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A Projection of  
Family Planning  
Needs & Costs  
1985—2000

BELIZE

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This report is one of a series of country reports illustrating the potential future needs  
and costs for family planning in the Latin American and Caribbean region.

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PROJECTION OF  
FAMILY PLANNING NEEDS AND COSTS, 1985 TO 2000:

BELIZE

Preface

All Latin American and Caribbean countries joined the United States in adopting the "Mexico City Declaration on Population and Development" at the August 1984 International Conference on Population.

The Declaration focused attention on the need to make family planning accessible to all couples so they can exercise the basic human right to decide for themselves the number and spacing of their children.

Now in 1986, two years after the Conference, Latin American and Caribbean nations with support from international donors are implementing the Declaration. The key questions are: How can family planning services be made more widely available to growing numbers of couples of fertile age? How much will it cost?

Reports in this series are designed to provide systematic estimates of what needs to be done and how much it will cost to reach the population policies and goals that have been formulated explicitly or endorsed implicitly by the Latin American and Caribbean nations themselves. The reports do not attempt to apportion family planning costs among the various funding sources, be they individual couples, Latin American and Caribbean governments, the international donor community, or private family planning organizations.

The reports are follow-on to "Project 1990," the first comprehensive cost forecasting system developed by James W. Brackett at The Population Institute. The methodology made extensive use of target setting models developed by John

Bongaarts of The Population Council and John Stover of The Futures Group.

To provide a context for understanding future family planning needs and costs, each report contains a brief overview of the national demographic and family planning situation. The cost estimates per user are calculated on what an individual from the poorer segment of society would pay for unsubsidized contraceptive services purchased in 1986 from local sources.

## I

### The Current Demographic Situation in Belize

At a census taken in 1980, Belize had a population of 144,857, estimated to be growing at the rate of 1.0 percent per year. This means that as of 1985 the population would be about 152,000 persons. Because it is very sparsely inhabited (only 7 persons per square kilometer), Belize is commonly regarded as one of the few "frontier" areas of the world where people are welcome to come and settle the land, provided they meet the criteria for permanent residence. However, the moderately rapid growth from natural increase is being partially neutralized by emigration of many Belizians to the U.S. and other countries.

Fertility. For purposes of this report, Belize's total fertility rate is estimated to be 4.5 children per woman in 1985. This estimate is based on estimates of The World Bank, results of the 1980 census, and analysis by Leon F. Bouvier of the Population Reference Bureau. Bouvier also estimates that fertility is declining. For this report, the total fertility rate is considered to be about 5.70 during the interval 1975-80, and hence has declined about 25 percent since then. This is a rather rapid decline if reliably measured. It should be taken only as a crude statistical impression gained by comparing data from various sources.

Mortality. Mortality rates in Belize are very low. Bouvier cites research indicating the average expectation of life in 1970 was equal to that of the United States (71 years). If that situation has persisted, then average life expectancy in Belize in 1985 should be about 74 years. This level can be attained only if infant mortality is low (near 20 births per 1,000 population) and if comparatively few deaths occur from infectious and parasitic diseases.

Growth. The average annual rate of growth estimated for Belize is 2.1 percent per year. This represents a balance between natural increase and migration. Each year a substantial number of persons enter the country to settle. They come especially from the neighboring countries of Mexico and Guatemala. Meanwhile, there is a moderately large outflow of

Belizian citizens to the U.S. Bouvier estimates that the country lost a net of about 15,000 persons between 1970 and 1980 due to international migration (more people leaving than arriving).

Distribution. The Government of Belize has a program encouraging settlement of rural areas in order to promote agricultural production. Despite this, the population tends to concentrate in urban settlements. Many activities of tourism are scattered along coastal areas. The country is much more urbanized, more cosmopolitan, and more modern than may appear from official statistics of urban-rural residence.

## II

### Belize's Population Policy and Goals

Because of the low person-to-land ratio and because of emigration of its citizens, the Government of Belize appears to be pro-natalist in its stance towards population growth. However, it has no objection to family planning for helping individual couples space and limit family size to improve maternal-child health, primarily to reduce the number of high-risk pregnancies. The Ministry of Health provides family planning services on a limited scale through a maternal/child health project, funded in part by the United Nations Fund for Population Activities. This is indicative of an official acceptance of family planning as a normal health activity. At this time there is no national population policy. Instead, the decision to practice contraception is left to individual couples.

## III

### The Current Family Planning Situation in Belize

There is little solid data concerning family planning in Belize. A KAP study, sponsored by the UNFPA and aimed at determining family planning need, was conducted in 1985. Results from this survey suggest that about 37 percent of in-union couples where the woman is of reproductive age practice family planning. (The survey shows that knowledge of contraception is very high--above 80 percent--and a substantial percentage of women of reproductive age do not wish to have more children.) Such information indicates that family planning is viewed favorably. If the attitude of the Government continues and if services expand in both the public and private sectors, a rather substantial decline in fertility can be expected to take place over the next 15 years.

The estimated "mix" of methods being used in Belize is difficult to assess as yet. Partial data from the KAP survey suggest the following rough proportional distribution:

Method	Percent
Total.....	100
Oral pill.....	23
IUD.....	1
Injectables.....	4
Female sterilization....	26
Male sterilization.....	1
Condom.....	6
Rhythm.....	6
Withdrawal/abstinence...	13
Foam.....	3
Breastfeeding.....	17

These crude estimates taken from partial data are intended to suggest magnitudes only. It appears, however, that about two-thirds of the contraception being practiced is "modern" contraception, and that female sterilization and oral pills constitute the principal methods, but with some use of all methods. The rather appreciable proportion of persons reporting abstinence and withdrawal suggests there is substantial unmet need for family planning assistance.

The sources of contraceptive service in Belize were not inventoried in the KAP Survey on Family Life and Fertility, and hence not even preliminary data are available. From the mix of methods described above it can be inferred that sterilizations take place primarily in public hospitals. This leads to the conjecture that roughly one-third of all contraception is through public facilities, one-third through private facilities, and one-third without an organized source of assistance.

A new Belize Family Life Association (BFLA), formed in 1985, plans to conduct information, training, and service activities. With organized private sector promotion of family planning, the large component of "folk" methods of contraception may possibly decline sharply in future years.

#### IV Projections of Future Family Planning Needs

The projections of this report are confined to estimating the needs dictated by official national policy, explicit or implied. In the light of the situation described above, it is to be expected that Belize does not have a specific official set of population goals. In order to project future family planning needs, this report infers that the goal of the government will be to let the birth rate take whatever course the public wishes to have it take. An additional assumption is that, if recent trends continue, the total fertility rate will decline to about 3.0 births per woman by the year 2000.

(These and all subsequent assumptions in the projections are only "educated guesses" in order to gain a rough dimension.)

The above "mix" of contraceptives for 1985 is assumed to change gradually to reduce the amount of folk contraception, with a moderate increase in use of sterilization, IUD, and injectables (5 percent for each).

Tables 1 to 6 report the results of these projections. Table 1 summarizes the numerical implications of the assumptions, while Table 2 reports the number of users there must be each year to attain the specified conditions. In order to attain the lower fertility rate of 3.00 children per woman by 2000, the percent of couples in union who are actively using contraception must rise from 37 percent in 1985 to 57.8 percent in the year 2000. Table 2 specifies the number of users there should be each year. From 7,000 users in 1985 the projections call for a leap to 18,500 users by the year 2000. This requires a doubling in the number of contraceptors within 15 years. Since these projections are based on very crude data and imprecise assumptions, they should be interpreted as being only of a general magnitude. It is nevertheless clear that family planning activity must expand by a very large amount if this particular set of targets is to be achieved.

In considering these projections, one should keep in mind that they are not a target arbitrarily set by the government to which it is hoped citizens will respond, but rather an assessment of the needs and demands the public will expect. The projections are a crude estimate of the demands of the public to which the citizens will hope the government and private agencies will respond.

According to these projections, the requirements for each of the contraceptive methods will increase as follows:

Method	1985	1990	1995	2000
Total users (000).....	7.0	10.2	14.4	18.5
Oral pills (cycles).....	20.7	31.4	45.4	60.4
IUDs (insertions).....	0.0	0.1	0.2	0.2
Injectables (cycles).....	1.0	2.4	4.6	7.5
Female sterilization.....	0.2	0.3	0.4	0.4
Male sterilization.....	0.0	0.1	0.1	0.1
Condom.....	0.4	0.6	0.9	1.1
Other .....	2.7	3.3	3.7	3.5

Note. Female and male sterilizations are number of operations, while other methods are couple-years of protection.

The sources from which each of these methods would be supplied is specified in Table 5. By multiplying the quantities in the above table by the proportions of Table 5, it is possible to calculate the quantity of each method to be provided by each source.

## V

Projected Costs of Family Planning in Belize

The "fair market price" of contraception in Belize for each of the methods was obtained in 1986. "Fair market prices" are considered to be those paid by the poorer segment of society if they were to seek contraceptive services through private or professional channels. These estimates are provided by informed sources within Belize. The following average estimates of cost (in \$U.S.) were used in making the projections:

Oral pills.....	\$1.75 per cycle
IUD insertion.....	25.00 per insertion
Female sterilization..	50.00 per procedure
Male sterilization....	100.00 per procedure (estimated)
Injections.....	8.00 per injection
Condom.....	0.30 per intercourse
Other.....	0.50 per intercourse

The average cost for a medical visit for a person in the poorer segment of society was estimated to be about \$10.00. By multiplying these prices by the quantities of contracep-

Table 1. PROJECTED NUMBER OF WOMEN OF REPRODUCTIVE AGE AND CONTRACEPTIVE PREVALENCE

Indicator	1985	1990	1995	2000
Total fertility rate.....	4.50	4.00	3.50	3.00
Women 15-49 years (000s)...	38.0	46.0	56.0	64.0
Women 15-49 years in union (000s).....	18.9	23.0	28.1	32.0
Percent of MWRA currently using.....	37.0	44.3	51.3	57.8
Number of contraceptive users (000s).....	7.0	10.2	14.4	18.5

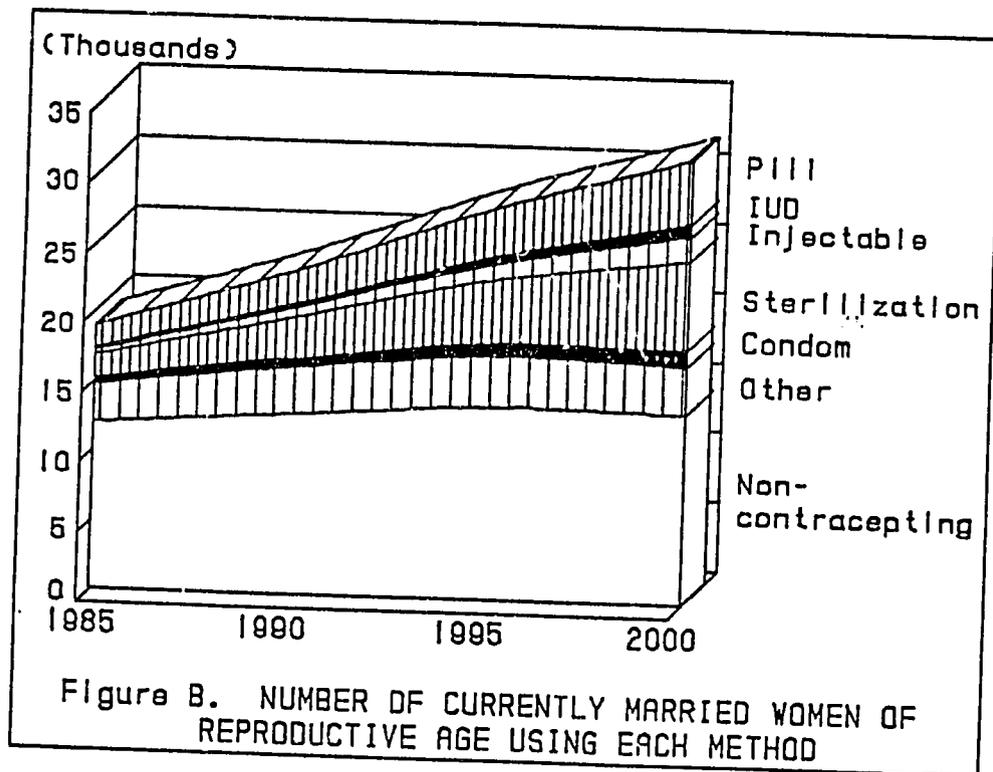
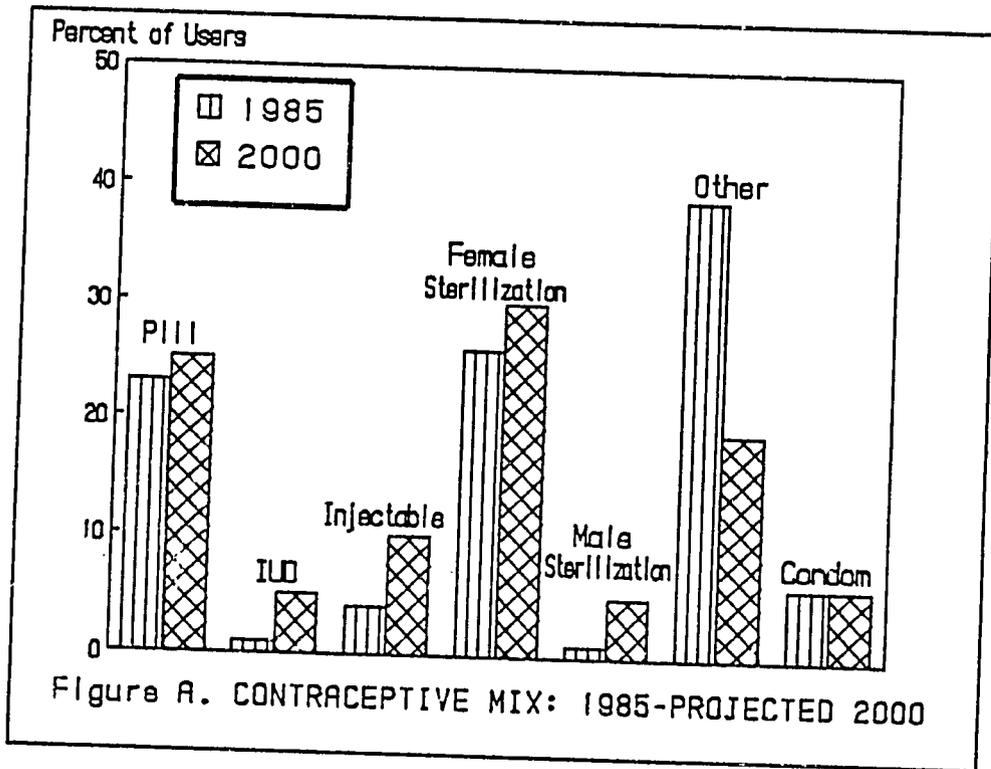


Table 2. PROJECTED FAMILY PLANNING USERS

Year	Percent using	Users (000s)
1985.....	37.0	7.0
1986.....	38.5	7.5
1987.....	40.0	8.1
1988.....	41.5	8.8
1989.....	42.9	9.5
1990.....	44.3	10.2
1991.....	45.8	11.0
1992.....	47.2	11.8
1993.....	48.5	12.6
1994.....	49.9	13.5
1995.....	51.3	14.4
1996.....	52.6	15.2
1997.....	53.9	16.1
1998.....	55.2	16.9
1999.....	56.5	17.7
2000.....	57.8	18.5

Table 3. CONTRACEPTIVE METHOD DISTRIBUTION: 1985-2000

Method	1985	2000
Total.....	100.0	100.0
Pill.....	23.0	25.0
IUD.....	1.0	5.0
Injectable.....	4.0	10.0
Female sterilization.....	26.0	30.0
Male sterilization.....	1.0	5.0
Other.....	39.0	19.0
Condom.....	6.0	6.0

Table 4. PERCENTAGE OF CURRENTLY IN-UNION WOMEN AGED 15 TO 49 USING CONTRACEPTIVES, BY METHOD: 1985-2000

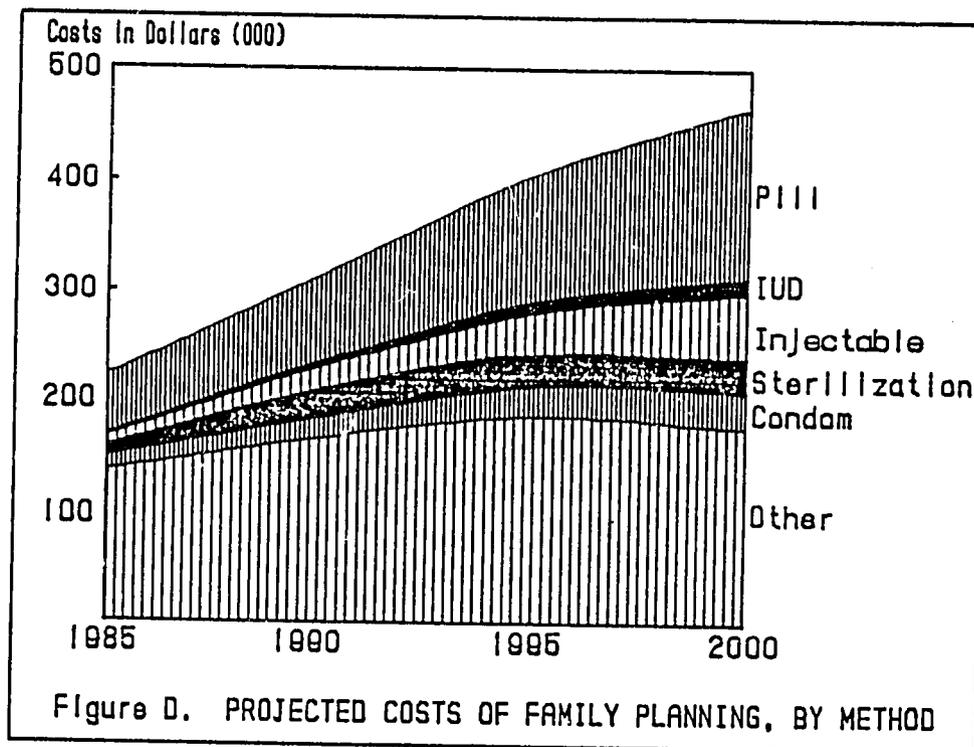
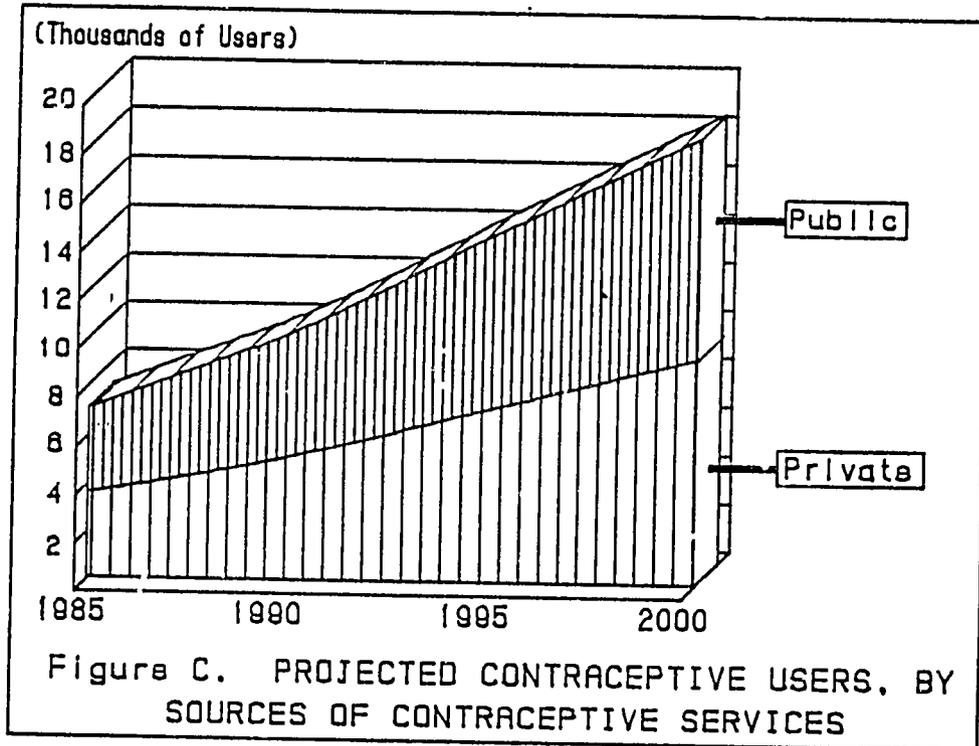
Method	1985	1990	1995	2000
Pill.....	8.5	10.5	12.5	14.4
IUD.....	0.4	1.0	1.9	2.9
Injectable.....	1.5	2.7	4.1	5.8
Female sterilization.....	9.6	12.1	14.7	17.3
Male sterilization.....	0.4	1.0	1.9	2.9
Condom.....	2.2	2.7	3.1	3.5
Other.....	14.4	14.3	13.2	11.0

Table 5. PERCENT DISTRIBUTION OF SOURCE OF CONTRACEPTIVE, BY METHOD: 1985

Method	Service Source		
	Total	Public	Private
Pill.....	100.0	35.0	65.0
IUD.....	100.0	50.0	50.0
Injectable.....	100.0	50.0	50.0
Female sterilization.....	100.0	65.0	35.0
Male sterilization.....	100.0	50.0	50.0
Condom.....	100.0	35.0	65.0
Other.....	100.0	50.0	50.0

Table 6. CONTRACEPTIVE USERS (000s)', BY SERVICE SOURCE: 1985 TO 2000

Source	1985	1990	1995	2000
Total.....	7.0	10.2	14.4	18.5
Public.....	3.5	5.1	7.2	9.2
Private.....	3.5	5.1	7.2	9.3



tives projected in the table above, an approximate cost of contraception services can be obtained. For oral pills and IUD insertion, it was assumed there would be one medical visit per year in addition to the per unit cost cited. The "other" contraception was treated as vaginal contraception (spermicides), which cost about \$20.00 per couple/year.

Scheduling out the costs of contraception, by method, yields the following estimates for selected years:

Method	1985	1990	1995	2000
Total.....	\$218.2	\$310.7	\$403.3	\$463.7
Oral pills (cycles).....	52.2	79.0	114.5	151.7
IUDs (insertions).....	1.0	4.5	10.0	14.0
Injections.....	8.0	19.2	36.8	60.0
Female sterilization.....	10.0	15.0	20.0	20.0
Male sterilization.....	0.0	10.0	10.0	10.0
Condom.....	12.0	18.0	27.0	33.0
Other.....	135.0	165.0	185.0	175.0

These estimates indicate that contraception in Belize costs about \$218 thousand per year. With an estimated 18,500 total number of users in 1985, this represents an average cost per user per year of \$11.79. Because of the rise in the expected number of users, the total annual cost is estimated to increase to \$463.7 thousand in 2000.

## VI Discussion, Implications, Conclusions

These projections of future needs for family planning need to be reviewed critically. The Knowledge-Attitude-Practice (KAP) survey estimates are only crude values taken from a small, representative sample of the population. Nevertheless, the estimates should not be dismissed completely. Final revisions, based on more recent and complete data, will probably deviate by less than 10 percent for the total number of users and total costs. If this proves to be the case, the following inferences are worthy of note.

(1) The quantities of funds required for family planning are extremely modest, compared with other nations. The cost of financing family planning in Belize, assuming that the users themselves share in the total cost, is small.

(2) The "Report on a Survey on Family Life and Fertility in Belize", published in 1986, indicates a substantial number of couples in the country need information and service for family spacing. The Cabinet has pending a family planning proposal to allow the Ministry of Health to provide family planning child spacing services as part of its other maternal-

child care. In addition, representatives from Belize are participating with the Caribbean Parliamentarians Group on Population and Development in working out solutions to the complex issues that comprise the region's problems in population and development.

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