

BIBLIOGRAPHIC DATA SHEET1. CONTROL NUMBER
PN-AAJ-7922. SUBJECT CLASSIFICATION (695)
PA00-0000-0000

3. TITLE AND SUBTITLE (240)

An assessment of perceptions of quality-of-life changes associated with community-based, integrated rural development in Thailand

4. PERSONAL AUTHORS (100)

David, H. P.

5. CORPORATE AUTHORS (101)

Am. Public Health Assn.

6. DOCUMENT DATE (110)

1981

7. NUMBER OF PAGES (120)

82p.

8. ARC NUMBER (170)

TH304.63.D249

9. REFERENCE ORGANIZATION (130)

APHA

10. SUPPLEMENTARY NOTES (500)

11. ABSTRACT (950)

12. DESCRIPTORS (920)

Birth control	Contraceptives
Thailand	Birth
Fertility	Rural development
Population growth	Community development
Family relations	Quality of life
Families	

13. PROJECT NUMBER (150)

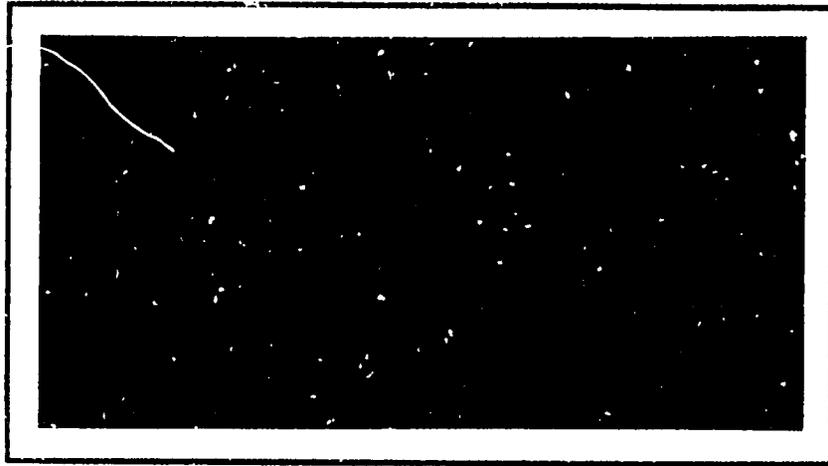
936590000

14. CONTRACT NO.(140)

AID/DSPE-C-0053

15. CONTRACT
TYPE (140)

16. TYPE OF DOCUMENT (160)



AMERICAN PUBLIC HEALTH ASSOCIATION
International Health Programs
1015 Fifteenth Street, N.W.
Washington, D.C. 20005

AN ASSESSMENT OF
PERCEPTIONS OF QUALITY-OF-LIFE CHANGES
ASSOCIATED WITH COMMUNITY-BASED,
INTEGRATED RURAL DEVELOPMENT
IN THAILAND

A Report Prepared By:
Henry P. David

During The Period:
April 19, 1981 - May 8, 1981

Supported By The:
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
(ADSS) AID/DSPE-C-0053

AUTHORIZATION
Ltr. AID/DS/POP: 7/8/81
Assgn. No. 582093

Development Information Center
Bureau for Development Support
Agency for International Development
Washington, D.C. 20523

ACKNOWLEDGMENTS

It gives me much pleasure to acknowledge the support provided by the staff of the International Health Programs, American Public Health Association; Mr. David Oot, Population Adviser, USAID, Thailand; and Mr. Mechai Viravaidya and the staff of the Population and Community Development Association, Bangkok. Without their generous assistance and gracious hospitality, it would not have been possible to complete my assignment in the brief time available. The concepts presented in this report reflect a genuine sharing of ideas with Thai colleagues in a context of dynamic leadership and innovation.

Henry P. David

May 11, 1981

PREFACE

The body of this report consists of a draft of a research proposal designed to assess changes in fertility behavior, economic behavior, and perceptions of individual, family, and community well-being associated with a community-based integrated rural development system for family life improvement (CBIRDS/FIL). The report opens with a summary, followed by an introductory presentation of general objectives. Separate sections on specific aims, the proposed target population and approach, sample selection and data collection, assessment procedures, data analysis, time and task phases, personnel and resources, budget, and references are included. Appended are a report on the Population and Community Development Association and its development strategy; a description of the existing and proposed Community Benefits Program; a summary of an earlier AID-commissioned report, "Incentives, Fertility Behavior, and Integrated Community Development," and an updated version of a chapter on Thailand; and an overview of Thailand and the Northeast Region where the proposed project will be launched. The responsibilities of proposed senior personnel and consultants are described, but the vitae have been deleted from this draft report (originally they constituted Appendix E). The draft proposal has been discussed with USAID/Bangkok, and two copies of the proposal are expected to be delivered to that office by May 15, 1981.

Segments of the proposal were discussed in Bangkok with Dan Cohen and David Oot (USAID/Bangkok); Mechai Viravaidya, Rachitta Na Pattalung, Thomas D'Agnes, and Leona D'Agnes (Population and Community Development Association, Bangkok); Tony Bennett (Ministry of Public Health, Bangkok); Stephen Isaacs and Alan Rosenfield (Columbia University, New York); Frederic L. Ayer (Research and Development Department, Cathay Trust Company Limited, Bangkok); Marshall Green and Fred Pinkham (Population Crisis Committee, Washington, D.C.); and Malcolm Potts (International Fertility Research Program, Chapel Hill). Field-tests of proposed qualitative assessment instruments were conducted in the Vieng Pa Pao District, located near Chiangmai in Northeast Thailand

Community-Based Integrated Rural Development Systems/
Family Life Improvement (CBIRDS/FLI)

Research Proposal Submitted To
The U.S. Agency for International Development

Implementing Organization(s): The Population and Community Development Association (PDA) of Thailand, with consultation from the Transnational Family Research Institute (Bethesda, Maryland)

Proposed Principal Investigator: Mechai Viravaidya

Proposed Project Manager: Rachitta Na Pattalung

Proposed Research Consultant: Henry P. David

Project Duration: Three Years (1981 - 1983)

Proposed Total Budget:

Local Contribution:

Funds Requested from AID: U.S.\$187,350

Conversion Rate: U.S.\$1 = 20 Baht

Date

Mechai Viravaidya
Secretary-General
Population and Community Development
Association

"Our approach means looking to the people themselves for solutions, going into villages and finding out what people want and what their ideas are in dealing with their problems."

(Mechai Viravaidya, 1974)

"What we do is common sense."

(Mechai Viravaidya, 1979)

"All economic development includes the improvement of facilities and the standard of living. To achieve this for the majority of people in Thailand, we need to change the patterns of consumption, create savings, develop agriculture, and control the birthrate."

(Mechai Viravaidya, 1981)

"Mechai believes that all the power, drive, and energy necessary to achieve a better way of life in Thailand rests with the individual who has been provided with a meaningful opportunity to participate in positive change."

(Malcolm Potts, 1981)

ABBREVIATIONS

ACPD	Asian Centre for Population and Community Development
AID	Agency for International Development
APHA	American Public Health Association
CBATDS	Community-Based Appropriate Technology and Development Services
CB/CI	Community Benefits/Critical Incidents
CBERS	Community-Based Emergency Relief Services
CBFPS	Community-Based Family Planning Service
CBIRDS/FLI	Community-Based Integrated Rural Development System/ Family Life Improvement
ESCAP	Economic and Social Commission for Asia and the Pacific
GDP	Gross Domestic Product
IPPF	International Planned Parenthood Federation
JOICFP	Japanese Organization for International Cooperation in Family Planning
MCH	Maternal and Child Health
MOPH	Ministry of Public Health
MWRA	Married Women of Reproductive Age
NESDB	National Economic and Social Development Board
NFPP	National Family Planning Program
PDA	Population and Community Development Association
PPAT	Planned Parenthood Association of Thailand
PPS	Probabilities Proportional to Size
TFRI	Transnational Family Research Institute
USAID	United States Agency for International Development

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Community-Based Integrated Rural Development System/
Family Life Improvement (CBIRDS/FLI)

SUMMARY

The Population and Community Development Association (PDA) is preparing to launch a community-based integrated rural development (CBIRD) program in selected villages in Northeast Thailand, the poorest and most agricultural region of the country. Among the objectives are improved economic well-being, better health and environmental conditions, and fertility reduction. It is the purpose of this proposal, developed in consultation with the Transnational Family Research Institute (TFRI), to seek funding for the assessment of changes in fertility behavior, economic behavior, and perceptions of individual, family, and community well-being. Baseline data to assess actual economic changes will be obtained, but a separate study also will be undertaken to examine in greater depth economic development trends.

The key component of the CBIRDS and Family Life Improvement (FLI) Program is a Revolving Village Development Loan Fund, with an initial PDA contribution based on a formula representing the number of pregnancy-free months since the time of the last birth for every married village woman. The formula is adjusted for age and parity. Subsequent contributions to the Village Development Fund will be based on pregnancy-free months for married women of reproductive age (MwRA) (15-44), adjusted for age and parity, beginning with the date of project implementation. Technical consultation will be provided to enhance income-generating activities and cooperatives supported by the Village Development Fund. The program design ensures that every village family will benefit, beginning with family planners, regardless of socioeconomic circumstances. This program is entirely voluntary. The 10 experimental and 10 control villages will be selected from a pool of 300 villages where an active community-based family planning service (CBFPS) program exists. Villages will be matched on the basis of contraceptive prevalence among all MwRAs, method use, and village size (using the PPS model). Five experimental villages will have the highest contraceptive prevalence rates and five will have the lowest. The 10 control villages will be matched with the 10 experimental villages on the basis of contraceptive prevalence, PPS ratings, and location in the same geographic district. No changes will be made in the CBFPS programs in the control villages.

All funds for program implementation will be provided by the PDA. Research support is requested solely to assess the behavioral effects of community benefits on the quality of life of families and villages in terms of actual and perceived changes in economic well-being, health, nutrition, contraceptive practice, fertility aspirations, and the spectrum of family and community development values by which a villager evaluates past and present life status and future expectations. Tangible and intangible aspects of specific community benefits will be assessed in terms of their contribution to perceived family life improvements. Communication among couples, contraceptive decisionmaking, communication transfer, and participation in community development will be noted. The primary objective is to document the effects on fertility of community benefits that are linked to the development process. A result will be guidelines or suggestions for development planners.

I. INTRODUCTION

Objectives

The Population and Community Development Association (PDA) is preparing to launch a community-based integrated rural development (CBIRD) program in selected villages in Northeast Thailand. Among the objectives are improved economic well-being, better health and environment, and fertility reduction. Funds are available to begin implementing the program in August 1981. It is the purpose of this proposal, developed in consultation with the Transnational Family Research Institute (TFRI), in Bethesda, Maryland, to seek funding for the assessment of changes in fertility behavior, economic behavior, and perceptions of individual, family, and community well-being. Baseline data to assess actual economic changes will be obtained, but a separate study also will be undertaken in greater depth to examine economic development trends. This proposal will focus primarily on changes in family and community perceptions evolving from a community-based integrated rural development system oriented to family life improvement (FLI). Recommendations for development planners will be provided.

Resources

The proposed research project builds on the extensive experience of the PDA's major operating unit, the Community-Based Family Planning Services (CBFPS), and associated units, including the Community-Based Appropriate Technology and Development Services (CBATDS), Community-Based Emergency Relief Services (CBERS), and the Asian Centre for Population and Community Development (ACPD) (Viravaidya, 1979a). A description of programs and a development strategy are found in Appendix A. Because development tends to disturb the socioeconomic patterns and value system of a community, the PDA prefers to introduce development gently, fostering trust and credibility while providing tangible benefits. It will begin with family planning acceptors. Projects are planned in partnership with villagers and are to be focused on perceived community needs. The PDA generates and uses village resources and experiences; technical assistance is provided by PDA development specialists. Participation in PDA projects is completely voluntary.

Project Activities

Successful fertility regulation requires the coordination of three distinct human forces: the desire to have sexual intercourse, the wish either to have or not to have a child, and the will to regulate the fertility consequences of sexual behavior. Though these forces may be linked logically, they are not related psychologically. Coordination requires a considerable and ever-vigilant

effort, typically with a longer-term reward that appears only in the guise of the absence of an event (David, 1981). It is one of the major purposes of this proposal to provide community benefits linked to successful family planning.

A description of the CBIRDS Community Benefits Program is presented in Appendix B; also included is an outline of income-generating activities for families and cooperatives that are expected to become self-supporting within 24 months. A segment of the program will be based on a Revolving Village Development Loan Fund, with an initial lump-sum contribution based on a formula representing the number of pregnancy-free months since the time of the last birth for every married village woman. The formula will be adjusted for age and parity. Subsequent project contributions to the Village Development Fund will be based on pregnancy-free months for married women of reproductive age (MwRA) (15-44), adjusted for age and parity, and beginning with the date of project implementation. Thus, each married woman in the village will contribute to the initial lump-sum payment in accord with her age and fertility history, and all MwRAs will be in a position to enhance the Fund further during the time of project implementation.

Program Design

The program design will include village cooperatives in which every village family will have shares, regardless of socioeconomic circumstances. Also included will be specific family benefits, apportioned family-by-family (by a method still to be determined), beginning with family planners. Some benefit will be provided to every village family, including non-family planners, however. Because every family will benefit, this portion of the program is also deemed to be a community benefit. Although participation in the community benefits program will be entirely voluntary, experience suggests that few, if any, families are likely to refuse. One of the objectives of the program is to enhance the likelihood of participation by the poorest village families, even if special terms have to be extended.

The proposal builds on the research consultant's AID-commissioned report, "Incentives, Fertility Behavior, and Integrated Community Development" (David, 1980), copies of which were disseminated to all USAID missions. This report summarizes experience in developing countries, reviews psychosocial and economic determinants of fertility behavior and their relationship to quality-of-life considerations, conceptualizes and defines types of incentives and disincentives, and discusses integrated community approaches to linking development with fertility reduction while avoiding coercion and perceived constraints. A summary of major findings is presented in Appendix C, which includes also an updated version of the chapter on Thailand and excerpts from a subsequent report that summarized the PDA experience in using reward systems for contraceptive use. That report, edited by Baker (1980), is based on reports by Khannabha (1980), Walker (1980), and David (1980).

As is outlined in the section on assessment procedures, the proposed project will assess behavioral effects of community benefits on the quality of life of families and villages in terms of actual and perceived changes in economic well-being, health, nutrition, contraceptive practice, fertility aspirations, and the spectrum of family and community development values by which a villager evaluates his/her present and previous life status and future expectations. Tangible and intangible aspects of specific community benefits will also be assessed in terms of their contribution to perceived family life improvement. Communication among couples, contraceptive decisionmaking, communication transfer, and participation in community development will be noted. Rationales are presented in the section on assessment procedures and are also noted in ESCAP* publications on the linkage between population and development programs (e.g., UNESCAP, 1980). Baseline data will be obtained on demographic and socioeconomic status, family planning practices, and related economic factors that will facilitate longer-term follow-up studies. Specifics are presented in the section on sample selection.

The role of "development" in influencing fertility is perceived most directly at the level of individual, family, and community responses to environmental change, that is, changes introduced by the "development process." It is here that fertility-choice behavior is linked with community dynamics and peer pressures (Sinding, 1979). As noted by Herz (1980), policymakers are seeking more information on the relationship between fertility and community organization, which seems to affect both the capacity to supply family planning services effectively and the demand for those services. A combination of family planning services in conjunction with development policies and programs that make the perception of smaller families more attractive offers considerable promise, as the experience of the PDA in Thailand suggests (Viravaidya, 1979c). In a recent AID population policy paper on the sensitive issue of economic incentives, it was noted that "social and economic conditions inevitably influence parental views on family size--health, savings, employment, etc. Incentives are but one way of deliberately adjusting economic conditions to encourage smaller families (Herz, 1980). Parents who truly want larger families are still able to choose that alternative. The AID position paper encourages experimentation with community incentives and cooperatives. It is the primary objective of this proposal to document the effects on fertility of community initiatives that are linked to the development process.

Use of Findings

The findings of the project are expected to enhance understanding of the community benefits approach which links community-based, integrated rural development systems to family life improvement. The proposed program, which goes "beyond family planning," is operating at this time in the experimental

* Economic and Social Commission for Asia and the Pacific.

and control villages. It is anticipated that the results will be used to produce guidelines or suggestions for consideration by development planners on how existing development funds can be linked more optimally with existing family planning programs to improve the actual and perceived quality of life of individuals, families, and communities.

Contents of Report

This proposal includes sections on specific aims, target population and approach, sample selection and data collection, assessment procedures, data analyses, time and task phases, personnel resources and responsibilities, and the budget. Selected references also are provided. The appendices contain descriptions of the Population and Community Development Association, its associated units, and development strategies; the CBIRDS Community Benefits Program; a summary of major findings from the AID-commissioned report entitled "Incentives, Fertility Behavior, and Integrated Community Development," and from reports on CBFPS/CBATDS programs; and an outline of development needs in the northeastern region of Thailand.

This proposal is based on extensive discussions with Mechai Viravaidya, Tony Bennett, Thomas D'Agnes, Leona D'Agnes, Rachitta Na Pattalung, and John Stoeckel. Also consulted were Fred Ayer, Jarrett Clinton, Stephen Isaacs, David Oot, Malcolm Potts, and Alan Rosenfield. Preliminary field-testing of psychological assessment procedures was conducted in the Vieng Pa Pao District in association with Rachitta Na Pattalung and Leona D'Agnes. Most of the material in the appendices was derived from published PDA papers. The draft presented here is a joint product of the PDA (Mechai Viravaidya and Rachitta Na Pattalung) and the TFRI (Henry David).

II. SPECIFIC AIMS

The following is an outline of the specific aims of the project.

Fertility Behavior

- Improve Contraceptive Practice
- Decrease Fertility Aspirations
- Assess Spousal Decisionmaking in Fertility Behavior.

Economic Behavior

- Improve Perceptions of Economic Well-Being
- Identify Perceived Behavioral Components of Community Benefits and Family Life Improvement
- Identify Perceptions of Participation in Community Development
- Assess Contributions of Specific Benefits to Family Life Improvement and Community Development.

Health Behavior

- Improve Perceptions of Physical Well-Being
- Improve Sanitation.

Economic and Health Aims

- Increase Average Household Income by 30 Percent
- Reduce Childhood Malnutrition by 25 Percent
- Improve Off-Season Employment Opportunities.

Environmental Aims

- Year-Round Availability of Water.

Development Policy Aims

- Assess Feasibility of Including Poorest Families in Village Cooperatives
- Develop Recommendations and Guidelines for Development Planners to Link Existing Rural Community Development Funds with Existing Family Planning Programs.

III. TARGET POPULATION AND APPROACH

Target Population

1. The project will be conducted in the Northeast, Thailand's largest, poorest, and most intensely agricultural region. The setting is described in Appendix D.
2. Implementation will be in 10 villages situated in Muang District, Mahasarakam Province, and Ban Phai District, Khon Kaen Province. These two districts were chosen as target districts for implementation because:
 - a. Both are rural, with large numbers of farmers living under the poverty level.
 - b. CBFPS, the family planning arm of the PDA, and sister agency to CBATDS, has a family planning volunteer in villages in both districts and has been providing family planning services there since 1974. The organization is known, respected, and well accepted by villagers in both districts.
 - c. Provincial government authorities in both districts have expressed both an eagerness to have such a program implemented within their jurisdictions and a willingness to participate in program inputs.
3. Muang District, Mahasarakam Province, is 640.5 square kilometers in area and has a population of 107,685. There are 9 tambons, or subdistricts, 127 villages, 1 hospital, 7 health centers, and 5 midwifery centers. Since beginning the family planning program there in 1974, the CBFPS has deployed 61 village distributors, or volunteers, who have recruited a cumulative total of 2,001 oral contraceptive pill acceptors.
4. Ban Phai District, Khon Kaen Province, has a total area of 826.9 square kilometers and a population of 132,190. There are 12 subdistricts and 164 villages in Ban Phai District, 1 hospital with a physician, 10 subdistrict health centers staffed by sanitarians or midwives, and 8 midwifery health

centers. The CBFPS has deployed 121 family planning volunteers who have recruited 1,589 cumulative oral pill acceptors since initiating program activities there in 1978.

5. The average number of households per village is 100, with an average household size of 7 persons.

Intended Approach

1. In Rural Operations Plan of "The Fifth Five-Year Development* Plan," prepared by the National Economic and Social Development Board (NESDB), the following approach to rural development is recommended:
 - Select target areas inhabited by the poorest segment of the population, especially north-eastern Thailand.
 - Give priority to programs that are aimed at raising people from poverty level to at least minimum livelihood.
 - Emphasize self-help activities, using appropriate technologies.
 - Allow the people to play as large a role as possible in the planning and implementation of development projects.
2. The activities which the NESDB recommends as highest priority in the development of poverty stricken rural areas are:
 - Supply alternative credit and financial resources to replace merchants and middlemen as money lenders.
 - Increase the potential economic base of villages (potable water, fuel, fertilizers, alternative income-generating opportunities).

* National Economic and Social Development Board, Rural Operations Plan, "The Fifth Five Year Development Plan (1982-1987)", January 20, 1981.

- Increase the ability to produce proteinaceous foods from animal sources, especially small animals such as fish and chicken.
 - Arrange for the establishment of village-centered rice banks to assist those in need of this dietary staple.
 - Arrange for the establishment of village-centered buffalo banks to rent buffalo to those in greatest need.
 - Increase the ability to take care of basic public health from the village level to the district level.
 - Increase the quality of local educational services.
3. The CBIRD project has been developed according to these guidelines. The community-based volunteer network of the Community-Based Family Planning Services will be used as the point of entry into the village system in the two target districts. Anticipated program inputs will be introduced through CBFPS family planning volunteers, who are respected village leaders in their own right. Many of the ideas that have been incorporated into this project have come from the villagers themselves. They have been communicated to the CBATDS through this village network.

Anticipated CBIRD Program Inputs

A. Marketing

The major project input will address the main problem facing income disparity among rural farmers: the lack of reliable markets for their produce. The CBATDS will market goods for the farmers at government-guaranteed prices, or at prices which are substantially higher than those being offered by middlemen.

B. Resources

The CBIRD will make financial resources available to farmers for the purchase of livestock, feed, seeds, seedlings, fertilizers, insecticides, latrines, raw materials, and seed money for home industry and cooperatives. These financial resources will be extended as credit for loans and revolving funds.

C. Technical Resources and Training

The CBATDS will provide training to all farmers participating in animal-raising, agriculture, home-industry development, and health and environmental sanitation. Technical staff will provide the training in these areas, and continual supervision, support, and follow-up after the programs have been implemented.

D. Cooperatives

Villagers will be encouraged to organize cooperatives with shares to be purchased by all families. Loans may be needed to assist the poorest families to purchase a minimum number of shares.

E. Family Planning

All methods of contraception will be available from village volunteers and government health services. Requests for sterilization at government health centers will be accompanied by signed consent forms, in keeping with the regulations of the Thai Ministry of Health.

IV. SAMPLE SELECTION AND DATA COLLECTION

Sample Selection

1. A survey will be conducted in 300 CBFPS villages in the Northeast to determine (a) contraceptive prevalence among all married women, 15-44 years of age, (b) method use, and (c) village size.
2. Based on the survey findings, 10 villages in two districts will be selected for the experimental program. These villages will represent the five villages with the highest contraceptive prevalence rate and the five villages with the lowest contraceptive prevalence rate.
3. The sample design follows the PPS* model; that is, the selection of units (in this case, villages) will be based on probabilities proportional to the size of the units. This procedure allows an approximate control for the variation in the size of the villages so that the distribution of larger and smaller villages selected within strata (i.e., high- and low-prevalence villages) will be approximately equal. Hence, the sample is self-weighting and takes into account variation in village sizes in the outcome of the study.
4. Control villages will be matched with the experimental villages on the basis of contraceptive prevalence, PPS ratings, and location in the same geographic district. No community benefits will be initiated in the control villages, and changes in the existing CBFPS program will be avoided.
5. Experimental and control villages will be selected randomly to negate the problem of non-randomized selection of experimental groups.

* Probabilities Proportional to Size.

Interviewers

1. It is proposed to recruit 20 interviewers, all female, who will be assigned to 10 teams of two each to the 20 villages (10 experimental and 10 control). Each team will be expected to interview 200 couples in one month, resulting in a total of about 1,000 experimental village couples and 1,000 control village couples. (It is estimated that approximately 100 eligible couples of which the wife is between the ages of 15 and 44 reside in each village.)
2. The interviewers will be recruited by the PDA and will receive intensive field-training while also testing the questionnaire in villages that are not participating in the study.
3. Interviewers for the pre- and posttests will receive similar training. They will be supervised by two supervisors from the PDA Monitoring and Research Unit, which will be under the direction of the project manager.

V. ASSESSMENT PROCEDURES

Introduction

1. As has been noted, the major emphasis in assessment will be on changes in fertility behavior, economic behavior, and perceptions of individual, family, and community well-being. Although baseline data for assessing actual economic changes will be obtained, an in-depth examination of economic development will require a different approach.
2. Although there are multiple definitions of the diverse components comprising the concept "quality of life," there appears to be consensual agreement that personal well-being and successful family-coping are among the key factors (Campbell, 1977). Population issues and quality-of-life concerns interact and affect each other causally and consequentially (Zeidenstein, 1978a, 1978b). For example, as couples perceive an improvement in their quality of life, their desire to limit family size increases. Conversely, rapid population growth can aggravate the socioeconomic stressors that lower perceptions of quality of life, make it more difficult to cope, and increase the potential for family and community disruption.
3. Attainment of specific objectives will be assessed by means of pre- and posttests that cover actual and perceived changes in individual, family, and community economic status and well-being, agriculture, and environmental, health, and nutritional status. Additional questions will focus on changes in actual fertility and contraceptive practice, fertility aspirations, and the perceived effects of selected community benefits on family life improvement. Standard demographic questions and queries on the value of children will be asked also.
4. The assessment battery will consist of close-ended questions used earlier in Thailand (Shevasunt and Hogan, 1979; PDA, 1980) and Korea (Palmore, 1980) and open-ended devices used earlier in cooperative transnational research. All English-language items will be translated into Thai and then retranslated into English to make comparisons with the original question and to resolve any remaining difficulties. Field

trials of the questionnaire will be conducted as part of interviewer training in villages not selected for participation in the proposed study. The battery will be administered separately, but simultaneously or consecutively, to both marital partners in families where the wife is between the ages of 15 and 44. An extensive pretest assessment program is recommended to facilitate longer-term studies and as a basis for an in-depth examination of economic development trends.

Basic Questionnaire

1. The basic questionnaire will include a series of demographic and economic questions that were used in earlier PDA research in Thailand. Included are village identification, name of respondent, confirmation of marital status or its equivalent, age, educational attainment, occupation, income by source, off-season employment, time away from village, number of persons in household, source of drinking water, use of private latrine (if any), transportation arrangements, family ownership of goods and land, farm size and land under cultivation, kinds of crops and yields, and existing market sources.
2. Additional questions will focus on the number of children ever born, number of children born in last year, age of youngest child, pregnancy status, number of pregnancy-free months since birth of last child, value of children, and plans for old age. Nutritional status will be assessed by using weight-for-age determinations.
3. In the area of family planning, information will be sought on contraceptive practice, source of supplies, and awareness of or contact with information, education, and communication (IEC) activities, and reasons for obtaining permanent contraception (when sterilization or vasectomy are mentioned by the respondent).
4. The interview will conclude with the interviewer's evaluation.

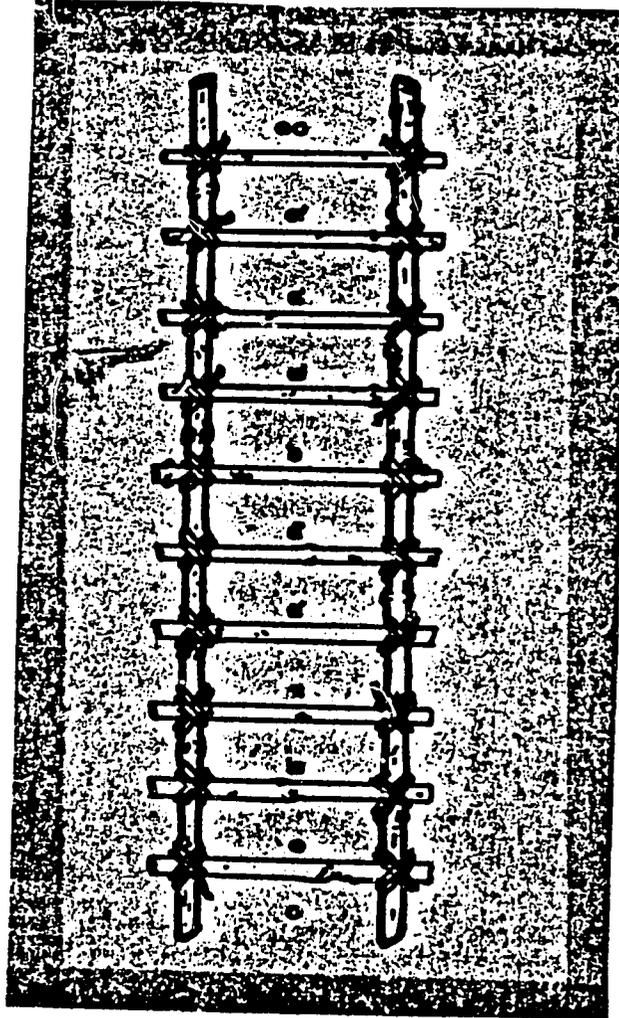
Self-Anchoring Striving Scale

1. A methodological problem posed by the proposed study is how to obtain an overall picture of the real world in which villagers live, a picture expressed by the respondents in their own terms, without sacrificing authenticity

or prescribing any fixed categories, but permitting comparisons among different individuals, families, and communities. As Cantril (1965) has noted, the aim is to uncover the limits and boundaries set by internalized social norms that serve as subjective standards for satisfaction and frustration. The problem is to learn what those standards are in a person's own language, and not judge them by Western criteria or alternatives imposed by standard questionnaires.

2. The problem was resolved by adapting the Cantril Self-Anchoring Striving Scale. The respondent is asked to define, on the basis of his/her own assumptions, perceptions, goals, and values, the two extremes or anchoring points of the spectrum on which some scale of measurement is desired. The self-defined continuum is then used as the measuring device. Cantril has recommended the use of a ladder.

3. The Self-Anchoring Scale can be used on a wide variety of problems, but it will be used in the proposed study as a means to discover the spectrum of family and community development values by which a respondent evaluates his/her own life. He/she describes as the top anchoring point perceived wishes and hopes, the realization of which would constitute the best possible life. At the other extreme are the worries, fears, and frustrations which represent the worst possible life. Then, using a non-verbal ladder device, the respondent is asked where he/she thinks he/she stands on the ladder now, with the top being the best, as he/she has defined it, and the bottom the worst, also as he/she has defined it. He/she is then asked where he/she stood five years ago and where he/she expects to be in three years. At the suggestion of Mechai Viravaidya, the Western ladder was adapted to the Mechai Bamboo Ladder, as shown below.



4. During field trials in northern Thailand, the utility of the Mechai Bamboo Ladder was established. Separate, but simultaneous or consecutive, interviews were conducted with both partners of a marital couple. Each spouse was asked to rank himself/herself and his/her spouse. The bamboo ladder was used to assess individual expectations, economic well-being, family well-being, and future opportunities for children. Queries about perceptions of community expectations, communication and information transfer, and participation in community development followed. The responses lend themselves to content analysis, comparisons of spousal communication, and ratings of expectations from community development. The now, before, and after queries permit tracking of personal expectations, over time. Each person becomes his/her own control, with all ratings anchored within a respondent's own real world. These ratings are not directly comparable to similar numerical ratings by others.

5. As reported by Cantril, the Self-Anchoring Striving Scale, here called the Mechai Bamboo Ladder, has been used successfully in more than 50 countries. The findings have been more meaningful over time than the results based on questions more affected by changes in circumstances and the context(s) in which they are asked.

Community Benefits and Critical Incidents (CB/CI)

1. The Critical Incident Technique is a well established psychosocial method particularly suitable for the identification of tangible and intangible aspects and qualities in population samples with lower levels of education (fewer than 20 percent of the village women in CBFPS samples had more than four years of education). The respondent is not required to cope with abstractions, and the information collected may be analyzed in various qualitative and quantitative ways, consistent with the local culture.
2. Basically, the CB/CI focuses the respondent's attention on a concrete action, which to him/her exemplifies a "good" or "desirable" quality, and then asks the respondent to describe why that action is perceived to be "good." Similarly, respondents can be asked to look at actions that appear to be "bad" or "undesirable" and to state, in their own words, why they believe they are "bad." (In Thailand, pretest respondents found it difficult to describe "bad" characteristics, but they replied quite readily to a modification, that is, when asked how a specific action could be improved.)
3. By means of content analysis, quantitative indices can be developed of the underlying principles implicit in the expressed reasons. The method has proven to be quite cost-effective in numerous countries, but preparatory time is needed to develop key questions and guidelines for content analysis. In Thailand, it is proposed to ask respondents about the characteristics of community benefits as the respondents perceive them and what difference they make for family life improvement. Similar questions can be asked about family planning, the Village Development Fund, and other issues deemed to be important.

4. A major advantage of the method is that, as long as data are carefully collected, additional analysis can always be performed without the need for additional fieldwork.

Fertility Aspirations

1. This segment consists of three interrelated questions. Each spouse is asked how many children he/she wanted at the time of marriage, the number of children he/she considers ideal for Thai village families, and the number of children he/she wants.
2. It is hypothesized that, as a result of the CBFPS and the community development programs, fertility aspirations will decline but that most couples will want to have at least one son and one daughter.

Spousal Communication and Decisionmaking

1. No woman becomes pregnant by herself. The decision to use or not to use a fertility-regulating method is heavily influenced by partner interaction. Thus, the perception of the partner's attitudes and degree of control in the couple's relationship are likely to affect the kind of method used, the consistency of contraceptive practice, and the resolution of eventual pregnancies. For numerous couples, fertility decisions are difficult to make, requiring a balance of personal and cultural values, anticipated costs and benefits, and perceived social environmental pressures (David, 1981).
2. In addition to asking each marital partner to rank his/her spouse on the Mechai Bamboo Ladder, the surveyors will ask four questions to establish the husband's and wife's perception of contraceptive knowledge, and to determine whether each believes the other would agree to use contraception, whether the couple discuss contraception, and who makes the decisions about contraceptive practice.

Contraceptive Method and Practice Ratings

1. Changes in contraceptive practice will be charted by assessing overall contraceptive prevalence in pre- and post-interviews and by noting percentage changes in the practice of specific contraceptive methods.
2. To assess changes in contraceptive vigilance, a weighting scheme has been devised with arbitrarily assigned values related to use-effectiveness and ease of service delivery. The ratings will be used only for experimental purposes. The ratings are as follows:

No Method Use	0	Injection	4
Traditional Methods	1	IUD	4
Barrier Methods	2	Female Sterilization	7
Pill	4	Vasectomy	10

Posttest

1. Pertinent questions will be repeated in the posttest. Particular emphasis will be on measuring actual changes and improvements, perceived changes in economic and fertility behavior, and shifts in contraceptive practice.
2. Additional questions may be used. Those questions that are least productive in the pretest may be deleted.

VI. DATA ANALYSES

1. Close-ended questionnaires will be coded, tabulated, and computer-processed. Cross-tabular analysis will be used; consideration will be given to the appropriateness of multivariate methods. Facilities for SPSS computer programming and processing are available at Mahidol University and other experienced resources in Bangkok. Dr. John Stoeckel (from The Population Council, Bangkok) and Mr. Tony Bennett (from Columbia University, on assignment to the Thai Ministry of Public Health) have been authorized by their organizations to serve as project consultants.
2. The responses from the open-ended questionnaire will be reviewed by content analysis, with subsequent coding, tabulating, and processing. A coding manual will be developed with the assistance of Dr. Frederic L. Ayer, a psychologist who has had extensive experience with the Critical Incident Technique and who has conducted market research in Thailand for more than 25 years.
3. The field coordinator will establish a continuous monitoring system in the experimental and control villages. Regular progress reports will be forwarded to the PDA office in Bangkok. The PDA is well experienced in devising, implementing, and analyzing field-monitoring programs.
4. Specific analyses will include (a) comparisons of the five experimental villages ranked high in contraceptive prevalence on the pretest with the five experimental villages ranked low; (b) comparisons of high experimental villages with high control villages, and low with low; (c) comparisons of individual villages with the total group of experimental and control villages; etc. Additional analyses will be evolved in terms of the specific objectives delineated in other sections of the proposal.

5. It is anticipated that an initial report will be made at 18 months, when the pretests will have been analyzed and initial experience obtained from 12 months of community benefits. A final report will be made at 36 months, incorporating all pre- and posttests. Intermediate progress reports will be made at the end of Years 1 and 2. All reports will include executive summaries, oriented to policy-makers and development planners, and specific recommendations on policy implications for community development.

Steps in Research Design

1. Survey of 300 CBFPS Villages in Northeast Thailand
 - a. Assess contraceptive prevalence among all married women, age 15-44.
 - b. Assess use of contraceptive methods.
 - c. Assess village size for using PPS* model.
2. Sample Selection
 - a. Rank villages on contraceptive prevalence.
 - b. Rank villages on PPS.
 - c. Choose five highest-ranked villages and five lowest-ranked villages as experimental villages for CBIRDS/FLI Community Benefits Program.
 - d. Choose 10 control villages matched for contraceptive prevalence and PPS.

* Probabilities Proportional to Size.

3. Questionnaire Administration

- a. Train interviewers by pretesting questionnaires in non-participating villages.
- b. Following field trials, revise pretest.
- c. Administer assessment battery to 100 percent of all MWRAs and spouses in experimental and control villages.

4. Program Implementation

- a. Initiate Village Benefit Program through implementation of Village Loan Fund.
- b. Make no change in CBFPS program in control villages.
- c. Monitor field programs.
- d. Prepare progress report at end of Year 2.

5. Initial Data Analysis

- a. Code, tabulate, and computer-process close-ended questionnaires.
- b. Conduct cross-tabular analysis and consider appropriateness of multivariate methods.
- c. Review open-ended questionnaires by means of content analysis, with subsequent coding, tabulating, and processing.
- d. Specific analysis will include:
 1. Comparisons of five experimental villages ranked highest in contraceptive prevalence with the five villages ranked lowest.
 2. Comparison of high experimental villages with high control villages.
 3. Comparison of low experimental with low control villages.

4. Comparisons of individual villages with total group of experimental and control villages.
5. Detailed analyses of subtest findings relative to specific objectives and aims cited in proposal.

6. Post-Program Assessment

- a. Following completion of program implementation phase, decide on necessary revisions to questionnaire, and conduct posttesting during months 29-31.
- b. Code and analyze post-data in manner comparable with pretests and in a format designed to meet proposal objectives.
- c. Prepare final report.

Presentation of Research Design

Graphically, the research design can be presented as follows:

		<u>Pretest</u>	<u>Community Benefits</u>	<u>Posttest</u>
Experimental	<u>High</u> (5 villages)	O_1	X_1	O_2
	<u>Low</u> (5 villages)	O_1	X_1	O_2
Control	<u>High</u> (5 villages)	O_1	--	O_2
	<u>Low</u> (5 villages)	O_1	---	O_2

VII. TIME AND TASK PHASES

The following is a summary, by phases, of the tasks for this project.

Phase I: Preparatory Phase: Months 0-4

1. Conduct survey for the selection of experimental and matched control villages.
2. Hire research assistant and field coordinator.
3. Select and train interviewers.
4. Pretest questionnaires in non-participating villages with subsequent revisions (following translation and retranslation).
5. Prepare participating villages through discussions with community leaders.
6. Conduct pretest in experimental village and control villages.

Phase II: Field Implementation: Months 5-28

1. Contribute lump-sum payment to Community Development Fund in cash or in kind.
2. Select families for specific benefits.
3. Have each village make a community needs assessment in consultation with the CBATDS.
4. Have community decide on income-generating cooperatives.
5. Implement field-monitoring.
6. Make payments for every three months of non-pregnancy.
7. Continue existing CBFPS program "as is" in control village.

Phase III: Initial Data Analysis and Reports: Months 5-18

1. Complete pretests in control village.
2. Code and analyze all pretests.
3. Monitor and analyze field reports.
4. Prepare reports at months 12 and 18.

Phase IV: Posttests: Months 29-31

1. Conduct posttests in experimental and control villages.
2. Begin analysis of field-monitoring reports.

Phase V: Final Data Analysis and Reporting: Months 32-36

1. Complete all data analyses, special analyses, and analyses of field reports.
2. Prepare data for final report.
3. Review draft final report with AID/Bangkok.
4. Publish and disseminate findings.

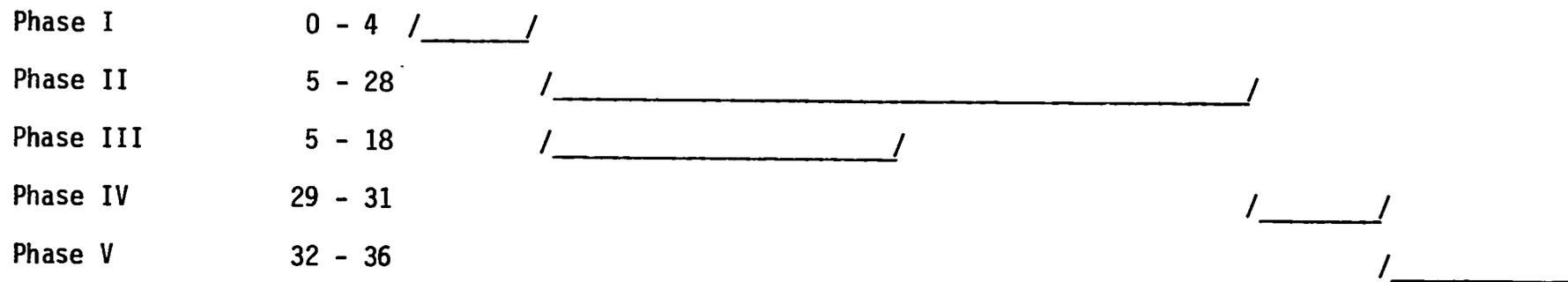
The timephasing is depicted graphically in the exhibit on page 26.

Exhibit

GRAPHIC DEPICTION OF TIMEPHASING

1 2 3 4 5 -----18----- 28 29 30 31 32 33 34 35 36

Months



VIII. PERSONNEL AND RESOURCES

Proposed Staff

A. Principal Investigator

The proposed principal investigator is Mechai Viravaidya. It is anticipated that Mechai will devote approximately 10 percent of his time to the proposed study. He will have primary responsibility for general policy and the supervision of the managing staff. Mechai's time constitutes a further PDA contribution to the project.

B. Project Manager

The proposed project manager is Rachitta Na Pattalung, who, at this time, heads the PDA Monitoring and Research Unit. Rachitta holds a master's degree in demography from Chulalongkorn University, has had additional training in the United States, and is well experienced in supervising field studies. It is anticipated that Rachitta will devote approximately 100 percent of her time to the proposed project. She will have primary responsibility for day-to-day operations, including all the tasks outlined in the time and task schedule.

C. Field Coordinator

The project manager will be assisted by a full-time field coordinator, who will be responsible to the project manager and serve as liaison with CBATDS, the PDA unit charged with implementing the CBIRD/FLI Program. The field coordinator will make local arrangements in the 10 experimental and 10 control villages, monitor developments, and make regular progress reports.

D. Research Assistant and Secretary

Further support will be given to the project manager by a half-time research assistant and a full-time secretary. These persons' tasks will be to assist the project manager with daily operations and ensure the timely completion of scheduled tasks, report preparation, and communication with research consultants.

E. Research Consultants

The principal research consultant will be Dr. Henry P. David, director of the Transnational Family Research Institute and associate professor in psychology in the Department of Psychiatry, University of Maryland Medical School, Baltimore, Maryland. As indicated in his vita, Dr. David has had extensive experience in directing cooperative transnational research in fertility behavior. He has written or edited several books, contributed chapters to other books, and published more than 200 journal articles. He has been a long-standing observer of family planning developments in Thailand, having visited the CBFPS program and written a chapter on Thailand which was included in his 1980 AID-commissioned report, "Incentives, Fertility Behavior, and Integrated Community Development." It is anticipated that Dr. David will come to Thailand near the end of the preparatory phase, when the first report is being prepared, and during the final phase of data analysis and reporting.

Also available for expert consultation are three research specialists currently residing in Bangkok: Dr. Frederic L. Ayer, Dr. John Stoeckel, and Mr. Tony Bennett. Dr. Ayer is a psychologist with more than 25 years of experience in marketing research in Thailand. He is well qualified to consult with the project manager on the development of a coding manual for the content analysis of the Critical Incident Technique and the open-ended portions of the Bamboo Ladder Scale. Dr. John Stoeckel holds a doctoral degree from Michigan State University and is widely experienced in research design. He is the regional population adviser at the Bangkok office of the Population Council. Mr. Tony Bennett is a long-time resident of Thailand and is well experienced in family planning research. Mr. Bennett is on leave from Columbia University to assist the Family Planning Department of the Ministry of Public Health.

Others who are available to the proposed project are the family planning and development specialists now serving on the PDA staff, including CBFPS and CBATDS management and field staff who will be directly involved in the implementation of the CBIRD project.

PDA Resources

The project will purchase supporting services from the PDA (see Chapter IX).

The evolving experience of the PDA and its operating units, the high staff morale, and the history of demonstrated initiative, skill, and organizational capability in community development linked with family planning represent further strengths in launching CBIRDS/FLI with a research component focusing on changes in fertility behavior and perceptions of family and community well-being.

IX. BUDGET AND BUDGET JUSTIFICATIONS

Proposed Budget: Year 1

A. Proposed Staff

<u>Position</u>	<u>Percentage of Time</u>	<u>Annual Salary²</u>
Principal Investigator (Mechai Viravaidya)	10%	0
Project Manager (Rachitta Na Pattalung)	100%	7,200
Field Coordinator	100%	6,000
Research Assistant	50%	<u>3,000</u>
Project Secretary		
Total, Personal Salaries and Benefits		<u><u>19,200</u></u>

B. Consultant Costs³

Principal Research Consultant (Henry P. David)	15 days	3,000 ⁴
Research Consultant (Frederic L. Ayer)	10 days	1,000 ⁵
Reserach Consultant (John Stoeckel)	15 days	0 ⁶
Research Consultant (Tony Bennett)	15 days	<u>0⁶</u>
Total, Consultation Costs		<u><u>4,000</u></u>

C. Costs of Fieldwork

Initial Village Survey ⁷		
Fieldwork in 300 Villages	4,500	
Questionnaire Preparation and Printing ⁸	750	
Data Processing and Reporting	<u>2,250</u>	7,500
Interviewer Training ¹⁰		
20 Interviewers, 10 days @ \$7 per day		1,400
Field Data Collection ¹¹		
20 Interviewers, 30 days @ \$14 per day		8,500
Field Supervisors ¹²		
2 Supervisors, 30 days @ \$14 per day		840
Implementation Supervisor ¹³		
1 Person, 30 days @ \$14 per day		420
Transportation ¹⁴		
Regional Travel		1,540
Local Travel		<u>3,500</u>
Total, Fieldwork Cost Estimate		<u><u>23,700</u></u>

D. Costs of Data Analysis¹⁵

Data Preparation Costs for Open-Ended Questions ¹⁶	1,000
Coding and Editing 4,000 80-Column Cards	1,000
Punching and Verifying	2,000
Programmer's Time (10 days @ \$100) ¹⁷	1,000
Computer time (6 hours @ \$250) ¹⁷	<u>1,500</u>
Total, Data Analysis Costs	<u><u>6,500</u></u>

E. Consultant Travel Costs¹⁸

Dr. David - One Round Trip, Bethesda/Bangkok	2,870
- 17 Days Per Diem @ \$90	1,530
- Field Visits	<u>500</u>
Total, Consultant Travel Costs	<u><u>4,900</u></u>

F. Printing and Supplies¹⁹

Questionnaires (4,500 copies @ \$0.50)	2,250
Reports (100 copies @ \$5)	500
Postcard Monitoring and Office Supplies	1,600
Reproduction	<u>300</u>
Total, Printing and Supplies	<u><u>4,650</u></u>

G. Other Anticipated Costs

Postage, Cable, and Telephone ²⁰	600
Participation in Professional Meetings ²¹	250
Accounting and Administrative Costs ²²	<u>3,850</u>
Total, Other Costs	<u><u>4,700</u></u>
GRAND TOTAL, YEAR 1 ²³	<u><u>67,650</u></u>

Budget Justifications: Year 1

A. Personnel and Consultants

- 1 Proposed staff tasks are described and justified in the section on personnel and resources, Chapter VIII.
- 2 Proposed annual salaries include benefits. No charge will be made for the services of the principal investigator.
- 3 Consultants and their tasks are described in the section on personnel, Chapter VIII.
- 4 Dr. David's honorarium will be based on AID's computation of annual compensation.
- 5 Dr. Ayer's rate is \$100 per day.
- 6 The services of Dr. Stoeckel and Mr. Bennett are being contributed by the Population Council and by Columbia University, respectively.

B. Costs of Fieldwork

- 7 The initial village survey is described in the section on sample selection, Chapter IV.
- 8 Questionnaires are described in the section on assessment procedures, Chapter V.
- 9 Data processing will be purchased as noted in the section on data analysis, Chapter VI.
- 10 Interviewer training is described in the section on sample selection and data collection, Chapter IV.

- 11 It is estimated that one interviewer can interview an average of three couples, or six marital partners, per day and that there are about 100 couples in each of the 20 villages.
- 12 Field supervisors are needed to check on interviewer performance and to help complete the interviewing task in 30 days.
- 13 Implementation supervision will be provided by the project manager.
- 14 Estimates of cost of local and regional transportation are based on daily round-trip costs from hotel to villages and from Bangkok to the field.

C. Costs of Data Analysis

- 15 Data analysis procedures are described in the section on data analysis, Chapter VI. It is recognized that a portion of these funds may not be needed until Year 2.
- 16 The open-ended questions will need special preparation for coding and analysis. Procedures will be developed by the research consultants who will train PDA staff.
- 17 Programmer and computer time will be locally purchased.

D. Other Costs

- 18 Dr. David's costs will be covered on a cost-reimbursement basis, as calculated by AID regulations.
- 19 Printing and Supplies includes printing of questionnaires, reports, and monitoring post-cards; office supplies; and costs of xeroxing. Office furniture and equipment will be provided at no cost.

- 20 Postage, Cable, and Telephone includes reimbursement of costs incurred by the principal research consultant.
- 21 A small fund is requested to support participation in professional meetings and dissemination of research findings.
- 22 Accounting and administrative costs are based on a formula of approximately 20 percent of total personnel costs. Additional secretarial support also will be provided at peak-load periods.

Proposed Budget: Years 1-3

	Costs, Years 1-3 (In U.S.\$)			<u>Total</u>
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	
Personnel ²³	19,200	21,200	23,200	63,600
Consultants ²⁴	4,000	4,500	5,000	13,500
Fieldwork ²⁵	23,700	500	22,800	47,000
Data Analysis ²⁶	6,500	---	9,000	15,500
Consultant Travel ²⁷	4,900	5,400	6,000	16,300
Printing and Supplies ²⁸	4,650	1,500	9,600	15,750
Other Costs ²⁹	<u>4,700</u>	<u>5,200</u>	<u>5,800</u>	<u>15,700</u>
Total Costs	<u>67,650</u>	<u>38,300</u>	<u>81,400</u>	<u>187,350</u>

Budget Justifications: Years 1-3

- 23 Personnel costs are calculated with anticipated 10 percent increases.
- 24 Consultant costs include a similar 10 percent annual increase.
- 25 Costs for fieldwork in Year 2 include supervisory expenses. With the exception of the initial village survey, the entire pretest package delineated in Year 1 will be repeated in Year 3.
- 26 Data analysis costs projected in Year 1 may spill over into Year 2. Costs in Year 3 include analysis of the posttests and additional analyses projected to meet the objectives cited in the proposal.
- 27 Consultant travel costs are increased by a factor of about 10 percent per year.

- 28 Printing and supply estimates include reprinting of the revised questionnaire, monitoring postcards, report preparation, and office supplies.
- 29 Administrative costs are increased at a 10 percent rate per annum.

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Appendix A

POPULATION AND COMMUNITY DEVELOPMENT ASSOCIATION AND DEVELOPMENT STRATEGY

The Population and Community Development Association (PDA) is a registered, tax-exempt, non-profit organization engaged in service delivery in family planning, parasite control, sanitation, general health, and community development at the village level and in some urban communities. It collaborates closely with government agencies. A multidisciplinary board of directors governs the association, which has more than 300 staff members and 16,000 volunteers who work in a variety of operating bureaus.

The Community-Based Family Planning Services (CBFPS)

The CBFPS is the major bureau of the Association. Since 1974, it has implemented community-based family planning services and activities primarily in Thai villages and some urban communities. Family planning volunteers, all of whom are longstanding members of the community and highly respected in their villages, have been trained and deployed in 16,200 villages in 158 districts with a population of 17 million people who represent one-third of all Thai villages. Activities have been expanded to include maternal and child health (MCH), nutrition, parasite control, immunization, primary health care, and sanitation.

In other programs, the CBFPS has provided family planning, health, sanitation, nutrition, medical information, and education to 320,000 rural school teachers, 304 commercial and industrial firms, state enterprises, cooperatives, and military organizations.

The Asian Centre for Population and Community Development (ACPD)

In mid-1978, the ACPD was established under the umbrella of the Association to facilitate the transfer of experience in community action concepts in population management and development activities among developing countries. The objective was to provide a series of international training programs on development, management, and expansion of community-based family planning, health, and development programs.

As of December 1980, the Centre had trained more than 150 participants from various developing countries, ranging from Kenya in Africa to Bangladesh in Southeast Asia.

The Community-Based Emergency Relief Services (CBERS)

In mid-1979, CBERS was established as a special agency to assist the government and cooperate with other voluntary agencies in providing relief services to communities suffering from disaster or other unfortunate events. In August 1979, CBERS, through the Population and Community Development Association, was given the responsibility of managing and providing family planning and preventive fertility-related health services to refugees in five camps in North and Northeast Thailand with a total refugee population of more than 50,000.

Recently, voluntary groups in developed countries asked CBERS to assist the general efforts of other national and international agencies in providing emergency relief services to displaced persons and refugees in Thailand. The initial emphasis was to be on food and necessary food supplements. Other activities are envisaged for 1981, including sanitation improvement through latrine (pit-type) construction and latrine-biogas digester development, vector control, and improved nutrition, with special emphasis on pregnant and lactating women and children under five years of age.

The Community-Based Appropriate Technology and Development Services (CBATDS)

The CBATDS was established in December 1978 to complement and supplement the fertility-related development work of the Population and Community Development Association and its major implementation bureau, the Community-Based Family Planning Services. Since its inception in 1974, CBFPS has emphasized local initiative, self-help, and innovation on the part of large numbers of people. Today, the CBFPS network of community-based change agents extends into 16,200 villages throughout the country, or one-third of all villages in Thailand.

When experience showed that family planning alone was not enough, the CBFPS increasingly concerned itself with other matters directly impinging on daily life, including unemployment, poverty, and income disparity. During efforts to address some of these problems, a number of small, income-generating projects emerged from local initiatives and innovations of CBFPS field staff and volunteers.

More technical and financial assistance was required to expand and replicate successful elements on a larger scale. The CBATDS was founded to fill the gap between local efforts at problem-solving and the necessary technical and financial support needed to facilitate self-reliant efforts initiated in the communities.

Development Strategy

The broad development focus of the PDA is on the mutual interaction between four overlapping, but conceptually separate, categories of phenomena: population, social organization, appropriate technology, and environment. Development is viewed as a complex social process which depends, in large part, on the internal innovative capabilities of a society to adapt population to its environment. In this respect, the PDA began its development work with the Community-Based Family Planning Services. The CBFPS has tried to raise the level of interaction of the population with its environment by strengthening and mobilizing existing village organizational forms for the promotion and dissemination of appropriate contraceptive technologies for fertility management. The CBFPS experience has not only increased the efficiency of the social organization--technology complex--but it also has increased the probability of community recognition of the need for integrating fertility reduction and socioeconomic development (David, 1980).

The CBFPS experience has demonstrated that villagers are more likely to be responsive to the need for limiting family size if they perceive the problem in the context of common development interests. Thus, the CBATDS development focus highlights fertility management in the context of a broader fertility-related development programming strategy, and it complements and supplements the CBFPS focus by endeavoring to strengthen the grass-roots levels of communities that demonstrate fertility management. In this way, communities upgrade their appropriate technology base, explore the potentialities of their environment, and deal with the constraints that environment imposed.

In the mutual development focus of CBFPS/CBATDS, fertility management is emphasized as the point of entry into the development scheme. The control of population growth ensures that any subsequent outputs from development efforts are not diluted by overpopulation.

CBATDS Goal Statement and Objectives

In the pursuit of its fertility-related development goal, the CBATDS seeks to maximize the common man's participation in the development process. This is the organization's strategic objective. Hence, the term "community-based." The enhancement of the quality of life is considered to be the end product.

In the development process, the CBATDS aims to increase the efficiency of the social organization-technology complex by promoting low-cost, ecologically sound, and appropriate technologies that are compatible with rural Thai social, cultural, and economic conditions. Recognizing that development is a disturbance of the socioeconomic patterns of the lives of people as well as communities, the CBATDS strives to introduce change gently, on a small scale, and to create trust, credibility, and tangible benefits for individuals and communities.

The longer-term objectives include:

- assisting Thai Government efforts in promoting integrated rural development and quality-of-life micro benefits for families and communities;
- assisting the Thai Government and international aid agencies in determining the minimum input requirements for the promotion of village-level technologies; and
- strengthening the management and technical capabilities of local and regional groups in conducting appropriate technology dissemination services.

Village Implementation Strategy

The CBATDS builds on the integrated community development or social mobilization strategy of the CBFPS, which is based on the assumption that communities are capable of perceiving and solving their own development problems, given adequate guidance and motivation. The strategy involves the transfer of authority for local program planning, operation, and day-to-day evaluation to lower administrative levels and the creation of integrated community development programs which reward villages for demonstrating fertility-reducing behavior. Such community-oriented programs tend to avoid the cultural insensitivities and communication failures that plague other delivery systems.

In promoting village-level technologies, the CBFPS village volunteer or contraceptive distributor functions as a change agent and appropriate technology facilitator by:

- linking at the local level with village "experts" in agriculture/animal husbandry, traditional medicine and technology, and marketing;
- linking at the local level with government agricultural extension and community development workers, and with village headmen and tambon council leaders;
- linking with CBFPS district-level supervisors, who, in turn, link with district and provincial level public and private resources; and
- linking with CBATDS technical staff and consultants who broker for the village facilitator at the national and international levels.

Appendix B

CBFPS COMMUNITY BENEFITS PROGRAM

Village Development Fund

The initial contribution to the Village Development Fund will be a lump sum based on a formula which counts the number of pregnancy-free months since the birth of the last child for each married woman over age 15 and resident in the village. The formula will be adjusted for age and parity. All payments will be made directly to a village bank account. Subsequent payments will be made quarterly, beginning with the first quarter after the project begins. Contributions will be made to the Village Development Fund for pregnancy-free months (adjusted for age and parity) by women of reproductive age (MwRA) who reside in the village.

Several assumptions are necessary in creating the proposed payment formulas*, including:

- the need for simplicity to understand the method of payment;
- separation of married women who are childless at the time of the village survey from non-nulliparous women;
- acknowledgment that 10 percent of eligible couples will be childless;
- awareness that the average open interval has increased to 30 months; and
- decline of average parity to 3.5 in 1981.

Pregnancy status will be assessed every four months. Generally, it becomes known quickly that a woman has become pregnant. A woman's contributions to the Fund will cease, but no penalty charge will be imposed.

* The formulas for lump-sum and quarterly payments were suggested by Tony Bennett.

The Village Development Fund will be used, in part, to encourage villagers to establish cooperatives with shares to be made available to all village families, including the poor, who may require a loan to purchase a minimum number of shares. The Village Cooperative will conduct a needs assessment to determine the most economical way to invest all or a portion of the available funds. Proposals will be reviewed by the CBATDS for feasibility and likelihood of economic success. The CBATDS may provide matching funds to the money raised by the villagers as initial capital. The Village Development Fund may also be used to establish fair price stores for medicine, household items, and other necessities or to provide storage facilities for the village marketing program.

The Village Development Fund will also sponsor specific family benefits, appointed by formula (still to be determined), beginning with family planners, but with some benefit provided to every village family, including non-family planners. Because every family will benefit, this portion of the program is also deemed to be a community benefit. Although participation in the community benefits program will be entirely voluntary, experience suggests that few, if any, families are likely to refuse. One of the objectives of the program is to enhance the likelihood of participation by the poorest village families, even if special terms have to be extended.

All activities that are introduced into the experimental CBATDS villages will be made available through different credit extension methodologies, as follows:

1. Contract Growing

The CBATDS will enter into a formal contract with farmers to buy certain portions of cash-crop (live-stock or agricultural) production. Any inputs needed to raise these crops (e.g., seeds, fertilizer, insecticides, animals, feed, vaccinations, etc.) will be advanced at no cost. Thus, the farmer will not be required to make a capital investment. After marketing, these costs will be deducted from the selling price and the profits will be returned to the farmer.

2. Revolving Loan Funds

The CBATDS will underwrite the cost for specific items requested by villagers, such as latrines or biogas digestors. The villager will make a down payment, and monthly payments will be made to the Village Loan Fund, which will use the money to finance additional, similar improvements in the village.

3. Cooperatives

The CBATDS will encourage and support village cooperatives, with variations of matching funds, to finance joint village ventures and public improvements through the Village Development Fund.

4. Credit

The CBATDS will extend credit to purchase seeds, fertilizers, etc., to villagers who have not entered into a contract, which will be repayable after the farmer has marketed his produce, regardless of the market agent.

The specific activities that will be implemented in the CBIRD program are:

1. Animal-Raising

This activity will have the triple purpose of increasing income from non-agricultural crop sources, providing dry season employment, and improving the protein availability in the villages. The major animal varieties to be introduced are:

a. Pigs

CBATDS experience has shown that contract pig-growing is the single most effective method of increasing farm incomes. Two pigs, with vaccines and feed, will be distributed to each family. Contract growers are expected to raise the piglets until they are 90 kilograms, or for approximately 6 months, at which time the CBATDS will market the animals.

b. Commercial Chickens

This contract growing scheme will be a joint venture involving 10-15 families in each village. The growing period will be 45-50 days, after which chickens will be marketed by the CBATDS.

c. Fish

The heartiest variety of fish that can be raised in a village is tilapia. On the average, they reach maturity within four months. Fish-raising will be conducted as a contract growing scheme.

d. Village Chickens

Chickens do not require commercial feed sources and can be raised as foragers. Mortality is normally 90 percent, but can be reduced to approximately 10-15 percent through vaccination. Each family will be supplied with 3-5 chickens. The poultry will serve primarily as an additional protein source.

e. Ducks

Ducks will be raised primarily for their eggs. It takes six months before ducks begin to lay, and their productive lifetime is 2½ years. The eggs can be sold or used as an additional source of protein.

f. Geese

Geese require commercial feed for only 2-3 weeks; they then can forage for food. Geese are especially useful around the

rice harvest, when they can consume all the rice that has been lost in the fields during threshing. Geese have commercial value and are a source of additional protein in the village.

g. Rabbits

Rabbits require no costs for feed, are hardy, and multiply rapidly. Their meat can be used for food, and their skins have commercial value.

2. Agricultural Crops:

Assistance will be provided to farmers to enable them to improve existing crop yields and introduce new crop varieties. The objectives of assistance will be to:

- improve existing crop yields through increased application of fertilizer and the introduction of efficient cultivation methods;
- expand cultivable land through increased use of fertilizer, seed, and market availability;
- introduce improved crop varieties (e.g., replace glutinous rice crops with ordinary white rice, which brings a higher price per ton);
- improve marketing services for agricultural produce, guaranteeing farmers reliable markets at fair prices;
- provide financial and technical assistance to farmers to plan small home gardens; and
- increase the availability of tree seedlings for fruit-tree growing (e.g., papaya and guava, which grow well in Northeast Thailand) and for tree-farming for fuel purposes, especially leucaena tree-growing, which is suitable to conditions in northeastern Thailand.

Cooperative Growing Schemes

To the greatest extent possible, the CBATDS will enter into contract growing schemes, guaranteeing to market crops from a fixed amount of land under production, advance supplies such as seeds, fertilizer, and insecticide at no cost, and then subtract the cost of the supplies from the market price before returning the profit to the farm cooperative. In addition, the CBATDS will have a "marketing credit fund" which will provide seed funds to market agricultural produce from farmers who have not entered into contract schemes.

Environmental Community Benefits

These benefits will be focused on the year-round availability of water for domestic use, sanitary waste disposal, and waste recycling. The specific activities that will be introduced are:

1. Construction of Village Ponds

Village ponds are the major source of water for drinking, domestic use, bathing livestock, and irrigation for small vegetable gardens. They will be situated in natural low spots and dug to a depth of at least three meters.

2. Deepening Existing Village Ponds

Most existing ponds are dug to a depth of one meter and are completely dry by April or May in the dry season. Where shallow village ponds already exist, the CBATDS will deepen them to a depth of at least three meters.

3. Construction of Deep and Shallow Tube Wells

In villages where the number of wells is insufficient to meet the needs for at least domestic use, the CBATDS will install either deep or shallow wells. The wells will be scaled, water will be withdrawn using polyvinyl chloride water pumps, and CBATDS technical staff will provide continuing maintenance.

4. Securing and Sealing Existing Wells

Most wells in the northeast are open and water is withdrawn by lowering a bucket, allowing for continual contamination. The CBATDS will seal the wells with cement, and PVC handpumps will be installed to withdraw water.

5. Latrine Construction

Low-cost water seal latrines will be provided with revolving funds.

6. Biogas Digestors

The introduction of biogas digestors will promote the concept of recycling waste materials, tapping renewable energy sources, and improving environmental sanitation.

Home Industries

The CBATDS will support the development of small-scale home and cottage industries in the villages to assist families in increasing non-farm, dry-season incomes. The home industries that will be supported are:

- silk-raising and weaving;
- cotton weaving;
- bamboo and wood products;
- pottery;
- waterjar-making;
- economic stove production;
- food processing and preservation;
- crop storage;
- clothes-making;
- brick-making; and
- tool-making.

The CBATDS will provide the capital investment needed to start home industries, and it will market all the goods produced.

Health Population and Nutrition

Through the existing CBFPS volunteers in each village, the CBATDS will introduce activities to improve health and nutritional status. These activities will be:

1. Family Planning

This is an ongoing activity conducted by CBATDS volunteers. Mobile sterilization services (vasectomy and tubal ligation) will be brought into each village.

2. Mobile Health Service

A mobile van will visit each village once every two months. The van will offer injectable contraceptives, immunization, nutritional surveillance, general medical services, and health education.

3. Parasite Control

There will be blanket treatment of all children below five years of age. The approach will be anthelmintic, using either the naturally occurring herb maklua or a modern, broad spectrum of drugs.

4. Training

Each of the family planning volunteers will receive twice each year an additional three days of training in family planning, primary health care, and parasite control. The emphasis will be on nutrition education and the importance of protein-rich supplemental weaning foods. The objective will be to complement home-gardening and animal-raising activities to increase the supply of nutritious foods available to the villagers.

Appendix C

INCENTIVE PROGRAM AND CBFPS EXPERIENCE IN THAILAND

Introductory Note

Appendix C presents the abstract of the AID-commissioned report, "Incentives, Fertility Behavior, and Integrated Community Development," originally published by the Transnational Family Research Institute in 1980 and disseminated by the U.S. Agency for International Development to all its missions. The overview is followed by a summary of the major findings and a revised version of the chapter Thailand, which was prepared in consultation with Mechai Viravaidya.

Also included in Appendix C are excerpts from the report entitled "The Experience of the Population and Community Development Association in Utilizing Reward Systems for Contraceptive Use in Thailand," edited by Jean Baker and published by the Bangkok office of the Population Council in 1980. This report incorporates highlights from two earlier papers, prepared by Choedchai Khannabha and David Walker, consultants to the Population Council. The report should be read in conjunction with Appendix B, the description of the CBIRDS Community Benefits Program.

INCENTIVES, FERTILITY BEHAVIOR, AND
INTEGRATED COMMUNITY DEVELOPMENT:
AN OVERVIEW

by
Henry P. David

Abstract

After outlining selected psychosocial and economic determinants of fertility behavior and discussing their relationship to quality-of-life considerations, the authors note the relevant aspects of population policy. In the next section, they offer a conceptualization and definition of kinds of incentives and disincentives, as well as a discussion of integrated community approaches to fertility reduction, with an orientation to enhancing community development. Legal and ethical constraints are presented in terms of legislative changes, perceived constraints on freedom, and coercion and human rights. The regional overview features country capsules--summaries of experience reported from Bangladesh, China, India, Indonesia, Korea, Philippines, Singapore, Sri Lanka, and Taiwan. The integrated community approach pioneered in Thailand is described in a separate section. Research findings are surveyed, with particular attention given to sociocultural and methodological concerns related to suggested cooperative pilot and policy research. A summary of major findings and a list of more than 180 references are provided in the overview.

Summary of Major FindingsBackground Factors

- The complexity of fertility behavior requires that both psychosocial and economic determinants of fertility be considered in any microeconomic approach to the value of children and policy initiatives to stimulate fertility reduction through use of incentives, disincentives, or integrated community programs.
- An incentive is defined as a tangible or intangible reward to an individual, couple, or other target group that is designed to induce specific, fertility-reducing behavior. A disincentive is defined as a tangible or intangible negative sanction incurred by an individual, couple, or other target group as a consequence of exceeding specified fertility behavior.
- Incentives may be paid to recruiters, acceptors, or providers of services. They may be small, one-time cash payments or larger amounts paid at a later date, depending on acceptance of specified conditions.
- Disincentive programs should be differentiated from politically organized pressures and coercion which restrict voluntary-choice behavior.
- Integrated community programs relate fertility reduction to community development, are sensitive to local needs, and involve the community in voluntary decisionmaking.
- "The 'universal human right' of every couple to choose the timing and number of children they will have, is a noble sentiment, but there is not a country in the world where it is not subject to highly effective societal and cultural constraints."
- The same variables which lead to compliance with an incentive or disincentive program may also be highly correlated with economic success, independent of any incentive. Ultimately, the validity of the assumption that incentive programs are administratively and politically feasible, economically workable, and in keeping with individual and societal norms can be assessed only by the fertility behavior of the community and society affected.

Successful Elements

- Delayed incentives and no-birth bonus schemes are providing encouraging initial results, but longer-term studies are needed to assess the effects on fertility and cost-effectiveness.
- Disincentives reinforce the public perception of small family norms and encourage rational decisionmaking by emphasizing cost-benefit factors without, however, preventing couples from having additional children if they wish to pay the costs entailed.
- Disincentives are accepted more readily in societies where all methods of fertility regulation are easily available, where a strong and stable government has a well established consensual relationship with its citizens, and when care is taken to avoid undue hardships for children born in disregard of official policy.
- Integrated community programs are positively perceived when fertility reduction schemes are oriented to community development and involve local autonomy and appropriate technology to enhance the quality of life.
- The non-governmental, community-based family planning service program pioneered in Thailand demonstrates the feasibility of using imaginative marketing, traditional folk humor, and innovative leadership tied to economic development goals. The more cohesive the community, the greater the probability of recognizing the need for integrating fertility reduction with socioeconomic development for the common benefit.
- The use of incentives, disincentives, and peer pressure is not incompatible with human rights principles if there is community consensus and if implementation does not result in discrimination on grounds of income, race, sex, language, property, or religion.
- Most incentive programs have been reported from Asia, particularly from Bangladesh, China, India, Indonesia, Korea, Philippines, Singapore, Sri Lanka, Taiwan, and Thailand.

Problems Encountered

- Policy decisions about the size of incentive payments, to whom they should be paid, and when, how, and in what form appear to have been made largely on the basis of conjecture and intuition, seldom as the result of field experience.

- Despite the millions of dollars spent on incentives, virtually no control studies have been reported. Little information exists on whether incentives will lower the birthrate, and if so, how large they would have to be to do so. There is a wide gap between the number of schemes proposed and the number of schemes that have been implemented with a research component.
- There is disagreement on whether incentives influence persons to want fewer children or prod them into accepting family planning (notably sterilization) before they would otherwise do so. It has not been possible to establish the extent to which incentives cloud the judgment of recruiters and service providers, or the informed consent of acceptors.
- Acceptance of non-permanent methods, prompted mainly by a desire for a small, one-time financial reward, tends to elicit low continuation rates. Delayed incentives or no-birth bonus schemes are of too recent origin to permit longer-term evaluation of their effects on fertility or costs.

An Integrated Community Approach: Thailand*

Introduction

Historically, Thailand has had a pronatalist policy, paying bonuses to large families until 1956. The Royal Thai Government did not express public concern until 1959, when a World Bank Economic Mission concluded that the high rate of population growth was adversely affecting economic development efforts. In 1964, family planning services were added, as an experiment, to selected facilities of the Ministry of Public Health (MOPH). From 1968 to 1970, family planning was a low-key activity, operating without public information support, without full-time family planning workers, and without incentives. The Planned Parenthood Association of Thailand (PPAT) was organized in 1970 and built on the efforts of private initiatives begun in the 1950s (Viravaidya, 1979a). Acting on a policy statement from the National Economic Development Board, the Royal Thai Government promulgated a National Population Policy in 1970, establishing the National Family Planning Program (NFPP) to provide voluntary services to the public, and placing responsibility for implementation in the Ministry of Public Health.

It is not the purpose of this presentation to review family planning services in Thailand. This has been done well by others (e.g., JOICFP, 1978; Viravaidya, 1979a). Rather, this section contains a discussion of the non-governmental Community-Based Family Planning Services program and its evolution into the Population and Community Development Association, launched in 1979. The discussion is followed by a consideration of currently operating and envisaged integrated community projects (Baker, 1980).

CBFPS

In 1973, Mechai Viravaidya--henceforth referred to as Mechai, in accord with the usual Thai tradition of calling people by their first names--then the Secretary-General of the Planned Parenthood Association of Thailand, conceived the idea of an experimental project for community-based family planning services (CBFPS) in parts of Thailand (Potts and Bhiwandiwala, 1979). Encouraging results were obtained whenever village leaders, itinerant entertainers,

* Adapted from H.P. David, "Incentives, Fertility Behavior, and Integrated Community Development", Bethesda, Maryland, Transnational Family Research Institute, 1981. The revised edition was prepared in consultation with Mechai Viravaidya.

or other indigenous personnel were recruited to help spread the idea of effective family planning. Communities responded to the improved availability of services, which were provided with the support of a grant from the International Planned Parenthood Federation (IPPF). The approach used borrowed heavily from imaginative marketing techniques that were infused with traditional Thai folk humor. Although some would consider the approach similar to incentive efforts in other countries, Mechai preferred to use a Thai word meaning "common sense" to describe the program which provided rewards for family planning practitioners and developed a community development philosophy based on grass-roots decisionmaking (David, 1979).

By the end of 1975, it became possible to explore prospects for the development of a non-clinical and non-governmental community-based contraceptive promotion and marketing system. When some of the leaders of the Planned Parenthood Association of Thailand did not endorse the project (other reasons also were given), Mechai resigned from the PPAT. In 1974, he established the Community-Based Family Planning Services (CBFPS) as an independent, non-profit organization with nominal links to the PPAT and cooperative relationships with the Royal Thai Government. Plans to implement a trial project in one district of 70,000 people were approved by the Ministry of Public Health, an advisory committee of Thai leaders and development specialists was organized, and initial financial assistance became available through the IPPF. The dramatic growth of the CBFPS, its unique innovations, and its "revolutionary" impact on rural and urban Thai lifestyles have been presented well in numerous reports (e.g., O'Donnell, 1977, 1978; Viravaidya, 1979a). One of the CBFPS' strong points has been a continuing creative partnership with governmental services (Potts, 1979).

In quantitative terms, the CBFPS achievements over a period of four years (1974-1978) are impressive. By the end of 1980, the project extended to 158 districts and 16,236 villages in the country, serving approximately 17 million people, or 33 percent of the national population. Indigenous personnel--shopkeepers, farmers, teachers, and housewives--distribute contraceptives and provide information about family planning practices to persons in their own villages. A recent study concluded that, by 1976, the CBFPS had reached 10 percent of total acceptors in Thailand, using substantially less than 10 percent of the total national expenditures for family planning. According to CBFPS sample surveys, in the CBFPS districts, between 1974 and 1976, pregnancy rates declined by 40 percent, compared to an average 20 percent in neighboring districts served solely by the government programs (Burintratikul and Samaniego, 1978). The overall changes in Thai fertility behavior and contraceptive practices have been substantiated by other demographic studies (e.g., Knodel and Debavalya, 1980).

An independent case study of CBFPS, conducted in 1978 by the International Council for Educational Development, concluded that:

The striking achievement of the CBFPS is that it has overcome the familiar barriers of geographical access to family planning information and contraceptive supplies by making these available in the village community itself. Another distinguishing feature is that the CBFPS is a non-governmental, private sector effort of sizable dimensions that mobilizes private resources, including manpower and management talents, but functions in cooperation with the government within the framework of the National Family Planning Program. A third significant characteristic is its attention to long-range cost feasibility of family planning services, including, in particular, its effort to make community-level distribution and communication activities at least partially self-financing (Burintratikul and Samaniego, 1978).

Community Participation

That community-based family planning service programs can be important components of integrated development efforts is often acknowledged in the abstract. Once in the field, uncertainty arises as to where the participation of the people begins.

Mechai's experience demonstrates the utility of humor and financial motivations as an entry into the serious business of family planning and family size limitation. For example, the CBFPS business card is a folded form with an attached condom, popularly called a "mechai." On the inside pages a series of drawings show how a condom should be used; included is a cartoon of a proudly erect penis smiling appreciatively for being fully covered. The tear-off mail order segment of the card conveys a message, which, roughly translated, is "Plan your family with rainbow colored mechais. Bright colors, beautiful perfume, safe and so easy to use. No side effects. Highly effective family planning and whisper-quiet home delivery service." On the back of the form is a brief lesson in demography; graphically depicted are the numbers of children born in Thailand each minute, hour, day, week, month, and year, and the slogan, "Too many children make you poor." Information on a free sterilization at a CBFPS clinic is provided also.

It is common practice at village orientation meetings to invite a group of men from the audience to compete in a condom contest. Each participant is given a condom to unwrap, blow up, and burst. Few people can maintain a serious attitude when contraceptives are handled in so public, and often hilarious, a way. These balloon contests have been staged on television, in classrooms, and at political rallies--wherever and whenever they were likely to lighten the mood and make the audience laugh. By desensitizing contraception, family planning has been made part of daily life. Once the villagers get the idea that fertility-regulating methods are just one more thing to buy in the local shop, they have far fewer inhibitions about their use. In Mechai's words, "I want people to accept contraceptives the same way they do soap or toothpaste" (Warren, 1978).

Village schools are also involved. Children recite family planning nursery rhymes, shout the slogan "Too many children make you poor," and sing the Thai family planning song. Based on a traditional tune they already know, it describes the hardship of having children too often and thus not having enough for everyone to eat. It ends happily, each listener reminded that there is no need to worry because the local distributor will tell the parents where to get the pill, a condom, an IUD, or sterilization. "The children may not understand exactly what contraception is," says Mechai, "but they do know what it can mean to them" (O'Donnell, 1977). Mechai adds, "We want them to grow up feeling family planning is normal" (Guerrero, 1978). "If parents hear this song often enough from their children, it becomes part of their thinking. Anyway, it is good to give these kids an early start. They will be parents soon enough" (Michai to Ridder, 1979).

Integrated Community Projects

Government acceptance of the community-based approach is reflected in a major new initiative. With the support of a consortium of international donors, an enlarged program was instituted in 20 provinces in 1978-1980. Village health volunteers, backed by paramedics, are providing basic health care needs, including family planning, in their respective villages. This program of integrated community-based services builds on the experience which the CBFPS gained with the Integrated Family Planning and Parasite Control Program, launched in 1976 with support from the Japanese Organization for International Cooperation in Family Planning, and the Integrated Family Planning Health and Hygiene Program, initiated in mid-1977 with assistance from the U.S. Agency for International Development.

Experience has demonstrated that family planning is the most logical point of entry into primary health care, followed by parasite control, household installation of sanitary latrines, rain-water collection and storage, and malnutrition prevention programs (D'Agnes, Viravaidya, and D'Agnes, 1979). The parasite control program is providing six-month loans to build latrines and wells for active family planning practitioners who are eligible for loan-reducing rebates if they recruit a certain number of additional acceptors who continue to practice family planning for a specified period or if they obtain one vasectomy acceptor (D'Agnes, 1979).

In view of the expanding activities, the Population and Community Development Association (PDA), with CBFPS as its major component, was organized in 1979 as an independent, tax-exempt, non-profit organization engaged in the training and support of change agents for service delivery in family planning, parasite control, general health, and community development at the village level, and in some urban communities, in close collaboration with governmental agencies (Population and Community Development Association, 1979). Also under the PDA umbrella is the Asian Centre for Population and Community Development (ACPD), which concentrates on national and international training in development and expansion of community-based family planning and development programs.

Another growing segment of the PDA is the Community-Based Appropriate Technology and Development Service (CBATDS). Its purpose is to enhance the quality of rural life by adding an appropriate technology component to villages where CBFPS change agents are also active. The CBFPS has always recognized that "family planning alone is not enough" and, wherever possible, it has supported the creative endeavors of its village distributors to use family planning as a springboard for other income-raising or life-enhancing community development activities (CBATDS, 1980). Over the years, the CBFPS has shown the way to fertility-related development by organizing small pilot schemes, including, for example, a discount buffalo rental service for field ploughing, transportation, and marketing of agricultural products; rain-water tank construction; a pig-growing scheme to obtain better prices; and the promotion of village cooperatives. "These services are not meant to be incentives to practice family planning, rather, they are rewards for fertility management and opportunities for greater self-help and self-sustaining development" (CBFPS, 1979). In a larger sense, they are integrative community programs that use appropriate technology to demonstrate that parents do not need many children to produce sufficient food and income (CBATDS, 1980).

The current program evolved from isolated efforts initiated in 1975, when the CBFPS added a small marketing operation to its existing contraceptive distribution program, allowing people who practice family planning to deposit their non-perishable agricultural products and handicrafts at the house of the distributor. Transportation was then arranged. By skipping the middleman, the sales price was usually 30 percent better than it would have been at the local market. On the return trip, the truck would carry fertilizer, seed, or garlic purchased by the CBFPS at wholesale prices and resold to family planning practitioners at 30 percent below local market prices.

In some villages, the CBFPS sponsored discount dressmaking, discount hair-dressing, or discount drug purchases for family planners. In other villages, a farmer who had had a vasectomy could obtain the lifetime services of the "family planning bull," which evokes good-natured titters when it appears on the scene (Rowen, 1978). A revolving loan fund for construction of rain-water storage tanks was implemented in drought-ridden northeastern villages. Most recently, a large-scale food purchasing program was launched to sell produce directly from the villages to the refugee camps in Northeast Thailand under the auspices of the CBATDS and the Community-Based Emergency Relief Services (CBERS).

Mechai has always emphasized the importance of people seeing an immediate benefit from family planning. He encourages villages which have accepted the CBFPS program to invest some of their money in a pair of buffalo. "Let them breed," he says. "They're not people. They are better than tractors because tractors don't produce baby tractors. Tractors eat expensive fuel, not grass, and they don't produce fertilizer" (O'Donnell, 1977). Village distributors are responsible for the animals, and registered family planning users can rent them at half the price charged to non-family planning practitioners.

To simultaneously reduce fertility and provide income-generating activities for villagers, the CBFPS (1979) launched a contract pig-growing program in one district of Chiangrai Province in northern Thailand in August 1978. The program evolved from the experience of a local CBFPS supervisor who offered the services of his popular high-quality stud boar, nicknamed "The Family Planning Pig," free of charge to any of the active acceptors in his district. These services were also made available to other villagers, but they had to pay the going market price or its equivalent--one piglet from the stud's litter (CBFPS, 1979).

The project was expanded subsequently with an improved strain of pigs. Women are urged to "space your next pregnancy with a pig." A family planning acceptor enters into a contract with the CBFPS to take a 15-kilo, two-month-old piglet to be fattened on table scraps and rice-crop leavings to 90 kilos. The CBFPS assumes transportation and marketing responsibilities and shares the profits with the contract grower. The woman's part of the deal is to promise to continue practicing family planning during the pig's fattening period, which usually requires eight to nine months. If a contract grower breaks the contract by becoming pregnant, she is not penalized and the pig is not taken away, but the family may lose the opportunity to receive another pig in the future. As of December 1980, no contract grower had given birth. An increasing number of villagers are becoming involved. A handbook on pig-raising and family planning is in preparation.

More recently, plans were implemented to expand and improve breeding stations, using low-cost building materials. At two stations, a biogas digester was installed so that pig manure could be recycled into rich fertilizer and methane gas. The addition of the biogas units helps to control flies and parasites. At one site in the north, the piggery has been extended into a full-scale, integrated farming system/village appropriate technology center with breeder pigs, a fish and duck pond, chickens, rabbits, a plant nursery, and vegetable and rice plots. A cooperative store where villagers can purchase animal feed and medicines constitutes another part of the center. The integrated farming and marketing system provides a training site for intensive farming on less than one acre of land while demonstrating principles of agricultural waste-recycling and the use of renewable energies. Simplified village handbooks have been prepared to support training activities. Revolving funds will be used to make non-pregnancy loans, thus further strengthening the scheme of helping the rural poor to help themselves and exemplifying the process of linking fertility reduction to economic development and perceived improvement of quality of life.

As one result of its successful work with villagers, the PDA was invited to work with Cambodians in the refugee camps of Thailand. Comprehensive family planning services are offered to camp inhabitants through a community-based system which uses trained Khmer workers for house-to-house or tent-to-tent motivation and referral. Sterilization and abortion are not part of the program. Appropriate technology schemes are used to help active family planning acceptors supplement their daily rations by raising vegetables and fast-growing leucaena trees for firewood and shade. Refugees are taught also such development skills as cloth-weaving, sewing, and basketry to improve camp life while reducing fertility.

As the authors of the case study of the PDA/CBFPS concuded in 1978:

The evolution of CBFPS into a multipurpose integrated program probably holds a significant lesson. A genuine community-based approach, it appears, cannot continue to function on the basis of a narrow, rigid, imposed-from-outside program scope and objectives. A program that subscribes to the values and ethics of a community-based service has to subordinate its immediate and narrow objective--be it the acceptance of contraceptives, or the treatment of parasites, or vaccination against preventable diseases--to the ultimate needs and interests of the community people. These needs and interests of a community as perceived by the community can be the only basis for an authentic community-based service program. The particular interest of an outside agency like the CBFPS can evoke a response from the community if it is a genuine need, but it has to fit into the total pattern of crucial concerns and priorities of the community. This is where the integrated approach comes into play (Burintratikul and Samaniego, 1978).

Appendix D

THAILAND AND THE NORTHEAST REGION

Thailand is the second largest country in Southeast Asia, with a population of 46.2 million. Geographically, and administratively, it is divided into four regions: North, Northeast, Central, and South. The economy is largely rural and agrarian. Eighty-three percent of the population live in the rural areas, defined as municipalities with populations below 30,000 people. Approximately 58 percent of all households are engaged in farming as their major source of income. Agricultural products, mainly rice, cassava, sugar, maize, kenaf, jute, and livestock, account for 28.5 percent of the Gross Domestic Product (GDP). The agricultural sector is nearly twice as large as any other sector of the economy.

The major problems facing rural farmers in Thailand, as delineated in the current Five-Year Development Plan, are:

- Large income disparity, with 25 percent of the population living in absolute poverty
- Rapid population growth
- High seasonal unemployment
- Shortage of available credit and high interest rates
- Poor crop yields
- Inadequate control of diseases of livestock
- Lack of marketing opportunities
- Unstable agricultural prices
- Insufficient and maldistributed health service infrastructure
- Inadequate preventive health services, including immunization, health education, sanitation, and availability of potable water.

A third of Thailand's population is crowded into the Northeast, the poorest, largest, and most intensely agricultural region. Eighty percent of all households in northeastern Thailand are engaged in agriculture as their main source of income. The average household size is seven persons. The average household income in the region is 10,280 Baht (\$500). This figure represents a real increase of only 60 percent since 1962, one-half the increase of farmers in Central Thailand. Using the accepted standard of poverty level in Thailand as 150 B/person/month, 52 percent of all people who are considered to be living in poverty in Thailand live in the Northeast. Most of these people are subsistence farmers who grow rain-fed glutinous rice

Rice is the region's major agricultural product. In the last 20 years, farmers have been diversifying into upland cash crops, such as cassava or tapioca, kenaf, maize, and jute. In doing so, the farmers have been able to increase their income, but their overdependence on cassava as a cash crop has caused overproduction, market disruption, soil depletion, and ecological change.

The major problems facing growth in the agricultural sector are:

1. Insufficient Credit Opportunities

Although 88 percent of all farmers in the Northeast own their own land, only a small percentage have established land title. Without legal proof of their only capital asset, few farmers have collateral for bank loans, and high interest rates and a tight money supply make other credit sources inaccessible. Farmers thus are left without the investment capital to purchase the improved seed varieties and fertilizer needed to improve their productivity.

2. Diminishing Land Resources

Virtually all increases in agricultural output during the past 20 years have been the result of expansion or land under cultivation. The Ministry of Agriculture and Cooperatives estimates that only 9 percent of current land holdings are suitable for agricultural expansion, and that available land will have been totally expended by the early 1980s.

3. Inefficient Use of Land

In a single year, the average farmer will put only 55 percent of his land holdings under cultivation. Economic constraints on seed and fertilizer procurement, the limited availability of water for irrigation, inefficient farming practices, and the lack of reliable market are all responsible for inefficient use of land.

4. Poor Crop Yield

In the 1960s and 1970s, low rates of fertilizer application (5kg/rai), use of low-yield rice varieties, and declining soil fertility combined to stagnate yields for most major crops. Thailand's rice yield per hectare of cultivable land, already the lowest of any country in Southeast and East Asia, increased by only 0.1 tons (100kg/hectare). Yields in the Northeast have been declining since 1961.

5. Lack of Marketing Opportunities

Once farmers overcome the resource limitations on agricultural output, they must face the major obstacle of marketing their produce. Monopolies in major segments of the agricultural produce markets allow middlemen to undercut government-guaranteed prices, leaving the farmer disproportionately small profit margins and no market alternatives.

Not only is the Northeast the most populous region, it is also the most rapidly growing area. Contraceptive prevalence is low, with only 45 percent of eligible couples currently practicing family planning. High crude birth rates contribute to the high prevalence of malnutrition in the region and elevated infant, childhood, and maternal mortality. Sixty percent of all children below 5 years of age suffer from some form of malnutrition. Maternal mortality in Northeastern Thailand is 70 percent higher than the national average.

The Northeast is the driest region in the country. During an average year, the Northeast receives 100 days of rain and 120 centimeters of rainfall. Water for domestic and personal use and consumption is usually obtained from contaminated, unsealed wells and village ponds. However, many villages have neither wells nor ponds, and many existing ponds, which are usually about one meter deep, dry up during the dry season. Villagers must travel as many as five kilometers to obtain water.