The National Family Planning Program
A Sector Review: Summary
Thailand

November 3, 1975
Population Projects Department

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NOTE

The Sector Review is being issued in two forms, an 18-page Summary and the full Report of 85 pp., plus tables and annexes (Report 724-TH). Several copies of the Summary, plus a few copies of the full Report, are being sent to all interested agencies in Thailand. Additional copies of each are available on request to the Bank's offices in Bangkok or Washington.
This report is the result of a Sector Review mission which visited Thailand from 18 November to 13 December 1974. The mission was composed of Mr. G.B. Baldwin, Chief, Mr. P. Hall, Dr. T.I. Kim, Mr. T. King, Mr. D. Mills, Ms. U. Olin (Consultant, UNDP), and Mr. A. Shaw. Dr. Dean Tirador of WHO's resident mission participated as an observer. Mr. Hall was primarily concerned with finance, organization, and private sector activities. Dr. Kim was responsible for technical medical questions, health planning and administration, and manpower forecasts. Mr. King was concerned with service statistics, program evaluation, and research. Mr. Mills covered the construction program of the Ministry of Public Health and prepared the cost estimates of typical facilities. Ms. Olin was responsible for demography and for defining the socio-economic characteristics of Thai culture. Mr. Shaw was concerned with information, education, and communications. Mr. Baldwin was the principal author of the report.
Introduction

1. Thailand is one of the many countries which started a National Family Planning Program in the mid-1960s. The results achieved have been among the most successful to be found anywhere in the world. The Thai population, including the rural population, has been found to be surprisingly receptive to family planning. There is preliminary but encouraging evidence that fertility is beginning to fall. Ten years ago Thailand had a rate of population increase that probably exceeded 3% per year; by the end of the Third Development Plan, in October 1976, this rate may have been lowered to 2.5%, the target set in the Plan. While the National Family Planning Program (NFPP) cannot be given all the credit for this result, it has undoubtedly played a major role. A promising base of demographic competence has been established. A growing number of public and private leaders are becoming aware of population problems and are supporting efforts to strengthen Government and non-Government efforts to slow population growth. Thus, Thailand has a combination of a well-planned, well-executed family planning program, a cultural setting that offers a favorable environment for fertility control, and a growing awareness of population problems among influential leaders. These favorable factors justify optimism that Thailand can gain control over its population growth before the country becomes seriously burdened with an excessively heavy population density.

2. At the end of 1974 about 25% of all eligible couples were estimated to be practicing fertility control through the use of modern contraceptive methods. This is among the highest rates found in developing countries today (it is exceeded only by the 35-40% rates found in Taiwan, South Korea, and in Singapore, Hong Kong, and Barbados). Eight factors appear to explain the strong results achieved to date:

(i) The Thai population seems unusually receptive to opportunities to control their fertility, i.e., the "demand" conditions are more favorable than in many other countries. It is impossible to explain fully why this is so, but it clearly reflects certain distinctive characteristics of Thai society. The full report tries to describe the socio-economic features of Thai society which seem to favor the acceptance of fertility control. At present, the system's overall performance is "supply constrained" not "demand constrained" as in many other countries. This means that further gains can be expected as a result of extending the delivery system (or "systems," as this report will emphasize) without having to await major shifts in motivations, which are slow to occur and difficult to bring about;

(ii) The existence of a relatively well-developed network of Government health services (which nevertheless provides a far-from-complete coverage of the population);
(iii) The careful development of a family planning service program in which the administrative policies governing the delivery of services have been progressively broadened. An imaginative but highly responsible series of decisions has liberalized many of the rules governing the classes of personnel which may perform specific services and has made Thailand a leader in innovative methods for making various methods more accessible to more people. The way in which technical/administrative policy questions governing the provision of services have been recognized and dealt with is an outstanding feature of the Thai program and a key factor in its growth;

(iv) Bangkok has been unusually well-endowed with a group of competent doctors concerned with the development of family planning services at leading hospitals. This has developed "professional visibility" and recognition for family planning within the medical profession, plus solid experimentation in service delivery, good technical leadership, and well-run training service programs;

(v) Strong attention to in-service training programs for doctors and nurses, which has spread technical competence throughout the system;

(vi) Senior Ministry officials have usually viewed the family planning activities of non-Ministry and non-Government agencies as welcome extensions of the Ministry's own program. The MOPH has wisely not tried to discourage other institutions, public and private, from providing family planning services; it has worked cooperatively with other agencies which it felt could contribute to national objectives. This attitude continues and is permitting some promising experiments in "social marketing" (subsidized non-clinical distribution) to take place as well as a healthy growth of the commercial sector (which shares with MOPH about 50% of the pill market);

(vii) Unusually effective technical assistance, and strong financial support, from external donors;

(viii) The country's highly centralized administrative system, combined with well-developed telecommunications, postal, and transport systems, provide a stronger basis for carrying out Bangkok-made program decisions than is found in many other countries.
3. The service program that now exists (including the contribution of the commercial sector and of private-agency networks, which are small) relies 60-65% on oral contraceptives, 20% on IUDs, and 15-20% on sterilizations (mostly female although male is soon to be given greater emphasis). Condoms have not been widely used, although an attempt is now being made to popularize them. The use of injectable contraceptives, whose use has been tested for several years by a voluntary agency in Chiang Mai, was introduced into the national program in January 1975; it may lead to substitution away from the pill, on an unpredictable scale. But apart from this possible shift, no significant change in contraceptive methods is anticipated during the next few years.

4. The development of family planning services on a national scale has of course been led by the Ministry of Public Health (MOPH), which started offering services in a few carefully-conducted pilot projects in the mid-1960s. The success of these early projects and of some outstanding programs offered by the leading government and missionary hospitals, plus the basic change in Government population policy in 1970, led in that year to the establishment of the National Family Planning Program (NFPP). Responsibility for the Program was placed in the MOPH, i.e., no new agency was created to design and carry out the new program. Within the Ministry, family planning has been offered on a fully integrated basis as part of the regular Maternal and Child Health activities. This arrangement appears to have worked very well. It has also been very economical, since no separate network of facilities and personnel was created. The only personnel expansion required has been the creation of the central planning and administrative group within the Ministry's Family Health Division at headquarters. In addition to its own direct services, the MOPH has been very helpful in the development of services by other institutions. The most important supplementary institutions and networks are the four major university hospitals in Bangkok, the 21 health centers run by the Bangkok Municipality, and private commercial sales through pharmacies. The Ministry has also encouraged experimental activities by some newer voluntary agencies whose work might grow to the point where they too become major contributors to the spread of family planning.

5. It is difficult to give a precise definition of what the NFPP is: one definition is that it consists of those family planning service activities which are provided by the MOPH itself and which are funded by money made available to the Ministry from the national budget or by external donors. This is too narrow a definition since it does not include all family planning services being offered in the country (about a third of total services are currently being provided through non-Ministry sources, both governmental and private). If we combine Ministry and non-Ministry family planning services and then add non-service activities such as the considerable and growing amount of research and educational activity being done by other ministries, by the universities, and by voluntary agencies, we arrive at a much wider concept of the National Program. Such a Program would be an overall Population Program and not simply a Family Planning Program. This Sector Review has been concerned with this broadly-defined national population program, even though that term is not in general use. However, many Thai officials do indeed think in these terms when speaking of the NFPP.
6. Although Thailand has been burdened in recent decades with a very high rate of population growth, the country's demographic outlook is basically encouraging. There are two central facts. One is that Thailand has time in which to gain control over its rapid population growth before the country becomes seriously overburdened by large numbers and high densities. The other key fact is that fertility now seems to be falling, partly because of the National Family Planning Program and partly because of favorable factors unrelated to family planning. Nevertheless, even if fertility falls dramatically (of which there is no assurance), the present age-structure provides a built-in momentum that will produce a population increase of 80-100% over the 1970-2000 period. A continuing and strengthened National Program to reduce national fertility should therefore remain a top national priority for at least the next generation and probably longer.

7. Five projections, reflecting quite different alternative patterns of population growth are shown in Table 1. The first four projections are adapted from the most recent set of projections prepared by the United Nations, and the fifth set was prepared by the Bank using demographic targets for 1976 and 1981 established by the Government. The projections vary only in their fertility assumptions -- mortality is assumed to decline steadily and equally in all five. The first projection assumes constant fertility based on estimated 1970 age-specific rates. The second, third and fourth are based on the United Nations' "high," "medium" and "low" assumptions about future fertility levels. These assumptions are based on international experience as well as specific information on the Thai situation. The fifth or "Thai target" projection assumes a decline in fertility which would result in the achievement of the Government targets of a 2.5% growth rate by the end of 1976 and 2.0% in 1981. This fall in fertility is then assumed to continue steadily until replacement level (a net reproduction rate of 1) is reached. This occurs around 1990 and is maintained thereafter. Comparison with the other projections makes clear how ambitious the Thai targets are.

Table 1. Illustrative Growth of Population Under Different Assumptions on Fertility Trends

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<tr>
<td><strong>A. U.N. Projections</strong></td>
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<tr>
<td>1) Constant Fertility</td>
<td>36,181</td>
<td>50,955</td>
<td>73,595</td>
<td>107,971</td>
<td>287,475</td>
<td>786,505</td>
</tr>
<tr>
<td>2) &quot;High&quot;</td>
<td>36,181</td>
<td>51,111</td>
<td>72,596</td>
<td>97,373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) &quot;Medium&quot;</td>
<td>36,181</td>
<td>50,527</td>
<td>69,420</td>
<td>89,624</td>
<td>131,587</td>
<td>160,836</td>
</tr>
<tr>
<td>4) &quot;Low&quot;</td>
<td>36,181</td>
<td>50,041</td>
<td>65,911</td>
<td>82,063</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*<em>B. Thai Targets</em></td>
<td>36,181</td>
<td>47,731</td>
<td>57,004</td>
<td>65,729</td>
<td>84,885</td>
<td>93,255</td>
</tr>
</tbody>
</table>


1/ This tentative 1981 target was set in 1974; it has subsequently been revised upwards to 2.1%. The calculations have not been redone to take account of this (minor) change.
8. Even if the Net Reproduction Rate (NRR) should fall to 1.0 (replacement level) by 1990, which would be a most remarkable achievement, the population will continue to increase well into the Twenty-First Century. The Table 1 projection indicates that even with an NRR of 1.0 in 1990, the Thai population will still increase to over 93 million by the year 2050 -- an increase of 260% in 75 years. This is due to the "momentum" existing in the present Thai age structure: the existing large number of children will result in a larger number of births in the future even if age-specific fertility rates remain the same, or decline.

9. The main economic and social implications of the demographic outlook over the next generation or so are the following:

(i) Increasing pressure on the agriculture sector to assure adequate domestic food supplies at reasonable prices;

(ii) Increasing difficulty in maintaining or increasing the agricultural surplus available for export;

(iii) Rising pressure on the average size of farms, adding to existing difficulties in raising farm incomes;

(iv) Increasing pressure to extend farming to less-productive marginal lands, including pressure to cut down forests;

(v) Increasing difficulty in spreading educational opportunities to larger proportions of the population and in keeping up with rapidly-rising absolute numbers in the school-age cohorts;

(vi) Rising needs for preventive and curative health care;

(vii) Increasing concern about the economy's ability to provide employment opportunities for the growing number of people who will enter the labor market each year. This can restrain wage improvements and hence worsen the distribution of incomes;

(viii) Rapidly mounting pressure for expansion of cities and towns, including Bangkok. Fortunately, Thailand has considerable space (outside Bangkok) to accommodate the major continuing urban growth expected; but this social overhead investment will make heavy demands on the available savings;

(ix) In general, the rapid growth of population requires that a large proportion of national resources be devoted to sustaining more people -- maintaining present inadequate per capita levels of social services, and to equipping a growing labor force -- rather than to raising productivity, incomes and living standards.

Quantitative projections of the size of the school-age population, of the labor force, and of the dependency ratio (those not productively employed as a proportion of those who are) will be found in Part B of Annex 1 in the full report.
10. The impact of population growth on agriculture is particularly important. Historically, unutilized land has been comparatively abundant and agricultural growth has come in large part from expanding the area under cultivation. The growth of the agricultural labor force has been matched by at least an equivalent increase in cultivated land. It is generally recognized that this period is drawing to a close. In the Central Plain, average farm size appears to have already declined. Some land remains unutilized but there is considerable controversy as to how much there is. There is no doubt, however, that the major source of output growth over the remainder of this century must be increased in land yields. There is also considerable controversy about how fast the agricultural labor force has been growing since 1960, let alone the rate of increase to be expected in the future. The agricultural labor force grew between 1 and 2% a year in the 1960s and its growth over the next decade will be at least as great as, or very possibly higher than, 2%. To provide a modest increase in agricultural incomes, and to feed a growing population without threatening major sources of exports (rice, maize and tapioca products), land yields will need to rise over 3% a year. This must be a minimum; if it is hoped to achieve substantial improvements in rural living standards, productivity growth must be still faster. Even growth of yields of 3% would be very fast in comparison with their recent growth, which was less than 2% a year for the period 1960-72.

11. Continued rapid increases in population will also increase the demand for food. While it may not be difficult to keep up with food demand alone, this may come at the expense of agricultural exports, which have traditionally provided 90% of total export earnings. Thus there is a close (but certainly not automatic) link, in Thailand, between population growth, the division of agricultural output between food supply and exports, and the country's balance of payments.

12. The impact of slower population growth on education and health services can be substantial. The National Economic and Social Development Board (NESDB) has explored these relationships in considerable detail.1/ Its results suggest that the country will need to spend around 25% less on education in the year 2000 if population is 70 million instead of 86 million, assuming the same enrollment ratios. In the health field, the savings were estimated around 17%. Expressed in terms of savings over the 30-year period, the study found that, in health alone, "Thailand could save about Bt. 4,436 million in investment costs...if the birth rate could be reduced according to the low projection. The savings in recurrent costs -- Bt. 8,314 million2/ -- would be even greater..." These specific figures should not be taken too literally; but the general conclusion they establish -- that lowering fertility leads to large savings in public expenditures for education and health -- deserves to be taken very seriously.


2/ The 1975 recurrent budget of the Ministry of Public Health is Bt. 1.1 billion; its capital budget Bt. 276 million.
Constraints and Weaknesses of the Present Program

13. A balanced picture of the program must also note certain problems that will deserve more attention in the future. We would call attention to the following points:

(i) The program's very heavy dependence on foreign financial support makes it vulnerable to possible reductions in the level of such support. This is not a danger if there is assurance that local funds can be supplied rapidly enough to make up for any withdrawal of foreign assistance without interruption of program activities; but such assurance almost never exists; and programs are interrupted, and staff become demoralized, while the uncertain search for new funds is being pursued. The Government can take over a much larger share of the financial responsibility for its population program and population will still not be nearly as costly as many other major programs in the MOPH budget;

(ii) There is a shortage of service points in many parts of the country (i.e., of 1st and 2nd Class Health Centers). Conversely, there is underutilization of many existing Health Centers. Consequently it would seem a mistake to embark on any mechanical or non-selective expansion of the health-center network until there is a much better understanding of the factors that explain heavy or light use of existing centers. But a selective expansion at carefully-chosen locations need not await the needed utilization studies. It is worth making the point that the rate of expansion of MOPH health facilities should be determined primarily by considerations of general health care, not by the need of the NFPP for additional service-points. But the gradual extension of the MOPH network will of course provide major opportunities for bringing family planning services to more people;

(iii) Many provincial hospitals' maternity wards are heavily overcrowded; there seems a clear case for expansions that will provide additional beds. This would permit some expansion of deliveries at such hospitals (as well as longer stays), thus permitting more effective postpartum family planning activities;

(iv) The further development of some service activities is being held back by shortages of funds. This is true of mobile services provided by one or two universities and by some of the MCH Centers, of some university-based research activities, of the vasectomy program experiments being pioneered by the Planned Parenthood Association of Thailand (PPAT). Thailand has sufficient resources to fund any well-justified family planning activity. Methods of program planning must be found that will identify opportunities for expanding services and for presenting these spending opportunities to the financial authorities responsible for funding decisions;
(v) At present the program is unable to meet the demand for certain types of services that require trained doctors (e.g. female sterilizations and vasectomies, the provision of which is in its early stages). The main needs are for in-service training for more doctors and more money to popularize and to provide these services;

(vi) The MOPH is generally short of trained staff, and especially so outside Bangkok. Nurses constitute a more serious shortage than doctors. This important problem is discussed in detail in Chapter IV of the full report;

(vii) In the past, the Government has made excellent use of technical assistance. It is recognized that more and more of the responsibility for program development must now be taken over by Thai experts; indeed, this is already happening. Two things will be needed for the immediate future: (a) a continuation of good appointments to senior posts in the Family Planning Section of the Ministry's Family Health Division, and (b) an expansion of staff in this Section to perform needed new functions, including the key program-planning function. The program needs more permanent staff (authorized by the Civil Service Commission and funded by the Budget Bureau) to perform an expanded range of tasks (notably in the fields of research and evaluation and in developing a stronger communications program (see Chapter VI in the full report). This is a critical constraint to the development of the Program;

(viii) There does not yet seem to be much use made of the program's service statistics for purposes of program improvement. This situation can change if the Ministry gets approval to expand the Research and Evaluation group in the Family Planning Section; but such approval should depend in part on the MOPH putting forward a modest but convincing program of research studies it would like to undertake. A few such studies are suggested in para 5.16 of the full report;

(ix) While national and provincial targets for new acceptors are set each year, they have so far not been used to motivate field staff (who are largely unaware of what targets have been set for their provinces). We believe that the use of targets, and the process by which they are established, can be useful for staff motivation and for the subsequent judgment of performance;

(x) Service could be extended beyond the areas and population groups which can be reached by the MOPH service points by building up private sector activities.
Targets and Priorities for the Fourth Plan

14. Three independent estimates have been made of the numbers of new and continuing acceptors that will be needed during the Fourth Plan in order to reach the demographic target of a 2.1% growth rate by the end of the Fourth Plan. The estimates made by the Bank and by the Ministry are shown in Table 2 below (the third set of estimates, prepared by a group at the University of Chicago, are not shown. The Chicago figures are somewhat higher than those arrived at by the Bank and the Ministry). The two sets of figures are in fact quite close, and provide a useful check on each other.

15. The annual figures for "new acceptors needed" shown in Table 2 are not necessarily the figures which the MOPH should adopt as program targets. The Table 2 figures constitute a minimum, or lower limit, for program performance targets. "Acceptors needed" refers only to the number needed in order to achieve the level of continuous users desired by the end of each year. If the program can reasonably expect to recruit more new acceptors than the "acceptors needed" figure, it should certainly do so. Indeed, the program recruited about 480,000 new acceptors in 1974, a figure higher than the "acceptors needed" figure for 1975. Thus the MOPH should not regard the figures of Table 2 as suitable national targets for new acceptors. The latter should be arrived at in a separate exercise, based partly on the "acceptors needed" but primarily on the level of performance which it believes can be achieved with good performance. In addition, provincial and sub-provincial targets should be worked out, perhaps broken down by individual facilities. A suggested approach to target-setting is described in paras. 21-23 of Annex C-1 of the full report.

16. Experience to-date strongly suggests that further progress in the next few years will depend more on improving and extending the service-delivery system than on stimulating demand. This does not mean that information-education-communication (IEC) activities can be neglected; but it does mean that in order to maximize acceptors during the Fourth Plan the Government should continue to give top priority to the supply side. In terms of the longer run, demand limitations are bound to arise, perhaps even before 1981; consequently, the Fourth Plan has wisely established as one of its major objectives the development of an IEC program that will sustain program growth whenever the program begins to encounter the inevitable "plateauing" effect.
### Annual New Acceptors Needed and Total Active Users, 1975-81

#### Government-Sponsored Program

<table>
<thead>
<tr>
<th>Year (end)</th>
<th>Population (million)</th>
<th>MWRA 1/</th>
<th>New Acceptors Needed (000)</th>
<th>% of MWRA</th>
<th>Active Users Cumulative 2/ (000)</th>
<th>Active Users in Private Sector (000) 3/</th>
<th>Total Active Users Number (000)</th>
<th>% of MWRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>42.1</td>
<td>5.47</td>
<td>430</td>
<td>7.9</td>
<td>994</td>
<td>390</td>
<td>1,384</td>
<td>25.3</td>
</tr>
<tr>
<td>1976</td>
<td>43.3</td>
<td>5.63</td>
<td>450</td>
<td>8.0</td>
<td>1,059</td>
<td>410</td>
<td>1,469</td>
<td>26.1</td>
</tr>
<tr>
<td>1977</td>
<td>44.5</td>
<td>5.79</td>
<td>500</td>
<td>8.6</td>
<td>1,133</td>
<td>440</td>
<td>1,573</td>
<td>27.2</td>
</tr>
<tr>
<td>1978</td>
<td>45.6</td>
<td>5.93</td>
<td>550</td>
<td>9.3</td>
<td>1,210</td>
<td>480</td>
<td>1,690</td>
<td>28.5</td>
</tr>
<tr>
<td>1979</td>
<td>46.7</td>
<td>6.07</td>
<td>600</td>
<td>9.9</td>
<td>1,299</td>
<td>520</td>
<td>1,819</td>
<td>30.0</td>
</tr>
<tr>
<td>1980</td>
<td>47.7</td>
<td>6.20</td>
<td>600</td>
<td>9.7</td>
<td>1,370</td>
<td>560</td>
<td>1,930</td>
<td>31.1</td>
</tr>
<tr>
<td>1981</td>
<td>48.7</td>
<td>6.33</td>
<td>600</td>
<td>9.5</td>
<td>1,422</td>
<td>600</td>
<td>2,022</td>
<td>31.9</td>
</tr>
</tbody>
</table>

1/ Assuming that married women reproductive age (age 15-44) constitutes 13% of the total population.

2/ Calculated by applying the average continuation-rate factors developed by Dr. Jack Reynolds. These factors assume that the following proportions of active users at the beginning of each year will remain users at the end of each successive year: T1-0.74; T2-0.55; T3-0.41; T4-0.30; T5-0.22; T6-0.17; T7-0.12 (see Annex F Table 11).

3/ Assumes a modest increase of active users, starting from the end-1973 level of 379,000 active users, (Population Council: A Factbook, December 1974).

Source: World Bank Estimates. The above Bank estimates differ slightly from those made independently, and later, by the Ministry. For example, the Ministry's figures for Columns: 3, 4, 5 and 7 above are as follows (see Annex B-2 T.3)
17. No one can say for certain what combination of activities will be most effective in expanding the availability and accessibility of services. We have identified a set of 10 suggested activities which we believe should be priorities for the Fourth Plan (eight of the ten activities are supply-oriented; the last two are demand-oriented). Some have already characterized the program and need only to be continued and expanded; others have not been priorities in the past but now seem to deserve concentrated attention (as time passes, the priority list will naturally change):

(i) **Expand the number of service points** to increase the accessibility of as many services as possible. This is a task of strategic planning by central program top management. It depends primarily on a knowledge of existing and potential delivery networks and of the particular services each network is capable of providing within the limits of responsible medical ethics. Both Government and private networks have important roles to play, although the Government networks will probably recruit about 75% of all new acceptors. The Government has three major planning tasks that will directly affect the expansion of service points: (a) to plan the types, numbers, and locations of additional health buildings needed; (b) to prepare detailed manpower programs, after deciding certain policy questions (see paras 24-25 below); and (c) to review the MOPH's rules and regulations that define who may do what with respect to specific family planning activities, and to press for desirable changes. A number of such changes are already under consideration. These include the removal of orals from the "dangerous drug" list (perhaps initially on a trial basis), liberalizing the rules governing the advertising of contraceptives (perhaps under guidelines issued by the MOPH), and the training of certain categories of nurses to inject Depo Provera in addition to their present role as distributors of orals. As the Ministry well realizes, its own administrative policies can have as much influence on expanding the number of service-points for particular methods as the construction of physical facilities;

(ii) **Intensify in-service training programs** for doctors, nurses, and midwives. This is the principal means by which health staff become motivated and interested in family planning and the key to the wider availability of all methods offered through the MOPH network, plus other networks. MOPH training may also provide doctors (and their employees) with a new source of income if it proves feasible to introduce Government payments to doctors who provide services through their private practices;

(iii) **Expand vasectomy services**: the modest steps taken to test the acceptability of male sterilization suggests that it may meet with a strong positive response. PPAT might be commissioned to prepare proposals for expanding this service, using MOPH, PPAT, and perhaps private doctors;
(iv) **Intensify the postpartum program:** although the program formally exists in almost all maternity facilities, it is being actively promoted in less than half of the provincial hospitals. One or two experienced individuals, assigned to this task for 18 months, should be able to improve program effectiveness in many hospitals. Staff training, the preparation of motivational materials for patients, and the setting of institutional targets may be key actions needed;

(v) **Assure an adequate flow of supplies:** the flow of supplies has apparently been quite good in the past; most of this flow has been arranged by foreign donors with only marginal participation by RTG authorities. As the program expands, partly by making use of additional delivery networks, and the Government takes over responsibility for a rising share of procurement, it will be important to pay more attention to the ordering and timely distribution of contraceptive supplies and to assuring that supplies are the kinds that clients find most acceptable;

(vi) **Develop a list of high-priority evaluation studies:** these provide the main source of information and judgments about program innovations. More analysis of the existing program statistics should rank high on the list. An attempt should be made to develop operational studies at some of the younger universities outside Bangkok, to supplement the excellent work done at the leading Bangkok universities;

(vii) **Assure adequate funding:** as the Government assumes greater responsibility for funding the NFPP, it will be the responsibility of NFPP management to estimate what funds will be required and to actively pursue them through the budget process. Not only must there be reasonably good (frequently updated) estimates, but these must be effectively presented to MOPH and Budget Bureau authorities to help assure that needs are met;

(viii) **Review policy on abortion:** the termination of unwanted pregnancies involves many sensitive and difficult questions on which reasonable people often differ. Most people would agree that abortion should not be widely used as a primary method of preventing unwanted births: contraception should be the primary method of choice.
Where contraception has failed, however, there may be strong grounds for granting a woman's request to terminate a pregnancy she does not want. The number of abortions performed in Thailand today is reportedly large; if true, this clearly indicates that a substantial number of pregnancies are unwanted, many so strongly that women are prepared to seek abortions under unsafe conditions. It would appear timely for the MOPH, in conjunction with other Government authorities, to review national policy governing abortion to see if acceptable rules can be worked out that will result in bringing into approved medical settings a much higher proportion of the abortions now being performed. One objective of any such change would be to ensure that all such women are given adequate family planning information and service;

(ix) **Review policy on IUDs:** permit auxiliary midwives to insert IUDs if ongoing tests prove successful;

(x) **Development of a mass-media communication program:** a stage will soon be reached in the evolution of the NFPP when results will increasingly depend on support from public IEC activities. It is therefore a priority task to get an IEC program well-established in the near future. What is needed now is (a) an expansion of the already well-organized audio-visual work by the MOPH mobile information/training vans and (b) the introduction of population and family planning materials into the mass media (radio, TV, the cinema, and newspapers and magazines). Sound plans for doing these things already exist within the MOPH. The main problem is staffing: the Budget Bureau and the Civil Service Commission should look sympathetically on MOPH requests to establish the additional posts needed in the Family Health Division of the Ministry if the Program's communications activities are to be put on a sound basis. The responsible unit has shown its capacity to do good work, but it has suffered seriously from personnel turnover caused by the absence of career prospects for its staff. Until there is a solution to this staff-turnover problem, both the training program and the mass-media communications programs will suffer;

(xi) **Introduction of population materials in the education system:** the Ministry of Education, with much help from Mahidol University, has made good progress in developing a draft curriculum of population materials for introduction into the school system and for use in non-formal education, i.e., outside of the school system. The Ministry has also worked out a program for testing and revising these materials with teachers before their use in primary and secondary schools and, later, universities. In the long run, the Government objective of slowing population growth will be greatly helped if students have been
given some understanding of the country's population problems and of measures that can be taken to limit fertility. Every encouragement should therefore be given to the Ministry to carry forward, now, its plan for introducing into educational channels carefully-prepared and suitably pre-tested population materials. Since the proportion of children who complete secondary school is low, especially among rural children, a program of "population education" will miss a large part of the potential audience. However, this group can be reached through the mass-media IEC program, which has many points of interest in common with the population education program. The people responsible for these independent but related programs should clearly keep in close touch with each other to prevent unnecessary duplication of work and to exchange ideas and materials.

Manpower: Projections and Proposals

18. The Ministry has begun to prepare a capital-construction program which it hopes to have in draft within the next 12 months or so. To assist this effort the Bank has made projections of the rate of expansion of the system over the Fourth Plan period, 1976-1981.1/ These projections are based partly on expansion-rates achieved during the Third Plan, using this recent achievement as one measure of the rate that can be expected in the future. However, it is often misleading to focus on single-valued projections; hence the Bank has illustrated the likely range of the expansion program by showing three alternatives (Projections A, B, and C in Table 3 below). The projections are expressed in terms of additional beds in provincial hospitals and additional 1st and 2nd class Health Centers. No attempt was made to project the number of additional beds that might be added outside provincial hospitals. Once the expansion in physical facilities is established, it is then a relatively simple matter to calculate the amount of additional manpower that will be needed, by major categories.

19. Projections of the future availability of physicians and Registered Nurses indicated that the supply of those key groups has now substantially caught up with requirements and will not present a serious problem for expanding the network during the Fourth Plan.2/ The manpower shortage problem is thus concentrated on Practical Nurse/Midwives and Midwives, two categories that are very important for MCH/FP facilities and programs. The need for additional training facilities can be estimated by (a) projecting the expected output from existing training institutions, (b) making an allowance for wastage each year from the existing stock of manpower, and (c) deducting the resulting expected supply each year from the estimated requirements.

1/ Estimates have also been made of the capital cost of representative MOPH facilities; see Annex I-4 of the full report.

2/ See Annex E-12 of the full report.
20. The results of the manpower projections are not as firm and precise as they appear, since there are important qualitative issues that will affect the quantitative results, depending on how they are decided. The two most important qualitative questions concern possible downward adjustment in the standard staffing pattern for 1st and 2nd Class Health Centers, and the possible integration of the Practical Nurse/Midwife and Midwife categories, a step that would simplify the training and utilization of both categories.

21. Table 3 below presents a summary of the more detailed projections on the growth of facilities and needed manpower between 1976 and 1981.

Table 3. Expansion of MOPH Facilities and Manpower Requirements, 1976-1981

<table>
<thead>
<tr>
<th></th>
<th>1976 (est'd no.)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>1981</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Facilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prov'l hosp. beds</td>
<td>21,000</td>
<td>25,000</td>
<td>27,000</td>
<td>31,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Cl. H.C.s</td>
<td>270</td>
<td>320</td>
<td>345</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Cl. H.C.s</td>
<td>3,200</td>
<td>3,950</td>
<td>4,200</td>
<td>4,700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Cl. H.C.s 1/</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Manpower 2/</td>
<td>12,400</td>
<td>14,750</td>
<td>15,675</td>
<td>17,550</td>
<td></td>
<td>14,750</td>
<td>15,675</td>
<td>17,550</td>
</tr>
<tr>
<td>Number available 3/</td>
<td>7,197</td>
<td>10,364</td>
<td>10,364</td>
<td>10,364</td>
<td></td>
<td>9,232</td>
<td>9,232</td>
<td>9,232</td>
</tr>
<tr>
<td>Shortage 4/</td>
<td>5,203</td>
<td>4,386</td>
<td>5,311</td>
<td>7,186</td>
<td></td>
<td>5,518</td>
<td>6,443</td>
<td>8,318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% attrition</td>
<td></td>
<td></td>
<td>7.5% attrition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[A]</td>
<td>[B]</td>
<td>[C]</td>
<td></td>
<td>[A]</td>
<td>[B]</td>
<td>[C]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/ No more to be built; many to be up-graded to 2nd Class status.

2/ It is not presently clear if more single-purpose midwifery centers are to be built. Many existing Centers are to be up-graded to second class status.

3/ Practical Nurse/Midwives and Midwives only.

4/ The "number available" (and the resulting "shortage") in 1981 has been calculated on two different assumptions about attrition rates, i.e., 5% and 7.5%.

Projection A shows a possible expansion of 20% in both facilities and needed manpower; projection B shows an expansion of about 25%; projection C an expansion of about 40%.

22. The possible rates of system expansion during the Fourth Plan can be judged much better against the rate of expansion attempted during the Third Plan and the actual achievements during the first three years, i.e., October 1971 through September 1974. Table 4 below presents this comparison:
Table 4. Possible Fourth Plan Expansion of Health Facilities Compared with Third Plan Targets and Results

<table>
<thead>
<tr>
<th></th>
<th>Third Plan Target</th>
<th>Fourth Plan Projections(^1/) to 9/74</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Results</td>
<td>A</td>
</tr>
<tr>
<td>Add'l prov'l hosp. beds</td>
<td>5,000</td>
<td>3,700</td>
</tr>
<tr>
<td>1st Cl. H.C.s</td>
<td>80</td>
<td>19</td>
</tr>
<tr>
<td>2nd Cl. H.C.s</td>
<td>1,276</td>
<td>739</td>
</tr>
<tr>
<td>3rd Cl. H.C.s</td>
<td>1,000</td>
<td>90</td>
</tr>
</tbody>
</table>

\(^1/\) World Bank projections.

The above figures indicate that the Ministry has done well in meeting its target for more beds in provincial hospitals but has not done as well in building additional 1st and 2nd Class Health Centers (the target for 3rd Class Health Centers became obsolete with a decision not to build any more of this class). It is doubtful that the target for health centers will be met, which suggests that the high C projection for 1976-81 might be unrealistic.

23. The manpower projections (Table 3 above) indicate that the present severe shortage of Practical Nurse/Midwives and Midwives will still be present when the Fourth Plan starts in 1976. If there were no expansion of the training capacity through 1981, the shortage would continue to be severe, even at the minimum rate of system expansion represented by projection A (the shortage would be nearly twice as severe if attrition averages 7.5% instead of 5%). These "shortage" projections indicate clearly the need for additional training capacity for Practical Nurse/Midwives and Midwives. Some of this additional capacity can be created very inexpensively, by providing the funds needed to take in larger classes at those existing schools which could do so (as some have indicated they could). A second relatively inexpensive possibility would be to convert temporarily two or three of the 23 existing nursing schools into schools for training Practical Nurse/Midwives and Midwives; this measure could be limited to the Fourth Plan period in order to use existing facilities to produce the types of manpower in shortest supply during that period. Finally, there seems a need for two to four new schools for training Practical Nurse/Midwives and Midwives. Consideration should be given to placing such schools at some of the 13 existing provincial hospitals scheduled for upgrading into Regional Medical Centers which do not now have any nurse training facility.

24. Integration of Practical Nurse/Midwife and Midwife Categories: Historically, the MOPH has maintained separate training schools for Practical Nurse/Midwives and for Midwives; there are today nine of the former, six of the latter (excluding 3 such schools for special-disease hospitals). This occupational/educational pattern reflected the Ministry’s needs before the integration of services that accompanied the Ministry reorganization of 1974: Practical Nurse/Midwives were trained to supply nursing personnel for the hospitals and Midwives were trained to supply MCH/FP personnel for the rural health services. Under an integrated scheme of administration and services, it would seem advantageous to consolidate these two categories into a single new Auxiliary Nurse-Midwife (ANM) category. This would simplify training, assignment to posts, and on-the-job utilization of this key nursing level.
This proposal would require the consolidation of what are now separate training authorities within the Ministry, the adaptation of the two existing curriculums, and some reorientation of teaching staff. The two categories already have the same educational requirements (10 years of general education) and the same training duration (18 months). The Ministry is now considering this proposal, and is believed sympathetic.

25. **Nurses' Aides as MCH/FP Workers for Rural Health Scheme:** There will continue to be severe though diminishing shortages of Practical Nurse/Midwives and Midwives for the next several years. Under the present shortage of Practical Nurse/Midwives most hospitals have turned to the use of nurses' aides, women with 10-year general educations who can be trained on the job in one or two months. While already accepted in the hospitals, they have not so far been used in the health centers, which belong to the rural health scheme. If the present staffing pattern for nursing personnel at 1st and 2nd Class Health Centers is revised to accommodate the integration proposal now under consideration, all nursing positions below the Registered Nurse level would be at the ANM level. In view of the expected continuing difficulty in meeting requirements for this category the Ministry might consider introducing Nurses' Aides in health centers. The Aides could assist in both clinic work and home visiting and help the ANMs make the best use of their time. The post would also provide a natural entry job for rural women who, after some field experience, might later want to go to school to become ANMs.

**Future Program Costs and Their Funding**

26. At the end of 1974 the NFPP was costing about Bt. 100 million (US$5 million) about 80% of these direct program costs were being paid for by external donors. Indeed, a feature of the Program has been the excellent use it has made of foreign assistance, both technical and financial. Financial aid has come primarily from the Population Council, USAID, UNFPA, and, in the private sector, from IPPF. Since three of these four donors expect to reduce their financial contributions over the next few years, and the program itself will be expanding, the Government will need to make substantially higher budgetary appropriations for its population activities.

27. The Bank has made estimates of the growth of budgetary allocations for the NFPP (broadly defined) that will be needed through 1981. The claim on the national budget will of course reflect the growth in program activities and the expected decline in external grant assistance. The results are shown in Table 5 below; there is obviously a great deal of elasticity in any such table, which should be periodically reviewed and revised. The program activities covered by these estimates do not correspond closely to those covered by the present allocations for the NFPP in the national budget; the program is in fact much larger than is reflected in the budget because of the heavy external funding. The Bank estimates have treated foreign-financed activities as if they were part of the NFPP and have assumed that the Government would take over responsibility for most of these activities as foreign funding declines.
Table 5. Expected Trend in Total Program Costs, Donor Grants, and Needed Funding by Government

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total (mn. Bt.)</th>
<th>USAID</th>
<th>UNFP</th>
<th>P.C.</th>
<th>IPPF</th>
<th>Total Grants</th>
<th>Govt.</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>94</td>
<td>1.0</td>
<td>1.5-2.0</td>
<td>0.2</td>
<td>0.6</td>
<td>3.3</td>
<td>66</td>
<td>28%</td>
</tr>
<tr>
<td>1977</td>
<td>110</td>
<td>0.8</td>
<td>1.5-2.0</td>
<td>0.1</td>
<td>0.4</td>
<td>2.8</td>
<td>56</td>
<td>54%</td>
</tr>
<tr>
<td>1978</td>
<td>125</td>
<td>0.6</td>
<td>1.5-2.0</td>
<td>0.1</td>
<td>0.3</td>
<td>2.5</td>
<td>50</td>
<td>75%</td>
</tr>
<tr>
<td>1979</td>
<td>135</td>
<td>0.4</td>
<td>1.5-2.0</td>
<td>0.1</td>
<td>0.3</td>
<td>2.3</td>
<td>46</td>
<td>66%</td>
</tr>
<tr>
<td>1980</td>
<td>145</td>
<td>0.2</td>
<td>1.0-1.5</td>
<td>0.1</td>
<td>0.3</td>
<td>1.6</td>
<td>32</td>
<td>113%</td>
</tr>
<tr>
<td>1981</td>
<td>165</td>
<td>-</td>
<td>1.0-1.5</td>
<td>0.1</td>
<td>0.3</td>
<td>1.4</td>
<td>28</td>
<td>137%</td>
</tr>
<tr>
<td>1976-81</td>
<td>+75% (in constant prices)</td>
<td>(-57%)</td>
<td>(-57%)</td>
<td></td>
<td></td>
<td>+390%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/ Existing tentative allocation.

Although somewhat arbitrary, the above estimates are probably correct orders-of-magnitude if donors hold to their present thinking. The figures suggest that grant assistance is likely to fall by 55-60% between 1976 and 1981 while the size of the National Program may expand by about 75% (the size and rate of program expansion has been arbitrarily assumed from a tentative base figure for 1976 that appears fairly firm). The most important conclusion to be drawn from the table is that the Government budget may have to provide over four times as much money in 1981 as it has already tentatively allocated for 1976 1/. Most of this increase will be required to fund program expansion, not to fill the gap left by declining grant assistance; using the above figures, the Government budget allocation will have to increase by Bt. 109 million but only Bt. 38 million (35%) of this will be needed to make up for declining grant aid. The larger share, Bt. 71 million, would cover the Bt. 71 million expansion in program size from Bt. 94 million to Bt. 165 million. An important result of this combination of declining assistance and growing National Program is that the Fourth Plan would see a sharp increase in the proportion of total population costs being financed from domestic resources -- from 30% in 1976 to over 80% by 1981.

1/ Before any allowance for inflation.