CURRENCY EQUIVALENTS

<table>
<thead>
<tr>
<th>Currency Unit</th>
<th>Unit</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>US$1.00</td>
<td>Baht</td>
<td>฿ 20.00</td>
</tr>
<tr>
<td>US$1 million</td>
<td>Baht</td>
<td>฿ 20 million</td>
</tr>
<tr>
<td>฿ 1.00</td>
<td></td>
<td>US$0.05</td>
</tr>
<tr>
<td>฿ 1 million</td>
<td></td>
<td>US$50,000</td>
</tr>
</tbody>
</table>

INITIALS AND ACRONYMS

- ANM = Assistant Nurse Midwife
- ARD = Accelerated Rural Development
- AV = Audio-Visual
- CBFPS = Community-Based Family Planning Services
- CBD = Community-Based Delivery
- CBR = Crude Birth Rate
- DEIDS = Development and Evaluation of Integrated Delivery Services
- DSCS = Development Support Communications Service (UNDP)
- H.C. = Health Center
- IEC = Information, Education, Communication
- IPPF = International Planned Parenthood Federation (London)
- MCH = Maternal and Child Health
- MCH/FP = Maternal and Child Health/Family Planning
- MOI = Ministry of Interior
- MOPH = Ministry of Public Health
- NESDB = National Economic and Social Development Board (formerly designated the NEDB)
- NFPP = National Family Planning Program
- NRR = Net Reproduction Rate
- PPAT = Planned Parenthood Federation of Thailand
- RTG = Royal Thai Government
- UNFPA = United Nations Fund for Population Activities
- USAID = United States Agency for International Development
- WHO = World Health Organization

<table>
<thead>
<tr>
<th>Thai Name</th>
<th>Administrative Units</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changwat</td>
<td>Province</td>
<td>70</td>
</tr>
<tr>
<td>Amphoe</td>
<td>District</td>
<td>516</td>
</tr>
<tr>
<td>Tambon</td>
<td>Sub-District</td>
<td>4,600 approximately</td>
</tr>
<tr>
<td>Muban</td>
<td>Village</td>
<td>45,000 approximately</td>
</tr>
</tbody>
</table>

Estimated GNP per capita (1972): US$220
THE GROWTH OF THAILAND'S POPULATION, 1850 - 2000

A - If 1970 fertility continued
B - If 50% decline in fertility by 2000
C - If fertility declines as fast as assumed by Thai targets for 1976 and 1981.

(1911 - 1970 show census years)
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptors</td>
<td>Persons accepting the practice of contraception.</td>
</tr>
<tr>
<td>Average Family Size</td>
<td>Average number of persons in the family, i.e., surviving children and parents.</td>
</tr>
<tr>
<td>Age-Specific Fertility Rates</td>
<td>Number of live births per year to 1,000 women in five-year age group during 15-49 years.</td>
</tr>
<tr>
<td>Crude Birth Rate</td>
<td>Number of live births per year per 1,000 of population.</td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>Number of deaths per 1,000 of population.</td>
</tr>
<tr>
<td>Dependency Ratio</td>
<td>Number of persons of 14 years or under, plus 65 or over, divided by the population aged 15 to 64 years. A frequently used but not very satisfactory measure of the balance between non-producing and producing members of society.</td>
</tr>
<tr>
<td>Expectation of Life at Birth</td>
<td>Average number of years an infant, exposed to a given set of mortality rates, is expected to live.</td>
</tr>
<tr>
<td>General Fertility Rate</td>
<td>Number of live births per year per 1,000 women aged 15-49 years.</td>
</tr>
<tr>
<td>Gross Reproduction Rate</td>
<td>The average number of daughters a woman will bear if she experiences a given set of age-specific birth rates throughout the reproductive ages, with no allowance for mortality over this period.</td>
</tr>
<tr>
<td>Infant Mortality Rate</td>
<td>Annual deaths of infants 0-12 months per 1,000 live births during the same year.</td>
</tr>
<tr>
<td>Maternal Mortality Rate</td>
<td>Number of deaths as a result of complications of pregnancy, childbirth and the puerperium, per 1,000 live births.</td>
</tr>
<tr>
<td>Net Reproduction Rate</td>
<td>Same as the gross reproduction rate but adjusted for mortality of women over their reproductive years. A net reproduction rate of 1.0 when reached, indicates that the country will be able to reach zero population growth rate after five to six decades. The population continues to increase after NRR has reached 1, because of the &quot;above-replacement daughters already born after the NRR fell to 1.0.</td>
</tr>
<tr>
<td>Rate of Population Growth</td>
<td>Rate of natural increase adjusted for (net) immigration or emigration.</td>
</tr>
<tr>
<td>Rate of Natural Increase</td>
<td>Difference between crude birth and crude death rate --usually expressed as a percentage.</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>The average number of children a woman will have if she experiences a given set of age-specific birth rates throughout her reproductive life. A good index to measure fertility changes as it is independent of age and sex distribution.</td>
</tr>
</tbody>
</table>
THAILAND

THE NATIONAL FAMILY PLANNING PROGRAM: A SECTOR REPORT

FOREWORD

1. This report brings together in one document a considerable amount of information about Thailand's demographic situation and the Government's National Family Planning Program. Although much is already known about these matters, an independent review of the program seemed timely in view of the approach of the Fourth Five-Year Development Plan (1976-81). Consequently, the Government invited the Bank to conduct a Sector Review which might assist it in preparing the Fourth Plan and which might also help external donors, including the Bank, to formulate their plans for financing population activities during the next Plan period.

2. As readers will quickly learn, the Sector Review mission formed a high opinion of the National Family Planning Program. The Program has in fact achieved a rate of family planning acceptance which is exceeded by only four or five developing countries. A number of reasons appear to explain why the Program is working so well. One major reason is the flexible, pragmatic way in which the Ministry of Public Health has dealt with questions of technical and administrative policy involved in the administration of specific family planning services -- an area of great importance to the availability and accessibility of services. Another reason is the existence of a health network that is relatively well-developed, despite the fact that many people still live beyond its present reach. A third major reason for Program success is the high quality of foreign technical assistance, and the large amounts of grant assistance which external donors have provided to help get the Program started. Finally, Thai culture seems unusually receptive to family planning; Chapter III of the full report tries to describe why this is so.

3. The family planning Program in Thailand, unlike that in many countries, is characterized as supply-constrained rather than demand-constrained. This means that for the next few years more new acceptors can be recruited by extending and improving the system for delivering family planning services than by trying to educate and motivate people who are already within range of services but who for one reason or another do not choose to use them. The report does not dismiss information, education, and communication activities as unimportant; far from it. But for the next few years, continuing attention to the extension of services seems more important than worrying about a limiting lack of demand. The report pays considerable attention to the various channels available for the delivery of contraceptives and other family planning services. It urges that the National Family Planning Program adopt the broadest possible definition of the Program so that strategic planning will not overlook networks, private as well as public, which can serve as resources for attaining national population objectives.
4. The service network of the Ministry of Public Health is likely to remain the dominant delivery network in the total system, accounting for well over half of all active users of family planning services. Nevertheless, major contributions to national objectives can be made by the private commercial sector, by Government health-delivery networks outside the Ministry of Public Health (notably the University hospitals, the Ministry of Interior, and the Bangkok Municipality) and by the promising but still unproven Community-Based Distribution experiments which have recently started. The primary role played by the Ministry of Public Health means that the expansion of its network will be of great importance to the spread of family planning, although the report emphasizes that expansion decisions should be based primarily on broader considerations of health services delivery. One major extension of the health-delivery system that may be of great importance for family planning is the Ministry's plan to appoint a large number of village health volunteers. This new class of part-time health auxiliaries would be authorized, after suitable training, to distribute pills and other contraceptives.

5. The report sees no need for any major organizational changes in the Program. Some minor changes, plus some increase in permanent staffing, are considered necessary. As the Program will expand in size by about 75 percent by 1981, more money will be needed. The present National Family Planning Program (even when broadly defined) is not now an expensive activity (about Bt.100 million per year = US$5 million) and is unlikely to become so. A substantial share of total costs can be, and are being, paid for by clients, just as for most health services in Thailand. Nevertheless, the Government budget faces sharply higher allocations for family planning during the Fourth Plan, partly to meet the costs of program expansion and partly because the Government is expected to take over from external donors a much higher proportion of total program costs, now carried 80-90 percent by foreign grant assistance. Even if the family planning appropriation expands by 400 percent during the Fourth Plan, it will still account for only about 7-8 percent of the Ministry of Public Health's 1981 budget. This is an insignificant fraction of the overall Government budget, especially for a program of such importance to the long-run future of the country.

Bernard R. Bell
Regional Vice President
East Asia and Pacific
THAILAND

THE NATIONAL FAMILY PLANNING PROGRAM: A SECTOR REPORT

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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 G.B. Baldwin, Chief,
P. Hall, Dr. T.I. Kim, T. King, D. Mills, Ms. U. Olin (Consultant, UNDP), and 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.
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I. A GENERAL OVERVIEW OF THE NATIONAL
FAMILY PLANNING PROGRAM

A. Introduction: History, Organization, and Achievements

1.01 Thailand is one of the many countries which started national family planning programs 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 surprisingly receptive to family planning. There is mounting 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. This combination of a well-planned, well-executed family planning program, a cultural setting that offers a favorable environment for fertility control, and growing awareness of population problems among influential leaders justifies optimism that Thailand can gain control over its rate of population growth before the country becomes seriously burdened with excessive population density.

1.02 The Government has had an official National Family Planning Program (NFPP) since 1970, after Cabinet approval of a policy to try to slow population growth. However, family planning services had been introduced into the regular health services in 1968 following pilot projects to test acceptability of family planning among both the rural and urban populations (see Annex B-1). Program planning has been the responsibility of the Ministry of Public Health, and services have been offered on a fully integrated basis. No incentives have been paid to acceptors or to health staff, no special family planning field staff has been established, no major mass media publicity campaign has been conducted, and political leaders have not emphasized the Government's (rather low-key) commitment to slowing population growth. The Ministry of Public Health has been very pragmatic and flexible in developing its own service program and in working out relations with the few voluntary organizations active in providing services, and with the commercial sector. The coordination of family planning services with other activities that make up a comprehensive population program (e.g. the development of demographic and operational research, the formulation of national population policy, the planning of population education for future introduction into the schools) has been achieved through an inter-agency committee structure, which has so far been rather weak, and through close personal relations among key people in Bangkok.
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 social characteristics and values of Thai society. Chapter III 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 other highly rural 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 cover only 35-40% of the total 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 which classes of personnel 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 assert a monopoly claim on the provision of family planning services, but has generally 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" to take place (see below, pp. 4), 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.

1.04 The service program that now exists (including the contribution of the commercial sector and the small but growing work of private-agency networks) relies 60-65% on pills, 20% on IUDs, and 15-20% on sterilizations (mostly female, although vasectomy is soon to be given greater emphasis). Condoms have not been widely used, although an attempt is now being made to popularize them.

1.05 As noted, the RTG has made excellent use of external technical and financial assistance. This has come primarily from the Population Council, USAID, UNFPA, WHO and DSCS and, in the private sector, from IPPF. External assistance has naturally focused on the MOPH but has included the National Economic and Social Development Board and the population institutes at Mahidol and Chulalongkorn Universities. At the end of 1974, the Thai NFPP was costing about Bt. 100 million (US$5 million); about 80% of these costs were being paid for by external donors (USAID, UNFPA, IPPF, and the Population Council). 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. We estimate that by 1981 the direct budgetary costs may have to be increased 6-7 times from their present level of Bt. 20 million, to Bt. 120-140 million, at constant (1974) prices.

1.06 At the present stage of program development, further expansion is limited more by supply factors than by weakness of demand. Therefore the
most important thing that needs to be done to increase acceptors during the
Fourth Plan is to continue increasing the availability and accessibility of
specific family planning services. The basic strategy for doing this is to
continue the MOPH policy of progressive liberalization of administrative
rules that determine who may provide which services -- a key factor in the
availability and accessibility of pills, IUDs, injectables, and steriliza-
tions. Training will continue to be of crucial importance. So will the ex-
pansion in the number of service-points, both static and mobile.

1.07 A balanced picture of the program must also note certain weaknesses
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 inter-
ruption 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 Govern-
ment can take over a much larger share of the fi-
nancial responsibility for its population program
and population will still not be nearly as costly
as many other major programs in the MOPH budget
(see below, Chapter VIII);

(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 post-
partum 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 appear a more serious shortage than doctors. This important problem is discussed in more detail in Chapter IV;

(vii) As noted, program development 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 below, Chapter VI). 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. In para. 5.16 a few such studies are suggested;
(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) Support for the MOPH's family planning activities, like all its activities, will inevitably reflect the ebbs and flows of national political developments and the senior personnel changes which these sometimes produce. One important means of minimizing this vulnerability of all Government programs is to build up activities outside the Government. Perhaps more important, this is also one way of extending services beyond the areas and population groups which can be reached by the MOPH service points.

B. Defining the National Family Planning Program

1.08 It may indeed be asked what "the national program" is. In a formal sense, there is the National Family Planning Program (NFPP) conducted by the Ministry of Public Health and consisting of all family planning activities provided by the Ministry itself, and for which it is directly responsible. This is the formal, narrow definition of Thailand's family planning program. A wider, more informal definition is also possible: it would include all officially-approved family planning activities, public and private. From this wider point of view, the MOPH would still be the dominant component in the whole system, or program, but the latter would include all the delivery systems through which people are now receiving contraceptive services or through which they might do so if particular networks were brought into the system. From this perspective, the "national program" would consist of the work of the MOPH, of the private commercial sector, of the four large Bangkok hospitals, of the 21 or more health centers of the Bangkok municipality, of the country's relatively few private hospitals and health centers (the most prominent, for family planning, being the McCormick Hospital and Family Planning Clinic in Chiang Mai), the Planned Parenthood Association of Thailand (PPAT), the hospitals and clinics owned and operated by Government ministries and agencies other than the MOPH (e.g. the Ministry of Interior, the Army, the Customs Administration, the Royal Thai Railways, etc.), and the Community-Based Family Planning Services (CBFPS) started in 1974 by PPAT and the International Planned Parenthood Federation in London. Since the provision of all family planning activities, private or public, must legally be conducted under general rules laid down by the MOPH, the Ministry should be regarded as the strategic planning center of the wider system and not only of the narrower network represented by its own facilities and services.

1.09 In our view, it is more helpful to adopt the broad definition than the narrow one now officially recognized. Indeed, many Government officials already think informally in the broader terms. There are many practical im-
lications of adopting the broad-definition approach; it opens up many new opportunities and creates new responsibilities for the MOPH officials concerned with planning expansion of the national system. Thus, the viewpoint adopted will affect which networks are identified and accepted into the system, the kinds of technical and financial assistance they are given, who receives what kinds of training, the adjustment of rules and regulations to permit particular agencies to make their full contribution, the way in which service statistics are collected and presented, etc.

1.10 The task of completing the larger system will never really end; it will continue to go forward step by step through the process of "constructive incrementalism" which has characterized the program's evolution since its start. In Chapter VI the report spells out the more important "next steps" that might be taken to make the program "more complete" than it now is.
II. THE DEMOGRAPHIC OUTLOOK AND ITS
ECONOMIC AND SOCIAL IMPLICATIONS

A. The Demographic Outlook1/

Introduction

2.01 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.

Historical Perspective

2.02 The demographic history of Thailand over the past century, like that of all developing countries, is one of accelerating population growth caused primarily by a fall in mortality. In 1850, Thailand's population was probably about 5 or 6 million. By the time of the first census in 1911 it had grown to about 8 million, a 60-year growth rate averaging less than 1% a year; about 40% of this increase came from Chinese immigration, which means that the natural rate of increase averaged about 0.5%. The crude death rate early in this century has been estimated at about 50 per thousand. In the period between World Wars I and II, mortality fell markedly; following the Second World War, a still more rapid fall in mortality took place, largely as a result of the spread of such public health measures as DDT control of malaria, immunization programs, and improved public sanitation. By 1970 the crude death rate is estimated to have reached about 50 per thousand, about the same as Europe and well below most Southeast Asian countries. The 1970 birth rate was about 42 per thousand, some estimates putting it over 45. The sharp fall in mortality during this century has increased average life expectancy from around 20 to 56 for men and 64 for women in 1965.

2.03 Table 1 summarizes the striking growth in the population of Thailand since 1850. Evaluation studies of the 1970 census have led to an upward revision of the 1970 figure to about 36 million. The revised annual growth rate from 1960 to 1970 is about 3%.

1/ See also Annex A-1.
Table 1. Population Size and Increases, 1850-1970

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>Inter-censal Increase</th>
<th>Annual Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850</td>
<td>5-6 million</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1911</td>
<td>8,266,408</td>
<td>2-3 million</td>
<td>Under 1.0</td>
</tr>
<tr>
<td>1919</td>
<td>9,207,355</td>
<td>940,447</td>
<td>1.4</td>
</tr>
<tr>
<td>1929</td>
<td>11,506,207</td>
<td>2,298,952</td>
<td>2.2</td>
</tr>
<tr>
<td>1937</td>
<td>14,464,105</td>
<td>2,957,898</td>
<td>3.0</td>
</tr>
<tr>
<td>1947</td>
<td>17,442,689</td>
<td>2,978,584</td>
<td>1.9</td>
</tr>
<tr>
<td>1960</td>
<td>26,257,916</td>
<td>11,467,727</td>
<td>3.2</td>
</tr>
<tr>
<td>1970</td>
<td>34,397,374</td>
<td>11,860,542</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Note: 1850 - estimate; all other years are census counts.

2.04 This striking acceleration of growth rate has given Thailand one of the highest population growth rates in the world today -- a rate that cannot be sustained for long without serious adverse effects on the economy and society. At present, the main population problems are those resulting from this rapid rate of growth rather than from the size of population in relation to available natural resources; but unless the level of population growth drops sharply, overall population pressure will become a serious problem.

2.05 Fortunately, there are two reasons for optimism that the rate of population growth will drop significantly. First, there is widespread awareness within the Government and among leaders of public opinion of the danger of continuing rapid population growth and a determination to bring the growth under control. This has been the major reason for the evolution of a population policy and the establishment of the National Family Planning Program. Second, as already noted, there are signs that fertility has begun to decline. Before the start of the Third Five-Year Plan in 1971, population growth was estimated to be at least 3.0%. It is now believed the Plan target of a growth rate of 2.5% by 1976 has a reasonable chance of being achieved. This significant decline is believed to have resulted entirely from a fall in fertility, since mortality is thought to be still falling.

2.06 The relationship between this decline and the start of the NFPP is not necessarily a causal one, as it is possible to have fertility declines without family planning programs, and vice versa. Factors that may lead to changes in national fertility independent of family planning programs include changes in age distribution, in the average age of marriage, in the proportion of people who get married, and changes in the conditions of life associated with urbanization, higher incomes, and the spread of education and public health. There are, for example, marked rural-urban differentials in Thailand today in both the age of marriage and in marital fertility. The fertility of the Bangkok-Thonburi metropolitan area is about 30% below the national average, while that
of provincial towns seems to be about 20% below the country as a whole. However, there is no question that the introduction of modern contraceptive methods, and the education of the public in their availability and use, can play a major role in influencing the number of children families choose to have and in enabling them to achieve these personal goals. In Thailand, the coincidence of a pronounced slowing of population growth and the rapid growth of family planning acceptance provides strong evidence that the family planning program is already having this effect.

Future Population Growth

2.07 Population projections are essentially mathematical models, based on sets of assumptions of fertility and mortality,1/ which attempt to demonstrate the consequences of these assumptions over time. As forecasts -- which attempt to predict precisely the future -- projections are no more reliable than the assumptions on which they are based. In the Thai case, a lack of firm base data for 1970 on the size and age/sex distribution adds to this uncertainty. In spite of these limitations, population projections do provide a useful tool for analysis of the effects of different levels of fertility and mortality on future population size and composition.

Projections of Future Population Size and Age-Distribution2/

2.08 Five projections, reflecting quite different alternative patterns of population growth are shown in Table 2. 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%3/ 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.

1/ Migration can of course also be included, but is likely to remain negligible in the Thai case, and has been ignored.

2/ For more details, see Annex A-1.

3/ 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.
Table 2. Illustrative Growth of Population Under Different Assumptions on Fertility Trends

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>A. U.N. Projections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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) 'High'</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) 'Medium'</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) 'Low'</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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></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>


2.09 The divergent results of these projections over the next 30 years are striking. The constant fertility projections (projection 1) -- although undoubtedly the least probable given recent evidence that fertility has started to fall -- nonetheless serves as a useful benchmark. By the year 2000, the "target" projection results in a population some 40% smaller than the constant projection and 20% smaller than even the most favorable U.N. projection. Nonetheless, the population, even under these favorable conditions would nearly double in this 30-year period, increasing from 36 million in 1970 to almost 66 million in the year 2000. The conclusions are apparent. Even under the most favorable conditions, Thailand will add 30 million people to its population between 1970-2000; such growth will place a substantial burden on the nation's prospects for development.

2.10 Even with the NRR at replacement level by 1990, which would be a remarkable achievement, the population will continue to increase well into the twenty-first century. The Table 2 projection indicates that the Thai population would 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.

B. Economic and Social Implications of Prospective Population Growth

2.11 The projections of Table 2 suggest that the Thai population is likely to rise by at least 80% between 1970 and the end of the century. It is entirely possible that the present population of approximately 42 million could double during the remainder of the century.
2.12 The main economic and social implications of this demographic outlook 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.

2.13 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 increases 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 were less than 2% a year for the period 1960-72.

2.14 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.

2.15 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..." Such savings would materialize only on the assumption that the larger population would be given the same standard of services as a smaller one. This might well not be so, since there might not be money enough to do so. Some of the "costs" of a larger population take the form of lower standards, not higher appropriations. But the general point is certainly valid: lower fertility leads to savings in public expenditures, or higher standards of service, or both.


2/ The 1975 recurrent budget of the Ministry of Public Health is Bt. 1.1 billion; its capital budget Bt. 276 million.
2.16 As regards employment, the 1972 NESDB projections estimate that if population reaches its "high" figure of 86 million instead of the "low" figure of 70 million, the economy will have to provide about 6.5 million more jobs. The same study suggests that per capita incomes in the year 2000 will probably be significantly higher (23%) if population increases at the low rather than the high rate.

2.17 There is no need to go beyond the figures presented in the preceding paragraphs. The important conclusion is that all social and economic problems become more difficult to deal with if population is growing rapidly than if it is growing more slowly. The Government understands this basic fact, has adopted policies and programs to do something about it, and has already begun to achieve results which seem very promising.

C. Population Policy and Organization

Evaluation of Population Policy

2.18. As awareness of the country's high rate of population growth has spread during the past 15 years, the Government has gradually altered its basic policy. For many years, Government policy was pro-natalist, and special allowances were given to families with many children. A private Family Planning Association was started in the fifties but its main function was to offer services, not to change Government population policy. By the late 1950s, however, a number of leaders had become concerned about the population growth rate; consequently when a 1959 World Bank economic survey called attention, very briefly, to the economic danger presented by the country's high rate of population growth, the subject became a matter of official concern within certain parts of the Government. By the early 1960s, a number of Government physicians were sufficiently concerned so that the MOPH began to offer services, in limited experimental projects, as early as 1964. Under the lead of the (then) National Economic Development Board a committee was established in 1969 to prepare a policy statement for submission to the Cabinet. Although the policy statement approved in mid-1970 was exceedingly cautious, it did commit the Government to slowing population growth. A National Population Policy Committee was established and the MOPH's Family Health Project was renamed the National Family Planning Program (NFPP). The Policy Committee never became a significant force but the NFPP has been outstandingly successful. Today, the NFPP is defined by whatever the Family Planning Unit in the MOPH does or is responsible for; this includes primarily the provision of services on a nationwide basis but also a program of information, education, and communication plus a considerable volume of operational research (some done in-house, some carried out at universities under MOPH sponsorship).

2.19 The change of Government following the October 1973 protests strengthened the hand of those leaders who favored a stronger population program. Consequently when the new Constitution was drafted in 1974 an article was included which raises population policy to the level of a Constitutional objective. The provision, Section 86, reads as follows:
"The State is to formulate population policy to suit the natural resources of the nation, social and economic conditions and technical progress for the interest of the economic and social development and the security of the State."

Organization of the National Family Planning Program

2.20 In 1970 the Cabinet placed responsibility for carrying out the newly-approved population policy in the Ministry of Public Health. The Under-Secretary of State for Health (the chief civil servant in the Ministry) was made Director of the Program, subject to a National Population Policy Committee (which, as events turned out, almost never met). The Director of the Family Health Division was designated Deputy Program Director and the Head of the Division's Family Planning Program was designated Program Officer. Thus the Program was given some administrative identity and independence within the MOPH Division responsible for general Maternal and Child Health activities. It was also given a staff of its own; at the end of 1974, this numbered 28 established posts spread over five sections (see Annex C-3). But family planning services were to be, and are, offered on an integrated basis as part of the Ministry's regular rural health services; there has been no separate field staff for either administration or services.

2.21 It was recognized that an effective population program would involve more than the provision of services alone and that other activities, and other ministries and agencies, including some of the universities, would be involved. Also, there were many public and private donors offering assistance of various kinds to different institutions and agencies. By 1973 the need to coordinate the activities of donors and of domestic agencies led the Government to dissolve the National Population Policy Committee and to replace it, in 1974, with a National Family Planning Committee (its membership is listed in Annex B-3).

Population Policy and National Economic Planning

2.22 The National Family Planning Committee is primarily concerned with the operational policies and programs of agencies providing family planning services, and especially with coordinating their relations with external donors. Concern for national population policies and activities is primarily the responsibility of the national planning agency, the National Economic and Social Development Board (NESDB); as noted, it was the NESDB that had prepared the draft policy statement for Cabinet consideration in 1970 and had set the 2.5% growth rate target to be reached by the end of 1976. With the increasing concern for population within the Government and the need to prepare the Fourth Five-Year Plan (October 1976-September 1981), the Manpower Development and Population Planning Division of NESDB recently began to expand its population work. In 1974, the Division's name was broadened to the Manpower Development and Population Planning Division. To assist in preparing the Fourth Plan, NESDB

1/ The number of 28 established posts is somewhat misleading, as the Program has about 40-45 additional professional employees whose posts have not been officially established and whose costs are covered by foreign funding. The insecure basis of these posts has caused some difficult personnel problems (see below, para. 6.07).
has established a number of representative sub-committees, including a Population Policy Planning Sub-Committee composed of members from all major ministries and agencies concerned with population questions. The intention is to establish demographic targets for the Fourth Plan\(^1\) and to set up Working Groups under the Sub-Committee to work on specific policy topics, with the findings and proposals to be reflected in the Fourth Plan. It is possible that the Population Sub-Committee of the NESDB might evolve into a National Population Commission. But for the present, the national planning agency is making an effort to see that population problems get identified and defined and that they are taken into account in preparing the next Plan. By the end of 1974, the MOPH had prepared the first draft of its own Second Five-Year Plan for the NFPP (see Annex B-2). The NFPP's First Five-Year Plan, of course, was part of the country's Third Development Plan (1972-1976).

\(^1\) In 1975, a growth rate of 2.1% by the end of 1981 was set as the overall demographic target.
III. THE SOCIO-CULTURAL SETTING OF THE
THAI FAMILY PLANNING PROGRAM

A. Introduction

A Somewhat Atypical Rural Society

3.01 The strong start which the National Family Planning Program has made, reaching in a relatively short time higher levels of acceptance than many other countries have achieved after longer periods, cannot be attributed only to the energy and skill with which the Program has been built up. Part of the explanation undoubtedly lies with certain distinctive characteristics of the cultural setting within which the Program has been developed. This chapter tries to identify those cultural features of Thai society which may help explain why the Program has made such a promising start, what constraints will affect widespread acceptance of family planning, and why there are good grounds for believing that Thailand will be able to gain control over its rapid population growth.

3.02 There are many basic characteristics of the Thai economy which suggest that family planning might not be widely accepted. Thailand remains heavily rural and agricultural: in 1970 about 85% of the population lived in rural areas and nearly 80% derived their livelihood from agriculture. According to experience from other family planning programs, such conditions would lead one to expect considerable resistance to the adoption of a new pattern of reproduction in which conscious and continuous fertility control is the key factor. In Thailand, not only is the demand for family planning services strong, but it is strong in both rural and urban areas. New acceptors (overwhelmingly women) tend to come from rural and urban areas in the same proportion as the total population; a relatively high proportion, more than 60% of all acceptors, are married to farmers. In view of the fact that the NFPP until now has operated virtually without the benefit of any public information and education campaign, this situation is all the more remarkable. As a final point it is worth noting that population pressure in Thailand in the absolute sense is not nearly as severe as on the Indian sub-continent, or Java, for example, so that one would not expect people to feel as much constrained by land pressure. In spite of rapid agricultural expansion for more than a century, the potential for further expansion of agricultural output remains larger than in most other countries.

Land, Population Growth, and Development

3.03 To gain some perspective on why this still very rural society has nevertheless responded so strongly to family planning, it may be useful to consider certain general features of the development process. In addition to whatever else it may mean, development everywhere involves the adoption of new methods of production that increase the carrying capacity of the habitat. In its early stages, the process both leads to and requires population growth.
Eventually, however, preservation of the improved and changing mode of life becomes dependent on the ability to keep population growth within the bounds set by the needs for an elaborate and costly societal infrastructure and the society's ability to feed itself, either directly or through trade. The ability to introduce more stringent and deliberate measures of fertility control is therefore a necessary aspect of development in countries where the size or speed of growth of population begins to press on these limits. The extent and timing of control that is needed will vary, depending on such factors as the resource base and the stage of development, but the eventual need for control is a common feature. In the absence of sufficient control, development will be held back and mortality will in due course return to higher levels.

3.04 From this thumbnail sketch of the relationship between population growth and development one may conclude that the difficulty or ease with which adaptive changes in behavior can be effected have an important bearing on the prospects for development. Since reproductive behavior concerns the essence of group survival, it is in the nature of things that the rules and norms pertaining to it are deeply ingrained and not easily changed. However, rural Thailand does not fit this typical picture. Thai agriculture is tradition-bound in the sense that rice-cultivation has long been and remains -- without major technological change -- the main crop. But the rigidity typical of so many rural societies is notably absent. A closer examination of why and how this is so may offer a clue to the surprisingly favorable Thai response to family planning. (The absence of cultural rigidity is of course also relevant to the development process in general but the present concern is limited to the prospects for the NFPP.) The discussion will focus on certain general characteristics of Thai society and how these appear to be reflected in male and female roles and relationships.

B. Origin of Distinctive Thai Social and Cultural Values

The Traditional Availability of Land

3.05 An outstanding characteristic of Thailand is the relative abundance and accessibility of the traditional resource base, that is, fertile land. Apart from the fertility of the land, this is mainly a reflection of the comparative youth of the Thai nation whose present inhabitants have, over a period of many centuries, continually migrated southward from their places of origin in the South of China. The area now known as the Central region (economically the most important) became fully occupied only within the last couple of hundred years. Under the impact of prolonged and, recently, very rapid population growth, the abundance of land has now sharply diminished. But, historically, easy access to cultivable land appears to have been an important factor in the evolution of Thai culture and social organization.
As late as the 1920s or '30s unused cultivable land could still be found in the vicinity of Bangkok. In more remote areas, new land is still being cleared, although at rising costs of erosion, deforestation and modification of rainfall patterns

3.06 Without further elaboration, conditions like these may give the impression of nothing but human expansion under relatively favorable conditions (mortality remained very high until recent decades). While not altogether wrong, such an impression is nevertheless misleading. The resource base for continuous expansion was there but the expansion did not, and could not have taken the course it did without some guidance and regulation. The economic expansion that started around the middle of the nineteenth century was initiated and accompanied by political and administrative changes which had a major bearing on the nature and extent of the expansion. These changes transformed an absolute but not highly integrated monarchy into a modern nation state in which Bangkok, the capital, has provided the leadership and focus for individual strivings and aspirations.

Political Modernization and Economic Expansion since 1851

3.07 The beginning of the modernization process came in 1851 when King Mongkut ascended to the throne and began to prepare Thailand to take its place as an active member of the international community. The first concrete step in this direction came in 1855 when Mongkut negotiated the first of a series of treaties with Western powers. The treaty, with the British, replaced the old system of royal monopolies and special privileges with one of free trade by private merchants, subject only to import duties. This fundamental shift in the source of Government revenues led to a total restructuring of the Government's financial system; this financial restructuring, as well as other changes, led eventually to a complete change of Thailand's administrative machinery.

3.08 The effect of the administrative reforms begun by Mongkut and, for the most part carried out by his son Chulalongkorn, was largely to replace the absolute monarchy with an office-holding elite, a bureaucracy, as the source of decisions. As one scholar has described this change, "The modern bureaucracy helped project ancient Siam into modern statehood. It produced solvency, order, stability, and diplomacy sufficient to avoid excuses for Western seizure. Its needs gave rise to a system of secular education; and bureaucratic careers have fulfilled the expectations of graduates of that system. The stable, neutral bureaucracy has carried on the work of government without breakdown in the face of depression, war, inflation, and a dizzying succession of political changes" (W.J. Siffin, as quoted by Riggs, p.110). In 1932 the changes set in motion by Mongkut led to a political coup that reduced the king's formal authority to that of a constitutional monarch.

1/ All references are to items listed at the end of the Chapter.
3.09 One objective of these administrative changes was to take advantage of Thailand's agricultural potential, in particular her capacity for increased export of rice. Such increases did indeed occur. From 1857-59 to 1949-51 the average annual volume of rice exports increased from about 1 million piculs\(^1\) to about 24 million piculs (disregarding a short but temporary decline in the 1940s). The area under rice cultivation increased from an estimated 5.8 million rai\(^2\) in 1850 to about 35 million rai in 1950 (Ingram, 1971, pp. 38, 44). During the same 100-year period population increased more than threefold, from under 6 million to more than 18 million.

3.10 The political changes and the growth of agriculture and trade in the 19th and 20th centuries were accompanied by important changes in the social structure. In spite of the common allegation that Thai society has remained basically autocratic and undemocratic until the latest "revolution" in October 1973, the social changes during the latter half of the 19th century were predominantly and decisively in the direction of increased (personal) freedom. Basically they consisted of the gradual abolition of slavery and the corvée system. In 1850 a large percentage of the population consisted of slaves of one kind or another and the entire male population was obliged to perform corvée labor (a number of required days of unpaid work for the Government each year.) Though both forms of bondage were for the most part of a benevolent nature, their abolition was undoubtedly welcome. It was also an important aspect of the expansion of the Thai economy.

3.11 That such profound changes could be engineered gradually and, on the whole, smoothly is again a reflection of the abundant supply of land. The freed rural population could claim up to 25 rai of uncultivated land, provided they cleared it and kept it under cultivation. This opportunity was of special benefit to the children of those who were liberated. The only charge was the payment of a small head tax. The availability of land, the small amount of capital required for clearing and cultivation, and the requirement of continuous use of the land, together had the effect of producing a rural population composed mainly of independent farm families. Hired or tenant labor was rare. As is typical under conditions of an independent landed peasantry, men and women both played an active and important role in the productive process.

3.12 Another feature of the rapid expansion and commercialization of the Thai economy that began in the 1850s was that while the Thais devoted themselves to rice production, commercial and other non-agricultural activities were left to foreigners. This led, among other things, to a heavy immigration of Chinese labor. The result of this ethnic division of function was a remarkable degree of preservation of the traditional way of life in rural areas in spite of the

\(^{1}\) One picul equals 60 kg.

\(^{2}\) One rai equals about 0.2 hectare or .4 acre.
introduction of a market economy, increased labor inputs to supply the expanded market, and major changes in the system of government.

3.13 Superficially these developments may lead to the conclusion that Thai rural society was not very different from that in other less expansive countries. There were important differences, however. The expansion of Thai agriculture, for example, necessarily involved a larger measure of geographical mobility than is characteristic of many traditional societies. Such mobility inevitably affected the social structure of Thai society. Migration could have materialized only on the basis of rather self-reliant, individualistic behavior, since the possibilities for anything but short-distance travel and transport were very limited. This suggests that family ties beyond the nuclear family were relatively weak as compared with a geographically less mobile society. That this was in fact the case appears to be confirmed by studies of other aspects of Thai culture.

Non-rigidity of Social Relations

3.14 Some anthropologists have characterized Thai society as a uniquely "loose social structure," i.e. one in which people's expectations of proper or appropriate social conduct are relatively elastic or flexible. The alleged looseness refers to the relative ease with which both kinship and other social ties can be broken. As everywhere, Thai social relations are based on the reciprocal exchange of services and facilities. The difference lies in the durability of the bonds. In Thailand both family and other relationships can, if they are no longer deemed profitable or satisfactory, be broken without the burden of much moral or social stigma. Family ties are typically stronger than other ties but the relative impunity with which social relations can be re-arranged is a distinctive feature of Thai culture. Nevertheless, to characterize Thai society as "loosely structured" is a one-sided and in many ways misleading description.

3.15 The geographical mobility that is part and parcel of Thai history makes a relatively flexible social order highly functional. The creation of an effective national bureaucracy is not a sufficient explanation of how Thailand succeeded in turning itself into a modern nation state in a relatively short time. How did this bureaucracy, directed from and focused on Bangkok, command sufficient attention and allegiance to become an efficient instrument of government? The only plausible answer to suggest itself is that Thai behavior, with its strong individualistic streak, must also be imbued with a highly developed system of common values and norms of conduct. The source of these common values and norms is the Buddhist religion, long-established and ever-present in the vast majority of Thai villages. Ninety-five percent of Thailand's population is Buddhist and every Thai village has its wat (monastery and temple) with its complement of monks. In rural areas the wat remains to this day the center of all social activities. The blessing, and often the active participation of the monks, is vital to most communal undertakings. The prestige and influence of the monks, however, is dependent on their abatement from too overtly active a role in secular affairs.
3.16 The content of Buddhist values in Thailand was heavily influenced by King Mongkut. When Mongkut ascended the throne, he had 27 very active years in the Buddhist Order behind him. During this long period of monastic retreat he developed a profound interest in the Buddhist scriptures and in due course he introduced major reforms in Thai Buddhist beliefs and practices. These activities covered a very wide area and have had a lasting influence on Thai society (Riggs, pp. 97-105). Mongkut's most important contribution was undoubtedly his revival of the original Buddhist doctrines and his insistence that their message should be kept functionally alive. He was opposed to empty "merit making," emphasizing that only deeds of social value had true merit. Similarly, he played down the traditional Brahmin concept of the king as a vehicle for the gods, in favour of the Buddhist concept of the king as a man whose prime duty is to serve as a moral leader, as the defender and preacher of the law. In effect, Mongkut's greatest impact as a leader may well have been that he brought about a gradual change in "the public image of the monarch from that of a divine king, apotheosized by the magical and supernatural rites of the Brahman priests, to that of the leading human defender and patron of the Buddhist Church. This is an image that persists strongly until the present day, and contemporary Thai kings allow no opportunity to pass to present themselves to the public as exemplary Buddhists, even to the point of taking the vows and becoming, for a while, Buddhist monks, amid great public interest and acclamation" (Riggs, p. 101).

3.17 Another important function of Buddhism is that it rationalizes the social inequities that exist in Thai as in other societies. The Lord Buddha explains the suffering in our lives with reference to our sins: the suffering is proportional to the sins in the present and, in particular, in past incarnations. Those who lead virtuous lives will be reborn to a better position, those who sin will pay for their sins in the next incarnation. Thus, in Buddhist as in Christian ethics, the strongest motivation to socially valuable behavior lies in presumed rewards in another existence. If we accept that this anticipated future existence may have something to do with the world our children will inherit, such beliefs may be more functional and adaptive than is sometimes admitted or appreciated.

3.18 Through the close but separate functions of the political and religious establishments an effective unity of purpose and aspiration of Thai society has been forged. This conclusion is reinforced when it is realized that traditionally the wat has provided the main opportunities for formal education, in principle open to all men. Such education was not limited to religious subjects but extended into certain secular areas, like history and language, sometimes beyond. Moreover, as still another example of the simultaneous openness and unity of Thai society, it is entirely possible to switch from a religious to a secular career with impunity.
Thus, one may suggest with considerable justification that Thai society is not only loosely structured but that it is also characterized by an unusual degree of unity. Everybody occupies a place on the same social ladder. While there are new institutional obstacles to movement on the ladder, a considerable body of rules and norms exist to ensure that the ladder will not crumble as a result of the mobility. The Monarchy and the Buddhist Sangha (the collectivity of monks) are the key symbols of this unity. This uncommon degree of flexibility or fluidity clearly is predicated upon the availability of alternative roles and places in society. This in turn reflects the ample supply of land in the past.

C. Family Roles in Thai Society

It is generally recognized and accepted that the degree of women's economic responsibility for the family in a society is an important factor in determining their attitude and behavior in respect of marriage and childbearing. It is well-known, for example, that married women's active participation in non-agricultural economic activities, which typically means that they must work outside the home, is inversely correlated with family size. Regardless of their income-earning capacity, women in urban areas also tend to favor the limitation of family size because of the high cost of rearing children in an urban environment.

For a variety of reasons the relationship between family size and women's role in farm work is less clear-cut. To begin with, the cost of children in rural areas is often relatively minor. Moreover, children can assume limited economic responsibilities at an early age. Additionally, high mortality together with a fear of family extinction and consequent destitution of the older generation may combine to encourage family size that includes a margin of insurance against these eventualities. The resultant adult "surplus" may migrate in search of new opportunities or attempt to make a living as wage labor. Alternatively, sub-division of farms may proceed to the point of general impoverishment. However, limitation of family size as a means of preserving the viability of farms under circumstances of limited economic opportunities is by no means unheard of. Prior to the industrial revolution such behavior was common in certain European countries.

In the Thai context, in particular in the light of the apparent strong demand for family planning facilities in rural areas, there is reason to assume that the relatively loose social bonds and the resultant emphasis on self-reliance discussed earlier are important factors in the attitude towards family limitation. To gain some insight into these matters, a brief discussion of male and female roles and parent/child relationships in Thai society will be attempted.
Parent/Child Relations and Old-Age Security

3.23 To begin with the latter, it is pertinent to refer back to an earlier observation to the effect that all social relationships, including those that involve family members, can be severed with relative ease. Parent/child relations are typically very close and last until one of the parties dies. However, the behavior of Thai children toward their parents is not characterized by the one-sided and unquestioned obedience and loyalty that are found in many other traditional societies. The obligations are mutual and they are kept alive and reinforced by the threat of withdrawal of loving care by the parent and of loving obedience by the child. There is thus no great difference between parent/child and the common patron/client relationship outside the family. Both types of relationships are pragmatic and have a strong component of material self-interest (Bunnag, p. 7; Embree, pp. 183, 187; Hanks and Hanks, pp. 432-433). In view of the obligation of Thai parents, especially among the wealthy, to offer relatively ample amenities of life to their children, parents may often feel motivated to limit family size if they find themselves having difficulty providing for their offspring. Their chances for old-age care are likely to be evaluated primarily in terms of how well they have provided for their children, rather than in terms of survival only.

Male/Female Adult Roles

3.24 In terms of male and female roles and the resultant status of men and women, it seems possible to suggest further reasons why family limitation is increasingly being attempted at this stage of Thai history. Because of their functions as mothers, women's role and status in society inevitably looms large in any family planning program. In the dominant rural society of Thailand, with its flexible social structure, women play an active role. In line with the joint economic responsibilities of men and women, their status is generally one of equality. Though Thai social relations within and outside the family for the most part are strictly hierarchical, the status of husband and wife is that of equal partners in a mutual cooperative arrangement, to which both contribute and which either one can dissolve at will (Hanks and Hanks, p. 435).

3.25 Moreover, while certain features of Thai society would lead one to believe that men might enjoy superior status, this is superficial. Thus, though Indian Buddhist tradition holds that rebirth as a male indicates greater virtue than rebirth as a female, maleness per se is not valued very highly by the Thais. Since the possibility of entering Nirvana, the highest Buddhist goal, is generally not considered to be a practical possibility, one can look forward to a very large number of rebirths. Given this prospect, one must count on having to take turns as male and female. Finally, life is not considered more difficult for a man than for a woman and one's social position
is recognized as more important than one's sex. It is therefore not surprising that there is no strong preference for either sex of children. If anything, girls tend to be preferred because they are considered more immediately useful around the house. Boys on the other hand are needed for heavier farm work and may contribute to the parents' store of merit by becoming monks. Boys and girls are raised together, play the same games, go to the same elementary schools, and can as adults, if need be, substitute for each other, both within the house and in the field. The division of labor that is practiced is generally functional, based on differences in parental roles and in physical strength.

3.26 Similarities and equality notwithstanding, there is a clear recognition of the complementarity in male and female behavior. Women are primarily thought of as nourishers and as the integrating force in the family. Men represent power. It is their task to enforce discipline and to deal with the outside world on behalf of the family.

3.27 Before a marriage can be concluded, both partners must give their consent. Parental agreement is generally considered desirable but parents do not enforce their will. Should a marriage be concluded against the wishes of the parents, the prospects for subsequent acceptance are relatively good. However, while these and other arrangements point in the direction of marriage seen as a partnership of equality, certain customs seem to indicate that women's status may in the past have been superior to that of men. Thus, it is still rather common for men to pay a bride-price and, as newlyweds, to go and live with the bride in the bride's home. Eventually the young couple will, with the assistance of the bride's parents, get their own house and land. However, one daughter, usually the youngest, is expected to remain with the parents and she and her husband will eventually take over the parents' house and farm. By now exceptions to these rules are very common, but the continuity of the family appears, in the past, to have extended through mother and daughter. The tendency for childless couples to prefer to adopt girls rather than boys points in the same direction (Hanks and Hanks, pp. 442-3; Prahuabmah et al., Ch. VI).

3.28 These inferences about women's past roles may, it seems, be presumed to reinforce their roles as active nourishers and providers. Attempting to assess the relevance of these matters to family planning, it would seem logical to suggest that Thai women, if they want to continue to play their traditional role as very active providers for the family, must do two things. They must counteract the persistent trend towards family size beyond what they can reasonably care for and they must increasingly look beyond the home for income-earning activities. The latter is an inevitable aspect of modern development. On both counts they would be strongly motivated to practice family planning. That this
is the pattern adopted by the urban upper and middle classes has been apparent for some time. In view of the unity of Thai values and social structure, this pattern may be quite widespread, even in rural areas.

D. Conclusion: Women's Opportunities and Family Planning

3.29 If the above interpretation is at all valid, certain tentative conclusions may be drawn from it. Change in reproductive behavior, which is central to the outcome of any development effort, can be fully understood only if seen in the context of the cultural evolution of the society in question. Statistical measurements of fertility changes cannot tell the full story. They need to be complemented with a qualitative assessment of the perspective from which people may be presumed to interpret and approach their changing life situation.

3.30 Thailand's economic and social evolution during the past century or more has been a development process that has been based on wide and relatively equitable participation. The explanation of this rather unusual phenomenon rests on the rich resource base of Thai society. This circumstance permitted large-scale expansion combined with increased personal freedom and preservation, even strengthening, of the institutional framework of traditional rural society. For the farmer and his wife the situation offered certain possibilities but their utilization depended on self-reliance. As in all rice-cultivating societies, there was considerable cooperation within each hamlet or village but the individual family could not count on any non-kinship or other social group for support. Support was obtained only in exchange for services of more or less equal value. This self-reliance, which characterizes women as well as men, is believed to be an important factor in the current and to all appearances widespread desire to limit family size in both rural and urban areas (in a recent survey, 47% of rural and about 55% of urban families with two children or less said they did not want more children. (For additional information, see Knodel and Pitaktepsombati, pp. 239-243.)

3.31 Needless to say, this assessment is encouraging for the prospects of the Thai National Family Planning Program. However, many of the factors that in the past tended to promote the conditions that have been judged favorable to family planning, in particular wide and more or less equitable participation in the development process by men and women, may be weakened by modern developments. Thus, as the resource base is narrowing under today's rapidly-growing population and as the development process makes life more varied and more demanding, wide and active participation in development may increasingly require Government interventions designed to make opportunities more widely available than is likely to be the case under laissez faire conditions. Growing social and political tension in Thailand, an inescapable aspect of large-scale rapid
change, indicates that this situation is already at hand. In respect of
women's role in development, the growth of industrial-urban modes of pro-
duction, which extend into modern agricultural production, requires special
policy measures designed to ensure that women's role as mothers will not
deprive them of opportunities to continue making their contribution to the
wellbeing of the family, as well as of the society. That such negative ten-
dencies exist, in spite of women's traditional strong involvement in the Thai
economy, is clear from certain differences in the proportion of men and women
in different sectors of the labor force. Thus, 1970 census data on work status
reveal that only 10% of the economically active women consist of salaried em-
ployees and wage earners, as compared with 20% of the male labor force. Con-
versely, 76% of the economically active women are recorded as family workers
versus 33% of the men. These figures reflect in part the need for women to
remain in the immediate vicinity of the home as well as their lack of train-
ing for an active participation in the income-earning activities of modern
society. There is, moreover, reason to believe that women are prevented from making
an optimal contribution even in such work as is in large measure family-centered.
It is, for example, reliably reported that women are by and large excluded from
agricultural education and training programs notwithstanding the fact that they
account for a very significant share of agricultural production. There is in-
creasing evidence that widespread limitation of family size is in large measure
a reflection of the extent to which social and economic progress becomes avail-
able on a broad basis, covering all sectors of the population, including women.
Eliminating conditions that discriminate against women's full participation in
the development process is important on general grounds of equity; but it is
also a means of preserving and expanding the social conditions in which women
will want to limit their child-bearing. It is, therefore, recommended that
measures be taken to review and, where indicated, to correct public policies
that may discriminate against women.
Bibliography


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*Note: The content is a representation of the bibliography section from a document, not the entire document.*
IV. CHANNELS AVAILABLE FOR THE DELIVERY OF FAMILY PLANNING SERVICES

4.01 The establishment of family planning services on a national scale occurred in the 1960s as a result of activities by the Ministry of Public Health, two or three of the Bangkok university hospitals, and a few private drug companies. With only a few individual exceptions, private physicians, hospitals, and clinics have played a minor role in providing contraceptive services. The network of facilities and personnel provided by the MOPH constitutes much the largest single element in the total set of networks which now provide services, or which might be used to do so. But it is by no means the only delivery-system. There are several supplementary systems both inside and outside the Government which participate in delivering services of various kinds.

4.02 From the start of the NFPP, a wide variety of family planning methods have been made available. Oral contraceptives, for example, have been available from the time of their introduction on world markets. Sterilization has also been freely available, although female sterilization has until recently proved more acceptable without any effort. Injectable contraceptives, however, were not offered in the Government program until 1975, although the McCormick Family Planning Clinic in Chiang Mai had pioneered this method for over a decade. Unlike sterilization, abortion has not played any significant role so far in preventing unwanted births, since this is the one method that is clearly affected by Thai religious values. The condom has played no significant role to date, mainly because it has a negative image associated with its primary use, in Thailand, as a protection against venereal disease (an attempt is now being made to popularize condom use by changing this image). The wide variety of methods available has offered a continuing challenge to develop delivery networks appropriate to each method and, equally, to review the regulations governing the provision of specific services so as to open up as many networks as possible and, within each network, to push services as far "down" as the MOPH judges sound medical practice should permit.

4.03 Not all networks are capable of providing all types of services: there is a "medical gradient" associated with the various methods of contraception, ranging from such doctor-provided services as female and male sterilizations, on down through medically-supervised but not necessarily medically-provided services (e.g. the insertion of IUDs or the approval of patients for orals) and on down to the delivery of such medically-unsupervised, totally client-regulated methods as the use of condoms, foams, and jellies. Clearly some systems (e.g. the MOPH) can be used for all methods and some (e.g. unlicensed retail outlets or mail-order distribution) can be used for only one or two. But for the dominant family planning method used
Extent of Health Center Coverage in a Typical Province

in Thailand today (the pill) many delivery networks can be used, and are likely to reach different regions and groups. Since convenience of access to sources of information and supply is of great importance, the specific rules governing permitted and non-permitted activities of the various delivery systems are of great importance in defining the availability of specific methods, the networks through which they are provided, and the reach of each network and hence that of the overall delivery system. Indeed, Thailand has been a leader in reviewing and revising its clinical regulations so as to push many specific services lower down in the medical gradient, thus widening the availability and accessibility of services. The MOPH is continuing to review its rules and regulations which affect the reach of its own delivery capability and that of other Government and private-sector networks.

A. The Service Structure of the MOPH

Table 1 below shows the structure of health facilities operated by the Government as of early 1973 (all but a few of the hospitals belong to the MOPH).

<table>
<thead>
<tr>
<th>Changwat = (Provincial)</th>
<th>Amphoe = (District)</th>
<th>Tambon = (Sub-District)</th>
<th>Muban = (Village)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Hospital</td>
<td>1st Class H.C.</td>
<td>2nd Class H.C.</td>
<td>Midwifery Centers</td>
</tr>
<tr>
<td>Total No.</td>
<td>84</td>
<td>252</td>
<td>2,937</td>
</tr>
<tr>
<td>Intended Coverage</td>
<td>50,000 pop.</td>
<td>2,000 pop.</td>
<td>500 pop.</td>
</tr>
<tr>
<td>Total Health Personnel</td>
<td>34-148</td>
<td>15(1 MD/center)</td>
<td>2-3</td>
</tr>
<tr>
<td>% Area Coverage</td>
<td>84/71 Prov. (over 100%)</td>
<td>252/556 (45%)</td>
<td>2,937/5,115 (57%)</td>
</tr>
</tbody>
</table>

1/ Source of Data: Ministry of Public Health, 1973. The "General Hospital" category includes more than the 71 provincial general hospitals.

The network represents a hierarchy of service points that correspond to the recognized civil divisions of Government: a simple midwifery center (third-class center), staffed by one midwife; at the village level; a second-class health center at the next higher or tambon level (one nurse and one junior sanitarian); a first-class health center, with 6-8 beds, at the district level, where a doctor and a supporting staff of 14 are stationed; and a general hospital at the provincial capital. As Table 1 and Chart 1 opposite both show, this network is still far from complete, and it will take many years to provide standard facilities over the whole country. The hospital coverage is more complete than the health-center coverage; the least complete coverage is at the village level, where only about one in every 20-25
villages has any kind of Government health post. The Ministry is in fact eliminating the village midwifery centers by upgrading many of the existing ones to 2nd-class health centers; this will speed up the process of achieving wider coverage of tambon-level facilities but leaves untouched the problem of providing services at the village level. In 1974 the Ministry had plans to fill this gap by the appointment of village health volunteers in every village. While full details of this important innovation remain to be worked out, and implementation will undoubtedly take a few years, the village health worker would provide what is now the main "missing link" in the Ministry's service-delivery network, i.e., the presence of health workers at the village level. The introduction of this new cadre could provide a major extension of the MOPH network capable of delivering family planning information and services; but this will depend on the supervisory rules governing the dispensing of pills by such workers.

4.05 The reach of the official health-delivery system is not accurately shown by the proportion of areas with standard facilities. For example, many health centers have had no doctor and many have been short of nurses. This of course restricts the range of services (including family planning services) which can be provided at such centers. Without a doctor no sterilization or IUD services are possible. In the small minority of areas where nurses are in fact inserting IUDs, a center short of nurses is less likely to have a

1/ Village volunteers would be appointed by village committees, one to a village. They would normally hold other jobs and would perform their new health functions in their free time. They will initially have three priorities: family planning (pill and condom distribution), Maternal and Child Health care, and nutrition. They will be given about two weeks' training. They will then be allowed to sell a standard list of household medicines useful in treating some five types of common complaints (gastro-intestinal infections, respiratory infections, parasites, skin problems, and headaches and minor fevers). They will be given an initial supply of medicines which they will then sell at a mark-up of 35% (giving the volunteer a 25% profit margin); resupplies must be purchased out of sale proceeds, so that there will be no direct cost to the Government after the initial supply. The health volunteers will probably be assisted by lower-level "health communicators" who will keep in touch with 8-10 neighborhood households. The volunteers would be supervised by the Junior Sanitarian in the nearest 2nd class Health Center, where these exist.

The initial appointment of village volunteers is expected to be made, in 1975, in one district (Hangchat - 45,000 population) in Lampang province, as part of a larger pilot project to develop a low-cost health delivery system (this is a USAID-supported DEIDS Project, i.e., the Development and Evaluation of Integrated Delivery Services). Thailand has had earlier experience with village health volunteers, in the late 1960s, in one district (Sarapee) not far from Chiang Mai.

For more details, see Annex B-6.
nurse trained in -- and with time for -- IUD insertions. But a more important limitation on the effective reach of the health-center network is the use of alternative sources of treatment by people when they get sick. Thailand, like many countries, has a network of unofficial sources of health care which in aggregate appear to provide a larger share of total care1/ than the official sources. These non-official sources include pharmacies in cities and towns, private clinics, and unlicensed traditional medical practitioners. (See para. 4.29, below.) While it is not easy to convey an accurate picture of the relative role of Government and non-Government care for different types of health needs, it is clear that people spend considerable more money on buying various forms of health care from private sources than the Government spends on providing official care. The main significance of these facts so far as family planning is concerned is to underline the importance of trying to identify and to use the more important of these non-official networks. The Ministry is already doing this through the permissions and encouragement it gives to the commercial (pharmacy) distribution of pills and to the two experiments in Community-Based Family Planning Services which were started in May 1974 and January 1975.

4.06 By the end of 1974, over 4,400 Government service points were reporting monthly family planning statistics to the headquarters of the NFPP. All but 1-2% of these Government service points were the Ministry's own hospitals and health centers; the rest included the 21 clinics run by the Bangkok municipality and perhaps a dozen non-MOPH hospitals and clinics, including the four major Bangkok hospitals, which are not run by the MOPH. Three years earlier, at the start of 1970, the Ministry had only 270 service points for family planning. The dramatic extension of the MOPH family planning network was made possible by an administrative ruling, based on a careful pilot experiment, that auxiliary midwives should be allowed to prescribe and distribute the pill on the basis of a specially-prepared checklist to screen for contraindications. This single ruling immediately increased the number of service points to almost 3,300. Pill distribution through the MOPH network increased dramatically as a result of this innovation. At the present time, the MOPH network of over 4,500 2nd-class health centers and midwifery centers constitutes the primary channel for pill distribution in the country, and is overwhelmingly dominant in the rural areas, where no pharmacies exist. However, this network does not cover more than about one-third of the population2/ and within the areas that are covered many people do not make as heavy use of MOPH facilities as of others which they find more convenient or more satisfactory for one reason or another. Thus, while the extension of the MOPH health center network will be important for family planning, other networks are also likely to be important.

4.07 Provincial hospitals are providing all types of contraceptive methods while 2nd-class health centers and midwifery centers are providing only pills (and a very small number of condoms). IUDs and pills are the major methods

1/ Measured in terms of relative expenditures involved.

2/ I.e., as measured by the ideal number of health centers the MOPH would have if its planning norms were fully met.
provided by first-class health centers. Recently health center physicians have started providing vasectomy service at many first-class health centers. During the period of January-June 1974, 41% of total IUD insertions and 46% of vasectomy were provided by the rural health centers (see Annex F, T-8). The particular "mix" of services provided at particular facilities depends on (a) the interest and motivation of key health staff at the facility in question, (b) the specific services which the available staff are allowed to perform, and (c) the training in family planning techniques which the staff have been given. Thus well-run in-service training courses for doctors and nurses are a crucial factor in motivating and qualifying key health personnel to promote and to provide family planning services. In general, the Ministry has had an unusually effective in-service training program for developing family planning knowledge and skills among health personnel.

4.08 The client-charges for sterilizations are not the only income received for these services by the Centers where they are performed. Additional payments of equal amount are paid to these facilities by the Ministry itself (with funds currently being supplied by UNFPA). Thus hospitals and health centers capable of providing these services have a fairly strong incentive to interest patients in accepting them. However, these fees and incentives are not paid to the health staff but are meant to be used in the same way as all other revenues generated at health facilities are used (para. 4.11). Although it is difficult to know what role the Ministry's incentive scheme has played, sterilizations (so far, mainly female) have become surprisingly popular in Thailand and the number has consistently exceeded initial forecasts. In 1974 there were over 73,000 sterilizations.

Maternal and Child Health Centers: A Special Facility

4.09 An institution of special significance for the NFPP is the set of four MCH Centers, three of which were built and put into operation in 1969/70 and one in 1974. These are independent maternity hospitals, each with 120-150 beds, and each with a midwifery training school attached. The Centers at Ratchaburi, Khon Kaen, and Yala (plus the older one in Bangkok) have all attracted many clients (they do 4-6,000 deliveries a year, with 70-90% bed-occupancy rates), have developed strong postpartum programs that have shown high acceptance rates for family planning (including many female sterilizations), and have developed mobile teams which deliver both ante- and postnatal care plus some family planning services. The newest Center, at Chieng Mai, will have to overcome some initial locational disadvantages before it can hope to become as successful as the other four.

4.10 The MCH Centers were built as demonstration and training centers, partly to encourage more Thai women to deliver in hospitals, partly to provide improved training for midwives (who must return to their villages for a minimum of three years' rural service) and partly to see how effective postpartum family planning services could be if offered under superior conditions of staff and environment. While results have been good, these institutions are expensive to build and to operate; consequently the MOPH has deferred its original plan to build one Center in each of the country's nine administrative regions.
Service Charges

4.11 A distinctive feature of the Government health system in Thailand is the extent to which services are paid for by the public. Something like a third to half of the non-personnel costs of each health center or provincial hospital is recovered from clients through various kinds of standard charges. (Indeed, this system, which seems well-established and well-accepted by clients, is one reason why the proportion of the RTG budget devoted to health is somewhat lower than in many other countries.) This service-charge system applies also to family planning services. The charges (called "contributions" to permit below-standard payments by those unable to pay the normal amount) are as follows:

<table>
<thead>
<tr>
<th>Service</th>
<th>Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cycle of oral pills</td>
<td>5 Baht (vs. 9-20 baht through pharmacies)</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>50 Baht</td>
</tr>
<tr>
<td>Tubectomy</td>
<td>150 Baht</td>
</tr>
<tr>
<td>IUD insertion</td>
<td>20 Baht</td>
</tr>
</tbody>
</table>

These are maximum permitted charges, but it appears that most places do in fact collect these amounts (each service-point is permitted to retain these and other revenues, which are deposited with the District Financial Officer for credit to the account of the facility which collected it. Funds are generally used for non-personnel expenses, such as maintenance, equipment, travel, supplies, etc.).

The MOPH price for pills has set the standard for charges by all other distribution networks except private commercial outlets, which charge Bt. 9-20 for a cycle of pills.

4.12 The MOPH client-charge for pills is approximately the c.i.f. cost of pills. At present, about three-quarters of the Ministry's pill supply comes as a donation from USAID while one-quarter is purchased by the Ministry. But as the Ministry takes over more and more responsibility for pill procurement it will be selling them, as it sells its other drugs, to clients for their approximate cost. The system appears to work well.

B. Health-Delivery Networks Outside the MOPH

4.13 Although the MOPH constitutes the official, the largest, and the fastest-growing health network in the country, there are several others. Indeed, Thailand, like many countries, has a variegated or pluralistic health-delivery system.1/ Many of these sub-system networks provide opportunities for the delivery of one or more family planning services; some are already being well used. It is important to recognize these networks and to assess

1/ See Riley "The Variegated Thai Medical System - A Context for Birth Control Services" in the Bibliography (Annex G-2).
their family-planning capabilities if the national family planning program
is to make full use of the available resources. The MOPH and the NFPP have
already established cooperative working arrangements with several of these
outside networks, both for family planning and for other purposes. The
summary review of the non-MOPH networks which follows is not offered on the
assumption that all networks automatically offer opportunities for providing
some form of family planning service; but it is suggested that even more use
can be made of several of them.

4.14 There are perhaps half a dozen types of networks that can be iden-
tified, i.e.,:

(i) Hospitals not run by the MOPH;

(ii) Primary general health care under Ministry of Interior programs;

(iii) Commercial channels (pharmacies plus other retail outlets);

(iv) Private doctors (modern), with their offices and in-patient clinics;

(v) Special-purpose family planning programs;

(vi) Traditional practitioners of various kinds.

A brief account of each of these networks follows.

Non-MOPH Hospitals

4.15 There are few non-Government hospitals in Thailand but there are several
Government hospitals run by agencies other than the MOPH. The important univer-
sity hospitals (four in Bangkok, one in Chiang Mai, and two under development
at Songkla and Khon Kaen) come under the Bureau of State Universities in the
Office of the Prime Minister. There are perhaps 2-4 missionary hospitals (the
McCormick Hospital and Family Planning Clinic in Chiang Mai has been outstand-
ing in its family planning work). The Army, Navy, and Air Force have a total
of 18 hospitals, run by the integrated Ministry of Defense. The Ministries of
National Development, of Agriculture, of Communications all have hospitals. So
does the Port Authority of Thailand, and perhaps certain other State Enterprises.
The NFPP has long relied heavily on certain of these hospitals, especially the
four prominent University hospitals in Bangkok, where much pioneering family
planning work was done in the 1960s and where a large volume of work continues.

C. Primary Health Care under Ministry of Interior Authority

4.16 This key Ministry is an important provider of health services. It
plays this role partly by virtue of its authority over local administration
throughout the country and partly because this Ministry runs two special rural
development programs that include health services.
4.17 The "Tambon doctor": 1/ in almost all the country's tambons (sub-districts) the MOI maintains a cadre of 5,225 tambon doctors; these are registered traditional doctors appointed by the MOI to provide first-aid, to dispense simple medicines, and to combat outbreaks of communicable diseases. Tambon doctors serve the Ministry on a part-time basis and are paid a nominal monthly salary of Bt. 170 to Bt. 240. Selected by the local village council, the tambon doctor obtains medical supplies from Government stores and sells drugs to clients at fixed prices (he is not allowed to charge for his own services). In the early 1970s 4,600 of these doctors were given two-week training courses in Bangkok; the courses included first aid, how to give injections, the curing of animal diseases, and family planning (although the tambon doctor is not yet allowed to distribute contraceptives). The MOI has recently recruited and trained, again in two-week courses, some 2,100 assistant tambon doctors, all of them younger men who have completed their military service, often as army medics. Although budgetary limitations have prevented the MOI from paying the assistants any stipend, it is hoped that they will gradually replace the older tambon doctors. The existing tambon doctor is fairly close, functionally, to the proposed village health volunteers which the MOPH intends to appoint (see para. 4.04); whatever family planning functions are assigned to the volunteers would also seem appropriate for tambon doctors.

4.18 ARD's mobile medical services and paramedics: the MOI's Department of Accelerated Rural Development (ARD) 2/ also provides medical services as part of its larger development efforts. It has a mobile medical services program and a paramedic program which provide medical services to villagers in 31 of the 71 provinces. The ARD Office of Technical Services operates 44 mobile teams serving around 750,000 patients annually. 3/ These mobile teams extend health and medical care services to the poorer areas where MOPH services are often unavailable. Begun in 1966, the program operates in villages and townships mainly in the North and Northeast regions. The mobile medical teams usually consist of 1 or 2 doctors, 1 nurse, and midwives and sanitarians working out of existing provincial and district health centers (the staff of the health centers are seconded to the MOI, which pays half their monthly salaries).

1/ Thai usage extends this title to almost any kind of modern or traditional healer.

2/ The ARD program is a Government-supported rural development program for strengthening the development capability of the Changwat Administration and Tambon Council.

3/ The total number of patients treated has been declining in recent years from over 1.7 million in 1971 to around 0.5 million patients in 1973. This decline is attributed to the increasing number of patients who are encouraged by mobile team personnel to go to Government health centers wherever available.
The mobile teams are used on average 15 days a month and see around 200 patients a day. To ensure the program is closely coordinated with MOPH activities, a Health and Medical Care Committee, chaired by the Minister of Health and including representation from the ARD has been appointed.1/

4.19 Since 1965 the mobile medical team program has been augmented by a paramedics program which trains and supervises home-visiting paramedics who work out of second-class health centers.2/ As of 1974 some 1,136 paramedics had been trained (6 months course) and were providing health services. The paramedics treat patients suffering from minor ailments and refer serious cases to the mobile teams, health centers or provincial hospitals. (See Annex D-8 for a list of the number of paramedics employed, by province, and the number of persons receiving medical care from them.) Recently, family planning training was added to the training curriculum. This training in the delivery of family planning services and family planning information and education is provided by the Planned Parenthood Association of Thailand (PPAT). A family planning drive has commenced in two provinces -- presumably a test of the usefulness of ARD paramedics for family planning.

4.20 Community Development workers: the MOI has a community development program which is run by the Department of Public Welfare. The 2,000 Community Development (CD) workers, most of them relatively young university graduates, work at the village level and are responsible for coordinating community development efforts. CD workers are members of the village council and village development committee and are supervised by the District Officer. They organize training programs, youth and women's groups, pre-school child development programs, home-economics classes, etc. Most CD workers are graduates of the Department of Social Work of the Faculty of Social Administration at Thammasat University. Family Planning is included as an integral part of the four-year bachelor's degree curriculum; the course covers the clinical, motivation and population dynamics aspects of family planning and includes 48 hours of instruction. Although some 200 CD workers presently distribute contraceptives with assistance from PPAT, the role of the CD worker is primarily one of ensuring that family planning is integrated into all aspects of social life.

4.21 The Department of Social Work has also run population seminars and workshops for adults. For example, in October 1974, a one-week family planning course was given to 48 local women leaders from 8 provinces in the North.

1/ The ARD spends around Bt. 400,000 per year per mobile team to operate the mobile vans; Bt. 180,000 for drugs; Bt. 6,500 for petrol costs; Bt. 2,500 for maintenance expenses; Bt. 130,000 for salaries and per diem expenses. Expenditures for the mobile teams have increased from Bt. 1.5 million in 1966 to Bt. 15.8 million in 1972. The USAID supports the program by supplying commodities such as medical equipment, radios and vehicles.

2/ Trainees are required to live in the community and to possess the equivalent of a sixth-grade education. They are given in-service training courses after several years on the job. They are supervised by senior paramedics who report to the District Medical Health Officer and are eligible to become sanitarians in the MOPH.
The women were selected by the village development councils and given lectures by officials, MOPH doctors, PPAT representatives, etc. The course was intended to provide these women with enough clinical and motivational information to enable them to sell contraceptives and motivate continuing users. The pilot project will be evaluated by CD workers and, if successful, will be extended.

4.22 Border Patrol Police: the Border Patrol Police (BPP) also provide health and family planning services to a substantial part of the nearly five million people they serve in the remote border areas. These services are offered by male auxiliary nurses who attend three-month courses run by the BPP. These auxiliaries work in 676 rural dispensaires which offer treatment to civilians as well as security personnel (over 500,000 civilian visits were recorded in 1973).

4.23 In 1974, one-week family planning courses were conducted by the MOPH and BPP for 270 auxiliaries. The course was to enable the BPP trainees to prescribe oral pills, counteract rumors and motivate families to accept family planning. These auxiliaries currently provide family planning service in some 200 rural villages.

Commercial Channels

4.24 There are about 12,000 pharmacies in Thailand. They are divided into three classes (A, B, and C) according to the kinds of drugs they are permitted to dispense; only "A" pharmacies are supposed to sell prescription drugs, which up to now has included oral contraceptives (but see Annex B-3). The pharmacy network is limited almost exclusively to cities and towns, where they cater to a class of people with more cash income than the great majority of villagers have. There is, of course, a much more extensive network of non-pharmacy retail shops and stalls, which does extend to the village level. If oral contraceptives are removed from the "dangerous drug" list, the market strategies of distributors who handle them will be considerably widened, although limited purchasing power will impose considerably narrower limits than the physical extent of this most pervasive of all networks might suggest. The (subsidized) Community Based Family Planning Services (CBFPS) program is also making selective use of the existing retail networks (see para. 4.28 and Annex B-5).

Private Doctors (modern)

4.25 It is estimated that there are about 5,000 private doctors' offices or clinics, some with in-patient facilities, distributed over the country. A large proportion of these private doctors' offices are run by physicians who are also in Government service: MOPH rules permit Government doctors to engage in private practice outside Government hours, and in fact a very high

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The oral contraceptives are provided by PPAT. They are sold at Bt. 5 per cycle, with the women keeping Bt. 2.
proportion do so, including most doctors who serve in rural areas. One effect is to extend the hours during which medical services are available in a community; another may be to offer a greater degree of privacy than the Government clinic may offer. The important point is that there are almost as many private doctors' offices in the country as MOPH health centers and these constitute a resource which might well be given an important role in the national family planning program; their present role appears negligible (see para. 4.40).

Special-Purpose Family Planning Programs

4.26 There are two or three institutions or programs engaged solely in family planning which constitute potentially very important resources for the NFPP; indeed, the Program is already using them. These are the Planned Parenthood Association of Thailand (PPAT) and two Community-Based Family Planning Services (CBFPS) projects, one jointly sponsored by PPAT and the International Planned Parenthood Federation in London, the other associated with Mahidol University.

4.27 Planned Parenthood Association of Thailand: PPAT is a young organization, formed in 1970, that does not have a network of clinics or strong representation in the provinces (a single branch has recently been organized by local leaders in Chiang Mai). It does, however, have a strong central office which has developed a program concentrated on information and education but which also includes several projects designed to extend family planning services to particular groups. In some cases PPAT will itself provide services for special groups, as in its vasectomy project where it recruits mobile education and medical teams to test public acceptance of this particular service. In other cases PPAT organizes training courses for groups which have their own medical staffs but which want to give them family planning training (as PPAT has done for the ARD program, the Border Patrol Police, and Community Development workers). Thus while PPAT does not have a permanent, in-place network which the NFPP can use, it is capable of taking responsibility for organizing temporary "networks" (such as mobile teams) by recruiting staff for short periods. PPAT appears likely to be less important to the NFPP as a supplementary network for extending family planning services than as a convenient and close working partner in the private sector that can take on a number of special assignments on behalf of the NFPP which the latter, for one reason or another, would find difficult to do itself.

4.28 Community-Based Family Planning Services: a series of experiments in extending family planning services through non-clinical channels is now in progress in several countries under the general sponsorship of IPPF (London). Thailand has two such Community-Based Distribution (CBD) experiments, one national in scope, the other limited to a single district. Two key concepts underlie the CBD approach. The first is the expectation that acceptance rates can be significantly raised if certain services can be brought closer to where people live, i.e., if they can be made more convenient and accessible than if people must travel to clinics. The second is the expectation that many people will tend to accept services more readily from community individuals they know and
trust than from others separated from them by "social distance." Thus the CBFPS program is to make use of existing community resources (small shops, teachers, tambon doctors, unlicensed medical practitioners, etc.) to distribute pills and condoms to their "natural clients," i.e., people who already know, use, and trust them as sources of information and services. One large nationwide CBFPS program was started in the spring of 1974 with PPAT/IPPF sponsorship; a second pilot-project scheme was started in January 1975 with the help of faculty members in the Department of Health Administration at Mahidol University (see Annex B-5). The MOPH has given its approval to both projects. Nobody knows how successful these two experiments will be. There are problems of supervision, of the integration of service statistics into the national system, and, especially, of the financial relations between CBFPS distribution and local health centers which need to be worked out more clearly. Removal of the pill from the "dangerous drug" list would simplify problems in one sense -- but leave unsolved the problem of what financial relationship, if any, ought to exist between the CBFPS distributors and the local health centers, which sometimes see CBFPS success as a loss of "their" market.

Private Practitioners (traditional)

4.29 There is a large number of traditional practitioners, injectionists, and herbalists who offer a wide variety of medical remedies and services, sometimes with admixtures of modern therapy. At least one class of traditional practitioner is licensed by the MOPH, on the basis of an annual examination. While most activities of traditional practitioners are entirely legal, some are not, and the general expectation among scientifically-trained health personnel would be that traditional practitioners will die out as the official health system is extended. Despite some conflicts, there appears relatively little cultural confrontation between the modern and traditional medical systems, since both move in circles relatively independent of each other as determined mainly by the preferences of the market (i.e., what sources of help people seek out when they need help). Since relatively little is known about the traditional sector, and since it has such little formal structure, it would not seem a promising one for distributing family planning services. But some attempts, such as a pilot experiment to use "Granny midwives" (mohtamyae) have already been made.1/

D. Expansion of the MOPH Network, 1976-1981:
Facilities and Manpower

4.30 The MOPH network has consistently recruited far more new acceptors than all other networks combined. (Its role is less dominant if commercial-sector activity is taken into account, something the regular service-statistics are not able to do.) For example, MOPH facilities have been responsible for recruiting more than 80% of all non-commercial acceptors during the past 10 years (Annex F, Table 9). Within the MOPH network, it is the Health

Centers which bring in the largest numbers; together the 1st and 2nd Class Health Centers typically account for 60-70% of all non-commercial acceptors and for 75-80% of all MOPH acceptors. The MOPH hospitals (the figures for which include the four big Bangkok hospitals) normally account for 25% of all MOPH acceptors. While it is possible that non-MOPH delivery networks may grow in relative importance, the MOPH network will remain the single most important delivery channel for the foreseeable future. Consequently, the Ministry's expansion plans for the Fourth Plan period are of great importance to the NFPP as well as to the general extension of health care.

Relationship Between Expansion of Facilities and of Manpower

4.31 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 2 below, and Table 9 of Annex E). 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 number of additional manpower that will be needed, by major categories.

4.32 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. These manpower calculations appear in Table 11 of Annex E. 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.

1/ Estimates have also been made of the capital cost of representative MOPH facilities; see Annex I-4. It is worth noting that the MOPH does its own design, contracting, and construction supervision work. Thailand has no Ministry of Works or Public Works Department, so most ministries look after their own construction. The size and composition of the MOPH capital expenditures for 1972-74 are shown in Annex I-3.

2/ See Annex E-12.
4.33 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.\(^1\)

4.34 Table 2 below presents a summary of the more detailed projections on the growth of facilities and needed manpower between 1976 and 1981.

<table>
<thead>
<tr>
<th></th>
<th>Expansion of MOPH Facilities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1976</td>
<td>1981</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td>(est'd no.)</td>
<td></td>
</tr>
<tr>
<td>Prov'l hosp. beds</td>
<td>21,000</td>
<td>25,000</td>
<td>27,000</td>
</tr>
<tr>
<td>1st Cl. H.C.s</td>
<td>270</td>
<td>320</td>
<td>345</td>
</tr>
<tr>
<td>2nd Cl. H.C.s</td>
<td>3,200</td>
<td>3,950</td>
<td>4,200</td>
</tr>
<tr>
<td>3rd Cl. H.C.s</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>(midwifery centers)</td>
<td>5% attrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number required</td>
<td>12,400</td>
<td>14,750</td>
<td>15,675</td>
</tr>
<tr>
<td>Number available</td>
<td>7,197</td>
<td>10,364</td>
<td>10,364</td>
</tr>
<tr>
<td>Shortage(^5)</td>
<td>5,203</td>
<td>4,386</td>
<td>5,311</td>
</tr>
</tbody>
</table>

1/ Consideration is being given to altering the staffing pattern of the second class health centers to include the posting of practical nurses at this level to provide more continuous availability of service in this type of facility. Also the use of nurse practitioners is being discussed. These are the types of changes which would somewhat alter the manpower requirements projected above.

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%.

5/ Before taking account of any expansion in training capacity.

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%.
4.35 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 3 below presents this comparison:

Table 3. Possible Fourth Plan Expansion of Health Facilities Compared with Third Plan Targets and Results

|                      | Third Plan | Fourth Plan Projections
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Results to 9/74</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.

4.36 The manpower projections (Table 2 above and Table 11, Annex E) 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 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 (see Table 7, Annex E).
Integration of Practical Nurse/Midwife and Midwife Categories

4.37 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 curricula, 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 said to be sympathetic.

Nurses' Aides as MCH/FP Workers for Rural Health Scheme

4.38 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, girls 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 girls who, after some field experience, might later want to go to school to become ANMs.

Concluding Observations on Manpower Constraints

4.39 The preceding manpower analysis has suggested that expansion of the MOPH network will not be seriously constrained by shortages of either doctors or Registered Nurses. It will, however, be severely taxed by a continuing shortage of Practical Nurse/Midwives and Midwives. Additional training capacity seems clearly needed, and three methods -- all of which might be used -- have been suggested to secure the additional output needed. It has also been suggested that improvements in the occupational structure, training programs, and staffing patterns for nurses could also relieve the ANM shortage. The specific suggestions are (a) to integrate two presently separate but closely-related occupations and (b) to introduce into the health centers the Nurses' Aide category that has been used successfully in provincial hospitals. These proposed changes should not only minimize the ANM shortage but, equally important, would also allow better use of higher-trained nursing personnel.
E. Summary of Delivery Strategies Available to the NFPP

4.40 The institutional structures and program activities reviewed above describe the current means of delivering family planning services in the country today. The total system as it now exists has evolved through a process of "creative incrementalism," i.e., the progressive enlargement of the total system by creating or adding delivery networks that have the potential for reaching new target groups. We have tried to think of all possible delivery networks which might be expanded during the Fourth Plan; the following list of ten program strategies deserves careful consideration (pp.47-49 discuss some of the advantages and disadvantages of each):

(i) Expand the network of Maternal and Child Health Centers, emphasizing post-partum sterilization and IUD services plus the development of mobile services for IUDs, injections, and vasectomies;

(ii) Expand the maternity-bed capacity and post-partum activities at existing provincial hospitals;

(iii) Expand the network of 1st and 2nd-Class Health Centers;

(iv) Expand village "service points" by establishing a cadre of village health volunteers who will be authorized to distribute pills under rules issued by the MOPH;

(v) Add mobile services to many existing static service points;

(vi) Encourage the growth of Community-Based Family Planning Services;

(vii) Encourage the maximum growth of commercial distribution;

(viii) Expand doctor-provided services by developing a fee-for-service program for private practitioners;

(ix) Take steps to assure that all other Government medical facilities and networks are involved in providing family planning services to their clienteles; these should pay particular attention to the resources available in programs operated by the Ministry of Interior;

(x) Assign a clear "pioneer" role to PPAT. Work out with PPAT a set of innovative functions (e.g., for testing the acceptability of vasectomy, the organization of services at large scale enterprises in the Bangkok-Thonburi area).
Relative Attractiveness of Different Strategies

4.41 The simple listing of possible family planning strategies is a helpful starting-point for selecting the particular "mix" of program activities for the Fourth Plan. The next step is to see what can be said about the relative cost/effectiveness of the various strategies listed. The difficulty of identifying the family-planning costs of strategies which make use of the general health-delivery system has been emphasized. Thus the extent to which the program chooses to rely on hospitals and health centers should be determined by considerations other than cost -- for example, by judgments about how rapidly the health network is likely to expand, the need for health-network facilities and medical personnel to provide the more effective family planning methods (sterilizations and IUDs), and the need for a local medical presence to monitor and supervise non-medical networks and to provide referral sources for clients who need medical consultations. The important point, however, is that there are many ways to expand family planning networks without waiting for further expansion of the health network, and most of these expansions can come at relatively low cost. Those that depend on a near-by medical presence can be introduced in those areas where the MOPH network already exists (as in the two experiments with village volunteers referred to in para. 4.46 below). The following paragraphs call attention to some of these non-health-network possibilities, many of which are already being partially used.

4.42 From the viewpoint of the Government budget, the lowest cost strategy is offered by expansion of the commercial sector -- an obvious but perhaps neglected point. While there are distinct limits to what the commercial network can do, it will cost the Government little or nothing to encourage commercial distribution to the maximum extent possible. The next-lowest-cost would appear to be the village health volunteer (see below). Finally, the CBD programs are low-cost even if Government should subsidize them by giving them pills free (to the extent that Government avoids this cost, the CBD costs to Government become similar to those of the -- self-financing -- village health volunteers, or the commercial sector).

4.43 Strategies (v) (adding mobile services to existing static service points) and (viii) paying private doctors to provide services) appear the next-lowest-cost strategies. Strategies (vi), (ix), and (x) are all within the same general range, i.e., in terms of budgetary cost there is not much to choose among them.

4.44 The MCH Centers are expensive, as is well recognized. They involve both high capital costs and high operating costs. They are, however, multi-purpose MCH facilities which provide a high-quality setting for institutional deliveries, important training benefits for nurses and doctors, and the provision of family planning services. The relevant cost comparison is between the specialized maternity hospitals (which is what the MCH Centers are) and the maternity wards of the regular provincial hospitals. For example, if the money needed for one MCH Center were used instead to expand the maternity wards of provincial hospitals, one could get five hospital expansions for the same capital cost and with substantially lower operating costs. The number of additional beds would be roughly the same, so there would not be much difference
in the number of deliveries that could be handled. However the postpartum programs at provincial hospitals are unlikely to be as effective as at MCH Centers that are well-located and fully staffed. A re-examination of design standards used for MCH Centers might show that they could be build at substantially lower cost.

4.45 The capital cost of one MCH Center would also build 4-5 1st-Class Health Centers and the 32-40 2nd-Class Centers associated with them. Annual operating costs of these 4-5 sets of HCs would be Bt.2-2.5 million, less than half the cost of running one MCH Center. This number of HCs might recruit 2500-3500 new acceptors per year, only a little over half the number to be expected from a successful MCH Center; also the quality of acceptors would be quite different (many fewer sterilizations and IUDs, many more pills, at Health Centers).

4.46 The introduction of village health volunteers\textsuperscript{1} can be a very low-cost strategy, depending on their success as recruiters and how much of the costs of supervision are charged to family planning. There would be practically zero capital and operating costs (perhaps some initial uniform costs, plus some bicycles or motorscooters for supervisors). For example, if 4000 village health volunteers could be appointed within, say, the next two years this would provide as many new village "service points" as there are now 2nd-Class Health Centers. While it is impossible to predict in advance how many new acceptors (almost all of whom would be pill acceptors) each volunteer would recruit, the cost would clearly be far lower than trying to achieve the same coverage by doubling the present network of 2nd-Class Health Centers. The presence of the volunteers may reduce the pill-distribution role of the

\textsuperscript{1} There are two experiments starting in 1975 that will make use of village volunteers. One, part of the USAID-assisted DEIDS project in the Lampang District in the Northern Region, will use general-purpose village health workers who will be authorized to sell a selected list of drugs for common diseases and complaints. The volunteers will be given two weeks' training and an initial stock of drugs (replacement drugs will be purchased from the MOPH at cost out of proceeds from sales). The volunteers consist of "sets" of one health-post volunteer whose home automatically becomes a health post plus a group of "communicators" or low-level health educators, one for every 10 households. The volunteers are non-health workers who devote their spare time to their health work. They will be paid no salary; their only income will be the modest margins the health-post workers earn on their drug sales. They will be under the supervision of the junior sanitarians assigned to 2nd-Class Health Centers. It is hoped that the volunteers can increase utilization of the 2nd-Class HCs by making referrals, and that staff from the HCs may be able to use the volunteers' homes as posts for mobile services. Supervision will be a key problem.

A second experiment is just starting in Po-thong, 85 miles north of Bangkok. Here single-purpose village volunteers will devote themselves exclusively (in their spare time) to family planning. This experiment, conducted by staff in the Faculty of Public Health at Mahidol University, is described more fully in Annex B-5.
(less convenient) Health Centers but may make it possible to recruit more IUD and sterilization cases (this might require training Assistant Nurse Midwives (ANMs) at the 2nd-Class Health Centers to insert IUDs and perhaps to inject Depo Provera, or wider use of mobile teams to provide sterilizations).

4.47 An expansion of mobile services also looks attractive from a cost/effectiveness viewpoint. They would concentrate on male and female sterilizations, IUDs, and injections -- all "high quality" acceptors. For example, it might be possible to organize 10-15 additional mobile units in each of the next two years, at a capital cost of Bt. 160,000-240,000, and an operating cost of Bt. 180,000-270,000 for each year's expansion. If each team averaged 30 new acceptors for each of the 100 days in the field this would mean 30,000 to 45,000 new acceptors per year. This would be far less expensive than MCH Centers, HCs, or provincial hospitals (but much more expensive than village volunteers).

4.48 Fee-for-service programs for private doctors and nurses would not involve as much risk for Government as building health facilities, since the Government pays nothing if there is no performance. Unlike strategies which require Government investment in service facilities (which may or may not be well used), the cost per acceptor depends almost wholly on the level of fee chosen (the only other cost would be the administrative cost of printing and distributing forms, processing claims for payment, making the payments, plus occasional audits to minimize fraud).

4.49 Making use of other Government health-delivery networks is clearly a low-cost strategy, and deserves attention. But the numbers of new acceptors likely to be reached by this strategy seem relatively low. This promotional strategy may be useful in educating a large number of Government officers and in recruiting more doctors and nurses who, if motivated and trained, would become available also for part-time private family planning work.

4.50 The use of the Planned Parenthood Association of Thailand (PPAT), primarily on a contract basis, looks attractive both on grounds of low and limited-commitment costs as well as giving the MOPH an important institutional resource for pioneering certain innovations (indeed, the use of contractual arrangements with other private and semi-private institutions might be considered. For example, the Chulalongkorn Family Planning Clinic and the McCormick Family Planning Clinic might be given responsibility for developing other mobile family planning services, run by other institutions, in certain regions.) The contract device involves relatively low costs, low risk (since unsatisfactory experience can be terminated) and can be used to get detailed planning done for specific activities which the MOPH might not have time to deal with.

1/ But see fn. 1, p. 38. The difference in cost may be attributable to the heavy drug costs of the ARD mobile units, and perhaps heavier staffing.
V. MEASURING PROGRAM RESULTS

5.01 The monitoring and measurement of program results includes three types of statistical and research/evaluation activities. These are: the maintenance of a system of service statistics; the conduct of a program of operational research and cost studies for evaluating the strategies and policies which make up the program; and the measurement of demographic trends, with special emphasis on fertility trends. This chapter summarizes the status of these three types of evaluation activities in the Thai program as of late 1974 and makes some suggestions for the future.

A. The Service Statistics System

5.02 The program has developed an efficient system for recording the numbers of new acceptors recruited through the Government's Program, showing the methods chosen by acceptors, and the types of service-points through which new acceptors are recruited. The details of the service statistics system are described somewhat more fully in Annex G-1.1/ By and large, service units submit their reports to program headquarters with reasonable promptness and with an apparently high standard of accuracy and integrity. Provincial summary data are fed into a computer at headquarters (the service statistics were computerized in late 1973) and consolidated figures for the whole system are made available in a rather bulky computer print-out, available in about a dozen copies. This monthly report is distributed within the MOPH and to two or three interested outside agencies (including the two largest external donors). No monthly abstract of these statistics is prepared for public distribution, or for distribution within the health sector. The only feedback to regional offices is the copy of the performance statistics for each province which are sent to the Provincial Chief Medical Officer, giving him the picture for activities in his province but not for other provinces. Thus, there is no general distribution for health personnel or for the general public of performance statistics on a current basis. While there is probably no need to prepare a monthly document for general distribution, it would seem desirable to prepare a brief quarterly, or at least semi-annual, abstract for general distribution.

1/ The most complete and detailed description of the NFPP's service statistics system is contained in a document under preparation in the Population Division of the Economic and Social Commission for Asia and the Pacific (ESCAP). ESCAP is conducting a "Comparative Study of Service Statistics Systems for Evaluation of Family Planning Programmes" in a number of member countries; this is expected to result in one or more publications starting in 1975. A draft report on the Thai program was prepared in the Ministry of Public Health in October 1972; it contains a detailed description of the NFPP service-statistics system, the organization of the central Research and Evaluation Section in the Ministry's Family Health Division, and a 10-page description of the method used to set program targets and to estimate births-prevented for the First Five-Year National Family Planning Plan (1972-76).
5.03 At present, data on the system's performance is made public mainly through a convenient and attractive annual report, which now appears about 15 months after the close of the year. Recent annual reports have been very attractively and simply prepared, with excellent graphics showing the trend of performance over time.

5.04 Much the most serious shortcoming of the service statistics system at its present stage of development is that relatively little analytical capability has yet been developed for making use of it for understanding and improving the performance of the program. Most of the major operational studies which have been made in recent years have been conducted by academic researchers at Mahidol or Chulalongkorn Universities. The Program's own Research and Evaluation Unit needs strengthening to develop the kind of capacity for program analysis which has been used to such good effect in Taiwan, for example. Two or three of the senior officers of the Research and Evaluation group, perhaps accompanied by representatives from the Mahidol and Chulalongkorn Population Institutes, might visit outstanding centers to learn how they have organized themselves to collect and analyze data for purposes of program improvement.

5.05 As noted, one very positive feature of the Thai Program is the relatively good and close relationships that have been developed between that part of the National Program provided through the MOPH and the family planning activities provided through other channels (e.g. the commercial sector, the young but promising Community-Based Distribution (CBD) activities, and services provided through the medical facilities operated by Government units other than the MOPH). At present the service statistics system does not adequately reflect the growing interdependence of MOPH and non-MOPH activities and does not measure completely the total volume of family planning activity in the country. A more deliberate attempt needs to be made, while the system is still relatively young, to incorporate in the service statistics system measures of activity outside the MOPH. Some attempts have already been made to do this. For example, a public accounting firm in Bangkok has been commissioned by USAID to collect from importers of contraceptive supplies data on the volume of their imports, by quarters. While total contraceptive import figures are thus reported to the MOPH, the figures are not included in the monthly service statistics and are not publicly reported. Nor is it at all clear to what extent the present service statistics include reports from non-MOPH Government service units or from the new CBD programs. While in theory both of these networks do report their activities to the Ministry on a monthly basis, they are not separately identified in the service statistics. The four major Bangkok hospitals and the Bangkok Municipality's 21 clinics, for example, have their activities regularly included in the Ministry's monthly statistics; but it is much more difficult to assure faithful reporting by other non-MOPH units unless those units are receiving supplies from the Ministry, in which case they undertake an obligation to submit regular reports on the Ministry's standard forms. While there seems no need to report every month on the distribution of acceptors among MOPH and other service networks, it is very important that reasonably detailed breakdowns be prepared occasionally (say once a year) so
<table>
<thead>
<tr>
<th>Distribution by Region (number)</th>
<th>Cumulative Number This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok Metropolis</td>
<td>66,467</td>
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<tr>
<td>Central Region</td>
<td>94,168</td>
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<td>Northeast Region</td>
<td>174,520</td>
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<td>North Region</td>
<td>122,681</td>
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<td>South Region</td>
<td>36,643</td>
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<td>Total</td>
<td>491,479</td>
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</table>

<table>
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<th>Distribution by Organization (%)</th>
<th>Total</th>
<th>IUD</th>
<th>Pill</th>
<th>F. Ster.</th>
<th>M. Ster.</th>
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<th>Pill</th>
<th>F. Ster.</th>
<th>M. Ster.</th>
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<td>3.8</td>
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<td>9.3</td>
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<td>75.8</td>
<td>2.5</td>
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<td>MCH Centers</td>
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<td>1.5</td>
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<td>100.0</td>
<td>100.0</td>
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</table>

1/ But does not include commercial sector, for which no "new acceptor" figures are available.

Source: Adapted from MOPH/Population Council monthly report for January 1975.
that everyone concerned with the national program will have a picture of the roles being played by different service networks and can plan strategies in the light of such knowledge. Such annual "checks" can be made partly by analyzing the sources of service statistics included in the Ministry's monthly tabulations, partly by collecting figures directly from the headquarters of other programs whose inclusion in the monthly statistics is unclear or incomplete (e.g., the CBD programs), and partly by continuing to collect data on commercial imports and domestic production (at least one manufacturer has recently started domestic production of pills, and there is one small condom manufacturer. If individual manufacturers show reluctance to report their production it will be necessary to estimate their output by converting imports of raw materials to quantities of finished product.)

5.06 The approach to service statistics, and to their periodic public reporting, suggested above parallels the broad-definition conception of the National Family Planning Program (NFPP) outlined in Chapter I and which is already widely accepted. Table 1, opposite, presents a monthly summary report on "New Acceptors" presently issued by the MOPH's Family Planning Division. It is quite close to the coverage suggested above, lacking only (a) a detailed breakdown of the "other ministries," (b) information on commercial sales, and (c) data on the new CBD programs. It is not being suggested that these last two items be included in the routine monthly report; but information on these three networks should be prepared annually or semi-annually and should be included in annual reports issued by the NFPP.

Regional Variations in Performance

5.07 Table 2 below provides an excellent illustration of the use of service statistics that deserves to be seen more frequently—and of results which deserve to be published. The table ranks all 70 provinces according to their success in recruiting new acceptors in 1973. Performance has been measured not in terms of absolute numbers of new acceptors but as a percent of all married women under age 45. The huge variation in performance is immediately apparent, ranging from the low of 1.24% in Yala to 17.71 in Khon Kaen. The top five provinces average 5 times the rate achieved by the bottom five. There are clearly some broad regional conclusions one can draw; e.g., of the top 10 provinces all but one are in the Central, Northern, or Northeastern regions and only one is in the South (there, Phuket, is a physical and sociological island dominated by a labor force engaged in tin-mining). Of the bottom 10 provinces, 8 are in the (Moslem) South and 2 are in the Northeast's southern border strip.

5.08 Another point brought out well by Table 2 is the great variation in methods accepted in different provinces. For example, the top two provinces show striking difference in the proportions accepting pills and IUDS. Another, Loei, had a very strong showing on pill-acceptance but a weak showing for both IUDs and sterilizations. One province with a very successful MCH Center, Yala, nevertheless was able to recruit only a fraction of the sterilization-acceptors
Table 2. Family Planning Performance (New Acceptors) by Changwat: 1974

<table>
<thead>
<tr>
<th>Changwat</th>
<th>Rank</th>
<th>% of All Married Women Under Age 45 Accepting FP Services</th>
<th>% of All Married Women Under Age 45 Accepting Oral Contraceptives</th>
<th>% of All Married Women Under Age 45 Accepting IUD</th>
<th>% of All Married Women Under Age 45 Accepting Sterilization</th>
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<tr>
<td>Khon Khaen</td>
<td>1</td>
<td>20.54</td>
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<td>9.58</td>
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<td>Bangkok</td>
<td>2</td>
<td>17.50</td>
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<td>Ratchaburi</td>
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<td>5.34</td>
<td>4.03</td>
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<td>Trat</td>
<td>4</td>
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<td>13.15</td>
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<td>Chanthaburi</td>
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<td>Saraburi</td>
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<td>Singburi</td>
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<td>14.71</td>
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<td>Loei</td>
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<td>14.28</td>
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<td>0.36</td>
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<td>Phuket</td>
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<td>6.40</td>
<td>1.43</td>
<td>1.37</td>
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<td>Angthong</td>
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<td>7.83</td>
<td>0.52</td>
<td>0.95</td>
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<tr>
<td>Uttaradit</td>
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<td>9.17</td>
<td>7.18</td>
<td>1.16</td>
<td>0.81</td>
</tr>
<tr>
<td>Nonthaburi</td>
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<td>9.01</td>
<td>7.95</td>
<td>0.13</td>
<td>0.92</td>
</tr>
<tr>
<td>Lopburi</td>
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<td>8.98</td>
<td>6.90</td>
<td>0.61</td>
<td>1.16</td>
</tr>
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<td>Kanchanaburi</td>
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<td>6.84</td>
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<td>Tak</td>
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<td>6.72</td>
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<td>1.10</td>
</tr>
<tr>
<td>Yala</td>
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<td>8.72</td>
<td>4.46</td>
<td>1.78</td>
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<tr>
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<td>8.68</td>
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<td>0.79</td>
<td>1.44</td>
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<tr>
<td>Prathum-Thani</td>
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<td>8.68</td>
<td>7.92</td>
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<td>0.13</td>
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</table>

(Continued)
### Table 2. (Cont'd.)

<table>
<thead>
<tr>
<th>Changwat:</th>
<th>Rank</th>
<th>% of All Married Women Under Age 45 Accepting FP Services (^1)</th>
<th>% of All Married Women Under Age 45 Accepting Oral Contraceptive</th>
<th>% of All Married Women Under Age 45 Accepting IUD</th>
<th>% of All Married Women Under Age 45 Accepting Sterilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayuthaya</td>
<td>46</td>
<td>8.64</td>
<td>7.00</td>
<td>0.90</td>
<td>0.74</td>
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<tr>
<td>Maha-sarakram</td>
<td>47</td>
<td>8.60</td>
<td>5.74</td>
<td>2.05</td>
<td>1.11</td>
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<td>Samut Prakan</td>
<td>48</td>
<td>8.51</td>
<td>7.34</td>
<td>0.33</td>
<td>0.63</td>
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<tr>
<td>Satun</td>
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<td>7.86</td>
<td>0.11</td>
<td>0.38</td>
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<td>Surat Thani</td>
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<td>Petchabun</td>
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<td>8.26</td>
<td>6.18</td>
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<td>Supanburi</td>
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<td>8.19</td>
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<td>Phichit</td>
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<tr>
<td>Samut Songkhram</td>
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<td>7.34</td>
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<td>0.56</td>
<td>0.75</td>
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<td>Buriram</td>
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<td>7.27</td>
<td>6.90</td>
<td>1.06</td>
<td>1.08</td>
</tr>
<tr>
<td>Samut Sakhon</td>
<td>56</td>
<td>7.06</td>
<td>6.16</td>
<td>0.28</td>
<td>0.61</td>
</tr>
<tr>
<td>Phetchaburi</td>
<td>57</td>
<td>6.80</td>
<td>5.68</td>
<td>0.36</td>
<td>0.75</td>
</tr>
<tr>
<td>Nakorn Si Thammaraj</td>
<td>58</td>
<td>6.74</td>
<td>5.04</td>
<td>0.67</td>
<td>1.01</td>
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<tr>
<td>Chumphon</td>
<td>59</td>
<td>6.67</td>
<td>4.31</td>
<td>0.52</td>
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<td>Trang</td>
<td>60</td>
<td>6.57</td>
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<td>0.30</td>
<td>0.86</td>
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<td>Nakhon Pathom</td>
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<td>6.49</td>
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<td>0.38</td>
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<td>Phattalung</td>
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<td>4.61</td>
<td>0.38</td>
<td>1.43</td>
</tr>
<tr>
<td>Chachaengsao</td>
<td>63</td>
<td>6.10</td>
<td>5.40</td>
<td>0.56</td>
<td>1.43</td>
</tr>
<tr>
<td>Mae Hong Son</td>
<td>64</td>
<td>6.15</td>
<td>5.30</td>
<td>0.37</td>
<td>0.67</td>
</tr>
<tr>
<td>Krabi</td>
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<td>5.96</td>
<td>5.29</td>
<td>0.10</td>
<td>0.55</td>
</tr>
<tr>
<td>Surin</td>
<td>66</td>
<td>5.21</td>
<td>3.64</td>
<td>1.04</td>
<td>0.52</td>
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<tr>
<td>Songkhla</td>
<td>67</td>
<td>4.86</td>
<td>3.19</td>
<td>0.11</td>
<td>1.25</td>
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<tr>
<td>Narathiwat</td>
<td>68</td>
<td>3.18</td>
<td>1.92</td>
<td>0.62</td>
<td>0.64</td>
</tr>
<tr>
<td>Pattani</td>
<td>69</td>
<td>2.75</td>
<td>2.12</td>
<td>0.26</td>
<td>0.36</td>
</tr>
<tr>
<td>Sri-sa-ket</td>
<td>70</td>
<td>1.98</td>
<td>1.14</td>
<td>0.52</td>
<td>0.31</td>
</tr>
</tbody>
</table>

\(^1\) These totals include acceptors of "other" methods not listed in this table. Therefore, the figures for the 3 listed methods do not necessarily equal the totals.

Source: Family Health Division of the Ministry of Public Health.
Table 3

TARGETS: ACCEPTORS BY CALENDAR YEAR AND BY METHOD, 1971-1976

For planning purposes, acceptor targets have been set for the years 1971-1976. These targets were based on performances by the end of 1970 and on estimates of what can be expected in provincial hospitals, MCH centers, health centers with and without physicians, and government clinics outside the Ministry of Public Health. In view of the unexpected successes in 1971, these targets are in the process of revision.

<table>
<thead>
<tr>
<th>Year</th>
<th>Oral Contraceptives</th>
<th>IUD</th>
<th>Sterilization</th>
<th>All three methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>200,000</td>
<td>80,000</td>
<td>20,000</td>
<td>300,000</td>
</tr>
<tr>
<td>1972</td>
<td>235,000</td>
<td>90,000</td>
<td>25,000</td>
<td>350,000</td>
</tr>
<tr>
<td>1973</td>
<td>280,000</td>
<td>90,000</td>
<td>30,000</td>
<td>400,000</td>
</tr>
<tr>
<td>1974</td>
<td>280,000</td>
<td>90,000</td>
<td>35,000</td>
<td>405,000</td>
</tr>
<tr>
<td>1975</td>
<td>280,000</td>
<td>90,000</td>
<td>40,000</td>
<td>410,000</td>
</tr>
<tr>
<td>1976</td>
<td>280,000</td>
<td>90,000</td>
<td>40,000</td>
<td>410,000</td>
</tr>
<tr>
<td>Total</td>
<td>1,555,000</td>
<td>530,000</td>
<td>190,000</td>
<td>2,275,000</td>
</tr>
</tbody>
</table>

Table 4

WOMAN YEARS OF PROTECTION AND BIRTHS PREVENTED

Based on the acceptor targets, the following tables have been prepared in which the woman years of protection and the number of births that will be prevented have been calculated. Assuming a fall in the crude death rate from approximately 10 to 8 per 1,000 population, these calculations lead to a lowering of the population growth rate from over 3.0% to approximately 2.5% by 1976.

WOMAN YEARS OF PROTECTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Due to work 1965-69</th>
<th>Due to work 1970</th>
<th>Due to work 1971-76</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>197,938</td>
<td>106,604</td>
<td>7,324</td>
<td>311,867</td>
</tr>
<tr>
<td>1972</td>
<td>174,718</td>
<td>120,600</td>
<td>155,525</td>
<td>450,843</td>
</tr>
<tr>
<td>1973</td>
<td>160,186</td>
<td>98,119</td>
<td>350,003</td>
<td>608,308</td>
</tr>
<tr>
<td>1974</td>
<td>150,120</td>
<td>84,861</td>
<td>544,336</td>
<td>779,317</td>
</tr>
<tr>
<td>1975</td>
<td>142,145</td>
<td>76,941</td>
<td>744,175</td>
<td>963,261</td>
</tr>
<tr>
<td>1976</td>
<td>134,217</td>
<td>71,834</td>
<td>925,929</td>
<td>1,131,981</td>
</tr>
</tbody>
</table>

BIRTHS PREVENTED AND BIRTH RATE REDUCTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of births prevented</th>
<th>Birth rate reduction per 1,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>103,955</td>
<td>2.78</td>
</tr>
<tr>
<td>1972</td>
<td>150,279</td>
<td>3.88</td>
</tr>
<tr>
<td>1973</td>
<td>202,767</td>
<td>5.07</td>
</tr>
<tr>
<td>1974</td>
<td>259,770</td>
<td>6.29</td>
</tr>
<tr>
<td>1975</td>
<td>321,084</td>
<td>7.55</td>
</tr>
<tr>
<td>1976</td>
<td>377,323</td>
<td>8.61</td>
</tr>
</tbody>
</table>
recruited in two other provinces with equally successful MCH centers, Ratchaburi and Khon Kaen: how much of the difference lies in the social characteristics of the Moslem population which Yala serves and how much in possible differences in staffing levels or motivational approaches used at the different Centers?

5.09 Many of these performance differences are doubtless well understood by program administrators; but there are many similar questions for which there do not appear to be good explanations and where knowledge gained from relatively simple studies could help management adjust program activities to improve performance.

Acceptor Targets, 1972-1976

5.10 As noted, the 1972-76 Plan established acceptor targets, based on estimates of the numbers of new acceptors, by methods, which it seemed reasonable to think could be achieved, given past performance. By applying a set of continuation rates to both continuing and new acceptors estimates were made of the number of woman-years of protection that would be achieved and of the number of births that would be prevented. It was then possible to translate these figures into reductions in the crude birth rate and, finally, in the rate of population growth. The results of these calculations are shown in Tables 3 and 4, opposite, reprinted from the NFPP's 1972 Annual Report, Family Planning in Thailand 1965-1971 (1972 Edition). A reading of the explanatory notes makes clear that the 2.5% demographic target for 1976 is derived from the acceptor targets, not vice versa. It will also be noted that the full burden of reducing the crude birth rate by 8.61 points (from around 42 to less than 34) is put on the family planning program, i.e., the calculations take no account of socio-economic developments that might contribute to falling fertility independent of family planning (it is very difficult to allow for such factors in this kind of quantitative calculation; most calculations of this type ignore non-program influences and treat them as "assists" or "drags" on program performance whose direction is usually known but whose strength cannot be meaningfully measured).

5.11 Program officials at national level take justifiable pride in the fact that national targets have been surpassed each year (see Annex F, Table 4). There is a feeling among some observers, however, that performance targets have not been used as effectively as they might. The intended revision in the original targets never took place. Provincial targets have never been publicly announced and no targets exist for individual service units. Ministry officials have been reluctant to announce sub-national targets, although consideration is currently being given to setting provincial targets (by numbers and method) for selected lower-performing provinces, many of them in the South, in hopes of improving their performance.

5.12 System performance might be stimulated if headquarters and field staff had clearer targets to shoot at. While provincial targets may be set at national level, targets for individual service units should be set by local staff, not from above. New-acceptor targets, by method, may not be the only
performance standard that deserves to be used. Other possible indicators of performance would be: the dropout/continuation rate, the increase in the number of service points offering the more effective services, the number of training courses held in a province, the percentage of nurses trained to insert IUDs, the volume of money collected from acceptors, and similar measures. The program should experiment with three or four provincial "performance workshops" to see what specific tests staff in those provinces think would be useful and feasible (see also Annex G-1, part B).

B. Measuring Fertility Trends

5.13 It is clearly important for any government to make periodic estimates of national fertility and mortality in order to derive estimates of the natural rate of increase. The key question is how frequently it is necessary or desirable to prepare such estimates, since doing so requires a considerable effort and expense. Clearly the effort and expense are very greatly reduced if a country maintains a system of vital registration of all births and deaths. Such registration systems are frequently maintained to establish certain rights of individuals, in addition to their function of providing desirable demographic statistics. Thus the population itself may have an interest in seeing that vital events are properly registered, and there may be a certain self-enforcing element in maintaining such statistics. But in a great many countries, vital registration systems are notably weak and incomplete, so that they provide a very imperfect, or perhaps almost useless, statistical basis for making demographic estimates with any accuracy. The periodic (usually 10-year) censusus which most governments now conduct are usually much more complete on births and deaths than the vital registration system provides. But while it is possible to derive quite detailed (i.e. annual) estimates of fertility trends from a well-conducted census, the interval between censuses, and the delays involved in their analysis, mean that such information, if forthcoming at all, occurs only at very long intervals. More frequent estimates therefore depend upon either the vital registration system, if one exists, or the conduct of more frequent periodic sample surveys. Where the vital registration system does not permit annual estimates with a fair degree of confidence, then somewhat less frequent sample surveys (e.g. every two or three years) would seem advisable.

5.14 Thailand has a vital registration system, as well as the capacity to conduct periodic sample surveys. The vital registration system is known to have defects, in the sense that it is known to be incomplete, but there are different judgments as to the extent of under-registration of vital events. Some knowledgeable observers believe that under-registration has been exaggerated and that the system either already permits reasonably good estimates, or could be made to yield such estimates with a relatively small additional effort. The demographic activities of the Fourth Plan should include an effort to experiment with various procedures for improving the vital registration system, perhaps on a selective regional or provincial basis, to see if it can be improved to the point where it can provide the estimates
required without the need for separate sample surveys for this purpose. On the other hand, both the Institute of Population Studies at Chulalongkorn University and the National Statistical Office have the capability of carrying out high-quality sample surveys. While the surveys which these two organizations will conduct in the next 1-3 years will go far beyond the collecting of information on births and deaths, these impending surveys should be used to check the apparent validity of the country's routine vital registration system. This deliberate exercise should yield a more confident judgment as to the extent to which the vital registration system can be relied on to produce current fertility/mortality estimates which are a highly desirable part of Government demographic activity. In short, the Fourth Plan should include a program for improving knowledge of fertility and mortality, if possible, broken down by key areas. There is no reason, today, why key demographic statistics should not get every bit as much attention as figures on trade, the money supply, or the national income.

C. Operational Research

5.15 Operational research is concerned with the evaluation of different program activities and results to gain better understanding of what works and what does not work, so that the program can be improved. Considerable use has been made of such studies, starting with the exploratory field study in Potharam District in 1964-66, the study which established the acceptability of family planning among the rural population. Another key experiment was the 1969/70 study of whether health auxiliaries could safely be given authority to dispense pills if there were no negative replies upon administration of a simple contraindication checklist. There have been studies on the use of different kinds of field workers, on the use of indigenous midwives, and a few studies on communications. Some of these studies have been conducted by the MOPH itself and some by staff members at the research centers attached to Mahidol and Chulalongkorn Universities.

5.16 The agency with the most direct concern for research on program operations is the Research and Evaluation (R&E) Unit in the Family Health Division of the MOPH. The strengthening of this Unit and the development of a longer-run perspective on its work-program could be of great assistance to senior NFPP management. The R&E Unit has identified and in part funded some 8 high priority projects to be undertaken during this year and the Development Plan period. These studies include: pilot projects for auxiliary midwives inserting IUDs, abortion attitude surveys, contraceptive follow-up surveys, a pill incentive study, and tests of the effectiveness of tambon doctors and mobile teams providing various types of services. These efforts are the type of operational research by the R&E Unit which will contribute to improving the progress of the Program. In addition, we offer the following few suggestions of other studies which might be undertaken:

... differential characteristics of acceptors (a) by methods and (b) by geographical distribution;

... identification of "high yield" service-points (by type of facility and, especially, within each such class), followed by attempts to see why the successful facilities have been so successful.
... re-examination of continuation rates, by method;

... analysis of residence patterns of acceptors at health clinics to establish the radius of effective catchment areas;

... the effectiveness of mobile services for (a) vasectomy work and (b) IUD insertions at health centers without personnel trained in these procedures;

... to see whether training courses lead directly to measurable increases in the numbers of procedures performed by those who were trained during the courses;

... to measure "side effect" complaints of acceptors and the most effective methods of counteracting the negative influence of their adverse experience (real or imagined);

... survey of the use of various health facilities by the public.

This list is illustrative only. The important point is to urge senior program management to take time to work out, in cooperation with the R&E Unit and perhaps with the help of a meeting or two with an outside Advisory Committee, a plan of operational research that can contribute to progressive improvement of the program.

D. Cost/Effectiveness Studies

5.17 There has been one attempt, by the NESDB, to carry out a field study of the relative costs of different methods of recruiting acceptors. The results were rather inconclusive. The Bank has experimented with some calculations of its own to see what the Thai data could reveal as to the cheapest methods of reducing fertility. Our own experience suggests that it is not easy to arrive at meaningful quantitative results as to the relative cost/effectiveness of different delivery systems. The key problem is what economists call the problem of "joint costs," i.e., the difficulty of allocating to individual outputs the costs of an activity which provides more than one output (e.g. distributing a clinic's staff costs among school vaccination, MCH, communicable disease control, family planning, the treatment of accidents, etc.). Joint costs are characteristic of all MOPH facilities used for family planning, and any basis for trying to share the total costs between family planning and other activities appears so arbitrary that the results have little or no significance. Such studies seem useful only

1/ See Annex C-1 for additional suggestions, with somewhat more detail.
where the addition of a family planning activity involves clearly-identifiable additional costs. Since the basic decisions to build MOPH facilities and to assign personnel to them should be made on grounds other than their contribution to family planning, the inclusion of the latter among their services involves relatively low additional direct costs. We therefore suggest that basic decisions about delivery systems can be made against a much wider set of qualitative and financial considerations, plus the rather obvious cost considerations discussed in Chapter IV, without the need to conduct formal cost/effectiveness studies on this question. Indeed, we would warn against such studies unless carried out under very explicit assumptions that reveal whether or not the study adequately recognizes--and resolves--the joint-cost problem.
VI. INFORMING AND EDUCATING THE PUBLIC

Introduction

6.01 The many activities which governments undertake to inform and educate their populations about population and family planning are conventionally described under two headings, Information-Education-Communication (IEC) and Population Education activities. The former relies mainly on the mass media; the latter on the classroom. The two sets of activities are normally carried on by different agencies within government, are supported under different budget headings, and have different objectives, target groups and time horizons. IEC activities are aimed primarily at adults in hopes of influencing their family-size decisions in the short-run, by persuading them to become family planning acceptors. Population education, on the other hand, is aimed primarily at the on-coming generation and tries to give them an awareness of national population problems, of considerations important in planning the number and spacing of their future children, and, sometimes, to give them a basic understanding of reproductive biology and human sexuality. Population education is therefore an investment in the future. Although the NFPP has so far developed only a modest, low-key IEC program, and no program of Population Education yet exists, there has been much preparatory activity in both areas in recent years. Plans are now well advanced to launch major programs if approvals are given and funding is provided. The IEC program is expected to include radio, TV and cinema programs. Desirable program time must be purchased. To permit this to be done and to oversee the coordination of information and education activities, a new Association for Strengthening Information and Communication Activities has been established, since RTG budget rules do not permit Government funds to be used for purchasing "air time". This is a healthy development which considerably expands the flexibility of the program. This chapter summarizes these recent and prospective activities.

A. Information-Education-Communication Activities

History

6.02 The early stages of the Government's family planning program were conducted without any organized IEC activities as it was considered that the subject was not yet suitable for public discussion. The very successful Potharam Project (1964-1966) and the Chulalongkorn University Hospital (in Bangkok) family planning clinic experience (1965 onwards) gained thousands of acceptors without any motivation campaigns at all. Women adopted family planning because they heard about it from other women and this word-of-mouth communication was strong enough, for example, to attract many to the Chulalongkorn clinic from all over the country. But it was thought that this initial rush of women, who were waiting to hear where the services could be obtained, would not continue indefinitely and that the person-to-person approach would need reinforcement.
6.03 When the Government adopted a population policy in 1970, the Ministry of Public Health (MOPH), with the help of the Development Support Communication Service (DSCS) of the UNDP, launched a six-month Family Planning Mass Communication Project in Khon Kaen, Northeastern Thailand. This area already had family planning services available and the program was working quite well. The pilot mass communication project used all the media including radio, TV, pamphlets and a mobile cinema van which was fully equipped with audio-visual (AV) equipment and materials. The results were evaluated both from the point of view of the number of acceptors and the effectiveness of each of the media used. The project was a great success and the acceptance rate in the target area was doubled. Equally important were the results of the evaluation of the different types of media and the measurement of their impact. This pilot project led to the drawing up and putting into execution of the present IEC project to support the National Family Planning Program during the Third Plan (1972-1976).

Organization, Program, Funding, and Staffing

6.04 The IEC program is carried out by the Information and Training Section, Family Health Division, MOPH. The Section has received major technical assistance from the DSCS. During the Third Plan, the IEC program is being funded almost entirely by UNFPA. As its title indicates, the Section has two functions which are treated as being of equal importance: i.e., public information and staff training.

6.05 Program: Following the Khon Kaen experience, the field work is based on the use of 10 mobile information units. Each is equipped with the full range of AV equipment and is under the control of a communication/health educator with an assistant and a driver-projectionist. The team's first task is to support the regional paramedical training courses. These at present take place in five regions but will soon be extended to all nine. Using specially prepared AV materials, the mobile units assist with the training courses. Then, working in cooperation with the medical staff, they visit the students in the places to which they have been assigned after training. In these rural centers they supplement the training course instruction by giving practical demonstrations of motivation work. They do this by helping the paramedicals to carry the family planning message to the women in a manner most suited to the situation: by organizing group meetings, either large or small; by visiting in their homes the key women in the community or in other ways talking to the women who influence village thinking. Later in the day the teams meet with the men for information/education talks about family planning so that the women, when they talk to their husbands, will find them informed on the subject. For all this work they use AV aids suitable for small groups. In the evening they carry out large-scale motivation by using Thai feature films which they break off occasionally to show family planning films. During the evening they involve the audience in a discussion about family planning. The success of these discussions depends on the personality of the communicator/educator but a Thai gathering is lively and vocal and responds readily to a human and often earthy approach.

6.06 Production: The communication/health educators number 13. They take it in turns to go in the field for 20 days every month. They are all trained
to perform multiple tasks. Those not on tour stay at headquarters to produce materials such as taped programs, written material, film slides, TV spots and posters (a graphics artist is under recruitment). The present policy envisages local production of materials for the regional radio and TV stations; initially this will be done by the communication/health educators from Bangkok but eventually in the office of the regional Medical Health Officer. The mobile units plus radio and TV stations give outlets for all the media materials produced. Film production is important and the Section has already produced, with the DSCS, four films for training purposes. Four motivation films are planned for production in early 1975 and these will be produced in four different regions by DSCS using some of the communication/health educators as trainees on the job so that eventually the Section can undertake its own production work. Only the printed materials, mostly pamphlets, present problems. Very large quantities are produced and sent out to the regional Medical Offices, but headquarters has too little knowledge about what use is ultimately made of these materials. The Information Section would like to establish a direct mailing system to reach specific target readers in schools, Government organizations in the field, women's groups and associations of various kinds.

6.07 Staff: Staffing the Section presents problems. Of the 13 communication/health educator posts only 4 are established (i.e., authorized by the Civil Service Commission as permanent MOPH posts). Job security is important, and several staff have left when they were able to find established jobs elsewhere even though they are paid premiums in lieu of security. The non-established posts are funded by UNFPA but only until 1976, which creates uncertainty about the future. This outside funding of posts for basic IEC activities with no guarantee that the Ministry will continue them is unsatisfactory; it is to the credit of the staff that they have been able to carry out good work in such circumstances. Nevertheless, the Section is seriously understaffed even for the present phase of the program and many activities planned for this phase have to be left undone. The MOPH has requested additional establishments from the civil service commission. The mission strongly supports this request as not establishing the posts poses a serious constraint to the development of the program. Quite apart from the routine of keeping nine mobile units supplied with materials and in the field, of planning their tours from three to six months ahead, of planning production and pretesting and evaluating the materials produced, there are many other things that should be done and only one person, the head of the unit, to see them all. There is as yet no post for an Evaluation Research Officer and although the Family Health Division has an evaluation and research section, that unit has no one experienced in communications. This would be a full-time job; if no post can be created perhaps the Faculty of Communication Arts at Chulalongkorn (see para. 6.17) could be called upon. As noted, there is need for developing the use of the mass media either directly or by contracting out this function to the PPAT (see below, para 6.19). It appears that Government salary scales may not attract anyone with the necessary qualifications, so it is suggested that the Section consider using the services of a marketing firm as consultants. Thus the whole question of the staffing of the Information and Training Section needs reviewing in the light of the present program and future plans, which are already drawn up.
Link to Health Education Section: In the MOPH there would seem to be no effective link, as yet, between the Health Education Section and the Family Health Division. Health Education has a media production unit and it is hoped that eventually this will be joined with the production unit of the Information and Training Section of Family Health, but there are no signs of this happening. Duplication will obviously be costly, and perhaps embarrassing.

Future Program

The Information and Training Section's plans call for the development of mass media communications as a major activity of the National Family Planning Program. In this field there are a number of possibilities. It is possible for the Information Section to put out radio and TV material free of charge through the Public Relations Department of the Prime Minister's Office, which controls all radio and TV outlets (see para. 6.13). This system works quite well except for the fact that there is no control over the time or date of the emissions. The messages may go out at a time of minimal listening and the date is not announced, so that there can be no evaluation of the results. To hire prime time, which would cost about Bt. 6000 per hour for TV, is not possible because Government Departments are prohibited from doing so. As suggested above in para. 6.07, expert advice on the whole question of the use of mass media is needed; this should be given by a Thai individual or firm knowledgeable in this complicated field. An alternative would be to contract out the work to an organization with expertise in this field (see paras 6.01 and 6.19).

Despite the excellent work being done by the Information and Training Section, the scale of activity is still too limited to have a nationwide impact on the public in the rural areas. Given the minimal support provided by the MOPH to the existing infrastructure it is difficult to envisage how the present effort could be expanded without a complete review of present activities and a realistic assessment of future needs. More mobile units (Japan will shortly provide 30 – see para. 6.12) would increase coverage but this would mean the creation of more posts and already the present number is insufficient. More production of audio-visual materials is needed and this would require a decision as to what extent the Section is to have all the facilities for in-house production work and how much might be contracted out, either to other Government agencies or to private firms. In making this decision, the potential of the Health Education Production Unit in the MOPH, continuing support from DSCS, and the possibilities offered by PPAT and the commercial sector, would

1/ The Health Education sanitarians work on a very sound communication plan. In each village they make a sociometric map that shows which family is the communication unit that seems to originate most of the news in the village. From this family they recruit a health volunteer and give him or her some basic training so that they can carry out health education in the area (these workers are unpaid but receive health and welfare benefits). Eventually the Ministry hopes to have at least one such worker in each village. In addition, the Ministry plans to recruit a corps of 50,000 volunteer village health workers to provide well-defined first-line health care. Both the health educators and the volunteer health workers could provide very helpful networks for family planning information/motivation.
all have to be considered. To sum up, the MOPH should consider the impact that the Information and Training Section is having on the family planning program by recruiting acceptors and preventing dropouts and the effect that it could have if its work was to be extended, and then make proper financial provision to support whatever decision that is taken.

6.11 Relations with Other Organizations: In view of staff limitations it has been difficult for the Information and Training Section to develop this aspect of their work. When possible, they have responded to requests from other Government Departments -- they have trained 600 workers from the Community Development Department of the Ministry of the Interior -- and they hope to collaborate more effectively with the PPAT. They also plan to set up an inter-Governmental Committee early in 1975 in order to involve other agencies with the family planning program in the IEC field. Among these would be the Ministries of Agriculture, Interior (this Ministry's Community Development and Accelerated Rural Development programs both have field workers who could be used) and Education. A Legal Officer would also be a member since changes in various laws could have a beneficial effect on the family planning program notably in the fields of abortion-review and the sale and advertising of contraceptives. The PPAT and other bodies would also be represented. Good relations at Committee level would be useful to make possible freer day-to-day cooperation at Section and field levels. Certainly the policy of the Family Health Division is to cooperate with all other organizations which could help in family planning work by spreading the message; but there is no one available to develop this promotional function.

6.12 Japanese Aid: The Government of Japan is donating to the Government 30 mobile AV units; at the Government's request, these will be delivered over a period of 3 years. The equipment will be compatible with that already being used and the UNFPA will pay for the installation of the equipment in the vans. At the moment it is intended that each unit will be attached to a Provincial Medical Officer of Health and be at his disposal, but it is not yet clear how these potentially very important units will be used. No matter how they are controlled, whether from the central or provincial level, it would seem inevitable that the MOPH should establish 30 additional posts for communication/health-educators to carry the work of the 30 additional mobile units. Properly used, these new units could scale up the work of the National Family Planning Program by 300%. The scale-up will also be a good test of the administrative and logistical problems involved in expanding this activity.

Mass-Media Resources

6.13 In Thailand, radio, TV and the Press are well-developed institutions. Surveys have shown that 60% of all rural households, 83% of provincial urban and 84% of all Bangkok/Thonburi households possess radios. For TV the figures are 2% rural, 24% provincial urban and 61% Bangkok/Thonburi (TV does not yet cover the whole country). All stations, in one way or another, come under the control of the Government. There are about 140 radio transmitters, plus 4 main
TV stations. In addition the Ministry of Education has a radio station and the Army has two TV stations. Although belonging to the Government, either through direct ownership or shareholding, they are all rented out to commercial interests, with the Government holding the right to put out its own programs. In order to put out programs at prime time, money would have to be found to buy such time. But Government Departments are not allowed to buy time; they can only accept, for free, whatever time the stations will allow.

6.14 There are probably about 275 cinemas, which means that there is at least one in all the cities and main provincial towns. The press is strong although the number of newspapers fluctuates. There are about 22 daily newspapers in Bangkok of which 13 are in Thai, 6 in Chinese and 3 in English. In the regions there are said to be 57 daily papers. There are also 24 monthly magazines devoted to sport and about 30 weekly, fortnightly and monthly magazines of various kinds.

6.15 All or some of these outlets are used at one time or another both by the Information and Training Section of the Family Health Division, the PPAT and the Community-Based Distribution System, but until now this use has not been planned. The Section would like to have a Media Officer to make a continuous and planned use of the mass media; for this they would need a consultant from a marketing firm during the first months to advise them. A barrier to the full use of the advertising media is the law which forbids any mention of contraceptives other than by brand name (even this has its uses as the unsophisticated enquire what it is that is being advertised). Since about 50% of all media advertising is for medical preparations, a lifting of the ban on the mention of contraceptives would probably lead to a good deal of useful and more educational advertising by commercial interests, possibly under guidelines prepared by the MOPH.

6.16 Undoubtedly the mass media could be very useful to the family planning program if its use were to be properly planned to assure good taste and to avoid over-exposure, leading to antagonism or boredom. At the same time, establishing contraceptives alongside aspirin or cough mixtures as part of normal health aids would be very useful. But this could not be done in a planned way unless (a) a system were established which would allow the Government to buy program time at sensible and established hours so that the results could be evaluated and (b) the ban on advertising contraceptives were to be relaxed. At the Seminar on Population Problems held for representatives of the mass media at Songkla in 1974 the suggestion was made that a public relations unit be established in the Family Health Division to create a continuing relationship with the mass media to help them both to understand each other. Alternatively, the present Information and Training section, assisted by a mass media consultant, might work through PPAT or a commercial firm and, while maintaining ultimate control, use that body as an agent for preparing all, or part, of a mass media campaign.
Some capability has been developed for assessing the effectiveness of communication activities. This work is now carried out by the Communication Research Center of the Faculty of Communication Arts at Chulalongkorn University; the work done so far has been commissioned by the DSCS, which has passed the results on to the Information and Training Section. The importance of this work is that it is action-oriented; the results are fed into the IEC program or used as the basis for future program planning. Already completed is an investigation of the credibility of the various media when putting out family planning messages—press, radio, television and cinema. Under way is a complete survey of all the mass media on a country-wide basis. Of this latter project, Southern Thailand and Northeastern Thailand have already been covered; the resulting two volumes give a very complete account of the areas reached by both national and regional media and the media preferences of the population. This direct link between communication research and a communication program is both a rare and fortunate occurrence. Future projects now looking for funding are: (a) information-acquisition and processing behavior, (b) designing and testing more effective family planning message strategies, and (c) network analysis of opinion leadership. These two projects form part of a worldwide survey of family planning communication research proposed by Unesco to the UNFPA for funding in an effort to build up the effectiveness of communications in family planning programs.

It is to be hoped that as the Information and Training Section of the family planning program gains experience, communication research could be asked to help find answers to more specific problems concerning day-to-day motivation, including direct evaluation of the Section's own field work.

With a limited budget, most of which is provided by the IPPF, the PPAT conducts a number of communication activities important to the NFPP. Indeed, the largest part of PPAT's budget is devoted to IEC even though this Section has only two officers and two graphic artists. A magazine with articles on population and family planning topics is published monthly and mailed, free, to a list of 10,000 opinion-leaders. PPAT's taped programs for radio are lively and attractive and their use of folk singers and dancers has been innovative and effective; but because of financial limitations, the range of their work is limited. The PPAT has recently appointed a Press Officer and his contribution, in a country with such a multiplicity of newspapers, many of which reach village level, could be important. Since the Ministry's Information and Training Section has neither the staff nor the freedom of the private sector to develop the full use of the mass media, they should pursue their present policy of cooperating closely with the PPAT.
Community-Based Distribution of Contraceptives (CBD)

6.20 One promising CBD project which started in 1974 has its own built-in methods of communicating with the public through its system of using local vendors who receive brief but very effective training in motivation and education. Since the network of vendors is essentially made up of local market people, they adapt what they learn to their own methods of selling. This avoids the necessity of an expensive communication infrastructure and can be adapted in any given area to local circumstances. The basic face-to-face techniques of the CBD approach would not be applicable to a Government mass campaign, but some of that program's training content might be relevant to the in-service training programs of the NFPP. There would be obvious advantages for the training staffs of the MOPH and of the private CBD programs to keep in touch with each other's work.

Conclusions

6.21 The present IEC program is effective but limited in its scale and its scope. Specific plans have been drawn up to increase both of these by an increase in the number of information units, by developing a mass media program, by the introduction of a mass mailing system and by the introduction of population education in the schools. We believe that there is sufficient evidence of success with the approaches so far taken, and sufficient promise of success with a planned communication development and mass media campaign and the already carefully prepared population education program, to justify Government support of these proposals. But these expansions -- just as with expansions of other parts of the NFPP -- should be monitored by periodic evaluations of specific activities to assure that the activities are accomplishing their objectives, and at a reasonable cost.

B. Population Education

6.22 The idea of introducing population education into the school system started in 1971 when a representative of the Ministry of Education attended a workshop organized by the East-West Center, Hawaii. During the next two years there was a series of often unrelated projects which included a KAP survey among teachers, the use of volunteer students for the production of teaching materials, and various teaching programs. One important focal point for this activity has been the Population Education Project of the Department of Education in the Faculty of Social Sciences and Humanities, Mahidol University. The Ministry itself has also been keenly interested.

Preparation of a Master Plan

6.23 In 1973 the Population Council assisted with the drawing up of a basic plan for population education and the Director of Technical Education at the Ministry of Education set up an ad hoc committee which became the present Executive Committee on Population Education. This includes several
sectors of Education, the NESDB, the Institute of Population Studies, the State University Bureau and private associations. It was decided that a National Master Plan should be drawn up by two members of the Mahidol project, one of them provided by Unesco/UNFPA. This is to be in three parts: Population Education in (a) the school system, (b) the non-school sector, and (c) the universities. The first part concerning schools was completed in October, 1974, and was submitted to the Executive Committee; it has not yet been officially accepted. The plan envisages the eventual setting up of a new unit within the Ministry of Education to deal with population education.

6.24 The first step to be taken after approval of the Master Plan will be curriculum development. It will consist of the preparation of a Source Book to identify content for the curriculum writers. The Curriculum Division will then prepare materials for terminal grades 4, 7 and 10 under the heading of Social Studies and Health. These will be written by Mahidol-trained staff and viewed as first drafts for eventual curriculum development.

6.25 Following the Government's policy of giving more responsibility to the regions, the Population Education Project will gradually become decentralized. Once the draft teaching materials have been tested they will serve as guidelines for the regions. There, selected groups of teachers will attend workshops and receive training for eight weeks; they will help adapt the material for local use. There will also be three in-service training programs a year. Gradually all the teachers in the country will be brought into the regional centers for training. A research and evaluation unit will be set up and one of its aims will be to find out how and when children first learn a concept of population. It is not yet certain whether the curriculum will include an approach to sex education, a subject of which the schools are somewhat shy.

6.26 Eventually 100,000 teachers will be trained for a period of two weeks and this training will be repeated after one or two years. A final budget has not yet been prepared but present estimates give a total figure of US$5-6 million over a period of five and a half years. Of this sum probably US$3.5 million will be used for transporting the teachers to and from the training courses. The rest will be for materials such as teachers' guides, audio-visual aids, libraries, printing, furniture, etc. The courses will be integrated into the syllabus as the text books come up for revision in the normal course of events. The major expenditure on travel will probably not be incurred until 1977 or 1978.

Adult Education

6.27 Since 1970, the Adult Education Department of the Ministry of Education has been conducting a pilot project on functional literacy that includes family life education as an important curriculum component, accounting for about 20% of classroom time. Technical assistance has been given by World Education, a private United States foundation. The experiment has tried to take advantage of a key aspect of Thai Buddhist philosophy, namely, the concept of the "khit-pen" man or woman. A "khit-pen" individual is one who is
rational, problem-solving, and self-reliant. By presenting people with all aspects of some practical problem of life they are helped to see alternatives and to make their own choices; they are not expected to accept the ideas of others on a teacher's authority. At present, the whole adult education program rests on about 50 teachers. Each works in a specified area for 6 months and visits each village in the area 2 days.

6.28 Despite the pioneering work done to date, there appears some question of the feasibility of scaling up the effort so that it becomes capable of reaching significant numbers of people within the next few years. It is also not quite clear what the relationship is between the work done by the Ministry of Education's Adult Education Department and the adult education activities proposed in Part II of the Master Plan prepared for the Ministry by the Population Education Project at Mahidol University. In general, it appears that the adult education proposals of the Master Plan may not move forward as rapidly as the school-directed parts. Thus the mass-media IEC activities of the NFPP, if vigorously developed, will probably play a larger role in educating adults about the advantages and possibilities of family planning than a classroom-based functional literacy program can play. But the Ministry of Education is also planning new adult education programs that will rely on radio. This is an obvious area for close collaboration between the IEC staff in the MOPH and the adult education staff in the Ministry of Education.
VII. PROGRAM TARGETS AND PRIORITIES: 1977-1981

7.01 The MOPH has prepared a draft NFPP program for the Fourth Plan (see Annex B-2). It is called the program's Second Five-Year Plan. Although necessarily quite general at the present stage, the Plan provides an excellent starting point for the more detailed planning to be done before the Plan starts in October 1976.

A. Targets for "Active Users" and "New Acceptors Needed"

7.02 There is general optimism among knowledgeable Thai experts that the rate of population growth will have been brought down to 2.5% by September 1976, i.e., by the end of the Third Plan. It was also agreed, in 1975, to set a 2.1% growth rate as the demographic target to be reached by the end of the Fourth Plan (September 1981). These demographic figures can be translated into order-of-magnitude targets for acceptors, both continuing acceptors and new acceptors. Current and 1976 figures can be estimated for both categories, as well as for the number of couples who will have to be practicing fertility control in 1981 if the rate of natural increase is to have slowed to 2.1%. The difference between the 1981 and 1976 total acceptor figures represents the net increase in acceptors needed. The total number of new acceptors who must be recruited over this period will of course be several times the net increase in order to replace the dropouts which continually occur in any program.

7.03 Survey data plus independent analysis of NFPP program data suggest that over 25% of the married women of reproductive age (MWRA, 15-44) were practicing fertility control through the use of modern methods as of early 1975. Using a figure of 13% as the proportion of married women in the reproductive ages (MWRA) in the total population, there were 5.46 million at the start of 1975. Twenty-five percent of this figure gives 1.36 million couples as the minimum number practicing family planning. The estimated distribution of acceptors among the various methods is as follows:

<table>
<thead>
<tr>
<th>Method</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral pill</td>
<td>67</td>
</tr>
<tr>
<td>IUD</td>
<td>18</td>
</tr>
<tr>
<td>Sterilization</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

There is no basis for believing that there will be any significant change in this "contraceptive mix" during the Fourth Plan period (the introduction of Depo Provera in the national program in 1975 will add an important new option for clients, one which is likely to cause some substitution away from pills).\(^1\)

The sterilization proportion might also rise moderately if vasectomy should become popular. While shifts in the contraceptive mix would influence the demographic impact of the family planning program, and should be reflected in setting program performance targets, they are not taken into account in calculating the desired growth in total acceptors discussed in the paragraphs which follow.

\(^1\) The Ministry's independent targets for the Fourth Plan assume substantially the same "mix" as the above; its annual figures assume a constant "mix" over the five years of the Plan (see Annex B-2, Table 3).
**THAILAND**

**Table 1**

**Annual New Acceptors Needed and Total Active Users, 1975-81**

<table>
<thead>
<tr>
<th>Year (end)</th>
<th>Population (million)</th>
<th>MWRA 1/</th>
<th>New Acceptors Needed (000)</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 (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>42.1</td>
<td>5.47</td>
<td>430</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>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>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>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>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>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>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: $T_1$=0.74; $T_2$=0.55; $T_3$=0.41; $T_4$=0.30; $T_5$=0.22; $T_6$=0.17; $T_7$=0.12 (see Annex F Table 1).

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 slight 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)

<table>
<thead>
<tr>
<th>Year (end)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>575</td>
<td>9.9</td>
<td>1,025</td>
<td>1,465</td>
</tr>
<tr>
<td>1978</td>
<td>587</td>
<td>9.9</td>
<td>1,190</td>
<td>1,670</td>
</tr>
<tr>
<td>1979</td>
<td>609</td>
<td>10.3</td>
<td>1,342</td>
<td>1,862</td>
</tr>
<tr>
<td>1980</td>
<td>621.5</td>
<td>10.0</td>
<td>1,490</td>
<td>2,050</td>
</tr>
<tr>
<td>1981</td>
<td>636.5</td>
<td>10.1</td>
<td>1,630</td>
<td>2,230</td>
</tr>
</tbody>
</table>
In its FY1977-81 Family Planning Development Plan, the Ministry has prepared estimates of the numbers of new acceptors and of continuing acceptors needed to reach the 1981 demographic target of a 2.1% annual growth rate. These figures will be found in Table 1 of Annex B-2 (presumably the Ministry's figures, like the Bank estimates in Table 1 overleaf, include acceptors recruited through the private sector and not only those recruited at Government service points). The Bank estimates shown in Table 1 were prepared independently, and somewhat earlier, and provide a useful comparison. The two sets of figures are in fact quite close. Table 1 overleaf shows the estimated growth in the basic target group, i.e., married women in the reproductive ages (MWRA), and in the target number of active users whom it is desired to have as practitioners of family planning at the start of each year shown (Col.7). The latter figure is based on what the Government and private-sector programs would have to achieve in order to raise the participation rate to the levels shown in Col.8. If these levels are in fact reached, they should provide sufficient couple-years of protection to decrease the population growth-rate to 2.1% by 1981 (not all the fertility-decline should be attributed to family planning; some will result from changes in age-distribution, average age of marriage, and abortions).

Whether or not the "new acceptors/users" targets can be attained will depend on the number of new acceptors and dropouts each year. Table 1 has been constructed by applying a set of widely-used dropout rates, over a series of years, to program acceptors. The figures for annual new acceptors (Col. 3) represent the difference between (a) users from earlier years who continue to the year-end and (b) the target number of total acceptors desired at the year-end (this figure includes MOPH-supplied plus all other users). As a result of this calculation, it will be seen that the Government program alone will have to recruit, every year, between 8-10% of all MWRA as "new acceptors"; the proportion will have to be higher at the end of the Fourth Plan than it is today.

The private sector seems likely to grow somewhat more slowly than the Government program, mainly because it is dominated by commercial sales to urban and town customers at prices well above prices charged by MOPH service-points. (But it is worth noting that even with the relatively slow growth shown in Col. 6, the private sector would need to have 175-200,000 "new acceptors" each year, i.e., about one-third the MOPH number.) Thus the MOPH-recruited users may grow 40-45% between 1975-81 while private sector growth may be slightly more than 25%. Since the MOPH clientele now constitutes about two-thirds of all acceptors, and is expected to grow faster than private acceptors, MOPH activity is expected to account for nearly 80% of the total growth in acceptors during this seven-year period. Two developments could lead to results very different from these projections: one is the rapid spread of village health volunteers, the other is the rapid growth of Community-Based Family Planning Services. Both of these developments might
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Age-Specific Fertility Rates (ASFRs) for Thailand, 1970-2000, Assuming Achievement of Present Thai Demographic Targets 1/

<table>
<thead>
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<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>.112</td>
<td>.067</td>
<td>.039</td>
<td>.038</td>
<td>approx. 1/3</td>
</tr>
<tr>
<td>20-24</td>
<td>.296</td>
<td>.179</td>
<td>.104</td>
<td>.101</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>25-29</td>
<td>.329</td>
<td>.198</td>
<td>.115</td>
<td>.112</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>30-34</td>
<td>.275</td>
<td>.166</td>
<td>.096</td>
<td>.094</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>35-39</td>
<td>.178</td>
<td>.108</td>
<td>.062</td>
<td>.061</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>40-44</td>
<td>.080</td>
<td>.048</td>
<td>.028</td>
<td>.028</td>
<td>&quot; 1/3</td>
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<td>45-49</td>
<td>.013</td>
<td>.007</td>
<td>.004</td>
<td>.004</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>TFR</td>
<td>6.41</td>
<td>3.86</td>
<td>2.24</td>
<td>2.19</td>
<td>&quot; 1/3</td>
</tr>
<tr>
<td>CBR</td>
<td>43</td>
<td>28</td>
<td>20</td>
<td>20</td>
<td>&quot; 1/2</td>
</tr>
</tbody>
</table>

Source: World Bank projection

1/ I.e., population growth rates of 2.5% by the end of 1976 and 2.0% by the end of 1981. (The 1981 target was later increased slightly, to 2.1%.)

Notes:

1. ASFRs: When the above numbers are multiplied by 1000 they represent the number of live children who would be born to a representative sample of 1000 women (married plus unmarried) in each age group. The results are not affected by the age-distribution of the population. Reading down each column for a given year shows the cycle of fertility for women in childbearing ages at a particular point in time. Reading across the rows shows how fertility of a particular age group changes over time. In the table above, the assumptions are such that fertility happens to fall by the same proportion in all age groups (an unlikely outcome), but differential reductions in fertility could still produce the same overall drop of two-thirds in the TFR and of over one-half in the CBR.

2. TFR: Total Fertility Rate; the sum of the ASFRs multiplied by five (since each age group covers five years).

3. CBR: The number of live births per 1000 total population. The figure reflects ASFRs and the age and sex distribution of the population. The young age-distribution of the Thai population explains why the CBR will fall more slowly than the ASFRs and the TFR over the next generation.
lead to a faster growth of acceptors than is assumed in Table 1; and the speed
with which these two new networks develop might significantly affect the rela-
tive contributions of the MOPH and the private sector to the growth in total
acceptors.

7.07 The annual figures for "new acceptors needed" shown in Table 1 are
not necessarily the figures which the MOPH should adopt as program targets.
The Table 1 figures constitute a minimum, or lower limit, for program per-
formance 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 1 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 G-1.

7.08 What do the above demographic targets imply about the birth rate?
It is estimated that in 1970 the crude birth rate (CBR) was perhaps 42/1000
or a little higher. If the 2.5% growth-rate target for 1976 is achieved,
this would imply a reduction in the CBR to about 34/1000. If the 2.0% target
for 1981 is reached, the CBR would then have fallen to about 27/1000. All
these figures are based on an assumption that the crude mortality rate remains
at about 10/1000 or just below. A fall of 15 points in the CBR in one
decade would be a major achievement, particularly since, as Table 1 shows,
the number of women in the reproductive ages will be growing throughout the
decade. Thus age-specific fertility will be falling faster than the crude
birth rate (see Table opposite).

7.09 It is worth noting that if Thailand is able to achieve an acceptor
rate of 31% by 1981, and a population growth rate of 2%, it will have approxi-
mately matched the 15-year performance of the Republic of Korea between 1960-75.
If successful in helping achieve this result, the Thai family planning program
will rank among the most effective anywhere in the world.

B. Priority Activities for Realizing Program Targets

7.10 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 IEC activities can
be neglected; but it does mean that in order to maximize recruitment during the
Fourth Plan the Government should continue to give top priority to the supply
side, not the demand 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 information, education, and communications (IEC) program that will sustain program growth whenever the program begins to encounter the inevitable "plateauing" effect.

7.11 It is important that Program management define a limited number of priorities which can be systematically pursued. Ten such program priorities are suggested below; some have already characterized the Program and need only to be continued; 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 (see Chapter IV). It also depends on using the widest possible definition of what "the National Family Planning Program" is (see para. 1.08); A number of important policy changes are already under consideration that would have an important impact in extending services. These steps 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 his 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. The MOPH might consider the need to expand this service, using all available resources (e.g. its own facilities and staff, 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 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 time distribution of contraceptive supplies and to assuring that supplies are of 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 (see Annex G-1). 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 make sure 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 (see paras. 6.23 ff.). 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.

7.12 The MOPH will of course be the focal point for the expanding program, as it has been in the past. This is true both in the sense of planning (a) what the NFPP (defined narrowly) should consist of and (b) how the Program's many activities should be carried out. It is therefore important that the management of the Program within the MOPH be strong and effective. Continued good appointments to key posts, staffed by individuals with strong commitment to the aims of the Program, is the starting-point of a successful Program. Continuing strong interest and support from top officials of the Ministry, an increase in the number of established posts for the program, and rapidly increasing funding will all be necessary to permit key program officials to expand and strengthen the program.

7.13 It is equally important to recognize that an effective national population program should involve more activities than the Ministry of Public Health can try to carry out by itself. The universities, other ministries, the commercial sector, the voluntary agencies, and other institutions will all have a role to play. These roles have to be defined, harmonized, financed and monitored. This multi-activity, multi-agency nature of population programs (broadly defined) requires a mechanism for coordination and review. These two functions are now the responsibility of the inter-agency National Family Planning Coordinating Committee, with assistance from the NESDB during the active period when the Fourth Plan is under preparation. It remains to be seen how active and effective this Coordinating Committee can become. But for the next few years, at least, no other mechanism seems to offer any better prospect of achieving the necessary coordination.
The present and future costs of the program, and their financing

Scope and Definitions

8.01 This chapter presents an estimate of the cost of the country's present population activities and of how these costs are likely to grow during the Fourth Five-Year Plan (1976-1981). These costs are much larger than those which appear in the national budget, since about 80% of direct program costs are currently financed by foreign grants. Also, the estimates cover a somewhat wider set of activities than are normally included in the National Family Planning Program. There are two purposes in making these estimates. The first and perhaps least important is to see how much it is costing to try to bring national fertility under control and to project how these costs may grow during the next several years. The second and more important purpose is to estimate the future growth of population costs which are likely to fall on the national budget. The general picture is one of substantial program expansion during the Fourth Plan, of a 50% decline in foreign funding, and thus of major increases in the need for national funding. It would be wrong, of course, to expect the Government to pick up the costs of all activities from which external funding may be withdrawn; some activities will undoubtedly be dropped or curtailed as foreign funding declines. But the basic outlook is clear: a rapidly growing need for additional domestic funding. However, the total amount of funds required will not be very large and is well within the ability of the Government to provide in order to pursue a national objective of this importance.

8.02 As noted, the activities covered by these estimates are defined somewhat more broadly than the NFPP; the definition includes all population activities except the provision of contraceptives through the private commercial sector (which is self-financing and therefore makes no claim on Government funds). It therefore includes family planning services provided by private non-governmental organizations (such as PPAT or the McCormick Clinic at Chiang Mai plus the CBFPS activities), plus certain non-service activities that are part of the national population-control program (such as information and education activities, plus the research and evaluation studies conducted at universities). This broad definition embraces the total population effort of the country (excluding commercial activity) and includes activities which are financed either by the Government or by foreign donors.

8.03 By "costs" we shall mean only public costs, i.e., costs which are not paid by those clients who purchase their contraceptive supplies from the private market or who pay for their supplies, or for sterilization services, at Government hospitals or health centers. Also, we shall refer only to direct cash costs, i.e., costs which the RTG, or some foreign donor, must bear and which would not exist if Thailand did not have a national family planning program. This definition excludes what economists call "joint costs," i.e., the cost of those resources which the program uses but which would be incurred anyway even if there were no family planning program. These joint or shared costs refer mainly to the costs of the health buildings and of the health personnel used in carrying on the NFPP. These would be major costs indeed, al-
though there is no satisfactory and objective way of apportioning the share of such costs which ought to be assigned to the FP program.\textsuperscript{1} This is an unimportant and rather theoretical problem, since, as noted, these joint costs would be incurred whether the NFPP existed or not. They are carried on other parts of the MOPH's budget, as they have been for many years.

The Present Level of Costs

8.04 There is not now, and probably never will be, any single budget figure that reflects the total public cost of trying to control national fertility. This is mainly because the NFPP is being financed from five main sources, the Government plus four principal external donors (USAID, UNFPA, IPPF, and the Population Council). In the early years of the program, the direct cash costs were carried entirely by foreign donors, and almost entirely by USAID, the Population Council, and by IPPF. The Government first began making separate budget allocations for family planning in FY 1972, when Bt. 10 million was provided for the NFPP.\textsuperscript{2} Table 1 below summarizes the budgetary picture from the start of the Family Health Project in FY 1968 through FY 1975:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Thai Budget Allocation</th>
<th>USAID</th>
<th>UNFPA</th>
<th>Population Council</th>
<th>IPPF</th>
<th>TOTAL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968-71</td>
<td>-</td>
<td>-</td>
<td>4.5 est.</td>
<td>-</td>
<td>1.5 est.</td>
<td>0.5 appr.</td>
</tr>
<tr>
<td>1972</td>
<td>10.0</td>
<td>0.50</td>
<td>1.6 &quot;</td>
<td>1.3</td>
<td>0.4 &quot;</td>
<td>0.3 &quot;</td>
</tr>
<tr>
<td>1973</td>
<td>11.0</td>
<td>0.55</td>
<td>1.8</td>
<td>1.4</td>
<td>0.4 &quot;</td>
<td>0.4 &quot;</td>
</tr>
<tr>
<td>1974</td>
<td>12.5</td>
<td>0.63</td>
<td>2.5</td>
<td>1.3</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>1975</td>
<td>18.7</td>
<td>0.94</td>
<td>1.1</td>
<td>1.5</td>
<td>0.3</td>
<td>0.7</td>
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<tr>
<td></td>
<td>52.2</td>
<td>2.62</td>
<td>25.0</td>
<td>100.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* These totals do not include an important US$450,000 contribution from the Government of Denmark, in 1972/73, to build a building in the MOPH compound which is used primarily by NFPP staff, and a few other minor grants. We have arbitrarily limited Table 1 to agencies with continuing programs of a financially significant size. Even though its support has gone to private agencies, IPPF is included because it is recognized as an official donor agency.

\textsuperscript{1} At least one attempt has been made to make this calculation, and the resulting figures have been published by the MOPH and the Pop Council (but without any explanation of the basis used for allocating the joint costs, called "indirect costs" in that calculation). The purpose of that calculation was to demonstrate that the Government was making a large contribution to the program. In a moral sense this was of course true; but it was not true from a budgetary sense, which is the focus of this chapter.

\textsuperscript{2} Although this money is spent entirely by the MOPH and appears in the Ministry's own internal budget, family planning allocations appear in the national budget as special allocation within the budget of the Ministry of Social Security and Welfare where they are earmarked for the MOPH. We see no need to perpetuate this method of indirect funding and recommend that in future family planning allocations be included directly in the regular budget of the MOPH.
This approach to estimating the cost of Thailand's family planning program consists of simply adding up the budgetary allocations of agencies whose purpose was to assist and promote fertility control in Thailand.\footnote{Strictly speaking, "budgetary allocations" are not the same thing as (a) costs, which measure work done during the year exclusive of advance ordering of supplies, etc., and not even the same as (b) expenditures. This chapter ignores these distinctions because it is concerned with financial planning at the budgetary level.} An alternative method of estimating the program's cost was also attempted, i.e., building up the level of expenditures from the specific objects of expenditure (supplies, NFPP personnel, special activities, research, technical assistance, etc.). While much useful knowledge about the structure of program costs can be shown this way, it proved impossible to arrive at program totals close to those defined by the budgetary allocations.

8.05 The above figures show that foreign donors have been financing about 90% of the program's direct costs (in FY 1975 the Government share rose to about 20%). Details on how the funds of each donor have been used are presented in Annexes H-1 to H-5. In general, USAID has concentrated its attention on commodity support; has been the principal source of contraceptive pills for the program. It has also provided technical assistance experts, foreign study fellowships, some vehicles, and a minor amount of direct budgetary support to NFPP personnel. UNFPA has concentrated on the development of seven independent projects (see Annex H-5), including the funding of a significant amount of personnel costs at NFPP headquarters in the MOPH. The Population Council assistance has consisted primarily of expert technical assistance, both within the NFPP headquarters and in NESDB and in one or two university posts. It has also donated (until FY 1975, when it began charging, at cost) most of the IUDs used in the program. IPPF has concentrated its early attention on the work of the McCormick Family Planning Clinic in Chiang Mai and the Chulalongkorn Clinic in Bangkok, both of which have received support since the mid-1960's. IPPF support recently expanded to include the establishment of a new voluntary association and, in 1974, support for a major new Community-Based Distribution experiment conducted jointly by PPAT and IPPF. USAID assistance is actually understated in Table 1, which includes only assistance paid for out of USAID's "country budget": additional assistance has been provided through contracts with American universities and other institutions which have provided important technical assistance to Thai universities and to the Government in the fields of demographic research and other population-related activities; this assistance has been funded from USAID's central budget in Washington.

8.06 Table 2 below presents an estimate of future total program costs and Government budgetary requirements on the basis of what is now known about future levels of grant assistance. The assumptions are that: (a) USAID will phase out its population assistance entirely by 1981 (the phasing could well be different from that shown, which is quite arbitrary); (b) UNFPA will continue its assistance at a level between US$1.5-2.0 million through 1979, when...
it is arbitrarily assumed to drop to US$1.0-1.5 million (Col. 6 of Table 2 has used the lower level of figures in Col. 3); (c) the Population Council is assumed to continue assistance of about US$100,000 through 1981 -- a level about one-third or one-quarter its recent levels; and (d) IPPF is assumed to cut back its contribution, after its special assistance to the CBFPS experiment "peaks" in 1976, to a level similar to what it had been giving in the early 1970s. Table 2 treats the activities now funded by the Population Council and IPPF as part of the "national program" and assumes that as the amount of assistance from these two private agencies falls, the Government will take over, in one way or another, an equivalent amount of their declining contributions. There is obviously a great deal of elasticity in any such table, which should be reviewed and revised at least annually.

Table 2. 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>UNFPA</th>
<th>P.C.</th>
<th>IPPF</th>
<th>Total Grants</th>
<th>Govt. % 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>
</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>
</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>
</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>
</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>
</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>
</tr>
<tr>
<td>1976-81</td>
<td>+75%</td>
<td>(-57%)</td>
<td>(-57%)</td>
<td></td>
<td></td>
<td>+390%</td>
<td></td>
</tr>
</tbody>
</table>

1/ Existing tentative allocation.

8.07 The above estimates are somewhat arbitrary but they 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. 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.
8.08 The overall scale of the Government's real resources devoted to population is not likely to change significantly during the Fourth Plan -- although the Government's financial allocations will have to increase substantially. A 1981 population program of Bt. 165 million (US$8.25 million) requiring Bt. 137 million from Government resources would require about 7% of the total MOPH operating budget of, say, about Bt. 2,000 million. This will be a substantially higher proportion of the MOPH budget than the 1-1.5% represented by recent family planning allocations in the Government budget; but the main reason that proportion has been so low is that most of the program has been funded by external assistance. But in terms of real resources -- personnel, administrative time, supplies, space, travel, etc. -- the 1981 program would be about the same proportion of total MOPH activities as it is today (i.e., the present program of Bt. 90-100 million is about 8-9% of the Ministry's present budget of Bt. 1,114 million; a 1981 program of Bt. 165 million would also be between 8-9% of a Bt. 2,000 budget).

Principal Program Costs

8.09 In para. 8.03 it was stated that an attempt had been made to project the total costs of the national program, 1976-1981, by building up estimates of specific program components. This "bottom up" approach proved less useful than the "top down" approach based on overall financial allocations, mainly because not enough data are available to make a complete calculation. (The calculations made appear as Annex I-1.) It proved impossible, for example, to derive a total program cost that was more than about two-thirds of the known program costs based on overall financial allocations by donors and the Government. Nevertheless, a few points of interest about the program's cost structure for 1973-75, were learned.

8.10 The two most striking facts that emerge from those figures are (a) the large share of total costs represented by contraceptive supplies and sterilization subsidies and (b) the relatively small share represented by personnel costs. The latter fact is a direct result of the integration of family planning in the Ministry's regular health services. Apart from its functional advantages, integration is a source of very large financial savings, since the only additional personnel needed are those at headquarters responsible for central program planning and management. On the other hand, contraceptive supplies, plus the subsidies paid for sterilizations, are a major cost -- indeed, the major cost. They account for half to two-thirds of total program costs as defined in Annex I-1, but fall to about 40% of the larger and more complete estimate of total program costs shown above in Table 2. In general, every Baht saved or lost in procuring contraceptive supplies will save -- or add -- nearly half a Baht in total program costs.

8.11 While the large role of supplies in overall program costs will come as no surprise to those experienced in managing family planning programs, it is important to realize that supplies are the single largest cost in the program so that they will be given the close attention they deserve.
These costs are almost 100% in foreign exchange, if not directly then indirectly. As the NFDP takes over greater responsibility for the financing and procurement of supplies, program management should review its procurement policies and procedures to make certain this aspect of program administration gets adequate attention. The MOPH is generally experienced in drug procurement on international markets and already has some experience with issuing international tenders for the supply of oral contraceptives. But the Government should not rule out the possibility of continuing to work with one or more of the major international donors (public or private) who might be willing to act as a procurement agent for all or part of the Ministry's various contraceptive requirements. This might provide a chance to participate in bulk contracts larger than the Ministry itself could arrange, and it might provide a check on its own independent procurement.
THE DEMOGRAPHIC OUTLOOK\textsuperscript{1/}

A. The Current Situation

1. The first population census of Thailand, in 1911, reported a total population of about 8 million. Nothing can be said with certainty about the size of Thailand's population at earlier dates, but it seems clear that by historical standards it had grown substantially during the preceding half-century. It is reasonably estimated that the population in 1850 was between 5 and 6 million. Of the increase of about 50% during the next 60-year period (well under 1% a year) about two-fifths consisted of Chinese immigration, which continued at a high rate until the 1930's (Government of Thailand, 1974, p. 2; Ingram, 1971, pp. 7, 210-211). At the time of the 1937 census, the population had grown to more than 14 million; the population growth rate had evidently doubled (to 2.2%) compared with the 1850-1911 period. During the second World War, the growth rate decelerated, averaging slightly less than 2% per year from 1937 to 1947. Thereafter, rapidly falling death rates led to renewed acceleration of population growth, now based almost exclusively on natural increase, that is, an excess of births over deaths. Official census data are summarized in Table 1 (Government of Thailand, 1974, p. 75). Evaluation studies of the 1970 census have led to an upward revision of the 1970 figure to about 36 million. The revised annual growth rate from 1960 to 1970 is about 3%.

Table 1. Census Counts of Population and Inter-Censal Increases, 1911-1970

<table>
<thead>
<tr>
<th>Census Year</th>
<th>Total Population</th>
<th>Inter-Censal Increase</th>
<th>Annual Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1911</td>
<td>8,266,408</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1919</td>
<td>9,207,355</td>
<td>940,447</td>
<td>1.4</td>
</tr>
<tr>
<td>1929</td>
<td>11,506,207</td>
<td>2,298,952</td>
<td>2.2</td>
</tr>
<tr>
<td>1937</td>
<td>14,464,105</td>
<td>2,957,898</td>
<td>2.0</td>
</tr>
<tr>
<td>1947</td>
<td>17,442,689</td>
<td>2,978,584</td>
<td>1.9</td>
</tr>
<tr>
<td>1960</td>
<td>26,257,916</td>
<td>11,467,727</td>
<td>3.2</td>
</tr>
<tr>
<td>1970</td>
<td>34,397,374</td>
<td>11,860,542</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Source:  

\textsuperscript{1/} All references are to sources listed at the end. More detailed information on the current demographic situation is given in the tables attached to this Annex.
Fertility

2. With the exception of the war years of the 1940's, fertility has remained at traditionally high levels during most of the twentieth century. In view of the high level of mortality, this was in large measure a condition of survival. Up to the early years of the century, it is clear that fertility must have been only slightly higher than mortality. But mortality appears to have started downwards about the time of World War I, leading to the sharp increase in the rate of natural increase recorded for the 1920's and 1930's, and which was resumed after the interruption of the Second World War. Fertility remained high (by international standards as is indicated by a gross reproduction rate of 3.2 estimated for 1950-55 and of 3.1 for 1964-65).

3. Other evidence of recent high fertility can be found both in the 1970 estimate that the average number of children ever-born to ever-married women past the childbearing age was about 6.5 and in the fact that some estimates for 1970 put the crude birth rate at that time at between 45 and 50 per thousand population (Government of Thailand, 1974, pp. 4, 81).

4. In recent years there is, however, growing, if still somewhat imprecise, evidence to the effect that a significant overall fertility decline may have commenced. This conclusion has been reached in some unpublished work of the National Economic and Social Development Board on the basis of a comparative analysis of data from registration statistics, censuses, sample surveys and other studies. These suggest that a fertility decline has been under way for some 10-15 years and has possibly been accelerating during the last five years. This conclusion can draw support from the fact that urbanization is proceeding rapidly and that marked urban-rural differentials exist. The fertility of the metropolitan area of Bangkok-Thonburi is on the average 30% below the national average, while that of provincial towns seems to be about 20% below the level of the country as a whole. It also appears that regional differentials in fertility are widening. Fertility in the Central Region, including Bangkok, and in the North appears to be falling significantly, while fertility in the North East and in the South increased between 1960 and 1970.

5. The results of the most recent demographic work of the NESDB and of the NSO are not available at this writing. Reportedly, however, the data are sufficient in amount and internal consistency to derive a reasonable estimate of recent age-specific fertility rates, which will shortly be used to construct better projections. Further tabulation and analysis of unprocessed data may shed more light on regional differentials, and the implications that recent patterns of internal migration can have for population growth. At this point, however, firm data on current levels of fertility do not exist. It is not yet
possible to estimate the probability that the declared population growth target of 2.5% in 1976 will be achieved, but the present evidence of fertility fall suggests that this may be attained.

Mortality

6. Until recently mortality in Thailand was high. An estimate by Bourgeois-Pichat (1960) presents a crude death rate of 50 per thousand for the early part of the twentieth century. This would suggest that the expectation of life at birth was only a little over 20 years. Life expectancy in 1937 has been estimated at 35 years implying a death rate of about 25/1000. A more rapid decline began after the Second World War, leading to an increase in life expectancy to 50 years in 1947 and to 56 years for males and 64 years for females in 1964-65, (Government of Thailand, 1974, p. 7). The crude death rate is now about 10/1000.

7. As in other developing countries, the decline in mortality is the result of a number of inter-related changes, such as a rapidly expanding agricultural production, improved transportation and other public services and facilities, and, in particular, public health measures. Among the latter, DDT control of malaria, certain immunization programs and improved sanitary conditions are the most important. The differential impact of these measures is indicated by the much lower level of mortality in urban than in rural areas. The standardized crude death rate for municipal areas, excluding Bangkok-Thonburi, was, for example, only about 56% of that of rural areas according to the Survey of Population Change, 1964-65 (Government of Thailand, 1974, pp. 7, 77). Again, regional differentials are known to be important but very little precise information is available.

8. It appears that the mortality decline is continuing. However, the absolute level is now so low that further gains would not have major impact on the overall rate of population growth. Such gains will be more significant for their differential impact on mortality and morbidity conditions among different population groups and in different parts of the country. It should also be noted that the dramatic reductions in the death rate accomplished in Thailand (and in other developing countries) will rest on a fragile basis until the material benefits of development become more substantial and more widely available to the population at large.

Population Distribution and Internal Migration

9. By Asian standards, Thailand is still a relatively sparsely populated country, although it will not long remain so if present growth rates continue. In 1970 average density was about 70 persons per square kilometer. Because of
the high rate of population growth, this figure may now, by the end of 1974, be expected to have risen to approximately 80 per square kilometer. Density per unit of cultivable land is of course much higher and varies significantly from region to region. Average density is highest in the Central Region, which includes the most fertile agricultural land in the country, as well as the Bangkok metropolitan area. The population of the Central Region, which includes the most fertile agricultural land in the country, comprises about 30% of the total population, one-third of which is accounted for by the Bangkok metropolitan area alone. Next in terms of density comes the North East, which has the poorest soil. Nevertheless, the North East remains predominantly agricultural and supports about 35% of the total population. The North and the South have more favorable agricultural conditions, but the North is also developing considerable pressure on cultivable land. These two regions hold about 22 and 12.5%, respectively, of the total population (Government of Thailand 1974, pp. 30, 97).

10. Urban growth is proceeding at a high rate. It has been estimated at 6.5% per year, or more than twice the rate of natural increase during the 1960's. The proportion of population residing in urban areas has increased from 10% in 1947 to between 15 and 16% in 1974. Since the designation of an area as urban is in part a matter of administrative considerations (it alters the services that must be provided, for example), these figures most likely understate the degree of urbanization that has actually taken place. The extent of "under-reporting" is not known.

11. The outstanding feature of the pattern of urbanization in Thailand is the dominance of the Bangkok metropolitan area. Thailand's capital has approximately 4 million people, about one-tenth of the country's population, and constitutes the most extreme example of a "primate city" anywhere in the world, exceeding the size of the second largest city, Chiang Mai in the North, by a multiple of more than 40. This figure is, however, likely to be somewhat exaggerated on account of the just-mentioned problem of definition of urban areas. The degree of dominance of Bangkok, in terms of relative numbers, has increased significantly in recent decades (ibid, pp. 30, 31, 98).

12. As elsewhere, it appears that the main motivation for migration is economic, as urban areas offer the prospect of better incomes and better social services. Additionally, migration occurs in connection with marriage and other family-related changes. Apart from rural-urban migration, movements from less to more promising rural areas are relatively common, in particular when settlement schemes or other new or improved facilities offer good prospects for cash income. Much of the migration is relatively short-distance. Thus, a very large proportion of migration across provincial boundaries has not extended beyond the four geographical or nine administrative regions. In all occupations, migrants tend to have a higher level of education than non-migrants (ibid, pp. 32-38).
Population Structure and Composition

13. As might be inferred from its high level of fertility, the relatively low and declining level of mortality, and insignificant external migration, Thailand has a young population. In 1970 slightly more than 45% of the population was below 15 years of age and only 3% was 65 years of age or older. If the working-age population is defined as those between ages 15 and 64, it follows that the dependency burden was 93 dependents per 100 persons of working age. This represents an increase from 85 per 100 in 1960, when the population below 15 years of age was somewhat lower (ibid., p. 21). Due to the concentration of rural-urban migration in the working ages, the dependency burden is significantly lower in urban than in rural areas, about 72 versus 93 per 100 for the country as a whole (ibid., p. 89).

14. Age of marriage is one important determinant of fertility. A comparison of the proportion single at ages 13 and over in 1960 and 1970 indicates that the age at first marriage is rising significantly. This may at least in part be presumed to reflect the rising urbanization, since the age at marriage is significantly higher in urban than in rural areas, particularly for men (ibid., pp. 22, 92).

15. Thailand's population is highly homogeneous. The most important ethnic minority is the Chinese, most of whom live in the urban areas, especially in Bangkok. On account of a high degree of inter-marriage, the proportion of fully Chinese households is declining rapidly. Nevertheless, the importance of the population of Chinese origin in Thailand is evident from data collected in the Longitudinal Survey of Social, Economic and Demographic Change. It has been estimated that more than one-tenth of heads of households in urban areas other than Bangkok-Thonburi are of Chinese origin. If the definition is broadened to include all households with some significant Chinese characteristics, the proportion rises to about one-third in the Bangkok metropolitan area (Prochuabmoh et. al., 1972, pp. 43-46).

16. In the South the population contains an element of Malay origin and in the North there are several hill-tribes, numbering perhaps a million people. Culturally and religiously, Thailand is known as one of the leading Buddhist countries in the world. This picture is corroborated by the 1970 census, which enumerates more than 95% of the population as Buddhists. For the country as a whole Muslims constitute less than 4% of the total; somewhat more than one-half of these live in the South. Slightly more than one-half of one percent of the population is Christian (Government of Thailand, 1974, p. 27).
Economically Active Population

17. The most remarkable feature of the Thai labor force is the high proportion of women who are economically active. In 1970, 52% of the male and 46% of the female population were in the labor force. For both sexes these figures represent a decline compared with the 1960 census when the participation rates were 54 and 51%, respectively. For men the decline reflects lower recorded rates of labor force participation at adult ages, from age group 25-29 and upwards. For women at least part of the decline is associated with a relative shift in economic activities from agriculture to non-agriculture, and the declining importance of the family as the economic unit. As part of these changes, the place of work is typically removed from the home or its immediate vicinity, thus making it more difficult for women to pursue their role as economic producers to the same extent as in traditional agricultural society. These factors are reflected in the 1970 census data on work status, which show 20% of the male labor force as salaried employees and wage earners compared with 10% of the female labor force. By contrast, only 33% of economically active men are family workers versus 76% of the women (ibid, pp. 103-110).

B. Future Population Growth

18. Population projections are essentially mathematical models, based on sets of assumptions of fertility and mortality,\(^1\) which attempt to demonstrate the consequences of these assumptions over time. As forecasts -- which attempt to precisely predict a future condition -- projections are no more reliable than the assumptions on which they are based. In the Thai case, a lack of firm data on the size and age/sex distribution adds to this uncertainty. In spite of these limitations, population projections do provide a useful tool for analysis of the effects of different levels of fertility and mortality on future population size and composition.

19. Five projections, reflecting quite different alternative patterns of population growth are shown in Table 2. The first four projections are adopted from the most recent set of projections prepared by the United Nations, and the fifth set was prepared by the Bank. 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, prepared by the Bank, assumes a decline in fertility which would result in the

\(^1\) Migration can of course also be included, but is likely to remain negligible in the Thai case, and has been ignored.
achievement of the Government's demographic targets -- a 2.5% growth rate in 1976 and 2.1% in 1981. This fall in fertility continues 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 shows how ambitious the Thai targets are. However, they are not unrealistic, assuming continuing strong growth in the national family planning program plus favorable supporting developments in social and economic factors influencing fertility.

Table 2. **Illustrative Growth of Population under Different Assumptions on Fertility Trends, 1970-2050**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. U.N. Projections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. 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>ii. &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>iii. &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>iv. &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>B. &quot;Thai Target&quot;</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>

20. The divergent results of these projections over the 1970-2000 period are striking. The constant fertility projections (projection 1) -- although undoubtedly the least probable given recent evidence that fertility has started to fall -- nonetheless serves as a useful benchmark. By the year 2000, the target projection results in a population some 40% smaller than the constant projection and even 20% smaller than the most favorable U.N. projection. Nonetheless, the population, even under these favorable conditions, would nearly double in this 30-year period, increasing from 36 million in 1970 to almost 66 million in the year 2000. The main conclusion is clear: even under the most favorable conditions, Thailand's population will continue to grow and place a substantial burden on the nation's prospects for development.

21. Another important conclusion is that even with a reduction in the NRR to the replacement level by 1990, the population would continue to increase well into the twenty-first century. Growth would reach over 93 million by the year 2050 -- an increase of 260% in 75 years. This would be due to the built-in "momentum" existing in the present Thai age structure. The existing large number of children will result in a larger number of births long into the future even if the fertility of each family remains the same or declines.
Table 3. Age Distribution, 1970 and 2000, Under Varying Fertility Assumptions

<table>
<thead>
<tr>
<th></th>
<th>0 - 14</th>
<th>15 - 64</th>
<th>65 +</th>
<th>0 - 14</th>
<th>15 - 64</th>
<th>65 +</th>
<th>Dependency Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>16,444</td>
<td>18,644</td>
<td>1,093</td>
<td>45.4</td>
<td>51.5</td>
<td>3.0</td>
<td>.94</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>51,726</td>
<td>53,165</td>
<td>3,079</td>
<td>47.9</td>
<td>49.2</td>
<td>2.9</td>
<td>1.03</td>
</tr>
<tr>
<td>High</td>
<td>40,767</td>
<td>53,406</td>
<td>3,199</td>
<td>41.9</td>
<td>54.8</td>
<td>3.3</td>
<td>.83</td>
</tr>
<tr>
<td>Medium</td>
<td>34,797</td>
<td>51,747</td>
<td>3,079</td>
<td>38.8</td>
<td>57.7</td>
<td>3.4</td>
<td>.73</td>
</tr>
<tr>
<td>Low</td>
<td>29,169</td>
<td>49,876</td>
<td>3,019</td>
<td>35.5</td>
<td>60.8</td>
<td>3.7</td>
<td>.65</td>
</tr>
<tr>
<td>Target</td>
<td>17,823</td>
<td>44,803</td>
<td>3,102</td>
<td>27.1</td>
<td>68.2</td>
<td>4.7</td>
<td>.47</td>
</tr>
</tbody>
</table>

22. Table 3 shows the effects of varying fertility assumptions on the age distribution of the population in the year 2000. It can be seen that the proportion of the population not of working age declines sharply with the level of fertility, resulting in dependency ratios which vary between 103 and 47. The absolute number of persons under the age of 15 shows an even more striking disparity. If the target fall in fertility is achieved, this group will be little more than one-third the number occurring with constant fertility or one half the figure for the medium projection. The potential for resource savings in education and other social sectors oriented toward the young is easily apparent. With the target fall in fertility, the population under 15 increases to about 20 million in 1980 but then falls slowly again before becoming almost stationary at approximately its current level.

23. Table 4 gives figures for two school age groups for the constant, medium variant, and the Thai target projections. The table clearly illustrates the effects of lowering fertility on these two age groups. With the higher fertility, the school age population will increase rapidly over the next 30 years, doubling even under the conditions of the medium variant projection. If the target projections goals are achieved, however, future increases in school age population will be significantly more modest and some decline might actually take place after the mid-1980's for the 6-12 age group and in the older age group around the mid-1990's. Under the more favorable conditions of the Thai target projection, it should be possible to devote an increasing proportion of educational investment to expanding enrollment ratios and improving educational quality. The wide variations between the target projection and the other projections point to the difficulties which will rise if fertility is not greatly reduced.
Table 4. Projections of the School-Age Population 1970-2050 (000s)

<table>
<thead>
<tr>
<th>Year</th>
<th>6-12</th>
<th>13-17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>Medium</td>
</tr>
<tr>
<td>1970</td>
<td>7,076</td>
<td>7,076</td>
</tr>
<tr>
<td>1980</td>
<td>9,948</td>
<td>9,921</td>
</tr>
<tr>
<td>1990</td>
<td>14,813</td>
<td>13,825</td>
</tr>
<tr>
<td>2000</td>
<td>21,766</td>
<td>16,061</td>
</tr>
<tr>
<td>2025</td>
<td>58,879</td>
<td>14,820</td>
</tr>
<tr>
<td>2050</td>
<td>161,157</td>
<td>15,293</td>
</tr>
</tbody>
</table>

24. Forecasts of the labor force are especially difficult to estimate given the number of volatile economic and social factors involved. Using the assumption that recent (1970) labor-force participation rates of 52% for males and 46% for females remain unchanged, the projections indicate a nearly three-fold increase in the labor force by the year 2000 (see table 5), an increase which will undoubtedly be difficult to absorb into the overall economic situation.

Table 5. Projections of the Labor Force 1970-2000 (000s)

<table>
<thead>
<tr>
<th>Year</th>
<th>Fertility Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
</tr>
<tr>
<td>1970</td>
<td>9,135</td>
</tr>
<tr>
<td>1980</td>
<td>12,688</td>
</tr>
<tr>
<td>1990</td>
<td>17,946</td>
</tr>
<tr>
<td>2000</td>
<td>26,044</td>
</tr>
</tbody>
</table>

Table 5 also indicates that the amount of decline in fertility, as indicated by the different projections, will have only a slight effect on the size of the labor force up to 1990. This is because the working-age population from which the labor-force is drawn (those 15 to 64 years of age) will not be affected for the next 15 years regardless of the change in fertility, and then only gradually will these changes have an effect. By the year 2000, the Thai target projection results in a labor force approximately 16% below the constant fertility projection and 14% below the medium variant projection.
Evidence of Emerging Fertility Differentials

25. As an aid in judging which projections likely to be most relevant, it may be helpful to mention some differential growth trends, some of which have already been referred to in the preceding sections. Depending on the course of development, these trends may foretell comprehensive changes in the future pattern of reproduction in the near or intermediate future or, alternatively, may remain relatively insignificant for a rather long period of time.

26. The 1964-65 Survey of Population Change made clear that rural-urban fertility differentials are market in Thailand (Government of Thailand, 1974, p.9). The subsequent 1968-69 Longitudinal Survey conducted by the Institute of Population Studies at Chulalongkorn University, showed that fertility in provincial urban centers was close to 30% (and in Bangkok-Thonburi almost 40%) below that of rural areas (Prachuabmoh et al., 1972, p. 62). Because of higher rural mortality, in particular infant mortality, actual family size varies considerably less than fertility. (ibid., p. 67.)

27. On the basis of data from the 1960 census, Goldstein et al. (1972) found that the level of education attained by Thai women was consistently inversely related to the level of fertility, regardless of whether the residence was urban or rural. More recent data indicate that rural-urban differences also persist at similar levels of education (Government of Thailand, 1974, pp. 14, 82).

28. Migration is another indicator of development and change. As noted earlier, migrants tend generally to have a relatively high level of education. As would be expected, they also have significantly lower fertility than non-migrants at the place of origin (ibid., p. 15).

29. In urban, but not in rural areas, women's participation in the labor force is inversely related to fertility, a circumstance that may be interpreted as a reflection of the separation of the place of work from the place of living that is typical of modern (urban) society (ibid., p.16). Separation from spouse, a relatively common phenomenon among ever-married women of childbearing age in Thailand, is also inversely related to fertility (Goldstein et al., 1972).

30. On the basis of evidence like the above it seems reasonably safe to suggest that the prospects for limitation of population growth to levels compatible with rapid development are rather promising -- provided constructive and profitable participation in development can become sufficiently broadly based i.e., so that the conditions that encourage low-fertility motivation reach enough people to affect overall growth figures. This distributional dimension to growth includes the pattern of future urban growth: such growth must become more widely dispersed and in significant degree deflected from the Bangkok metropolitan area.
31. The following tables were taken from *The Population of Thailand*, a monograph prepared for the World Population Year Series under the direction of the Committee for International Coordination of National Research in Demography, Bangkok, 1974.
### Table 6

**Age-Specific Fertility Rates and Related Measures of Fertility for Thailand by Regions, Urban and Rural, 1964-1965**

<table>
<thead>
<tr>
<th>Regions and Municipal Area</th>
<th>Crude Birth Rate (CBR)</th>
<th>Gross Fertility Rate (GFR)</th>
<th>Gross Total Fertility Rate (TFR)</th>
<th>Gross Reproductive Rate (GRR)</th>
<th>Net Reproductive Rate (NRR)</th>
<th>Age Specific Fertility Rates (15-19)</th>
<th>Age Specific Fertility Rates (20-24)</th>
<th>Age Specific Fertility Rates (25-29)</th>
<th>Age Specific Fertility Rates (30-34)</th>
<th>Age Specific Fertility Rates (35-39)</th>
<th>Age Specific Fertility Rates (40-44)</th>
<th>Age Specific Fertility Rates (45-49)</th>
<th>Age Specific Fertility Rates (50-54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Kingdom</td>
<td>42.2</td>
<td>188.8</td>
<td>188.8</td>
<td>6,299</td>
<td>3.07</td>
<td>2.56</td>
<td>64.4</td>
<td>258.9</td>
<td>302.6</td>
<td>237.1</td>
<td>222.0</td>
<td>112.3</td>
<td>24.4</td>
</tr>
<tr>
<td>North</td>
<td>43.7</td>
<td>20.1</td>
<td>198.1</td>
<td>6,475</td>
<td>3.15</td>
<td>2.64</td>
<td>96.5</td>
<td>232.7</td>
<td>304.3</td>
<td>277.5</td>
<td>221.2</td>
<td>96.2</td>
<td>18.5</td>
</tr>
<tr>
<td>Northeast</td>
<td>48.5</td>
<td>193.6</td>
<td>196.0</td>
<td>6,611</td>
<td>3.22</td>
<td>2.68</td>
<td>62.3</td>
<td>257.9</td>
<td>318.0</td>
<td>292.6</td>
<td>231.9</td>
<td>123.1</td>
<td>36.6</td>
</tr>
<tr>
<td>Central</td>
<td>39.7</td>
<td>176.4</td>
<td>175.7</td>
<td>5,901</td>
<td>2.87</td>
<td>2.60</td>
<td>47.4</td>
<td>261.4</td>
<td>305.4</td>
<td>237.6</td>
<td>218.8</td>
<td>108.1</td>
<td>21.6</td>
</tr>
<tr>
<td>South</td>
<td>40.9</td>
<td>184.1</td>
<td>180.9</td>
<td>6,020</td>
<td>2.93</td>
<td>2.45</td>
<td>71.6</td>
<td>256.6</td>
<td>256.5</td>
<td>279.3</td>
<td>209.8</td>
<td>123.8</td>
<td>10.4</td>
</tr>
<tr>
<td>Municipal Area</td>
<td>29.9</td>
<td>117.2</td>
<td>125.2</td>
<td>4,233</td>
<td>2.1</td>
<td>1.7</td>
<td>47.8</td>
<td>164.6</td>
<td>223.5</td>
<td>171.1</td>
<td>142.5</td>
<td>89.2</td>
<td>7.7</td>
</tr>
<tr>
<td>Non-Municipal Area</td>
<td>43.2</td>
<td>182.5</td>
<td>196.7</td>
<td>6,489</td>
<td>3.2</td>
<td>2.6</td>
<td>68.2</td>
<td>267.7</td>
<td>309.5</td>
<td>282.9</td>
<td>229.4</td>
<td>114.5</td>
<td>25.6</td>
</tr>
</tbody>
</table>

1/ Standardized by using age composition of Whole Kingdom population.
2/ Rates in cols. 3-7 do not include specific rates for age group 50-54.

**Source:** Report on the Survey of Population Change, 1964-1965, National Statistical Office, Bangkok. (The Sample on which these data are based excluded the Bangkok-Thonburi Municipal Area.)

### Table 7

**Age-Specific Death Rate and Related Measures of Mortality for Thailand by Regions, Urban and Rural, 1964-1965**

<table>
<thead>
<tr>
<th>Regions and Municipal Area</th>
<th>Crude Death Rate (STD)</th>
<th>Infant Mortality Rate (STD)</th>
<th>Under 1 yr. Mortality Rate</th>
<th>Age-Specific Death Rates (1-9)</th>
<th>Age-Specific Death Rates (10-19)</th>
<th>Age-Specific Death Rates (20-29)</th>
<th>Age-Specific Death Rates (30-39)</th>
<th>Age-Specific Death Rates (40-49)</th>
<th>Age-Specific Death Rates (50-59)</th>
<th>Age-Specific Death Rates (60 yrs and over)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Kingdom</td>
<td>10.9</td>
<td>84.3</td>
<td>89.3</td>
<td>6.9</td>
<td>2.4</td>
<td>3.8</td>
<td>4.7</td>
<td>8.0</td>
<td>11.6</td>
<td>49.4</td>
</tr>
<tr>
<td>North</td>
<td>12.4</td>
<td>90.5</td>
<td>103.4</td>
<td>8.6</td>
<td>7.6</td>
<td>3.7</td>
<td>5.5</td>
<td>10.3</td>
<td>13.1</td>
<td>49.9</td>
</tr>
<tr>
<td>Northeast</td>
<td>11.4</td>
<td>83.4</td>
<td>83.8</td>
<td>7.8</td>
<td>3.1</td>
<td>4.8</td>
<td>5.1</td>
<td>7.5</td>
<td>14.9</td>
<td>51.9</td>
</tr>
<tr>
<td>Center</td>
<td>10.6</td>
<td>96.0</td>
<td>107.6</td>
<td>3.7</td>
<td>1.1</td>
<td>3.1</td>
<td>3.9</td>
<td>8.7</td>
<td>8.7</td>
<td>52.8</td>
</tr>
<tr>
<td>South</td>
<td>8.6</td>
<td>46.5</td>
<td>50.2</td>
<td>7.2</td>
<td>2.3</td>
<td>3.7</td>
<td>8.4</td>
<td>6.6</td>
<td>37.0</td>
<td></td>
</tr>
<tr>
<td>Municipal Area</td>
<td>5.6</td>
<td>67.6</td>
<td>65.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-Municipal Area</td>
<td>11.3</td>
<td>82.5</td>
<td>90.5</td>
<td>1.3</td>
<td>2.2</td>
<td>4.1</td>
<td>5.0</td>
<td>8.2</td>
<td>11.9</td>
<td>50.4</td>
</tr>
</tbody>
</table>

1/ Standardized by using age composition of Whole Kingdom population.

**Source:** Report on the Survey of Population Change, 1964-1965, National Statistical Office, Bangkok. (The Sample on which these data are based excluded the Bangkok-Thonburi Municipal Area.)
<table>
<thead>
<tr>
<th>Age of Woman</th>
<th>Age-Specific Fertility Rate from Survey of Population Change</th>
<th>Age-Specific Marital Fertility Rate from Longitudinal Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>68</td>
<td>48</td>
</tr>
<tr>
<td>20-24</td>
<td>268</td>
<td>164</td>
</tr>
<tr>
<td>25-29</td>
<td>310</td>
<td>223</td>
</tr>
<tr>
<td>30-34</td>
<td>283</td>
<td>172</td>
</tr>
<tr>
<td>35-39</td>
<td>229</td>
<td>143</td>
</tr>
<tr>
<td>40-44</td>
<td>115</td>
<td>89</td>
</tr>
<tr>
<td>45-49</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>15-49</td>
<td>195</td>
<td>125</td>
</tr>
<tr>
<td>Total number of women</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Notes: All rates expressed in terms of per 1000 women. n.a. = not available.
Table 9

Number of Children Ever Born (Standardized for Age of Woman) by Literacy Status and Educational Attainment and Place of Residence, 1960

<table>
<thead>
<tr>
<th>Literacy Status or Educational Attainment</th>
<th>Rural Agricultural</th>
<th>Rural Non-Agricultural</th>
<th>Urban Agricultural</th>
<th>Provincial Urban Non-Agricultural</th>
<th>Bangkok</th>
<th>Total Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literate</td>
<td>4.23</td>
<td>3.87</td>
<td>3.72</td>
<td>3.73</td>
<td>3.07</td>
<td>3.99</td>
</tr>
<tr>
<td>Illiterate</td>
<td>4.59</td>
<td>4.06</td>
<td>4.21</td>
<td>3.92</td>
<td>3.80</td>
<td>4.40</td>
</tr>
<tr>
<td>No schooling</td>
<td>4.03</td>
<td>3.87</td>
<td>4.49</td>
<td>4.23</td>
<td>3.64</td>
<td></td>
</tr>
<tr>
<td>Grades 1-4</td>
<td>3.75</td>
<td>3.87</td>
<td>4.37</td>
<td>3.81</td>
<td>3.36</td>
<td></td>
</tr>
<tr>
<td>Grades 5-10</td>
<td>3.66</td>
<td>3.64</td>
<td>3.62</td>
<td>3.31</td>
<td>3.39</td>
<td></td>
</tr>
<tr>
<td>Higher education</td>
<td>-</td>
<td>1.87</td>
<td>2.01</td>
<td>2.73</td>
<td>1.70</td>
<td></td>
</tr>
</tbody>
</table>

Note:  
a. Limited to women aged 20-44 because of small number of women under 20 years and 45 years and over who have had a higher education.  
b. Less than 10 women.


Table 10

Mean Number of Children Ever Born and Living Children (Standardized for Age) by Residence and Educational Attainment-Ever-Married Women 1969-70

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No school</td>
<td>5.06</td>
<td>4.54</td>
<td>4.04</td>
<td>4.10</td>
</tr>
<tr>
<td>1-3 years</td>
<td>4.95</td>
<td>4.41</td>
<td>4.02</td>
<td>3.85</td>
</tr>
<tr>
<td>4 years</td>
<td>4.73</td>
<td>3.97</td>
<td>3.91</td>
<td>3.57</td>
</tr>
<tr>
<td>5-9 years</td>
<td>3.61</td>
<td>3.61</td>
<td>3.61</td>
<td>3.37</td>
</tr>
<tr>
<td>10 or more years</td>
<td>3.80</td>
<td>2.68</td>
<td>3.70</td>
<td>2.32</td>
</tr>
</tbody>
</table>

Notes: The age-distribution of ever-married women for the entire kingdom as given in the preliminary results of the 1970 Census was used as the age-standardization schedule. Because of the small number of respondents in rural areas with more than 4 years of schooling, the categories 5-9 and 10 or more year have been combined for the rural sample.

Table 11
School Grade Attained by Population Six Years of Age and Over, 1970
Whole Kingdom

<table>
<thead>
<tr>
<th>School Grade Attained</th>
<th>Description</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>0</td>
<td>None</td>
<td>7,145,341</td>
<td>25.9</td>
<td>2,880,028</td>
</tr>
<tr>
<td>1-4</td>
<td>Lower primary</td>
<td>17,178,543</td>
<td>62.3</td>
<td>8,786,649</td>
</tr>
<tr>
<td>5-7</td>
<td>Upper primary</td>
<td>1,189,219</td>
<td>4.3</td>
<td>715,228</td>
</tr>
<tr>
<td>8-12</td>
<td>Secondary</td>
<td>1,336,654</td>
<td>4.8</td>
<td>846,631</td>
</tr>
<tr>
<td>13-15</td>
<td>Attended college</td>
<td>106,878</td>
<td>0.4</td>
<td>61,999</td>
</tr>
<tr>
<td>16</td>
<td>Completed</td>
<td>72,482</td>
<td>0.3</td>
<td>50,597</td>
</tr>
<tr>
<td>17 or more</td>
<td>Graduate Degree</td>
<td>5,269</td>
<td>-</td>
<td>3,722</td>
</tr>
<tr>
<td>Religious, pre-primary and unknown</td>
<td>561,577</td>
<td>2.0</td>
<td>338,412</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>27,595,963</td>
<td>100.0</td>
<td>13,683,266</td>
</tr>
</tbody>
</table>

### Table 12


<table>
<thead>
<tr>
<th>Rank</th>
<th>1947 Place &amp; Region</th>
<th>Population</th>
<th>1960 Place &amp; Region</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangkok-Thonburi (C)</td>
<td>781,662</td>
<td>Bangkok-Thonburi (C)</td>
<td>1,800,678</td>
</tr>
<tr>
<td>2</td>
<td>Chiangmai (N)</td>
<td>38,211</td>
<td>Chiangmai (N)</td>
<td>66,823</td>
</tr>
<tr>
<td>3</td>
<td>Lampang (N)</td>
<td>22,952</td>
<td>Korat (NE)</td>
<td>44,630</td>
</tr>
<tr>
<td>4</td>
<td>Korat (NE)</td>
<td>22,340</td>
<td>Hat Yai (S)</td>
<td>36,197</td>
</tr>
<tr>
<td>5</td>
<td>Nakorn Pathom (C)</td>
<td>22,007</td>
<td>Lampang (N)</td>
<td>36,002</td>
</tr>
<tr>
<td>6</td>
<td>Samut Sakorn (C)</td>
<td>20,754</td>
<td>Ayuthaya (C)</td>
<td>33,547</td>
</tr>
<tr>
<td>7</td>
<td>Phuket (S)</td>
<td>19,550</td>
<td>Phitsanulok (N)</td>
<td>33,233</td>
</tr>
<tr>
<td>8</td>
<td>Songkhla (S)</td>
<td>18,662</td>
<td>Ayuthaya (C)</td>
<td>31,488</td>
</tr>
<tr>
<td>9</td>
<td>Ayuthaya (C)</td>
<td>17,807</td>
<td>Chonburi (C)</td>
<td>33,233</td>
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<tr>
<td>10</td>
<td>Chonburi (C)</td>
<td>17,671</td>
<td>Songkhla (S)</td>
<td>31,488</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>981,616</strong></td>
<td></td>
<td><strong>2,150,206</strong></td>
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<table>
<thead>
<tr>
<th>Rank</th>
<th>1970 Place &amp; Region</th>
<th>Population</th>
<th>1972 Place &amp; Region</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangkok-Thonburi (C)</td>
<td>2,913,706</td>
<td>Bangkok Metropolitan (C)</td>
<td>3,793,763</td>
</tr>
<tr>
<td>2</td>
<td>Chiangmai</td>
<td>89,272</td>
<td>Chiangmai (N)</td>
<td>93,363</td>
</tr>
<tr>
<td>3</td>
<td>Nakorn Ratchasima (NE)</td>
<td>82,256</td>
<td>Nakorn Ratchasima (NE)</td>
<td>77,397</td>
</tr>
<tr>
<td>4</td>
<td>Phitsanulok (N)</td>
<td>64,979</td>
<td>Phitsanulok (N)</td>
<td>70,649</td>
</tr>
<tr>
<td>5</td>
<td>Udorn Thani (NE)</td>
<td>54,869</td>
<td>Udorn Thani (NE)</td>
<td>70,110</td>
</tr>
<tr>
<td>6</td>
<td>Hat Yai (S)</td>
<td>54,050</td>
<td>Hat Yai (S)</td>
<td>57,255</td>
</tr>
<tr>
<td>7</td>
<td>Nakorn Sawan (N)</td>
<td>48,609</td>
<td>Ubon Ratchatani (NE)</td>
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</tr>
<tr>
<td>8</td>
<td>Songkhla (S)</td>
<td>46,322</td>
<td>Nakorn Sawan (C)</td>
<td>51,378</td>
</tr>
<tr>
<td>9</td>
<td>Nakorn Sithammarat (S)</td>
<td>45,353</td>
<td>Nakorn Sithammarat (S)</td>
<td>50,761</td>
</tr>
<tr>
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<td>Chonburi (C)</td>
<td>45,127</td>
<td>Songkhla (S)</td>
<td>50,687</td>
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<td><strong>Total</strong></td>
<td><strong>3,444,543</strong></td>
<td></td>
<td><strong>4,367,534</strong></td>
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Table 13
% Breakdown of Economically Active by Work Status, 1960 and 1970, by Sex

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>13,836,984</td>
<td>16,850,136</td>
</tr>
<tr>
<td>Employers and own-account workers</td>
<td>4,128,392</td>
<td>4,995,963</td>
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<tr>
<td>Salaried employees and wage earners</td>
<td>1,632,686</td>
<td>2,597,870</td>
</tr>
<tr>
<td>Family workers</td>
<td>7,982,836</td>
<td>8,934,983</td>
</tr>
<tr>
<td>Others and unknown</td>
<td>93,070</td>
<td>321,320</td>
</tr>
<tr>
<td>Total</td>
<td>13,836,984</td>
<td>16,850,136</td>
</tr>
</tbody>
</table>

Males

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>7,144,796</td>
<td>8,910,760</td>
</tr>
<tr>
<td>Employers and own-account workers</td>
<td>3,378,325</td>
<td>4,044,464</td>
</tr>
<tr>
<td>Salaried employees and wage earners</td>
<td>1,198,412</td>
<td>1,770,734</td>
</tr>
<tr>
<td>Family workers</td>
<td>2,312,667</td>
<td>2,903,394</td>
</tr>
<tr>
<td>Others and unknown</td>
<td>55,392</td>
<td>192,168</td>
</tr>
<tr>
<td>Total</td>
<td>7,144,796</td>
<td>8,910,760</td>
</tr>
</tbody>
</table>

Females

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6,692,188</td>
<td>7,939,376</td>
</tr>
<tr>
<td>Employers and own-account workers</td>
<td>750,067</td>
<td>951,499</td>
</tr>
<tr>
<td>Salaried employees and wage earners</td>
<td>434,274</td>
<td>827,136</td>
</tr>
<tr>
<td>Family workers</td>
<td>5,470,169</td>
<td>6,031,589</td>
</tr>
<tr>
<td>Others and unknown</td>
<td>37,678</td>
<td>129,152</td>
</tr>
<tr>
<td>Total</td>
<td>6,692,188</td>
<td>7,939,376</td>
</tr>
</tbody>
</table>
Bibliography


Robinson, Warren C., 1974. Notes on Fertility Trends in Thailand. NESDB, Bangkok. (Citation requires permission by author (who provided document)).
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   6. Justification .............................................. 5

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THAILAND

The Development of the Family Planning Program to Late 1974

1. Unlike the growth of family planning programs in many countries, the Thai program has seen the relatively steady evolution of activities that began on a modest and cautious scale about 1965. Although the Government did not officially endorse the establishment of a national family planning program until 1970, officials in the Ministry of Public Health had been concerned about the country's population problems, and about the need for individual services, from the mid-1960s. Consequently, they had started a program in the city of Bangkok in 1965; the Bangkok program was extended beyond the capital only in 1969. The national program has developed in a relatively unbroken line of extension of the initial activities; there have been no important crises or radical changes of direction in the program over its first decade. Instead, the present national program reflects a steady broadening of the original program through the gradual addition of new services and new activities (such as the launching of a public information campaign in 1971), and the liberalization of technical policies which govern the provision of particular services. Since the 1976-81 Five-Year Family Planning Program is expected to continue this evolutionary process, it is important to understand the present program and how it has evolved.

2. The first Five-Year Plan for Family Planning which was published in English by the Ministry of Public Health (MOPH) in February 1971. This 45 page document provides an excellent description of the 1972-1976 Five-Year Plan as well as the activities which preceded it. The scope of the Plan is suggested by its table of contents, reproduced opposite.

3. The period before the adoption of an official National Family Planning Program (NFPP) in 1970 can be divided into two main phases. The first dates from the beginning of activities in 1965 through 1967. The first phase was limited to the development of family planning activities in the capital city, and within the city primarily at four large hospitals (Chulalongkorn, Siriraj, Vajira, and Women's). In 1968, the Undersecretary of State in the MOPH initiated a three-year "Family Health Project". The second phase includes the three-year period 1968-70. A handful of clinics were opened in two northeastern provinces in 1966, and these accounted for almost all activity outside Bangkok. The postpartum program developed in Bangkok spread to nine provincial hospitals and two new MCH centers, and the Bangkok Municipality began offering family planning services in all 21 of its health centers. In the words of the 1972-76 Plan, "the stated objective was to prepare for the time when, in the future, the Government might state an official population policy, by extending family planning services throughout the country". In actual fact, Ministry officials were seriously concerned about the high rate of population growth and felt that action was necessary to provide services to women in rural areas of lower socio-economic status, who had no other access to family planning services.
4. "All health personnel of the Department of Health assigned outside of Bangkok and at least one physician and nurse from every provincial hospital were to receive training in family planning and population dynamics. Following completion of the training course, family planning clinics were to be opened in provincial hospitals and in all primary health centers with a physician." Thus the 1968-70 Family Health Project began family planning at the larger peripheral service points of the Government's health delivery system, and gave great emphasis to the training of medical personnel; this emphasis on training is a notable feature of the Thai program. The following paragraphs summarize the activities of the 1968-70 Family Health Project:

Activities during 1968-70

5. During the three year period, 330 physicians, 700 nurses and 3,090 auxiliary midwives received a one-week training course. Physicians and nurses were trained in Bangkok and received, in addition to didactic lecture material, practical experience in the large family planning clinics of several Bangkok hospitals. The auxiliary midwives were trained in the provinces, with an emphasis on motivation and education of eligible women and on the methods of contraception to be used in the project. In addition, 1,985 male health workers received a brief two-day orientation course which presented the Ministry's activities in this field, so that the health workers could assist in the project. During 1970, 20 full-time family planning clinic workers were recruited and received a one-month training course. A course was held for nurse instructors from many of the nursing schools in Thailand to assist in introducing family planning/population into the nursing school curricula.

6. Following the completion of training the personnel returned to their province and clinics were opened. Initially services were provided only in those clinics which had a physician. There were 83 clinics in provincial hospitals and 185 Department of Health Facilities (45 in Provincial Health Offices, the remainder in health centers) with a physician, which offered contraceptive services. In addition, there were 43 clinics outside the Ministry of Public Health which cooperated with the Ministry's program (21 of these clinics belong to the Bangkok Municipal Health Department).

7. During 1969-1970, a pilot study was initiated in which auxiliary midwives were allowed to prescribe oral contraceptives directly, making use of a checklist to rule out any contra-indications to their use. The purpose of this study was to get services more quickly to women who wanted to practice contraception, and to prove that allowing midwives to prescribe them was safe. The study was a success, with no increase in complications and a definite increase
in the numbers of acceptors in the provinces and improved continuation rates as compared to oral contraceptives prescribed by physicians. As a result of the success of the pilot study, the Ministry ruled, in mid-1970, that midwives throughout the country could distribute oral contraceptives, using the same checklist. This meant that an additional 3,400 clinics without physicians were now able to provide contraceptive services, which resulted in a very significant increase in the number of oral contraceptive acceptors in late 1970.

8. During the three-year period, the following supplies and materials were distributed: 372 sets of medical equipment for family planning clinics, 3,600,000 cycles of oral contraceptives, 194,483 intrauterine devices together with 8,579 insertors, 9,300 printed lectures on family planning/population, 5,000 copies each of four programmed instruction manuals, 5,000 questionnaires for health personnel, 4,000 flipcharts, 30,000 copies of a family planning newsletter and 560,000 copies of leaflets on the IUD and on oral contraception.

9. Because of the limitation on public information activities during the three-year period, the health education section was limited to the production of the materials listed above and to assisting in the training courses. During the latter part of 1970, this section began to develop plans for a major public information program, to be launched during 1971.

10. A characteristic and very constructive feature of the Thai program has been the progressive integration of official MOPH activities with activities in other Ministries and in the private sector. The following paragraphs summarize non-MOPH developments during the 1968-70 period:

**Activities Outside the Ministry of Public Health**

11. There has been a great deal of activity outside the Ministry during this period of time. The highlights include:

a. A new private association, the Planned Parenthood Association of Thailand, which was created in 1970, will emphasize public information and motivation in close cooperation with the Government's National Family Planning Project. It is expected that this Association will play a very important role in the future of population/family planning activities in Thailand.

b. The Population Research and Training Center at Chulalongkorn University, which provides a graduate training program leading to an M.A. Degree in Demography, and which is presently conduc-
ting the first national longitudinal study of demographic, economic and social change in Thailand, was upgraded by the Cabinet to independent institute status. The Center is now called the Institute of Population Studies.

c. The Institute for Population and Social Research at Mahidol University, is developing programatic population research in conjunction with the Ministry of Public Health. An important family planning survey (KAP) was completed and published.

d. A Population Sector has been created in the National Economic Planning Board, which is the agency responsible for overall planning for the Government of Thailand.

e. The Ministry of Education has begun to take an interest in the population field, and is introducing family life education first into its adult literacy programs.

f. Similarly, population materials are being introduced into the curricula of medical, nursing and midwifery schools throughout Thailand.

g. The National Research Council, the original pioneering Government agency in the field of population, published an important KAP survey conducted in the southern Muslim provinces.

h. A large number of research studies in the fields of population/family planning have been carried out. A bibliography which includes most of the publications in those fields is attached as Annex 1. (omitted)

12. As a result of these early activities through 1970, the Government approached the start of its first official five-year Family Planning Program with the following accomplishments to show for its efforts:

a. A large number of health workers had already been trained before the national policy was adopted. These trained health personnel include 330 doctors, 700 nurse/midwives and 3,090 auxiliary midwives. By the end of 1970, there were over 3,500 clinics offering family planning services in Thailand (including rural subcenters, staffed by auxiliary midwives, who had
been allowed to prescribe oral contraceptives directly).

b. Family planning has been integrated into the general health services from the start, and the rural health workers are instructed to render family planning service to the people in their areas as one of the basic health services. There have been neither incentives nor bonuses for their family planning work. So far the family planning activities have been carried out solely by the existing health staff without the recruitment of fulltime family planning field workers.

c. There has been the good coordination and cooperation between various government agencies and private agencies concerned with population problems and family planning before the national policy was adopted. The family planning activities of the Ministry of Public Health are now supplemented by many government and non-government institutions.

d. There is an apparent motivation for small families and a desire to practice contraception among the rural people of lower socio-economic status, with the great majority of acceptors coming from this group.

e. The total number of acceptors in 1970, in the absence of a true public information program, was 40,000 more than the original unofficial target of 180,000 acceptors. The response of the people to the opening of clinics has been very impressive.

f. Prescription of oral contraceptives by midwives has proved successful and has lead to a greatly expanded network of facilities, making family planning services much more readily accessible to the people.

g. The preliminary results of a recent follow-up survey of users indicate that continuation rates for the IUD and Pill acceptors are relatively high and surprisingly comparable.

Features of the 1972-76 Five-Year Plan

13. The Plan established for the first time a national demographic target (to reduce the estimated population growth rate from over 3% to 2.5% by the end of 1976) and established a series of annual national targets for family planning acceptance which it estimated would have to be reached in order to achieve the program's demographic objective. The acceptor targets are shown in Table together with the actual achievements through 1974. Table shows the distribution of acceptors which was estimated would be recruited at five main types
of service points, together with the number of acceptors which had been recruited at each of these classes of service points through 1974. The Plan also established a scale of "standard donations" (not called fees because provision was made for exempting acceptors who could not afford the recommended donations); these donations or fees were set at the following levels:

- 1 cycle of pills -- 5 Baht
- An IUD insertion -- 20 Baht
- A vasectomy -- 50 Baht
- A tubal ligation -- 150 Baht

In addition to the above charges to clients, the national family planning project agreed to pay an additional sum to every hospital or clinic performing a female sterilization of 150 Baht, plus the sum of 50 Baht for each vasectomy; these institutional fees, paid by the MOPH to the institution at which they were to be performed, was an attempt to stimulate staff at the institutions to popularize these procedures. There was also an incentive element in the intended distribution of the donations received from clients: 75% of total receipts were intended to be kept at the operational unit, where they could be used for various clinical and personnel needs; the remaining 25% was to be sent to the central headquarters of the project in Bangkok.

The Plan went on to list about 7 program innovations which it was hoped would facilitate the spread of services. After outlining these additional service inputs that would form part of the program, the Plan concluded by outlining proposed staffing levels, and the financial resources that would be required from both the national budget and from various sources of foreign assistance. The seven new program inputs which the Plan was to introduce were the following:

a. The mobility of the midwives was to be increased by providing each of them with a women's lightweight motorcycle. This was considered important because the midwife was in fact the only field worker in the program and if she was to extend her services beyond the very narrow radius which she could reach from her third-class or midwifery center on foot, she needed some means of transport;

b. The Ministry was to extend the introduction of a new class of family planning workers who were to be assigned to the larger family planning clinics. This system had been introduced experimentally in 1970; it was hoped to assign one family planning worker to all clinics at which a physician was assigned. The duties of these high school graduates would be to give general assistance to the physician, maintaining records and statistics, and conducting motivational and followup activities in areas immediately surrounding the clinic;
c. It was felt impossible to reach all eligible women with the existing staffing pattern in the Health Ministry. It was, therefore, decided to introduce a new category of personnel, a family planning field worker, who could supplement the work of the midwives. Two proposals were under consideration at the time the Plan began:

i. the use of full-time, paid field workers who would be assigned to cover approximately 5000 individuals; these would be assigned to areas not presently covered by the auxiliary midwives;

ii. as an alternative the use of village level volunteers was proposed, with one volunteer per administrative village of about 500 people. These volunteers would not be paid but would be given some form of incentive in the form of commodities or perhaps money. Studies were to be conducted in 1971 and 1972 to see which of the two above approaches seemed to work best. By mid-1974 the Ministry had decided that the second of these two alternatives, the use of village-level volunteers, was the preferred option. An initial experiment with the introduction of these FP/MCH workers was to be conducted in the Lampang District in the northern region early in 1975.

d. A new Division of Public Information was to be established and would introduce the first public information program for family planning. The work of this new Division is described in more detail below;

e. The Ministry realized that the lack of effective supervision in the Ministry had been an important limitation on its ability to improve the delivery of health care, not only family planning but in all fields. Consequently, special efforts of planning, improved per diem arrangements, and improved training and transportation were to be developed in a deliberate effort to upgrade the quality of supervision;

f. There was to be continuing heavy emphasis on the training of physicians, nurses and auxiliary midwives;

g. A set of research projects was listed. Most of these were to be carried out by Bangkok universities, although some were to be done within the Ministry itself. The development of a vigorous program
### Personnel by Section, Proposed and Present Numbers

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of operational and medical research has been a feature of the Thai program from its early days. A considerable number of program innovations have been introduced on a pilot project basis, studied for their effectiveness, and then, if successful, scaled up for national use; and

h. Finally, an attempt was to be made to accelerate the development of maternal and child health services, of which family planning is an integral part in Thailand. In practice, the accelerated development of MCH services has taken the form of a special project in the northeast region, funded by the UNFPA.

Personnel

15. Because the Thai program of family planning has been fully integrated with the country's regular health services, most personnel who provide family planning services are carried on the Ministry's regular budget categories and are not separated out and designated, or funded, through family planning classifications. Almost the only category of personnel who are classified and funded as family planning personnel are those attached to the central staff of the MOPH in Bangkok (i.e., the Family Health Division within the MOPH). In 1971, just before the Five-Year Plan began, there were 30 people designated as family planning personnel. The Five-Year Plan proposed to approximately triple this number, as shown in the table which lists the distribution of present and proposed numbers. In addition to the 95 "Government officials" designated as FP program personnel, the program would also add an additional 39 people, designated "permanent employees." Finally, a third category of personnel, defined as "temporary employees" was possible to be added. These were to include some 300 family planning workers (the high school graduates trained to help in the clinics at which doctors were working) and the possible cadre of 1500 field workers, if it was decided to proceed with the engagement of this group. (No such decision was ever made.) It will be seen that the group designated "permanent employees" are lower-echelon employees, i.e., non-professionals, but employees who nevertheless have permanent status as MOPH employees. The group of "temporary employees" was to consist of the 300 high school graduates to be assigned to clinics having physicians to work on administrative and statistical matters, and a group of perhaps 1500 field workers, depending upon what type of field worker was decided upon. The designation of what MOPH employees are in fact "family planning" employees is a matter of budgetary convenience, depending upon where they can be accommodated within the Ministry's overall budget and on whether or not they are single-purpose or multi-purpose workers. As we shall see, the program was not in fact able to secure authorization as permanent government officials for all of the 90-plus posts it hoped to secure. While several of these posts have been provided
### Government Family Planning Budget, 1972-1976

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### Expected International Assistance, 1972-1976

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from external financial sources, this has meant that the posts could not be designated as permanent posts, which has caused some difficulty in recruiting and retaining the kinds of individuals program management has wanted.

Financing

16. The Five-Year Plan was to have seen the start of a substantial government commitment, out of the national budget, for the support of family planning activities. When the Ministry of Public Health began its three-year Family Health Project in 1968, there were no government funds available, and no official population policy; for these reasons, the program was funded mainly by external donors (primarily USAID, the Population Council, and UNICEF). The Government provided a small counterpart budget for the USAID component, but in 1970 this sum amounted to only US$100,000. The two tables show the amount and distribution of Thai Government funds which were being requested for the Five-Year Plan period, plus the amount and use of foreign funds expected over the same period. While the investment of Thai budget funds was to almost double over the five-year period, it was expected that external funding would be higher in every year than locally-provided funding. In actual fact, foreign funding has carried a much higher proportion of total program costs than these original budgets contemplated (see text para. 8.04).
### THAILAND

**Evolution of Demographic Policy and of the National Family Planning Program, 1900-74**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Thai Agency</th>
<th>External Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900-1958</td>
<td>Pronatalist Policies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>&quot;High Rate of Population Growth Adversely Affects&quot;</td>
<td>NESDB</td>
<td>WORLD BANK (Economic Report)</td>
</tr>
<tr>
<td>1959-1963</td>
<td>Study Committee</td>
<td>NRC, NESDB and others</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>First National Population Seminar</td>
<td>REC</td>
<td>PC</td>
</tr>
<tr>
<td>1964</td>
<td>Family Health Research Committee</td>
<td>PMO</td>
<td></td>
</tr>
<tr>
<td>1964-1966</td>
<td>Potharam Project</td>
<td>NRC, MOPH</td>
<td>PC</td>
</tr>
<tr>
<td>1964-1966</td>
<td>Survey of Population Change</td>
<td>NSO</td>
<td>USAID.</td>
</tr>
<tr>
<td>1965</td>
<td>First Bangkok Family Planning Clinic</td>
<td>Chulalongkorn Hospital (Thai Red Cross)</td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>Second National Population Seminar</td>
<td>NRC</td>
<td>PC</td>
</tr>
<tr>
<td>1966-present</td>
<td>International Postpartum Program</td>
<td>Chulalongkorn, Siriraj Vajira, Women's Hospital</td>
<td></td>
</tr>
<tr>
<td>1966-present</td>
<td>Family Planning Clinic Activities</td>
<td>Siriraj, Vajira, McCormick Hospital</td>
<td>IPFF</td>
</tr>
<tr>
<td>1966-present</td>
<td>Institute of Population Studies (IPS)</td>
<td>Chulalongkorn University</td>
<td>PC</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Thai Agency</td>
<td>External Agency</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>1966-present</td>
<td>Institute for Population and Social Research (IPSR)</td>
<td>Mahidol Univ.</td>
<td>NC Univ.</td>
</tr>
<tr>
<td>1968-1970</td>
<td>Family Health Project</td>
<td>MOPH</td>
<td>USAID, PC, UNICEF</td>
</tr>
<tr>
<td>1968</td>
<td>Third National Population Seminar</td>
<td>NRC</td>
<td>PC</td>
</tr>
<tr>
<td>1967-present</td>
<td>Mobile Family Planning Clinic</td>
<td>Chulalongkorn Hospital</td>
<td>IPPF</td>
</tr>
<tr>
<td>1968</td>
<td>International Communications Workshop</td>
<td>IPSR</td>
<td>NC Univ.</td>
</tr>
<tr>
<td>1969</td>
<td>Seminar for the Press, Radio and T.V.</td>
<td>NRC, Chiengmai Univ.</td>
<td>PC</td>
</tr>
<tr>
<td>1969-present</td>
<td>Expanded Postpartum Program</td>
<td>MOPH</td>
<td>PC</td>
</tr>
<tr>
<td>1970</td>
<td>Seminar for Medical Educators</td>
<td>NRC, MOPH, NESDB</td>
<td>PC</td>
</tr>
<tr>
<td>1970</td>
<td>Population Policy Report</td>
<td>NESDB, IPS, MOPH</td>
<td>-</td>
</tr>
<tr>
<td>1970</td>
<td>National Population Policy Statement</td>
<td>CABINET</td>
<td>-</td>
</tr>
<tr>
<td>1970-present</td>
<td>Planned Parenthood Association of Thailand</td>
<td>-</td>
<td>IPPF</td>
</tr>
<tr>
<td>1971</td>
<td>MCH/FP given first priority in MOPH Family Planning Five-Year Plan, 1972-76.</td>
<td>MOPH</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>Population/FP given high priority in National Five-Year Plan</td>
<td>NESDB</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>Midwife authorized to distribute pill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>Reorganization MOPH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>National Family Planning Committee formed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>Article 86 of newly adopted constitution sanctions adoption of Population Policy in accordance with nation's resources and socio-economic priorities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>MOPH authorizes nurses to insert IUDs. Second Five-Year FP Program approved by NFPC.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Family Health Division, MOPH.
THAILAND: The Second Five Year
Family Planning Program
B.E. 2520-2524 (FY 1977-1981)1/

Family Planning Operations Under the National Economic and
Social Development Plan, Third Draft

With regard to the family planning operations by the National
Family Planning Project under the First Draft of the five-year plan or
under the Third Draft of the National Economic and Social Development
Plan (B.E. 2515-2519), the Family Planning Program has established a
clear-cut objective in an attempt to enable each family to determine the
size of family or to prolong births as they wish. The emphasis of the
program has been placed upon groups of people who have the necessity,
e.g., low income, poor health, many children, etc. It is expected that,
after the operations under the third draft of the plan (2519) have been
completed, the population growth can be decreased by approximately 0.5%
by providing the family planning services with other general maternal and
child health and public health operations. An emphasis of the operation
is placed upon utilizing the existing public health forces and facilities
in order to minimize the costs of operations as well as to eliminate the
problem of work overlapping. In the meantime more thorough services can
be extended to rural people, especially those who live in remote areas.
To achieve the above-mentioned objective, the Family Planning Program has
carried out the following operations:

a. Publicizing knowledge concerning population problems and
family planning, encouraging and inducing as well as giving
help and advice on family planning to those who are willing
to accept the services.

b. Providing services to families, who want to limit the family
size or to prolong births, regularly and thoroughly covering
the country.

c. Providing supports and assistance in improving mother and
child health which will result in decreasing of the rates of
sickness and death of mothers and children.

d. Establishing targets on the number of people to receive
services each year so as to make the rate of population
growth of over 3% drop to around 2.5% per year at the end
of 1976.

1/ Family Health Division, Ministry of Public Health, April 1975.
e. Providing supports for and arranging necessary research in various fields which will be beneficial to the family planning operation, as well as handling the follow-up on those who have received the services in order to evaluate the program at every period.

Targets and Operations until Present

As for the Third Draft of the Development Plan, the Family Planning Program has set targets on the number of people to receive services as follows: the total number of persons receiving services is 1,975,000--of which 450,000 will receive IUD service, 1,355,000 will receive oral pill service; and 170,000 will receive vasectomy and tubal ligation services. When considering the outcome as to the number of those receiving services under the target set forth, it may be concluded that the operations have been successful. During the first three years of the Third Draft of the Development Plan (end of 1974), a target of 1,155,000 persons were to receive the services; in actuality, 1,350,764 persons received services, which can be sorted out as follows:

<table>
<thead>
<tr>
<th>Service</th>
<th>Target</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>IUD</td>
<td>270,000</td>
<td>274,777</td>
</tr>
<tr>
<td>Oral Pill</td>
<td>795,000</td>
<td>885,756</td>
</tr>
<tr>
<td>Vasectomy and Tubal ligation</td>
<td>90,000</td>
<td>154,678</td>
</tr>
<tr>
<td>Injection</td>
<td>-</td>
<td>35,553</td>
</tr>
</tbody>
</table>

The total number of people who received services in excess of the target is 195,764. The figures can be seen from Table 1 in which the targets and outcomes are compared and the number of people who received the services accumulated from the beginning of the project is shown.

Results of major operations during the period of the Third Draft of the Development Plan can be summarized as follows:

a. Extension and Improvement of Family Planning Services.

   During the period, the family planning service units have been improved and extended in terms of increase in number from 3,897 units in 1971 to 4,925 units in 1974.

   With regard to the various means of birth control services, the number of people receiving the IUD service still remains at the same level while the trend of the number of those re-
ceiving oral pill service is dropping. On the contrary, the trend of the number of those receiving vasectomy and tubal ligation services is rapidly rising, because people have begun to appreciate these methods and to feel more secure about using them. In order to correspond to the needs of people in providing sterilizing surgical operations services, mobile medical units are established to provide vasectomy service to people in remote areas. Moreover, during the period of the Third Draft of the Development Plan, initiation has been made to make condoms and injectionables available so as to give the people an opportunity to select the service they prefer. This also helps extend the services to the people in a wide scope.

Family Planning service units in the rural areas has always been replenished with the supplies of pills, IUD, vasectomy and tubal ligation instruments, condoms, injection as well as other necessary medical supplies and accessories so that they can carry out their operations with greater efficiency. In addition, during the first three-year period of the Third Draft of the development plan, 90 vehicles have been supplied to first-class health stations and 3,600 motorcycles have been supplied to midwives and medics for use in their job performance to provide them with convenient transportation in order to extend adequate services over a wider area.

b. Supports and Extension of Public Information and Relations Operations. Public information and relations operations are established with the purpose to give knowledge and understanding to people and related agencies and to stimulate them to pay attention and realize the importance of family planning through the use of mass media and various means of communication so that the family planning operations will be successful. During the first three years of the Third Draft of the Development Plan, the following things are produced: 2,715,000 copies of publication, 34 reels of film, 375 reels of sound recorded tape, 4,070 slides for showing at the various movie theaters, 7 TV advertising films, 5,000 slides and transparent pictures. Radio programs have been produced and sent to 36 provinces and funds for radio program broadcasts have been released to 22 provinces. Besides nine automobiles, equipped with audiovisual aids, are provided to carry out public information operations in 428 locations in various provinces. Fifty-seven personnel have been trained to produce and use audiovisual aids.
c. **Extension and Improvement of Training and Follow-up Operations.**

Acceleration has been made on extension and improvement of this area of work to provide education and experience to personnel at the various levels and to stimulate them to pay attention to their work, particularly in the area of training. Improvement has been made to use training aids in a wide scope. Evaluation has also been conducted in order to establish guidelines for improvement of training courses to make them more effective and in better harmony with the needs of the participants. Furthermore, emphasis is placed on supervision to enable the personnel to perform their jobs in accordance with correct and suitable guidelines. At the end of the third year of this Draft of the Development Plan, the following public health personnel at the various levels have been trained: 164 doctors, 841 nurses, 2,875, midwives, 679 changwat level health personnel, 689 family planning personnel, 139 home visiting personnel, 381 paramedics, 302 indigenous midwives and 200 persons trained in basic midwifery. The total number of personnel trained is 5,649. Trips were also made to give supervision at the service units in the various provinces, e.g., clinics at the office of the chief doctor, first-class health stations, second class health stations, midwifery offices, etc.

d. **Extension and Improvement of Research and Evaluation Operations.**

During the period of the Third Draft of the Development Plan improvement has been made on research and evaluation by means of improving the data collecting system and using modern machines, such as computers to analyze data in order to obtain the results of computation and statistical figures so that they can be used as guidelines for development of plans and improvement of project implementation with a greater degree of progress and efficiency. Besides, the scope of research operations has been extended to stress research work which will help support the family planning service operations. At the end of 1974, 12 research works have been completed and six more are underway.

**Budget for the Operation During the Period of the Third Draft of the National Economic and Social Development Plan.**

During this period, funds obtained from RTG are rather limited. In order to make the family planning operations meet the goal as set forth, it is therefore necessary to use the funds made available from international organizations mainly. Details on the budget are shown below.
Details on Budget of the National Family Planning Program for 1971, 1972 and 1973

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Budget (Baht)</th>
<th>Counterpart Funds (Baht)</th>
<th>USAID Funds (Baht)</th>
<th>UNFPA Funds (Baht)</th>
<th>Totals (Baht)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>10,000,000</td>
<td>3,805,876</td>
<td>25,667,000</td>
<td>-</td>
<td>39,472,876</td>
</tr>
<tr>
<td>1972</td>
<td>11,000,000</td>
<td>2,863,092</td>
<td>34,117,000</td>
<td>24,191,280</td>
<td>72,171,372</td>
</tr>
<tr>
<td>1973</td>
<td>12,496,600</td>
<td>5,810,696</td>
<td>39,639,000</td>
<td>27,656,600</td>
<td>85,602,896</td>
</tr>
</tbody>
</table>

Existing and Recurring Problems

Despite the fact that family planning operations during the first three years of the third development plan have successfully attained the pre-established targets, there nevertheless exist certain significant problems that affect current operations. Unless appropriate solutions are found and corrective measures taken, these problems are apt to further impede the progress of the fourth development plan. Briefly stated, the problems are:

a. **Personnel strength.** Of the total 127 central personnel engaged in family planning operations, only 28 are regular-based. The fact that the office of Civil Service Commission has not up to this point approved the various job ceilings and positions that are vital to the operations has necessitated hiring of various different types of personnel ranging from those at the administrative and technical levels to the clerical class, all funded through foreign assistance. But since such subsidization by foreign organizations is of an indefinite and non-committal nature, the working staff finds the lack of security and working morale a frequent cause for leaving their jobs as soon as they have located other employment that promises better security. As a result, the efficiency and effectiveness of the operations suffer. While it is the government's policy and desired target to check the rate of population expansion, it is difficult to see how the various pre-set targets can be accomplished unless an adequate personnel strength commensurate with the expanding work scope is provided. Of particular concern, however, is the possibility of partial or complete withdrawal of foreign assistance.

b. **Budget.** The budgetary support presently received for family planning operations comes substantially through foreign subsidization, with the local government providing barely over ten million Baht per year which is scarcely adequate for a successful and objective operation. Moreover, owing to the on-going nature of the family planning operations and the fact that services as such are not merely rendered to new clients year after
year, but are continuingly solicited by those served in the preceding years, the number of clients accumulates and expands with each succeeding year. For this reason, unless the Government increases its budgetary support, the desired operational achievement cannot be expected to materialize. As for the substantial foreign subsidy presently being administered, there exists no commitment whatsoever that it will continue to be provided indefinitely. On the contrary, there is the tendency that such assistance will be sizably reduced in the future.

The Second Five-Year Family Planning Program.

Objectives and Policies -

Objectives. To promote, encourage, induce and provide family planning services to the willing public to enable them to predetermine the sizes of their families or conception-free periods in an effort to decrease the rate of population growth from 2.5% per annum at present to 2.1% per annum toward the consummation of the fourth development plan (1980).

Policies. Provide support and make developments in family planning operations, aiming at achieving the established objectives. This involves rapid improvements toward more efficient and effective administration of services, enlargement of operational areas to reach the inhabitants of remote rural localities, and, by offering more diversified services, the public are afforded the choices of birth control on a wider scale. Emphasis shall be upon the following:

a. Enlarge and accelerate improvement of services particularly in areas where birth rate is higher than others.

b. Promote and elevate the standard of operational efficiency of the personnel both in the central and the provincial regions.

c. Promote public relations via the use of different communication media to incite understanding and interest by the public to avail itself of the opportunities for family planning services.

d. Give priority to research and evaluation as they contribute beneficially to the family planning operations, especially in increasing the effectiveness in the rendering of services.

e. Promote, cooperate and coordinate with other government units or private organizations which are engaged in family planning operations.
Family Planning Operational Development Guidelines.

a. Enlarge and accelerate improvement in the administration of services in areas where the birth rate is high.

i. Accelerate improvement in the operations in areas of high birth rate, especially in remote rural locations so as to achieve a higher degree of efficiency in administering services on an enlarged scale. This involves increasing the number of various types of personnel as required as well as providing for an increased supply of medical supplies and equipment to a level commensurate with the need of the public utilizing the services.

ii. Promote the production and out-turn of low-level public health personnel such as village public health volunteers with the necessary knowledge and capability in providing simple birth control services that do not require special medical skills and techniques, such as the use of prophylactics. These personnel should additionally be capable of inducing the public to utilize the services.

iii. Solicit the cooperation of various government units or private organizations in the event that, without which, the services cannot be directly administered. For instance, in rendering services to people inhabiting in remote, barren areas where communication is inconvenient, such as in the various hill tribe areas, the cooperation of the border patrol police may be solicited.

b. Promote and improve upon the operational efficiency of the personnel.

i. Conduct training of public health personnel of different levels who are undertaking the new assignment so as to equip them with the necessary operational knowledge and capabilities.

ii. Conduct training of personnel who had previously undergone family planning training in order to educate them with modern advanced technologies as well as provide them with a refresher course.
iii. Supervise and follow-up closely on the operations of the personnel at various levels in order that any problem and obstacles arising during the course of operations may be effectively dealt with. Additionally, this serves to ensure that the operations are properly and suitably carried out.

c. Promote propagation and public relations via the use of various types of communication media.

i. Enlarge the media of communication.

ii. Improve and modernize the techniques used in the various media of communication in order to produce positive results.

iii. Expand the scope of operations of the mobile public relations unit so as to attain a country-wide coverage.

d. Confer weight upon research and evaluation.

i. Advocate research work on at least eight theses per year, placing emphasis upon those that will prove beneficial toward improving efficiency in the administration of family planning services.

ii. Improve upon the systems employed in the compilation of various data and statistics in order that more complete, accurate and expeditious data may be derived as a result.

iii. Improve upon the evaluation system to achieve greater effectiveness so that it may subsequently be used in the programming stages of future operations. Moreover, it can be used to govern the course of operations to ensure coherence to the specified targets.

e. Promote, cooperate and coordinate with other work units.

i. In cooperation and coordination with the Sanitation Office and Maternal and Child Health Center of the Bangkok Municipality, provide services to the impoverished within the metropolis.

ii. Maintain liaison, coordination and cooperation with the various government work units or private organizations on matters concerning family planning operations as and when informed, notified, or reported
Measures that provide backstopping for efficacious operations consistent with the policies.

In order that the operations may proceed well and effectively in consistency with the aforementioned policies, the following essential improvements should be considered.

a. Accelerate improvement in personnel strength. Bring to the attention of affiliated work units, such as the Bureau of Budget and the Office of Civil Service Commission, the essentiality of family planning operations; justify that it warrants the requested positions and ceilings and budget allocations for hiring an adequate number of personnel to carry out family planning operations both in the central and the provincial regions.

b. Bring to the attention of the Government the importance of family planning operations as well as the prospect of difficulties that may arise as a result of receding or withdrawal of subsidization by foreign organizations so that the Government may consider allocating a budget sufficiently large to enable implementation of project operational objectives.

Objectives.

In order to achieve the operational objectives and adhere to the pre-established policies in accordance with the fourth development plan in the family planning operations, targets have been established so that in the years 1977, 1978, 1979, 1980 and 1981 the number of service recipients, both old and new, will be 1,600,689; 1,777,051; 1,951,366; 2,111,625; and 2,266,609 respectively. More details appear in Table 2. (Target of service recipients, classified according to methods used, Fourth Development Plan.)

Budgets.

During the duration of the Fourth Development Plan it is estimated that a budget of 527 million Baht will have to be allocated for use in family planning operational development to attain the desired target. The computation was based upon the budgetable funds and the trend of foreign financial subsidy. The financial status of 1975 was used as the basis upon which the estimates were derived.

From the entire estimates of allocations as indicated in the Fourth Development Plan, the highest allocation appears to be that of medical supplies used in family planning which reaches 58.4% of the overall budget. Funds for this purpose are expected to be made available, mostly if not entirely, through foreign aid. In contrast, funds for salaries and wages only constitute a 7% of the overall figure. Apart from this, it may be noted from the characteristics of this allocation that, approximately 90% of the total budget is distributed into the
various provincial regions of the country. Details are shown in Table 3 of the family planning operational development funding allocation, Fourth Development Plan, FY 1977-81.
Table 1

Comparison of the Target Number of Acceptors with the Result of Operations during the First Three Year of the Five-Year Family Planning Program (1972 - 1974)

<table>
<thead>
<tr>
<th>Methods of Acceptors</th>
<th>Projected Number of Acceptors 1972-1976</th>
<th>Projected Number of Acceptors 1972-1974</th>
<th>Number of Acceptors Recruited 1972-1974</th>
<th>Target and result of operations in accordance with Third Five Year Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUD Acceptors</td>
<td>450,000</td>
<td>270,000</td>
<td>274,777</td>
<td>90,000</td>
</tr>
<tr>
<td>Oral Pill Acceptors</td>
<td>1,355,000</td>
<td>795,000</td>
<td>885,756</td>
<td>235,000</td>
</tr>
<tr>
<td>Male &amp; Female Sterilization Acceptors</td>
<td>170,000</td>
<td>90,000</td>
<td>154,678</td>
<td>25,000</td>
</tr>
<tr>
<td>Condom</td>
<td></td>
<td></td>
<td></td>
<td>35,553</td>
</tr>
<tr>
<td>Injectable Acceptors</td>
<td></td>
<td></td>
<td></td>
<td>350,000</td>
</tr>
<tr>
<td>Total Acceptors</td>
<td>1,975,000</td>
<td>1,155,000</td>
<td>1,350,761</td>
<td>400,000</td>
</tr>
</tbody>
</table>

Source: Family Health Division, Ministry of Public Health.
### Table 2

Target Number of Acceptors Required during
Second Five-Year Family Planning Program
(FY 1977-1981)

<table>
<thead>
<tr>
<th>Year</th>
<th>IUD Initial Acceptors</th>
<th>IUD Continuing Users</th>
<th>Pill Initial Acceptors</th>
<th>Pill Continuing Users</th>
<th>Male/Female Sterilization Initial Acceptors</th>
<th>Male/Female Sterilization Continuing Users</th>
<th>Injectable Initial Acceptors</th>
<th>Injectable Continuing Users</th>
<th>Total Initial Acceptors</th>
<th>Total Continuing Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>95,000</td>
<td>298,817</td>
<td>350,000</td>
<td>691,072</td>
<td>90,000</td>
<td>35,800</td>
<td>1,025,368</td>
<td></td>
<td>575,000</td>
<td>1,025,368</td>
</tr>
<tr>
<td>1978</td>
<td>100,000</td>
<td>333,120</td>
<td>350,000</td>
<td>795,631</td>
<td>95,000</td>
<td>57,300</td>
<td>1,190,051</td>
<td></td>
<td>587,000</td>
<td>1,190,051</td>
</tr>
<tr>
<td>1979</td>
<td>105,000</td>
<td>308,198</td>
<td>360,000</td>
<td>888,518</td>
<td>95,000</td>
<td>61,300</td>
<td>1,328,774</td>
<td></td>
<td>609,000</td>
<td>1,328,774</td>
</tr>
<tr>
<td>1980</td>
<td>106,500</td>
<td>305,511</td>
<td>370,000</td>
<td>977,264</td>
<td>100,000</td>
<td>107,300</td>
<td>1,190,125</td>
<td></td>
<td>621,500</td>
<td>1,190,125</td>
</tr>
<tr>
<td>1981</td>
<td>106,500</td>
<td>300,230</td>
<td>385,000</td>
<td>1,061,937</td>
<td>100,000</td>
<td>127,700</td>
<td>1,620,107</td>
<td></td>
<td>636,500</td>
<td>1,620,107</td>
</tr>
<tr>
<td>Total</td>
<td>513,000</td>
<td>1,815,000</td>
<td>1,061,937</td>
<td>3,029,000</td>
<td></td>
<td></td>
<td>1,630,107</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Family Health Division, Ministry of Public Health.
Table 3

Recommended Budget Allocations for Family Planning Operations
During Second Five-Year Family Planning Program (FY 1977-1981)

(Million Baht)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Research and Evaluation</td>
<td>2.400</td>
<td>2.400</td>
<td>2.400</td>
<td>2.400</td>
<td>2.400</td>
<td>12.000</td>
</tr>
<tr>
<td>4.</td>
<td>Expansion of Sterilization Method</td>
<td>11.000</td>
<td>11.450</td>
<td>12.000</td>
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<td>(i)</td>
<td>Oral Pill</td>
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<td>55.564</td>
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<td>IUD</td>
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Total: 92.760 103.878 106.924 108.508 115.367 527.437

Source: Family Health Division, Ministry of Public Health.
THAILAND

Composition of National Family Planning Coordinating Committee

1. Minister of the Ministry of Public Health (Chairman).
2. Assistant Minister of the Ministry of Public Health (Deputy Chairman).
4. Under-Secretary of State of the Ministry of Interior.
5. Under-Secretary of the State of the Ministry of Agriculture and Cooperative.
6. Secretary of the National Economic and Social Development Board.
8. Director of the Budget Bureau.
9. Director of the National Family Planning Program.
10. Director General of the Health Department.
11. Director General of the Medical Services Department.
12. Director General of the Department of Technical and Economic Cooperation.
13. Director General of the Department of Public Relations.
14. Director of the Population and Social Research Institution, Mahidol University.
15. Director of the Institute for Population Studies, Chulalongkorn University.
17. Head of Adult Education, Ministry of Education.
18. President of the Planned Parenthood Association of Thailand.
19. Director of the Family Health Division, Ministry of Public Health.

1/ The National Family Planning Committee was established in 1974. It is responsible for overseeing the work of the National Family Planning Program as planned and administered by the Ministry of Public Health. It also helps coordinate the population activities of external donors.

Source: Family Health Division, Ministry of Public Health.
The Planned Parenthood Association of Thailand (PPAT)

1. The PPAT was established in Bangkok in 1970 by a group of distinguished Thai citizens. It is presently an associate member of the International Planned Parenthood Association and may soon become a full member.

2. PPAT's Board of Directors is composed of 17-25 persons elected by the National Assembly. Among the members are representatives of key ministries, universities and private agencies concerned with family planning/population activities. The Executive Board, which supervises the administration of the program, consists of at least five members of the Board of Directors, including the President, Executive Director and the Treasurer (ex-Officio). It meets at least ten times a year and oversees the work of the 54 permanent employees all but a few of whom are located in Bangkok.

3. The only other PPAT office is the first Regional Office which opened in Chiengmai in 1972. The Chiengmai Office has a staff of nine and provides part-time family planning services in the rural areas through mobile teams. It will soon open a clinic in Chiengmai and plans to extend its information and education activities, if funds become available.

4. A full-time Executive Director is responsible for the day-to-day operations of the program. Functionally, the PPAT is divided into three main divisions which have the following responsibilities:

   a. The Logistics Division handles the administration and financial aspects of the Association's work. It has a staff of 20 persons.

   b. The Technical Division undertakes planning, evaluation, coordination and fund raising. This Division has 11 members.

   c. The Field Operations Division is responsible for project implementation and for undertaking field activities developed by the Technical Division, particularly information and education activities. One of the most important educational activities at present is the publication of a monthly family planning magazine; 10,000 copies of which are distributed by mail to prominent government and private leaders in many parts of the country.

   1/ The Board of Directors meet at least four times a year.
5. In 1973 PPAT had a budget of around US$250,000 over 90 percent of which was provided by IPPF. In 1974 IPPF contributed US$264,000 and in 1975 expects to contribute some US$300,000. The PPAT's current projects include:

   a. **Accelerated Rural Development Project** - Train Accelerated Rural Development (ARD) paramedics in family planning clinical services and motivation. Thus far some 200 paramedics in two provinces have received one week of training. PPAT plans to train all 1,136 ARD paramedics who are operating in 32 provinces;

   b. **Community Development Program** - the training of community development (CD) workers and village housewife leaders. Some 200 CD workers and 900 housewives have been trained to distribute pills to clients (i.e., depot holders) who have been screened initially by paramedical personnel; CD workers are also trained to make referrals when complications arise;

   c. **Slum and Minority Groups** - Training of university students to motivate Chinese and Muslim minority groups in Bangkok. The students work for PPAT during their vacations. It is estimated they reached some 3,600 households in 1974;

   d. **Northeast and Resettlement Project** - PPAT staff motivated more than 4,000 persons to accept oral contraceptives;

   e. **Youth Orientation Project** - Pilot project using students for family planning motivation. Some 300 leaders were given four-day basic and four-day refresher courses and sent into the rural areas on their vacations;

   f. **Private Clinic Project** - Providing private physicians with pills, condoms, IUDs and printed family planning material;

   g. **Military and Police Groups Project** - Holding of family planning clinics in military and police camps. PPAT trains the nurses and motivates these groups to accept family planning;

   h. **Vasectomy Project** - Holding vasectomy clinics in two districts. A team of one doctor, a nurse and a PPAT worker motivates potential clients and performs vasectomy operations. In 1974, in two Northeast districts some 500 vasectomies were performed. IPPF provided funds for the information and education activities, but due to the lack of funds for paying per diem and transportation, the project had to be discontinued despite a high demand for services;
i. **Industrial Sector Project** - Motivation of industrial workers in 22 industrial facilities during the lunch period. By the end of 1974 PPAT expected to be conducting this project in some 50 enterprises.
Community-Based Family Planning Services

1. The Community-Based Family Planning Services (CBFPS) project is a non-profit private-sector program designed to "test new methods of significantly expanding access to and information about contraceptive methods, particularly in the rural areas, by utilizing local villagers, shopkeepers, farmers, village headmen and teachers as channels of communication and distribution." 1/ It is based on selecting and training village volunteers to distribute contraceptives and to motivate new acceptors and continuing users mainly in areas where there is no MOPH clinic. The program was formally approved by the NFPOC in May 1974 and immediately began operations. The CBFPS project will supplement and cooperate with Government family planning activities and be directed towards: (a) the identification, selection and training of community and village-based family planning volunteers; (b) the development of an integrated approach to family planning services; and (c) the establishment of a simple, inexpensive and replicable information/motivation/distribution system. 2/

2. The project is being implemented under the guidance and supervision of a Tri-Partite steering committee made up of representatives from the MOPH, PPAT AND CBFPS. 3/ It is being undertaken as a PPAT related activity but is funded directly by IPPF. In 1974 IPPF contributed US$200,000 of the CBFPS US$300,000 budget. 4/ CBFPS intends, however, to launch a local fund-raising drive to become self-sufficient as quickly as possible. Contraceptive pills are sold by distributors at either 95 or 50 per cycle depending on the brand. This is well below the 12 to 15 per cycle price found in pharmacies. The distributors keep 1 for every cycle they sell. The contraceptives are presently provided free of charge by IPPF. The income from the sale of contraceptives will also help CBFPS achieve self-sufficiency.

3. CBFPS acts as the Executing Agency. The project is headed by a Project Director and at the end of 1974 had a full time staff of 27 professionals. 5/ The project includes three major programs - a village program, a public institution program, and a private sector program:

2/ CBFPS, "Community Based Distribution of Contraceptives: A Project Proposal to the NFPC," May 1974, pp. 4-5.
3/ The Steering Committee is comprised of 3 CBFPS members, 2 PPAT members, and 3 MOPH members. It is chaired by the Director-General of Medical Science in the MOPH Dept.
4/ The CBFPS expects to have a budget of US$500,000 in FY 1976 of which CBFPS will raise some US$300,000.
5/ 12 in operations, 5 in research and evaluation and 10 in budgeting.
The Village Program utilizes local distributors from villages with a population of 200 to 1,000 persons. A CBFPS coordinator is stationed in each district to supervise, to keep distributors supplied with contraceptives and assist in the keeping of accurate records. A local Government doctor is contracted to provide medical supervision, for which CBFPS pays him an honorarium.

The Public Institution Program works through existing governmental organizations which have some kind of medical infra-structure to provide family planning services for their members, and to train some of the members to be distributors in their communities. Already some 46,000 government primary school teachers have been taught about family planning by CBFPS at 36 teacher training colleges. More than 3,600 teachers have received additional one-day training as distributors, following the initial motivation sessions. They will form part of a mail order service for the distribution of contraceptives throughout Thailand.

The Private Sector Program concentrates on organizations, professions or disciplines which fall outside the above two programs; i.e. labor unions, barber shops, etc.

Results

4. It is much too early to evaluate the results of the CBFPS program. It appeared to have gotten off to a good start during its initial six months in 1974. By the year-end, active distributors exceeded 1,310 the number of pill acceptors was increasing each month, and by mid-1975 the program hoped to be operating in 10% of the country's 556 districts (amphoe). Although the program had not yet worked out all problems of its relationship to the MOPH program, a cooperative spirit on both sides (at the Bangkok level, at least) gave hope that the interface problems could be resolved.
THAILAND

Village Health Volunteers

1. Another experiment based on the training of local people to serve their own community is the "village volunteer" pilot project started in January 1975. This study is based on utilizing a volunteer selected from each village who is trained to provide family planning services in villages beyond the reach of the health center personnel. In contrast to the Community Based Family Planning Services (CBFPS) project which utilizes local private distributors, non-medical government personnel (mainly teachers) and other local channels, the village volunteer is directly related to Ministry of Public Health (MOPH) activities. The volunteer is selected, trained and supervised by local health center personnel; he (or she) refers clients wanting Intra Uterine Device (IUD) or sterilization to MOPH service points, and is responsible to a team led by the physician at the first-class health center. The CBFPS also extends family planning services to the village level, but contraceptive supplies, supervision, and training are the responsibility of the CBFPS, not the MOPH.

2. The volunteers will augment health center personnel by providing family planning services (pills and condoms) in villages thereby increasing the coverage of the family planning program. The project will cost around US$38,000 (assistance is being received from Canada's International Development Research Center). Annex I provides a diagram of the village-based contraceptive services model.

3. The project will seek to determine: (i) characteristics of the most effective village volunteer; (ii) total number of new acceptors resulting from this new approach; (iii) yearly continuation rates; and (iv) annual cost per acceptor of the pilot project. Baseline data will be gathered through a KAP survey which will be followed by a second KAP study after one year. Second-class health center personnel and village headmen will select one volunteer from each village. Altogether some 100 villages (100 volunteers) and 8,800 household and families will be covered. These households are serviced by one first-class health center and 13 second-class health centers. Condoms and pills will be sold by the village volunteers at 5% per cycle or per dozen, condoms (the same price charged at health centers). New pill acceptors will be screened by the volunteer. As an incentive, the volunteer can deduct 2% per pill cycle or per dozen of condoms sold. So as not to detract from the monthly income of the health center, the project will reimburse the health centers for the incentive money paid to the village volunteer. The Ministry of Public Health will provide the oral pills and condoms for the study.

1/ The CBFPS volunteers or community leaders do, however, arrange for a meeting of the newly-motivated client with a midwife or nurse who gives the client a checkup and fills in the government health center form. The health center midwife is paid 2% to register the client as a new acceptor. During its first year of operations, the CBFPS is concentrating its activities on 24 districts. The village volunteer study is being undertaken in one rural district, in the Po-Thanh District (45,000) of Antong Province, 85 Km. north of Bangkok.

2/ Altogether there are around 50,000 villages in Thailand.
THAILAND

Diagram of Village-Based Contraceptive Services Model

1/ The physician at the first-class health center serves as the team leader. He is responsible for the total field operation. He will assist in the training and supervision of the village volunteers and paramedical personnel involved in the scheme. He receives a stipend and is assisted by an assistant field director who is responsible for resupply of contraceptives, collection of monthly reports, etc. In addition to the district health officer (non-MD), one male and one female at the second-class health center are responsible for keeping accurate records, collecting fees, selling contraceptives, etc.
MOPH Rules Governing the Provision of Specific Family Planning Methods
(A Summary)

1. Oral Contraceptives

Remains on the list of "dangerous drugs" whose control is regulated by the requirement of a doctor's prescription and sale only through Class "A" pharmacies. In practice these regulations are not strictly enforced and customers are usually able to purchase pills without prescription and from many non-Class "A" pharmacies.

In 1970 the MOPH began allowing midwives to enroll pill clients after administering a simple contraindication examination and getting 100% negative answers (any positive answers required referral to a doctor). In 1974 CBFPS experiments were allowed to distribute pills (a) without prescription in districts where a doctor was appointed to supervise CBFPS activities and where CBFPS clients names were put on record at the nearest health center, or (b) by mail, to school teachers (who act as community distributors), accompanied by blank prescriptions signed by doctors of the Teachers' Medical Plan in Bangkok.

In late 1974 the MOPH asked its drug-control committee to review the need to keep the pill on the "dangerous drug" list, citing growing medical opinion that the risks of pregnancy outweigh the risks of freer pill distribution.

2. Intrauterine Devices

In 1972 an experiment was conducted to compare the medical effects, and continuation rates, of IUD insertions by doctors and by 30 nurses. Preliminary results at the end of 1974 suggest distinct advantages in permitting nurses to perform this procedure. Some hospitals and MCH Centers have trained nurses to insert IUDs where they could be "under a doctor's supervision," the present requirement. One or two provinces have strongly promoted IUD work by nurses, with impressive effect on acceptance rates. As a result of these experiments, the MOPH has agreed to permit properly trained nurses to insert IUDs. A two-year training program will start in late 1975.

3. Sterilizations

Female sterilizations are performed by doctors only, mainly at hospitals and MCH Centers but also at those 1st class HCs where there are doctors trained in this procedure. Male sterilizations (vasectomies), a much simpler procedure normally performed on an outpatient basis, may also be performed only by doctors. They are done only at hospitals and at a minority of 1st class HCs where trained physicians are present. (Isolated examples are cited of vasectomies performed by traditional doctors and former army "medics", both unlicensed doctors; such procedures would of course be illegal.)
4. Injectables

The McCormick Hospital and Family Planning Clinic in Chiang Mai pioneered the use of this contraceptive in the early 1960's, with excellent acceptance/continuation rates and clinical results. In 1974, the MOPH decided to introduce Depo Provera in all MOPH units where a physician is in attendance (i.e. nurses will be allowed to do the actual injecting), following a standard protocol to be issued by the Ministry.

5. Advertising (all contraceptive products)

Products may be advertised by name only, i.e. without supporting material explaining their purpose or use. In late 1974, the MOPH was considering a relaxation of these restrictions to assist extension of commercial distribution efforts.
THAILAND

Organization Chart of Ministry of Public Health

Office of the Secretary to the Minister

Minister of Health

Duty Minister

Under - Secretary of State for Health

Office of the Under - Secretary of State for Health

Duty - Under Secretary (Administration)

Duty - Under Secretary (Planning and Evaluation)

- General Administration Div.
- Financial Division
  - Personnel Div.
  - Medical Registration Div.
  - International Health Div.
  - Maintenance Engineering Div.
- Medical Affair Div.
- Construction & Design Div.

Office of the Secretary

Financial Division

Personnel Div.

Medical Registration Div.

International Health Div.

Construction & Design Div.

Department of Medical Care

Office of the Secretary

- Financial Division
- Personnel Div.
- Medical Registration Div.
- International Health Div.
- Maintenance Engineering Div.
- Medical Affair Div.
- Construction & Design Div.

Office of the Secretary - Office of the Secretary

Office of the Secretary - Office of the Secretary

Department of Health

Rural Administration

Provincial Chief Medical Officer

Provincial Public Health Office

- Provincial and District Hospitals
  - Medical and Health Centers

Department of Communicable Disease Control

- Office of the Secretary
- Medical Div.
- Personnel Div.
- V.D. Control Div.
- Leprosy Control Div.
- T.B. Control Div.
- Leprosy Hospital
- Chest Hospital

Department of Medical Sciences

- Office of the Secretary
- Medical Science Div.
- National Health Laboratories Project Div.
- Radiation Protection Service Div.
- Clinical Pathology Div.
- Pathology Div.
- Drug Analysis Div.
- Food Analysis Div.
- Medical Research Div.
- Virus Research Institute

Office of Food & Drug Control

- Office of the Secretary
- Public Relation and Advertisement Control Div.
- Cosmetic Control Div.
- Drug Control Div.
- Narcotic Substance Control Div.
- Food Control Div.
- Technical Div.
- Inspector Div.
THAILAND

Organization Chart of the National Family Planning Program

Minister of Health and Deputy-Minister

Under-Secretary of State for Health

Office of the Under-Secretary of State for Health

Department of Health

Family Health Division

Maternal and Child Health  Family Planning

Research and Evaluation  Public Information  Training and Supervision  Special Projects

Administration

(see next page)

Source: Family Health Division, Ministry of Public Health,
THAILAND
Staffing of the National Family Planning Program at Headquarters, Ministry of Public Health

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1/ As of September 1975.
2/ Data established by the civil service commission.
3/ Employed by the Ministry of Public Health on direct subscription basis through program funds provided by external donors.

Sources: Family Health Division, Ministry of Public Health.
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Communication Officer</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Social Sciences (Public Communication)</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>Administrative Assistant</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Social Sciences</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Artist</td>
<td>3rd</td>
<td>1</td>
<td>1,550</td>
<td>Diploma in Fine Arts</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Electronic Officer</td>
<td>3rd</td>
<td>1</td>
<td>1,550</td>
<td>Diploma in Electronics</td>
<td>1</td>
</tr>
<tr>
<td>5.</td>
<td>Clerk</td>
<td>4th</td>
<td>2</td>
<td>1,220</td>
<td>Diploma</td>
<td>3</td>
</tr>
<tr>
<td>No.</td>
<td>Section and Position</td>
<td>Grade</td>
<td>Rank</td>
<td>Monthly Salary</td>
<td>Qualifications</td>
<td>No. Required</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>-------</td>
<td>------</td>
<td>----------------</td>
<td>---------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>SPECIAL PROJECT SECTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Foreign Affairs Officer</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Social Sciences (Arts)</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Administrative Assistant</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Social Sciences</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>TRAINING AND SUPERVISION SECTION</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1.</td>
<td>Health Educator</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Sciences (Public Health)</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Administrative Assistant</td>
<td>3rd</td>
<td>1</td>
<td>1,550</td>
<td>Diploma</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Public Health Nurse</td>
<td>2nd</td>
<td>1</td>
<td>2,230</td>
<td>2nd Grade Nurse Midwife</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Public Health Nurse</td>
<td>3rd</td>
<td>2</td>
<td>1,750</td>
<td>B.A. in Nursing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GRAND TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
</tbody>
</table>

Source: Family Health Division, Ministry of Public Health.
## THAILAND

### Distribution of Beds in Provincial Hospitals

<table>
<thead>
<tr>
<th>Number of Beds</th>
<th>Number of Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 and under</td>
<td>-</td>
</tr>
<tr>
<td>26-50</td>
<td>1</td>
</tr>
<tr>
<td>51-100</td>
<td>8</td>
</tr>
<tr>
<td>101-200</td>
<td>31</td>
</tr>
<tr>
<td>201-300</td>
<td>28</td>
</tr>
<tr>
<td>301-400</td>
<td>10</td>
</tr>
<tr>
<td>401-500</td>
<td>4</td>
</tr>
<tr>
<td>500 and over</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>84</strong></td>
</tr>
</tbody>
</table>

Source: Mission estimates.
THAILAND

Ratio of Population per Provincial Hospital Bed and Occupancy Rate by Region, 1973

<table>
<thead>
<tr>
<th>Region</th>
<th>Population per Bed</th>
<th>Bed Occupancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>1,380</td>
<td>75.9</td>
</tr>
<tr>
<td>Northeast</td>
<td>2,909</td>
<td>78.5</td>
</tr>
<tr>
<td>North</td>
<td>2,068</td>
<td>71.8</td>
</tr>
<tr>
<td>South</td>
<td>1,405</td>
<td>67.4</td>
</tr>
<tr>
<td>National</td>
<td>1,919</td>
<td>73.3</td>
</tr>
</tbody>
</table>

*Source:* Mission estimates.
### THAILAND

#### Development of Rural Health Centers by Region, 1970-74

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F  S  M</td>
<td>F  S  M</td>
<td>F  S  M</td>
<td>F  S  M</td>
<td>F  S  M</td>
</tr>
<tr>
<td>Central</td>
<td>74 444 458</td>
<td>75 626 382</td>
<td>77 777 339</td>
<td>76 837 321</td>
<td>77 898 316</td>
</tr>
<tr>
<td>North</td>
<td>56 366 406</td>
<td>57 471 340</td>
<td>60 511 356</td>
<td>59 574 338</td>
<td>59 609 354</td>
</tr>
<tr>
<td>Northeast</td>
<td>59 633 504</td>
<td>62 774 455</td>
<td>64 910 464</td>
<td>62 974 481</td>
<td>71 1,006 522</td>
</tr>
<tr>
<td>South</td>
<td>38 189 366</td>
<td>39 266 360</td>
<td>45 312 383</td>
<td>43 339 406</td>
<td>45 363 435</td>
</tr>
<tr>
<td>Total</td>
<td>227 1,632 1,734</td>
<td>233 2,137 1,537</td>
<td>244 2,511 1,542</td>
<td>245 2,724 1,546</td>
<td>252 2,876 1,627</td>
</tr>
</tbody>
</table>

---

**Note:**
- F = First class health centers.
- S = Second class health centers.
- M = Midwifery health centers.

**Source:** Rural Health Division, Ministry of Public Health.
### THAILAND

**Distribution and Population Coverage of Health Centers by Region, 1973**

<table>
<thead>
<tr>
<th>Region</th>
<th>Estimated Rural Population (in thousands)</th>
<th>First-Class Health Centers Population per Center</th>
<th>All Types of Health Centers Population per Center</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Number</td>
</tr>
<tr>
<td>Central</td>
<td>8,716</td>
<td>77</td>
<td>1,291</td>
</tr>
<tr>
<td></td>
<td></td>
<td>113</td>
<td>6,752</td>
</tr>
<tr>
<td>Northeast</td>
<td>13,463</td>
<td>71</td>
<td>1,599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>189</td>
<td>8,420</td>
</tr>
<tr>
<td>North</td>
<td>8,158</td>
<td>59</td>
<td>1,022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>138</td>
<td>7,982</td>
</tr>
<tr>
<td>South</td>
<td>4,728</td>
<td>45</td>
<td>843</td>
</tr>
<tr>
<td></td>
<td></td>
<td>105</td>
<td>5,610</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35,066</strong></td>
<td><strong>252</strong></td>
<td><strong>4,755</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>139</strong></td>
<td><strong>7,375</strong></td>
</tr>
</tbody>
</table>

**Source:** Column 1 based on 1973 Annual Registration; remainder are mission estimates.
THAILAND

Health Center Service Statistics, 1971

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinic Visits</strong></td>
<td></td>
</tr>
<tr>
<td>Out-patients</td>
<td>4,371,559</td>
</tr>
<tr>
<td>Family Planning</td>
<td>1,404,738</td>
</tr>
<tr>
<td>New Acceptors</td>
<td>(269,464)</td>
</tr>
<tr>
<td>Revisits</td>
<td>(1,135,274)</td>
</tr>
<tr>
<td>MCH Services</td>
<td>1,271,215</td>
</tr>
<tr>
<td>Antenatal</td>
<td>(443,851)</td>
</tr>
<tr>
<td>Postnatal</td>
<td>(204,647)</td>
</tr>
<tr>
<td>Pre-school children</td>
<td>(622,717)</td>
</tr>
<tr>
<td><strong>Home Visits</strong></td>
<td></td>
</tr>
<tr>
<td>Family Planning</td>
<td>712,153</td>
</tr>
<tr>
<td>MCH Services</td>
<td>1,311,497</td>
</tr>
<tr>
<td><strong>In-patient</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Patients</td>
<td>44,807</td>
</tr>
<tr>
<td>Patient days</td>
<td>126,440</td>
</tr>
<tr>
<td><strong>Deliveries</strong></td>
<td></td>
</tr>
<tr>
<td>At Centers</td>
<td>17,345</td>
</tr>
<tr>
<td>At Home</td>
<td>105,949</td>
</tr>
<tr>
<td><strong>Sanitary Latrine Established</strong></td>
<td>154,519</td>
</tr>
<tr>
<td><strong>Immunization, All Types</strong></td>
<td>13,485,251</td>
</tr>
</tbody>
</table>

**THAILAND**

**Distribution of Health Centers by Region**

<table>
<thead>
<tr>
<th>Rural Health Centers</th>
<th>Central</th>
<th>North</th>
<th>Northeast</th>
<th>South</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Class Health Centers</td>
<td>76</td>
<td>59</td>
<td>67</td>
<td>43</td>
<td>245</td>
</tr>
<tr>
<td>Second Class Health Centers</td>
<td>837</td>
<td>574</td>
<td>974</td>
<td>339</td>
<td>2,724</td>
</tr>
<tr>
<td>Third Class Health Centers (Midwifery Centers)</td>
<td>321</td>
<td>338</td>
<td>481</td>
<td>406</td>
<td>1,546</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,515</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Family Health Division, Ministry of Public Health.*
### THAILAND

**Accelerated Rural Development: Summary of Health Personnel and Activities, 1970-74**

<table>
<thead>
<tr>
<th>Province</th>
<th>staff employed</th>
<th>People given medical care (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loei</td>
<td>34</td>
<td>488</td>
</tr>
<tr>
<td>Nongkai</td>
<td>52</td>
<td>952</td>
</tr>
<tr>
<td>Udorn</td>
<td>82</td>
<td>482</td>
</tr>
<tr>
<td>Skolnakorn</td>
<td>67</td>
<td>812</td>
</tr>
<tr>
<td>Nakornpanom</td>
<td>89</td>
<td>282</td>
</tr>
<tr>
<td>Ubol</td>
<td>103</td>
<td>1,324</td>
</tr>
<tr>
<td>Chiangrai</td>
<td>37</td>
<td>364</td>
</tr>
<tr>
<td>Nan</td>
<td>40</td>
<td>324</td>
</tr>
<tr>
<td>Uttradit</td>
<td>20</td>
<td>62</td>
</tr>
<tr>
<td>Roi-et</td>
<td>80</td>
<td>753</td>
</tr>
<tr>
<td>Kalasin</td>
<td>45</td>
<td>727</td>
</tr>
<tr>
<td>Surin</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Buriram</td>
<td>42</td>
<td>305</td>
</tr>
<tr>
<td>Srisaket</td>
<td>28</td>
<td>-</td>
</tr>
<tr>
<td>Chaiyapum</td>
<td>29</td>
<td>240</td>
</tr>
<tr>
<td>Maharasarakarm</td>
<td>28</td>
<td>196</td>
</tr>
<tr>
<td>Petchboon</td>
<td>51</td>
<td>333</td>
</tr>
<tr>
<td>Prachuabkirikhan</td>
<td>37</td>
<td>146</td>
</tr>
<tr>
<td>Chiangmai</td>
<td>48</td>
<td>208</td>
</tr>
<tr>
<td>Maehongsorn</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>Korat</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Lampang</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>Tak</td>
<td>36</td>
<td>61</td>
</tr>
<tr>
<td>Pisanuloki</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Prachinburi</td>
<td>34</td>
<td>-</td>
</tr>
<tr>
<td>Prae</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>Yasotorn</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>Nakornsritamrat</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Pattalung</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Surastani</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Pech-buri</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Raja-buri</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,136</strong></td>
<td><strong>7,307</strong></td>
</tr>
</tbody>
</table>

**Source:** Department of Accelerated Rural Development, Ministry of Interior, January 26, 1973.
## THAILAND

**Major Performance Indicators of Regional MCH Centers, 1974**

<table>
<thead>
<tr>
<th></th>
<th>Khan Kaen</th>
<th>Yala</th>
<th>Ratchburi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of beds</strong></td>
<td>120</td>
<td>60</td>
<td>120</td>
<td>300</td>
</tr>
<tr>
<td><strong>Admissions</strong></td>
<td>13,760</td>
<td>3,472</td>
<td>6,078</td>
<td>23,310</td>
</tr>
<tr>
<td><strong>Bed Occupancy Rate</strong></td>
<td>100.0</td>
<td>64.3</td>
<td>46.9</td>
<td>86.3</td>
</tr>
</tbody>
</table>

1/ First nine months of year only. Chiangmai MCH Center not included as service only became available in late 1974.

**Source:** Family Health Division, Ministry of Public Health.
THAILAND

Contraceptives Imported for Ministry of Public Health Distribution, 1973-74

<table>
<thead>
<tr>
<th>Contraceptives</th>
<th>1973</th>
<th>1974 1/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Oral Pills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplied by USAID</td>
<td>5,020,760</td>
<td>3,500,000</td>
</tr>
<tr>
<td>Purchased by MOPH</td>
<td>1,276,252</td>
<td>400,000</td>
</tr>
<tr>
<td>Sub-total</td>
<td>6,279,012</td>
<td>3,900,000</td>
</tr>
<tr>
<td>2. IUDs 2/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loop PPD</td>
<td>10,000 pcs.</td>
<td></td>
</tr>
<tr>
<td>Loop B</td>
<td></td>
<td>40,000 pcs.</td>
</tr>
<tr>
<td>Loop C</td>
<td></td>
<td>100,000 pcs.</td>
</tr>
<tr>
<td>Loop C</td>
<td></td>
<td>110,000 pcs.</td>
</tr>
<tr>
<td>Sub-total</td>
<td>10,000 pcs.</td>
<td>250,000 pcs.</td>
</tr>
<tr>
<td>3. Condoms: Supplied by USAID</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>150,000 gross</td>
</tr>
<tr>
<td>4. Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depo Provera: Supplied by UNFPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>260,000 doses</td>
</tr>
</tbody>
</table>

1/ As of September 1974.

2/ Loops and inserters were supplied free of charge by the Population Council. In 1974, the Council was no longer the source of supply and the Government began purchasing directly from the manufacturer.

Source: Family Health Division, Ministry of Public Health.
THAILAND

Number of Pharmacies and Pharmaceutical Manufacturers, 1973

<table>
<thead>
<tr>
<th></th>
<th>Bangkok</th>
<th>Outside Bangkok</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern Pharmaceutical Manufacturers</td>
<td>-</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Drug Stores(^\d)</td>
<td>Class A</td>
<td>990</td>
<td>1,620</td>
</tr>
<tr>
<td></td>
<td>Class B</td>
<td>771</td>
<td>4,329</td>
</tr>
<tr>
<td></td>
<td>Class C</td>
<td>1,546</td>
<td>6,346</td>
</tr>
</tbody>
</table>

No. of Pharmaceutical Importers: 309

\(^\d\) Class A or first class drugstores sell prescription only preparations, largely in urban centers.

Class B or second class drugstores sell proprietary medicines in towns.

Class C or third class drugstores sell traditional medicines, mostly in larger villages.

Sources: F.D.A. Department, Ministry of Public Health, Bangkok.
THAILAND

Standard Staffing Pattern for Health Centers

<table>
<thead>
<tr>
<th>Category of Staff</th>
<th>First-Class Health Centers</th>
<th>Second-Class Health Centers</th>
<th>Midwifery Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nurse¹</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Midwife</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Health Worker</td>
<td>3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Laboratory Technician</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Clerk</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>3</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

¹/ One additional nurse will be assigned to the second-class health center located on the district site since there is no first-class health center as yet.

Source: Rural Health Division of the Ministry of Public Health.
THAILAND

Status of Staffing Requirements at Health Centers, November 1974

<table>
<thead>
<tr>
<th>Category of Staff</th>
<th>Number of Staff Required¹/</th>
<th>Number of Existing Staff</th>
<th>Shortage and Surplus Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician</td>
<td>252</td>
<td>217</td>
<td>-35</td>
<td>-13.9</td>
</tr>
<tr>
<td>Nurse</td>
<td>941</td>
<td>591</td>
<td>-350</td>
<td>-37.2</td>
</tr>
<tr>
<td>Midwife</td>
<td>5,007</td>
<td>5,493</td>
<td>+486</td>
<td>+9.7</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>5,259</td>
<td>315</td>
<td>-4,944</td>
<td>-94.0</td>
</tr>
<tr>
<td>Health Worker</td>
<td>3,632</td>
<td>3,856</td>
<td>+244</td>
<td>+6.2</td>
</tr>
<tr>
<td>Others</td>
<td>756</td>
<td>259</td>
<td>-497</td>
<td>-65.7</td>
</tr>
</tbody>
</table>

¹/ Staffing requirements for special health centers were considered to be the same as ordinary first-class health centers, due to the lack of detailed information.

Source: Mission estimates.
Number of Established Posts for MOPH Health Personnel, November 1974

<table>
<thead>
<tr>
<th>Posts</th>
<th>Rural Health Scheme</th>
<th>MCH Centers</th>
<th>Others</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Posts</td>
<td>Posts</td>
<td>Posts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sanctioned</td>
<td>Existing</td>
<td>Vacancy</td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central and Provincia' Administration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>1,433</td>
<td>1,289</td>
<td>144</td>
<td>2,172</td>
</tr>
<tr>
<td>Dentist</td>
<td>143</td>
<td>136</td>
<td>7</td>
<td>253</td>
</tr>
<tr>
<td>Nurse</td>
<td>4,568</td>
<td>3,956</td>
<td>632</td>
<td>6,329</td>
</tr>
<tr>
<td>Tutor Nurse</td>
<td>234</td>
<td>161</td>
<td>73</td>
<td>451</td>
</tr>
<tr>
<td>Health Worker</td>
<td>406</td>
<td>270</td>
<td>136</td>
<td>1,238</td>
</tr>
<tr>
<td>Midwife</td>
<td>6</td>
<td>6</td>
<td>-</td>
<td>74</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>4,464</td>
<td>3,668</td>
<td>796</td>
<td>8,145</td>
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<tr>
<td>Dental Hygienist</td>
<td>80</td>
<td>57</td>
<td>23</td>
<td>157</td>
</tr>
<tr>
<td>Scientist</td>
<td>96</td>
<td>66</td>
<td>30</td>
<td>192</td>
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<tr>
<td>Laboratory Technician</td>
<td>455</td>
<td>336</td>
<td>119</td>
<td>901</td>
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<tr>
<td>Pharmacist</td>
<td>183</td>
<td>167</td>
<td>16</td>
<td>366</td>
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</table>

*Source: Personnel Division, Ministry of Public Health.*
## THAILAND

### Estimated Number of Medical and Paramedical Personnel Employed by the MOPH, 1974

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<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>4,092</td>
<td>1,110</td>
<td>260</td>
<td>4,942</td>
<td>1,930</td>
<td>39.1</td>
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<tr>
<td>Nurses</td>
<td>9,760</td>
<td>3,300</td>
<td>653</td>
<td>12,407</td>
<td>5,248</td>
<td>42.3</td>
</tr>
<tr>
<td>Practical Nurses</td>
<td>5,803</td>
<td>2,850</td>
<td>433</td>
<td>8,220</td>
<td>4,141</td>
<td>50.4</td>
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<tr>
<td>Midwives</td>
<td>4,989</td>
<td>1,500</td>
<td>324</td>
<td>6,165</td>
<td>5,681</td>
<td>92.1</td>
</tr>
<tr>
<td>Health Workers</td>
<td>5,615</td>
<td>1,500</td>
<td>356</td>
<td>6,759</td>
<td>5,801</td>
<td>85.8</td>
</tr>
</tbody>
</table>

1/ Based on average annual graduates of various schools.
2/ Five percent of attrition for three-year period was applied arbitrarily.
3/ As of November 1974.

**Sources:** Column 1, 1971 Public Health Statistics, Ministry of Public Health; other columns, mission estimates.
**THAILAND**

**Vacancy Rate of MOPH Medical and Paramedical Personnel, November 1974**

<table>
<thead>
<tr>
<th>Categories of Staff</th>
<th>Vacancy Rate - Employed Staff Against Posts Sanctioned (%)</th>
<th>Hospitals</th>
<th>Rural Health</th>
<th>MCH Centers</th>
<th>Others</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Physicians</td>
<td></td>
<td>10.0</td>
<td>7.7</td>
<td>11.1</td>
<td>20.7</td>
<td>11.1</td>
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<td>13.8</td>
<td>14.3</td>
<td>41.3</td>
<td>38.3</td>
<td>17.1</td>
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<tr>
<td>Practical Nurses</td>
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<td>17.8</td>
<td>15.4</td>
<td>-</td>
<td>24.5</td>
<td>17.9</td>
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<td>Midwives</td>
<td></td>
<td>-</td>
<td>2.7</td>
<td>9.8</td>
<td>79.1</td>
<td>3.8</td>
</tr>
<tr>
<td>Health Workers</td>
<td></td>
<td>33.5</td>
<td>6.5</td>
<td>-</td>
<td>22.1</td>
<td>11.9</td>
</tr>
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</table>

1/ Including provincial and district office staffs.

Source: Mission estimates.
## THAILAND

### Growth of MOPH Staff, 1969-74

<table>
<thead>
<tr>
<th>Categories of Staff</th>
<th>Employed Staff 1969</th>
<th>Employed Staff 1974</th>
<th>Staff Increase Number</th>
<th>Staff Increase Percent</th>
<th>Staff Increase per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>1,338</td>
<td>1,930</td>
<td>592</td>
<td>44.2</td>
<td>118</td>
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<tr>
<td>Nurses</td>
<td>3,413</td>
<td>5,248</td>
<td>1,835</td>
<td>53.8</td>
<td>367</td>
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<tr>
<td>Practical Nurses</td>
<td>2,203</td>
<td>4,141</td>
<td>1,938</td>
<td>88.0</td>
<td>388</td>
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<td>Midwives</td>
<td>3,276</td>
<td>5,681</td>
<td>2,405</td>
<td>73.4</td>
<td>481</td>
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<tr>
<td>Health Workers</td>
<td>3,253</td>
<td>5,801</td>
<td>2,548</td>
<td>78.3</td>
<td>510</td>
</tr>
</tbody>
</table>

Sources: 1/ 1971 Public Health Statistics.  
2/ Personnel Division, Ministry of Public Health.  
Other columns: Mission estimates.
Distributions of Training Institutions Within Provincial Hospital Scheduled To Be Upgraded to Regional Medical Centers

<table>
<thead>
<tr>
<th>Provincial Hospitals</th>
<th>School for Registered Nurses</th>
<th>School for Practical N/Ms</th>
<th>School for Midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saraburi</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Chalburi</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Nakhonrajasima</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ubon-Rajathani</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Khonkaen</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Udonthani</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lampang</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Phitsnuloke</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nakhonsawan</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rajburi</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Surasthani</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Nakhon-Srithammaraj</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Haadyai, Song-Khla</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Ø School existing.
- No school.
N/M Nurse/Midwife.

Source: Mission estimates.
THAILAND

Alternative Rates of Expansion of MOPH Facilities and Requirements for Practical Nurse-Midwives and Midwives, 1974-81

<table>
<thead>
<tr>
<th>Year</th>
<th>Provincial Hospital Beds</th>
<th>First Class Health Center</th>
<th>Second Class Health Center</th>
<th>Midwifery Centers</th>
<th>Required Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>20,000</td>
<td>335</td>
<td>2,874</td>
<td>1,825</td>
<td>3,075</td>
</tr>
<tr>
<td>1976</td>
<td>20,500</td>
<td>265</td>
<td>3,050</td>
<td>1,560</td>
<td>3,150</td>
</tr>
<tr>
<td>1977</td>
<td>21,000</td>
<td>270</td>
<td>3,200</td>
<td>1,500</td>
<td>3,270</td>
</tr>
<tr>
<td>1978</td>
<td>21,500</td>
<td>280</td>
<td>3,300</td>
<td>1,500</td>
<td>3,330</td>
</tr>
<tr>
<td>1979</td>
<td>22,000</td>
<td>290</td>
<td>3,400</td>
<td>1,500</td>
<td>3,390</td>
</tr>
<tr>
<td>1980</td>
<td>22,500</td>
<td>300</td>
<td>3,500</td>
<td>1,500</td>
<td>3,450</td>
</tr>
<tr>
<td>1981</td>
<td>23,000</td>
<td>310</td>
<td>3,600</td>
<td>1,500</td>
<td>3,510</td>
</tr>
</tbody>
</table>

Under the assumption that the annual increase during the Fourth Five-Year Plan period will be:

1/ Provincial hospital beds, 10 First Class Health Centers and 150 Second Class Health Centers.

2/ Moderate assumption that the annual increase will be 1,200 provincial hospital beds, 15 First Class Health Centers and 200 Second Class Health Centers.

3/ Optimistic assumption that the annual increase will be 2,000 provincial hospital beds, 25 First Class Health Centers and 300 Second Class Health Centers.

4/ To the extent midwifery centers are converted to Second Class Health Centers these would become a source of staffing for the First and Second Class Health Centers. The need for additional staff from training institutions would, correspondingly, be that much less.

5/ Under the assumption that existing staffing norms will continue to be 3 staff to 20 provincial hospital beds, 5 staff for a First Class Health Center, 2 staff for Second Class Health Center, and 1 staff for Midwifery Center.

Source: Mission Estimates.
### THAILAND

Number of Students Graduated from Nursing and Midwifery Schools, 1964-73

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Degree</th>
<th>Diploma</th>
<th>Certificate</th>
<th>Post Graduate</th>
<th>Practical</th>
<th>Nursing</th>
<th>Nursing</th>
<th>Midwifery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>645</td>
<td>19</td>
<td>173</td>
<td>453</td>
<td>85</td>
<td>192</td>
<td>216</td>
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<td></td>
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<tr>
<td>1965</td>
<td>690</td>
<td>14</td>
<td>178</td>
<td>498</td>
<td>96</td>
<td>284</td>
<td>325</td>
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<tr>
<td>1966</td>
<td>645</td>
<td>17</td>
<td>175</td>
<td>453</td>
<td>107</td>
<td>407</td>
<td>357</td>
<td></td>
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<tr>
<td>1967</td>
<td>670</td>
<td>21</td>
<td>246</td>
<td>403</td>
<td>140</td>
<td>508</td>
<td>389</td>
<td></td>
<td></td>
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<tr>
<td>1968</td>
<td>817</td>
<td>21</td>
<td>400</td>
<td>396</td>
<td>207</td>
<td>541</td>
<td>380</td>
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<td>1969</td>
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<td>428</td>
<td>417</td>
<td>267</td>
<td>552</td>
<td>427</td>
<td></td>
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</tr>
<tr>
<td>1970</td>
<td>982</td>
<td>15</td>
<td>407</td>
<td>560</td>
<td>226</td>
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<td></td>
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<tr>
<td>1971</td>
<td>1,094</td>
<td>46</td>
<td>464</td>
<td>584</td>
<td>210</td>
<td>862</td>
<td>482</td>
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<tr>
<td>1972</td>
<td>1,101</td>
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<td>415</td>
<td>628</td>
<td>246</td>
<td>862</td>
<td>482</td>
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<tr>
<td>1973</td>
<td>1,103</td>
<td>50</td>
<td>430</td>
<td>623</td>
<td>169</td>
<td>959</td>
<td>551</td>
<td></td>
<td>545</td>
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</tbody>
</table>

1/ Including degree, diploma and certificate programs.
2/ Including all practical nursing programs.

**Source:** Nursing Division of the Ministry of Public Health.
Practical Nurse-Midwives and Midwives: Alternative Staffing Requirements for Provincial Hospitals and Health Centers for 1981

<table>
<thead>
<tr>
<th>Facilities</th>
<th>No. of Facilities by 1981</th>
<th>Alternative I</th>
<th>Alternative II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Staff per</td>
<td>Total Staff</td>
</tr>
<tr>
<td>Provincial Hospital Beds</td>
<td>25,000</td>
<td>3/20 beds</td>
<td>3,750</td>
</tr>
<tr>
<td>First Class Health Centers</td>
<td>320</td>
<td>5/Center</td>
<td>1,600</td>
</tr>
<tr>
<td>Second Class Health Centers</td>
<td>3,950</td>
<td>2/Center</td>
<td>7,900</td>
</tr>
<tr>
<td>Midwifery Centers</td>
<td>1,500</td>
<td>1/Center</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>14,750</strong></td>
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</tbody>
</table>

1/ Based on Projection A, see Table E-8.

Source: Mission Estimates.
### Thailand

#### Availability of Practical Nurse-Midwives and Midwives for Provincial Hospitals and Health Centers (1975 - 1981)

<table>
<thead>
<tr>
<th></th>
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<td><strong>Annual Graduates</strong></td>
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<tr>
<td>Practical Nurse-Midwives</td>
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<td>460</td>
<td>460</td>
<td>460</td>
<td>460</td>
<td>460</td>
<td>460</td>
</tr>
<tr>
<td>Midwives</td>
<td>500</td>
<td>500</td>
<td>600</td>
<td>500</td>
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<tr>
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<td>7,191</td>
<td>6,896</td>
<td>7,894</td>
<td>8,562</td>
<td>9,194</td>
<td>9,794</td>
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<td>Attrition</td>
<td>295</td>
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<td>328</td>
<td>481</td>
<td>393</td>
<td>558</td>
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<td>596</td>
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<tr>
<td>Net Increase</td>
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<td>517</td>
<td>632</td>
<td>479</td>
<td>700</td>
<td>563</td>
<td>665</td>
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#### Projection A (Table E-8, footnote 1)

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Staff</strong></td>
<td>12,035</td>
<td>12,035</td>
<td>12,400</td>
<td>12,400</td>
<td>13,340</td>
<td>13,340</td>
<td>14,810</td>
<td>14,810</td>
</tr>
<tr>
<td><strong>Staff Level</strong></td>
<td>6,565</td>
<td>6,417</td>
<td>7,197</td>
<td>6,896</td>
<td>7,894</td>
<td>8,562</td>
<td>9,194</td>
<td>9,794</td>
</tr>
<tr>
<td><strong>Shortage of Staff</strong></td>
<td>5,470</td>
<td>5,618</td>
<td>5,203</td>
<td>5,504</td>
<td>4,973</td>
<td>4,778</td>
<td>4,616</td>
<td>4,986</td>
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#### Projection B (Table E-8, footnote 2)

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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required Staff</strong></td>
<td>13,055</td>
<td>13,055</td>
<td>13,710</td>
<td>13,710</td>
<td>14,365</td>
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<tr>
<td><strong>Staff Level</strong></td>
<td>7,897</td>
<td>7,439</td>
<td>8,562</td>
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<td>8,405</td>
<td>9,294</td>
<td>8,835</td>
</tr>
<tr>
<td><strong>Shortage of Staff</strong></td>
<td>5,158</td>
<td>5,616</td>
<td>5,148</td>
<td>5,769</td>
<td>5,171</td>
<td>4,774</td>
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<td>6,185</td>
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#### Projection C (Table E-8, footnote 3)

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<tbody>
<tr>
<td><strong>Required Staff</strong></td>
<td>13,425</td>
<td>13,425</td>
<td>14,450</td>
<td>14,450</td>
<td>15,475</td>
<td>15,475</td>
<td>16,500</td>
<td>16,500</td>
</tr>
<tr>
<td><strong>Staff Level</strong></td>
<td>7,897</td>
<td>7,439</td>
<td>8,562</td>
<td>7,941</td>
<td>9,194</td>
<td>8,405</td>
<td>9,294</td>
<td>8,835</td>
</tr>
<tr>
<td><strong>Shortage of Staff</strong></td>
<td>5,528</td>
<td>5,986</td>
<td>5,888</td>
<td>6,509</td>
<td>6,281</td>
<td>7,070</td>
<td>6,706</td>
<td>7,186</td>
</tr>
</tbody>
</table>

1/ Graduates of school in Women's Hospital are excluded.
2/ New school in Chiangmai MCH Center will produce graduates from 1977.
3/ As of year end.
4/ Attrition rate of 5% per annum.
5/ Attrition rate of 7.5% per annum.
6/ From Table E-8.

**Note:** Figures rounded off to next whole number.

Source: Mission estimates.
THAILAND

Demand for and Supply of Doctors and Registered Nurses During Fourth Plan

1. The outlook for the supply of doctors and nurses over the next few years is relatively encouraging. Until quite recently, both doctors and nurses had been in short supply, and the supply had been heavily concentrated in towns and cities, especially Metropolitan Bankgok. There has, however, been a significant expansion of educational capacity for these two senior categories of health staff, and previous shortages have become much less of a constraint on expansion of the system. Almost equally important, the Ministry of Public Health introduced, in the early 1970s, a measure requiring a minimum number of years' service in the rural health service for all doctors trained at Government expense. This has substantially improved the geographical distribution of doctors. The Ministry is about to extend this requirement to all newly-graduated doctors, whether or not trained at public expense.

2. A comparison of the numbers of doctors and Registered Nurses expected to be graduated between now and 1981 with the numbers of additional personnel in these categories to be needed by the MOPH suggests that there should be relatively little difficulty. The basic calculation is made with the estimates of Projection A used in Annex E, Table 10. This assumes that by the end of 1981 the Ministry will have 25,000 beds in provincial hospitals, will have 320 1st-Class Health Centers, 3,950 2nd-Class Health Centers, and will not expand the present number of midwifery centers (3rd-Class Health Centers). The Ministry's present staffing norm calls for:

<table>
<thead>
<tr>
<th>per 20 hospital beds:</th>
<th>1st-Class Health Centers</th>
<th>2nd-Class Health Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 physician</td>
<td>1 physician</td>
<td>1 practical nurse/midwife</td>
</tr>
<tr>
<td>3 registered nurses</td>
<td>3 practical nurse/midwives</td>
<td>1 midwife</td>
</tr>
<tr>
<td>3 practical nurse/midwives</td>
<td>2 midwives</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3rd-Class Health Centers

1 midwife

By applying these norms to the numbers of facilities indicated above, the required numbers of staff for 1981 are defined. The table below shows the number of MOPH staff in each of these categories in 1974, the number to be needed in 1981, and the increase in staff needed between these two dates.

<table>
<thead>
<tr>
<th>Staff Category</th>
<th>No. of MOPH/Staff in 1974</th>
<th>No. of Staff Needed in 1981</th>
<th>Required Increase '1974-1981</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>971</td>
<td>1,570</td>
<td>599</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>3,340</td>
<td>4,710</td>
<td>1,370</td>
</tr>
<tr>
<td>Practical Nurse/Midwives and Midwives</td>
<td>5,808</td>
<td>14,750</td>
<td>8,942</td>
</tr>
</tbody>
</table>

1/ Refers only to MOPH physicians working in provincial hospitals and 1st-Class Health Centers. The MOPH had a total of 1930 physicians and 5248 Registered Nurses in its employ in November 1974 (see Annex E, Table 6).
3. There are at present 4 medical schools and 23 nursing schools already turning out graduates. From 1975-1981 it is estimated that these institutions will produce about 2,600 doctors and 7,700 registered nurses. In addition, two new medical schools have recently opened which will begin producing graduates in 1979. Between 1979-1981 these two new schools are expected to graduate about 500 additional doctors, bringing the total supply of new graduates to 3,100. Assuming that the MOPH gets no more than 40% of the new doctors and registered nurses, this will still give them a supply of 1,240 doctors and 3,080 nurses. These numbers are more than double the requirements shown in the preceding paragraph. Even if the MOPH network should expand at the very high rate of Projection C (Annex E, Table 10) these supply numbers are large enough so that system expansion will not be constrained by a shortage of either doctors or registered nurses. The national service obligation is expected largely to solve the problem of geographical distribution.

4. The outlook for Practical Nurse/Midwives and Midwives is very different from that for doctors and registered nurses. Critical shortages are expected to continue throughout the Fourth Plan, although prompt action now can do much to remove this bottleneck. This problem is analyzed separately in Annex E-11, and in the text, para. 4.36 ff.
THAILAND

Family Planning Training Courses for Health Personnel

Introduction

1. Three types of family planning training have been developed for health personnel in Thailand, covering both general and clinical skills. Since the start of MOPH family planning activity in the mid-1960's, the basic training courses for all health personnel have been revised so that they now include material on family planning. In addition to introductory coverage of the subject in basic education courses, the Ministry has given general in-service training courses to over 4,000 doctors and nurses since the start of the Family Health Project in 1968. By early 1974, this initial round of special in-service training in family planning, which trained trainers in Bangkok and service personnel in the regions, had covered all Ministry personnel engaged in family planning. A second-round of this special in-service training is now being conducted for recently hired staff (see section B, below). The third type of training has been clinical training in particular methods for selected doctors and nurses. This has included training in female sterilization procedures (vasectomy is considered too simple a procedure for doctors to need specialized training). An expanded vasectomy program may present a need for some specialized training. Sterilization training has not been sponsored by the MOPH but by one of the leading university hospitals (see section A, below). In addition to the above formal training activities, a considerable amount of informal on-the-job clinical training occurs, reflecting local initiatives by doctors especially interested in specific family planning procedures.

A. Clinical Training in Particular Methods

Training of Physicians for Female Sterilization

2. With assistance from the Association of Voluntary Sterilization (AVS) in New York, the Ramathibodi Hospital of Mahidol University has been conducting a fertility-termination training program for physicians since July 1973. The program will last for four years and will be aimed at training about 300 physicians mainly for female sterilization technique. There are two types of courses, one at the hospital for 1-3 weeks and one at the local level carried out by the physicians who have gone through the former training courses. The so-called 'mini-Laparotomy approach' is being thought of as a major female sterilization technique. It was developed by a well-known professor at Mahidol University. One interesting feature of the program is to encourage already-trained physicians to organize local training on a voluntary basis. The basic instrument for the mini-laparotomy approach, which is provided by AVS and costs only about $20 per set, is given to each trainee. About 150 physicians were trained under the program by the end of 1974. About half of these are second-round trainees trained in the provinces. Ninety are MOPH's physicians, 40 are private practitioners, and the remaining 20 are from military hospitals, universities, state enterprises, and Bangkok Municipality. Training is on a voluntary
basis but the MOPH provides travel expenses for the trainees who work under the MOPH. The division of family health has no direct involvement in the training scheme. The MOPH may take responsibility for sponsoring this training course when the existing four-year foreign-funded program terminates in June 1977.

A Pilot Project on the Use of Midwives for Injecting Depo-Provera (DMPA)

3. With UNFPA funding, UNICEF has procured 300,000 doses of Depo-provera (DMPA) which was introduced as a new method of the NFPP as of early 1975. It is being offered initially only at service-points where a doctor is present (i.e. hospitals and most first-class health Centers). For the rapid dissemination of Depo-provera, the MOPH has a plan to carry out a pilot project on the use of midwives to give these injections. This will be "a comparative study on the use of Depo-provera by medical and paramedical personnel in Thailand"; it will be supported by the Population Council. Training will be given to a selected group of 50 midwives (2 days) and 15 physicians (1 day). The aim is to have at least 600 acceptors through midwives and 300 to 600 acceptors through physicians and evaluate medical side effects and their handling. The study period is 1½ months.

Training of Nurse/Midwives for IUD Insertion

4. A pilot study on the use of nurse/midwives for the insertion of IUDs has been completed and a full report will be published soon. The results suggest that nurse/midwives have, if anything, a somewhat better record with IUD insertions than doctors. The Family Health Division will submit the report to the National Family Planning Coordinating Committee in hopes of getting approval on the use of nurse/midwives for IUD insertion for the national program. The MOPH will organize local training courses at selected provincial hospitals and at the MCH Centers, using 30 nurse/midwives who are already trained.

B. General In-service Training of Health Personnel for Family Planning

5. In 1974 the second round of a nationwide training scheme for public health nurses, auxiliary midwives and sanitarians was launched, with UNFPA funding. Major emphasis of the training is on client motivation and counseling. The training is divided into two levels; training of regional trainer/supervisors at the Family Health Division for two weeks and training of service-level personnel by the regional trainer/supervisors at regional level; the course lasts one week for public health nurses and auxiliary nurses and three days for sanitarians. In 1974 two regions finished the training program; three of the remaining seven regions will carry out the training program in 1975 and four regions in 1976.
## THAILAND

**New Acceptors by Method and by Year, 1965-1974**

<table>
<thead>
<tr>
<th>Year</th>
<th>IUD</th>
<th>Pill</th>
<th>Sterilization</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965-68</td>
<td>121,458</td>
<td>64.9</td>
<td>54,656</td>
<td>41.8</td>
<td>186,893</td>
</tr>
<tr>
<td>1969</td>
<td>54,656</td>
<td>41.8</td>
<td>74,404</td>
<td>32.6</td>
<td>130,219</td>
</tr>
<tr>
<td>1970</td>
<td>86,034</td>
<td>32.6</td>
<td>90,128</td>
<td>21.1</td>
<td>228,578</td>
</tr>
<tr>
<td>1971</td>
<td>100,032</td>
<td>21.1</td>
<td>93,449</td>
<td>22.1</td>
<td>407,835</td>
</tr>
<tr>
<td>1972</td>
<td>89,739</td>
<td>26.0</td>
<td>232,804</td>
<td>63.6</td>
<td>456,694</td>
</tr>
<tr>
<td>1973</td>
<td>1,406,814</td>
<td>61.0</td>
<td>1,505,244</td>
<td>61.7</td>
<td>2,912,058</td>
</tr>
<tr>
<td>1974</td>
<td>2,324,074</td>
<td>100.0</td>
<td>2,540,526</td>
<td>100.0</td>
<td>4,864,600</td>
</tr>
</tbody>
</table>

**Source:** Family Health Division of the Ministry of Public Health.

---

1/ Unspecified.
THAILAND

**National Family Planning Program: New Acceptors, 1970-74**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pill</td>
<td>132,387</td>
<td>294,607</td>
<td>327,582</td>
<td>268,674</td>
<td>305,244</td>
</tr>
<tr>
<td>IUD</td>
<td>74,404</td>
<td>86,034</td>
<td>90,128</td>
<td>93,449</td>
<td>89,739</td>
</tr>
<tr>
<td>Condom</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tubectomy</td>
<td>18,242</td>
<td>22,945</td>
<td>31,386</td>
<td>46,804</td>
<td>73,702</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>406</td>
<td>601</td>
<td>1,282</td>
<td>2,802</td>
<td>6,780</td>
</tr>
<tr>
<td>Other Methods</td>
<td>3,139</td>
<td>3,648</td>
<td>6,316</td>
<td>10,447</td>
<td>19,014</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>228,578</td>
<td>407,835</td>
<td>456,694</td>
<td>422,176</td>
<td>494,479</td>
</tr>
</tbody>
</table>

1/ Beginning in April 1972, new acceptors for oral contraceptives dropped sharply from around 33,000 per month to about 22,000-25,000. This trend continued through the first half of 1973 when pill acceptors fell to around 20,000 per month. Contributing to the decline was a "using up" of new early pill acceptors in the catchment areas of health centers and a change in the brand of pills offered. During the first half of 1974 with the change in the brand of pills supplied by USAID, monthly pill acceptors climbed to around 25,000. A comparison of six-month pill figures for 1973 and 1974 shows that there were around 150,000 pill acceptors recruited in 1974 and 132,000 recruited in 1973, an increase of 18,000.

**Source:** Family Health Division, Ministry of Public Health.
### THAILAND

**Comparison of Family Planning Targets and Achievements, 1972-76**

<table>
<thead>
<tr>
<th>Year</th>
<th>Oral Pills</th>
<th></th>
<th></th>
<th>IUD</th>
<th></th>
<th></th>
<th>Sterilization</th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Achievement</td>
<td>Target</td>
<td>Achievement</td>
<td>Target</td>
<td>Achievement</td>
<td>Target</td>
<td>Achievement</td>
<td>Target</td>
<td>Achievement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>235,000</td>
<td>327,582</td>
<td>90,000</td>
<td>90,128</td>
<td>25,000</td>
<td>32,668</td>
<td>350,000</td>
<td>450,378</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>280,000</td>
<td>268,674</td>
<td>90,000</td>
<td>93,449</td>
<td>30,000</td>
<td>49,606</td>
<td>400,000</td>
<td>411,729</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>280,000</td>
<td>305,244</td>
<td>90,000</td>
<td>89,739</td>
<td>35,000</td>
<td>80,482</td>
<td>405,000</td>
<td>475,465</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>280,000</td>
<td>90,000</td>
<td>40,000</td>
<td></td>
<td>410,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>280,000</td>
<td>90,000</td>
<td>40,000</td>
<td></td>
<td>410,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,355,000</td>
<td>450,000</td>
<td></td>
<td>170,000</td>
<td></td>
<td></td>
<td>1,975,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Family Health Division of the Ministry of Public Health.
THAILAND

Cumulative New Acceptors by Region, 1965-1974

<table>
<thead>
<tr>
<th>Region</th>
<th>(A) Estimated Number of Eligible Couples in 1973 (millions)</th>
<th>(B) Cumulative Acceptors from 1965 through end of</th>
<th>% of B/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok - Thonburi</td>
<td>0.53</td>
<td>385,854</td>
<td>72.6</td>
</tr>
<tr>
<td>Central</td>
<td>1.15</td>
<td>441,753</td>
<td>25.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>1.78</td>
<td>736,706</td>
<td>41.0</td>
</tr>
<tr>
<td>North</td>
<td>1.10</td>
<td>590,080</td>
<td>54.0</td>
</tr>
<tr>
<td>South</td>
<td>0.64</td>
<td>172,481</td>
<td>26.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5.20</strong></td>
<td><strong>2,326,874</strong></td>
<td><strong>45.0</strong></td>
</tr>
</tbody>
</table>

(A): 13% of total population was estimated as married women between the ages, 15-44.

Source: Mission Estimates.
### THAILAND

#### Increase in Acceptance Rate by Region, 1969-1973

<table>
<thead>
<tr>
<th>Region</th>
<th>Eligible Couples 1/</th>
<th>Annual Acceptors</th>
<th>Acceptance Rate (%)</th>
<th>Eligible Couples 2/</th>
<th>Annual Acceptors</th>
<th>Acceptance Rate (%)</th>
<th>Increase of Acceptance Rate 1969-1973 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok-Thonburi</td>
<td>400,057</td>
<td>34,361</td>
<td>8.6</td>
<td>530,000</td>
<td>52,560</td>
<td>9.9</td>
<td>115</td>
</tr>
<tr>
<td>Central</td>
<td>979,487</td>
<td>18,717</td>
<td>1.9</td>
<td>1,152,612</td>
<td>84,297</td>
<td>7.3</td>
<td>384</td>
</tr>
<tr>
<td>Northeast</td>
<td>1,563,268</td>
<td>31,495</td>
<td>2.0</td>
<td>1,780,103</td>
<td>149,224</td>
<td>8.4</td>
<td>420</td>
</tr>
<tr>
<td>North</td>
<td>973,529</td>
<td>32,366</td>
<td>0.3</td>
<td>1,099,551</td>
<td>111,178</td>
<td>10.1</td>
<td>1,367</td>
</tr>
<tr>
<td>South</td>
<td>555,318</td>
<td>13,280</td>
<td>2.4</td>
<td>640,754</td>
<td>30,917</td>
<td>4.8</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>4,471,659</td>
<td>130,219</td>
<td>2.9</td>
<td>5,193,020</td>
<td>422,176</td>
<td>8.1</td>
<td>279</td>
</tr>
</tbody>
</table>

1/ To estimate the number of eligible couples (based upon wives between the ages 15-44) 13% of the total population figure, according to the 1970 Census, was used.

2/ Based on the 1973 inhabitants registration figures.

**Source:** Mission estimates.
## THAILAND

### New Acceptors by Methods, 1974

*(1973 figures in brackets)*

<table>
<thead>
<tr>
<th></th>
<th>IUD</th>
<th>PILL</th>
<th>F.Sterilization</th>
<th>M.Sterilization</th>
<th>Other Methods</th>
<th>Total 1974</th>
<th>Total 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>8,585 (8,875)</td>
<td>25,349 (24,831)</td>
<td>5,216 (3,215)</td>
<td>316 (189)</td>
<td>1,347</td>
<td>40,813 (37,110)</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>8,719 (9,185)</td>
<td>23,970 (22,476)</td>
<td>4,795 (3,144)</td>
<td>427 (244)</td>
<td>1,382</td>
<td>39,293 (35,049)</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>7,867 (9,452)</td>
<td>24,532 (23,324)</td>
<td>5,136 (3,406)</td>
<td>424 (223)</td>
<td>1,393</td>
<td>39,352 (36,405)</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>6,033 (6,906)</td>
<td>23,560 (19,096)</td>
<td>4,614 (3,141)</td>
<td>392 (224)</td>
<td>1,107</td>
<td>35,706 (29,367)</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>7,374 (7,417)</td>
<td>26,608 (21,410)</td>
<td>5,778 (3,761)</td>
<td>569 (189)</td>
<td>2,093</td>
<td>42,422 (32,777)</td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>7,041 (7,177)</td>
<td>25,249 (20,912)</td>
<td>5,799 (3,306)</td>
<td>285 (162)</td>
<td>2,729</td>
<td>41,103 (31,557)</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>6,727 (6,274)</td>
<td>23,843 (19,244)</td>
<td>6,402 (3,630)</td>
<td>393 (175)</td>
<td>1,405</td>
<td>38,770 (29,323)</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>6,667 (6,527)</td>
<td>22,423 (20,498)</td>
<td>6,532 (3,427)</td>
<td>815 (180)</td>
<td>1,479</td>
<td>37,916 (30,632)</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>6,410 (6,221)</td>
<td>24,112 (19,972)</td>
<td>6,389 (3,921)</td>
<td>1,055 (190)</td>
<td>1,285</td>
<td>39,251 (30,304)</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>7,215 (6,144)</td>
<td>26,101 (19,406)</td>
<td>6,522 (3,045)</td>
<td>668 (291)</td>
<td>1,283</td>
<td>41,789 (28,886)</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>6,550 (7,366)</td>
<td>24,421 (21,433)</td>
<td>6,151 (4,564)</td>
<td>740 (309)</td>
<td>1,459</td>
<td>39,321 (33,672)</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>6,178 (6,302)</td>
<td>24,626 (21,464)</td>
<td>6,434 (4,317)</td>
<td>444 (256)</td>
<td>1,644</td>
<td>39,326 (32,339)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85,366 (87,846)</strong></td>
<td><strong>294,794 (254,066)</strong></td>
<td><strong>69,768 (42,877)</strong></td>
<td><strong>6,528 (2,632)</strong></td>
<td><strong>18,606</strong></td>
<td><strong>475,062 (387,421)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**1974 Target**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(12 months)</strong></td>
<td>90,000</td>
<td>280,000</td>
<td><strong>35,000</strong></td>
<td><strong>405,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** These figures do not include late reporting, the totals may, however, be less than the national totals.

**Source:** Family Health Division of the Ministry of Public Health.
**THAILAND**

**New Acceptors by Region, 1974**

<table>
<thead>
<tr>
<th>Region</th>
<th>IUD No.</th>
<th>IUD %</th>
<th>Pill No.</th>
<th>Pill %</th>
<th>New Acceptors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td>No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangkok-Thonburi</td>
<td>14,188</td>
<td>15.8</td>
<td>31,463</td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>9,595</td>
<td>10.7</td>
<td>66,824</td>
<td>21.9</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>47,460</td>
<td>52.9</td>
<td>99,789</td>
<td>32.7</td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>15,203</td>
<td>16.9</td>
<td>81,592</td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>3,292</td>
<td>3.7</td>
<td>25,576</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>89,739</td>
<td>100.0</td>
<td>305,244</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Tubectomy No.</th>
<th>Tubectomy %</th>
<th>Vasectomy No.</th>
<th>Vasectomy %</th>
<th>Others No.</th>
<th>Others %</th>
<th>Total No.</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td></td>
<td>No.</td>
<td></td>
<td>No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangkok-Thonburi</td>
<td>17,464</td>
<td>23.7</td>
<td>1,121</td>
<td>16.5</td>
<td>2,231</td>
<td>11.7</td>
<td>66,467</td>
<td>13.4</td>
</tr>
<tr>
<td>Central</td>
<td>15,272</td>
<td>20.7</td>
<td>1,855</td>
<td>27.4</td>
<td>622</td>
<td>3.3</td>
<td>94,168</td>
<td>19.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>24,474</td>
<td>33.2</td>
<td>1,837</td>
<td>27.1</td>
<td>960</td>
<td>5.0</td>
<td>174,520</td>
<td>35.3</td>
</tr>
<tr>
<td>North</td>
<td>10,193</td>
<td>13.8</td>
<td>940</td>
<td>13.9</td>
<td>14,753</td>
<td>77.6</td>
<td>122,681</td>
<td>24.8</td>
</tr>
<tr>
<td>South</td>
<td>6,299</td>
<td>8.5</td>
<td>1,027</td>
<td>15.1</td>
<td>448</td>
<td>2.4</td>
<td>36,643</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73,702</td>
<td>100.0</td>
<td>6,780</td>
<td>100.0</td>
<td>19,014</td>
<td>100.0</td>
<td>494,479</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source:* Family Health Division of the Ministry of Public Health.
THAILAND

**New Acceptors Recruited by the MOPH and Other Sources**

<table>
<thead>
<tr>
<th>Year</th>
<th>MOPH</th>
<th>Non-MOPH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1965-68</td>
<td>91,316</td>
<td>48.9</td>
<td>95,577</td>
</tr>
<tr>
<td>1969</td>
<td>88,652</td>
<td>68.1</td>
<td>41,567</td>
</tr>
<tr>
<td>1970</td>
<td>187,771</td>
<td>82.1</td>
<td>40,807</td>
</tr>
<tr>
<td>1971</td>
<td>369,389</td>
<td>90.6</td>
<td>38,446</td>
</tr>
<tr>
<td>1972</td>
<td>410,189</td>
<td>89.8</td>
<td>46,505</td>
</tr>
<tr>
<td>1973</td>
<td>365,229</td>
<td>86.5</td>
<td>56,947</td>
</tr>
<tr>
<td>1974 1/</td>
<td>411,879</td>
<td>83.3</td>
<td>82,600</td>
</tr>
<tr>
<td>Total</td>
<td>1,924,425</td>
<td>82.7</td>
<td>402,449</td>
</tr>
</tbody>
</table>

1/ Due to some discrepancy among the source of data from MOPH, the figures were adjusted by the mission.

2/ Excludes acceptors recruited through commercial sector.

THAILAND

Average Monthly Acceptors by Service Point and by Region, 1972-1974

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly Per Clinic</td>
<td>Clinic</td>
<td>Monthly Per Clinic</td>
<td>Clinic</td>
<td>Monthly Per Clinic</td>
<td>Clinic</td>
</tr>
<tr>
<td>Bangkok-Thonburi</td>
<td>3,751</td>
<td>130</td>
<td>4,380</td>
<td>116</td>
<td>5,539</td>
<td>131</td>
</tr>
<tr>
<td></td>
<td>28.9</td>
<td></td>
<td>36.9</td>
<td></td>
<td>42.3</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>7,532</td>
<td>977</td>
<td>7,025</td>
<td>1,058</td>
<td>7,847</td>
<td>1,137</td>
</tr>
<tr>
<td></td>
<td>7.7</td>
<td></td>
<td>6.7</td>
<td></td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>13,566</td>
<td>1,148</td>
<td>12,435</td>
<td>1,223</td>
<td>14,543</td>
<td>1,410</td>
</tr>
<tr>
<td></td>
<td>11.8</td>
<td></td>
<td>10.2</td>
<td></td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>9,826</td>
<td>954</td>
<td>9,265</td>
<td>981</td>
<td>10,223</td>
<td>966</td>
</tr>
<tr>
<td></td>
<td>10.3</td>
<td></td>
<td>9.4</td>
<td></td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>2,857</td>
<td>688</td>
<td>2,576</td>
<td>749</td>
<td>3,054</td>
<td>742</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td></td>
<td>3.4</td>
<td></td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37,532</td>
<td>3,897</td>
<td>35,181</td>
<td>4,127</td>
<td>41,206</td>
<td>4,386</td>
</tr>
<tr>
<td></td>
<td>9.6</td>
<td></td>
<td>8.5</td>
<td></td>
<td>9.4</td>
<td></td>
</tr>
</tbody>
</table>

1/ Number of Family Planning service points reported in January of each year.

Source: Mission estimates.
### Expected Number of Active Users, 1975-81

<table>
<thead>
<tr>
<th>Year</th>
<th>New Acceptors Needed</th>
<th>% of MWRA</th>
<th>Government-Sponsored Program Active Users (000) 1/</th>
<th>Active Users in Private Sector 2/</th>
<th>Total Active Users (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>( T_1 ) ( T_2 ) ( T_3 ) ( T_4 ) ( T_5 ) ( T_6 ) ( T_7 ) Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>430</td>
<td>7.9</td>
<td>318 225 173 136 89 38 15 994</td>
<td>390</td>
<td>1,384</td>
</tr>
<tr>
<td>1976</td>
<td>450</td>
<td>8.0</td>
<td>333 263 168 126 100 69 27 1,059</td>
<td>1,10</td>
<td>1,469</td>
</tr>
<tr>
<td>1977</td>
<td>575</td>
<td>8.6</td>
<td>370 247 176 123 92 77 48 1,133</td>
<td>1,140</td>
<td>1,573</td>
</tr>
<tr>
<td>1978</td>
<td>587</td>
<td>9.3</td>
<td>407 275 184 129 90 71 51 1,210</td>
<td>1,180</td>
<td>1,690</td>
</tr>
<tr>
<td>1979</td>
<td>609</td>
<td>9.9</td>
<td>394 291 202 135 91 69 49 1,299</td>
<td>1,250</td>
<td>1,819</td>
</tr>
<tr>
<td>1980</td>
<td>621.5</td>
<td>9.7</td>
<td>330 225 150 99 73 49 41 1,370</td>
<td>1,310</td>
<td>1,930</td>
</tr>
<tr>
<td>1981</td>
<td>636.5</td>
<td>9.5</td>
<td>330 216 165 110 76 51 41 1,422</td>
<td>1,370</td>
<td>2,022</td>
</tr>
</tbody>
</table>

1/ Using factors developed by Jack Reynolds; at 30% of annual dropout rate: \( T_1 \cdot 0.74 \); \( T_2 \cdot 0.55 \); \( T_3 \cdot 0.41 \); \( T_4 \cdot 0.30 \); \( T_5 \cdot 0.22 \); \( T_6 \cdot 0.17 \); \( T_7 \cdot 0.12 \).

EVALUATION AND RESEARCH ACTIVITIES BEARING ON THE NFPP

A. Program Evaluation

The Service Statistics System

1. A straightforward and efficient system has been developed for collecting and reporting the numbers and demographic and other characteristics of those who accept various methods of contraception. Monthly information on numbers of new acceptors is compiled from the activity reports of individual service units; information on characteristics (mainly age and parity) is derived from client report forms and reported annually.

2. Second class health centers and midwifery centers prepare a daily report on their activities -- the number of new acceptors and revisits by method, the number of home visits made and pill cycles distributed. These are sent to the District Health Offices, where a monthly activity report is prepared, compiling totals for all such centers in the district, and sent to the Ministry of Public Health in Bangkok. In some provinces, the District Health Office (MOI) report includes information from the first class health centers; in others, these reports directly to the Health Ministry. Provincial hospitals, MCH and municipal health centers, and service units belonging to other organizations and private associations also report directly to MOHP in Bangkok. Service statistics, therefore, include a number of non-government family planning activities, such as the Community-Based Distribution Scheme, but they do not include private commercial sales.1/ All field reports are due at the Ministry's Family Health Division's Research and Evaluation Unit in Bangkok by the 15th of the following month. The Ministry has developed procedures for following up the failure of a unit to report on time, and the proportion of reporting units which cannot be included in each monthly report is small.

3. The Research and Evaluation Unit is responsible for checking the reports and for preparing a monthly report on acceptance by method. Since October 1973 the process has been computerized and the report on any month becomes available during the fourth or fifth month thereafter. The report presents the results from each province separately, giving acceptance by method for each reporting unit for the current month, previous month, same month last year and year to date. Summary tables by region and method, and by type of reporting unit (e.g., district health office, hospitals, etc.)1/ are also prepared. Provincial Chief Medical Officers receive copies of the print-out only for their own province and the summary tables. The number of complete sets of the report is extremely small (12), and, except for copies to PPAT, and to three aid agencies most closely involved with the day-to-day

1/ A quarterly report of contraceptive imports is prepared for the MOPH by a private accounting firm (Price, Waterhouse and Co.). Apart from such unofficial figures as the principal distributors are willing to disclose, these import figures are the only figures available for estimating the flow of supplies in the commercial sector.
activities of the program, all copies remain inside the Ministry. In addition to monthly reports, quarterly reports are also prepared on the same basis.

4. The use that is made of these statistics is not very easy to judge. There are no nationally established acceptance targets by province, district or individual health unit. At least one informal target setting exercise has taken place in the Ministry and it appears that some Provincial Chief Medical Officers do themselves informally set targets for the staff of their province. If agreed targets are arrived at, it should not be difficult at the provincial level to use the monthly reports in their present form to compare performance with targets, and to identify where problems are emerging or greater staff supervision is needed. At the national level, however, it is not easy to use the mass of numbers now presented to compare, say, provincial performance, though something of this nature is informally attempted. One very easily taken step that would facilitate this comparison would be to include calculations of provincial, and perhaps even district, acceptance rates (for example, per 1,000 married women). Such information has been calculated for the forthcoming Annual Report on 1973; and it reveals a very wide range of provincial performance indeed -- from 1.2% of married women accepting service in one province up to 17.7% accepting in another (there are probably, however, many instances where residents of one province accept contraception in another). Without rate calculations, it is difficult to interpret the data. If some sort of targets by reporting unit were introduced, the degree of fulfillment could be reflected in the monthly reports and a brief evaluation of progress and emerging problems presented to the managers of the program each month. (More is said on the question of target setting below.)

5. The other source of statistics on acceptors and their characteristics are record cards filled out for each client who accepts contraception for the first time, or who changes methods or place of service. The card contains a medical check-list for oral contraceptives and a record of clinic visits, and is retained in the health center. But a duplicate copy of the demographic information is sent to the Ministry of Health. Data on one in 60 pill and IUD acceptors, and for all those sterilized, is processed and a report on acceptor characteristics is prepared annually. At present, it does not appear that these data receive much attention, but potentially they would permit an analysis of trends in the "quality" of acceptance, and should be of great value in assessing the effectiveness of the program. This could also be a useful tool of management.

6. Some analysis of the annual data for 1973, and especially of reasons for regional disparities in performance, has been begun in the Research and Evaluation Unit, but it is still in a relatively early stage, and much more could be done. Questions of research and evaluation priorities will be discussed below.

7. The client record forms are used as a frame for selecting a sample of acceptors to be used in periodic follow-up surveys, which can establish continuation rates. One such continuation rate survey was carried out by the
Research and Evaluation Unit in 1971 and two more (one on orals, one on the Copper-T IUD) in 1974.

Other Operational Research and Evaluation

8. The value of experimenting with different approaches to the delivery of family planning services by means of carefully evaluated pilot projects has been well accepted in Thailand, ever since the first family planning project with government involvement took place in Potharam District in 1964-66. In this project, a 19-month action program run by the Ministry of Public Health was preceded by a baseline survey. Several intermediate evaluations, special purpose studies, and a five-year follow-up survey were also carried out. The results, which clearly established the acceptability of family planning to a significant proportion of Thai women in rural areas, were of considerable influence on subsequent decisions to develop a national family planning program. The critical decision, made in 1970, to allow auxiliary midwives to prescribe oral contraceptives also resulted from a pilot study made the previous year. Since then, there have been several experiments and innovations. One of these involved an experiment with three alternative approaches to adding field workers to the family planning program — full-time salaried employees, full-time employees paid by results, and volunteers paid a small honorarium. Unfortunately the small scale of this experiment and poor design made its results rather inconclusive. This is now being followed by a study of field workers in metropolitan Bangkok. Other experiments include an attempt to use indigenous midwives in the family planning program, two approaches to community-based distribution of contraceptives and an experimental scheme testing several ways of mobilising village residents to provide health, family planning and nutritional services (the so-called DEIDS project at Lampang). In addition to the experiments, projects supported by UNFPA such as the accelerated development of the MCH program in four northeastern districts, the provision of motorcycles to auxiliary midwives, and the expansion of the sterilization program all include evaluation studies.

9. Outside the field of family planning delivery, there have been other experiments and evaluation studies. These include several trials of new contraceptives — including the very successful trials of injectables in the Northern region by Dr. McDaniel of McCormick Hospital, Chiangmai, and trials of the copper T IUD. They also include several studies of side effects from oral

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1/ The results of the study have been reported in the Working Papers of the Institute for Population and Social Research, Mahidol University, Nos.1-4. No. 2 in this series gives a good discussion of some of the problems with this survey. Only thirty-nine field workers were involved. The method of payment by results -- which was to divide up a fixed sum of money among field workers according to their relative performance -- could be potentially demoralising where the performance of a field worker improved in absolute terms but worsened relative to others, causing a drop in income. And in some areas client saturation was reached. The finding -- that the "volunteers" serving a small population obtained better acceptance per eligible married woman, at a higher cost per acceptor -- is interesting but not conclusive.

2/ Development and Evaluation of Integrated Delivery Services. This is patterned after a delivery system first tried in a nearby district - Saraphi.
contraceptives and IUD's, a study of ways of increasing condom use in rural areas, and a still continuing follow-up study of vasectomy acceptors at Ramathibodi Hospital in Bangkok. There have also been some studies of communications in family planning.

10. Several institutions and many individuals have been involved in this program of research. Large service projects with outside finance have their own evaluation units -- this is true for example for the IPPF -- financed DEIDS project. The latter project has a particularly sophisticated program of evaluation using foreign technical assistance. Some of the medically-related and communications studies have been independent of the Research and Evaluation Unit of the MOPH. In most of the other studies, the Unit is or has been at least partially involved. In several cases, the Unit has done the evaluation itself, and a substantial proportion of its central office staff are temporary employees obtained for a specific project. If interviewers are required, as in the case with many of the Unit's studies, these are also obtained as needed and supervised by the central office staff.

11. For a number of studies -- on field workers, on condom use, on indigenous midwives -- the research has been financed by the Ministry of Public Health but carried out by university researchers. In all these cases the university has been Mahidol -- in the first two of these the Institute for Population and Social Research, and, in the third, the Faculty of Public Health. The Bangkok Metropolis Field Worker Project, however, does not involve MOPH -- this is a UNFPA financed project, carried out by the Institute of Population Research at Mahidol in collaboration with the Bangkok Metropolitan Bureau of Public Health. Another study of the role of public health nurses in promoting family planning is also being undertaken at the Institute.

Some Observations on Operational Research and Evaluation

12. The Evaluation and Research Unit of the Family Health Division has a total of 18 employees, 3 of which have officially-established positions. The Unit appears to be understaffed in relation to the work it is called upon to perform. In particular, specialists with social science training able to design sample surveys, analyze survey results and undertake in-depth studies are required. At present, the special studies aspect of the work is being over-emphasized compared with the regular interpretation and evaluation of program service statistics. This limits the depth each study can achieve.

13. The Family Health Division is aware of the need for additional, non-medical support. The Evaluation and Research Unit has, however, difficulty in attracting researchers to work in the MOPH where advancement opportunities are limited. A preferable arrangement would be for the Unit to contract out a number of its studies and in-depth analyses to the universities currently undertaking population and family health related research. Various possibilities are discussed below. Recognizing the importance of operational research, the Family Health Division has identified some 8 high-priority research projects to be undertaken during the Second Five-Year Family Planning Program. Some of these studies have already commenced; others are in the planning stages. The 8 studies include: (i) a depo-provera
pilot project for auxiliary midwives; (ii) an IUD insertion pilot project for auxiliary midwives; (iii) a survey of attitudes towards abortion and liberalizing the law of medical students, physicians and members of Parliament; (iv) a contraceptive follow-up survey; (v) a pill incentives study; (vi) a pilot project for determining how tambon doctors can be best used in distributing family planning services; (vii) an FP/MCH impact survey in South; and (viii) a mobile vasectomy demonstration project. Total cost of these studies have been estimated at around US$500,000. Funding has been secured for the first three.

14. The proposed studies should contribute significantly to the operational research program. In the past, a good deal has been learned from these pilot studies about possible innovations in the delivery system -- and some of the most successful, such as allowing midwives to prescribe oral contraceptives, have been adopted. When the Community Based Distribution Scheme and the DEIDS project, both of which started in 1974, and both of which could lead to much greater involvement in the program by very lightly trained village residents, have been in operation for two years, a great deal more valuable information will have been accumulated. There is already a good deal of fragmentary evidence -- such as from the Saraphi project, and from the field worker study -- that community workers may be of considerable use to the program. Preliminary results of the experiment with indigenous midwives suggest that these are probably relatively ineffective. In general, however, it is difficult to think of possible modifications to the delivery system that have not already been tried and evaluated, at leasted on a small scale. This is not to say that no further carefully evaluated experiments should be tried. There appears to be little cost analysis of some of the schemes. Many of the schemes have been on a very small scale. It would probably be worth repeating the inconclusive field work worker study (which did address the cost question) on a larger scale with better design.

15. The small scale of some of the pilot projects in the past is, however, a source of difficulty. If for example, experiments with alternative patterns of manpower use involve much more supervision than would be possible if the project were implemented nationally, the results of a pilot project may be a misleading guide to program innovation. This problem may make it difficult to obtain useful results from the current DEIDS project. This project has such outstanding leadership, and the quality of training and supervision are likely to be so excellent, that the project may succeed where a national replication of it might fail. One recommendation is that the DEIDS project be spread to at least eight neighboring districts (with say 1/2 million people) and that the present very sophisticated evaluation system be adopted to cover all such districts. Only then will it be possible to assess whether it is likely to be replicable on a nationwide basis.
16. Much more seems to be known about pilot projects than about the operation of the regular program itself. Not very much is known about the methods of work of midwives and junior sanitarians with respect to family planning or the degree of supervision they are given, the amount paid in practice by pill acceptors or the use made of the funds received for pill sales. It is reported that some health facilities -- particularly first class health centers -- are underutilized but the extent of this is not known, nor are its causes well understood. A recent paper on this has been produced by the Mahidol Institute for Population and Social Research, which is interesting and provocative but very short on hard fact.\footnote{James N. Riley and Santhat Sermsri, \textit{The Variegated Thai Medical System as a Context for Birth Control Services}, Mahidol Institute for Population and Social Research, Working Paper No. 6, June 1974.} The main research and evaluation priority must be the current operations of the regular family planning program.

17. One of the best ways to obtain information on the operation of the family planning programs and health services would be to carry out a new National Health Services Survey or, alternatively, a more modest series of local studies. The purpose of such research would be to learn much more than is now known about how far people are willing to travel for various kinds of health services; how extensive is the use of non-Governmental sources of health care; the roles of distance, service-hours, prices charged, waiting-time, etc., on the patient's choice of service; the amounts which people spend on health, where they spend it, and for what services; how Government health workers perceive priorities in their daily work and how these perceptions fit the priorities of higher level administrators and supervisors. The overall survey would require two or three separate investigations. The first would involve interviews with the general public and would generate data about the use of modern and traditional providers of health care and drugs, amounts spent, etc., and possibly data on morbidity, mortality, and health-related socio-economic information. A second level would involve interviews with a sample of personnel of the official program, at several levels -- midwives, junior sanitarians, and nurses and doctors at first class health centers -- about their own work, the supervision received and given, etc. A third level should look at the utilization made of physical facilities -- e.g., the extent of bed and equipment usage, the geographical distribution of patients, etc. Possibly the second and third levels could be combined into a single study. This information would be of much wider value than simply as providing information on the current working of the present system. By providing information on the effect of distance on the utilization of facilities, it should enable the Ministry to plan the most cost-effective phasing and pattern of expanding the system; detailed information about the workers' roles and supervision may lead to suggestions for improvements in the training of workers and supervisors; and information on existing prices paid by users and non-users of the system would permit a review of how the present health system is being financed. There is undoubtedly a good deal of local variation in the efficiency and acceptance of health services, and it is important that research be planned, and the findings interpreted, with this fact in mind.
18. Such a survey should be carried out as soon as possible. It would require a good deal of planning, and it is unrealistic to believe its results would be available in advance of the need to make decisions about the rate of expansion of coverage of the health system during the Fourth Plan. But it may suggest a modification of planned policies, and there must be recognition when the Plan is being drawn up that such modification may be needed during the plan period, in the light of the findings of the survey.

19. Although the Health Ministry should participate in the design of the survey it is important that the survey itself, -- or at least that of health personnel -- be carried out by a group other than the Health Ministry, with full assurance of confidence given to respondents. The Mahidol University Faculty of Public Health is a possible group. Whether the Faculty would be able to handle all aspects of the three related surveys would need discussion. It is possible that the National Statistical Office could carry out the interviewing of the general public, and that another university could do the study of the utilization of physical facilities.

20. The proposed National Health Services Survey has a predecessor in the form of a 1970 survey carried out by the Ministry of Public Health with WHO assistance, though this was much less extensive than now suggested. Unfortunately, the results of this survey remain unpublished. Some tabulations and discussions are available, however, though we understand that the original data have now been destroyed. The design of any new survey should take into account the experience of the old.

21. Another recommendation is that the Research and Evaluation Unit should devote a much larger proportion of its attention to the evaluation of the program as revealed by the service statistics. This would include a brief analysis each month to bring the salient features of each monthly report to the attention of the program managers. Greater attention should also be paid to the apparent causes of inter-provincial differences in performance. Some valuable work in this, using multivariate regression, has begun in the Research and Evaluation Unit and should be continued and expanded.

22. Evaluation is only of use if action is to follow. The most valuable aid to this would be to develop a more satisfactory method of setting targets. The present national targets were derived, as part of the Five Year Planning Exercise, from a mechanistic calculation of the number of births that must be prevented in any year to achieve the fall in the birth rate needed to obtain the target of a 2.5% rate of population growth in 1976. This is very difficult to do accurately since how program acceptors would have behaved if there were no program is hard to estimate. The allocations among methods were based on earlier experience of preferred methods but were also essentially arbitrary. The effect was to establish unchanging targets, except for sterilization for the period 1973-76. Based on the experience of programs elsewhere, which have tended to show declining rates of acceptance a few years after the program began, this was not necessarily unrealistic, since it could be argued the ever wider coverage of the program would tend to be offset by the inevitable slowing rate of acceptance. The crucial point is to judge when this eventual slowdown will occur; otherwise targets will be set too low or too high.
23. A more realistic approach to target setting would start from the fact that it is in the interests of Thailand to reduce births as quickly as possible. The concern of the target-setting process should therefore be less in terms of some distant future birth rate, which might turn out to be either excessively conservative in terms of what could be achieved, leading to complacency, or hopelessly over-ambitious, thereby making program accomplishments seem less satisfactory than they deserve to be. Instead targets should be established for a shorter time period to reflect what can reasonably be expected, given a determined and sustained effort to build up nation-wide effective program coverage as soon as possible. More important than total national plan targets are targets for every unit -- for provinces and districts, and probably by individual service points. These targets ought to be set annually. They should be based on a reasonable expected workload, but must recognize that it may be harder to get acceptance in some parts of the country than others. Ideally, the target for each individual unit or worker should follow a discussion by supervisors of what can reasonably be achieved, and a discussion of the constraints on doing more. Performance norms set at national level may need modifications in the light of local circumstances. Targets set in this way after a dialogue between program managers, supervisors and the staff of the program, will be more effective as a management tool than the present targets, which are arbitrarily established at five year intervals.

24. The key questions for regular attention would then become an analysis of the degree of fulfillment of targets. It should become possible then to identify both general trends in nationwide acceptance -- which might themselves suggest the need for general changes in policy -- and also places where the program is doing particularly well or particularly badly. In some cases members of the Research and Evaluation Unit might want to do a case study of performance in a particular area -- perhaps to suggest corrections to an apparent deficiency, or to see whether general lessons can be learned from particular local experience.

25. If program managers start to pay more attention to performance as revealed in the service statistics, and the evaluation of individuals in the program start, at least partly, to depend on this, there will be a greater incentive for over-stating acceptance. Perhaps some system for random checks on the accuracy of the reporting should be developed.

26. In a more performance-oriented program there will be more widespread interest in regular service statistics. Presumably it would not be convenient to provide the currently very bulky sets of monthly statistics on a wider scale. Consideration could be given, however, to the possible compromises between the publication of the detailed monthly statistics and the presently long-delayed annual reports. For example, summary data at monthly or quarterly intervals might include figures by province rather than by region.

27. More attention to the regular program will not be possible unless the core staff of the Research and Evaluation Unit is substantially strengthened. At the present time several of the staff are temporary employees, recruited for individual studies. This obviously works against the Unit's accumulating collective expertise, increases the difficulty of finding qualified people, and lowers morale. (It is already difficult to attract young statisticians to work in a Ministry where their prospects for promotion are obviously limited).
But unless a way to strengthen the Unit is found, it will be very difficult indeed to make the regular analyses of the program which should be its top priority.

### B. General Observations on Population Research

28. As Annex I on the Demographic Outlook makes evident, frequent survey information on the rate of population growth, and particularly, on the birth and death rates is not available. The determination of apparent trends is a matter of demographic deduction and, to some extent, speculation. This has been made harder by the acknowledged deficiencies of the 1970 Census. The major demographic surveys -- the Survey of Population Change of the National Statistical Office and the Longitudinal Study of Social, Economic and Demographic Change at the Chulalongkorn Institute of Population Studies are at present indispensable in trying to piece together what is happening. As means of obtaining regular information, these surveys have deficiencies. The Survey of Population Change is a decennial effort (separate from the regular census) with a very large sample and limited research objectives; the Longitudinal Study, with a three-year cycle, is designed for research purposes rather than to provide national demographic estimates. The vital statistics registration system underestimates both births and deaths. In 1964-65 the Survey of Population Change estimated the degree of under-registration to be 15% for births and 30% for deaths. There is no reason to know whether the degree of under-registration is constant and so whether the trends indicated are a reliable reflection of reality. Considerably more about recent trends should be known later in 1975 when results from the 1974/75 Survey of Population Change become available.

29. It is clearly of importance to the managers of a family planning program to know not only what is happening to acceptance, but also what is happening to fertility. We have not been able to make a detailed analysis of the reasons why the Thai vital registration scheme captures only an incomplete number of births and deaths. With a registration system in which vital registration has been compulsory since 1917, and which requires registration not only of births and deaths but also of permanent migration, it is not for want of legislation.

30. Alternative ways of improving information on vital events should be considered. One possibility would be more frequent regular surveys, although this is possibly more expensive and cumbersome than would be worthwhile. Another might be a sample registration scheme where very deliberate attempts are made to record all births and deaths for a sample of urban and rural areas. Under such a scheme responsibility is given to local people, such as teachers (rather than village headmen) who are likely to know all such
events within a small area and may be persuaded to give this particular function the sustained effort that it would require. It has not been possible for the mission to explore these alternatives in any detail.

31. Leaving aside the role of the National Statistical Office in the collection and processing of demographic data, the research picture in population is dominated by two institutions -- Mahidol University and Chulalongkorn University.

32. Mahidol began as a solely health-related institution, but since 1969, it has expanded more broadly into the social sciences. The Institute for Population and Social Research is the main place for non-medically related research on population. The Institute has been in existence since 1966, originally as part of the Faculty of Public Health. It obtained its independent status in 1971. Most of the research carried on so far has been operational. Its major studies, especially those in field workers, have been mentioned above. There is a considerable internal interest in broadening this, while retaining the operational research as well. The Institute began largely on a part-time basis. Over the years, a number of people have received foreign training. A full-time advisor has been provided by the Rockefeller Foundation. Apart from the Director, there are currently four Research Associates, all with U.S. Masters' degrees. The return of a number of very promising PhD's from abroad is impending, and with the present Director who is a well-trained demographer recently beginning work on a full-time basis, the future of the Institute looks very promising with respect to personnel. Relations with the Ministry of Public Health have not, however, recently been very good and the Institute is not at present working on projects coming through MOPH. This is unfortunate, and given the Institute's promise as a research institution, it must be hoped that it will be possible for closer cooperation to take place after the Ministry's reorganization is completed. The Institute itself is not a teaching institution but its staff teaches both in various medical departments and other institutes in Bangkok.

33. Other departments of the university are also active in the field of population. There is at least one very good sociologist/demographer in the Department of Social Science, which is part of the Faculty of Social Sciences and Humanities. He arrived at Mahidol University fairly recently and has a number of interesting research ideas. In addition, another member of the Faculty of Social Sciences and Humanities heads a program of research on population education.

34. There is widespread interest in various aspects of the family planning program in the Faculty of Public Health. The research there includes the study of traditional midwives mentioned above and another study of the completeness of vital registration. Research on bio-medical questions (including contraceptive technology) is taking place in the two University hospitals and in the Faculty of Social Sciences.
35. The Institute of Population Studies at Chulalongkorn University is Thailand's leading demographic research and training center. It has received considerable support from the Population Council and, until very recently, this included a foreign advisor on a permanent basis. There are more than a dozen Faculty Research Associates and Staff Researchers. Since 1967 an average of fifteen graduate students a year have entered the Institute and a large number of M.A. degrees have been given. As at Mahidol University, there has been a program of foreign training and the Institute can look forward to some promising well-trained demographers and other social scientists returning over the next few years. The main work of the Institute has centered on designing, executing and analysing the Longitudinal Study of the Social, Economic and Demographic change in Thailand. This involved rural sample surveys in 1969 and 1972 and urban ones in 1970 and 1973, and the forthcoming core questionnaire of the World Fertility Survey is being adapted to provide continuity of the World Fertility Survey is being adapted to provide continuity with the earlier surveys. Not only does the study provide information on broad demographic trends, but it also includes a great deal of other information. It has already provided an important series of publications, and there remains a great deal of material not yet fully analyzed, particularly with respect to changes between 1969/70 and 1972/73. On the whole, the research so far has concentrated on describing patterns of demographic change rather than seeking to explain causation with respect to other social and economic variables; but there is clearly great interest in broader and more fundamental questions and there is reason to be optimistic that, as the expertise of the staff builds up, some very interesting work will be done at the Institute. A list of publications from the Longitudinal Study is attached.

36. Demographic and family planning research at other Thai universities is on a much smaller scale, and depends much more heavily on the interests of isolated individuals. Thammasat University, which is a leading research center in some branches of social science, such as economics, appears to have no significant current research on population, though there is much interest in family planning questions in the Department of Social Welfare. Some minor work on family planning questions has taken place at Chiangmai University. Some interesting anthropological work on population questions is being carried out with the participation of members of the Faculty of the National Institute of Development Administration, jointly with some U.S. academics. Finally, the Population and Manpower Planning Division of the National Economic and Social Development Board, though clearly not a research institution in the normal sense of the word, has been doing a good deal of demographic work in the preparation of population projections and on the relationship of population growth to the country's ability to meet its goals in the fields of public health and education. It has also made one or two small studies on aspects of the family planning program.
Finance

37. So far, finance for research appears to be generally adequate to keep the available staff time productively occupied. Most, however, comes from foreign donors and there is very little research money available from Thai sources. The National Research Council has only very limited funds for social sciences, and although population apparently gets relatively favorable treatment, the amounts involved are extremely small. In general, the present finance arrangements appear to be more satisfactory in the case of Chulalongkorn, where the Institute is more firmly established, than at Mahidol University. At Mahidol University there is some feeling that the research program has been excessively shaped by the availability of funds for particular studies, and that this has made it work more extensively in the field of family planning operations than some of the staff would regard as ideal. In addition the Rockefeller Foundation support for Mahidol University, which has been of great importance in the University's development, is now approaching its end. At the present time, the Mahidol Institute is looking for substantial core support.

38. Population Council support for Chulalongkorn has already been reduced. There is, therefore, considerable uncertainty about the outlook for research financing, especially given the changes in the financial position of UNFPA and the major Foundations. As the number of qualified researchers at both the Chulalongkorn and Mahidol Institutes grows, it clearly will be essential to obtain new financial commitments from somewhere, either from a foreign foundation or aid agency or the Thai government.
BIBLIOGRAPHY OF DEMOGRAPHIC AND NFPP REFERENCES SINCE 1970

I. GENERAL
(including serial research reports)


I. GENERAL (continued)


II. DEMOGRAPHY


II. DEMOGRAPHY - (continued)


III. HEALTH DELIVERY


Vairoj, (Dr.), *Activity of the Medical Manpower of the Border Patrol Police,* November 18, 1974, 2 pp., mimeo.
IV. FAMILY PLANNING


**Business in Thailand**, August 1974. (This issue of this top-management business magazine has five articles on family planning in Thailand, with emphasis on non-clinical delivery).


Chitt Hemachudha, "Advertising Regulations for Pharmaceuticals". An address by the then Director-General, Department of Health Promotion, MOPH, at a meeting of the Pharmaceutical Products Association, Bangkok, October 3, 1973. 9 pp., mimeo.


II. FAMILY PLANNING - (continued)


Population Council (Thailand Office). Semi-Annual Reports (various, mimeo).
FAMILY PLANNING - (continued)


Ramathibodi Hospital, Department of OB/GYN, Faculty of Medicine, Mahidol University. Study Material in Population/Family Planning, n.d. (various materials, many of clinical nature).


Wright, Nicholas H., Thailand: Estimates of the Potential Impact of Family Planning on Maternal and Infant Mortality, February 27, 1974, 12 pp., mimeo.
Research Reports:


No. 5 Sidney Goldstein, Inter-Relations Between Migration and Fertility in Population Redistribution in Thailand, November 1971, 45 pp.


No. 7 Sidney Goldstein, The Demography of Bangkok: A Case Study of Differentials Between Big City and Rural Populations, August 1972, 48 pp.


Chulalongkorn University, Institute of Population Studies. Three Series of Reports are Issued: (a) Working Papers, (b) Research Reports, and (c) Special Reports. Titles in the first two series, through 1974, are reproduced below:

Working Papers:

No. 1 Review of Findings from the Longitudinal Study of Social, Economic, and Demographic Change in Thailand, August 1973.


No. 9 (English Translation not Available.)


No. 12 (English Translation not Available.)


1/ No Special Reports were available.
THAILAND

Major Donor Support for Population Activities  
FY 1974-75  
(000' s)

<table>
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<th>Donor</th>
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<td>2,500(^1)/</td>
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<td>Population Council</td>
<td>403(^1)/</td>
<td>250(^2)/</td>
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<td>IPPF</td>
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<td>700</td>
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<td><strong>Total</strong></td>
<td><strong>4,800</strong></td>
<td><strong>3,510</strong></td>
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1/ Direct family planning support (not channeled through off-shore intermediaries. Of the total amount US$942,000 was for oral contraceptives, US$50,000 for condoms, and US$1,010,000 for training, fellowship support, technical assistance, etc.)

2/ Includes funding for World Education Project Costing US$130,000.

3/ Rough approximation. Advisory costs financed from USAID program grant to Population Council.
The Population Council

1. The Population Council has supported Thailand's population planning efforts since 1963, when it sponsored the First National Population Seminar. The Council's advisory and financial support has been critical in helping the Thai program get started. Between 1963 and 1971 the Council provided a total of 13 long term medical and demographic advisors. One of the most important contributions was to the Thailand postpartum program which was begun in 1966 as part of the Population Council's international program. Four hospitals in Bangkok became participants. These four were among the most successful of the 25 hospitals participating in the international program. They performed over 50,000 obstetrical deliveries per year. The Thai program was expanded to ten Ministry of Public Health hospitals outside Bangkok in 1969. These hospitals extended family planning (including abortion) services to semi-urban and rural areas outside Bangkok. Each of the participating hospitals serviced at least 1,000 obstetrical patients per year. Two of the hospitals were MCH centers and in 1970 a third MCH Center was added. These Centers were particularly successful as they undertook extra motivational efforts in antenatal and postpartum clinics. In 1970 the three MCH Centers had nearly 60% of the obstetrical patients accepting family planning. The continuation rate in the Thai postpartum program was among the highest in an international comparative follow-up study conducted in 1970. The twelve month rate for the IUD was 72 and 79 for the pill.

2. Total Population Council expenditures for these and other projects, including the post-partum program, amounted to some US$300,000 in 1972. A summary of their activities in 1973-74 follows:

   a. 1973-74 - The financing of: (i) four advisors²(a doctor, sociologist, economist and demographer); (ii) local support to the MOPH, mostly for evaluation and research activities (US$80,000); (iii) bio-medical projects (US$20,000); longitudinal surveys, salary and fellowship support for the Institute of Population Studies, Chulalongkorn University (US$120,000); (iv) funding for NESDB seminars on population policy (US$25,000); and (v) support for the Population and Manpower Planning Division of the NESDB (US$13,000).

3. In the future, because of funding constraints, the Council expects to reduce its contribution to the National Family Planning Program. In 1975 there will be only 1 or 2 advisors and level of funding will be around 50% of what it was in 1972.

¹/ The Chulalongkorn Hospital has had over 60,000 IUD acceptors over the last six years - possibly a record for a single clinic.
²/ The demographer left at the end of 1973 and the economist and social-scientist in mid-1975.

THAILAND

Population Assistance by the
United States Agency for International Development (USAID)

1. Since 1968 USAID has strongly supported population activities in Thailand. Between 1968 and mid-1973 over US$7.9 million were spent. Most of this support was in the form of commodity assistance, particularly oral contraceptives, clinic and research equipment, and vehicles for rural health personnel. Short-term and long-term fellowship assistance has also been provided, primarily for post-graduate public health fellowships. US$1.8 million was spent on population in FY1973 and US$2.5 million was budgeted in FY1974. Appendix I gives a detailed breakdown of the FY1974 budgeted expenditures. In FY1975 USAID will combine its health, nutrition and family planning activities in a consolidated program that will give priority to rural activities. USAID expects its level of health/nutrition/population support to stabilize in FY1976 at around US$1.5-2 million with population activities accounting for a declining share of this total.

2. USAID's largest support has been for contraceptive supplies, followed by offshore training. Both of these contributions are being decreased. Prior to FY1973 USAID has provided free of charge all of the contraceptives distributed by the MOPH. Starting in FY1973 it was agreed that USAID would progressively reduce its contribution. In FY1974 it is estimated USAID provided around 4.7 million monthly cycles or around 40% of AID's population budget. Some US$550,000 was also spent to import 150,000 gross of condoms for commercial distribution in a program designed to promote the use of condoms as a contraceptive.

3. For FY1975 USAID has proposed a new integrated health, nutrition and family planning project which will include: (i) support for new 1975 activities designed to assist Thailand's Ministry of Public Health in determining its priorities and in planning its future health, nutrition and family planning programs; and (ii) a terminal contribution to continuing activities begun under the Rural Health Development/Protein Food Promotion Project (now terminated) and the Family Planning/Faculty of Public Health Project. Around US$930,000 has been requested

1/ During and prior to FY1973 AID provided 100% of the MOPH's pill requirements. In FY1973 the Mission agreed to purchase an increasing share of its oral contraceptives from RTG resources. According to that agreement, the RTG would purchase 25% of its (baseline FY1973) pill requirement in FY1974, 50% in FY1975, 75% in FY1976, and 100% thereafter. In FY1974 the RTG met its commitment by purchasing over one million cycles; it plans to purchase two million cycles in FY1975; three million cycles in FY1976; and four million cycles in FY1977. However, in order to encourage continued increases in oral contraceptive usage, the Mission is considering a revision of this agreement. Under a proposed amendment, the US would apply its declining-share formula to each year's incremental pill requirements. This would slow down the planned transfer of procurement responsibility from USAID to the Government. By the end of 1977, based on projected acceptor and continuing user requirements (roughly three times present level) it is estimated the MOPH will need around 7 or 8 million pill cycles p.a., roughly twice the number now required.

2/ This project was supposed to end in FY1974. Due to a shortfall in funds some US$50,000 in commodities is required as a carryover.
for Health and Population activities. Of this amount some US$30,000 are proposed for personnel costs, US$338,000 for centrally procured oral contraceptives, US$180,000 for medical supplies and equipment, US$281,000 for training costs, and US$41,000 for research grants to local institutions. USAID is also assisting the Ministry of Education extend its non-formal functional literacy program for adults in rural areas. Some US$130,000 is proposed in FY1975 for pilot projects in five regions. Population education and family planning are included in the training program. This will bring USAID's FY1975 contribution to US$1.06 million.

4. FY1975 will also be a planning year for the development of the Fourth Development Plan. Depending upon the findings of the Country Health Programming Exercise (WHO assisted) and the World Bank's Sector Survey Report and Thailand's national priorities, USAID will develop its program of FP/MCH and health assistance beyond FY1975. In addition to title X grant funds, consideration will be given to the use of long-term concessional lending or incremental grants - possibly on a matching/reimbursable basis through the Ministry of Public Health.

5. In addition to its family planning support charged to the country-program budget, USAID also provides assistance, from its headquarters budget, to various intermediary organizations which in turn fund projects in Thailand. It is difficult to obtain figures on the monetary value of these intermediaries' activities in Thailand, where USAID assistance is channeled through 23 intermediaries, some 12 of which are actively involved in family planning. These include: (i) the American Home Economics Association - which sponsors workshops and seminars in home economics and develops curricula (family planning included); (ii) the American Public Health Association, a five-year DEIDS project2 to improve MCH, nutrition and family planning services in Lampang province; (iii) the Association for Voluntary Sterilization, which is assisting in the training of Thai physicians in sterilization techniques; (iv) the Family Planning International Assistance of the Planned Parenthood Federation of America, which is assisting local Thai associations in providing family planning information and services in slum areas, industrial compounds, to hill tribes, and to church groups; and (v) the Asia Foundation, which promotes distribution of family planning information and education and evaluation and research activities.

1/ Around US$.25 million will be spent from Title X grant funds. The rest will be soft loan funds.

THAILAND
The International Planned Parenthood Federation (IPPF)

1. Thailand had no private family planned association until 1970, when the Planned Parenthood Association of Thailand (PPAT) was formed. Earlier, IPPF had supported pioneering family planning programs at two prominent hospitals, the McCormick Missionary Hospital in Chieng Mai and the Chulalongkorn Hospital in Bangkok. Both institutions have developed world-wide reputations for distinctive programs they have pioneered -- McCormick for its introduction of Depo Provera, largely through its mobile service, and Chulalongkorn for developing the largest IUD clinic in the world (it has also pioneered work with mobile services). Both of these hospitals developed their programs in the 1960s largely with the aid of funds received from the IPPF. Table 1 (attached) shows the breakdown of IPPF assistance to these two institutions in 1975.

2. In 1970 IPPF began supporting the newly-established Planned Parenthood Association of Thailand (PPAT). This assistance has continued and grown. In 1974 IPPF contributed some US$264,000 to the PPAT Program. This formed more than 95% of PPAT's operating budget. Some 41% of this amount went toward PPAT information and education activities, 31% for administration, 9% for medical and clinical services, 14% for special projects and 5% for training costs. IPPF expects to contribute around US$300,000 in 1975 with continued emphasis placed on administration and on information and education activities.

3. IPPF is sponsoring and funding a major new Community Based Family Planning Services Project (CBFPS). The CBFPS project, begun in 1974, is being undertaken as a PPAT-related activity but is being funded directly by IPPF. In 1974 IPPF contributed US$200,000 or 66% of the CBFPS operating budget. It expects to continue this level of support in 1975 and 1976.


\[1/\] The amounts listed in Table 1 are included in Table 2.
THAILAND

IPPF Assistance to Government of Thailand, 1973-1975

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<td>18.4</td>
<td>12.7</td>
<td>11.2</td>
</tr>
<tr>
<td>9. Non-Clinical</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10. Special Projects</td>
<td>62.9</td>
<td>43.2</td>
<td>72.7</td>
<td>49.3</td>
<td>49.3</td>
</tr>
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</table>

Gross Expenditure 242.1 301.1 497.3 341.6 305.6
Income 3.2 7.1 41.6 41.6 41.6

Net Expenditure 238.9 294.0 455.7 300.0 264.0

IPPF Cash Grant 220.0 264.0 455.7 300.0 264.0
Commodity Grant 156.9 175.6 223.6 202.6 202.6

Total IPPF Grant 376.9 439.6 679.3 502.6 466.6 +36.0

% Increase over Previous year
Cash 7.7 20.0
Total 21.5 16.6 6.1

Community-Based Distribution of Contraceptives 200.0 200.0

Grand Total 639.6 702.60

Source: IPPF Regional Office
THAILAND

Recommended IPPF Budget for McCormick and Chulalongkorn Hospitals, 1975

<table>
<thead>
<tr>
<th>Item</th>
<th>1975 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orals</td>
<td>2,200</td>
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<tr>
<td>Condoms</td>
<td>100</td>
</tr>
<tr>
<td>Depo-Provera and Foams</td>
<td>158,000</td>
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<tr>
<td>Clinic Equipment</td>
<td>2,866</td>
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<td>Audiovisual Equipment</td>
<td>15,000</td>
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<td>Office Equipment</td>
<td>4,060</td>
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<tr>
<td>Vehicles</td>
<td>20,400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>202,646</strong></td>
</tr>
</tbody>
</table>

1/ In 1974 IPPF's commodity grant totaled US$175,000.

Source: IPPF Bangkok Regional Office.
UNFPA Assistance to the Government of Thailand

I. Introduction

1. A memorandum of understanding between UNFPA and the Royal Thai Government was signed in November 1971, for about US$4 million over a three year period (Calendar 1972-74). Within the framework of this agreement seven major UNFPA projects were developed; these are described below in some detail (Part II below and Table 1 attached).

2. In March 1974, a Working Party was established by the RTG/UNFPA Projects Coordinating Committee to draft plans for UNFPA assistance upon expiration of the four existing projects administered by the MOPH (Projects Nos. 1, 2, 4 and 6 below). Because of the brief time available for formulation and submission of new projects for UNFPA approval for FY1976, and the need to formulate projects according to the yet-to-be defined priorities of the 1977-81 Development Plan and its subsidiary plan for population, the Working Party subsequently secured UNFPA approval in principle to extend the existing projects through the remainder of the current plan period (i.e. through September 30, 1976), at an additional cost of some US$3 million including around US$2.5 million in calendar 1975. UNFPA subsequently notified the UNDP Regional Representative that while the Fund had no technical objection to the revised proposal, funding constraints and world-wide commitments permitted only some US$1.15 million to be made available for 1975. The Regional Representative is presently looking into other possibilities. In the meantime, new projects to cover the fourth plan period are already being developed. UNFPA assistance during the Fourth Plan is now being estimated at around US$2.0 million per year, but much depends upon the large number of world-wide requests and funding commitments UNFPA is able to secure.
II. Project Summaries

The seven major UNFPA projects whose project lives have been extended through September 1976 are described below:

I. Project THA/72/P02 - Expanded Sterilization Project (UNFPA/WHO) ($794,375) Three-Year Project Operating through 1975 with a Projected Increase in Acceptors in 1975 and the Extension of the Project through September 1976. The Total Budgetary Requirement is US$1,382,177.

1. The immediate objectives of the project are: (a) to increase the availability of surgical operations of male and female sterilization by providing financial assistance to hospitals, health centers and other selected institutions; (b) to reach a target of approximately 265,000 sterilizations in 48 months of project operations and to provide reimbursement for around 200,000 of these sterilizations; (c) to ensure that the public demand for sterilizations can be met by the National Family Planning Program so far as possible; and (d) to undertake trials of the feasibility of mobile sterilization teams. The proposed annual targets for total sterilizations and for procedures for which subsidies will be paid are found in Table 1.

2. By the end of February 1974, subsidies had been claimed by participating institutions for 45,629 procedures. Tubal ligation remains much more widely accepted than vasectomy. By the end of December 1973 the following procedures were performed:

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Cases for which subsidy payment has been claimed</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubal ligation</td>
<td>35,522</td>
<td>52,159</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>1,752</td>
<td>3,160</td>
</tr>
<tr>
<td>Total</td>
<td>37,274</td>
<td>55,319</td>
</tr>
</tbody>
</table>

3. Two mobile teams will be set up in 1975, each composed of three surgeons and three nurses plus support personnel, to travel to selected rural sites. Physicians and nurses from nearby health centers will be invited to accompany the teams in order to receive training in sterilization techniques. Surgical procedures will be performed at no cost to the acceptor, thus helping to determine the effect of free service on acceptability. Mobile motivation teams consisting of two communications officers, one driver, plus locally recruited folk performers, will visit the villages near the selected site in advance of the surgical teams. Four locations will be chosen for each team and about 1,440 procedures are expected during the first year. The trials will be evaluated in late 1975. If judged successful, four sterilization teams and four motivation teams will function in 1976. UNFPA funds have been proposed for both 1975 and 1976.

1/ Excerpted from "UNFPA Assistance to the Government of Thailand," and UNFPA Project Revision Forms.
4. Subject to the availability of the funds, the MOPH plans to subcontract with the Institute for Population and Social Research of Mahidol University for a follow-up study of rural vasectomy acceptors during early 1975. The study results will assist in the planning for future project activities and will provide information needed for the design of motivational materials specifically aimed at encouraging acceptance of vasectomy by rural residents. Funds for media design and production are requested in the revised budget of the Family Planning Communications Development and Integrated Campaigns project.

5. A rough estimate has recently been made of the potential demographic effect of the project. If it is assumed that 57,000 tubal ligations will be performed in 1974 and that the age structure of acceptors follows that which has prevailed in the recent past, these 57,000 procedures would yield approximately 182,400 prevented births over the next 10 to 15 years. If it is further assumed that the UNFPA project has stimulated only half of these operations, the project will have contributed about 91,200 prevented births at a cost of about $0.68 per birth averted.

6. At the annual project review held by the Government of Thailand/UNFPA Coordinating Committee in March 1974, it was recommended that non-government institutions be made eligible for reimbursement for sterilization operations provided they meet the Ministry's standards of training and facilities. Since that meeting the Association for Voluntary Sterilization has agreed to provide funds to cover costs of subsidies in several non-government institutions. However, funds are not available to subsidize sterilizations performed by the PPAT. Therefore, for the remaining period of this project, it has been proposed that reimbursement be provided at standard rates to PPAT which expects to perform approximately 5,000 vasectomies annually.


7. The immediate objectives of the project are: (a) to contribute to increasing the coverage of the population by providing motorcycles and bicycles to nurses and midwives in service in rural areas in order to increase their mobility and thus the geographical area and number of people they can serve; (b) to meet the continuing need for training government health personnel, including doctors, nurses, auxiliary midwives, sanitarians, family planning clinic workers and family planning field workers by providing travel expenses and stipends that for initial or refresher training in family planning; and (c) to ensure that sufficient health personnel are appropriately trained to man the National Family Planning Program, in particular those components supported by UNFPA assistance.
8. The Family Health Division of the MOPH conducts an extensive training program in MCH and FP for its own personnel and for selected personnel of other agencies. This project has assisted the training program by providing funds for travel expenses and per diem for participants in certain basic training courses. The purposes of the training program were to acquaint health personnel with the national program, to bring them up to date on how to provide MCH and FP services, and to teach them to become effective communicators with their clients and with the community.

9. Curricula were planned, central and regional-level trainers were trained, and training evaluation plans were formulated. The following courses have been conducted: (a) pre-service training for new nurses (fifty new nurses were trained in two one-week courses); (b) basic training for field workers (seventy-nine field workers have received two weeks' training and are now being posted in the four Northeastern provinces); (c) refresher courses for nurses and midwives (a total of 1,367 nurses and midwives from 16 provinces have received one week refresher training); and (d) training of nurses in IUD insertion.

10. The project provides motorcycles and bicycles for use by nurses and midwives at peripheral health facilities to increase the coverage and efficiency of health center personnel. Between December 1972 and mid-1974, 3,600 motorcycles were received from UNICEF. These motorcycles have been distributed by the Ministry of Public Health in 48 provinces. Prior to distribution, training courses in operation, maintenance and safety were conducted. Afterwards, a spot-check of 10% of the vehicles indicated that worker performance and coverage had increased significantly.

11. The revised work plan for January 1975 through September 1976 provides for: (a) travel and per diem costs for trainers and participants in the refresher training courses conducted in 1975; (b) provision of additional motorcycles (around 2,000) for personnel working in the 23 provinces not yet included in the project; and (c) the provision of portable motivation kits for use in home visits and community work (if successfully pretested).

---

1/ The UNFPA/DSCS-assisted Family Planning Communications Development and Integrated Campaigns Project helped develop this training program.

2/ Preliminary results of the evaluation of the success of insertions performed by the 44 nurses who were trained at Chulalongkorn Hospital are encouraging. A decision on future policy on IUD insertions performed by nurses will be made after evaluation is complete.
III. Project THA/72/P05 - Mahidol University, Feasibility Study and Faculty Training (UNFPA/UNESCO/Faculty of Social Sciences and Humanities) (US$231,520) 2½ Year Project. The Cost for Extending this Project through September 1976 is US$24,500.

12. The main long-term objectives of this project is, "to serve as a national center for teaching, research and staff training in population education." A major emphasis of the program is to prepare trainers of teachers at universities, teacher training colleges and other institutions. The project will identify types of training and research needed. The project also envisages a research scheme on population education for the development of curricula for the different grade levels in schools, colleges, universities, and adult education programs. Five junior faculty members are now studying in the United States for Ph.Ds in different educational fields, each taking courses related to population with the object of integrating the population content into their educational specialties. The Mahidol project is assisted by a UNESCO adviser.


13. The immediate objectives of the project were: (a) to demonstrate, by means of a pilot project in four Northeastern provinces (Kalasin, Khon Kaen, Roi- et and Udornthani), the feasibility of delivering effective FP services by taking advantage of the high motivation that exists in partum and post-partum situations and by providing FP information and contraception; (b) to improve the FP/MCH services of the hospitals and rural health centers in the project area thus providing as many people as possible with readily accessible FP/MCH services; (c) to integrate existing resources so that sufficient numbers of appropriate staff are trained and optimumly used; (d) to use experience gained with the pilot project for the further development of these concepts on a nationwide scale; and (e) to coordinate this project with other UNFPA-assisted projects.

14. The project has been rephased and modified due to a slower than anticipated rate of project implementation and increased costs for construction and equipment. Consequently UNFPA has decided to construct only two of the four MCH sub-centers. Construction has started in November on two sub-centers at Amphur Pol, Khon Kaen Province and at Suwanapoan, Roi- et Province. They are scheduled for completion in mid-1975. Equipment and supplies for the four provincial hospitals and two sub-centers have been procured by UNICEF and distributed. The first year's supplies, drugs and vaccines have been distributed. Salary support for health personnel in the four provinces are also included. Because of the high construction cost, it was decided to defer the planned
renovation and expansion of the four provincial hospitals and to use the savings to build a third MCH sub-center. Additional funds for the fourth MCH center may be approved, but it is unlikely. Equipment for the additional centers will be ordered in early 1975 so that it is available when the centers open. In order to facilitate the extension of FP/MCH services into rural areas, the training of some 1,025 traditional birth FP/MCH attendants will be undertaken in the four provinces in 1975-76. The courses will last 10 days and will be held by nurse-midwives from the central and provincial offices. Sample surveys of fertility continuation rates and KAP studies will be undertaken in late 1975 and early 1976. The project also includes funding for travel costs and per diem, studies, and project evaluation.

V. Project THA/72/P07 - Family Planning Communications Development and Integrated Campaigns (UNFPA/DSCS) (US$811,781). Three-Year Project. An Additional US$500,000 has been Proposed to Extend this Project.

15. The purpose of the project is to assist the Government in developing planned and integrated support communication for the National Family Planning Program in Thailand. Activities will be directed towards:

(a) aiding the aims and functions of the National Family Planning Program by the production and dissemination of orientation materials on the population dynamics of Thailand and the National Program;

(b) the production and dissemination of motivation-information materials through mobile units in rural and remote areas, as well as through the mass media, in order to spread a wider knowledge and adoption of family planning, its practices and the services that exist for its support;

(c) the production and sustained use of materials for all aspects of training health personnel in the processes of family planning and related development work;

(d) the development of training methods and supporting aids in the field of motivation and information for all health field staff, to ensure long term communication support for family planning;

(e) assisting the development of skilled personnel resources in, and providing audiovisual equipment to the Information and Training Unit of the National Family Planning Program to enable it to provide integrated communication support for all other needy components of the National Family Planning Program, including all other UNFPA-assisted activities;
(f) the development of an integrated multi-sectoral approach to family planning communication by the coordinated use of all possible channels and services whose activities have bearing on social and economic development;

(g) integrating research techniques into the project so that baselines are established, materials are pretested, feedback systems are established, and an evaluation of the project is carried out at appropriate stages; and,

(h) the coordination of this project with all other UNFPA projects, and all other Thailand family planning activities, especially those of the Planned Parenthood Association of Thailand.

16. The project's communication-support of training of health personnel is well advanced. Some 400 nurses and midwives had been trained in the four Northeastern provinces; further provincial level training was held in twelve other provinces in January 1974. In addition, the new staff of communicators, health educators and mobile audiovisual unit teams were trained in Bangkok through the National Family Planning Program and then at DSCS.

17. Additionally, radio programs are in operation for eight provincial radio stations and the first five mobile units, equipped with audiovisual equipment, have been delivered to the Ministry of Public Health and four more are expected shortly.

VI. Project THA/72/P08 - Bangkok Metropolis, Family Planning Field Workers' Project (UNFPA/WHO/UNICEF) (US$1,37,902). Three-Year Project. Extension of the Project will Bring the Estimated Total Costs to US$505,105.

18. The immediate objectives of the project are: (a) to strengthen the motivation of couples in Bangkok-Thonburi to have fewer children by improving the general health of the whole family; (b) to strengthen cooperation between government agencies in Bangkok-Thonburi providing general health and family planning services by further development of the referral and follow-up system already in existence; (c) to assist the development and expansion of FP/MCH and child health services in Bangkok-Thonburi; (d) to increase the numbers of acceptors of FP services and to help increase continuation rates among those women who accept these services; and, (e) to ensure that the public demand for FP services in Bangkok-Thonburi can be met insofar as possible.
19. Some 81 field workers have been trained and posted in 27 health centers within Bangkok. Public health nurses are supervising them and physicians, engaged on a sessional basis, conduct clinics once a week at each health center. In the period from March 1973 through June 1974, 151,819 home visits were made to 113,809 women. During the period January-June 1974, 55.7% of these women were recorded as eligible and were not currently practicing family planning. Some 12.9% of these women or 12,936 women, previously non-acceptors, have adopted contraception.

20. The project includes funds for the construction of 39 new health centers and the purchase of vehicles for the central office and health centers participating in the program. A mobile clinic unit is also included. However, due to unexpectedly higher construction costs, the Bangkok Metropolis program for the building of new health centers has been delayed. Only six new health centers will be incorporated into the project in 1975 instead of the 15 envisaged in the original plan. The remainder will be added in 1976, bringing the total number of participating centers to 39. An expanded public information and education effort is planned and funds have been requested in the revised budget to defray costs of posters, pamphlets, radio spot announcements, slides for cinema showings, etc. Brief refresher training courses for professional and non-professional personnel are also included.


21. It has been recognized that the publication of laws, judicial decisions and administrative decrees play an important part in assisting governments to implement their population policies as an integral part of their efforts to enlarge the general welfare benefits and human rights of their citizens. In Thailand, the Institute of Population Studies, Chulalongkorn University is engaged in a project with the following objectives:

(a) to search, compile and bring up to date all the laws, statutory decrees and decisions which affect, or may affect, population and family planning;

(b) to describe customary laws if they differ from the above;

(c) to prepare a monograph on Population and the Laws in Thailand; and

(d) to suggest procedures for changing the laws of Thailand.

Source: UNFPA Program Coordinator, Bangkok.
### Summary of UNFPA Projects, 1972-75

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
<th>1972 - 73</th>
<th>73 - 74</th>
<th>74 - 75</th>
<th>Government Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. THA/72/P02 - Expanded Sterilization Project (UNFPA/WHO PlanOps 1/73)</td>
<td>794,375</td>
<td>246,250</td>
<td>298,125</td>
<td>250,000</td>
<td>1,942,900*</td>
</tr>
<tr>
<td>2. THA/72/P04 - Training &amp; Increased Mobility for Health Personnel</td>
<td>801,091</td>
<td>264,620</td>
<td>278,713</td>
<td>257,753</td>
<td>616,557*</td>
</tr>
<tr>
<td>(UNFPA/WHO/UNICEF PlanOps 1/73)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. THA/72/P05 - Mahidol University - Feasibility Study &amp; Faculty Training</td>
<td>231,520</td>
<td>108,020</td>
<td>74,400</td>
<td>49,100</td>
<td>57,777*</td>
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<tr>
<td>(UNFPA/UNESCO/Faculty of Social Sciences and Humanities PlanOps 12/72)</td>
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<tr>
<td>4. THA/72/P06 - Accelerated Development of Maternal &amp; Child Health Services</td>
<td>943,767</td>
<td>471,721</td>
<td>472,046</td>
<td>-</td>
<td>729,115*</td>
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<tr>
<td>&amp; Family Planning (UNFPA/WHO/UNICEF PlanOps 1/73)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. THA/72/P07 - Family Planning Communication Development &amp; Integrated</td>
<td>841,784</td>
<td>271,753</td>
<td>307,571</td>
<td>262,460</td>
<td>3,052,089*</td>
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<tr>
<td>Campaigns (UNFPA/DSGS PlanOps 2/73)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. THA/72/P08 - Bangkok Municipality - Family Planning Field Workers'</td>
<td>347,052</td>
<td>30,220</td>
<td>124,495</td>
<td>192,337</td>
<td>448,315*</td>
</tr>
<tr>
<td>Project (UNFPA/WHO/UNICEF PlanOps 3/73)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. THA/72/P11 - Law &amp; Population (UNFPA/Institute of Population Studies,</td>
<td>17,675</td>
<td>8,475</td>
<td>9,200</td>
<td>-</td>
<td>20,400</td>
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<td>Chulalongkorn University PlanOps 3/73)</td>
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<td></td>
<td>3,977,264</td>
<td>1,401,059</td>
<td>1,564,555</td>
<td>1,011,650</td>
<td>6,867,153</td>
</tr>
</tbody>
</table>

**Note** *In addition to the contribution in kind (Personnel, Land, Training etc.) Government has appropriated an amount of $604,502 for FY 1972-73 for the National Family Planning Program.*

**Source:** Office of the UNFPA Coordinator.
THAILAND

UNFPA: Proposed Annual Sterilization Targets 1972-76

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Sterilization</th>
<th>Subsidized Sterilizations&lt;sup&gt;1/&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>(Nov.-Dec.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>5,733</td>
<td>310</td>
</tr>
<tr>
<td>1973</td>
<td>46,426</td>
<td>2,850</td>
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<td>1974</td>
<td>56,750</td>
<td>9,500</td>
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<tr>
<td>1975</td>
<td>62,250</td>
<td>19,000</td>
</tr>
<tr>
<td>(Jan-Sept.)</td>
<td>46,750</td>
<td>16,000</td>
</tr>
<tr>
<td>Total</td>
<td>217,909</td>
<td>47,660</td>
</tr>
</tbody>
</table>

<sup>1/</sup> Based on claiming of subsidy for 80% of total operations;

<sup>2/</sup> Actual achievements.

Source: UNFPA Program Coordinator, Bangkok.
THAILAND

New UNFPA Project Proposals Now Under Consideration

1. Mahidol University. Support for University's Population Program (five-year project). 640,000

2. Mahidol University. Implications of demographic change to problems of the aged population in Thailand (one-year project). 44,000

3. Mahidol University. Translation of demographic text books into Thai.

4. Population Education. Uncosted and no request received from Government but a probable long-term request (three years). 300,000

5. Chulalongkorn University. Law and Population Project Staff Development (five years). 405,000

6. Better Family Living Project (FAO). (Two years), tentative. 235,100

7. Uncosted medical projects to be formulated within framework of Fourth Five-Year Plan (three years). 300,000

8. ILO Population Education (Trade Unions and Employers) (two years). 200,000

TOTAL 2,131,100

1/ No official request from Thai Government.

Note: This list is tentative and has not been fully discussed with Thai Government.

Source: UNFPA Program Coordinator, Bangkok.
THAILAND POPULATION PROJECT


* For first-and larger-estimate, see text, para. 8.05.

Table 1
Consolidated Total of Estimated Budget Cost to Government
(in million Baht, at constant prices)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total Costs</th>
<th>Donor Grants</th>
<th>Required from Govt. Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Totals of Sub-tables 1-4</td>
<td>(Suppl. &amp; Ster.) (Spec.Pros.) Total</td>
<td>(5)</td>
</tr>
<tr>
<td>1974</td>
<td>45.00</td>
<td>21.90</td>
<td>15.6</td>
</tr>
<tr>
<td>1975</td>
<td>55.50</td>
<td>27.70</td>
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<tr>
<td>1976</td>
<td>62.25</td>
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<td>1980</td>
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<tr>
<td>1981</td>
<td>90.55</td>
<td>8.80</td>
<td>8.3</td>
</tr>
</tbody>
</table>

1/ From Sub-tables 2, 3, and 4.
2/ Government budget allocations (actual or planned) were 12.5, 18.1, and 28.5, i.e. roughly 50% greater than this estimate; see text, para.

Assumptions: The main assumptions are that (a) USAID and IPPF donations of pills will start to fall by 1978, (b) UNFPA subsidization of sterilizations will end after 1976, and (c) that subsidies for Depo Provera will drop off after 1976. It is worth noting that none of the following tables include Technical Assistance, which covers both the costs of foreign experts working in Thailand and the costs of study abroad by Thais. Such costs would probably add between Bt.10-20 million (US$0.5-1.0 million) per year to total program costs; they are currently financed 100% by foreign grants and hence would not affect the budgetary appropriation required to cover the program's recurrent costs (assuming any such Technical Assistance would continue to be 100% grant financed).

Sub-table 1: NFPP Personnel, plus Activities Contracted to Other Agencies
(in millions of Baht)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Personnel and their Support Costs 1/</th>
<th>Contract Activities 2/</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>1974</td>
<td>2.5</td>
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<td>2.5</td>
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<tr>
<td>1975</td>
<td>2.7</td>
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<td>2.7</td>
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<tr>
<td>1976</td>
<td>4.0</td>
<td>0.5</td>
<td>4.5</td>
</tr>
<tr>
<td>1977</td>
<td>5.0</td>
<td>1.0</td>
<td>6.0</td>
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<tr>
<td>1978</td>
<td>5.5</td>
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<td>1979</td>
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<td>1980</td>
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<tr>
<td>1981</td>
<td>6.0</td>
<td>5.0</td>
<td>11.0</td>
</tr>
</tbody>
</table>

1/ "Support costs" include office supplies, travel, utilities, etc.
2/ This heading is not now in use, and the practice of "contracting out" for certain services, or for studies or communication activities, is not yet used much by the NFPP. We have assumed, quite arbitrarily, a considerable expansion in such activities.
Sub-table 1 (Continued)

**Assumptions:** The estimate starts from the 1974 personnel figure in the MOPH's budget. The NFPP employed about 38 people at this time; it plans to expand to 90-100 people by the end of the Fourth Plan (this expansion is at headquarters only, i.e., no allowance is made for the addition of any new field personnel to be charged to the NFPP budget).

Sub-table 2: Special Activities and Projects
(100% UNFPA-funded)
(in million Baht)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Training (MOPH Staff)</th>
<th>Center for Pop. Ed. (Mahidol Univ.)</th>
<th>MCH/FP Accel. Devt.</th>
<th>Bangkok Fld. Workers</th>
<th>Communications</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
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<tr>
<td>1974</td>
<td>2.0</td>
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<td>3.0</td>
<td>5.6</td>
<td>15.6</td>
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<tr>
<td>1975</td>
<td>2.0</td>
<td>1.0</td>
<td>4.0</td>
<td>3.0</td>
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<td>15.6</td>
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<tr>
<td>1976</td>
<td>2.0</td>
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<td>4.0</td>
<td>2.0</td>
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<td>14.6</td>
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<tr>
<td>1977</td>
<td>2.0</td>
<td>0.5</td>
<td>3.0</td>
<td>2.0</td>
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<td>1978</td>
<td>2.0</td>
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<td>3.0</td>
<td>2.0</td>
<td>4.0</td>
<td>11.5</td>
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<tr>
<td>1979</td>
<td>2.0</td>
<td>0.5</td>
<td>3.0</td>
<td>2.0</td>
<td>4.0</td>
<td>11.5</td>
</tr>
<tr>
<td>1980</td>
<td>2.0</td>
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<td>3.0</td>
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<td>4.0</td>
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<td>1981</td>
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<td>2.0</td>
<td>1.0</td>
<td>3.0</td>
<td>8.3</td>
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</table>

**Note:** These figures are rough estimates of the annual level of support now being received for the above activities from UNFPA assistance. This assistance is assured through September, 1976 (i.e., through FY1976). We have assumed, quite arbitrarily, a continuation of some support for these same activities through the Fourth Plan. It is probable that new projects will be approved so that the total level of UNFPA-supported "special activities and projects" will not in fact decline. The estimated cost of UNFPA-provided motorcycles in the training project, and of construction in the Accelerated Development of MCH/FP project, have both been excluded as these are capital, not recurrent, costs.

1/ Total appears as Col. (3) in Table 1.

Sub-table 3: Contraceptive Supplies

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Oral Contraceptives (in millions)</th>
<th>Total Cost (mn. Baht)</th>
<th>Depo Provera Others (mn. Bt.)</th>
<th>Total (mn. Bt.)</th>
</tr>
</thead>
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<tr>
<td></td>
<td>MOPH Donors</td>
<td>Total</td>
<td>US$</td>
<td>Bt.</td>
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<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
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<td>1974</td>
<td>1.0</td>
<td>3.2</td>
<td>4.0</td>
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</tr>
<tr>
<td>1975</td>
<td>2.0</td>
<td>3.5</td>
<td>5.0</td>
<td>1.0</td>
</tr>
<tr>
<td>1976</td>
<td>3.0</td>
<td>3.0</td>
<td>6.0</td>
<td>1.2</td>
</tr>
<tr>
<td>1977</td>
<td>4.0</td>
<td>3.0</td>
<td>7.0</td>
<td>1.4</td>
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<td>2.0</td>
<td>8.0</td>
<td>1.6</td>
</tr>
<tr>
<td>1979</td>
<td>7.0</td>
<td>2.0</td>
<td>9.0</td>
<td>1.8</td>
</tr>
<tr>
<td>1980</td>
<td>9.0</td>
<td>1.0</td>
<td>10.0</td>
<td>2.0</td>
</tr>
<tr>
<td>1981</td>
<td>10.0</td>
<td>1.0</td>
<td>11.0</td>
<td>2.2</td>
</tr>
</tbody>
</table>

1/ A c.i.f. cost of US$20 (Bt.4) has been used.
2/ Omits a one-time donation of Bt.11 million (US$550,000) of condoms. Thus "Others" Column assumes 100% MOPH-funding.
3/ This sum, minus donor share of Col. (5) plus Col. (7) plus Col. 5 of sub-table 4 (1974-76 only) appears as Col. (2) in Table 1.
Assumptions: The rate of increase in pill use is 1 million cycles per year; this represents a declining percentage increase from year to year. It assumes continued expansion of the MOPH network, including the introduction of Village Health Volunteers, plus a significant contribution from Community-Based Distribution schemes (with or without Government subsidy). Depo Provera use begins from the volumes expected to be used in the McCormick Clinic program, plus MOPH use starting in 1975, and assumes a relatively modest (averaging under 10% p.a) rate of increase each year; this may well prove too low, but a fast increase is likely to be at the expense of pill use (cost per user is roughly similar). "Others" includes condoms, IUDs, foams, jellies. Their use is not expected to grow vigorously, despite an attempt to popularize the condom. An allowance equal to 5% of the combined cost of pills and Depo Provera seems a reasonable estimate.

Sub-table 3 (Continued)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Female (no.)</th>
<th>Female Cost</th>
<th>Male (no.)</th>
<th>Male Cost</th>
<th>Total Cost</th>
</tr>
</thead>
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<tr>
<td>1974</td>
<td>45,000</td>
<td>6.75</td>
<td>7,600</td>
<td>0.15</td>
<td>6.90</td>
</tr>
<tr>
<td>1975</td>
<td>50,000</td>
<td>7.50</td>
<td>10,000</td>
<td>0.20</td>
<td>7.70</td>
</tr>
<tr>
<td>1976</td>
<td>55,000</td>
<td>8.25</td>
<td>15,000</td>
<td>0.30</td>
<td>8.55</td>
</tr>
<tr>
<td>1977</td>
<td>55,000</td>
<td>8.25</td>
<td>20,000</td>
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</tr>
<tr>
<td>1978</td>
<td>60,000</td>
<td>9.0</td>
<td>25,000</td>
<td>0.50</td>
<td>9.50</td>
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<td>60,000</td>
<td>9.0</td>
<td>25,000</td>
<td>0.50</td>
<td>9.50</td>
</tr>
<tr>
<td>1980</td>
<td>65,000</td>
<td>9.75</td>
<td>30,000</td>
<td>0.60</td>
<td>10.35</td>
</tr>
<tr>
<td>1981</td>
<td>65,000</td>
<td>9.75</td>
<td>30,000</td>
<td>0.60</td>
<td>10.35</td>
</tr>
</tbody>
</table>

Assumptions: UNFPA will continue paying total costs through 1976 and thereafter the RTG will continue the practice of paying institutions providing these two services at Bt. 150 per tubal ligation and Bt. 50 per vasectomy. The rate of increase has been arbitrary (averaging about 5.5% for ligations and 25% for vasectomies for seven years, but allowing for some years with no increases).
## THAILAND

Total Government Appropriation for Health, 1967-74
(Million Baht)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ministry of Public Health</td>
<td>555.5</td>
<td>587.8</td>
<td>643.6</td>
<td>785.0</td>
<td>977.9</td>
<td>956.3</td>
<td>1,023.2</td>
<td>1,113.6</td>
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<tr>
<td>2. Other Agencies</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>-Office of the PM</td>
<td>216.4</td>
<td>473.0</td>
<td>485.2</td>
<td>318.6</td>
<td>343.3</td>
<td>371.1</td>
<td>412.2</td>
<td>455.9</td>
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<tr>
<td>-Ministry of Interior</td>
<td>64.5</td>
<td>81.1</td>
<td>75.6</td>
<td>62.6</td>
<td>86.1</td>
<td>78.1</td>
<td>137.6</td>
<td>147.4</td>
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<tr>
<td>-Ministry of Defence</td>
<td>10.5</td>
<td>10.8</td>
<td>12.1</td>
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<td>14.3</td>
<td>14.4</td>
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<td>7.1</td>
<td>122.1</td>
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<td>21.3</td>
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<tr>
<td>-Ministry of Agriculture and Coops.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>-Ministry of Communications</td>
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<td></td>
</tr>
<tr>
<td>-Port Authority of Thai</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
<td>2.1</td>
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<tr>
<td>3. Total Government Appropriation on Health</td>
<td>849.2</td>
<td>160.7</td>
<td>1,339.5</td>
<td>1,329.6</td>
<td>1,443.6</td>
<td>1,442.4</td>
<td>1,596.5</td>
<td>1,743.7</td>
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<tr>
<td>4. Total Government Appropriation</td>
<td>19,228.3</td>
<td>21,620.0</td>
<td>23,960.0</td>
<td>27,299.9</td>
<td>28,645.0</td>
<td>29,000.0</td>
<td>31,600.0</td>
<td>36,000.0</td>
</tr>
</tbody>
</table>

1/ These totals do not include state enterprises (state railway, electricity authority, etc.) which have health facilities. They are, therefore, understated by that much.

Source: Division of Health Planning, Ministry of Public Health.
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
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<td>1</td>
<td>Maternal and Child Health</td>
<td>3,150,000</td>
<td>157,500</td>
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<td>106,500</td>
<td>1,770,000</td>
<td>138,500</td>
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<tr>
<td>2</td>
<td>Family Planning</td>
<td>1,000,000</td>
<td>50,000</td>
<td>1,000,000</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
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<tr>
<td>3</td>
<td>National Malaria Eradication Project</td>
<td>800,000</td>
<td>40,000</td>
<td>290,000</td>
<td>11,900</td>
<td>-</td>
<td>-</td>
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<td>4</td>
<td>Leprosy Control</td>
<td>560,000</td>
<td>28,000</td>
<td>-</td>
<td>-</td>
<td>3,910,000</td>
<td>197,000</td>
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<td>5</td>
<td>Tuberculosis Control</td>
<td>500,000</td>
<td>25,000</td>
<td>-</td>
<td>-</td>
<td>1,320,000</td>
<td>65,000</td>
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<td>6</td>
<td>Chest Surgery</td>
<td>300,000</td>
<td>15,000</td>
<td>120,000</td>
<td>6,000</td>
<td>520,000</td>
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<td>7</td>
<td>Venera and Yaws Control</td>
<td>640,000</td>
<td>32,000</td>
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<td>28,500</td>
<td>500,000</td>
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<td>8</td>
<td>Communicable Diseases Control and Defense</td>
<td>1,500,000</td>
<td>75,000</td>
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<tr>
<td>9</td>
<td>Rural Hospital</td>
<td>68,120,000</td>
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<td>510,000</td>
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<td>10</td>
<td>Nursing Teacher College</td>
<td>13,000,000</td>
<td>650,000</td>
<td>13,650,000</td>
<td>672,500</td>
<td>10,180,000</td>
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<tr>
<td>11</td>
<td>Improvement and Expanding Health Center Project</td>
<td>12,440,000</td>
<td>2,122,000</td>
<td>51,190,000</td>
<td>2,709,500</td>
<td>58,300,000</td>
<td>2,915,000</td>
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<tr>
<td>12</td>
<td>National Cancer Institute</td>
<td>3,490,900</td>
<td>174,545</td>
<td>5,360,000</td>
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<td>13</td>
<td>Dermatology Institute</td>
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<td>605,000</td>
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<td>14</td>
<td>Lerd Sinn Hospital</td>
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<td>270,000</td>
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<td>Women's and Children's Hospital</td>
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<td>11,200,000</td>
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<td>16</td>
<td>Psychiatric Hospital</td>
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<td>17</td>
<td>Provincial and District Health Administration</td>
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<td>Maintenance</td>
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<td>20</td>
<td>Research and Treatment of the Addict</td>
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<td>80,000</td>
<td>4,000</td>
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<td>-</td>
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<tr>
<td>21</td>
<td>Provincial Hospital</td>
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<td>56,310,000</td>
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<td>56,936,000</td>
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<td>-</td>
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<td>Village Water - Supply</td>
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<td>80,000</td>
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<td>65,000</td>
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<td>25</td>
<td>Nutrition Promotion</td>
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<td>-</td>
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<td>26</td>
<td>Filariasis Division</td>
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<td>150,000</td>
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<td>27</td>
<td>Local Health Development</td>
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</tr>
<tr>
<td>28</td>
<td>Medical and Health Diagnostic Laboratory</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,45,346,900</td>
<td>7,267,315</td>
<td>162,213,000</td>
<td>8,110,650</td>
<td>170,218,000</td>
<td>8,510,900</td>
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### Approximate Cost of Some Types of Health Buildings, 1974

**a. Midwifery Center — Drawing # 356 (no housing provided)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 41 m² at ฿1,000 p.m²</td>
<td>฿1,400</td>
</tr>
<tr>
<td>Plinth, etc. 32 m² at ฿250 p.m²</td>
<td>฿8,000</td>
</tr>
<tr>
<td>Building Cost</td>
<td>฿19,900</td>
</tr>
<tr>
<td>Furniture</td>
<td>฿20,800</td>
</tr>
<tr>
<td>Equipment</td>
<td>฿4,000</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>฿7,700</td>
</tr>
<tr>
<td><strong>Estimated Civil Works Cost of a New Midwifery Center</strong></td>
<td>฿81,000</td>
</tr>
</tbody>
</table>

**b. Converting Existing Midwifery Center to Second Class Health Center — Drawing # 356**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ext. to M.W.C. 43 m² at ฿1,000 p.m²</td>
<td>฿13,000</td>
</tr>
<tr>
<td>Plinth, etc. 24 m² at ฿250 p.m²</td>
<td>฿5,600</td>
</tr>
<tr>
<td>Building Cost</td>
<td>฿14,600</td>
</tr>
<tr>
<td>Staff Housing</td>
<td>฿4,300</td>
</tr>
<tr>
<td>Junior Staff Houses (3)</td>
<td>฿180,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>฿20,900</td>
</tr>
<tr>
<td>Equipment</td>
<td>฿4,000</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>฿25,100</td>
</tr>
<tr>
<td><strong>Estimated Civil Works Cost of converting MWC to 2nd Class Health Center</strong></td>
<td>฿279,000</td>
</tr>
</tbody>
</table>

**c. New Second Class Health Center — Drawing # 356**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 64 m² at ฿1,100 p.m²</td>
<td>฿22,900</td>
</tr>
<tr>
<td>Plinth, etc. 46 m² at ฿250 p.m²</td>
<td>฿11,500</td>
</tr>
<tr>
<td>Building Cost</td>
<td>฿103,700</td>
</tr>
<tr>
<td>Staff Housing</td>
<td>฿5,750</td>
</tr>
<tr>
<td>Junior Staff Houses (3)</td>
<td>฿180,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>฿20,900</td>
</tr>
<tr>
<td>Equipment</td>
<td>฿4,000</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>฿31,200</td>
</tr>
<tr>
<td><strong>Estimated Civil Works Cost of a New Second Class Health Center</strong></td>
<td>฿340,000</td>
</tr>
</tbody>
</table>

**d. New First Class Health Center — Drawing # 661**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 321 m² at ฿1,200 p.m²</td>
<td>฿385,200</td>
</tr>
<tr>
<td>Plinth, etc. 93 m² at ฿400 p.m²</td>
<td>฿37,200</td>
</tr>
<tr>
<td>Building Cost</td>
<td>฿422,400</td>
</tr>
<tr>
<td>Staff Housing</td>
<td>฿600,000</td>
</tr>
<tr>
<td>Physician House (1)</td>
<td>฿120,000</td>
</tr>
<tr>
<td>Senior Staff House (2)</td>
<td>฿180,000</td>
</tr>
<tr>
<td>Junior Staff House (5)</td>
<td>฿300,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>฿72,400</td>
</tr>
<tr>
<td>Equipment</td>
<td>฿95,200</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>฿119,800</td>
</tr>
<tr>
<td><strong>Estimated Civil Works Cost of a New First Class Health Center</strong></td>
<td>฿1,310,000</td>
</tr>
</tbody>
</table>
### e. MCH Sub-Center - Drawing #1649 (22 beds)

<table>
<thead>
<tr>
<th>Description</th>
<th>Baht</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 774 m² at $2,100 p.m²</td>
<td>1,555,000</td>
<td>83,300</td>
</tr>
<tr>
<td>Ramps, etc. 40 m² at $1,000 p.m²</td>
<td>140,000</td>
<td>2,030</td>
</tr>
<tr>
<td>Building Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Houses (2)</td>
<td>240,000</td>
<td>1,750</td>
</tr>
<tr>
<td>Senior Staff Houses (4)</td>
<td>360,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Junior Staff Houses (6)</td>
<td>360,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>92,000</td>
<td>6,750</td>
</tr>
<tr>
<td>Equipment</td>
<td>705,000</td>
<td>45,295</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>34,320</td>
<td>2,255</td>
</tr>
<tr>
<td>Estimated Civil Works Cost of a New MCH Sub-Center</td>
<td>1,770,000</td>
<td>188,600</td>
</tr>
</tbody>
</table>

### f. Nurse Midwife Training Center

<table>
<thead>
<tr>
<th>Description</th>
<th>Baht</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 2020 m² at $2,000 p.m²</td>
<td>2,020,000</td>
<td>101,000</td>
</tr>
<tr>
<td>Plinth, etc. 700 m² at $500 p.m²</td>
<td>350,000</td>
<td>17,500</td>
</tr>
<tr>
<td>Building Cost</td>
<td>2,370,000</td>
<td>118,500</td>
</tr>
<tr>
<td>Staff Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Houses (2)</td>
<td>240,000</td>
<td>1,750</td>
</tr>
<tr>
<td>Senior Staff Houses (4)</td>
<td>360,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Junior Staff Houses (6)</td>
<td>360,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>1,318,000</td>
<td>85,900</td>
</tr>
<tr>
<td>Equipment</td>
<td>705,000</td>
<td>45,295</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>55,200</td>
<td>3,515</td>
</tr>
<tr>
<td>Estimated Civil Works Cost of a New Nurse Midwife Training Center</td>
<td>5,200,000</td>
<td>260,000</td>
</tr>
</tbody>
</table>

### g. MCH Center - Drawing #474 (160 beds including trainees)

<table>
<thead>
<tr>
<th>Description</th>
<th>Baht</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building area 3554 m² at $2,600 p.m²</td>
<td>9,240,000</td>
<td>462,020</td>
</tr>
<tr>
<td>Plinth, Ramps, etc. 224 m² at $850 p.m²</td>
<td>190,000</td>
<td>9,520</td>
</tr>
<tr>
<td>Building Cost</td>
<td>9,430,000</td>
<td>471,540</td>
</tr>
<tr>
<td>Staff Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Houses (3)</td>
<td>360,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Senior Staff Houses (6)</td>
<td>540,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Junior Staff Houses (9)</td>
<td>540,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Furniture</td>
<td>244,000</td>
<td>12,200</td>
</tr>
<tr>
<td>Equipment</td>
<td>2,123,000</td>
<td>120,650</td>
</tr>
<tr>
<td>10% Contingencies</td>
<td>1,292,000</td>
<td>77,520</td>
</tr>
<tr>
<td>Estimated Civil Works Cost of a MCH Center</td>
<td>11,680,000</td>
<td>714,000</td>
</tr>
</tbody>
</table>

**Note:** The above estimates are very approximate and will require checking as to content and amount at an appropriate stage, in particular furniture and equipment will have to be listed and costed. The building figures are based on a consensus of opinion of building costs as at December 1971; they do not include purchase of land or any extensive site works. Housing costs are based on the following unit prices.

- Physician Houses - Baht $120,000 per house (US$ 6,000)
- Senior Staff Houses - Baht $90,000 per house (US$ 4,500)
- Junior Staff Houses - Baht $60,000 per house (US$ 3,000)
## Financing of Provincial Health Expenditures in 1973

*(in thousand Baht)*

<table>
<thead>
<tr>
<th>Items</th>
<th>Government (%)</th>
<th>Non-Government (%)</th>
<th>Total (100.0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries (Established posts)</td>
<td>193,555 (100.0)</td>
<td>--</td>
<td>193,555</td>
</tr>
<tr>
<td>Permanent Wage employees</td>
<td>17,232 (51.9)</td>
<td>15,033 (48.1)</td>
<td>32,264</td>
</tr>
<tr>
<td>Temporary Wage employees</td>
<td>687 (2.7)</td>
<td>13,809 (97.3)</td>
<td>14,496</td>
</tr>
<tr>
<td>Compensation (other)</td>
<td>2,999 (64.1)</td>
<td>1,680 (35.9)</td>
<td>4,679</td>
</tr>
<tr>
<td>Ordinary</td>
<td>15,931 (58.2)</td>
<td>11,443 (41.8)</td>
<td>27,374</td>
</tr>
<tr>
<td>Material</td>
<td>56,245 (30.2)</td>
<td>129,757 (69.8)</td>
<td>186,002</td>
</tr>
<tr>
<td>Equipment</td>
<td>3,450 (32.8)</td>
<td>7,065 (67.2)</td>
<td>10,515</td>
</tr>
<tr>
<td>Land and Construction</td>
<td>101,907 (96.6)</td>
<td>3,629 (7.4)</td>
<td>105,536</td>
</tr>
<tr>
<td>Subsidy</td>
<td>18,562 (76.8)</td>
<td>5,605 (23.2)</td>
<td>24,167</td>
</tr>
<tr>
<td>Others</td>
<td>4,753 (27.5)</td>
<td>12,508 (72.5)</td>
<td>17,261</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>415,320 (67.4)</td>
<td>200,529 (32.6)</td>
<td>615,850</td>
</tr>
</tbody>
</table>

1/ 4 out of 91 provinces are not included in the above data.

2/ Non-government means mainly fee-generated revenues of the medical and health institutions.

**Source:** Ministry of Public Health.
Figure 1-1. The 71 Provinces.
Figure V-1. Density of Population by Districts, 1960.

Source: Central Statistical Office, Thailand Population Census: 1960, "Whole Kingdom", Bangkok, Thailand, 1962, Figure 2, page viii.
Figure V.2. The Four Regions and the Twenty Largest Municipal Areas, 1967.