CHAPTER IX

POPULATION POLICY AND FAMILY
PLANNING ADMINISTRATION IN THAILAND

Population Trends and Implications of Population Explosion

Population Trends:

We are witnessing a trend of accelerating growth of world population which began some 200 years ago. This phenomenon coincides with the birth of industrial revolution in Europe. It took more than 1,000 years to double the population before the industrial revolution. The growth has been explosive during the last two centuries. It gathered momentum during the first half of the twentieth century (50 per cent increase between 1900-1950). At the present rate, numbers can double in 37 years (See Tables 1 and 2).

Table 1

Growth of World Population
(Estimated Population in Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>World Total</th>
<th>More Developed Regions</th>
<th>Less Developed Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1750</td>
<td>791</td>
<td>201</td>
<td>590</td>
</tr>
<tr>
<td>1800</td>
<td>978</td>
<td>248</td>
<td>730</td>
</tr>
<tr>
<td>1850</td>
<td>1,262</td>
<td>347</td>
<td>915</td>
</tr>
<tr>
<td>1900</td>
<td>1,650</td>
<td>573</td>
<td>1,077</td>
</tr>
<tr>
<td>1950</td>
<td>2,506</td>
<td>857</td>
<td>1,649</td>
</tr>
<tr>
<td>1960</td>
<td>2,995</td>
<td>976</td>
<td>2,019</td>
</tr>
<tr>
<td>1970</td>
<td>3,621</td>
<td>1,084</td>
<td>2,537</td>
</tr>
<tr>
<td>1980</td>
<td>4,401</td>
<td>1,183</td>
<td>3,218</td>
</tr>
<tr>
<td>1990</td>
<td>5,346</td>
<td>1,282</td>
<td>4,064</td>
</tr>
<tr>
<td>2000</td>
<td>6,407</td>
<td>1,368</td>
<td>5,039</td>
</tr>
</tbody>
</table>

Source: Compiled from UN Statistical Year Books
Table 2

<table>
<thead>
<tr>
<th>Period</th>
<th>Annual increase (Millions)</th>
<th>Annual Rate of Growth (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>World Total</td>
<td>More</td>
</tr>
<tr>
<td></td>
<td>Deve- loped</td>
<td>Deve- loped</td>
</tr>
<tr>
<td>1750-1800</td>
<td>3.7</td>
<td>0.9</td>
</tr>
<tr>
<td>1800-1850</td>
<td>5.7</td>
<td>2.0</td>
</tr>
<tr>
<td>1850-1900</td>
<td>7.8</td>
<td>4.5</td>
</tr>
<tr>
<td>1900-1950</td>
<td>17.1</td>
<td>5.7</td>
</tr>
<tr>
<td>1950-2000</td>
<td>78.0</td>
<td>10.2</td>
</tr>
<tr>
<td>1960-1970</td>
<td>48.9</td>
<td>11.9</td>
</tr>
<tr>
<td>1970-1980</td>
<td>62.6</td>
<td>10.8</td>
</tr>
<tr>
<td>1980-1990</td>
<td>78.0</td>
<td>9.9</td>
</tr>
<tr>
<td>1990-2000</td>
<td>94.5</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Source: Compiled from UN Statistical Year Books

An interesting feature of this table is the uneven distribution of population increase among the regions of the world. Most of the increase has registered in those regions where socio-economic standards are poor. The rate of growth in less developed regions was more than two times.

The population covered by the WHO South-East Asia Region constitutes almost one-fourth of the
world population:

Table 3

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>Population Around 1980 (In Millions)</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>356</td>
<td>8</td>
</tr>
<tr>
<td>American</td>
<td>611</td>
<td>14</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>268</td>
<td>6</td>
</tr>
<tr>
<td>European</td>
<td>834</td>
<td>19</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>1,053</td>
<td>24</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>1,309</td>
<td>29</td>
</tr>
</tbody>
</table>

\[4,431\] 100

Source: Compiled from the Reports of WHO

The land area covered by the territories of these ten* countries amounts to about 8.5 million square kilometres—a mere 6 per cent of the world's land surface area. The gross density of population per square kilometre of 124 for the South-East Asia Region thus compares very unfavourably with the global average of about 31.

An indication of the size of the population and the population density for each country in the Region

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* Bhutan became a Member of the Organization on 8 March, 1982. Information on this country is not included.
in 1980 is shown below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>87.66</td>
<td>618</td>
</tr>
<tr>
<td>Burma</td>
<td>35.30</td>
<td>53</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>17.19</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>663.60</td>
<td>198</td>
</tr>
<tr>
<td>Indonesia</td>
<td>151.89</td>
<td>80</td>
</tr>
<tr>
<td>Maldives</td>
<td>0.15</td>
<td>503</td>
</tr>
<tr>
<td>Mongolia</td>
<td>1.67</td>
<td>1.1</td>
</tr>
<tr>
<td>Nepal</td>
<td>14.01</td>
<td>99</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>14.74</td>
<td>226</td>
</tr>
<tr>
<td>Thailand</td>
<td>47.17</td>
<td>92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,034.10</strong></td>
<td><strong>124</strong></td>
</tr>
</tbody>
</table>

Source: Compiled from the records of South-East Asia Regional Office of WHO, New Delhi.

Sixty-five per cent of the Region's population is accounted for by India alone, while Bangladesh, India and Indonesia together constitute more than 97 per cent. Maldives with a population of 150,000 and Mongolia with about 1.5 million come at the other end of the scale.

The problems presented by this large population and high population density are compounded by relatively
high rates of growth throughout the Region. Annual rates of population growth range from 1.7 to 2.9 per cent compared to rates of 0.6 per cent per year for the European Region and 1.0 per cent per year for the USSR as well as the North American continent. Thus, while it will take about 117 years for the population of Europe to double itself at current rates of growth, and about 70 years for those of North America and USSR, the member countries of the WHO South-East Asia Region will double their populations in periods from 24 to 41 years.

<table>
<thead>
<tr>
<th>Country</th>
<th>Doubling Time for Population (Number of Years)</th>
<th>Annual Rate of Growth (Per Cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>29</td>
<td>2.4</td>
</tr>
<tr>
<td>Burma</td>
<td>32</td>
<td>2.3</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>28</td>
<td>2.1</td>
</tr>
<tr>
<td>India</td>
<td>33</td>
<td>2.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>29</td>
<td>2.3</td>
</tr>
<tr>
<td>Maldives</td>
<td>29</td>
<td>2.8</td>
</tr>
<tr>
<td>Mongolia</td>
<td>23</td>
<td>2.9</td>
</tr>
<tr>
<td>Nepal</td>
<td>32</td>
<td>2.2</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>35</td>
<td>1.7</td>
</tr>
<tr>
<td>Thailand</td>
<td>28</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Source: Compiled from WHO Reports
Among the countries of the South-East Asia, Thailand is number two in terms of Annual rate of growth.

The population of the countries of the Region is predominantly rural and comparatively young. Thus, in all countries except Mongolia, more than 75 per cent of the population live in rural areas. The rural proportion of population ranged from 49 per cent (Mongolia) to 96 per cent (Nepal). A trend of gradually increasing urbanization is discernible in all the countries.

Children under 15 years of age constitute between 39 and 47 per cent of the total population. This percentage has either slightly increased or remained stable in the different countries in recent years. Sri Lanka provides an exception with a slowly declining trend.

Implications of Population Explosion:

The growth rate in population absorbs the national income and lowers the standard of living. The world population conference indicated in the population plan of action that population growth and population policy must be viewed not in isolation, but in the context of development. It was mentioned by the Secretary-General
that "Current and potential world-wide population trends evidently cannot continue for as long as even one century without causing serious dislocations and crises in many areas."\(^1\)

Myrdal, in his book Asian Drama, gave a stern warning to the world in regard to population explosion when he said, "Demographers are of the view that if fertility does not decrease, a time will come when mortality will lose its relative independence of levels of living and begin to rise again."\(^2\)

Thus, there is a great need of stabilizing population. According to Frank W. Notestein:

"The ultimate goal of the world's population policy must be to achieve an equilibrium based on low birth and death rates that can be sustained throughout a distant future for the world and its several parts."\(^3\)

As long as the birth rate is not restricted in these countries, it would not be possible to bring about improvements in the living standard of the people.

1. UN:E/F/S. 75 XIII. 4, p. 76.


In a 'capital poor' and technologically backward country, growth of population diminishes the rate of capital accumulation, increases the amount of disguised unemployment and lowers the standards of living of the people, i.e., resources go to the formation of population, not capital. Prof A.W. Singir says that population growth has a negative effect on the rate of economic development. According to him:

\[ D = SP - r \]

Where, \( D \) = rate of economic development
\( S \) = rate of net savings
\( P \) = productivity of new investment
\( r \) = rate of increase in population

In the above equation, \( r \) appears as a negative factor with a minus sign.

Let us examine the impact of population growth on the socio-economic development.

(i) Need of More Investments to Sustain Population Growth:

The population growth requires more investment while at the same time reduces the capacity of the people to save. This creates a serious gap between investment requirements and the availability of investible funds resulting in the low rate of growth of an economy.

According to Coale and Hoover, "The significant
feature of population as such is that a higher rate of population growth implies a higher level of needed investment to achieve a given per capita output, while there is nothing about faster growth that generates a great supply of investible resources."

(2) Reduction in the Rate of Capital Formation:

The composition of the people in underdeveloped countries (40-50% of the population in unproductive age-group) is such that it reduces the capacity of the people to save which affects the rate of capital formation. According to Prof Meier, "This high dependency requires the economy to divert a considerable part of its resources, that might otherwise go into capital formation, to the maintenance of high percentage of dependence who may never become producers or, if so, only for relatively short working life."2

(3) Food Problem:

The demand of food is rising faster than the production of food. In a study3 carried out by Food

and Agricultural Organization, it was found that the failure of food production to keep up with population growth was especially pronounced in the case of the developing countries. Out of the total of 106 countries studied, 72 were classified as developing but in 24 of these (or one-third) food production lagged behind the growth of population. In the more recent period, it was mentioned, the situation was even less favourable.

(4) Unemployment and Underemployment:

The result of more population would affect the employment situation as there is already a back-log of unemployment and underemployment in these countries. The growing unemployment of these countries is not only an economic but it is also a social evil.

(5) Poor Health Standards:

Family planning and health are intimately related. Family planning can promote women's health through the prevention of unwanted pregnancies, limiting number of births, and proper spacing, timing of births and foetal health. Family planning also promotes the health of the child through the reduction of child mortality, and promotion of child development. Maryellen Fullam stresses the importance of family planning as instrument for the promotion of health. He says:

"Uncontrolled fertility directly threatens the health of mothers and infants and may
undermine the health of other family members. Today, no health programme can be considered complete unless it offers ready access to the appropriate family planning measures for all potential parents. 

V.T. Herat Gunaratne has rightly said:

"Malnutrition, infection, and related physical and intellectual development are all directly related to overlarge families, particularly if they are poor. In fact, children from large families are more prone to infection, malnutrition, and stunted growth than those from smaller ones."

(6) Social and Psychological Tensions:

Rapid population growth leads to social and psychological tensions, and breakdown of a distribution system. Civil amenities, such as water and power supply, housing, transport and social utilities like schooling, educational, health and medical services, fall much short of demand in spite of their constant expansion. Besides, it leads to political and social corruption and accentuates economic disparities.

Thus, we can say that the problem of growing


population has reached such menacing proportions that it has become a real threat to the socio-economic stability of the country. The excessive growth in population does not affect the national economy alone, it disturbs the stability of the entire body politic. It poses a colossal threat to our social structure. In our fight against poverty, disease, hunger, malnutrition and unemployment, checking the rapid growth of population is as important as raising production in the farms and factories and provision of social services. Population control is one of the chief issues which the country has to resolve and accord top priority in its march towards social and economic development. The programme of family planning is of vital importance. It is a positive and constructive approach to the betterment of the quality of life of the community.

Growth of Population in Thailand

The rate of population growth in Thailand has been very high. The population has increased from 36,370 thousand in 1970 to 47,173 thousand in 1980 (Refer Table 5). In 1980, 83 per cent population was rural (Refer Table 5). If we trace the population growth since 1909, we find that the population has increased by eight and a half times (Refer Table 6). This is going to be a very serious problem by the end of this
century. Many projections have been done on the premises of fertility (Refer Table 7). We can see the differences which the Family Planning Programme can exert, i.e., with high fertility the population can be 105,911 thousand in 2010 while it would be 72,649 thousand if the fertility is low.

One of the very important features which must be kept in mind is the difference in population growth in different regions (Refer Table 8 and map). The analysis of the Table indicates that the Bangkok Thonburi has a growth rate of 4.1 and sub-region (East) 2, has a growth rate of 3.5. While the population growth for the whole country is 2.4. All these facts must be kept in mind while attending to family planning programme.

Table 5
Total Population and Percentage of Distribution
Urban/Rural Area for Thailand

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Absolute Total</td>
<td>Absolute Total</td>
</tr>
<tr>
<td>1970</td>
<td>36,370,000</td>
<td>13</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,728,100</td>
<td>31,641,900</td>
</tr>
<tr>
<td>1973</td>
<td>39,693,000</td>
<td>14</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5,557,020</td>
<td>34,135,980</td>
</tr>
<tr>
<td>1976</td>
<td>42,960,000</td>
<td>16</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,873,600</td>
<td>36,086,400</td>
</tr>
<tr>
<td>1980</td>
<td>47,173,000</td>
<td>17</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8,019,410</td>
<td>39,153,590</td>
</tr>
</tbody>
</table>

Sources: 1. UNAPDI Health Technical Report 26
2. Fact Book on Population and Manpower of Thailand NESDB
### Table 6

The Number of the Population in Thailand

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Population</th>
<th>No. of Population increased annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>8.0</td>
<td>0.24</td>
</tr>
<tr>
<td>1942</td>
<td>16</td>
<td>0.53</td>
</tr>
<tr>
<td>1957</td>
<td>24</td>
<td>0.88</td>
</tr>
<tr>
<td>1966</td>
<td>32</td>
<td>1</td>
</tr>
<tr>
<td>1974</td>
<td>40</td>
<td>1.2</td>
</tr>
<tr>
<td>1980</td>
<td>47</td>
<td>1.2</td>
</tr>
</tbody>
</table>


### Table 7

Total Population Derived Under Different Assumptions

<table>
<thead>
<tr>
<th>Year</th>
<th>High Fertility</th>
<th>Medium Fertility</th>
<th>Low Fertility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>36,370</td>
<td>36,370</td>
<td>36,370</td>
</tr>
<tr>
<td>1975</td>
<td>41,869</td>
<td>41,869</td>
<td>41,869</td>
</tr>
<tr>
<td>1980</td>
<td>48,164</td>
<td>47,686</td>
<td>47,173</td>
</tr>
<tr>
<td>1985</td>
<td>55,373</td>
<td>53,851</td>
<td>52,087</td>
</tr>
<tr>
<td>1990</td>
<td>63,529</td>
<td>60,310</td>
<td>56,742</td>
</tr>
<tr>
<td>1995</td>
<td>72,675</td>
<td>66,951</td>
<td>61,237</td>
</tr>
<tr>
<td>2000</td>
<td>82,828</td>
<td>73,614</td>
<td>65,431</td>
</tr>
<tr>
<td>2005</td>
<td>93,976</td>
<td>80,126</td>
<td>69,324</td>
</tr>
<tr>
<td>2010</td>
<td>105,911</td>
<td>86,154</td>
<td>72,649</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Kingdom</td>
<td>36,370,000</td>
<td>41,869,000</td>
<td>2.8</td>
<td>47,173,000</td>
<td>2.4</td>
<td>52,087,000</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangkok-Nonthaburi</td>
<td>3,817,000</td>
<td>4,178,000</td>
<td>3.9</td>
<td>5,720,000</td>
<td>4.1</td>
<td>6,139,000</td>
<td>4.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central region</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sub region 1 (central)</td>
<td>2,832,000</td>
<td>3,187,000</td>
<td>2.0</td>
<td>3,409,000</td>
<td>1.3</td>
<td>3,519,000</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sub region 2 (east)</td>
<td>2,114,000</td>
<td>2,451,000</td>
<td>3.2</td>
<td>2,969,000</td>
<td>3.5</td>
<td>3,589,000</td>
<td>3.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sub region 7 (west)</td>
<td>2,778,000</td>
<td>3,085,000</td>
<td>2.0</td>
<td>3,297,000</td>
<td>1.3</td>
<td>3,415,000</td>
<td>0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North-east region</td>
<td>12,725,000</td>
<td>14,769,000</td>
<td>2.8</td>
<td>16,670,000</td>
<td>2.3</td>
<td>18,287,000</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North region</td>
<td>7,894,000</td>
<td>8,904,000</td>
<td>2.4</td>
<td>9,918,000</td>
<td>2.1</td>
<td>10,730,000</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South region</td>
<td>4,510,000</td>
<td>5,195,000</td>
<td>2.8</td>
<td>5,794,000</td>
<td>2.1</td>
<td>6,356,000</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- NESDB
- Chulalongkorn University
- NES.
AREA AND DISTRIBUTION OF THE POPULATION CLASSIFIED BY REGIONS IN 1980 (TN MILLION)

NORTH
(21.0%)
9.9 Million
Area 70,006 Sq. Km.

NORTH-EAST
(35.2%)
16.6 Million
Area 170,226 Sq. Km.

CENTRAL
(20.3%)
9.6 Million
Area 102,030 Sq. Km.

BANGKOK
(10.8%)
5.12 Million
Area 1,567 Sq. Km.

SOUTH
(12.1%)
5.7 Million
Area 70,187 Sq. Km.
Meaning and Scope of Family Planning Programme

Meaning:

Family planning programme makes a planned and scientific approach to the issues and problems of family life and attempts to solve them to make the family life happier, harmonious and fruitful.

A distinction must be made between population control and family planning. Population control is influenced and determined by a government policy motivated by socio-economic considerations. Family planning, on the other hand, is a responsibility of the family. WHO has given various definitions of family planning.

An Expert Committee (1971)1 of the WHO defined family planning as: "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country."

Another Expert Committee (1971)2 defined and

2. Ibid., No. 476.
described family planning as follows: "Family Planning refers to practices that help individuals or couples to attain certain objectives:

(a) to avoid unwanted births;
(b) to bring about wanted births;
(c) to regulate the intervals between pregnancies;
(d) to control the time at which births occur in relation to the ages of the parents; and
(e) to determine the number of children in the family."

Family planning is not synonymous with birth control. It encompasses more than mere birth control. In a broader sense, family planning is concerned with the quality of life. In the context of family health, it is a way of helping families to be healthier and happier. With family planning pregnancies can be spaced so that a woman can regain all her strength and take good care of a new child. Many different methods of family planning are available today which enable couples to determine when and how many children they wish to have.

To quote John D. Rockefeller: "My final conclusion is that the ultimate objective of our work in family planning is not the restriction of human life
but rather its enrichment. To me, it is disturbing that so many people think of the population problem only as number of people versus available food. This seems to equate man with animal, and food with fodder.¹

A WHO Expert Committee (1970)² has stated that family planning includes in its purview (1) the proper spacing and limitation of births, (2) advice on sterility, (3) education for parenthood including pre-natal and post-natal care, (4) sex education, (5) screening for pathological conditions related to the reproductivity system, e.g., cervical cancer, (6) genetic counselling, (7) pre-marital consultation and examination, (8) carrying out pregnancy tests, (9) marriage counselling, (10) the preparation of couples for the arrival of their first child, (11) providing services for unmarried mothers, (12) teaching home economics and nutrition and (13) providing adoption services. These activities vary from country to country according to national objectives and policies with regard to family planning. This is the modern concept of family planning.

Evolution of Population Policy

As awareness of Thailand's high rate of population growth has spread during the past 15 years' consciousness towards population policy, 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 but 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. The MOPH began to offer family planning services, in limited experimental project, 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 reduce population growth. A National Population Policy Committee was established and the MOPH's Familty Health
Project was renamed as the National Family Planning Programme (NFPP). The Policy Committee never became significant force but the NFPP has been outstandingly successful. Today, the NFPP includes primarily not only the provision of services on a nation-wide basis but also a programme of information, education, and communication plus a considerable volume of operational research.

In 1970, the Royal Thai Government declared a National Population Policy, and the National Population Policy Committee (NPPC) was established for planning and co-ordinating policies on family planning. To strengthen the role of family planning services, the Ministry of Public Health was made responsible for implementing this newly approved policy, and the National Family Planning Programme (NFPP) was started. In 1974, the National Family Planning Co-ordinating Committee (NFPCC) was set up to replace NPPC and it has been functioning since then.

The change of Government following the October, 1973, protests strengthened the hands of those leaders who favoured a stronger population programme. Consequently when the new constitution was drafted in 1974, an article was inserted which raises population policy to the level of a Constitutional subject. The
provision, under 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."

Consequently, the Government has continued to place major emphasis on reducing rapid population growth. For example, the target for the Third Plan called for reducing the population growth rate from 3 per cent annually to 2.5 per cent by the end of the Plan period. The Fourth Plan called for a further reduction to 2.1 per cent by the end of 1981.

The population targets during the Third Plan, emphasized the reduction of population growth rate in terms of quantity only. Fourth Plan encompassed other aspects of a population policy as well, including improvements in the quality of population and consideration of an improved population distribution and human settlement pattern.

Despite achieving a reduced growth rate of 2.1 per cent in 1981, this rate of growth is still considered to be high for a developing country like Thailand. Although the proportion of children population to the total population is expected to decrease during the Fifth Plan period, the growth rate
of the labour force as a proportion of total population, will increase at a relatively high rate of approximately 3.2 per cent annually. Moreover, the adoption of modern science and technology for national development without due consideration given to its repercussions and other accompanying problems has brought about rapid changes in economic, social, demographic, and environmental conditions which have made life increasingly complex. These shortcomings need to be urgently corrected.

Administrative Set-up for Family Planning Programme

A. The National Family Planning Co-ordination Committee:

Since the NFPP relates to various other organizations besides the Ministry of Health (National Economic and Social Development Board; Ministry of Education; Labour Department; Ministry of Interior; Ministry of Agriculture; Educational Institutions and Private Organizations), the creation of National Family Planning Co-ordination Committee insures that the NFPP follows the broad national policies approved by the Cabinet.

Policies are formulated by the NFPP Committee and submitted to Cabinet for approval. The National Economic and Social Development Board plays an important role in correlating the objectives and targets of the NFPP with those of the National Economic and Development Plan.
B. The Ministry of Public Health (MOPH):

Family Planning activities are the integral part of the Ministry of Public Health. No additional personnel have been recruited to deliver family planning services. The delivery of family planning services concerns three major units of the Ministry of Public Health.

i) The Office of the Under-Secretary of State for Public Health

Having responsibility over all provincial hospitals (73), Provincial Chief Medical Offices (73), first class health centres (311), second class health centres (4,165) and Midwifery centres (1,674). The Office covers almost 99 per cent of the total MOPH service delivery system.

ii) The Department of Medical Services

Which has responsibility over Government hospitals in the Bangkok Municipal area.

iii) The Department of Health

Responsible for operational management of the Programme and also having maternal and child health centres.

While hospitals, health centres, midwifery and
MCH Centres belonging to the 3 units mentioned above, deliver family planning services, the Department of Health has a significant role in the Management of the NFPP. The Director General of the Department of Health also serves as the Director of the NFPP.

C. Other Government Health Delivery Systems Outside MOPH:

Although the MOPH constitutes the largest health delivery system in the country, there are several others associated with the NFPP.

i) The Ministry of Interior is an important provider of primary health care including family planning;

- The Bangkok Metropolis Department of Health operates Network of urban health centres where family planning services are available. Field workers are engaged in motivation and follow-up work in the slum areas.

- The Border Patrol Police provides health and family planning services in the remote border areas.

- Special rural development programmes also provide services (Tambon Doctors—ARD's mobile medical services and paramedics, community development workers).
ii) The Office of University Affairs operates important university hospitals closely associated with NFPP. Research as well as family planning services (sterilization and other methods) are carried out in the four major hospitals in Bangkok, in Chiang Mai, Songkhla and Khen Maen.

D. Private Sector:

The Ministry of Public Health has encouraged private institutions to provide family planning services and has worked co-operatively with other agencies.

i) The major private sector family planning organization in Thailand is the Population and Community Development Association (PDA)\(^1\) which has been extending family planning services through clinical and non-clinical channels since 1974.\(^2\) PDA was initially supported by IPPF and has trained more than 10,800 village based volunteers to provide

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1. The Community-Based Family Planning Services (CBFPS) is the major bureau of the PDA.

family planning information, contraceptives and referral services to a general population of 16 million in 158 districts throughout the country. Mobile and standing clinics and nation-wide condom marketing programmes are also part of its network of contraceptive services.

ii) Planned Parenthood Association of Thailand is a relatively recent organization (1970). It does not have an extensive network of clinics but a strong central office in Bangkok which concentrates mainly on information and education. PPAT also provides training and/or services to certain groups, particularly in the Capital and in the North-east provinces.

iii) There are a few (4 - 5) missionary hospitals engaged in family planning work, especially the McCormick Hospital and Family Planning Clinic in Chieng Mai.

F. Commercial Channels:

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. 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 drugs" 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 suggests. The PDA has a nation-wide condom marketing programme which is making use of the existing retail networks.

F. Private Doctors (Modern):

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 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 centres and these constitute a resource which might well be given an important role in the national family planning programme; their present role appears negligible. The network of facilities used for the delivery of family planning services has already been mentioned but 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. The dominant family planning method used in Thailand today is the pill and variety of delivery networks can be used, which extend to the most remote areas of the country. The more clinically-related methods such as IUD, injectable and sterilization still require the use of well-trained personnel for administration. Thus,
this group of methods suffers from restricted
distribution. One intermediate means of bridging the
clinical service gap is through the use of mobile family
planning and medical units. These units are costly to
operate, however, and should be considered only a
makeshift solution to service distribution deficiency.

Performance

The most popular method is the pill as it has
increased from 25.5 per cent in 1966-68 to 65 per cent
in 1980. It is followed by IUD and sterilizations.

Performance of the National Family Planning Programme:

In the 1960s, the IUD was the major method of
Family Planning. This was followed by the Pill and
Female Sterilization. By 1970, however, the pill
became the primary method of contraception in the
national programme. Table 9 presents the number of
Family Planning initial acceptors as a per cent
higher or lower than the target by method. The
analysis of the Table indicates the pill is the most
popular method as by 1979, more than sixty thousand
women were using it.

Introduction of interval sterilization techniques
for the female in the early 1970s resulted in dramatic
increases in acceptance so that by 1979 there were
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<th>Higher +</th>
<th>Lower -</th>
<th>Target Acceptor</th>
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**Sources:** Research & Evaluation Section, Family Health Division, Department of Health, Ministry of Public Health
almost 175,531 acceptors in that year alone as compared to only 49,606 in 1973. In 1973, with subsidies received from the UNO, the government significantly lowered the charge for sterilization procedures (tubal ligation was available for a total of $7.50, a vasectomy for $2.50, prices felt to be within the range of most rural inhabitants). As a result, by 1976, sterilization acceptance had been doubled, as compared to 1973.

In 1970, the Ministry affected a new policy which imparted dramatically on family planning services. This policy was to make the pill, IUDs and sterilizations in rural areas free. The impact of this policy was to increase monthly pill acceptance by 56%, an increase which has continued to the present, and to assist in the continuing increase in sterilization acceptance nation-wide.

Generally speaking, acceptance and use of contraception through the National Family Planning Programme is increasing at a faster rate. It is quality acceptance as well since an independent survey of contraceptive practice prevalence revealed that nearly half of all Thai eligible couples were protected from unwanted pregnancy at the end of 1980. Behind this achievement is an extremely active training
programme which trained over 8,000 individuals in 1979 as diverse as refugees and military officers. Promotion of family planning through the NFPP involves production of materials in the millions of pieces. In addition, radio programmes are aired throughout the country and are also locally produced to lend regionality to the presentations. As Thai family planning activities are being more and more decentralized through the utilization of paramedicals for clinical services and village volunteers for non-clinical services and NFPP is devoting more intensive efforts on maternal and child health.

Critical Appraisal of the Administrative Adequacy and Performance

The performance of the family planning programme has been satisfactory as compared to the resources put in the programme. The actual achievement has always exceeded the targets laid for each year except IUD insertions. However, the performance can be improved further through good management. Iboko says:

"It is accepted that inability to manage efficiently or utilize effectively the available and potential resources is the common ill of all the less-developed countries. It follows that successful development demands a sound programme for
managerial improvement."\(^1\)

It was also reported by the UN that "a principal obstacle everywhere to the development of successful official family planning programme lies in the area of organization and administration. . . The challenge for Planners and Administrators is to work out effective means for delivery of this technology and service to the public."\(^2\)

Now, let us analyze the organizational and administrative factors in the context of family planning programme. On the basis of facts presented, we shall draw conclusions and make suggestions for a more effective programme.

Mr Gaus defines organization as "Organization is the arrangement of personnel for facilitating the accomplishment of some agreed purpose through the allocation of functions and responsibilities. It is the relating of efforts and capacities of individuals and groups engaged upon a common task in such a way as to secure the desired objective with the least friction and the most satisfaction to those for whom

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2. UN: E/F/S. 75, XVII 5, p. 494.
the task is done and those engaged in the enterprise."  

Now-a-days, organizations are defined in terms of the systems approach (input and output). We can represent it diagramatically.

Organizations are not simply structures but an action system and the success and failure of the organizations are to be measured in terms of this action system. Action system is a structured device in which resources are mobilized and transformed by use of certain skills and technology to produce pre-designed output, all taking place by influence of leadership within an environmental context. Let us discuss the organizational problems and their improvements at various levels.

1. Administrative Leadership

Administrative leadership or capability is an important means of converting or processing programme inputs into outputs such as goods and services. It has been mentioned by Gabriel, "What makes the leadership variable so crucial in the implementation process is its dynamic, not passive quality, i.e., its capability to act and react on these critical inputs. It is this manipulative and transferring quality of leadership that could significantly determine the administrative capability of implementing organization."

Such leadership is not available in the top and

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middle level administrators working in the family planning programme. Most of the administrators are not committed to the programme as they have been forced to work on this programme. They should stimulate others to a high level of performance. They should be willing to experiment new innovations and approaches especially to adopt the programme to differing and changing circumstances. Family planning is given only peripheral attention in the curricula of medical schools. In practice, only a few doctors seem to find family planning work professionally challenging. Instead of accelerating the momentum of the programme, these administrators are always on the lookout for their transfer to the medical side. Because of their lukewarm attitude, their contagious effects spread in the whole organization. Thus, the success of the programme can only be achieved if adequate number of motivated persons are made available for accelerating the tempo of this difficult and arduous task.

Walter R. Sharp has also mentioned the importance of the personnel in the organization. He says:

"Even poorly devised machinery may be made to work if it is manned with well-trained intelligent, imaginative and devoted staffs. On the other hand, the best planned organization may produce unsatisfactory results if it is operated
by mediocre of disgruntled people.\textsuperscript{1}

Besides, they must have faith in the ideals of the family planning programmes, by willing to accept hardships and be prepared to work in the spirit of service. Their ambition and enthusiasm should not be dampened by local conditions, which may not provide them with the necessary facilities. Unfortunately, the sense of dedication has been the crassest casualty of the prevailing atmosphere of cynicism bred by increasing propensity towards expediency.

2. Action Programme

The policy of the Family Planning Programme Organization in terms of targets is made only for the province or country as a whole. No attempt has been made so far to prepare action plans for each small area in terms of money, equipment, personnel, time, physical targets, etc. Such action programme if designed would help in effective implementation and monitoring. Here, we can make use of the New Techniques of Management--PERT/CPM for proper programme planning and resource development.

1. Family Planning Programme should be continually implemented in every region

\textsuperscript{1} Sharp R. Walter, 'Field Administration in the United States System,' London, 1961, p. 119.
of the country, including Bangkok.

2. Effort should be made to give high priority to areas where there is relatively small coverage of service and inadequate PMIS system.

3. It is necessary to set long-term targets for continuing acceptors and new acceptors for the five-year period.

4. There should be emphasis on administration and supervision at village level.

5. The United Nations agencies that used to support such projects should foresee the necessity to continue support for the 5th development plan.

3. Environmental Linkages

It is understood that the implication of family planning programme is a quite complex process in which Medical, Cultural, Psychological, Social, Economic, Administrative and even Political Factors are involved and intermingled. A good organization must respond to and react to the changes in the environment—establish environmental linkages. Linkages are points of interactions with the environment. They can be classified into four categories—enabling, functional, normative and diffused linkages.
4. Enabling Linkages

Enabling linkage ensures and protects the organizational authority to operate its access to resource and its power to achieve results. One of the more important factors which impinges on the programmes from its formulation to execution is political and its impingement on both the programme and implementators occur at all levels (national, regional, provincial, district) and at the programme input levels (financial allocations, personnel, material resources). The impact of politics and the political processes on the programme is both positive and negative and this insight provides the directions and options available to ensure greater success in programme implementations. Since political constraints are neither permanent nor inseparable there is urgency in adopting measures designed to optimize the positive contributions of political support as well as minimize and mitigate the harmful effects of partisan interferences.

For administrators to operate successfully in this political environment they must acquire not only the knowledge and skills required in running the programme but also a deeper insight of the 'political games' as well as the 'political skills' needed to serve and thrive in that environment. An important asset is the capability of programmes leaders to seek and maintain
support from key political elites both at the national and local levels.

(ii) **Functional Linkages**

Functional linkages is to link the programme with the task environment University, Research Institute, Hospital, etc.

(i) **Collaboration with the universities:** In this connection it is suggested that there should be effective collaboration between the universities and the family planning programme from the policy formulation to evaluation. In South Korea, one of the reasons ascribed for the success of the programme is the association of the University with the family planning programme.

(ii) **Collaboration with the hospitals:** The success of family planning programme depends to a great extent on the way the programme can be operated through the health services network in the country. The hospital provides a good platform from the educational and motivational point of view.

(iii) **Diffused Linkages:** It means to reach the clients through mass media. Organized family planning programme requires a high level of user participation. Any successful family planning effort must be understood
and accepted by the people and be based on public trust and confidence. It cannot be solely dictated or legislated. Family planning is such a multifaceted personal and intimate subject that its practice can only occur on an individual voluntary basis.¹

The art of developing common understanding among people is vital to bring about change of attitudes and behaviour. Sociologists have classified the diffusion process which leads to a widespread acceptance of the programme into five stages:

1. Awareness (the individual's first introduction to a new idea or practice).
2. Interest (the stage at which he actually seeks further information and background data).
3. Evaluation (the stage of assessment on theoretical grounds).
4. Trial (a limited phase of experiment).
5. Acceptance or adoption.

Naturally the duration of the process depends upon personality factors which differs with individuals. Mass-media helps in creating awareness, in providing stimulation and motivation and in giving ready access

to information. But at the specific stage of evaluation, trial and adoption, inter-personal face to face communication counts for much more and the inability of the mass media to maintain a two-way dialogue with regular feedback restricts their utility. Therefore, no medium of communication is as effective as one human being talking to others. The UNESCO has rightly stated:

"The process of social and economic development is a process of human development for people are the targets as well as the essential variable in development. Communication being a two-day process, provides for participation at whatever stage of enlightenment of the individuals composing a society find themselves. Change agents are key factors in both the communication development processes in that they are instruments for getting facts to the people upon which decisions can be based."1

(iv) Normative Linkages

There has been little attempt to incorporate the family planning behaviour into the existing value system of the society. Social values act as a hindrance to ready adoption. For example, if people talk about birth control behaviour naturally related to sex, it is traditionally regarded as impolite. Not only social

1. UNESCO, Communication in support of population/family planning and Development, E/F/S. 75 XIII, 5, p. 482.
values but also religious values often act as a hindrance. Therefore, the mass-media and communication officers and family planning workers must dispel all those false impressions and taboos after a careful survey and research in demography. Mass media and communication officers may intensify their efforts by organising public meetings of different groups—labourers, farmers, workers, union leaders and extensive use of various media like cinemas, exhibitions, radios, TV, etc., may be made. At present, the full use of mass-media is not being made in the real sense in spite of the availability of the arrangements. More attention is to be paid to uneducated rural people and economically depressed classes. Family planning and fertility control behaviour of the client group, especially eligible women have been affected by their socio-economic background. It is found that the higher educated women tend to have a small number of children and the use of contraceptive and induced abortion is more prevalent among them. The socio-economic status as well as the urban-rural diffusion of client groups are clearly pronounced in their family planning behaviour.

4. Co-ordination with Voluntary Agencies

Voluntary agencies can play an effective role in mobilizing the public opinion in support of the programme. The Government must set up a 'Women Club' in every village as in South Korea. At present, the Mothers Club having a membership of 20-40 women in each of 19,000 villages has become a multi-purpose basic organ for the nation-wide 'New Community Movement' since 1971, in Korea. It is significant to note that the family planning programme became integrated into a broader community movement by the 'Mothers Club' at the village level.\(^1\) This experiment has been a great success in South Korea. We can also create such clubs having influential members. We can bring these members in the communication network with the help of a four-step strategy mentioned below:

(a) provide the opinion leaders with the information necessary for a full understanding of the reasons for family planning including its relationships to national and particularly local development.

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(b) invite their suggestions for local activities.

(c) involve them in the purview of radio and television programmes.

(d) invite them to open discussion about family planning in the community formally or informally.

Mrs. Helvi Sipila has also stressed that the association of women will surely help in checking the menace of population explosion. A study of the inter-relationship of the status of women and family planning was conducted in accordance with economic and social council resolution.

The report affirmed:

(a) "The right to decide freely and responsibly on the number and spacing of their children is a fundamental right of individuals which facilitates the exercise of other human rights especially by women."

1. UN: E/F/S. 75 XIII 5, p. 483.

2. Mrs. Helvi Sipila, Assistant Secretary General, 'Social Development & Humanities Affairs,' UN, June 17, 1975, Weekly News Letter, UN Information Centre, New Delhi, Vol. 25, No. 3.

3. UN, 1326 (XLIV).
(b) "Adequate information, education and services enabling individuals to exercise this right are essential pre-requisites for ensuring their complete integration in social and economic development at all levels."

(c) "Family Planning which should constitute an integrated and essential part of development plan and programme in countries suffering from over-population can only succeed in concert with other measures which also improve the status of women."¹

Thus, it can be said that the best contraceptive in the world is the involvement and the overall improvement of the status of women.

5. Built-in Device to Gain Confidence of the People

The success of the programme depends upon the built-in confidence and faith of the people in the responsiveness and effectiveness of the family planning organization at all levels. This needs to be assured at all levels.

¹ UN, E/CN 6/5755, Add 1-3 ECOSOC
6. **Use of Modern Management Methods**

No matter how excellent the original planning is, an implementation scheme may be designed to develop a certain amount of detail for its effective performance. The management must work to ensure that all the component activities and tasks are accomplished according to the implementation schedule. The effectiveness of national planning and population programme can be increased through the sound use of modern management techniques.

7. **Incentive Systems**

At present, different kinds of incentives are provided to the people to undergo sterilization, etc. This has resulted in many malpractices. All these incentives in the ultimate analysis cannot be effective in the success of the family planning programme and has created many wrong practices and false reporting. In this way time and money is spent on undesirable cases. There is a great need of supervision to assess the reliability and fitness of the reported cases.

8. **Research and Evaluation**

The researches so far conducted have not devoted sufficient attention to fields of organizational structure and functioning of family planning programme and modern methods of administrative management. The
WHO Regional Committee for South-East Asia laid great emphasis on administrative problems. We must encourage health administrators in collaboration with University teachers of Public Administration to take up such problems of research. Evaluation machinery needs strengthening at all levels. Independent evaluation may be undertaken to ensure that qualitative aspects of the programme have not been ignored.

The Fifth Plan calls major problems which impede the implementation of work on the reduction of population growth rate which have to be rectified on an urgent basis during the Fifth Plan period are as follows:

(i) Lack of family planning services in remote areas due to the shortage of physicians and nurses: Despite intensive efforts to train public health personnel, e.g., nurses and sanitarians to perform sterilizations and auxiliary midwives to insert IUDs, the lack of personnel is still a problem due to the long and difficult process involved in obtaining authorization from the Ministry of Public Health and the Medical Council for para-medical personnel to provide clinical family planning services.

(ii) Low family planning achievement in the Southern border provinces due to factors such as culture, political activities and terrorism which have made it difficult to attain family planning targets and to ensure the safety of health workers.
(iii) The implementation of selected population activities is not yet consistent with population targets and policies. In particular, the Government has not revised the laws and regulations to apply to the majority of the population; such laws and regulations are now mainly applicable only to civil servants. Moreover, the formulation of programme, incentive or indirect inducements to encourage family planning practice cannot be fully undertaken since a lot of careful consideration has to be given to their repercussions as well as to their benefits.

(iv) Administrators and technical personnel involved in population education have different interpretations of the concept of population education which are very crucial for implementation purpose. At the same time inadequate support has been given to promote population education programme of the private sector. There is also no central co-ordinating agency between the Government and the private sectors. In addition, the monitoring of the work of health officers at the regional and zonal levels and volunteer groups on a continuous basis is also lacking.

(v) The production and supply of audio-visual equipment to disseminate family planning information is still limited and is not applicable to the general population.
There also continues to be a problem in the conduct of family planning campaign to the people residing in backward areas.

In the past, there have been no specially designated target groups and target areas in which emphasis could be given to accelerate development on a priority basis.

The lack of adequate funding, manpower, statistical data, research, and suitable evaluation procedures has made implementation of programmes less effective than desired. In addition, measures to ensure that programmes are being implemented to carry out policy guidelines or to support implementation programmes consistent with policy are still inadequate.

The administration and co-ordination of population activities are, at present, carried out in task oriented from under the direction of a committee. At the national level there is the National Family Planning Committee, Executive Committee on Population Education and Sub-Committee for Population Policy and Planning. Each of these committees and/or sub-committees has a different official status and further improvement is required to ensure more effective co-ordination among them.

Future Targets

The Fifth Plan calls for realizing the following
targets in reducing the growth of population:

Reduction of the population growth rate: It is the goal of the Fifth Development Plan to reduce the population growth rate to approximately 1.5 per cent by the end of the Plan period (1986) (Refer Table 10). At that time, it is estimated that the total population will increase to approximately 52.1 million, with an estimated crude birth rate of about 22.9 and an estimated crude death of about 7.3 per thousand respectively. If implementation of programmes for reducing the growth rate is achieved, it is estimated that the total annual population classified by age groups and sex during the plan period will be, as indicated in Table 11 and 12.

Table 10
Estimated Population, Birth Rate, Death Rate and Population Growth Rate: 1981-1986

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (in thousands)</th>
<th>Male</th>
<th>Female</th>
<th>Birth Rate per thousand</th>
<th>Death Rate per thousand</th>
<th>Population Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>47,488</td>
<td>23,868</td>
<td>23,620</td>
<td>28.4</td>
<td>7.7</td>
<td>2.1</td>
</tr>
<tr>
<td>1982</td>
<td>48,490</td>
<td>24,374</td>
<td>24,116</td>
<td>27.5</td>
<td>7.6</td>
<td>2.0</td>
</tr>
<tr>
<td>1983</td>
<td>49,459</td>
<td>24,862</td>
<td>24,597</td>
<td>26.0</td>
<td>7.5</td>
<td>1.8</td>
</tr>
<tr>
<td>1984</td>
<td>50,396</td>
<td>25,334</td>
<td>25,062</td>
<td>24.8</td>
<td>7.4</td>
<td>1.7</td>
</tr>
<tr>
<td>1985</td>
<td>51,301</td>
<td>25,789</td>
<td>25,512</td>
<td>23.7</td>
<td>7.3</td>
<td>1.6</td>
</tr>
<tr>
<td>1986</td>
<td>52,094</td>
<td>26,187</td>
<td>25,907</td>
<td>22.9</td>
<td>7.3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Table 11
Total Population Classified by Age Groups, Sex and Growth Rate during the Fifth Plan Period

(Unit: Thousand Persons)

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>1981</th>
<th></th>
<th></th>
<th>1986</th>
<th></th>
<th></th>
<th>Growth Rate(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Pre-School</td>
<td>6,412</td>
<td>3,274</td>
<td>3,138</td>
<td>6,054</td>
<td>3,093</td>
<td>2,961</td>
<td>1.00</td>
</tr>
<tr>
<td>children (0-4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Age</td>
<td>23,298</td>
<td>11,844</td>
<td>11,454</td>
<td>24,991</td>
<td>12,714</td>
<td>12,277</td>
<td>1.40</td>
</tr>
<tr>
<td>Children (5-25)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Age</td>
<td>16,276</td>
<td>8,080</td>
<td>8,196</td>
<td>19,267</td>
<td>9,589</td>
<td>9,678</td>
<td>3.20</td>
</tr>
<tr>
<td>Persons (26-64)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Age</td>
<td>1,502</td>
<td>670</td>
<td>832</td>
<td>1,782</td>
<td>791</td>
<td>991</td>
<td>3.42</td>
</tr>
<tr>
<td>Persons (65+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47,488</td>
<td>23,868</td>
<td>23,620</td>
<td>52,094</td>
<td>26,187</td>
<td>25,907</td>
<td>1.85</td>
</tr>
</tbody>
</table>

To achieve the target reduction of the population growth to 1.5 per cent by 1986 requires the recruitment of approximately 4.6 million new acceptors over the Plan period and the retention of approximately 4.1 continuing acceptors at the end of 1986. Detailed targets of acceptors by method during the Plan period is presented in the following Tables 13 and 14.

Table 12

Proportion of Population Classified by Age Groups and Sex

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>1981</th>
<th></th>
<th></th>
<th>1986</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Pre-School Children (0-4)</td>
<td>13.50</td>
<td>13.72</td>
<td>13.29</td>
<td>11.62</td>
<td>11.81</td>
<td>11.43</td>
</tr>
<tr>
<td>School Age Children (5-25)</td>
<td>49.06</td>
<td>49.62</td>
<td>48.49</td>
<td>47.97</td>
<td>48.55</td>
<td>47.39</td>
</tr>
<tr>
<td>Working Age Persons (26-64)</td>
<td>34.28</td>
<td>33.85</td>
<td>34.70</td>
<td>36.99</td>
<td>36.62</td>
<td>37.36</td>
</tr>
<tr>
<td>Old Age Persons (65+)</td>
<td>3.16</td>
<td>3.81</td>
<td>3.52</td>
<td>3.42</td>
<td>3.02</td>
<td>3.82</td>
</tr>
<tr>
<td>Total:</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

### Table 11
**Annual Targets of New Acceptors by Method During the Fifth Plan Period (1982-1986)**

<table>
<thead>
<tr>
<th>Year</th>
<th>IUD</th>
<th>Pill</th>
<th>Sterilization</th>
<th>Injection</th>
<th>All Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>52,800</td>
<td>472,600</td>
<td>176,800</td>
<td>93,300</td>
<td>795,500</td>
</tr>
<tr>
<td>1983</td>
<td>56,400</td>
<td>504,900</td>
<td>187,700</td>
<td>98,100</td>
<td>847,100</td>
</tr>
<tr>
<td>1984</td>
<td>61,900</td>
<td>553,400</td>
<td>204,600</td>
<td>106,200</td>
<td>926,100</td>
</tr>
<tr>
<td>1985</td>
<td>65,700</td>
<td>587,500</td>
<td>216,600</td>
<td>112,200</td>
<td>982,000</td>
</tr>
<tr>
<td>1986</td>
<td>69,800</td>
<td>624,600</td>
<td>229,600</td>
<td>118,500</td>
<td>1,042,500</td>
</tr>
</tbody>
</table>

Total: 306,600 2,743,000 1,015,300 528,300 4,593,200

Source: Family Health Division, Ministry of Public Health.

### Table 14
**Annual Targets of Active Users by Method During the Fifth Plan Period (1982-1986)**

<table>
<thead>
<tr>
<th>Year</th>
<th>IUD</th>
<th>Pill</th>
<th>Sterilization</th>
<th>Injection</th>
<th>All Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>338,900</td>
<td>1,839,800</td>
<td>1,096,600</td>
<td>179,800</td>
<td>3,455,100</td>
</tr>
<tr>
<td>1983</td>
<td>316,400</td>
<td>1,865,500</td>
<td>1,223,600</td>
<td>184,200</td>
<td>3,580,800</td>
</tr>
<tr>
<td>1984</td>
<td>298,600</td>
<td>1,873,300</td>
<td>1,358,100</td>
<td>186,600</td>
<td>3,716,600</td>
</tr>
<tr>
<td>1985</td>
<td>288,300</td>
<td>1,948,200</td>
<td>1,500,200</td>
<td>195,600</td>
<td>3,932,400</td>
</tr>
<tr>
<td>1986</td>
<td>287,200</td>
<td>2,022,600</td>
<td>1,647,800</td>
<td>203,800</td>
<td>4,161,400</td>
</tr>
</tbody>
</table>

Total: 1,015,300 4,593,200
A CASE STUDY
POST-PARTUM TUBAL LIGATION BY NURSE-MIDWIVES AND DOCTORS IN THAILAND

ACCEPTANCE of female sterilization in Thailand has increased considerably, but because of the shortage of doctors, especially in rural areas, long delays occurring before surgery are common. Women are discharged from hospital within 24 to 48 hours of delivery and, although many wish to have post-partum sterilization, they often find it inconvenient to return to hospital for tubal ligation. Besides, it is very costly.

The Thai Ministry of Public Health decided to introduce the performance of post-partum tubal ligation by trained nurse-midwives, since this could alleviate the shortage of doctors and so reduce waiting times and free doctors for more skilled tasks. This reduces costs as well.

It has also been examined by World Health Organization. To quote "One way of containing costs is to ensure that the degree of technical complexity involved is appropriate for the task to be performed. In the case of staff, those that are highly skilled, such as physicians, should not be employed on tasks that could
be performed by staff that are less skilled.\textsuperscript{1} This will also help in generating employment and economic development. To quote "Manpower is a prime resource in the production of health services; these can, therefore, provide employment opportunities for otherwise un-employed or under-employed people, especially in developing countries. The less skilled the manpower used, the more employment can be generated. These benefits in terms of economic development can be increased if the extra savings and thus opens up material investment opportunities for the economy as a whole."\textsuperscript{2}

Tubal ligation services provided by health workers other than doctors have been reported from Iran,\textsuperscript{3} Bangladesh,\textsuperscript{4} and the People's Republic of China,\textsuperscript{5} but these were not randomized controlled Studies. We have compared the competence of operating-room nurses in performing tubal ligation with that of doctors in a

\begin{flushleft}
\textsuperscript{1} WHO: Health Economics, PHP 64, Geneva, 1975, p. 16.
\textsuperscript{2} WHO: Health Economics, PHP 64, Geneva, 1975, p. 20.
\end{flushleft}
randomized trial. This meant that the adequacy of the nurse-training programme could be fully evaluated and ensured that patients would not be exposed to unnecessary risk.

In 1979, a pilot study was conducted by the Ministry of Public Health in which five nurse-midwives with operating-room experience were trained to perform post-partum tubal ligation by a minilaparotomy incision under local anaesthesia. The performance of the trained nurse-midwives was compared with that of doctors in a controlled, randomized clinical trial. The results suggested that trained nurse-midwives can safely perform the procedure.¹

In the subsequent study, an expanded field trial of the nurse training programme was carried out by the Ministry of Public Health to evaluate the replicability of the training programme in provincial settings.

Trainees and Method

Twenty nurse-midwives with more than one year's experience as operating-room assistants were selected from 18 provincial hospitals from different parts of

the country. These nurse-midwives had at least 12 years
of schooling, in addition to three years' training in
nursing and six to eight months of midwifery training.
All were willing to participate in the training
programme and to work in their provincial hospital for
at least two years. The training was conducted for a
12-week period at the Regional Maternal and Child Health
Centre in Khon Kaen, a north-eastern province of Thailand.

The trainees were taught pelvisce and abdominal
anatomy, and the principles of local anaesthesia and
post-partum tubal ligation. Animal tissues were used
for training in the handling of instruments, tying
ligatures, and dissection. After this preliminary
phase, the trainees assisted gynaecologists with three
to five cases of tubal ligation. If the gynaecologists
considered the nurse-midwives competent, they were then
allowed to perform 20 operations under the supervision
of a doctor. Records were maintained of the trainee's
performance of each operation and of her acquisition of
knowledge and skills.

All nurse-midwives successfully completed the
training programme and subsequently returned to their
hospitals to be primarily responsible for post-partum
sterilization service. One gynaecologist at each
hospital was designated the programme supervisor.
Informed volunteer subjects, who before delivery requested sterilization, were apparently healthy women who had a vaginal delivery. They were first interviewed, examined, and screened for the following exclusion criteria.

- Severe toxemia of pregnancy (blood pressure more than 150/100 mm Hg and/or albuminuria.
- Haemoglobin less than 10 gm/100 ml
- Premature rupture of membranes.
- Post-partum haemorrhage.
- Puerperal sepsis or febrile condition of other nature
- Marked obesity (a skin-fold thickness of more than 5 cm).
- Previous obesity (history of severe pelvic inflammatory disease).
- Previous abdominal surgery.

Following delivery, the subjects were operated on by the trained nurse-midwives, with the approval of the supervisors.

Under local anaesthesia, a 2.5 cm. to 3.0 cm. vertical abdominal incision was made two fingerbreadths below the uterine fundus. The tubes were mobilized and
ligation and resection were performed by the Pomeroy technique. Another nurse-midwife acted as an assistant and a doctor was on call in case of emergency. During the operation, the duration of the procedure and any surgical difficulties or complications were recorded.

Results

In a 12-month period, 20 trained nurse-midwives successfully operated on 3,549 women (Table 15). The mean age of the women selected for tubal ligation was 28.2 years, and the mean number of living children was 3.6. In only 18 cases (0.5 per cent), assistance was needed from the supervising doctors because of difficulties resulting from one or more of the following conditions: Thick abdominal fat, tubal adhesions, inadequate sedation and/or analgesia (Table 16). The average operating times decreased as the nurse-midwives gained experience. At the end of the 12-month period, the average operating time was 14.8 ± 0.3 minutes. Thickness of the abdominal fat correlated significantly with the time required for operation ($r = 0.23$, $p = 0.01$).

### Table 15
Characteristics of the Women

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of subjects</td>
<td>3,549</td>
</tr>
<tr>
<td>Mean age (years)</td>
<td>28.2</td>
</tr>
<tr>
<td>Mean number of living children</td>
<td>3.6</td>
</tr>
<tr>
<td>Mean body weight (kg) ( \pm \text{SEM} )</td>
<td>51.2 ( \pm ) 0.1</td>
</tr>
<tr>
<td>Mean thickness of abdominal fat (cm) ( \pm \text{SEM} )</td>
<td>1.7 ( \pm ) 0.6</td>
</tr>
<tr>
<td>Percentage with an episiotomy</td>
<td>26.8</td>
</tr>
</tbody>
</table>

**NOTE:** SEM = standard error of the mean

### Table 16
Operative Problems

<table>
<thead>
<tr>
<th>Rating of operative difficulty</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine</td>
<td>3,454</td>
<td>97.3%</td>
</tr>
<tr>
<td>Moderately difficult</td>
<td>77</td>
<td>2.2%</td>
</tr>
<tr>
<td>Difficult (requiring a doctor's assistance)</td>
<td>18</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,549</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
The post-operative complication rates were not substantially different from the rates observed in the pilot study, with the exception of mild pyrexia, which was more frequently reported in this study (Table 17).

At six weeks post-partum, 1,746 cases (49.2 per cent) returned for a check-up; 1,431 cases (40.3 per cent) had a pelvic examination. All were well and without complications, except for 28 cases who had minor wound complaints such as a stitch abscess or a small subcutaneous induration.

The facts of the pilot project and follow-up studies clearly demonstrate that the involvement of Nursing personnel has been quite useful and beneficial. An interview schedule was prepared to measure the attitudes of Doctors and women undergoing tubal ligation in Lampang Hospital. This study was carried out during August, 1982.* On discharge from the hospital, 45 subjects out of 50 (i.e., 90 per cent) selected on random basis reported full satisfaction with the service and said that they would recommend tubal ligation to friends. Three cases (6 per cent) said that they were not fully satisfied and would not recommend to friends. 2 cases (4 per cent) expressed complete dissatisfaction with the programme. Table 18 indicates the

---

*My Supervisor, Dr S.L.Goel, was also with me.
opinions of 20 doctors selected on random basis towards this programme. Most of the doctors appreciated the programme and felt a great need to design training programmes.

Table 17
Post-operative Complications

<table>
<thead>
<tr>
<th>Complications</th>
<th>Present study (N=3,529)</th>
<th>Previous studya (N = 143)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers</td>
<td>Percentage</td>
</tr>
<tr>
<td>Mild pyrexia</td>
<td>323</td>
<td>9.1</td>
</tr>
<tr>
<td>Puerperal sepsis</td>
<td>51</td>
<td>1.4</td>
</tr>
<tr>
<td>Upper respiratory tract infection</td>
<td>16</td>
<td>0.4</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>7</td>
<td>0.2</td>
</tr>
<tr>
<td>Unsatisfactory wound healing</td>
<td>6</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>403</td>
<td>11.3</td>
</tr>
</tbody>
</table>

aDusitsin et al, cited in note 2.
bp 0.005
cNot significant; column does not add to total because of rounding.
Table 18
Doctors' opinions about the nurse training programme

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there a need in your hospital to train nurse-midwives for tubal ligation service?</td>
<td>12</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Are you supportive of nurse training programme for post-partum tubal ligation?</td>
<td>14</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3. Do you believe that the nurse training programme will significantly relieve doctors for other more important tasks?</td>
<td>19</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. What is your opinion about the performance of the trained nurse-midwives in this programme at your hospital?</td>
<td>16</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5. In your opinion, how urgently should the nurse training programme be developed?</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
Discussion

The results of the field trial of the nurse-training programme are similar to those of the pilot study, and further demonstrate that trained nurse-midwives with operating-room experience can safely perform post-partum tubal ligation under local anaesthesia in provincial settings. The nurse-midwives gained both surgical experience and self-confidence in a relatively short period. The average operating time of the nurses after 12 months (15 minutes) was nearly that of the doctors in the previous study (12 minutes).

The acceptability of the service as perceived by the patients was clearly impressive. The attitudes of doctors toward the use of trained nurse-midwives in their hospitals to perform tubal ligation were very positive. As a result of this study, it has been suggested to the Ministry of Public Health that an expanded programme be planned and implemented. Secondly, it is suggested that as medical procedures become accepted and routine, doctors should delegate these tasks to nursing and other personnel. Delegation does not

undermine the professional role; it enhances it. The more the doctor delegates the more time he has available for those tasks he cannot delegate and the more his work becomes confined to problems that staff with less training have failed to solve. In addition, more of his time can be devoted to supervising the work he has delegated and to providing continuing education to all engaged locally in activities to improve health.

But delegation is also a matter of economics. The ratio between the remuneration of the doctor and the average worker tends to be much higher in developing countries than in the more developed countries. Auxiliaries can also be trained at much lower cost than can higher grades of professional staff. Thus, it is that much more important to ensure that the doctor's time is used only for tasks that require his skill and knowledge. The same is true of other highly trained health professionals—dentists, pharmacists, health inspectors, nurses, sanitary engineers, and many others. There is a strong case for every highly trained professional grade to be matched by a corresponding auxiliary grade. Furthermore, as their training is shorter, auxiliary staff can be working in the field much earlier than more highly trained personnel.
To quote Allan Rosenfield:

"I firmly believe that personnel other than physicians can and should be trained in the techniques of vasectomy, post-partum and interval tubal ligation, provision of injectable hormonal contraceptives and, where legally and culturally acceptable, the carrying out of menstrual regulation or early first-trimester abortion procedures."

Recommendations

Based upon our analysis, we suggest the following to improve performance.

(a) Need of Effective Co-ordination with the Private Sector:

Co-ordination in family planning between the public and private sectors need be accelerated in order to reduce the growth rate of population to a level suitable to the pattern of population distribution and compatible with local resources. Emphasis may be given to the extension of these services to remote areas in the South and the North-East, particularly among low acceptor areas.

(b) Development Measures:

(i) We should extend family planning services throughout the country by increasing the number of

---

mobile units and promoting the use of permanent contraceptive methods, particularly for people living in remote and disadvantaged areas. Emphasis need be placed in providing family planning services to selected groups of people with high fertility rate such as those living in the North-East, the four border provinces in the South, the Bangkok Metropolitan Area. Special emphasis need be placed on providing such services to refugees and hill tribes.

(ii) We should increase and improve the dissemination of information of family planning through the mass media and encourage each province to set up its own public information and dissemination programme using simple language suitable to local conditions.

(iii) There is a need to produce manpower through the provision of technical training for doctors, nurses, midwives, and assistant public health officers. Short-term training courses will need to be arranged for community leaders, volunteers and women and youth groups in basic family planning methods and on how to motivate or attract additional acceptors.

In order to increase all categories of personnel who are able to provide family planning services, nurses and auxiliary nurses who pass the training course on IUD insertions and who have been accepted by
the family programme authorities may be authorized to use this method under the supervision of doctors. In addition, there are also other groups of people such as teachers and volunteer officers who should be authorized by the Ministry of Public Health and the Medical Council to prescribe pills for the second time and after. However, thorough physical examination by auxiliary midwives or doctors should be strictly enforced before prescriptions are authorized for first time users.

(c) Legal measures and incentives:

i) There is a need to issue ministerial regulations permitting trained and experienced Government para-medical personnel to perform sterilization. The Medical Profession Act has already made room for the undertaking of such actions.

ii) There is a need to change the regulations allowing civil servants and other employees to be released from work, without loss of leave, in order to have sterilization operations. After the operation leave of absence should also be permitted.

iii) There is a need to revise article 305 of the Criminal Code to require less stringent conditions for obtaining legal abortions, i.e., to permit legal abortions to be obtained for unplanned pregnancies due to failure of
contraception, because there is, as yet, no perfect
contraception.

(d) Tax Measures: Major tax concessions to be implemented
are as follows:-

1) To exempt family planning devices from
customs duties so that public and private
organizations offering such services may
be able to continue providing them.

2) To develop incentive package to enable the
private sector to set up factories for
manufacturing family planning devices
such as oral contraceptives and others, by
requesting donor countries to permit the
purchase of locally produced contraceptives
as substitutes for those produced in donor
countries.

3) Reduce the tax rates of single persons in
order to encourage them to delay marriage.

4) Allowing employers or donors to deduct the
expenses on the provision of family planning
services to employees as a part of health
care services under the Labour Protection
Law, on their income taxes.
(e) Incentives:

(i) Induce people to use family planning services particularly for sterilization by making payments or awards to those who provide family planning services and to those who motivate others to use family planning if a certain target is met. Provide free child delivery service for those who consent to undergo sterilization after delivery.

(ii) Motivate people to have not more than two children by giving special benefits to small families, for example, by awarding scholarships to children of small families, providing housing welfare services and by offering Government aid to certain groups of people or communities located in the rural areas, e.g., agricultural credit, hiring of farm animals, husbandry services, etc.

(f) Population Education:

(i) Promote the teaching of population education as an independent subject at all educational levels or as part of the regular curricula to meet the needs of each age group.
(ii) Create a better understanding of population education by organizing, at least annually, a seminar programme for educational administrators at the policy-making level. In addition, continuous training programmes may also be arranged for all levels and groups of government and private rural development workers, volunteers and school teachers.

(iii) Encourage community workers and volunteers who have had training in the field to disseminate population education to community members in every village and "tambon".

(iv) Disseminate population education by organizing radio and television programmes, exhibitions and distributing newsletter as well as encouraging both government and private agencies involved in the dissemination of information to incorporate population education in their programmes.

(v) Promote the development of an appropriate curriculum for population education by requesting regional education offices and non-formal education centres to produce books, journals and learning kits to be distributed to schools, libraries or local centres.
(vi) Support research studies and evaluation so that the findings can be applied to further the development of population education.

(vii) Assign responsibility to the National Commission on Population Education for implementing programmes which accord with stipulated policies and plans. The Commission may also serve as the centre for co-ordination, collection of data and for providing services and disseminate information on population education. Adequate funding and staffing must be provided to ensure the effective operations of the Commission.

(g) Information, Education and Communication aspects of Population Activities:

1) Establish a Co-ordinating Committee for Information, Education and Communication for Population Activities to serve as the centre for co-ordinating the activities of both the Government and private agencies, and also for monitoring and evaluating their performance in accordance with the established policies.

ii) Encourage agencies responsible for formulating
national population policy and planning to organize a national seminar for representatives of relevant government and private agencies, in order to outline a master plan for the implementation and co-ordination of projects which are concerned with information, education and communications.

(iii) Provide additional financial resources to those agencies responsible for disseminating information and providing education on population activities in high fertility areas and to those areas with a low family planning acceptor rate.

(iv) Request the Ministry of Public Health and relevant government agencies to allocate more resources to private associations involved in carrying out family planning activities so that they will have the opportunity to assist as much as possible in disseminating and providing, education and communication services on population activities.

(v) Encourage government and private agencies which have not yet undertaken action, to integrate the information, education and
vi) Encourage relevant educational institutions to organize training programmes for their staff who are responsible for information, education and communication services applicable for population activities and to develop the curricula in this field so that it can be integrated into the regular course of study.

vii) Organize seminars for members of the mass media, public relations units of private business firms, government agencies and private organizations to explore means for promoting closer co-operation in the provision of information, education and communication service on population activities.

viii) Train leading figures in folk entertainment to integrate information, education and communication services on population activities into their programmes.

ix) Encourage educational institutions and relevant agencies to carry out studies and research in order to develop appropriate
techniques for implementing information, education and communication services on population activities.