consumer goods.

The Women's Questionnaire was used to collect information from ever-married women age 10-49. These women were asked questions on the following topics:

Background characteristics (age, education, religion, etc.)
Reproductive history
Knowledge and use of family planning methods
Antenatal and delivery care
Breastfeeding and weaning practices
Vaccinations and health of children under age five
Marriage
Fertility preferences
Husband's background and respondent's work
Height and weight of children under age five and of their mother
HIV and AIDS.

The Men's Questionnaire was similar to that for women except that it omitted the sections on reproductive history, antenatal and delivery care, breastfeeding, vaccinations, and height and weight. The questionnaire for the Service Provision Assessment was completed for each sample point and included questions about the existence in the community of income-generating activities and other development organizations and the availability and accessibility of health and family planning services. Detailed analysis of the SPA data will be presented in a separate report.

Training and Fieldwork

The BDHS Women's Questionnaire was pretested in May 1999, and the Men's Questionnaire was pretested in October 1999. For the pretest, male and female interviewers were trained at the office of Mitra and Associates. After training, the teams conducted interviews in various locations in the field under the observation of staff from Mitra and Associates and members of the Technical Task Force. Altogether, 309 Women's and 137 Men's Questionnaires were completed. Based on observations in the field and suggestions made by the pretest field teams, the TTF made revisions in the wording and translations of the questionnaires.

In October 1999, candidates for field staff positions for the main survey were recruited. Recruitment criteria included educational attainment, maturity, ability to spend one month in training and at least four months in the field, and experience in other surveys. Training for the main survey was conducted at a rented center for four weeks (from October 9 to November 9, 1999). Initially, training consisted of lectures on how to complete the questionnaires, with mock interviews between participants to gain practice in asking questions. Toward the end of the training course, the participants spent several days in practice interviewing in various places close to Dhaka. Trainees whose performance was considered superior were selected as supervisors and field editors.

Fieldwork for the BDHS survey was carried out by 12 interviewing teams. Each consisted of 1 male supervisor, 1 female field editor, 5 female interviewers, 1 male interviewer, 1 porter for the anthropometric equipment, and 1 cook, for a total of 120 field staff. Mitra and Associates also fielded four quality control teams of two people each to check on the field teams. In addition, NIPORT monitored fieldwork using their quality control team. Moreover, staff from USAID, Macro International Inc., and NIPORT monitored the fieldwork by visiting teams in the field. Fieldwork commenced on November 10, 1999 and was completed on March 15, 2000. Fieldwork was implemented in four phases.

Data Processing

All questionnaires for the BDHS survey were returned to Dhaka for data processing at Mitra and Associates. The processing operation consisted of office editing, coding of open-ended questions, data entry, and editing inconsistencies found by the computer programs. The data were processed on six microcomputers working in double shifts and carried out by ten data entry operators and two data entry supervisors. The BDHS data entry and editing programs were written in ISSA (Integrated System for Survey Analysis). Data processing commenced in mid-December 1999 and was completed by end of April 2000.

Response Rates

Table 1 shows response rates for the survey and reasons for nonresponse. A total of 10,268 households were selected for the sample, of which 9,854 were successfully interviewed. The shortfall is primarily due to dwellings that were vacant or in which the inhabitants had left for an

extended period at the time they were visited by the interviewing teams. Of the 9,922 households occupied, 99 percent were successfully interviewed. In these households, 10,885 women were identified as eligible for the individual interview (i.e., ever-married and age 10-49) and interviews were completed for 10,544 or 97 percent of them. In the one-third of the households that were selected for inclusion in the men's survey, 2,817 currently married men age 15-59 were identified, of which 2,556 or 91 percent were interviewed.

The principal reason for nonresponse among eligible women and men was the failure to find them at home despite repeated visits to the household. The nonresponse rate was low.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, Bangladesh 1999-2000

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households sampled	2,997	7,271	10,268
Households occupied	2,891	7,031	9,922
Households interviewed	2,857	6,997	9,854
Household response rate	98.8	99.5	99.3
Individual interviews: women			
Eligible women	3,274	7,611	10,885
Eligible women interviewed	3,150	7,394	10,544
Eligible woman response rate	96.2	97.1	96.9
Individual interviews: men			
Eligible men	851	1,966	2,817
Eligible men interviewed	771	1,785	2,556
Eligible man response rate	90.6	90.8	90.7