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THAILAND

COUNTRY DEVELOPMENT STRATEGY STATEMENT

FY 82

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January 1980

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
WASHINGTON, D.C. 20523

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January 15, 1980

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Washington, D. C. 20523

Dear Jack:

In preparing the CDSS this year, we were particularly concerned about the extraordinary new pressures Thailand faces as a result of the Vietnamese invasion of Kampuchea, the massive influx of hundreds of thousands of refugees, the soaring costs of petroleum and the international and domestic liquidity crunch.

It is unlikely that most of the pressures will go away in the near future. The costs associated with enhanced security concerns and the energy sector may place claims against some of the resources initially planned to finance priority RTG development objectives. To date, however, we have seen no evidence of a slackening of RTG interest or commitment to growth with equity goals. On balance, the pattern of RTG policies and actions have continued to move, albeit at a mixed pace, in a progressive direction.

The CDSS assumes that the RTG will continue on its present laudable development course, an assumption which can only be tested with time. It further assumes that the sustained support of the international development community will be increasingly important to the RTG as it addresses more complex and tenacious development issues in the Eighties.

The critical importance of the energy sector to Thailand and the increased priority accorded to it by A.I.D., is reflected in the major substantive change in this year's CDSS: we are proposing a doubling of A.I.D. resources to the energy sector from the amount planned in last year's document. we further propose that A.I.D.

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PART I: ANALYSIS

A. Introductory Outline

The description and causes of poverty in Thailand are analyzed comparatively in this report. Section B provides a macro-economic overview Section C is an analytical description of the poor. Section D compares the poor to others in the country, in terms of relative income distribution, regional resource endowment, etc. Section E assesses the causal conditions which the Royal Thai Government is influencing or can reasonably be expected to influence. CDSS Part II then discusses which of these may benefit from USAID assistance.

B. Macro-Economic Overview

Led by a buoyant private sector and supported by prudent monetary and fiscal policies Thailand has experienced almost two decades of sustained economic growth. Real GDP growth has averaged 7.3% and real per capita income 4%. If real per capita income continues to grow at 4% per year (a reasonable assumption given Thailand's falling birth rate) it will rise from $512 in 1979 to $788 by 1990 and $1,167 by the year 2000. It is instructive to note that previous AID "graduate" countries like Korea, Malaysia and Taiwan had similar income levels and growth rates throughout the 1950's and 1960's.

This past economic performance has resulted in a dramatic reduction in the incidence of absolute poverty - from 52 percent of the population in 1962/63 to 25 percent in 1975/76.[1/] However not only does one-fourth of the population (about 11 million) still live in absolute* poverty (and another 20 million or so have incomes below $250 per year), the relative inequality income distribution also has increased. Regionally, Bangkok, with only 10% of the population accounts for about 30% of the GDP. Average GDP per capita is lowest in the North and the Northeast; 35% of the nation's population live in the Northeast and produce only 15% of the GDP, while 21% in the North account for only 12% of the GDP.

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*Defined as $90 p.a. in rural areas and $120 p.a. in urban areas expressed in 1975/76 prices (source: IBRD).

In 1979, we have witnessed the emergence of a particularly serious structural problem in the economy which threatens to vitiate Thailand's development plans. Skyrocketing petroleum prices have been a major factor in an annual inflation rate of 15 percent after almost two decades of stable prices. Thailand's continued high dependence on imported oil could have a dampening effect on economic growth as much of the resources planned for capital formation will need to be reallocated to higher recurrent costs. Moreover, if international liquidity continues to shrink, Thailand will face stiffer competition for access to foreign private capital markets to bridge a growing savings/investment gap. If this scenario holds true, in the medium term, Thailand would have little alternative but to direct a greater amount of resources to the energy-consuming industrial sector with proportionately less resources available for agriculture and rural development.

Thailand with no major conventional energy resources depends upon foreign sources for more than eighty percent of the Country's commercial energy and over forty percent of all energy consumption. Overall energy consumption (in physical units) grows at ten percent per annum and petroleum use while increasing at only four percent per year, since 1973, will in 1980 amount to about $2.3 billion in imports, absorbing the earnings of Thailand's top three exports.

The transportation and communications sector presently consumes 39% of all energy followed by electricity and water utilities, manufacturing, agriculture, commercial services and construction and the energy sector with consumption rates of 19%, 17%, 10%, 9% and 6%, respectively.

Proven oil reserves are commercially insignificant but Thailand has about 7 trillion cubic feet of natural gas. At anticipated use rates the natural gas should last about twenty years, and will have its biggest substitutive impact in the early 1980's, displacing about 20% of oil imports but declining proportionally thereafter. The newly discovered natural gas will initially be entirely absorbed by the increased demand for use in electrical generation. Hydro power currently provides about 10% of the total energy supply but its future growth is limited as there remain few larger-scale commercial sites not already exploited. Lignite

supplies about 2% of all energy and there are estimated reserves of about 700 million metric tons, less than one-half of which it is currently economic to exploit. The RTG is actively considering full exploitation of these reserves. Fuelwood and charcoal account for about 7% of energy use and are a promising source for future energy if the present rapid deforestation can be reversed. In addition to fuelwood it would appear that Thailand's more promising long term sources of energy will be biomass, wind and solar sources.

At the end of 1979 Thailand's petroleum import bill will stand at approximately $1.7 billion (or almost 30% of all imports) and 1980's import bill is estimated to claim a 40% share. Transportation, industry and electrical generation are heavily dependent upon petroleum and there is little room for oil import compression in the near term. Adequate short-term financing is currently available for petroleum imports but the longer term solution will have to be conservation and alternative energy sources if Thailand's foreign exchange resources are not to be seriously co-opted by recurrent energy costs.

The impact on the modernizing economy has been immediate and extensive. Thailand's overall development is dependent upon adequate energy supplies and agriculture in particular will require greater use of pumping and traction power, fertilizer, and pesticides if productivity is to increase. Given the fixed amount of domestic and foreign resources available to Thailand in the short term the growing energy bill could decrease the resources available to agriculture.

Real GDP growth in 1980 is expected to be about 6.0% (with GDP rising to about $24 billion). This is down from 1979's growth of 7.0%, almost solely attributable to higher energy costs, especially in manufacturing and transportation. Agriculture's share in GDP has been steadily declining and is presently 27% of GDP. Agriculture's real growth has been about 5% annually. The Fourth Five Year Plan (1977-81) has target rates of growth for GDP of 7.0% annually. Despite the present energy picture these rates are both reasonable and obtainable over the next two years provided the world economy can avoid a recession

of the 1974-75 magnitude.

Prudent monetary and fiscal policy have (before the changed energy situation of 1973) given Thailand one of the lowest inflation rates in the world (slightly over 2% annually). Consumer prices in 1979, however, will be about 15% higher than 1978 and 1978 prices were 9.7% higher than 1977. The near term outlook is for continued double-digit inflation as energy costs are now - or will soon have to be - almost entirely absorbed by the consumer.

Thailand's imports and exports together account for 52% of the GNP. For a number of years now, Thailand has been running significant balance of trade deficits. Moreover, the rate of growth of imports has been higher than that for exports. The deficit in the balance of trade in 1978 was $1.4 billion and, despite an excellent year in agriculture production, exports and good world prices, the 1979 deficit grew to an estimated $2.2 billion (or almost 10% of GDP). 1980 is estimated to end with a $3.4 billion deficit in the trade account. The deficit in the overall balance of payments in 1979 will reach about $750 million as opposed in 1978's $665 million.

Thailand's international reserves are $2.8 billion or approximately five months merchandise imports. Accumulated foreign debt is about $3.8 billion with public and private debt service a reasonable 15 percent of export earnings. Thailand maintains an excellent international credit rating and is only beginning to tap available public and private lending sources. Recent forays into private international capital markets have been very successful with Thai private and public institutions obtaining among the most favorable loan terms ever granted to an LDC. If, however, the recent tightness in international liquidity continues, then Thailand could well enter a sustained period of credit shortages.

Direct foreign investment levels are higher now than in 1975 (the low point in investor confidence and the peak of foreign disinvestment) but have not reached the 1974 high mark. As of March 1979 direct foreign investment in Thailand totaled $1.7 billion with the U.S. share at 16% or approximately $275 million. The reasons for sluggish growth in foreign investment stem from excessive bureaucratic red tape upon the part of

investment promotion authorities and not problems of political uncertainty or repatriation of profits.

Domestic gross capital formation is increasing but the public portion is increasing faster than private investment. Investment in the second half of 1979 has been especially hard hit by record high international lending rates, a very tight domestic credit supply and bottlenecks in critical construction materials.

Domestic saving as a percent of GDP has fallen from 18.5% in 1978 to about 10 percent in 1979 due to negative real interest rates experienced this past year. Commercial banks heretofore have had to increase agricultural lending as a portion of their portfolio for five successive years. 1980, however, will have the same percent earmarked for agriculture as 1979.

Official statistics put open unemployment at 1% of the labor force in 1979. But underemployment and disguised unemployment are so high as to make reported statistics almost meaningless. Hidden unemployment may affect as much as 30-40% of the countrywide labor force and account for a 20-30% loss of their available work hours.

The labor force has been growing at up to 3 percent per year, requiring the Thai economy to generate more than 500,000 new jobs annually for the age cohort of the 1950's and 60's population boom. About two-thirds of the labor force is engaged in agriculture which is giving off labor at about twice the rate that is being absorbed in non-farm employment. The industrial and service sectors, fast growing as they are, will be unable to absorb all of the agricultural labor surplus with the consequence that open unemployment will be increased in the future. There is substantial seasonal migration inter-regionally, and permanent moves, usually to Bangkok.

In 1980, Thailand will receive approximately $2.2 billion in external capital inflow. About $1 billion will be private capital in the form of commercial bank loans, direct foreign investment and suppliers credit. Approximately $1.2 billion will be official development assistance and RTG public borrowing from private sources. Of this $1.2 billion, over $800 million will be from the World Bank Group ($430 million), the

Asian Development Bank ($150 million) and the Government of Japan ($250 million). Other donors, with much smaller magnitudes but still significant shares include, the USG, UNDP, Canada, Australia and West Germany.

Negotiations are presently on-going with the IMF for a line of credit spread over three years that could total to as much as $609 million. This agreement, if concluded, will raise the projected 1980 capital inflow to $2.4 billion.

C. Analytical Description of the Poor

1. The Outline of the Problem. As already noted, upward of 30 million Thai earn less than $250, and 11 million of these live in absolute poverty. Over nine tenths of all poor live in rural areas, with over half located in Northeastern provinces, about a quarter in the North, a tenth each in the South and the Center, and 5 percent in Bangkok. The poor are concentrated in the agricultural sector and increasingly in unskilled labor categories throughout all sectors and regions. The hilltribes of Northern Thailand are the poorest ethnic minority in the country.

On average, poor households in Thailand are headed by males, 34 years of age, with less than 3 years education. Family sizes average over 6 persons. A large majority of poor households have only one cash income earner and the great majority two or less income earners. In 1977 Kingdomwide real per capita income was $266 (base = 1971-73) ($421 in current prices). Urban households account for about 20% of total households in Thailand. The status of urban poor improved in the early 1960's, but since then the incidence of urban absolute poverty has remain almost unchanged, as contrasted with a reduction in rural absolute poverty.

2. Relative Income Distribution. By far the largest income disparity is that which compares income on a regional basis. In 1977, for example, real income per capita in Bangkok was almost three times the Kingdom average and seven times real income in the Northeast. The explanation is, in part, that gross regional product growth rates vary markedly across regions.[2/] The wide disparity in sectoral growth rates[3/] means that those regions predominantly dependent upon agriculture (North, Northeast, South) lag behind regions diversified into industry and services (Central and Bangkok). If agriculture continues to experience growth rates well below industry and services and if the North, Northeast and South remain largely in agriculture, then regional income disparities will continue to widen.

The urban-rural incomes gap appears to have increased over the 1962/63 to 1975/76 time period, except in the Northeast where slow growth in both urban and rural areas caused less disparity. Intra-municipal and intra-village income differentials are very much dependent upon occupation. Some 98% of Northeast region urban unskilled workers earn less than the 1975/76 urban median income of $276 for this area, and less than 5-10% of North and Northeast regional households earn more than $250 in 1975/76 dollars. (See Annex II, Table/Graph 7.) Even in Bangkok, 80+% of unskilled workers earned less than the median income there of $315. Conversely, about 80% of professional/technical workers and half of the mercantile class were above regional median income throughout the country. The occupational income curves are much flatter in rural areas than in cities and the absolute magnitudes bear no relation inter-regionally. The flatness of the rural occupational income curves indicates a lack of effective demand for non-farm skills in rural areas, and probably presages more migration to urban jobs in the future (which may not exist when needed).

A number of different measures demonstrate that income distribution is worsening in Thailand. However, we note that Thailand's degree of income inequality compares favorably to other LDC's (of similar GDP) when an international comparison of Gini coefficients is made. In general, income levels are more similar in rural areas as opposed to urban, but

the change in inequality has not been uniform. On a percentage basis the coefficients have worsened relatively more in rural areas reflecting the growing importance in commercial over subsistence agriculture, i.e., income stratification in rural areas in increasing faster than in urban areas.[4/]

3. Literacy and Educational Access/Attainment. About four-fifths of the adult Thai population have completed lower primary school (4th grade). Only about 14% of the workforce have education beyond the fourth grade, and only about a fifth of these went on to complete college or teacher training. While the 80+% which has completed fourth grade is nearly the same as the self-reported literacy rate, fourth grade literacy attainment is marginal and probably about half of these lose their literacy within three years, at least in part due lack of reliable access to relevant printed media. It is thus likely that more than half of the rural population is unable to read and write.

Participation in lower primary education has improved and statistics appear to show that Thailand has now achieved virtually universal education through the fourth grade. However these statistics contain repeaters, so that probably about one in ten children today are not completing grade 4 most of these concentrated in remote rural areas. Beyond the fourth grade, real participation (eliminating repeaters) falls off markedly.

4. Health. The high morbidity rates for the country reflect the lack of an effective preventive health system; however, a relatively responsive public and private curative health care delivery system has managed to maintain a crude death rate of 10 and an infant mortality rate of 68. In addition, the country is confronted with a malaria control problem that is generally limited to the border and sparsely populated mountainous areas of the country.

The utilization rate for governemnt sponsored curative facilities is quite low, and it is estimated that government sponsored facilities deliver only 20% of the curative health care used in the country. The rest of the care is delivered through the private sector: either public sector employees working during off-duty hours, or purely private sector

service providers. Health care services are more readily available in urban areas as illustrated in data which states that 344 or 52% of the districts in Thailand (out of a total of 659 districts nationwide) have no doctors - either living and/or working in the district on a daily basis. Health services - to the extent they are available in these areas - are provided through para-professionals and non-professionals in both the public and private sector.

5. Nutrition. Children living in the rural sector and in Bangkok slum areas, and pregnant/lactating women, are the most vulnerable to nutritional deficiencies. Available data from the Nutrition Division of MOPH concerning malnutrition in Thailand suggest that approximately 56% of the infants and children (between 0-5 years of age) suffer from protein and caloric deficiencies based on weight by age information. Of the 56% malnourished children, approximately 41% are within 75-90% of their ideal weight or are first degree malnourished; 13% are second degree malnourished - between 60-75% of their ideal weight; and 2% are third degree or severely malnourished - less than 60% of their ideal weight. Although the data for 1st and 2nd degree differs slightly by region of the country, third degree malnutrition is fairly stable at 2% throughout the country.* In addition, the Northeast region of the country is generally found below the average of the scale and the East-Central region is above the average of the scale with about 58% of the children tested being free of malnutrition. Approximately 42% of the Northeast population as a whole suffered from at least some malnutrition, although one source indicates 72% is a truer figure based on household income data.

Although Thailand is a food exporting nation, malnutrition is pervasive throughout the country. The single most important factor influencing nutrition practices in the country is family income. The RTG's interest in a broad based developmental effort will, in the long run, greatly improve the nutritional status in the country. Inadequate water supply for garden crop development and environmental

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*In fact, the highest severity of protein/calorie malnutrition occurred in Bangkok slums, with first degree PCM among 0-6 years old children at 82%, second degree at 46%, and third degree at 7%.

sanitation is also a major impediment to improved nutritional status, and water supply is an area that is appropriate for short term policy interventions. At the present time, the government is sponsoring a supplemental food distribution program; however, cost, logistical problems and acceptability preclude this from being a lasting or efficient solution to the malnutrition problem. Widespread indigeneous food production for household consumption, supported through programs that promote water availability, is the single most viable solution to the malnutrition problem.

6. Population Fertility, Mortality, Growth, and Migration. Indications are that a decline in fertility began in the 1960's and accelerated in the 1970's.[5/] Fertility is lowest in the North, but the most rapid decline has been in the Northeast, with the most gradual decline in the South. Fertility in urban areas continues to be lower than rural areas, although rural fertility is rapidly declining.

National surveys suggest the use of contraception has accelerated since 1975. The percent of currently married women, age 15-44, practicing contraception has increased from 15 percent in 1969/1970 to 53 percent in 1978/1979. The most rapid change has occurred in the Northeast, where prevalence of contraceptive use has increased from 25 percent in 1975 to 45 percent in 1978. Contraceptive use in the South, however, still remains far below the rest of the country and a substantial percentage of the users rely on less effective, non-modern methods. Interestingly, the increase in contraceptive use has been greatest among women with no education (27 to 47 percent) and at least among (52-60 percent) among women with secondary of higher education.

The crude death rate (CDR) has decreased from an estimated 30.9 per thousand in 1945 to 8.9 per thousand in 1975. Between 1965 and 1975, the CDR is estimated to have fallen at the rate of 2.8 percent per annum. Infant mortality, which is considered to be a more sensitive indicator of improved health conditions, it estimated to have fallen from 85/1,000 in 1965 to 68/1,000 by 1979, although a large gap exists between the IMR in urban and rural areas. Infant mortality is reported to be much higher in the North than in the Northeast, where income and other determinants of health status are less favorable. Although this may partially a function of incomplete statistics, this surprising phenomenon nevertheless deserves special investigation.

Although there is disagreement about the rate of population growth in Thailand, the Thailand Panel of the National Academy of Sciences (U.S.) carried out a very thorough investigation of existing data, and determined that the growth rate was between 2.3 and 2.6 per annum in 1975. This was down from a rate of 3.2-3.4 percent in the early 1960's. The data seem to show that fertility has declined by another 10-20 percent since 1975, causing a further decrease to 2.0-2.3 percent in 1979. It appears, therefore, that the RTG target of a 2.1 percent growth rate by 1981 may already have been achieved. However, it is important to note that a continued 2.0 percent growth would result in a doubling of the population (currently estimated to be 46.2 million) in 35 years.

Support of population in or from Northeast Thailand and reduction of population increase rate there will be the most important demographic issue facing Thailand over the next decade. Although population growth rates in South Thailand are also fairly high, population there is still small but over one-third of the population of Thailand now resides in the Northeast where a large number of children already born will join the labor force. The Northeast is the most resource impoverished region in Thailand, environmental degradation is already becoming a significant problem, and migration in and out of the Northeast (much of it seasonal) although still relatively low is now increasing. Out-migration from the Northeast is higher than other regions. Given the growth of the industrial sector vs. that of agriculture and that good arable land is now scarce throughout Thailand, it is likely that the presently-predominant pattern of intrarural migration, especially to settle new areas, may be offset by rapid increases in rural-urban migration patterns, especially in seasonal and other forms of back-and-forth movement in regional cities. Such movements should increasingly involve Northeastern Thai.[6/]

Bangkok alone is conservatively projected to grow by the present 4.1% per year rate, almost tripling its population to 12 million by end century. If the trend in these rural-to-urban movements from Northeast continue in future, basic conditions in Bangkok will deteriorate dramatically.[7/] The only viable alternatives for these near-certain population

movements are a) labor resource mobilization in modernized Northeast agriculture and b) orderly growth of regional urban employment centers such as Udon and Korat.

D. The Causes of Poverty

Differences in income can be explained by differences in access to income producing assets and opportunities for productive employment of these assets. Land, labor, capital (both physical and financial) and technology are the resources or assets available to an economy. The Thai private sector has generally been credited with making efficient use of available resources but monopoly elements and concentrations of economic power have prevented a more equal distribution of income-producing assets and hence income itself.

1. Access to Private and Public Services. A cross-correlation analysis of factors yields an obvious poverty profile: people with the lowest per capita income live largely in rural areas, have higher dependency ratios, less schooling, more deaths from communicable disease, housing without water, toilets or electricity, lack radios and private transportation and are more victimized by crime. Further, the correlation analysis determined that "...the degree of urbanization is a good yardstick of the level of well-being of the population and the accessibility to social services; that the richer (provinces), as measured by gross provincial product per capita, are precisely those which are more urbanized and have better social services..."[8/] It is probably axiomatic that the growth of regional poles of development is required in order to provide effective urban locations for goods and services provided either from public or private sources, in the rural areas. In fact, however, Bangkok has been the big urban growth center, and this "service to/market for" relationship of provincial cities and surrounding rural areas is stunted. Public policy shifts and public/private investment in localized service centers have not yet been able to establish the logical urban/rural hierarchy. A working continuum of farm, village, regional city, and Bangkok is elusive despite the partial step of designating nine regional growth pole cities in the present Five Year Plan and recent moves to establish village-based social infrastructure to redress past public

investment imbalances. Under the Progress and Commitment section below, we discuss more fully a number of important RTG policies, including the provision of such services, that have impacted upon income distribution and economic development.

2. Land. Average size of agricultural land holdings has generally increased since 1962 but good agricultural land is now scarce. Indeed, the largest increase in average size of land holding has been in the resource-scarce Northeast but this increase is accounted for by cash-crop expansion onto upland soils, which despite their marginality have produced fairly high yields under simple technologies. In both the North and Northeast the majority of farms are without access to irrigation. In the Northeast, even the most optimistic irrigation development plans would still omit eighty percent of the population.

A wholly clear picture of the dynamics of tenancy and landlessness is not yet available, although regional differences exist and in some instances must be cause for concern. The national figures[9/] indicate tenancy/partial tenancy at 9% for the Northeast, 29% for the North, and 40% for Central Thailand, whereas detailed local studies have found higher figures, some almost twice as high.[10/] Tenancy is lowest in the Northeast but the land is poorer and part of the holdings are in even less well-endowed upland fields. In North Thailand, the modal size of land holding, including upland fields, is lowest in the country. Land scarcity in the Northeast has already led to significant agricultural intensification and some land-status-based socio-economic stratification within lowland villages. Tenant contracts are usually oral rather than written, for short duration, and in some areas of the North landlords take up to one-half the production in contravention of the 1974 farm rent control law. The disincentives to tenant capital investment are problematical.

Using a subregional or provincial analysis, even more startling differences emerge in land holding size and tenancy patterns, particularly in the North. All provinces in the upper North show a preponderance of, small ownership holdings (less than 15 rai), but in the lower North, all provinces show a preponderance of holdings greater than 15 rai (Table).

Size of tenancy holdings somewhat follows the ownership distribution pattern except there are many more small holdings in the lower North than would be expected from the ownership pattern (see ref in Table 17). Thus the extent to which tenancy rates are a distributive rather than a resource endowment problem differs widely among provinces. More provincial data analysis is needed before policies can adequately address widely differing provincial situations.

Accurate quantitative data in this area is essential in that existing and anticipated tenancy and landlessness rates can influence access to resources such that strategies aimed at increasing production may not benefit the poor if rental rates are high, etc. (discussed further below).

Land (and, with it, shelter) ownership is also a problem for the urban poor. Land speculation frequently cuts the low-income population out from any chance of achieving land security. Demand, at least in Bangkok, for RTG-financed low-cost homes is enormous and increasing as population growth in and migration to the urban center continues.

3. Capital. Agricultural capital other than land is not well-developed, consisting mainly of plows, draft animals, hand-tools, etc. In North Thailand fixed capital formation per average farm was $432 in 1975-76, of which well over half was in land and land improvement, less than a quarter in buildings and well less than a quarter in machinery, tools, and transport. On a per-capita, country-wide basis, however, fixed capital formation is probably quite low ($13 in 1970). Analysis is also needed to determine the associative relationsips between this structure of capital formation and poverty.

Most credit to farmers in Thailand still comes from informal sources such as moneylenders, merchants, relatives and acquaintances. Interest rates are estimated to be between 15-36%, but may be up to 50% in some cases.[11/] Even at these rates much of the credit goes to better-off farmers. Since 1975, however, increasing amounts of formal (bank) credit have been channelled to agriculture (RTG role in this discussed below), but despite this significant expansion only 25% of

the farmers received this credit by 1977 and large farm owners received the greater share. Tenant farmers in particular are apparently not receiving significant formal credit but accurate data on direct and trickle-down credit is lacking.

4. Human Resources. The causal relationshipe between poverty and many human resource factors in Thailand are not yet clear but are undoubtedly important and deserve investigation. Severe malnutrition, for example, affects child growth and can even affect mental development. The relationship between poverty and education seems clear; the correlations between income and education are strong at all levels.[12/] The curricula used in rural schools are not directly relevant to the needs of rural dwellers. Furthermore, if efforts to achieve greater local administrative capability are to succeed (discussed below), the human resource skills at local levels will need to be improved.

5. Political and Social Structure. The organizational structure of Thai governmental administration today is basically the same system that was established in the last years of the nineteenth century, albeit now constitutional rather than absolute. In order to prevent colonial encroachment, the system was intentionally highly centralized to gain rapid and maximum control of previously more autonomous outlying areas. The historical success of and attachment to this strategy now makes governmental decentralization institutionally difficult.

Since 1932 Thai political structure has been traditionally accountable to constituents in the governmental sector itself, with links into the business sector at urban levels but generally remote from the lives of the rural villagers.[13/] Economic development of the agricultural sector in Thailand has occurred, largely independent of this structure, through the extensification of agriculture.[14/] As good agricultural land is becoming scarce, (especially land easily adapted to wet-rice cultivation), the necessity of meeting the needs of rural inhabitants through agricultural intensification will require an increase in the institutional capacity of private and public sectors to deal

with rural problems. In any event, the traditionally distant relationships between government and villagers will certainly undergo quantitative change and the often-noted political vacuum at the village level can be expected to rapidly disappear.

Demographic trends and resource constraints in Thailand, already evidenced in North Thailand, tentatively suggest that a number of basic structural changes are likely to occur. With more frequent short-term migration, increasingly interconnecting cities and rural areas, problems (and thus solutions) to rural and urban poverty will become increasingly interrelated. Second, as the problems in rural areas and in regional urban centers increase, greater pressure for decentralization out of Bangkok should begin to force localization of a variety of governmental functions, probably at province level. Concommitantly, as bottom-up pressures on governmental services increase, the potential for local level organization should also increase. Governmental efforts to shape and guide this process began in the democratic period (1973-76) with the national funding of tambon (sub-district) councils. These efforts were largely dormant after 1976 but are now being renewed in altered form under the present administration. If these efforts continue to accelerate, the potential for locally-initiated development action should also increase correspondingly. However, strong cultural values stress the passing of responsibility and decision-making to higher levels. The degree to which these values can be adapted, modified, or bypassed may well be the ultimate measure of the degree to which decentralization can occur.

Both Thai politics and society have been characterized as vertically-integrated via patron-client relationships.[15/] Horizontal integration is much weaker than the vertical linkages but should not be thought of as "loosely structured".[16/] Personal cross-linkages between governmental agencies, for example, are accomplished through a network of acquaintanceships. Thai government expansion, in size and function, will increasingly tax these networks. It is likely that formal (non-personal) channels will become increasingly utilized to handle routine business and will have to do so more effectively. Important in this

regard are the strengthening of political parties and the growing importance of labor unions. The characteristics and mix of formal and traditional, governemntal and institutional non-governmental" are as yet unclear.

Thai village social structure, once also characterized as "loose," has since been shown to be much more structured than previously believed. Furthermore, land fragmentation, landlessness and tenancy, already a significant problem in parts of North Thailand, are likely to become more so as the labor force grows. Within rural villages this is likely to lead to increasing intra-rural social stratification. This is already partially evidenced by increasing intra-rural income stratification. As the opportunities for economic and social advancement within the village thus decrease, rural poor are increasingly likely to utilize and expand linkages with patrons and potential employers outside the village, especially in regional towns and cities. Greater horizontal solidification among wealthier land-owners within villages is also likely to occur.

A more complex, changed urban-rural social/political structure, and increasing social problems, are thus likely to emerge. Development efforts aimed at helping the poor will thus face more difficult problems. Increasing village agricultural production, although a logical path for expanding the economy, may not in fact have a direct impact on the poor.[17/] Determination of the extent of socio-economic stratification within rural villages (present and projected) will be important for designing adequate assistance measures. In some cases control of resources within the village may inhibit effective development aid to the poorer villagers (i.e. increases in production that one way or another would end up profiting the richer farmers in the village rather than the poor). In such cases off-farm income-generating activities in the urban growth poles may be needed as a safety value and also as a very legitimate additional tool to address poverty regionwide.

Within Thailand, socio-political constraints on opportunity also exist for various groups. Most disadvantaged of the ethnic groups are the various hill peoples whose education, cultural separateness and

legal status vis-a-vis Thai society effectively block meaningful participation in the larger society. Less severe blocks to advancement exist for regional minorities (North Thai, Northeast Thai, Southern Thai and Muslim). The principal blocks to advancement for regional groups are in restricted educational opportunity.

The legal status of Thai women has improved markedly. In 1976, new legislation gave women improved legal rights in divorce proceedings, ownership of property, and in the conduct of business. Women actively participate in most professions and in all sectors of the economy. For example, women play a vital role in both the educational and medical professions and are well represented in the civil service. In rural households, women often hold the household funds and usually play key roles in economic decision-making. Their participation in the labor force is very high compared to many other Asian countries. But women in Thailand also face disadvantages in advancement and training opportunities in the labor force, especially rural women. Outnumbered in sub-professional occupations, women are also underrepresented in most higher income jobs. The changing role of women in Thai society is one that has not been adequately investigated and demands research priority if the situation is to be adequately understood in the Thai context.

Finally, awareness of inequality in income distribution and in opportunity has definitely increased in Thailand over the past half-decade or so. This is certainly reflected in the impressive rural voter participation. The growth of mass communication and the spread of ideas has facilitated this new awareness. Thus not only is income disparity increasing in Thailand; it is also the subject of increasing dissatisfaction by Thailand's poor. However resolved, the traditional nature of vertical structure in Thai society is likely to change as a result of this awareness.

6. Environment.[18] The major ecological issue facing Thailand in the near future, for both urban and rural areas, is the maintenance of the principal components of the resource base under conditions of depletion and pollution which are resulting from competing usages, population

pressure, growth and development. Principal components under the most stress are surface and ground water, forests, cultivatable land, and fish.

In North Thailand water quantity, quality and timing depending on maintenance of watershed areas, all of which are fortuitously located within Thailand's borders. Maintenance of watershed in North Thailand is crucial to the state of the Central Thailand "rice bowl". Development in the hills of North Thailand and the alleviation of poverty there will have to take careful account of this issue while there is still time. The problem is further complicated by the fact that tropical forest ecosystems are inhabited human ecosystems. Since habitation patterns in tropical uplands are difficult to change, watershed maintenance becomes a complex problem. Large areas of unihabited forest reserve, on the western model, are probably an unfeasible solution.

In Northeast Thailand maintenance of upland watershed is not as crucial to the welfare of the Central Thailand wet-rice system as is maintenance in North Thailand. However, Northeast watersheds are of extreme importance to development within the region. Water quantity and timing are already problematical in the Northeast due to climatic conditions and the lack of high mountain watershed. Thus the maintenance of existing upland watershed is important in helping to prevent wet season flooding, excess siltation, and dry season drought. This upland watershed has been significantly reduced over the past decade by massive cash-crop encroachment. Other environmental issues, such as the problem of salinity levels, are also important in the Northeast.

Environmental problems affecting poverty are not confined to the rural areas of North and Northeast Thailand. They will become increasingly important in urban areas as well, both in Bangkok and in provincial cities. With population growth, it is unlikely that the rural sector will be able to absorb a proportionate share of increased population and labor force. While successful rural development strategies could conceivably improve the lot of rural dwellers and lessen expected rural to urban migration, even optimistic projections would forecast

vastly increased urban populations. Environmental problems in Bangkok, already serious, would be further exacerbated and would most affect the increasing numbers of urban poor, i.e., access to clean water, adequate shelter, adequate sewage facilities, etc.

Principal problems in the resource components under stress (water, forest land and fish) have not been adequately identified and there is an urgent need for more detailed information.
The disappearance of forests has been generally blamed on "shifting cultivation" but this can be misleading. Although much forest land has indeed been converted to agriculture; the vast majority of the new land tillers throughout the country are Thais, not hilltribe swiddeners, and it is unclear what percentage logging, wood-gathering and charcoal production account for this loss, nor, equally important, what alternatives exist to solve the problems and what policies will be effective. Equally important, due to the increasing costs of energy, the mix of causes of forest destruction can be expected to change (i.e. a firewood and charcoal crunch is expected), thus solutions and policies will have to take account of these expected changes.

The problem of marine fish scarcity is presently one of over-exploitation (demersal fish production peaked in 1971), but marine pollution in the Gulf of Thailand is one the rise. For riverine fishing (an essential food source for much of Thailand's population), new destructive techniques (dynamiting and poisoning) are probably causative, as is population pressure and aquaculture intensification in general.

Overall, it is clear that Thailand presently stands on the threshold of potential environmental crisis that may occur over the next ten years. While the National Environmental Board initiates studies and makes recommendations, it lacks the authority to regulate or sanction. How the RTG responds to the expected pressures may well determine the choice between continued development or future impoverishment.

7. Summary of the Causes of Poverty. A number of causes of poverty in Thailand have been discussed, in terms of resources access and social services, rural land status, capital, technology, human resources,

policy, society and environment. In general, poverty in Thailand has been explained as both a resource scarcity as well as a distributional issue. The 11 million people living in absolute poverty in Thailand have been basically left out of the development process that has raised the incomes of so many of their countrymen. Specific associations were found in unequal availability of governmental services, low non-land capital formation, insufficient rain-fed agricultural technology, poor resource quality in the Northeast, insufficient rural education, etc. Several important factors potentially important to incidence of poverty in the near future were also discussed. These were seen in the context of increasing population pressure and rapid change from agricultural extensification to intensification. Increasing socio-economic stratification within rural areas, and possible environmental degradation of water resources were specifically cited. We have argued that RTG policies, functions and services have influenced who and how many are poor in Thailand, and that future RTG actions can significantly reduce the incidence of poverty in Thailand while maintaining growth if specific responsibilities can be spelled out and acted upon.

E. The RTG Response: Progress and Commitment

The analysis above indicates that availability of important governmental services is negatively correlated with poverty. While this implies government policy itself has been a factor in poverty distribution, it also establishes the potential role of government to help alleviate poverty in Thailand. In this section we assess RTG awareness, capability, intentions and obstacles to the alleviation of poverty in Thailand. The institutional capability of the Royal Thai Government to promote development suffers from over-centralization, duplication of function among ministries, coordination problems (in the mix of formal and traditional systems), and also from historically-evidenced political instability at top levels. These kinds of problems, however, are by no means unique to Thailand, nor indeed to the developing nations of the world and there is ample reason to believe that RTG is serious in its concern for an equitable distribution of income. The RTG's Fourth Five Year Plan, for the first time, has made the better distribution of income a major

national goal. Toward this end of RTG has established quantitative targets for a better distribution of the tax burden and sharing of government services. Serious deficiencies also exist however, thus both positive and negative aspects are discussed here under six general topics: 1. Decentralization and Participation, 2. Public Expenditures and Services, 3. Investment Climate, 4. Domestic Resource Mobilization 5. Human Rights, 6. Financing of Development.

1. Decentralization and Participation. In an effort to increase the relevance, immediacy, and effectiveness of rural development investments, the Thai Government launched two new programs in 1979. One is the New Village Development Program (NVDP) assisted by the Japanese Government, which will make development funds available to 5,000 selected villages throughout Thailand for small rural works and income promotion projects, with an emphasis on local determination and implementation of projects. The second, which USAID proposes to support, is the Changwat (Province) Development Program, which allocates a small portion of the national budget (1% in FY 79) to a special fund to finance rural development projects of high local interest that are identified for priority attention in provincial plans. In the face of tight deadlines under these new programs, first-year projects tended to be taken from lists of small tambon and village infrastructure needs compiled several years earlier under the guidance of community development workers. However, until FY 1979 these projects had lacked sources of funding.

Both programs may be seen as a particular institutionalization of a process of government-sponsored rural development which has been going on in Thailand for at least the past two decades. Much that has been learned from previous institutionalized efforts--e.g., Community Development, ARD, the Developing Democracy Program of the late 1960s, and most recently the Tambon Development Program--has conditioned the structure of these programs. It has also been designed to carry out policy objectives which are different than those of the past; in specific, it has the objectives of promoting development primarily among the rural poor and of stimulating greater participation of rural people in the development process. While these objectives certainly

were not fully realized in the first year of the Changwat Development Program, the trend which that program--and NVDP--represent in terms of the larger process would appear to be towards these ends.*

While both programs are impressive in their aims, the amount of funding is small compared to the vastly greater development expenditures of central line ministries. Moreover, the budget percentage and absolute amount of the Changwat Development Fund declined in 1980, from 1% to 0.8% and $47 million to $45 million respectively. The planning and budgeting operations of line ministries has tended to be concentrated in Bangkok, with local participation a concept that is only beginning to take hold.

Nevertheless, subjective indicators lead us to believe that the RTG commitment to decentralization and participation is far greater than suggested by the level of resources currently programmed through decentralized means. We find a consistent concern for serving the rural poor and deconcentration of development administration at all levels of the bureaucracy. The Steering Committee for the Fifth Five Year Plan (1982-1986) has identified decentralization as a vital area for examination and will designate a work group to recommend means of effecting decentralization. Ministry of Interior (MOI) officials met at a workshop on integrated rural development in November 1979, and recommended steps (later officially announced) to assure more meaningful local participation in development actions and greater budget authority by sub-district councils. Such actions suggest that a policy of decentralization and participation is slowly becoming institutionalized. If performance is to follow commitment, increased funding for decentralized development must follow including (in the longer-term) local revenue generation capacity.

2. Public Expenditures and Services. Since 1975, the level of RTG expenditures in the provinces is well above revenue collected in these

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*Charles Keys, Government Development Assistance for Thailand's Rural Poor: A Social Impact Assessment of the Provincial Development Program, August 1979.

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same provinces. The provincial deficits have been financed by borrowing and transfers of revenue from Bangkok. Despite this encouraging trend, resource transfers to the provinces are still highly regressive and inequitable on a per capita basis. Expenditure problems are of two basic types. First, the historic pattern of relying on precedent in division of appropriations and expenditures makes it extremely difficult to shift funds into priority areas. The following table illustrates this fact:

	Economy		Education		Health	
	Amount	% of budget	Amount	% of budget	Amount	% of budget
1974	7,503.6	19.3	7,023.3	18.0	1,084.0	2.8
1975	12,643.3	25.4	10,287.5	20.4	1,507.6	3.0
1976	16,144.3	25.8	13,225.7	21.1	2,649.3	4.2
1977	14,583.5	21.2	14,841.2	21.6	3,430.8	5.0
1978	16,076.6	19.9	16,358.4	20.2	3,263.2	4.0
1979	17,603.9	19.1	18,004.2	19.6	3,884.8	4.2
1980	22,823.7	20.9	22,583.4	20.7	4,539.5	4.2

	Services		Defence		Other		Total Budget
	Amount	% of budget	Amount	% of budget	Amount	% of budget	
1974	3,006.5	7.7	7,165.8	18.4	13,244.4	33.9	39,027.6
1975	3,773.0	7.5	8,289.2	16.4	13,999.4	27.6	50,500.0
1976	4,249.0	6.7	10,569.7	16.9	15,812.0	25.3	62,650.0
1977	4,748.5	6.9	13,101.0	19.1	18,084.9	26.3	68,790.0
1978	5,538.0	6.8	16,405.1	20.3	23,358.7	28.8	81,000.0
1979	7,160.1	7.8	19,066.2	20.7	26,280.8	28.6	92,000.0
1980	7,682.9	7.1	22,349.9	20.5	29,020.6	26.6	109,000.0

Source: Budget Bureau, 1979

Second, the increase of expenditures to approach per capita parity with Bangkok would require vastly increased revenues (see below). RTG response to the expenditures problem is generally one of incremental changes, i.e., to shift increases at the margin into priority areas rather than to cut budgets in non-priority areas. This is facilitated by extrabudgetary borrowing from domestic and, especially, foreign sources (commercial and concessional). It is also interesting to note that the share of the RTG

budget devoted to capital expenditures has decreased steadily from about 27 percent in the early 1970's to slightly over 20 percent at present. Presumably recurrent expenditures resistant to easy budget cutting, such as salaries a governing bureaucracy, have demanded a larger share.

Following is an analysis of RTG performance and commitment by key development sectors affecting the poor majority:

a. RTG Agricultural Policies. During 1979, robust world prices for the main Thai agricultural products and more effective application of RTG policy instruments regarding rice exports tended to alter the urban-rural terms of trade in favor of rural producers. The RTG maintains the controversial export premium on rice. However, whereas the rice export tax in 1974 ($255 per metric ton) was 80% of the world rice, the tax incidence in 1979 ($45 per metric ton) declined to 12% of the world rice price, thereby lessening the disincentive effect of the premium. In 1979, world rice prices were about 34% higher than the previous year and domestic farm gate prices were 32% higher. In similar situations in the past, the RTG increased the rice premium and imposed export volume quotas. They did not do so in 1979.

The RTG also maintains a price support program for paddy and increased the floor price significantly in 1979. Whereas this program manifests the government's intention to protect farm incomes its past effectiveness has been hampered by administrative problems in assuring appropriate timing of government purchases, prompt payment to farmers and providing adequate transport and storage facilities. The most recent government intervention in the market in December have had a more effective impact in driving up farm gate prices.

The target group of the AID program in Thailand consists primarily of small holder, subsistence producers who have limited access to irrigation. Reorientation of RTG rice pricing policies, e.g., elimination of the rice premium, would undoubtedly have an incentive effect on rice farmers. However, this incentive would induce the strongest

production responses from farmers in the Central Plains and in irrigated sections of the North and Northeast who have the potential to double-crop, use high-yielding varieties, and increase their applications of fertilizer, given favorable price ratios between rice and fertilizer. Rainfed rice farmers have little in the way of marketable rice surplus nor the productive potential of farmers in irrigated areas. They would be much less served by alteration of current rice pricing policy.

A more effective means of serving AID's target group is by the delivery of inputs and services that promote increased production and diversification of income sources. The Year of the Farmer, and its projection over the next several years, has stressed this increased flow of services with special emphasis on water resources, extension, credit, and improvement of agricultural cooperatives. Concomitantly, the budget of the Ministry of Agriculture increased by 24% from 1979 to 1980, vs. an overall budget increase of 18.5%. Prime Minister Kriangsak has directed water resource development agencies to increase expenditures on water resource projects by 20% in 1980 with primary orientation to the Northeast and small-scale projects serving low-income farmers. The level of effort in small-scale water resource development will represent a 50% increase over 1979.

The National Agricultural Extension Improvement Program initiated in 1977, proposes a seven-fold increase in the number of agricultural extension agents, placing agents at the sub-district (tambol) level whereas previously the district (amphur) was the lowest administrative level at which the extension service was represented. To date, the RTG has solidly backed this program by timely allocation of civil service positions and budget. Consistent with the intended momentum of the Year of the Farmer, the RTG greatly accelerated the pace of implementation of this program in 1977. Phase II of the program, governing 39 provinces was initially planned to take place over five years, with activity in only two provinces in 1980; this phase has been telescoped into three years, with ten participating provinces in 1980.

There have been significant progressive increases in formal, institutional credit made available to agriculture. The loan

portfolio of the Bank for Agriculture and Agricultural Cooperatives increased by 22% in 1978/1979, and a similar increase is forecast for 1979/80. More significantly, the Bank of Thailand has required commercial banks to increase their agricultural lending by stipulating a minimum percentage of bank deposits that must be loaned to the agricultural sector. This percentage rose from 7% in 1976 to 13% in 1979; in 1980, it will remain at 13%, primarily because of a general squeeze on liquidity.

The RTG also initiated a major program in 1979, to alter the structure of supporting institutions for agricultural cooperatives and improve the economic performance of cooperatives--to the benefit of the farmer. Among other objectives, the improvement program aims at strengthened management and more efficient input supply, credit, and marketing operations. It would also enable cooperative members without clear land title to obtain credit far more easily.

In an effort to buttress all these vital elements of its agricultural policy, the RTG has established an oversight mechanism ("Operations Room") for Year of the Farmer programs in the Office of the Prime Minister and revitalized National Sub-Committees for Water Resources Development, Agricultural Cooperatives, and Rural Development.

There remains some divergence, however, between policy commitment and demonstrated performance. Results of the Year of the Farmer have been announced, somewhat too facilely, in terms of completed projects and funds expended. Meaningful impact at the farm-level, and particularly the extent to which new or expanded service programs have made any significant difference for low-income farmers, needs far more detailed scrutiny. Despite laudable intentions in accelerating the agricultural extension improvement program, there are serious questions about the RTG's ability to recruit qualified personnel for newly established extension positions; recruitment in Phase I (covering 33 provinces) is already 33% behind schedule. Regarding credit, little data is available concerning the amount of the increased credit flow which is reaching low-income farmers. It is widely believed that this target group must still primarily rely on traditional, informal--and high-interest--credit sources. Unless the liquidity situation improves significantly,

the RTG would have to readjust credit allocation policies to assure greater availabilities for the agricultural sector. While initiatives in the cooperatives sector are hopeful, there are serious doubts about the ability of cooperatives to compete with the private sector in business operations and the extent to which cooperatives will be established as voluntary associations of farmers in their self-interest rather than administrative instruments and wards of the bureaucracy.

In sum, we conclude that the RTG is committed towards serving the farm population, including low-income farmers, through a number of policy instruments that affect inputs, organization, and management. More attention is needed in the evaluation of performance and benefit incidence and in the effective implementation of key programs so that the intended results are achieved.

b. Population. Since the early 1970's, Thailand has experienced a dramatic and virtually unprecedented decline in fertility. Contraceptive prevalence has risen from about 17 percent to over 50 percent, while the growth rate has dropped from close to 3 percent in the late 1960's to 2.1 percent in 1979. Much of this decline has probably been due to a variety of social and cultural conditions which seem highly conducive to the adoption of innovations, but a major contributing factor has been the high level of RTG commitment to reducing the rate of population growth.

As a result of high level official concern about population, a major effort to provide family planning services began in 1968 and was later expanded in 1971. Using an integrated MCH and family planning approach which relies heavily on non-physicians, contraceptive services have become widely available. Government officials at virtually every level have been very supportive of family planning efforts and the Ministry of Public Health has been particularly effective in mobilizing the participation of the private sector. Evidence of RTG commitment to population planning is also apparent from the steadily increasing budget allocation for family planning activities as reflected in the National Family Planning Program budget and in the family planning component of the Primary Health Care Project. For FY 1979 the overall commitment is estimated to have been over $12.5 million (cash and in-kind). This

statistic does not, of course, acknowledge the fact of active private sector agency program or that the RTG has provided a climate conducive to such activity.

In sum, with strong RTG leadership and budget support for family planning, it now appears certain that the Fourth Economic and Social Development Plan goal of a 2.1 percent population growth rate will certainly be met. The RTG is already beginning to focus attention on the next plan period (1983-1987), for which they are considering a demographic goal of 1.5 percent per annum.

c. Health. RTG commitment in the field of health is strong. Although the health budget is limited, and expectations of receiving a larger portion of the national budget are dim, the RTG Ministry of Public Health is attempting to select and support the specific health components that will make the greatest impact on improving services in the rural areas of the country. Budget allocations, however, are not easy to shift; Bangkok still receives a disproportionate share of total expenditures compared with, say, the Northeast and its much larger population. Also, much of the budget is consumed by recurring administrative costs and overhead.

The MOPH is now supporting a nationwide deployment system for para-professionals and has targeted twenty provinces for specific additional personnel and institutional improvements. In addition, the government has initiated a major program that supports village level health improvement efforts that will build a responsive service system from the ground up, rather than the traditional top down health system.

In the field of preventive health care, the MOPH is able to immunize about 50% of the children between the ages of 0-1 in 1978 with basic childhood immunization (DPT, BCG, and Smallpox). The MOPH similarly immunized substantial numbers of children from 1-5 years of age. The use of sanitary waste facilities is now over 25% for rural villages, and 60% for all district towns in the country, although this is clearly still inadequate. The Ministry is considering a renewed effort in this area.

Another major area that has traditionally been handled by the Ministry of Public Health is rural water supply. The availability of plentiful water is one of the most critical factors affecting this area to parallel the efforts made toward improving rural water supply through other arms of the RTG bureaucracy.

d. Nutrition. The MOPH is presently supporting a nutrition program that includes the production and distribution of supplemental infant and weaning foods, the establishment of child nutrition centers, targeting the Bangkok slums for concentrated nutrition efforts, sponsoring nutrition education for mothers in rural areas, production of iodized salt for areas of the country with high goiter rates, promotion of the use of breast milk in the feeding of infants, an improved system for storage and distribution of infant foods; and, extensive supplemental training for health and nutrition personnel throughout the country.

Although all of the relevant personnel in the Ministry of Public Health are fully aware of the problems caused by improper nutrition, the government has had a difficult time developing programs that will result in significant improvements in the nutrition status of the rural people of Thailand or in lobbying for substantial additional funding to support proposed nutritional improvements. There has been a fairly strong commitment toward research and the distribution of supplemental foods which, although produced with indigenous ingredients, have limited impact upon the improvement of the nutritional status of rural people.

Although Thailand is a rice exporting nation, the government must develop methods to increase the local consumption of foodstuffs as well as develop diverse crops for home consumption that are high in the necessary vitamins, minerals and protein.

3. Investment Climate. Industry is concentrated in and around Bangkok where infrastructure, facilities, and services are attractive. The present incentives offered to locate industry in the outer provinces are as yet insufficient to offset these advantages. Moreover, private foreign investment has been seriously hampered by cumbersome customs

and investment regulations. The foreign exchange regime has not been altered to foster inefficient import-substitution or export-promotion schemes. Trade and industrial policies have generally allowed trade and industry to develop consistent with Thailand's factor endowment and comparative advantage.

4. Domestic Resource Mobilization

a. Interest Rate

As noted earlier, domestic savings have fallen drastically in 1979 because the legal interest rates paid to depositors by financial institutions have become negative real rates. Similarily with investment, non-price rationing and "administrative fees" have appeared because of the legal limit on loan interest charges. The RTG has recently permitted international banks to increase their cost of money to prevailing international rates but domestic banks, to date, continue to operate under unrealistic usury laws. If a realistic interest rate policy is not enacted soon, non-price rationing and charges will proliferate to the obvious disadvantage of the small borrower. (Comment: On January 7, Prime Minister Kriaangsak announced what appears to be an effective increase in interest rates for domestic Financial Institutions. We will provide a separate analysis of this action once its impact can be better understood.

b. Revenues. Along with regressive expenditures, probably the most serious policy deficiency is the inefficient and inequitable tax system. Indirect taxes are over seventy percent of revenue and non-compliance and evasion are high. Taxes on incomes, both personal and corporate, are relatively small, accounting for about 12-14 percent of revenues. The tax system is vertically inequitable in that overall tax treatment of rising incomes in regressive, but the system is also horizontally inequitable because the same incomes are taxed differently depending upon source. RTG taxes have tended to increase more slowly than GDP in recent years, due to the low revenue elasticity with respect to income. This implies that, over time, the increase in revenue will have to be made by changes in the tax rates or by imposition of new taxes. However, revenue collection efforts have steadily

improved with tax collections by the Revenue Department up by 14% in 1976, 23% in 1977, and 19% in 1978.

5. Human Rights. Social and economic issues in human rights are discussed in detail throughout Part I. Politically, 1979 has been a year of marked positive change. National elections were held in April, reestablishing a limited form of parliamentary elections with a strong executive. A martial law order permitting indefinite detention without trial was repealed and prisoners released. Also notable was the elimination of the Prime Minister's power to sentence persons without trial. At present, the only remaining legal basis for imprisonment without trial is a provision of the Anti-Communist Act permitting detention from 7 to 16 months.

Some freedoms are still limited, however. Suspension of newspaper publication rights can be and has been applied (in one instance for a limited period this year). While restrictions on the activities of organized labor have now been relaxed, permittings labor organizing and public discussion of grievances, strikes remain banned although do occasionally occur with minimal punishment. Other personal and religious freedoms are essentially intact.

Thailand's policy with respect to Kampuchean refugee influx has varied, but in October 1979 came a positive affirmation of an "open door" prepared to accommodate hundreds of thousands with the basic human needs of food, shelter, and protection. The RTG has also greatly facilitated maintenance of the international relief agencies' lifeline across the Kampuchean border.

As stated elsewhere in this paper, the RTG is also now taking concerted action to provide villagers with continuing opportunities to participate in development decisions and processes affecting their lives. For the vast majority of people in the countryside, this shift in government/public relations may be the most important development of all in the area of human rights.

6. Financing of Development. While Thailand provides 84% of all development expenditures from domestic resources, it is relying heavily on external financing to meet the incremental costs to support its rural development programs. The RTG has been particularly successful in increasing the amounts of official development assistance and diversifying the sources of that assistance to meet its public borrowing target of about $1.2 billion annually for the remainder of the Plan period. The three major donors--the World Bank, Japan and the ADB--have substantially increased assistance to Thailand and together account for almost three-fourths of the total flows. The World Bank alone has almost doubled its lending over the past year to an FY 80 target of $439 million and a planned target of $500 million for FY 81. Furthermore, the rural and social development components of the lending portfolio have sharply increased and represent a clear shift in previous RTG policy which resisted borrowing for these sectors at relatively non-concessional terms. While projected debt service resulting from the increases in foreign borrowing is still within manageable limits, the impact of the energy sector may strain this capacity in the future.

PART II: AID PROGRAM STRATEGY

A. Rationale for AID in Thailand

There are several persuasive arguments for an AID program of magnitude to Thailand:

- there are still significant numbers of impoverished people in Thailand,
- the RTG appears strongly committed to addressing basic poverty conditions and disparities in income,
- there is a serious gap between that expression of will and actual results, and
- the RTG is actively seeking foreign donor assistance in understanding the nature of poverty and devising effective programs to alleviate poverty.

These factors are reinforced by a perception shared by the RTG that AID can perform a qualitative role in advancing Thai development that is not

easily assumed by the IFI's or other donors. The RTG values U.S. expertise, technology, and willingness to engage in risk-taking projects. They look to AID to participate with them in addressing some of the more difficult development problems at the delivery end of the system and providing "software" elements (advisors, training, operations research) of larger programs supported by the IFI's.

AID is qualified for such a role. The Agency's overall thinking is relatively well-advanced on such matters as integrated agricultural development, energy resource mobilization, environmental degradation, and low-cost social service delivery programs. The style of AID assistance is equally important. Our emphasis on collaborative project planning helps to assure a sense of Thai ownership of the project, at the same time helping to cultivate local skills in project formulation. Resident AID staff facilitate a continuing dialogue with Thai project management, patterns of cooperation in project implementation, and understanding of problems that are rooted in local value systems and ways of doing business. Such relationships and sensitivities are essential in dealing with root causes of poverty through decentralized, participatory programs.

The final argument is that by the intelligent application of bilateral assistance, we can help Thailand enter the rank of middle-income countries and significantly contribute to the achievement of global development goals--in health, family planning and food production--to which the U.S. Government is committed.

B. AID's Goal and Strategy

AID's goal during the next five years will be to support RTG policies to increase resource flows benefiting economically deprived areas and broaden participation in the development process. Specifically, AID will help the RTG improve the delivery of basic economic and social services, especially in the North and Northeast of Thailand, while drawing villagers into identification and implementation of relevant projects.

AID will give preferential support to activities which are intended to (1) demonstrate cost-effective approaches to service delivery and (2) strengthen RTG and local capabilities to plan, manage, and evaluate

development programs. AID will be prepared to engage in experimental activities, even in situations where technical and economic results are uncertain, in the interests of determining what works in local situations and what does not. At the same time, AID will seek to achieve a direct and immediate impact on as large a target population as possible who otherwise would not be reached by the larger resources projected by the IFI's and the Japanese Government.

Two sectors which fall outside the conceptual framework discussed above warrant special attention. Despite one of the most successful family planning programs in the development world, Thailand's population growth rates remain at a level which, if not reduced, will vitiate RTG development goals. Secondly, the soaring costs of energy to the economy, if unchecked, can cause various shortfalls in the resources required to support Thailand's growth with equity goals. AID, therefore, intends to continue a sustained development assistance relationship with the RTG in these two areas during the CDSS period.

C. Programming Methodology

We believe certain operational approaches and instruments are appropriate in Thailand now. These choices are influenced by many factors, such as Thai development problems, RTG agency capabilities, other donor activity, and constraints working in and on AID.

1. Area Development

AID proposes a sustained commitment to multifaceted area development programs in North and Northeast Thailand throughout the period of the CDSS and beyond, with first-stage projects through FY 81 and follow-on activities coming on-stream in the FY 82-86 period, as appropriate.

We have chosen area development as a principal mode of assistance for several reasons. First, the RTG has frequently expressed its preference for this technique. Area development also provides an effective means of testing the feasibility and developmental impact of national policies and programs and of demonstrating the cost-effectiveness of rural development approaches for wider replication. It addresses specific target groups, permits controlled delivery of a variety of interrelated stimuli and services, and facilitates baseline data collection and subsequent analysis to measure results.

Finally, area development is compatible with the RTG's interest in decentralizing development planning and implementation and placing greater reliance on local administrative mechanisms. Its success requires strong interest and involvement by local authorities, particularly in coordinating interdependent project activities by line agencies of the central government and in relating government services to community needs and self-help efforts.

The area development process envisaged by AID will not entail simultaneous action on all the variables that affect the productivity and income status of low-income families, nor does it postulate dramatic income increase in short time spans. Its basic features will be: (a) initial attention to minimum essential requirements to begin the development process, such as soil and water development leading to higher yields of basic food crops and modest increases in farm family income; (b) progressively broadening the base of experience and phasing in additional innovations, such as increased emphasis on changes in cropping patterns; (c) adaptation of project interventions to the receptivity and changing perceptions of the target group; and (d) emphasis throughout on relative simplicity, administrative feasibility, and replicability.

2. Single-Function Programs

AID also proposes to support national programs organized along functional lines, usually with geographic focus on North and Northeast Thailand, when such programs meet the following criteria:

a. Significant potential for eliminating/alleviating one of the principal causes of poverty.

b. An appropriate supportive role is not being performed by another donor agency.

c. Either or both of the following constraints prevail:

(1) Appropriate technologies and methodologies need to be tested (and proven) in a wider variety of situations than an area development focus affords;

(2) The institutional capability to deliver services through the national program is limited (in this context the term capability embraces personnel, planning and managment systems, and organizational efficiency).

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AID's support to single-function projects could be directed towards methodological or operational improvement (generally small-scale) in a number of locations, or operational expansion, through assisting the executing agency to serve a larger target group. Successful functional activities could also be incorporated in later stages of area development projects supported by AID, or informally integrated by explicitly making allowance for synergistic linkages among related projects in the site selection criteria. This technique permits single-input programs to operate throughout entire regions, but encourages coalescence of inputs on localized bases.

D. Program Efficiency

1. Sector and Geographic Concentration

AID will focus its assistance on the rural poor of the Northeast, and in a lesser degree the North, consistent with the greater poverty concentration in these regions. Within these regions, the population living in rainfed agricultural zones will receive special emphasis because of their greater relative deprivation of both natural resources and available government services.

Given the value the RTG attaches to AID development assistance, we could play a constructive role in almost all areas of development concern. However, given the realities of funding availabilities and staff constraints, we propose to focus the bulk of our resources on agricultural/rural development and the energy sector which, taken together, will receive roughly 80% of total resources planned for the CDSS period. A sub-sectoral concentration on the development of rainfed areas will require 40-50% of total resources. Conversely, we do not propose any AID activity in the education sector which we believe will receive adequate attention from other donors. The World Bank, for example, proposes major support for an expansion and reform of primary education, which appears well-conceived. Furthermore, many of AID's rural development projects will involve transference of skills through non-formal educational techniques.

We will attempt further concentration of effort by dovetailing the interventions of discrete rural development projects in a few selected provinces, wherever such combinations are compatible with project

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objectives. A possible example would be to program activities of separate projects in rainfed area development, off-farm employment, and local planning/administration in the same provinces. However, there are trade-offs between seeking such complementarities and serving the larger population of the Northeast and North with rapid impact projects such as aquaculture, extension, etc. Projects of this latter type, which particularly emphasize expansion of service capabilities, will have a wider geographic spread within the Northeast and North.

2. Increased Scale of Projects

The AID program in Thailand, since its near close-out in 1976-77, is being developed according to a "building block approach" which relies heavily on relatively small demonstration projects initiated in the FY 79-81 period. Such projects as Renewable Non-Conventional Energy, Village Fish Pond Development, and the analytical project on Off-Farm Employment are expected to provide the methodological and institutional underpinnings for much larger program initiatives during the CDSS time frame. Similarly the Northeast Rainfed Agricultural Development and Provincial Planning and Development Projects, though planned on larger scale with concern for early impact, are viewed as precursors to larger ventures late in the CDSS period.

Through this approach, we intend to progressively increase the average size of projects, to roughly $15 million per project by 1983-84, and $20 million per project by the end of the CDSS period. These average figures will represent a combination of large-scale projects which replicate earlier successful demonstration projects and continued, limited use of pilot/demonstration activities to lay the groundwork for future programs.

3. Limit of Units of Management

The evolution of the AID program in Thailand during the period from FY 74-FY 78, when USAID was in a phase-out mode of operation, resulted in a large number of management units in relationship to the annual obligation rate. During this time frame AID launched numerous projects which were small, but complex and staff-intensive. For example, the last four rural development projects approved during that time period

average $3.5 million per project, but have required high staff input. Even when the decision was made in FY 78 to sustain a bilateral assistance program to Thailand, the project identification process and tentative commitments to the RTG tended to emphasize smaller-scale projects. This strategy, in part linked to an interest in demonstration activities, has resulted in average obligation figures for new projects in FY 79 and FY 80 of approximately $2.5 million and $3.8 million, respectively. In FY 81 the average size of projects will increase significantly. The three PID's approved by AID/Washington for FY 81/82 averaged $10 million. Given the programming strategy described above, we foresee only a modest increase in the number of management units for which USAID will be responsible and a dramatic reduction in the ratio between management units and annual obligation rates.

4. Potential for Sector Support

Sector loans (grants) presuppose a thorough analysis of the sector/sub-sector, host government willingness to effect policy and systemic changes within the sector/sub-sector, and donor assistance of sufficient magnitude to induce the host government policy commitment and to meaningfully address the problems clarified by the analysis. The relatively low level of proposed budget levels at the beginning of the CDSS period and the need to initiate a number of lead-in, demonstration projects in difficult development areas preclude early use of sector programming techniques.

In subsequent versions of the CDSS, we will reassess the applicability of sector lending in light of our increased knowledge of and involvement in critical sub-sectors. The point should be made, however, that projectized sector loans, integrating numerous activities within a sub-sector, do not necessarily assure economy of USAID staff time.

5. Relationship with Other Donors

The pattern of other donor support is placing increased emphasis on basic human needs and on serving the rural poor, including the large concentrations of low-income people in North and Northeast Thailand. Moreover, the RTG is actively seeking large financial flows from the big-three donor group (World Bank, Asian Development Bank, and Government of Japan) in support of its rural development strategy. The RTG also

assures that the form of such assistance is compatible with its own policy objectives. Two recent examples are the OECF (Japanese Government) loan for the New Village Development Program--an innovative venture for the OEF--and reorientation of a proposed ADB loan from a traditional rural infrastructure project to one involving some technical services and local participation. In sum, the proposed programs of the IFI's and other donors, though covering more sectors and regions, will help reinforce the AID program strategy described in this document.

We intend that the assistance programs of AID and the IFI's will be mutually supporting, recognizing the comparative advantages of each donor organization. Successful AID/RTG projects will offer opportunities for IFI's to finance their replication on a much larger scale. We will also look for opportunities to co-finance projects with the IFI's and the Japanese Government, similar to the successful approach followed with the Agricultural Extension Outreach and Rural Primary Health Projects. In these, AID resources are focused on improving delivery systems through technical assistance, training, and financing of local costs while much larger IFI resources finance infrastructure, equipment and materials, and increased operational costs.

AID can also draw on selected donor-financed projects to provide complementary inputs to area development activities. Examples already being considered are the World Bank assisted program to expand the agricultural extension service, OECF financing of rural roads. UNICEF-supported village-based nutrition programs, etc.

6. Use of Intermediaries

- Peace Corps

USAID and Peace Corps/Thailand have established a collaborative relationship which matches AID's development resources and well-defined projects with the Peace Corps' capability to facilitate out-reach projects at the local level. AID's FY 79 and 80 project portfolio anticipates Peace Corps involvement in energy, land settlements and malaria control programs. Looking to the CDSS period, we believe there are promising opportunities to expand these complementary relationships. The objective will be to enhance USAID's implementation capabilities while providing

support to the community-based efforts of Peace Corps volunteers by assuring the availability of financial resources and reinforcing institutional linkages with RTG agencies. Care must be taken, however, to preserve each agency's unique identity and developmental role, particularly as they have been explained to and accepted by the Thai.

- Use of PVOs

AID is actively supporting PVO activities in Thailand principally through a newly initiated PVO co-financing project. We are planning continued use of this mechanism throughout the CDSS period. Following current practice, PVO's will be encouraged to develop innovative projects in problem areas of significant program interest to AID, thereby substituting in part for USAID staff work in developing future project proposals. Nevertheless there are limits on PVO involvement in carrying out AID-financed activities in terms of their institutional capabilities, their acceptability to the RTG, and, most importantly, preserving the identity and relative flexibility of private institutions.

- Title XII Institutions

We will jointly consider with RTG agencies the use of Title XII institutions to engage in project identification and design work beginning with the definition of a problem area. In such cases, the collaborative assistance mode would be followed. Should the opportunity arise later in the CDSS period for sub-sector programming techniques in the agriculture sector, Title XII institutions would be a logical choice for assistance in the detailed sector analysis that must precede project design.

7. Reliance on Thai Professional Resources

Much of USAID's effort during the pre-CDSS period will be directed at developing appropriate methodologies and administrative structures to utilize a much larger flow of AID resources in the FY 82-86 time frame. In particular, we will support and encourage decentralized planning/administrative capabilities, through both the Provincial Planning and Development Project and the administrative arrangements devised for rural development projects under central ministry responsibility. As these local capabilities increase, there will be a concomitant reduction in USAID staff time required for monitoring implementation.

We are already beginning to rely on the Thai academic community for analytical work on development problems and generation of project ideas. Thai researchers contributed a number of studies used in the preparation of the CDSS, and will participate in a series of workshops related to future program development. Such relationships will be expanded. Similarly support for project preparation capabilities within the Ministry of Agriculture and Cooperatives (as now proposed in an Agricultural Planning PID) should help conserve on USAID staff time devoted to project preparation in the future.

E. Key Development Problems

We have identified nine major problem areas for AID concentration on the basis of their importance in attacking the causes of poverty described in Part I, their relevance to RTG development objectives, and their synergistic relationship with each other. If the RTG can make demonstrable progress over the next five years in the following areas, gains in the absolute real income and quality of life of the rural population can be expected:

1. Poor resource endowment for agriculture in the Northeast--low soil fertility, erratic rainfall, and lack of reliable alternative sources of water for agricultural production.

2. Sub-optimal use of land and labor resources by the average farm household in North and Northeast Thailand, which engages primarily in subsistence food-crops production without sufficient knowledge/incentives to increase yields or shift to higher value cash crops, and without significant opportunities for off-farm employment.

3. General under-utilization of irrigation systems throughout the Northeast because of failure to complete farm distribution systems, organize farmer groups for water management, and provide for sustained maintenance.

4. The progressive destruction of forests and resultant watershed degradation in the North and Northeast as farm families move up the slopes in search of additional agricultural land and affordable sources of energy.

5. Continued high population growth rates despite a highly successful national family planning program.

6. A high rate of child morbidity and mortality throughout rural areas of the Kingdom resulting from the combined effects of poor nutrition, inadequate water supply and sanitation facilities, and limited preventative health care services.

7. Thailand's inability to meet its energy requirements from indigenous sources; 80% of its energy needs are supplied by petroleum imports, which will account for 40% of all Thai imports by 1980.

8. Limited capabilities in development plannning and administration at provincial and local levels, where the RTG intends to place progressively greater responsibility for carrying out development programs.

9. Inadequate growth of off-farm production potential to absorb surplus agricultural labor.

F. Program Interventions

The following lines of action are proposed as the AID strategy for assistance to Thailand from 1982-1986, in an effort to deal most effectively with the key development problems identified above:

1. Development of Rainfed Agricultural Areas of Northeast Thailand

The development prospects of Northeast Thailand (and development assistance strategies) are fundamentally affected by the limited feasibility of year-round irrigation. Approximately 80% of Northeast Thailand farm families cannot be served by reliable irrigation systems. These families must rely upon seasonal rains and supplementary irrigation from small-scale sources (ponds, weirs, wells) for crop water requirements. These families, who live in the so-called "rainfed agricultural" sections of the Northeast, will be the prime target group for USAID efforts.

The agriculture/rural development problems affecting this population group are more deeply entrenched and forbidding than elsewhere in the Northeast: limitations imposed by soil moisture availability of six months or less, high risk of departing from traditional agricultural practices, uncertainty regarding appropriate agricultural technology to increase yields and incomes, and only rudimentary experimentation to date with intervention mixes that may be appropriate to the resource base of rainfed areas.

AID's program would assist the RTG to increase productivity and incomes in rainfed agriculture zones through a combination of area-specific and functional activities. These activities would be designed to promote:

- improvement of the resource base for agriculture (soil and water development)
- higher yield on basic food crops
- increased production of cash crops
- improved access to markets
- supplementary income activities on-farm (aquaculture, livestock, sericulture, etc.)
- rural-based, off-farm employment
- More effective participation by the target group in planning and managing activities to address their basic needs.

The AID program will emphasize small-scale water resource development and land development to increase the fertility and moisture retention capability of the soil. Extension efforts will be directed towards several related activities: use of improved technology to increase crop yields, optimal use of limited water resources for diversified agricultural production (crops, horticulture, livestock, aquaculture, etc.), and planning of total farming systems that will more productively employ land and labor resources available to the average farm household.

The availability of proven agricultural technology for rainfed areas will initially be a limiting factor, but a number of rice varieties and upland cropping systems are expected to be ready for extension to farmers during the CDSS period. More extensive research on rainfed agriculture (crops) will be carried out by the RTG with IBRD assistance under a National Agricultural Research Project. AID would finance, as appropriate, applied research activities relevant to specific agroclimatic conditions in the target area, drawing to the maximum extent possible on combined efforts of Thai universities and the RTG's agricultural research stations.

Given the complexity of this problem area, AID will also provide assistance, where necessary, to improve data collection, analysis, and

planning related to rainfed agriculture and to strengthen administrative capabilities including local agencies to carry out well-designed development programs. Appropriate emphasis would be given to strengthening local participatory organizations such as cooperatives and credit associations. As early stage activities prove successful, consideration would be given to phasing in additional activities, including local food processing and agro-industry.

2. Effective Utilization of The Irrigation Potential of Northeast Thailand

Eventually about 20% of Northeast Thailand's population (vs. 3% currently) can be provided year-round irrigation through either medium- to large reservoirs or pumping from major rivers. For this population group, several possibilities exist for increasing farm output: stabilized production through adoption of cropping systems and cultivation practices that have already proven successful on research stations, and dry-season farming. However, existing irrigation systems in the Northeast have largely failed to deliver such benefits because of slow progress in completing on-farm distribution systems, difficulty in organizing water-user groups for effective water management, inadequate maintenance leading to deterioration of the systems, and insufficient market inducements to diversified and dry-season cropping. As a result, a majority of farm families in the planned service areas of irrigation systems continue with traditional rainfed-agricultural practices to meet subsistence requirements despite the availability of high-yielding crop varieties (HYV) suitable for irrigated areas.

Primarily on a functional basis, AID proposes to assist the RTG in developing and exploiting the productive potential of irrigated and irrigable areas of Northeast Thailand through the following means:

- rehabilitation and completion of existing small-scale irrigation systems with emphasis on on-farm water distribution.
- support for additional small-scale irrigation development, through reservoir systems and through pumping from groundwater sources where technically/economically feasible.

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- operations research on means of organizing farmers for effective water use and maintenance of irrigation facilities.
- promotion of increased and diversified agricultural production in the service areas of established irrigation systems, including attention to agricultural extension, market development, and food processing industry.

The basic principles for an improved small-scale irrigation program will be drawn from experience with the Northeast Small-Scale Irrigation (tank rehabilitation) Project scheduled for FY 80 start-up, and from an overall strategy for small-scale water resource development in the Northeast being formulated by an RTG task force. Consistent with AID's role definition, we do not propose financing for construction of large of medium-scale reservoirs and related main canal systems. These activities will remain the province of the IFI's.

3. Reduction of Fertility Rates

Since 1970 the RTG has, by it policies and actions, demonstrated a deep commitment to a national family planning program. Together with effective private organization, the RTG has succeeded in reducing the population growth rate from over 3% to about 2.1% in less than a decade. This is at or near the Fourth Five-Year Plan target for 1981. Moreover, recent well-documented research indicates dramatic increases in contraceptive use have been made throughout the country with the exception of the Muslim south (ex: contraceptive prevalence has now reached 45% in the Northeast as against a national average of 53%).

Thailand's 2% plus growth rate is, however, in the median group for Asian countries and unless further progress is made, the population will double in 35 years to 90 million. A slackening of this effort now would be premature. The RTG is considering a goal to reduce the growth rate to 1.5% during the next (1982-86) Plan. To accomplish this goal more widespread efforts to provide safe, effective methods, both permanent and temporary, must be encouraged. Hard-core problem areas, such as isolated rural communities, urban slums, and teenagers, must be specially targeted. In addition to improved and expanded

contraceptive services, further declines in fertility will also be dependent upon the success of RTG efforts to effect important socio-economic correlates of fertility (e.g., education, income, and female employment). These and other factors have been found to be important indirect determinants of fertility behavior.

AID can play an important role by supporting new and continuing dimensions (described below) of the NFPP, particularly targeted on backward and poverty-stricken areas, which will help in the achievement of the RTG's population growth target for 1986:

- Support expansion of facilities and capabilities for Voluntary Surgical Contraception, including training for a gradual, carefully-supervised expansion of the use of non-physicians to provide VSC.
- Expand family planning education and service programs among the youth.
- Support an expanded capability to provide MCH care in conjunction with family planning services.
- Assist the NFPP further develop local supervisory and administrative capabilities to permit better oversight of program activities at the village level. This may include better training in management methods, adequate travel support, and more mobility.
- Encouraging a program focus on continuing, as well as new acceptors of family planning services by establishing targets for both.
- Continue to support and encourage the participation of private sector agencies in the delivery of family planning services.
- Assist the NFPP in establishing an on-going system for monitoring change in contraceptive use (e.g., repetitive contraceptive prevalence surveys).
- Extend availability of clinical services by training auxiliary midwives to provide IUD services at the Tambon level.
- Expand commercial sales of contraceptives, complementing this activity with exploration of improved design and marketing of low-cost non-permanent methods.

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4. Reduction of Infant Morbidity and Mortality Rates

The reduction of high infant morbidity and mortality rates is closely associated with the attainment of national family planning goals. Infant mortality and morbidity rates are affected by insufficient clean water and sanitation facilities, poor nutrition, and an under-utilized maternal-child health care system.

The RTG is embarking on a major expansion of its health care system in 20 provinces selected on the basis of lowest health and family planning coverage and the highest population densities. Design and implementation of effective programs are difficult because of several factors: a limited national health budget, shortages in technically trained personnel and, most importantly, the structure of the public health system, which is curative-health-oriented with an emphasis on hospital-based treatment (54% of provincial health budgets are used to support hospitals). Additionally, a significant characteristic of Thailand's health system is that the bulk of services are delivered through the private sector. Eighty percent of the people seeking health care obtain service from the private sector.

In addition to the geographic expansion of the rural primary health care system program from 20 provinces to a national program, the RTG intends to add qualitative dimensions to the program directed at reducing the high incidence of diarrhea and infectious diseases and the poor nutritional status of children.

AID proposes to support this strategy by:

- participating in a revitalized water and environmental sanitation program including training communities in effective use and maintenance of water and waste system as well as assisting to finance new facilities.
- supporting a nutrition program with emphasis on locally produced foods with high protein and caloric values for income and household consumption.
- investigating the possibility of mobilizing private sector health services to complement the policies and actions of the government.

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5. Development of Alternative Energy Technologies

As modern agricultural techniques become more widely adopted, rural Thailand will exert increasing demand for energy in the form of fertilizer, irrigation pumping, traction, crop processing, transportation to market, etc. Much of this demand will be based on petroleum as the energy source unless positive steps are taken to introduce alternatives. A move to develop new approaches to solving Thailand's energy needs, both rural and urban, will be extremely difficult. For instance, substantial investment in a national rural electric grid, which is a major objective of the RTG, will create a future reliance on increasingly expensive petroleum imports unless other means of providing electric energy are developed. On the urban scene, architectural designs of the recent past have paid insufficient attention to energy conservation and optimum use of the solar technologies.

The energy demand for agricultural production purposes will be additive to the needs of rural areas for cooking, lighting and other amenities. The demand for wood and charcoal for cooking could threaten the ecological system on which Thailand's rural development is based if problems of sustained usage of these renewable resources are not promptly addressed.

Thailand is showing special interest in developing (a) its limited but useful lignite deposits, (b) alcohol fuel production, and (c) mini/micro hydroelectric facilities (on the scale, for example, of New England mill towns). Improving efficiencies of wind power for pumping, solar heating, and thermal insulation - already commercially available in country - also appears to be achievable.

AID proposes assisting the RTG to reduce its dependency on imported energy sources by developing and introducing alternative energy resources through assistance in the following areas:

- adaptive research and development of renewable non-destructive energy resources (underway).
- introduction, testing and demonstration of renewable energy technologies (including conservation) to determine their social, technical, and economic feasibility in both urban and rural environments.

- design and capital financing of small-scale hydro projects (up to 1 megawatt installed capacity).
- energy master planning on a sub-sectoral basis as a component of overall sector planning.
- biomass development (village-based or commercial sector), especially production of fuel wood.
- assistance in RTG policy formulation regarding conservation.

6. Improved Resource Planning and Resource Use in Northern Thailand Watersheds

A significant proportion of the poor in North Thailand live in hilly areas and employ shifting-cultivation farming practices on sloping plots that yield only subsistence incomes and deplete forest resources. Of this target population, perhaps a third (approximately 300,000-500,000) are members of hilltribes who have traditionally lived in the upland/highlands of North Thailand. The ecological problems of "swidden" agriculture are now exacerbated by rapid population growth among the hilltribes (estimated 3.7% yearly) and progressive movement up the slopes by lowland Thai farmers seeking new land to cultivate.

The stability of watersheds throughout this sub-region is increasingly threatened by forest destruction, cultivation of hillsides, and poor land preparation practices. Continuation of current trends would endanger the viability of lowland wet-rice systems in North and Central Thailand and exacerbate already serious conditions of poverty in the uplands/highlands. Conservation-oriented cropping systems and land development/cultivation practices have been demonstrated with some success on research stations. However, further development of such systems and their effective extension of hilltribes and Thai swiddeners are urgently needed.

AID is providing a variety of support assistance and will attempt to fund projects testing resource use options in the hills of North Thailand to promote settled patterns of agriculture that are consistent with increased incomes, maintenance of biomass resources, and overall effective watershed management. Lines of action include:

- improved planning for land use in the uplands/highlands so as to address both population and watershed/ecological requirements.
- establishment of effective upland/highlands research and extension in selected watersheds.
- experimentation with various compatible mixes of forest management and agricultural production including agro-forestry, arboriculture, silvipasture, etc.

Emphasis throughout is on encouraging appropriate RTG agencies to co-operate in researching existing land use systems and introducing improved systems through area-development applications, with concern for local life styles and values. The target group of AID's efforts will be the entire watershed population: lowland Thai farmers including those now farming in the hills and hilltribes who have traditionally lived in the uplands and highlands. The AID program will be closely coordinated with the IBRD, since the IBRD will assist the RTG with similar efforts in North Thailand, and with research on upland and highland crops as part of the National Agricultural Research Project. AID will also cooperate with UNDP which is funding a National Research Council study of landuse and landuse planning in North Thailand watersheds for policy purposes.

7. Development of Improved Local Government Planning and Administration

The central issue for the 80's will be the extent of government determination to expand and strengthen the process of decentralized planning and administration and local participation from its current limited basis to a national program. This determination will be influenced by the successes and setbacks the RTG experiences in the initial years of the Provincial Planning and New Village Development Programs.

An assessment of the first year of operation of the Provincial Development program indicates some tangible progress: the framework of a process to link local-initiated proposals with national goals

and resources has been established and project selection is being carried out at provincial and district levels.

AID proposes to support the expansion and strengthening of the decentralization process by:

- — improving the capabilities of provincial authorities to plan the allocation of available development resources.
- — strengthening the role played by district level officials in articulating local needs to provincial authorities.
- — defining and expanding the participation of the villagers in the planning, implementation and evaluation of the projects.
- — financing of village or district based rural development activities in selected provinces as a means of testing absorptive capacity and institutional constraints.

8. Support of Regional Growth and Employment Centers

The towns and small cities of the North and Northeast are in symbiotic relationship with the rural areas surrounding them. They are an important intermediate or ultimate market for agricultrual production. They are also the local source of agriculturally-related capital goods and services upon which modernization of the subsistence system is dependent. Finally, and not unimportantly, towns and small cities such as Roi-Et and Udon can play a major future role in absorbing some of the inevitable surplus rural labor which would otherwise flow to and glut the established employment center in Bangkok, exacerbating social conditions there.

Based in part upon the on-going HIG program and off-farm employment study, AID proposes support of the orderly growth of secondary towns and cities and assistance to Bangkok through a variety of Thai agencies and institutions by:

- — upgrading basic facilities and services of existing communities and shelter, and/or financing new shelter and associated facilities to accommodate the growing influx of rural immigrants in search of employment opportunities.

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— financing of new or improved agricultural input/output marketing infrastructures.

— promotion of investment opportunities outside of traditional centers, e.g. Bangkok.

— financial and technical support to development of a Thai housing finance system.

— financing with HIG and IIPUP resources small shelter projects in regional cities with additional focus on the identification of and meeting the social and employment needs of the poor.

— financing with HIG program a comprehensive slum and environmental upgrading program in Bangkok.

— financing with HIG program new shelter (site and services/ core housing) for low income families in and around Bangkok related in part to industrial estate development.

G. Objectives During CDSS Period

The planned intermediate objectives of the AID strategy for Thailand are summarized below by program area:

1. Development of Rainfed Agriculture Areas

— development of small-scale water resources to meet basic requirements for domestic water needs, supplementary irrigation, and dry season irrigation of vegetable garden plots.

— improved technical production packages for rainfed agriculture, including partial substitution of higher-value (and environmentally sustainable) field crops for glutinous rice.

— increased land productivity and meaningful (but not dramatic) increases in incomes from crop production.

— improved nutrition and increased incomes resulting from pond aquaculture.

— foundation laid for replication of basic improvement techniques during 1986-90 period, and introduction of other technological changes.

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2. Utilization of Irrigation Potential
   - adoption of a comprehensive approach to irrigation system development that includes on-farm water distribution and appropriate provision for operations and maintenance (O&M).
   - a common understanding among government officials and farmers that an irrigation system is a community resource: that the community has a right to be involved in planning the system and a responsibility to share in its cost and pay for its use and maintenance.
   - effective techniques for organizing water user associations and training members in O&M.
   - increased land use intensity and productivity during the rainy season, and initial efforts towards dry season cultivation.
3. Fertility
   - the RTG promulgating and achieving a population growth rate of 1.5% by 1986, supported by an appreciable reduction in fertility rates.
4. Child Mortality and Morbidity
   - optimization of private sector health services delivery capabilities, both professional and non-professional, augmenting public health programs.
   - community-initiated and administered water and environmental sanitation programs which reduce diarrheal infections and parasite diseases caused by inadequate water supply and poor waste disposal.
   - reduced rates of child malnutrition through increased sources of locally produced foods which enhance the nutritional status of the rural population.
5. Alternative Energy Development
   - availability for replication of renewable energy technologies adapted to Thailand and demonstrated to be technically, economically and socially feasible.

— RTG adoption of at least one technology and delivery system for national replication.

— increasing adoption of improved (more efficient and less destructive) energy utilization practices in rural areas.

— existence of an RTG energy resources utilization policy, and associated plan, which provides a balance between production and conservation alternatives and minimizes reliance on imported petroleum.

— increased exploitation of small-scale hydroelectric energy resources.

6. Resource Planning/Use in Northern Thailand Watersheds

— an active, institutionalized RTG presence in the uplands/highlands of North Thailand, with increasingly effective inter-agency coordination.

— an established system for assessing/planning land use in upland/highland areas.

— increasing local acceptance of improved land preparation and cultivation practices, and cropping systems that will lead to both increased incomes and preservation of the watershed.

7. Provincial/Local Planning and Administration

— demonstrated capability of provincial/district levels of government to plan and manage development activities.

— progressive increases in RTG budget transfers to provincial governments for development programs.

— effective linkages between village-level ("bottom-up") project selection and planning with national/provincial determination of priorities and allocation of resources.

— integration of the planning and operational activities of central ministries within the decentralized planning/administrative framework at provincial/sub-provincial levels.

— formulation of laws and appropriate regulations to permit municipalities to raise local revenues.

8. Strengthened Regional Growth and Employment Centers
   - reduction of underemployment through year-around and off-season employment of agricultural household labor in rural industry.
   - expanded local processing facilities, agro-industry and improved market outlets in North and Northeastern regional towns and cities.
   - new and upgraded shelter facilities associated with employment growth.
   - a national shelter policy.
   - regional town development plans.

III. ASSISTANCE PLANNING LEVEL

A. The Indicative Planning Allocation

We believe the AID/W indicative allocation of $120 million for 1986 represents an appropriate level of effort given the dimension of need in the regions and problem areas selected for AID concentration and the RTG's readiness to direct increased resources to these areas and is well within Thailand's absorptive capacity.

Further, we believe that the total magnitude of financial assistance we propose for 1982-86 (See PAPL below) is proportionate to the size of the population group we are trying to serve. At current population levels in North and Northeast Thailand, the five-year planning level of $425 million represents a per capita investment of only $13. Assuming that our rainfed area development program of $135 million would benefit up to one-quarter of persons living in rainfed areas of the Northeast, the per capita expenditure of this program would approximate $45.

B. Proposed Assistance Planning Levels (PAPL)

Program Area	Planning Levels ($ million) 1982	1983	1984	1985	1986	Sub-Total	Totals
1. Development of Rainfed Area							
Increased agricultural production	5	10	15	25	30	85	
Supplementary income promotion - on-farm	10	7	10	10	10	47	
Institutional development			5			5	
							137
2. Small-Scale Water Resources							
Water delivery systems		5	5	15		25	
Increased agricultural production			3			3	
Institutional development			2			2	
							30
3. Watershed Planning/Use							
Land and forest management		5		10		15	
Applied research/extension		5		10		15	
							30
4. Fertility Reduction	3	3	5	5	5	21	
							21
5. Reduction of Child Morbidity/Mortality							
Delivery of health services	5					5	
Improved water supply	5			15		20	
Environmental sanitation	5			5		10	
Nutritional food production*		5			10	15	
							50
6. Renewable Energy							
Renewable energy production	15		25		30	70	
Energy technologies research			5		10	15	
							85
7. Local Planning/Administration							
Improved planning/administrative systems			5			5	
Village-level development		10			20	30	
							35
8. Support of Regional Growth Centers							
Off-farm employment	2	5	5	15		27	
Housing Investment Guarantee (non-add)	(40)		(40)		(30)	—	
							27
9. Emerging Problems of Development		5			5	10	
							10
TOTALS	50	60	85	110	120		425

*Principal funding for this activity is included under supplementary income promotion in Rainfed Area Development, e.g. aquaculture.

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C. Justification for Magnitude and Composition of Funding

The PAPL is distributed among appropriation categories as follows:

— food and nutrition/rural development (including off-farm employment and rural development administration)	- 61%
— energy	- 20
— health	- 12
— family planning	- 5
— selected development problems	- 2

The magnitudes of assistance reflect USAID judgment concerning need, the RTG's absorptive capacity, and probable assistance in the same program areas from other donors. The highest funding priority is accorded development of rainfed areas in Thailand. Since last year's CDSS, the critical dimensions of the energy problem have caused us to recommend a substantial increase of resources allocated to this sector during the planning period—more than doubling the amount programmed in last year's planning document. Similarly, the phasing of the planned assistance levels is related to the need to sustain our development efforts in rainfed agriculture and the delivery of basic health services while responding to new development opportunities and the Agency's mandate in the energy sector.

D. Staffing Implications

USAID is currently responsible for 35 units of management, consisting of 14 approved projects, 13 projects under various stages of preparation, and 8 regional-funded projects. For historic reasons described in Part II, this is an inordinately large number of separate project activities for the annual obligation rate in Thailand over the last five years. In addition, USAID has some responsibility for 24 centrally-funded projects, many of which were welcome during the phase-out years of FY 74-78. While many of these central projects entail minimal USAID involvement, in the health/population sectors they continue to consume between one-half to two-thirds of a USDH office's time. This workload translates into the equivalent of two regular units of management. The overall combination of country, regional, and central projects helps to explain the full utilization of

24 USDH employees on the Mission staff at present.

We believe that USAID can accommodate the greatly increased funding shown in the Proposed Assistance Planning Levels primarily by limiting the increase in units of management and the management burden of centrally-funded projects. Following a strategy of developing fewer projects with a much higher dollar-value across the period of the CDSS, we estimate that the Mission-generated project design/implementation workload will consist of approxiamtely 32 units of management. With regional projects, the total number might increase to 38-40, only slightly greater than the current level.

Based on this workload analysis, we are convinced that a modest increase in the current Mission staffing level, i.e., no more than an additional five positions, will be sufficient to handle planning and management responsibilities for the program we have outlined for 1982-86. Other factors will balance out. We intend to achieve economies of staff through program and area concentration, use of the Peace Corps and other intermediaries, and increased cultivation of and reliance on host government capabilities in planning and management. On the other hand, the larger average size of some projects will imply numerous, geographically dispersed sub-projects that will require careful monitoring, even on a random sample basis.

We plan to phase-out centrally-funded activities of peripheral importance to our program and assure that future centrally-funded efforts are directly related to the accomplishment of country development goals as articulated the CDSS. Effective Mission-AID/W communications on such projects can actually result in projects that conserve on Mission staff time. Prospective examples include use of DSB cooperative agreements for project identification, design, and evaluation work; collaborative research and development activities between RTG agencies and U.S. institutions that eventually form the basis for bilaterally-funded projects, e.g., aquaculture development; and other serious activities that complement on-going USAID projects and help clarify problem areas, e.g., problem soils management in relationship to rainfed area development.

There have been some skills imbalances in the USAID staff that we are gradually beginning to correct. The CDSS calls for intensive activity in the agricultural sector. USAID has recently added an agronomy advisor

position (filled by an IDI graduate) and will recruit three agricultural officers to positions that will be vacated in FY 80. Of the five additional positions proposed during the CDSS period, at least two more should be allocated to agriculture/rural development, and one should be allocated to the energy sector which receives increased emphasis in this CDSS.

Annex 1

NOTES

1/ See Tables 1, 2 and 3 (Annex 2); IBRD, Thailand: Toward a Development Strategy of Full Participation A Basic Economic Report, (Wash. D.C.: Sept. 1, 1978). Hereafter referred to as "IBRD Report."

2/ See Table 5a, Annex 2

3/ See Table 5b, Annex 2

4/ See Table 9, Annex 2

5/ Data from the second year (1975/76) of the Survey of Population Change indicates that the total fertility rate in rural areas declined from 6.49 in 1964-65 to 4.98 in 1974/76, and the recent family planning evaluation found a further decline to 4.11 by 1978. The crude birth rate is currently estimated to be 32 per thousand, down from 37 in 1975-75 and 42.2 in 1964-65. See:

NESDB, Report: The Survey of Population Change 1974-75, Bangkok: 1977. p. 19;

APHA, Report: Thailand National Family Planning Program Evaluation Wash, D.C. 1979, Appendix D, Tables D-11, D-12; and

Ibid; p. 9.

6/ The importance of regional towns and cities is suggested by the finding that migration to Bangkok is not occurring in the expected "stepping stone" fashion via regional centers. Instead, occasional movements back and forth and increasingly complex interrelationships between urban and rural areas are to be expected. For discussion of migration to towns and cities in Thailand, see Goldstien, Sidney et al., "Migration to Urban Places in Thailand: Interrelationships Among Origin, Recency, Frequency, and Motivations." Paper # 21, Chulalongkorn University Institute of Population Studies, 1977.

7/ Van Huyck, A., "Shelter Sector Programs and Urban Development Strategy in Thailand", Memo: Wash. D.C. Nov. 10 1978.

8/ This discussion is based entirely upon: Oey Astra Meesook, A Study of Disparities in Income and Social Services Across Provinces in Thailand, (Thammasat Univ. Report 7, Faculty of Econ. Sept. 1978.) This study uses correlation techniques to test relations among variables for 1970 census data and various NSO socio-economic surveys.

9/ Ministry of Agriculture, Division of Agricultural Economics, Land Holdings Studies, 1974, 1975.

10/ E.g., Potter, Jack M. Thai Peasant Social Structure (Chicago: Univ. of Chicago Press, 1976), p. 57, 59; Amara Pongsupanich, Village Khon Kaen, (Bangkok: Chulalongkorn University Social Research Institute, 1978), pp. 196-198; Mizuno, Koichi, "The Social Organization of Rice Growing Villages" in Yoneo Ishii (editor), Thailand: a Rice-Growing Society (Kyoto: Amyot, Jacques, Village Auytthaya (Bangkok: Chulalongkorn University Social Research Institute, 1976), Table 6.4, passim.

11/ Meyer, Richard L. et al., "Rural Financial Markets in Thailand: Assessment and Recommendations" (Bangkok, AID, 1978). (Mimeographed), pp. 36-37.

12/ Also an investigation in Northeast Thailand concluded that lack of knowledge of such basics as the rudimentary workings of local market systems was a prime drawback to farmer income improvement. See Ng, R.C. Y. et al., Land Use and Socio-Economic Changes Under the Impact of Irrigation in the Lam Pao Project Area in Thailand (London: Univ. of London School of Oriental and African Studies, 1978), pp. 115-119.

13/ See Riggs, Fred W. Thailand: The Modernization of a Bureaucratic Polity (Hawaii: East-West Center Press, 1966.)

14/ Ingram, James C. Economic Change in Thailand 1950-1970 (Standford: Standford Univ. Press, 1971).

15/ See Evers 1969, Hanks 1966, 1975, all listed in Potter (op. cit, note 37 above).

16/ C.F., Embree, John F. "Thailand, a Loosely Structured Social System," American Anthropologist 52 (1950): 181-193.

17/ Akin Rabibhadana, "Problems in Rural Development Work: The Case of the Maeklong Integrated Rural Development Project." Paper presented at MJAD Seminar, Kuala Lumpur, Dec. 13-16, 1977, p. 11.

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18/ Basic environmental issues regarding specific regions of the country and specific resources have been laid out by Sanga Sabhasri in a series of articles in Siam Rath (Thai language newspaper), esp. May 22 and June 15, 1978. The discussion in this section of the 1981 CDSS depends primarily on an overview paper prepared for USAID/Thailand: Ruangdej Srivadhana (November 1979) "Environment Assessment, Thai University Research Association Report No. 4; also used in the preparation of this section, "Draft Environmental Report on Thailand" for AID/DS/ST by the Science and Technology Division of the Library of Congress, Washington, D.C. (October 1979). The likely increase in environmental problems in urban areas unless adequate strategies are adopted is discussed by Al Van Huyck, PADCO, in a letter to AID subject "Shelter Sector Programs and Urban Development in Thailand," November 10, 1978.

Annex 2

Statistical Annex

Table 1

Summary of Incidence of Absolute Poverty,a/ 1962-76

	Population with income below poverty line as % of total population			Population as % of total in the country
	1962/63	1968/69	1975/76	1976
Rural				
Northeast	75	60	38	33
North	60	31	28	19
Center	35	13	12	20
South	41	31	26	11
Kingdom				
Rural	57	37	28	83
Urban	28	11	11	17
Total	52	34	25	100

a/ Poverty line is defined to be $90/year/person in rural areas and $120/year/person in urban areas, in 1975/76 prices.

Source: NSO, Household Income and Expenditures Survey, 1962/63, and Socio-Economic Surveys, 1968/69 and 1975/76 as compiled in IBRD, Thailand: Toward a Development Strategy of Full Participation A Basic Economic Report, (Wash. D.C.: Sept. 1, 1978), Chapter 3.

Table 2

Incidence of Poverty a/ By Region And Location, 1962-76

	% of Population		
	1962/63	1968/69	1975/76
Northeast			
Urban	36	13	13
Rural	75	60	38
Total	72	58	36
North			
Urban	45	14	13
Rural	60	31	28
Total	58	30	27
Center			
Urban	28	11	10
Rural	35	13	12
Total	34	13	12
South			
Urban	23	12	13
Rural	41	31	26
Total	38	29	25
Bangkok	20	9	9
Kingdom			
Urban	28	11	11
Rural	57	37	28
Total	52	34	25

a/ Poverty line is defined to be $90/year/person in rural areas and $120/year/person in urban areas, in 1975/76 prices.

Source: NSO, Household Income and Expenditure Survey, 1962/63, and Socio-Economic Surveys, 1968/69 and 1975/76 as compiled in Ibid.

Table 3

Distribution of the Poor by Region and Location

	As % of total poverty group			% of total population
	1962/63	1968/69	1975/76	1976
Northeast				
Urban	2	1	1	1
Rural	46	58	50	33
Total	48	59	51	34
North				
Urban	3	-	1	2
Rural	22	20	22	19
Total	25	20	23	21
Center				
Urban	2	1	1	2
Rural	14	7	8	20
Total	16	8	9	22
South				
Urban	1	-	1	1
Rural	8	11	11	11
Total	9	11	12	12
Bangkok	2	2	5	11
Kingdom				
Urban	10	4	9	17
Rural	90	96	91	83
Total	100	100	100	100

Source: NSO, Household Income and Expenditure Survey, 1962/63, and Socio-Economic Surveys, 1968/69 and 1975/76 as compiled in Ibid.

Table 4

Regional Real Income Per Capita 1/ and as Percent of Whole Kingdom Income, 1968/69, 1973 and 1977

($/Year)

Region	1968/69 Income/ Per capita	1968/69 % of WK*	1973 Income/ Per Capita	1973 % of WK	1977 Income/ Per Capita	1977 % of WK
Bangkok	$ 276	217%	$ 654	289%	$ 778	292%
Northeast	80	61	100	44	112	42
North	103	89	145	64	169	64
Central	145	125	400	177	452	170
South	103	89	216	96	248	93
Whole Kingdom	116	100	226	100	266	100

1/ At 1972 prices.

Sources: NESDB, National Income of Thailand 1977 Regional Product (1978); NESDB, Estimate of Population, Number of Households and Number of Families by Economic Regions and Locations 1 July 1971-1981 (in Thai) (1978).

*WK = Whole Kingdom

Table 5a

Real Gross Regional Product Growth Rates, 1971-76

Northeast	5.4%
North	4.5
Central	7.1
South	4.8
Whole Kingdom	6.2

Source: NESDB, Fourth Five Year Plan (Bangkok: 1976), p. 86.

Table 5b

Sectoral Real Growth Rates, 1970-77

Agriculture	3.8%
Industry	8.5
Services	6.8
Total GDP	6.4

Source: IBRD, Thailand: Toward a Development Strategy of Full Participation A Basic Economic Report, (Wash. D.C.: Sept. 1, 1978), p. 6.

Table 6

Rural Income As % of Urban Income

Region	1962/63	1968/69	1971/73	1975/76 a/
Northeast	23%	31%	25%	39%
North	45	45	49	41
Central	66	60	50	57
South	57	35	42	49
Whole Kingdom	-	38	40	-

Source: Somluckrat Wattanavitukul, "Income Distribution in Thailand", (Bangkok: Thammasat University, Discussion Paper, 1978), p. 280.

a/ NSO, Socio-Economic Survey, 1975/76, Preliminary, (Bangkok: 1978). The 1975/76 rural/urban ratios are based on median income as opposed to mean income for other years.

Table 7

Percentage of Rural Households With Per Capita Income Below Regional Median Income by Occupational Class, 1975/76

Region	Median Income	% Below Median Income					
		Prof. Tech. & Admin	Own Account	Clerical	Economically Inactive*	Farm Owners	Unskilled Workers
Central	$196	- 0 -	33%	30%	20%	52%	63%
Northeast	109	- 0 -	20	12	30	58	38
North	134	7	37	28	30	60	56
South	137	3	30	30	40	60	46

Source: NSO, Socio-Economic Survey, 1975/76 (Bangkok: 1978).

* Retired from labor force.

Table 7 - Continued

Percentage of Municipal Households With Per Capita Income Below Regional Median Income by Occupational Class, 1975/76

Region	Median Income	% Below Median Income				
		Prof. Tech. & Admin	Own Account	Clerical	Economically Inactive	Unskilled Workers
Bangkok	$ 315	18%	46%	50%	37%	81%
Central	345	22	50	56	61	95
Northeast	278	21	50	60	48	98
North	323	21	52	54	50	84
South	280	17	45	57	47	82

Source: NSO, Socio-Economic Survey, 1975/76 (Bangkok, 1978).

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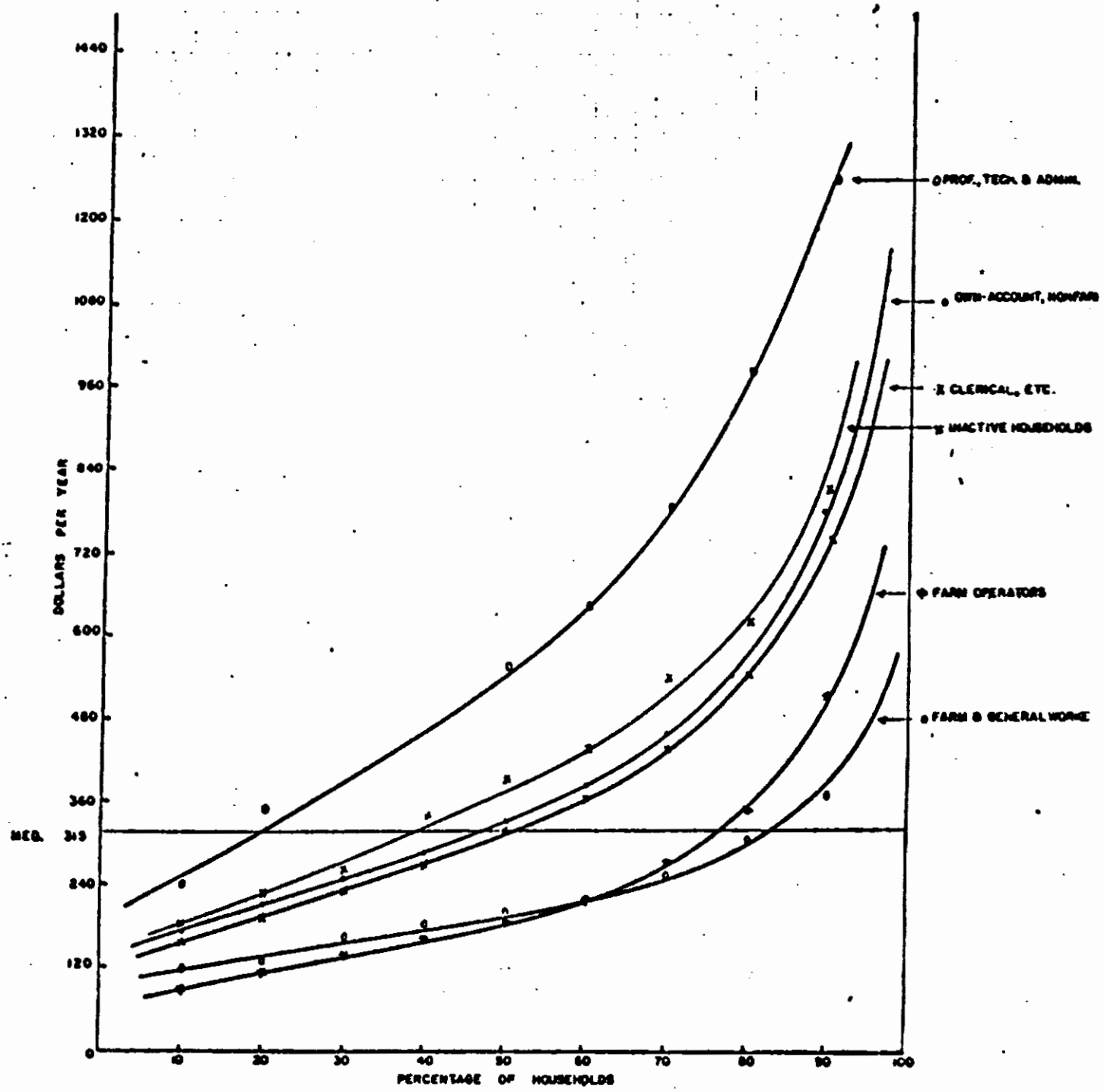
Graph 7a

ESTIMATED PERCENTAGE OF GREATER BANGKOK METROPOLITAN HOUSEHOLDS WITH PER CAPITA INCOME BELOW ฿315 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1975-76



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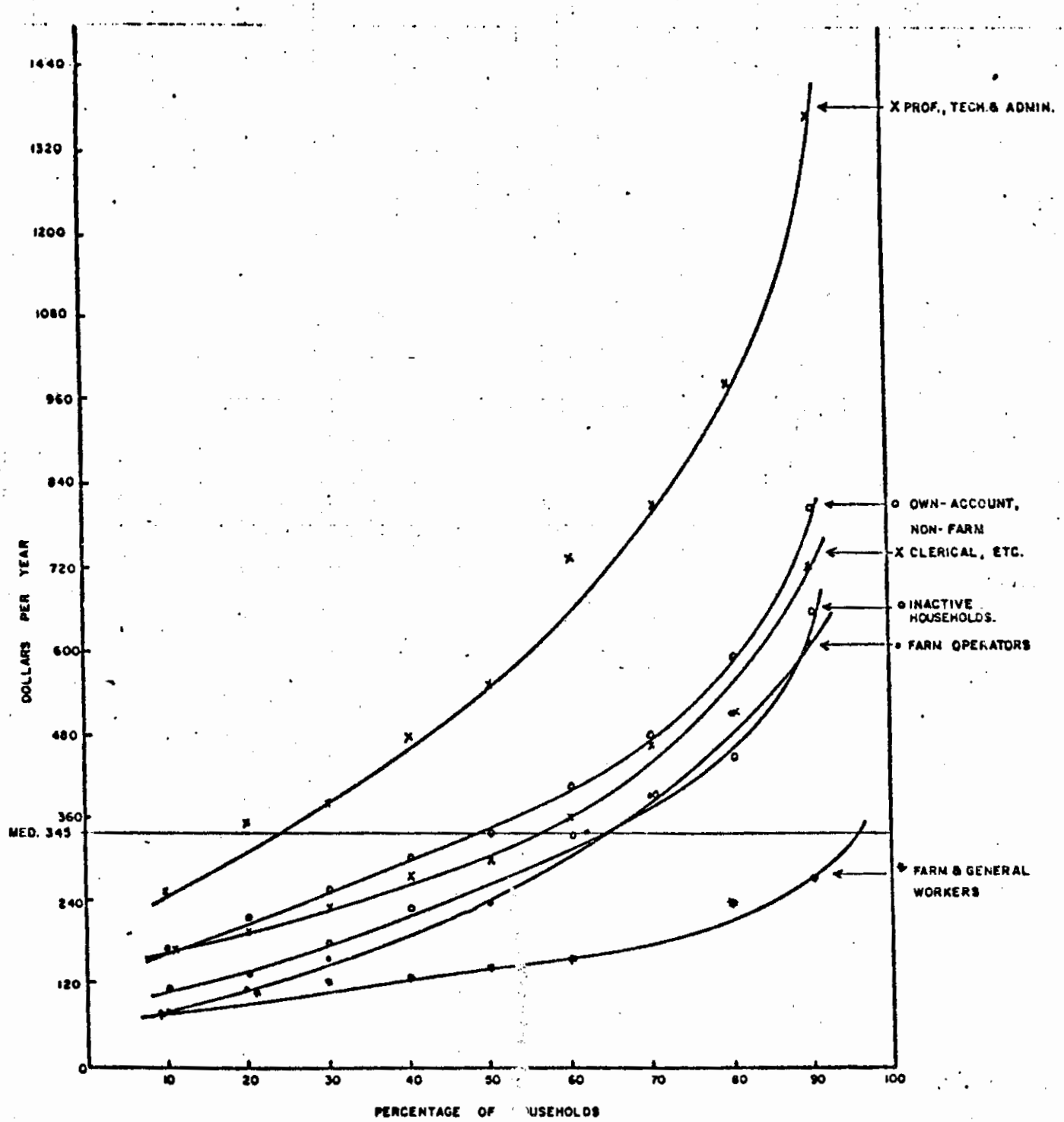
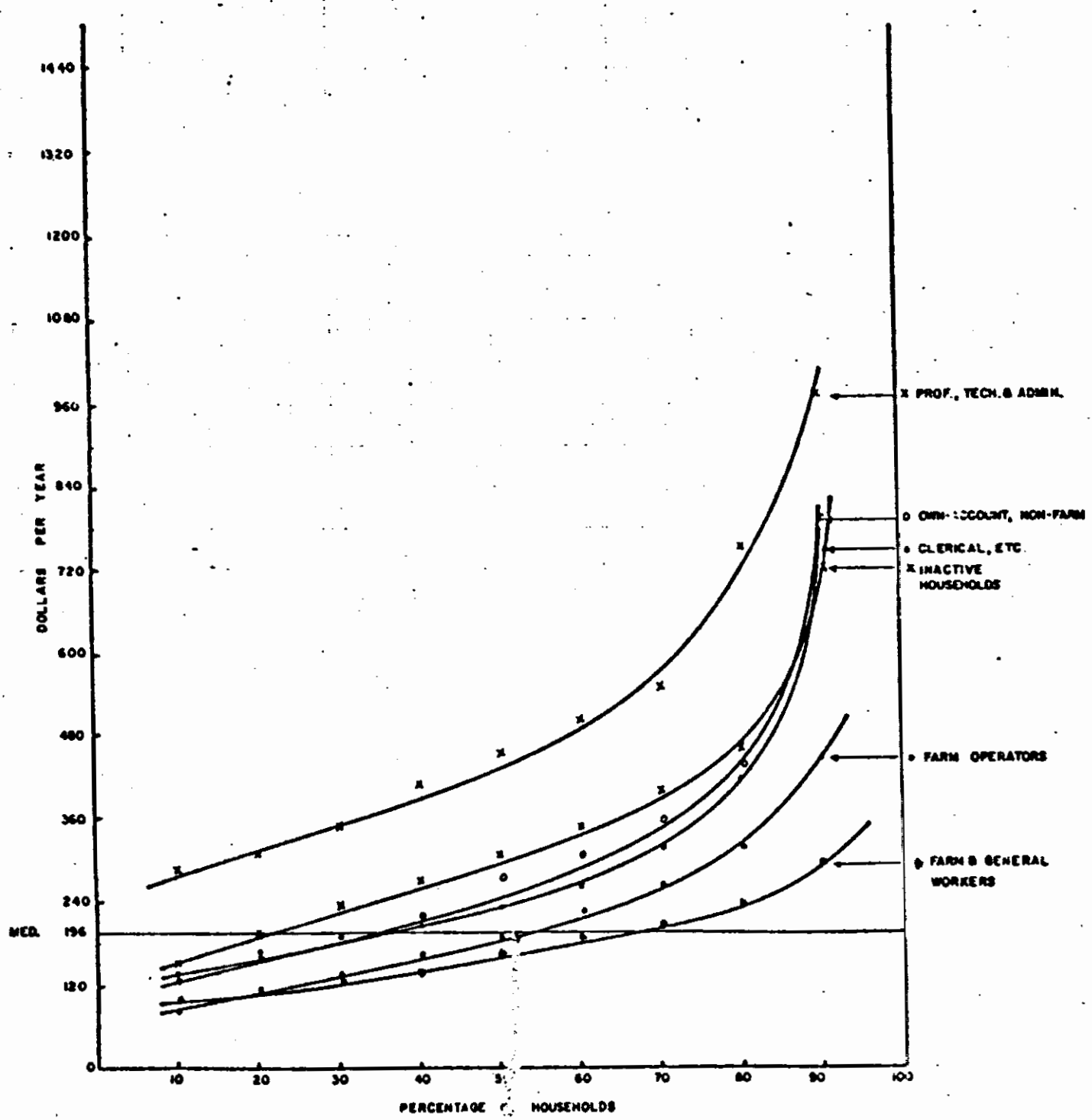
Graph 7b

ESTIMATED PERCENTAGE OF CENTRAL REGION MUNICIPAL HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 345 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1973-75



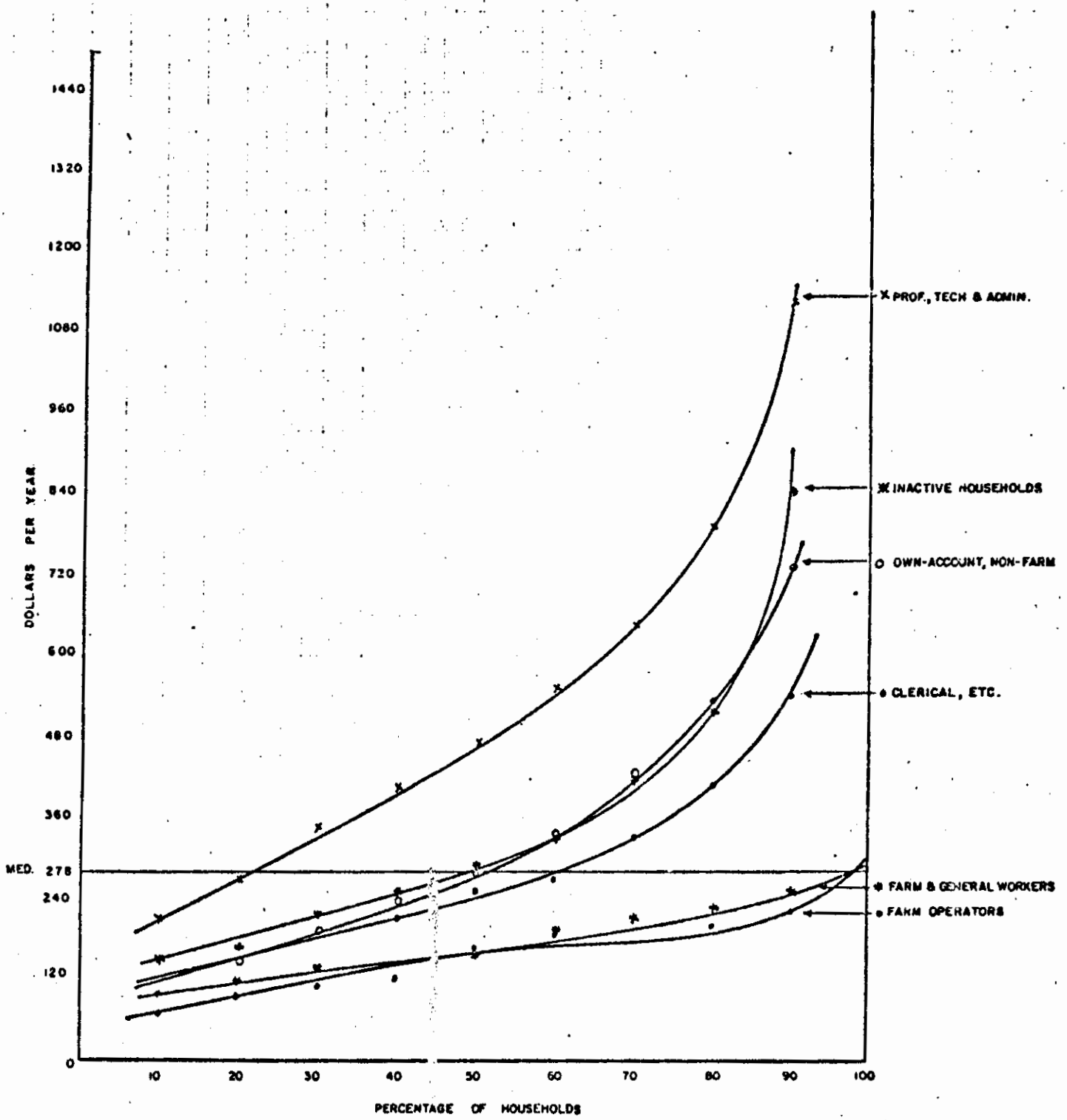
Graph 7c

ESTIMATED PERCENTAGE OF CENTRAL REGION VILLAGE HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 196 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1975-1976



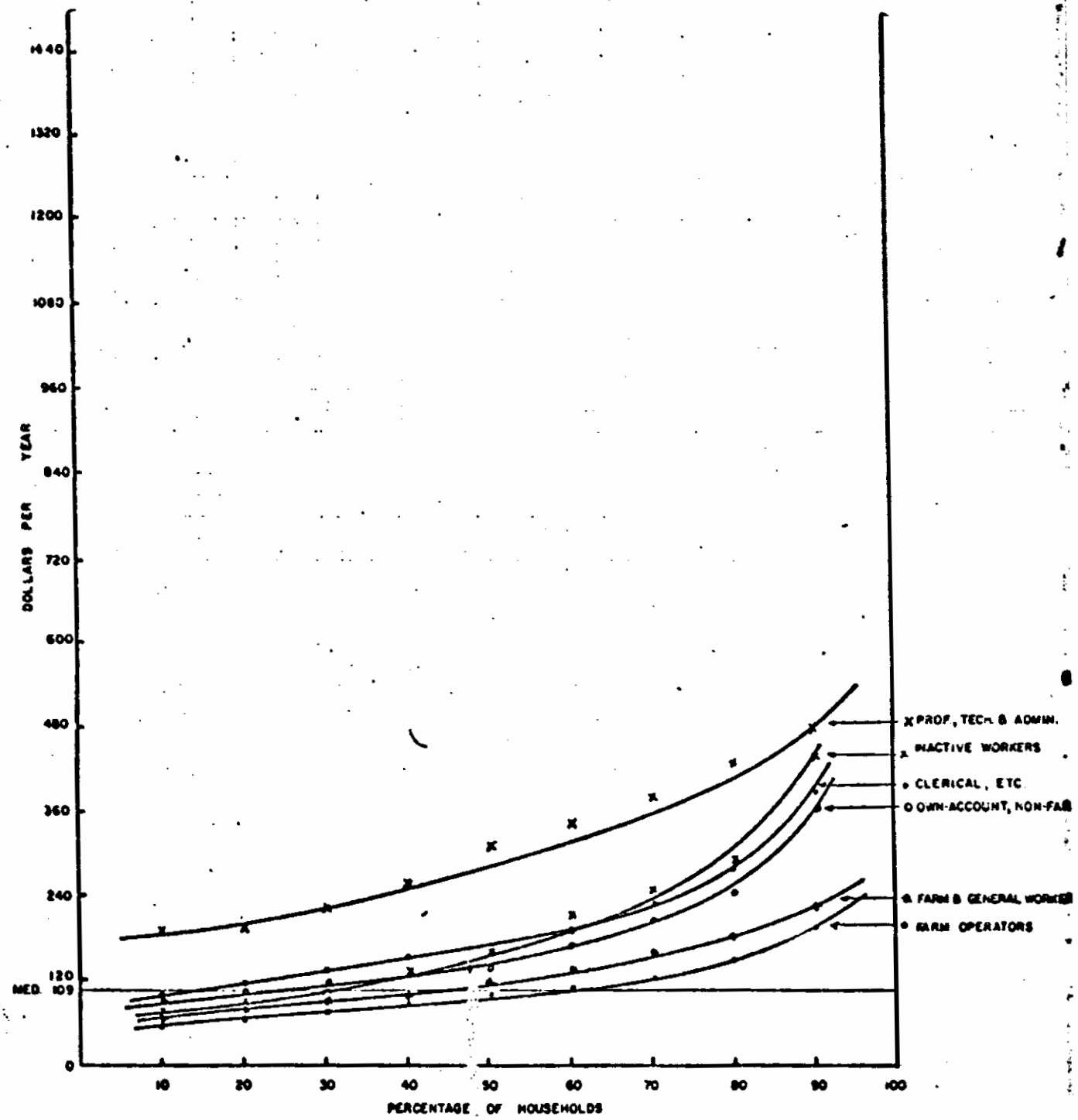
Graph 7d

ESTIMATED PERCENTAGE OF NORTHEAST REGION MUNICIPAL HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 278 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS 1975-76



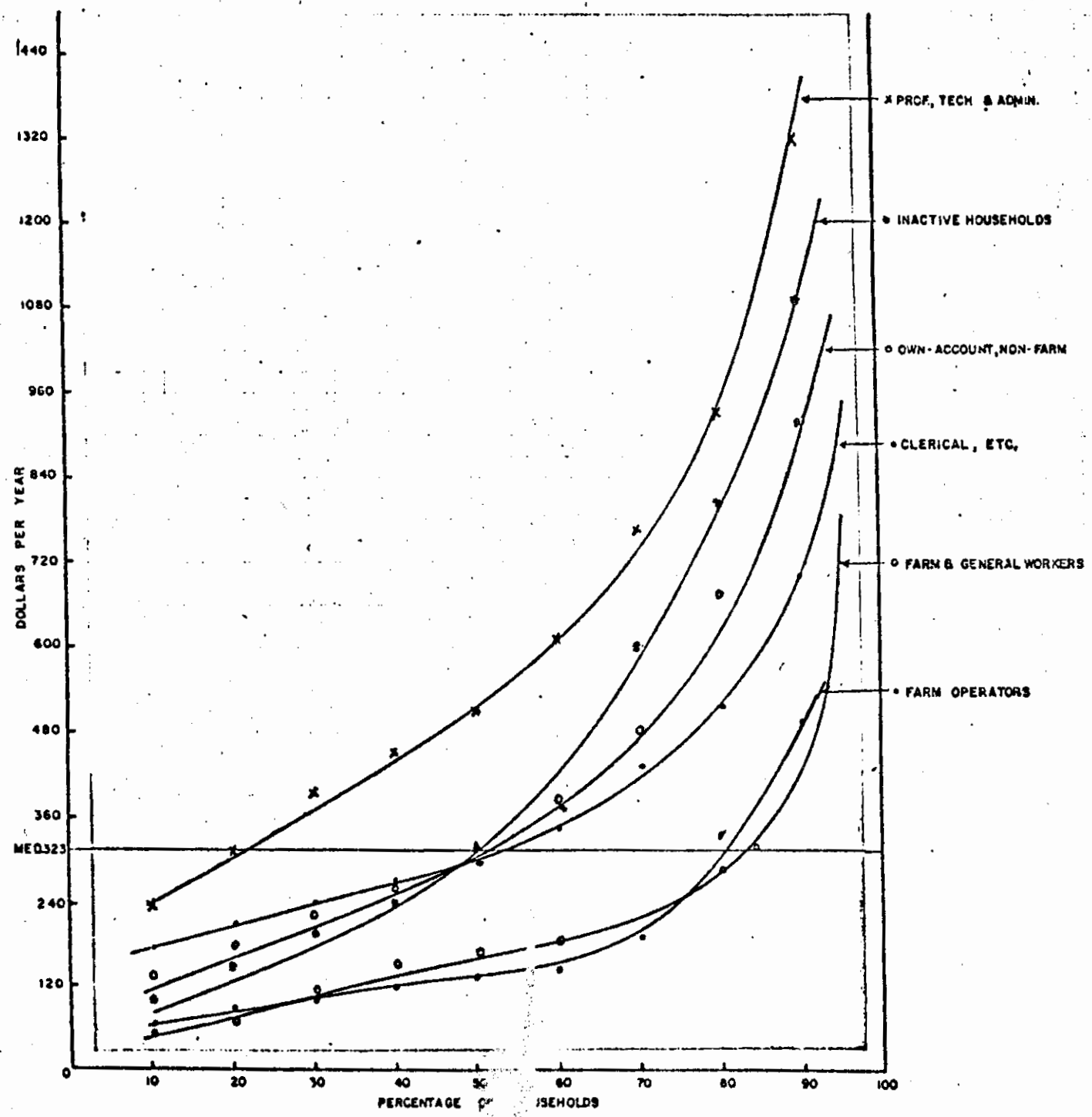
Graph 7e

ESTIMATED PERCENTAGE OF NORTHEAST REGION VILLAGE HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 100 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS 1975-1976



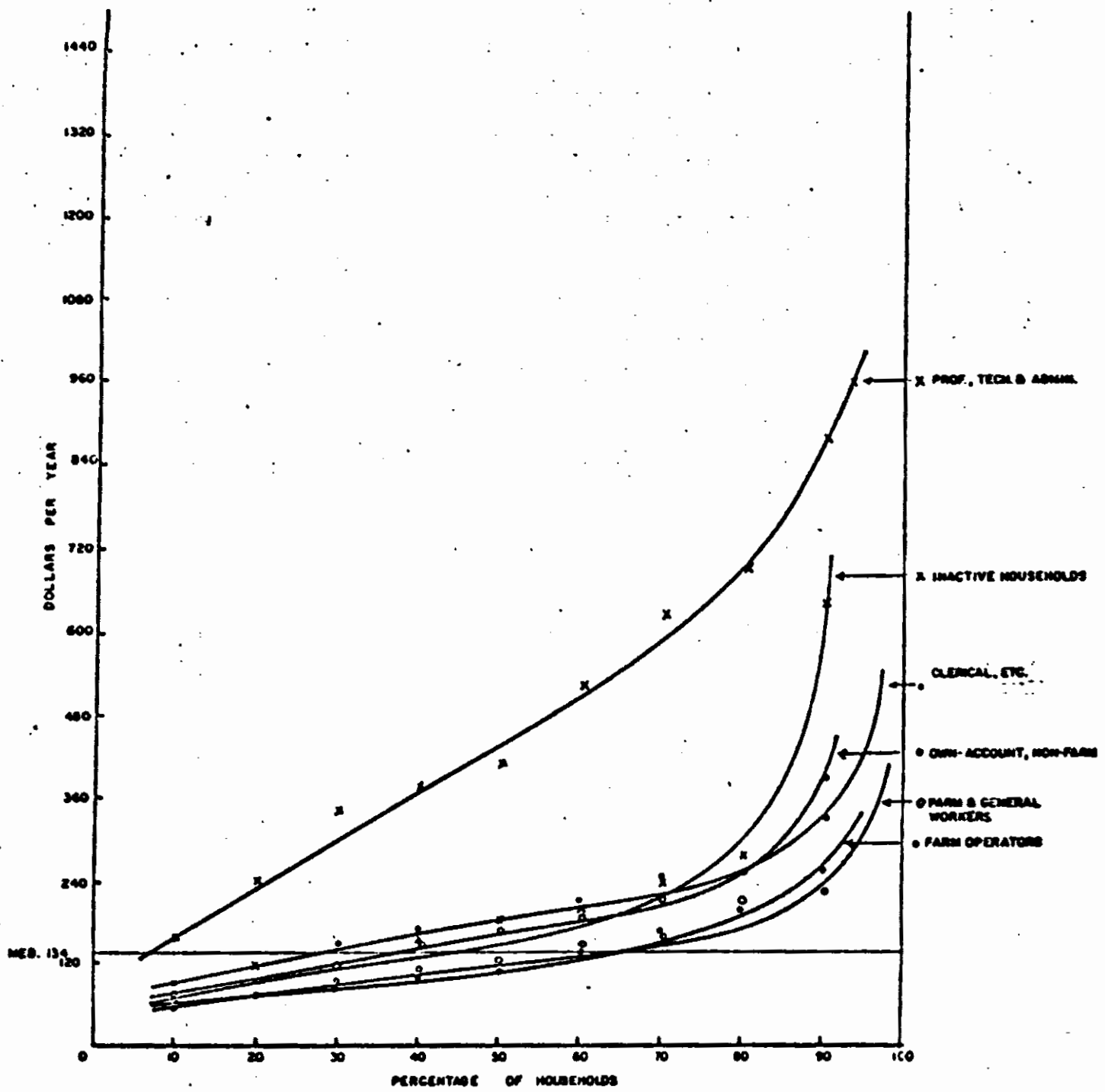
Graph 7f

ESTIMATED PERCENTAGE OF NORTHERN REGION MUNICIPAL HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 323 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1973-78



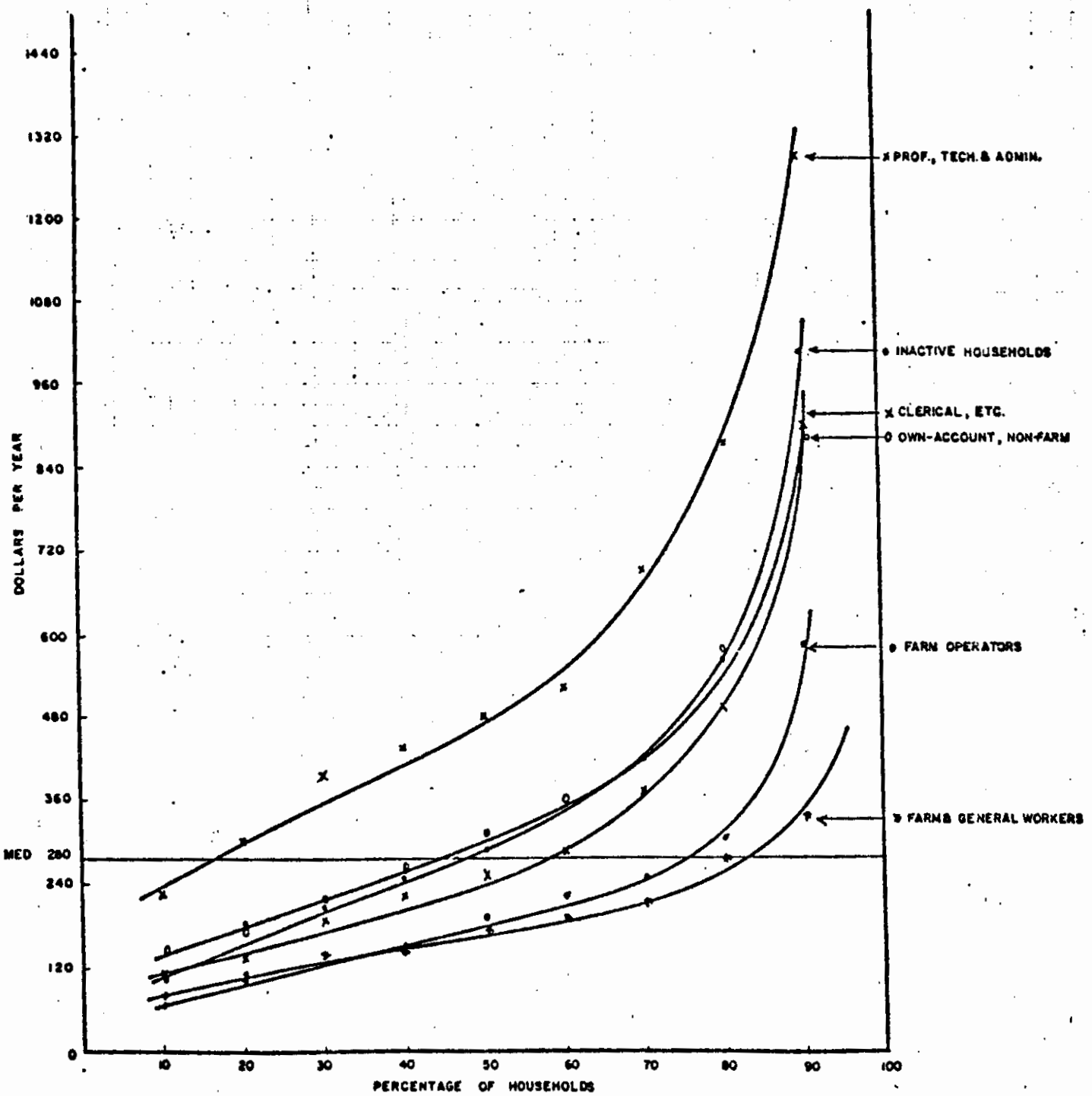
Graph 7g

ESTIMATED PERCENTAGE OF NORTHERN REGION VILLAGE HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 134 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1975-76



Graph 7h

ESTIMATED PERCENTAGE OF SOUTHERN REGION MUNICIPAL HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 280 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS 1973-76



Graph 7i

ESTIMATED PERCENTAGE OF SOUTHERN REGION VILLAGE HOUSEHOLDS WITH PER CAPITA INCOME BELOW $ 137 (MEDIAN INCOME PER CAPITA) BY OCCUPATIONAL CLASS, 1975-76

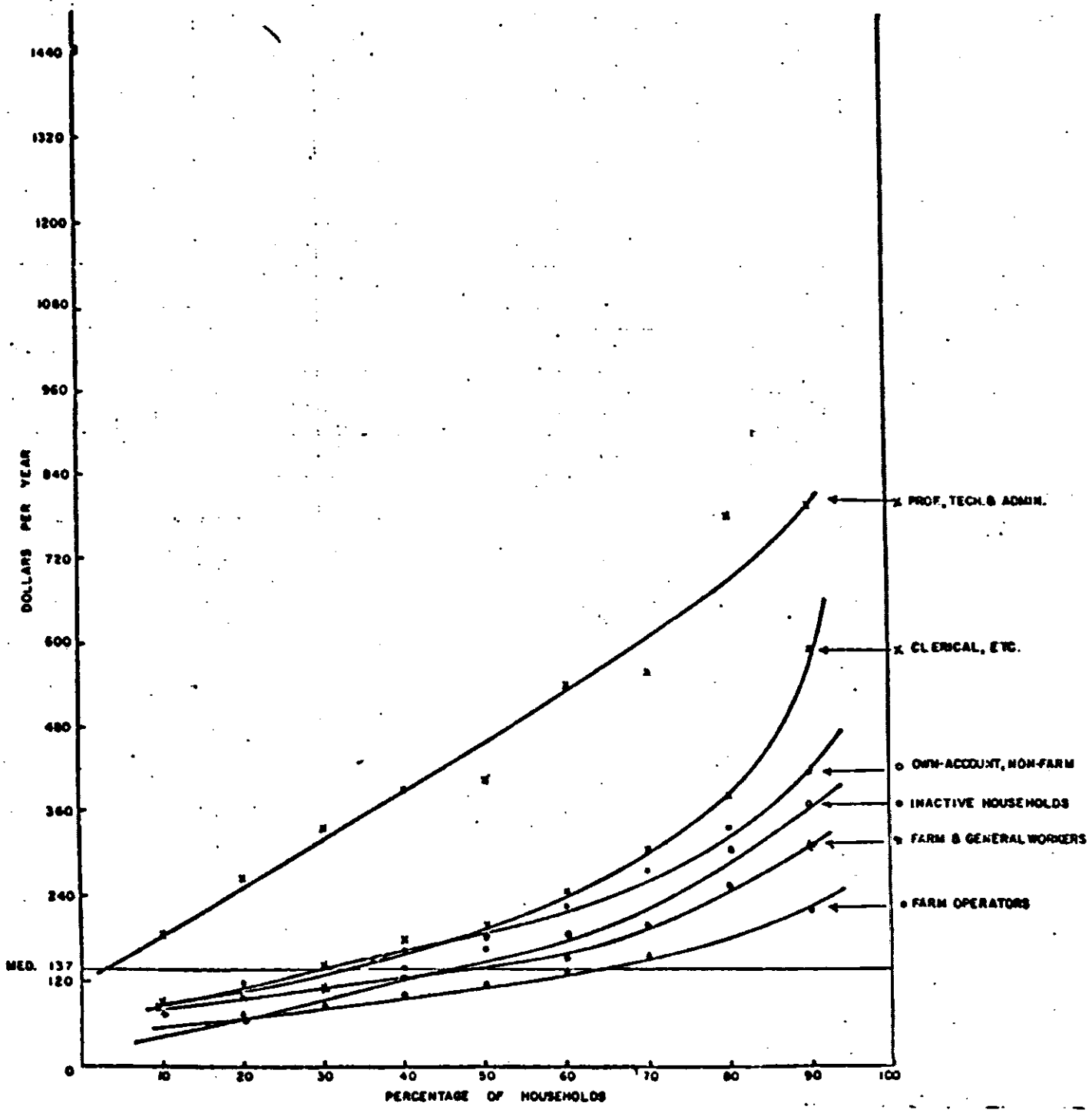


Table 8

Regional Distribution of Total Income By Household Decile to Lowest 40% and Highest 10% of Households, 1962/63,a/ 1968/69, 1971/73

Region	Share of Income to Lowest 40%			Share of Income to Highest 10%		
	1962/63	1968/69	1971/73	1962/63	1968/69	1971/73
Whole Kingdom	16.6	16.5	12.7	34.3	32.0	40.5
Northeast	23.0	18.3	15.2	34.0	32.0	33.7
North	20.7	17.5	10.9	31.0	28.0	48.5
South	16.1	16.5	14.5	33.0	32.0	36.5
Center	16.0	16.5	14.9	31.3	33.0	31.5
Bangkok	-	16.5	16.5	-	31.8	31.8

Source: Somluckrat Wattanavitukul, "Income Distribution of Thailand", (Bangkok: Thammasat University, Discussion Paper, 1978), pp. 268-269.

a/ Money Income.

Table 9

Gini Index of Total Income Inequality by Region and Location

	Region	Gini Coefficient Urban	Rural	Total
1962/63		.405	.361	.414
	Northeast	.422	.264	.344
	North	.460	.308	.359
	Central	.384	.375	.391
	East	.403	.361	.390
	South	.360	.370	.402
1968/69		.429	.381	.429
	Bangkok - Thon.	.408	.393	.412
	Northeast	.450	.347	.379
	North	.440	.345	.370
	Central	.399	.392	.401
	South	.450	.325	.401
1971/73		.433	.466	.499
	Bangkok - Thon.	.410	.335	.401
	Northeast	.497	.378	.423
	North	.443	.559	.563
	Central	.402	.413	.428
	South	.437	.414	.444

Source: Somluckrat Wattanavitukul, "Income Distribution in Thailand", (Bangkok: Thammasat University, Discussion Paper, 1978), p. 275.

Table 10

GENERAL EDUCATION (Public and Private)

Enrollments and Percentage Increase of Pupils in Public and Private Schools by Level of Education (1970-1976)

Level of Education	1970		1972		1974		1976		Average Annual % Increase 1970-1976
	Number	%	Number	%	Number	%	Number	%	
Pre-Primary Education	134,355		153,573	14.3	176,202	14.7	245,456	39.3	9.8
Public	58,922		63,033		70,822		96,992		
Private	75,435		90,540		105,380		148,494		
Primary Education									
Lower (Grades 1-4)	4,740,560		5,016,792	5.8	5,156,314	2.8	5,184,664	0.6	1.3
Public	4,229,989		4,504,257		4,667,497		4,700,349		
Private	510,571		512,535		488,817		484,315		
Upper (Grades 5-7)	894,222		1,134,562	26.9	1,350,452	19.0	1,690,513	25.2	10.2
Public	602,276		845,788		1,084,450		1,452,631		
Private	291,946		288,774		266,002		237,882		
Secondary General Education									
Lower (Grades 1-3)	449,840		595,648	32.4	754,727	26.7	927,409	22.9	11.7
Pulbic	231,308		334,885		475,709		703,896		
Private	218,532		260,765		279,018		223,513		
Upper (Grades 4-5)	62,089		69,440	11.8	92,023	32.5	187,771		21.2
Public	34,110		42,959		68,132		145,591		
Private	27,979		26,481		23,891		42,180		
Total, General Education	6,281,066		6,970,015	11.0	7,529,718	5.0	8,235,843	9.4	4.1
Public	5,156,605		5,790,920		6,366,610		7,099,389		
Private	1,124,461		1,179,095		1,163,104		1,36,384		

Sources: (a) Conditions of Education for the Years 1970-1974; and (b) Educational Planning Division, Ministry of Education, Educational Statistics 1974 and 1975, and cited in UNESCO, Thailand, Education: Towards Equalization and Reform, 1976, Paris

Footnotes to Table 10, "General Education"

1. After pre-primary education, upper secondary education expanded at the greatest rate from 1970-76.

2. Lower primary education shows steadily decreasing rates of enrollment over the 70/76 period. In 1974 there was an actual decrease in enrollment from the previous year. Disregarding the overaged in the system, this reflects the overall decrease in population growth rates.

3. Upper secondary education shows the third highest rate of expansion. The elimination of grade seven and the creation of a unified six-year system will speed the expansion rate at grade five and six.

4. Private sector education shows a general decrease at all levels but upper secondary. This reflects a government decision to gradually withdraw grant-in-aid programs to private schools and to de-emphasize their role.

5. Targets for the current school year of 1977/78 are given. Several reviews of the Fourth Five Year Plan for Education have indicated that the stated targets are unrealistic and that plan achievements are likely to fall short.

Table 11

Normal Weight and Degree of Malnutrition - Thai Children 0-4 Years Old (%)

Province	Normal	1^0	2^0	3^0
Northeast	26.9 %	56.1 %	15.1 %	1.9 %
North	34.9	55.9	9.2	-
East	45.8	45.0	9.3	-
South	38.5	52.5	8.6	0.5
Central	47.3	43.7	8.4	0.6

Source: NSO, Department of Public Health, Nutrition Division, National Nutrition Survey 1975, preliminary tabulations, (Bangkok: 1977).

Notes : Normal = Bangkok well-baby clinic average weight

Malnutrition: 1^0 = 75-90 percent of normal weight

2^0 = 60-75 percent of normal weight

3^0 = 60 percent of normal weight

Table 12

Fertility Measures by Region, Municipal and Non–Municipal Area : 1964–65 Survey and 1974–75 Survey.

Regions	Crude Birth Rate CBR	General Fertility Rate GFR	Age Standardized General Fertility Rate GFR (Std)	Total Fertility Rate TFR	Gross Reproduction Rate GRR	Net Reproduction Rate NRR	Age Specific Fertility Rate 15–19	20–24	25–29	30–34	35–39	40–44	45–49
1974–75 Survey													
Whole Kingdom	**37.0**	**157.5**	**157.5**	**5,167**	**2.5**	**2.2**	**84.1**	**246.9**	**254.5**	**203.6**	**153.5**	**76.4**	**14.5**
North	26.6	108.7	113.0	3,787	1.8	1.6	53.7	169.6	202.8	162.7	112.3	48.0	8.3
Northeast	45.0	204.7	199.8	6,588	3.2	2.8	113.3	333.7	305.0	245.2	196.8	103.8	20.0
Central (excluding Bangkok Metropolis)	34.1	143.0	140.7	4,668	2.3	2.0	77.7	219.6	234.1	184.2	133.2	71.9	12.9
Bangkok Metropolis	32.6	108.2	104.1	3,648	1.8	1.5	48.0	109.9	209.5	162.0	108.1	62.8	29.1
South	41.4	190.4	192.4	6,284	3.1	2.6	107.7	329.1	318.9	232.3	173.2	77.7	17.9
Municipal areas	39.1	136.2	133.1	4,580	2.2	1.9	53.4	167.7	286.7	191.4	123.3	69.2	24.3
Non–Municipal areas	36.7	161.6	161.0	5,313	2.6	2.2	89.7	265.2	257.5	194.7	158.7	79.5	17.3
1964–65 Survey													
Whole Kingdom	**42.2**	**188.8**	**188.8**	**6,299**	**3.1**	**2.6**	**66.4**	**258.9**	**302.6**	**273.1**	**222.4**	**112.3**	**24.1**
North	43.7	201.1	198.1	6,473	3.2	2.6	94.5	282.3	304.3	277.5	221.2	96.2	18.5
Northeast	43.5	193.6	196.0	6,611	3.2	2.7	62.3	257.9	318.0	292.3	231.9	123.1	36.6
Central (excluding Bangkok Metropolis)	39.7	174.4	175.7	5,901	2.9	2.4	47.4	241.4	305.4	237.6	218.8	108.1	21.6
South	40.9	184.1	180.9	6,020	2.9	2.5	71.6	256.6	256.5	279.8	208.0	121.0	10.4
Municipal areas	29.9	117.2	125.2	4,233	2.1	1.7	47.8	164.4	223.3	171.8	142.5	89.2	7.7
Non–Municipal areas	43.2	182.5	194.7	6,489	3.2	2.6	68.2	267.7	309.5	282.9	229.4	114.5	25.6

Source: NESDB, Report: The Survey of Population Change, 1974-75 (Bangkok: 1977) p. 19.

Table 13

Comparison of Death Rates by Region: 1964-65 Survey and 1974-75 Survey

Region	Crude Death Rate	Infant Mortality Rate	Age Specific Death Rate							
			Under 1 year	1-9	10-19	20-29	30-39	40-49	50-59	60 and over
1974-75 Survey										
Whole Kingdom	**8.9**	**56.3**	**77.1**	**5.0**	**1.8**	**2.5**	**4.9**	**8.0**	**13.8**	**51.1**
North	10.3	96.0	115.2	6.7	2.1	2.9	6.0	8.0	13.1	47.0
Northeast	10.0	54.4	74.2	5.0	2.2	2.8	5.8	9.9	17.2	75.5
Central (excl. Bangkok Metropolis)	6.8	49.5	75.9	4.1	1.5	1.9	3.7	6.0	9.7	31.8
Bangkok Metropolis	4.3	31.0	59.9	1.3	0.5	0.3	1.0	4.5	7.0	35.2
South	10.3	60.4	75.0	5.3	2.2	3.5	6.0	9.0	16 2	48.5
Municipal Area	6.2	10.3	20.7	2.3	0.7	1.6	2.5	5.5	13.1	61.8
Non-Municipal Area	9.3	63.9	83.7	5.3	1.9	2.6	5.3	8.4	13.9	49.1
1964-65 Survey										
Whole Kingdom	**10.8**	**84.3**	**89.3**	**6.9**	**2.4**	**3.8**	**4.7**	**8.0**	**11.6**	**49.4**
North	12.4	96.5	103.4	8.6	2.6	3.7	5.5	10.5	13.1	49.9
Northeast	11.4	83.4	83.8	7.8	3.1	4.8	5.1	7.5	14.9	51.9
Central	10.4	94.0	107.0	3.7	1.1	3.1	3.9	8.7	8.7	52.6
South	8.6	48.5	50.2	7.2	2.3	2.9	3.7	8.4	6.6	37.0
Municipal Area	5.6	67.6	65.3	–	–	–	–	5.4	7.8	38.6
Non-Municipal Area	11.3	85.5	90.8	1.3	2.5	4.1	5.0	8.2	11.9	50.4

Note : The difference between the infant mortality rate and death rate under 1 year in some cases seems to be larger than expected. This is probably due to under-reporting of population age 0.

Source: Ibid., p. 26.

Table 14

Crude Birth Rates, Crude Death Rates and Natural Growth Rates for the Whole Kingdom and the Regions

Region	Population	Births	Death	Rates per 1000 Population		Rate of Natural Increase
				Birth	Death	
Whole Kingdom	222,105	8,227	1,979	37.0	8.9	2.8
Bangkok Metropolis	15,813	516	68	32.6	4.3	2.8
North	47,485	1,261	488	26.6	10.3	1.6
Northeast	78,401	3,528	786	45.0	10.0	3.5
Central (excluding Bangkok Metropolis)	55,678	1,898	381	34.1	6.8	2.7
South	24,728	1,024	256	41.4	10.3	3.1

Source: NSO, Report of the Survey of Population Change 1974-1975.

Table 15

Average Values of Socio-economic Indicators for Province Grouped by Region, Thailand

Indicator	Region: Northeast	North	South	Center	Bangkok-Thonburi
1. Income					
1.1 Gross provincial product per capita, 1970	$ 89	$ 137	$ 198	$ 250	$ 642
1.2 Gross provincial product per capita, 1976	$ 161	$ 277	$ 362	$ 536	$ 958
1.3 Annual growth rate in gross provincal product per capita, 1970-1976	10.4	12.4	10.6	13.5	6.9
1.4 Government expenditure per capita, 1970	$ 10	$ 13	$ 15	$ 18	-
1.5 Government expenditure per capita, 1976	$ 29	$ 36	$ 46	$ 47	-
1.6 Annual growth rate in government expenditure per capita, 1970-1976	18.3	18.5	20.6	17.3	-
1.7 Population per government employee, 1970	75	62	32	37	14
2. Degree of Urbanization					
2.1 Percentage of population in municipal area 1970	3.7	5.9	10.6	9.5	81.1
2.2 Percentage of households in agriculture, 1970	78.4	69.6	63.1	52.8	6.5
3. Demographic					
3.1 Average household size, 1970	6.1	5.5	5.5	5.7	6.0
3.2 Number of births per thousand and population, 1972	35.0	26.4	35.6	28.7	37.3
3.3 Number of deaths per thousand population, 1972	7.3	6.7	5.8	6.2	6.8
3.4 Infant mortality, 1972	2.6	3.2	1.6	2.6	3.7
3.5 Annual rate of population growth, 1970-1976	3.5	3.2	3.8	3.9	6.7
3.6 Number receiving family-planning service per thousand population, 1972-73	24	26	14	20	6

Table 15 - continued

Indicator	Northeast	North	South	Center	Bangkok-Thonburi
4. Labor					
4.1 Percentage of economically active population employed, 1970	37	49	77	70	93
5. Education					
5.1 Percentage of population who are literate, 1970	86	74	76	84	90
5.2 Average number of years of schooling for population 6+, 1970	3.1	2.8	2.7	3.2	4.6
5.3 Students per teacher, 1973	33	30	28	28	24
5.4 Students per classroom, 1973	29	30	29	30	36
5.5 Average number of years of schooling of teachers, 1973	12.4	12.5	12.6	12.8	13.2
5.6 Total expenditure on primary education per capita, 1975 (CAO)	$ 30	$ 34	$ 44	$ 44	-
6. Health					
6.1 Number of patients with communicable diseases per thousand population, 1974	3.2	1.8	4.4	5.9	2.2
6.2 Percentage of deaths from communicable diseases, 1974	2.9	2.4	1.4	1.7	.8
6.3 Population per hospital, 1973	33,340	20,819	14,546	11,413	7,653
6.4 Population per hospital bed, 1973	2,188	1,711	946	747	358
6.5 Population per doctor, 1973	41,805	18,234	20,131	14,481	1,863
6.6 Population per nurse, 1973	14,720	7,628	6,456	5,031	892
6.7 Rural population per first class health center, 1973	189,704	130,528	94,616	109,215	-
6.8 Rural population per health center, 1973	8,440	7,882	5,297	6,366	-
6.9 Expenditure on health per capita, 1977	$ 2	$ 3	$ 4	$ 4	-

Table 15 - continued

Indicator	Northeast	North	South	Center	Bangkok-Thonburi
7. Housing					
7.1 Percentage of houses with piped water, 1970	5.0	5.5	5.3	10.5	78.5
7.2 Percentage of households using well water, 1970	79.5	72.9	83.2	49.2	6.4
7.3 Percentage of houses with electricity, 1970	7.7	11.8	13.5	21.1	85.9
7.4 Percentage of houses with toilets, 1970	18.3	32.3	15.1	35.7	93.6
7.5 Rural Population per public well, 1974	153	73	99	183	-
7.6 Percentage of villages with electricity, 1976	9.0	20.0	15.0	35.1	-
8. Communications					
8.1 Population per registered vehicle, 1969	422	312	206	135	19
8.2 Percentage of households with radios, 1970	56.1	66.2	60.7	82.6	82.8
8.3 Percentage of households with televisions, 1970	3.8	3.2	3.1	12.0	54.7
8.4 Percentage of households with cars, 1970	2.2	2.8	3.2	4.9	16.2
8.5 Population per telephone, 1974	1,258	897	477	531	29
8.6 Rural Road needs per thousand rai of cultivated area, 1977	.54	.79	1.13	.39	.11
8.7 Number of train stops per thousand square kilometers	.74	.52	2.31	1.88	13.56
8.8 Kilometers of railway per thousand square kilometers	5.39	3.62	13.73	11.36	70.37
9. Security					
9.1 Number of crimes per thousand population, 1974	306	405	802	369	184
9.2 Percentage of crimes solved, 1974	23	23	20	33	55
9.3 Number of police stations per thousand square kilometers	1.24	.98	2.55	2.17	36.15
9.4 Population per policeman, 1974	1,113	836	519	750	741

Table 16

Actual Total Expenditures and Revenue by Region
($ Millions)

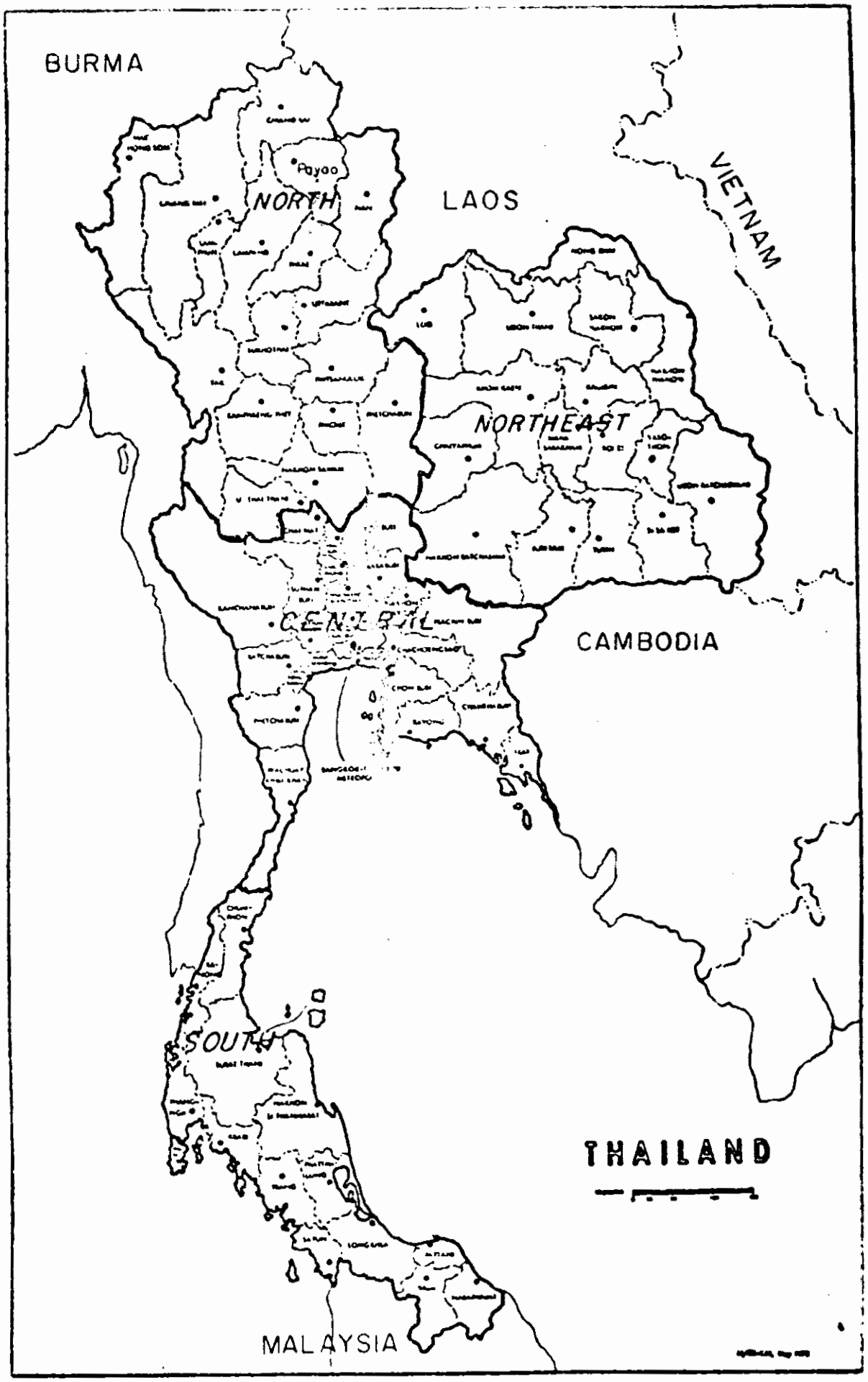
		Bangkok	Central	North	Northeast	South	Total
1975	Total Exp.	$1,962	$ 257	$ 177	$ 336	$ 152	$2,884
	Revenue	1,850	121	28	29	36	2,064
1976	Total Exp.	422	450	324	856	102	2,154
	Revenue	2,202	161	71	57	102	2,593
1977	Total Exp.	1,874	422	308	402	223	3,229
	Revenue	2,835	201	78	47	155	3,316
1978	Total Exp.	3,838	486	369	503	273	5,469
	Revenue	3,123	272	65	56	225	3,741
1979	Total Exp.	2,849	483	512	607	249	4,700
	Revenue	2,960	253	113	69	402	3,797

Source: Comtroller General Department and Bureau of the Budget, RTG.

Table 17 Size of Agricultural Holdings 1973-1974

Upper North	Owned (%) <14.9 rai	15 rai +	Tenant (%) <14.9 rai	15 rai +
Chiangmai	93	7	100	0
Lamphun	91	9	86	14
Mae Hong Son	100	0	-	-
Phrae	89	11	62	38
Chiangrai	69	31	100	0
Nan	80	20	-	-
Lampang	88	12	82	18
Nakhon Sawan	23	77	-	-
Phichit	9	91	20	80
Phitsanuloke	14	86	58	42
Tak	48	52	100	0
Kamphaengphet	7	93	63	37
Uthaithani	20	80	-	-
Sukhothai	27	73	26	74
Uttaradit	40	60	62	38
Phetchabun	22	78	32	68

Source: Ministry of Agriculture and Cooperatives, Land Utilization in Thailand, 1973 (Thai language), analyzed in Krirkiat Phipatseritham (1979), "Trends in Land Tenure and Security - A Report Prepared for USAID/Thailand" Thai University Research Association, Report #5.


BURMA
LAOS
VIETNAM
CAMBODIA
MALAYSIA
NORTH
NORTHEAST
CENTRAL
SOUTH
Payao
THAILAND