

THE DEVELOPMENT OF AN INTEGRATED
SYSTEM OF HOUSEHOLD SURVEYS
FOR THAILAND:
MID-TERM PROJECT REVIEW

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THE DEVELOPMENT OF AN INTEGRATED
SYSTEM OF HOUSEHOLD SURVEYS
FOR THAILAND:
MID-TERM PROJECT REVIEW

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ABBREVIATIONS

APHA	American Public Health Association
ESCAP	Thai Department of Technical and Economic Cooperation
ILO	International Labor Organization
MS	Multipurpose Survey
NHSCP	National Household Survey Capability Programme
NSO	National Statistical Office of Thailand
PMS	Pilot Multipurpose Survey
PPS	Probability Proportionate to Size
SIAP	Statistical Institute for Asia and the Pacific
UN	United Nations
UNDP	United Nations Development Program
USAID	United States Agency for International Development

INTRODUCTION

Purpose of the Report

This report describes the objectives, findings, results, and recommendations of a technical assistance mission to the National Statistical Office (NSO) of Thailand. The mission was one of a series of short-term consultancies to aid the NSO in the implementation of an integrated program of household surveys. The NSO is undertaking this effort as a participant in the National Household Survey Capability Programme (NHSCP), a major technical-cooperation effort in statistics that is co-sponsored by the United Nations (UN), the United Nations Development Program (UNDP), and the World Bank.

The mission was funded by the United States Agency for International Development (USAID) under Agreement AID/DSPE-C-0053 in cooperation with the American Public Health Association (APHA). The author of this report was in Thailand from August 14 to September 11, 1983.

Objectives of the Mission

In two prior missions (August 31 to October 27, 1981, and July 7 to September 4, 1982), the author of this report worked with the NSO on the design of an integrated household survey program and on plans for field testing of its key features. A major element of the program is to be the Multipurpose Survey (MS), a continuing household survey with quarterly rounds. Data on current economic activity and a few other important topics will be collected in every round; other topics, such as health and education, will be investigated in one quarterly round each year or less frequently. Other household surveys covering such topics as population change and consumer expenditures will be conducted separately, but will make use of common sampling frames, field staff and data processing facilities, and will be designed to facilitate linkage of the results of all surveys for analytical purposes.

A major pretest of the MS was carried out in two provinces, Khon Kaen and Satun, in January 1983, in accordance with plans developed during the author's 1982 mission.

The main objectives of the mission covered by the report were

- To review the findings from the January 1983 pretest (which will be referred to as the Pilot Multipurpose Survey - PMS) and to evaluate their implications for the national MS.
- To assess the overall progress to date of the NHSCP-Thailand project, which started in July 1981 and is scheduled to run through December 1986.

Background Information

Detailed information about the NSO, the NHSCP, and the objectives, work plan, and schedule of activities for the NHSCP-Thailand project may be found in the reports of the author's 1981 and 1982 missions to Thailand:

- 1981 - A Report on Plans to Develop an Integrated System of Household Surveys for Thailand
- 1982 - A Progress Report on the Development of an Integrated System of Household Surveys for Thailand

This section gives a brief summary of the major features of the project.

As stated in the original project proposal, the long-range objective of the project is to enable the Royal Thai Government to obtain through household surveys and in conjunction with data from population censuses and other sources, a continuing flow of integrated statistics that it needs for formulating and implementing plans for social, economic, and demographic development and for monitoring their implementation.

Project activities since the start of the project in July 1981 have focused primarily on planning and testing in preparation for the start of the national MS. A small pilot test was conducted in February 1982, using central office staff as interviewers. The initial project work plan called for the national MS to start in January 1983; however, it was concluded that further testing of sampling and data collection procedures was essential and, as mentioned above, a major pretest was

carried out in two provinces in January 1983. The results of this pretest confirmed the feasibility of covering more than one topic in a single interview. During the mission covered by this report, the executive staff of the NSO held several meetings to discuss and agree on a field work plan covering fiscal years 1984 to 1987 (the fiscal year in Thailand is defined in the same way as in the United States). The latest version of the plan has the following features:

- The number of annual rounds of the Labor Force Survey will be increased from two to four, starting in calendar 1984.
- A survey on television viewing, radio listening, and newspaper readership planned for 1984 will be conducted as a supplement to one of the four rounds of the Labor Force Survey.
- Supplements to the Labor Force Survey in subsequent years will cover topics such as cultural activities and use of leisure time, health and welfare, and education.

Thus, the basic features of the MS as to be implemented, although the content of supplemental modules has been altered considerably from earlier plans. Further changes in the scheduling of supplements are likely as new user needs emerge and as experience with the MS approach leads to better understanding of its potential uses.

A second important activity under the NHSCP-Thailand project has been a broad review of the design and procedures in all of the NSO's household surveys. Several improvements have been recommended and, pending the start of the MS, many of them have already been incorporated in the ongoing Labor Force Survey. Details are given in Part II and Appendix E of this report.

One of the objectives of the project has been to establish better communication between NSO and the principal users of household survey data. A recent step which may help has been the reactivation of the Statistical Commission, a high-level inter-ministerial body which will advise the NSO on the content and conduct of all of its programs. Members of the Commission have been named and a first meeting was planned for October.

Technical assistance in support of the NHSCP-Thailand project has consisted of short-term consultancies and training. In addition to the three missions by the author of this report, the NSO has received assistance in the subject-matter areas covered by its household surveys from the Thai Department of Technical and Economic Cooperation (ESCAP) regional advisors. In particular, the International Labor Organization (ILO) Regional Advisor on Household Surveys has played an important role in reviewing the concepts used in the NSO's Labor Force Survey and recommending changes consistent with ILO's proposed new standard for the collection of data on economic activity.

Training to date has been short-term. In 1982, Dr. M.N. Murthy, of the Statistical Institute for Asia and the Pacific (SIAP), conducted an in-house course in the measurement and control of non-sampling errors for NSO staff. In 1983, two NSO officials attended an NHSCP-sponsored course in non-sampling errors at the Statistical Institute for Asia and the Pacific (SIAP), and two others received four months of training in sampling and survey methodology at the Indian Statistical Institute in New Delhi, under a UNDP-assisted NSHCP training program.

The initial project plan calls for university training leading to master's degrees for seven NSO officials: two each in survey methodology and data processing, and one each in cartography, demographic statistics, and economic statistics. One person will receive training in demography, under sponsorship of the Colombo Plan, at the Australian National University, starting in the fall of 1983. No sources of funding have been found for the other six.

FINDINGS AND RESULTS

FINDINGS AND RESULTS

Preliminary Note

Most of the findings and recommendations resulting from this mission are included in four memorandum addressed by the author to the Secretary General and other officials of the NSO. These memoranda are included as appendices to this report. This section of the report provides a brief summary and will serve as a guide to the contents of the four memoranda.

The four Memoranda are:

- Appendix B. August 17, to Dr. Niyom Purakam, Deputy Secretary General. Recommendations concerning the labor Force Survey and Related Surveys in 1984.
- Appendix C. August 26, to Ms. Phensri Suwansingha, Director, Statistical Techniques Division. Recommendations on Sampling Procedures Based on Findings from the Pilot Multipurpose Survey.
- Appendix D. September 2, to Dr. Niyom Purakam, Deputy Secretary General. Recommendations Concerning the Use of the Housing Unit as a Listing and Sampling Unit in Household Surveys.
- Appendix E. September 6, to Mr. Ambhorn Arunrangsi, Secretary General. Final Report.

Results of the Pilot Multipurpose Survey (PMS)

The PMS, for which the field work was carried out in January 1983, was conceived as a "dress rehearsal" for the national MS. It provided an opportunity to test sample selection procedures, data collection procedures and instruments, and processing procedures designed for the MS. Some of the key issues examined were

- the amount of time required for household interviews covering multiple topics,

- the feasibility of switching from the household to the housing unit as a listing and sampling unit, and
- the feasibility of using a self-weighting sample design with the primary sampling units (blocks and villages) being selected with probability proportionate to size.

These issues were reviewed by the author, on the basis of reports prepared by NSO officials who observed the field operations and records showing the outcomes of the sample selection process and through discussions with several of the participants.

Unfortunately, no systematic records were kept of the duration of interviews. However, the observer reports indicated that, for both versions of the questionnaire, the average interview time did not exceed the 45-minute limit that had been established.

There were some difficulties in applying the specific housing unit definition developed for the PMS, and it was reported that some of the interviewers who participated found it confusing. The author discussed these problems with several of the NSO officials directly involved in the PMS, and on this basis prepared a revised definition, which is included in the memorandum of September 2 to Dr. Niyom Purakam on this subject (Appendix D). There is general, although not unanimous, agreement that the switch from household to housing unit should be made, and that the problems observed in the PMS can be resolved by revising the definition and by providing adequate training for the field staff in the new concept and its implications for the listing and sampling operations.

A careful examination of the sampling instruction and worksheets for the PMS indicated that the new sampling procedures had, with one or two minor exceptions be properly executed. There was reasonably good agreement between frame counts (measures of size) and listing counts of households, indicating the desirability of the proposed selection of sample blocks and villages with probability proportionate to size (PPS). On the other hand, it proved difficult to control the overall interviewing workload, and there were several sample blocks and villages for which it was necessary to change the indicated sampling fraction in order to avoid excessively large

samples of housing units. Therefore, the author's principal recommendations, which appear in the August 26 memorandum to Ms. Phensri Suwansingha (Appendix C), were to switch to PPS selection of blocks and villages at the first opportunity, but in the meantime to revert to the present procedure of selecting a fixed number of housing units in each sample block and village.

The author's overall conclusion from his review of the PMS results was that the key features of the proposed MS have now been adequately tested and that there is no reason for further delay in starting the national MS. This conclusion is reflected in recommendations to the Deputy Secretary General (memorandum of August 17, see Appendix B) and to the Secretary General (memorandum of September 6, see Appendix E).

Status of the NHSCP-Thailand Project

An evaluation of the accomplishments to date of the NHSCP-Thailand project is included in the author's final report to the Secretary General of the NSO (Appendix E). On pages 3 to 11 of that report, the four "immediate objectives" contained in the original project plan are listed, followed by the author's evaluation of the degree to which each one has been or is being met at this stage of the project, i.e., approximately two years through its scheduled duration of five and one-half years. This evaluation is followed (pages 11 to 18, and Attachment A) by recommendations covering three areas deemed critical to successful completion of the project:

- The need to streamline and "freeze" the core module of the MS covering labor force activity. This action is considered essential to meet the project objective of producing more timely data on this topic.
- Guidelines for making full use of the multipurpose survey approach. Attachment A provides a list of topics to be considered as possible supplemental modules for the MS in addition to those already scheduled.
- Technical assistance for the remainder of the project.

The careful reader of this report may observe some discrepancies between the statements in Part I of this report concerning the MS supplements already scheduled and the statements on this same subject in the author's final report to the Secretary General of the NSO. This matter was the subject of intense debate by the NSO's top staff, continuing through the final day of the author's mission, and the statements in Part I are based on the most recent oral information available to him.

The final report to the Secretary General was completed and submitted a few days prior to the end of the mission and does not reflect information received subsequently.

Other Activities During the Mission

At the request of NSO officials, the author engaged in additional activities not directly related to the primary mission objectives, as follows:

- Lectured to approximately 60 NSO officials on "Quality Control of Field Work in Household Surveys." Most of the materials for this lecture was drawn from the NHSCP Technical Study "Non-sampling Errors in Household Surveys: Sources, Assessment and Control." Based on a show of hands, it was found that only one person present had seen this publication, which has been available for at least one year. This finding suggests that additional efforts may be needed to publicize and insure adequate distribution of this excellent series of NHSCP publications.
- Served as "student advisor" to two master's degree students from the NSO's Statistical Techniques Division. A student working for a master's degree in statistics from Chulakongkorn University requested advice in connection with a thesis on determination of the optimum sample size for use in the decennial population census. A student planning to work for a degree in demography at the Australian National University asked for help in selection of a topic for a thesis making use of demographic data from Thai censuses and household surveys.
- Discussed the sample design and estimation procedures for the NSO's annual surveys of the trade and service industries, with particular emphasis on the question of how to deal with the high non-response rates encountered in those surveys.

SUMMARY AND RECOMMENDATIONS

Summary

In the two years since the start of the NHSCP-Thailand project, the NSO has completed the developmental work necessary to initiate the MS, which will become a key component of the NSO's program of household surveys. Implementation at the national level is scheduled to begin in 1984. All survey topics proposed for inclusion in the project, except food consumption, have been or are presently scheduled to be covered in household surveys. Several important steps have already been taken to improve the quality of survey results and to develop more cost-effective survey designs and procedures in ongoing household surveys. Needs for short-term consultants have been met through the support of USAID and the ESCAP regional statistical advisors. Short-term training has been provided by the SIAP and the Indian Statistical Institute, with UN support.

Failure to publish survey results in a timely manner remains a critical problem. Recommendations on this topic are included in the author's final report to the Secretary General of the NSO (Appendix E). Another problem is the lack of NSO staff available and qualified to undertake first-level analysis of survey results. Little progress has been made so far in establishing better communication between the NSO and users of survey data; however, the recent reactivation of the Statistical Commission holds promise for improvements in this area. Funding for graduate training of seven NSO officials was requested under the project; to date, support has been obtained for training only one person.

With three and one-half years of the project term remaining, the outlook for meeting most of the project objectives is favorable. Special attention should be given at this point to speeding up the publication of survey results and to improving NSO's capabilities for performing first-level analyses of survey results.

Recommendations

1. USAID should continue to provide support to the NHSCP-Thailand project. In particular, it should sponsor the one-month consultancy for overall project review scheduled for 1985.

2. The UN Statistical Office should continue to seek support for graduate training requirements associated with the project and for additional short-term training, especially in the area of analysis of survey data.
3. The Statistics Division of ESCAP should continue to support the project with short-term consultancies by its regional advisors, as requested by the NSO.

Appendix A
LIST OF CONTACTS

Appendix A

LIST OF CONTACTS

United Nations

Statistical Office, New York

Mr. V.R. Rao, Officer in Charge, National Household Survey
Capability Programme

Ms. Beverley Carlson, NHSCP staff

Mr. Vijay Verma, NHSCP staff

Mr. William Seltzer, Assistant Director for Demographic and
Social Statistics

Statistics Division, Economic and Social Commission for Asia and the
Pacific (ESCAP), Bangkok

Mr. Andrew Flatt, Acting Division Chief and Chief, Statistics
Development Section

Mr. M.V.S. Rao, ILO Regional Advisor on Household Surveys

Mr. Lawrence Lewis, Regional Advisor on Population Censuses and
Surveys

Mr. M. Khalid Siddiqui, Economic Affairs Officer, Statistics
Development Section

Fund for Population Activities, Bangkok

Dr. J.S. Parsons, Deputy Representative and Senior Advisor on
Population

U.S. Agency for International Development

AID/Washington

Mr. Richard Cornelius, Operations Research Division, Office of
Population

Ms. Judith R. Saltzer, Policy Development Division, Office of
Population

Mr. David Oot, Office of Population, Health and Nutrition

USAID/Thailand

Mr. Terrance P. Tiffany, Director, Office of Health, Nutrition and
Population

National Statistical Office, Thailand

Mr. Ambhorn Arunrangsi, Secretary General
Dr. Niyom Purakam, Deputy Secretary General
Mr. Ithi Swunkatat, Deputy Secretary General

Population Surveys Division

Ms. Wiwit Siripak, Director
Ms. Sasithorn Jotikasthira, Chief, Labor Force and Education
Survey Branch
Ms. Yaovasri Likanasadh, Head, Labor Force Survey Section

Economic Surveys Division

Ms. Duangchai Poomchusri, Director
Ms. Varai Woramontri, Chief, Socio-Economic Statistics Branch

Statistical Techniques Division

Ms. Phensri Suwansingha, Director
Ms. Annie Skunasingha, Chief, Planning and Coordination Branch
Ms. Eiamchan Premyothin, Chief, Statistical Methodology Branch
Mr. Sue Lo-Utai, Head, Sampling Section
Ms. Orapin Kitjahan, Sampling Section
Ms. Oosanee Phoopat, Sampling Section

Field Operations Division

Mr. Kanet Chantarasup, Director
Mr. Somphong Dimichai, Head, Quality Control Section
Mr. Worawut Lewboonthawatapai, Head, Economic Statistics
Coordination Section

Data Processing Center

Mr. Thavisakdi Thangsupanich, Director
Ms. Woranut Tritipayabut, Chief, Data Processing Techniques Branch

Other Thai Government Officials

Professor Bundhit Kantabutra, formerly Secretary General, National
Statistical Office

Ms. Anuri Wanglee, formerly Deputy Secretary General, National Statistical Office

Ms. Tippawadi Meksawan, Chief, Manpower Planning Subdivision, Policy and Standards Division, Civil Service Commission

Ms. Maneerat Flipat, Manpower Planning Subdivision, Policy and Standards Division, Civil Service Commission

Aug. 17, 1983

To: Dr. Niyon Purakan

Deputy Secretary General

National Statistical Office

From: Thomas B. Jabine

NESCP Consultant

Subject: Recommendations Concerning the Labor Force Survey and
Related Surveys in 1984

A. Background

Important decisions concerning the 1984 schedule and design for the Labor Force Survey and related household surveys must be made within the next few days. The NESDB has urgently requested that four rounds of the Labor Force Survey be conducted in 1984, rather than two as in previous years. The Pilot Multipurpose Survey conducted early this year has demonstrated the feasibility of adding inquiries on other topics such as housing characteristics, mass media, and children and youth, to the standard labor force inquiry in the same interviews. The overall NSO budget for the 1984 fiscal year (starting October 1, 1983) has already been set.

B. Recommendations

1. Four rounds of the Labor Force Survey should be conducted in 1984

It is important to respond to the urgent request of the NESDB, which is one of the principal users of data from the survey. It will clearly be useful to obtain new information on seasonal variations in economic activity of the population.

With a suitable design (see recommendation 2), the four rounds can be conducted at no additional cost. The total number of blocks and villages to be listed and the number of interviews will be roughly the same as in 1983, but they will be scheduled at different times.

2. The sample design should allow for 50 percent overlap of the sample between rounds, with listing of the new blocks and villages just prior to each round

This is illustrated by the diagram below. The overall sample of blocks and villages will be divided into 5 subsamples, each of

which will be one-fourth of the size of the 1983 sample of blocks and villages. These subsamples will be listed and interviewed as shown in the diagram:

subsample	List prior to rounds				Interview in rounds			
	1	2	3	4	1	2	3	4
1	X				X			
2	X				X	X		
3		X				X	X	
4			X				X	X
5				X				X

The total number of interviews will be about the same as in 1983. The number of blocks and villages to be listed will be increased by 25 percent; however, the unit cost of listing can be reduced (see item 5 below).

3. Supplementary modules should be added to the standard Labor force inquiries in one or more rounds

At a minimum, the housing characteristics module should be added in all four rounds, and the mass media and the children and youth modules should each be added in one round. Based on previous discussions, round 3 would probably be most suitable for the children and youth module.

Consideration may be given to addition of other modules such as income or twelve months work experience. The latter is relevant to the new ILO standard for collection of data on economic activity. Some development and testing of these modules will be needed.

4. The annual migration survey for the Bangkok Metropolis should be done in conjunction with the listing prior to the first round

There are two design options under the design proposed in recommendation 2 above:

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Option 1 - Do the migration survey only for subsamples 1 and 2.

This will reduce the sample size by 50 percent.

Option 2 - In the Bangkok Metropolis only, list subsamples 1 to 4 prior to Round 1, and use all of them for the migration survey.

5. Reduce the scope of the listing operation to include only the data needed for sampling purposes and, in the Bangkok Metropolis, to identify households with migrants

Collection of reliable data on labor force status as part of the listing is not feasible. Such data can in no sense be regarded as preliminary estimates of the data collected for sample households in the interview. Data on number of radio and television sets will be provided by the mass media interview module.

C. Issues to be resolved

There are two issues, both relevant to the design of the 1984 Labor Force Survey, which have emerged from the experience of the Pilot Multipurpose Survey. These require further study. I plan to make recommendations on these two questions within the next two or three weeks.

1. Household vs. housing unit as a sampling unit

Apparently the field staff had some problems in applying the housing unit definition used in the Pilot Multipurpose Survey. These problems need to be carefully evaluated in order to weigh the advantages and disadvantages of the two approaches.

2. Self-weighting sample vs. fixed sample size per FSU

It is necessary to maintain a reasonable control over the total sample size for each interviewer in each round of the survey. Apparently the procedures in the Pilot Multipurpose Survey failed to do this. The reasons must be determined and appropriate adjustments made to the sample design and selection procedures.

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D. Concluding comments

If recommendations 1 to 5 above (especially recommendation 3) are followed, the NSO will, in fact, be conducting a national multipurpose survey for the first time in 1984. I believe that sufficient resources are available and that prior experience and testing has established the feasibility of this approach.

It has been my normal procedure, in submitting proposals of this nature, to circulate drafts for review by staff of the NSO divisions primarily involved in the program. In view of the limited time available and the urgency of reaching a decision, I have not done so in this case. However, I think the decision is now up to you, as Director of the NHCSP Project, and to the Secretary General. I believe that the division directors are most anxious to have a clear decision from you on this matter, and I am sure that they will do their best to carry out your instructions, whatever they may be.

Thomas B. Jabine

Aug. 26, 1983

To: Mrs. Phensri Suwansingha, Director
Statistical Techniques Division
National Statistical Office

From: Thomas B. Jabine
NHSOP Consultant

Subject: Recommendations on Sampling Procedures Based on Findings from
the Pilot Multipurpose Survey

With the cooperation of you and your staff in providing the necessary information, I have been able to analyze the results of the sampling procedures used in the Pilot Multipurpose Survey (PMS). Thanks to the careful records that were kept, it has been possible to learn important lessons from this experience.

On the basis of this analysis, I would like to present two major recommendations concerning the sampling procedures for the Multipurpose Survey and other surveys with similar designs:

Recommendation 1 Sample blocks and villages should be selected with probability proportional to size (PPS).

Recommendation 2 Within each stratum a fixed number of sampling units should be selected from each sample block or village.

Each of these recommendations is discussed below. This discussion is followed by some additional suggestions concerning sampling procedures.

Selecting blocks and villages with probability proportional to size

The reason for preferring PPS selection to equal probability selection is that the use of PPS can be expected to result in smaller sampling errors for a given size sample. This will happen as long as there is a reasonably large positive correlation between the measures of size used for selection and the variables to be estimated from the sample. Such appears to be the case in the PMS. Although there were a few sample blocks and villages for which the number of households listed was substantially above the measures of size (frame counts), the overall correspondence, taking

splits into account, was good.

Specific procedures for developing the block and village frames for PPS selection were covered in detail in my 1981 report "Proposed Design for Multipurpose Survey". Following are a few points that deserve special emphasis, and one minor modification in the suggested procedures:

1. The measures of size (household counts) for blocks in municipal areas should be taken from the 1980 Population Census. A systematic procedure should be established for updating these measures in blocks with large amounts of new construction or demolition every two or three years. This work could be carried out by the field staff in each changed, based on instructions prepared by your division.
2. For villages, the updated village lists maintained by your division should serve as the frame. The measures of size should be either population or household counts from the latest available source. For most villages, this source should be the most recent Annual Village Survey for which data are available. In some cases it may be necessary to use data from an earlier year and occasionally it may be necessary to ask the field staff to provide rough counts for selected villages.
3. It will not be necessary to combine villages whose measures of size are below a specified level. However, it is recommended that a minimum measure of size be assigned to each of these units, in order to give "protection" against errors in the frame counts. If, for example, population counts are the measure of size, each village with fewer than 100 persons could be arbitrarily assigned a measure of 100 for sampling purposes.
4. Since the sample blocks and villages have already been selected with equal probability for the 1984 Labor Force Survey, the first chance to use PPS selection in a labor force or multipurpose survey will be in the selection of the 1985 sample. In the meantime, attention should be given to preparing the block and village sampling frames for this purpose.

5. Because the villages in the sanitary district stratum tend to be large and densely populated, and to show rapid growth, it would be desirable to convert from list to area sampling for this stratum. Some of the necessary work has already been done, since maps are available for most sanitary districts.

Selection of a fixed number of units from each sample block or village

This is the procedure that has normally been used in the Labor Force Survey and in other NSO household surveys that have similar designs. A "self-weighting" sample design was tried in the RMS on the grounds that use of this design would (1) simplify the estimation procedure, and (2) simplify the procedures for sampling in the field, since the sampling interval for each sample block or village could be specified in advance.

The sampling procedures for the self-weighting design in the RMS worked out reasonably well. However, there were two problems. First, there were several sample blocks and villages for which the initially assigned intervals had to be changed in order to keep the sample sizes within reasonable limits. Since these blocks and villages require special weights in the estimation formula, the advantage of simplicity in the estimation procedure is not fully realized. Second, there was a significant increase in the total enumeration workload compared with what was targetted. The number of households for which questionnaires were completed exceeded the target sample sizes by about 25 percent in Khon Kaen and 11 percent in Satun. The excess in Khon Kaen was due in part to some cases in which sampling intervals were not adjusted when they should have been. Nevertheless, for orderly control of field work, it is essential that workloads be kept close to target figures.

In view of these two problems, it seems better, on balance, to use a design that calls for fixed numbers of sample units per block or village. This design can be used regardless of whether the ultimate sampling unit is a household or a housing unit. If fixed numbers of housing units are used, there will be some variation in workload due to vacant housing units and units with more than one household. However, it should be easy to keep this variation within manageable limits. It is important in this connection that

the household definitions be correctly followed. In the FMS in Khon Kaen, there were two sample blocks where several units occupied by students were treated as private households when they probably in fact were either special or institutional households.

Other suggestions concerning sample design and estimation procedures

Recent improvements in sample design and procedures are most encouraging. These include: the revised estimation procedure for the Labor Force Survey, elimination of the use of reserve samples, coverage of complete villages in the sanitary district stratum, and current work on the estimation of sampling errors for the Labor Force Survey.

Additional improvements that you may want to consider are listed below:

A. Short-range

1. Ensure that a full record is kept of the details in each case where a sample block or village is split in the field. In the FMS there were a few cases where the proper weights could not be determined because this information was not available. If communication channels are adequate, the preferred method of handling such splits would be to have your division make the final selection based on information provided from the field.
2. It would be desirable to revise the sampling procedures for special households so that the sampling interval for persons in special households is the same as the interval used to select private households (or housing units) in each block or village.
3. Update the control totals used in ratio estimates to reflect results of the 1980 Census of Population. There is clear evidence that the age-sex distributions from the 1980 Census differ significantly from those in the projections based on the 1970 Census.

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4. Collect more complete and accurate information on the time required for listing and enumeration in household surveys. A review of the data on days for listing each block and village in the PMS suggests that the data may not have been recorded very accurately in one of the two changwad's. Such information is essential for planning new surveys and changes in the design of existing surveys.

B. Intermediate-range

1. Computerise the frames used for all household surveys. Because of the frequency of creation of new villages and higher-level units, this is technically a fairly complex undertaking, at least for the village frame. Nevertheless, the benefits for both sampling and other purposes would be great.
2. Consider revision of the procedure used to adjust for sample households not interviewed in a survey. The present method of incorporating this adjustment in the ratio estimate is a reasonable one; however, it does not take full advantage of information about the missing households that is available from the listing form, e.g., number of persons. One alternative procedure would be to duplicate data for a similar interviewed household in the same block or village.
3. Undertake a study to determine the optimum designs for various types of household surveys. Two issues, in particular, deserve attention:
 - a. The allocation of the sample villages between the sanitary district and other village strata.
 - b. The size of ultimate cluster (number of sample households or housing units) in each of the three types of areas: municipal area, sanitary district and other.

Determination of optimum allocations will require data on both cost components (see item A, 4 above) and components of sampling error.

Thomas O. Jabine

Sept. 2, 1983

To: Dr. Ni/om Purakan
Deputy Secretary General
National Statistical Office

From: Thomas B. Jabine
NHSCP Consultant

The attached memorandum, "Recommendations Concerning Use of the Housing Unit as a Listing and Sampling Unit in Household Surveys" was circulated in draft last week to The Population Surveys, Field and Statistical Techniques Divisions.

I have received written comments from Mrs. Sasithorn Jotikasathara, who believes that it would be preferable to retain the household as the listing and sampling unit. A copy of her memorandum is attached. From my discussions with representatives of the other two divisions, I understand that they would favor using the housing unit.

Since there is a difference of opinion, it would appear that this issue deserves further discussion by the NHSCP Working Group. There are two points that I would like to contribute to this discussion:

- 1) The advantages of using the housing unit are especially great in multi-round surveys where, as in the present design of the Labor Force Survey, the same sample households are visited more than once.
- 2) Before making a final decision on this question, some further field testing on a small scale, using a revised definition and listing procedures along the lines suggested in my memorandum, would be desirable.

Thomas B. Jabine

To: Dr. Niyon Purakan
Deputy Secretary General
National Statistical Office

From: Thomas B. Jabine
NRSCP Consultant

Subject: Recommendations Concerning use of the Housing Unit as a Listing and Sampling Unit in Household Surveys

Background

In a multi-stage household survey with listing and subsampling, units must be defined at three levels: listing, sampling, and enumeration. In past household surveys conducted by NSO, the household has been used at all three levels: as a listing unit, sampling unit, and unit of enumeration. All of the households in a sample block or village are listed, a sample of these households is selected, and a questionnaire is completed for each of the sample households.

This procedure is straight-forward, but it has two disadvantages:

- 1) Households, which consist of groups of persons, are volatile, i.e., their composition tends to change frequently. Thus, if the same sample households are to be interviewed in more than one round of a multi-round survey, households are sometimes difficult to locate in subsequent rounds, and complex procedures are needed to deal in an unbiased way with changes in household composition. The same problem occurs in a single round survey if there is a significant time interval between listing and enumeration.
- 2) The listing of households requires that a substantial number of questions must be asked at each occupied house or other structure in order to identify the households associated with these structures. The time required for listing a block or village might be substantially reduced if this determination needed to be made only for a sample of houses and other structures, at the time of enumeration.

For these reasons, it was recommended, for the proposed Multipurpose Survey, that the housing unit be used as the listing and sampling units, with the household continuing to serve as the unit of enumeration. This procedure was tested in the Pilot Multipurpose Survey (PMS) conducted early this year in Changwade Khon Keen and Satun. A review of the PMS results shows that:

- 1) There were some problems related to the particular housing unit definition used in the PMS. These problems can be overcome with certain changes in the definition and the establishment of suitable rules of association for linking households with sample housing units.
- 2) Reductions in the time required for listing were not realized because both housing units and households were listed.

Specific recommendations to resolve these problems follow. The recommended procedure should be used in any NSO household survey which requires listing of blocks and villages, followed by sub-sampling. It is especially important to use this procedure in multi-round surveys with overlapping samples.

Recommendations

1. The housing unit (HU) definition should be changed so that each detached house or other occupied structure is treated as a separate HU, even in cases where the same household occupies more than one house. A proposed revision of the HU definition is provided in Attachment A.
2. The information collected in the listing operation should be limited to:
 - a) Information needed to identify each housing unit, to classify them by size for sampling, and to locate sample housing units at the time of enumeration.
 - b) Information needed to identify special households so that they can be sampled separately.

- c) Screening information needed to identify HU's eligible for special surveys on topics such as migration or labor force activities of university graduates.

Specific details are given in Attachment B. Note that households are not to be listed separately, and that no data items (such as number of persons by labor force status) are included. If these limitations are observed, the ~~average~~ time needed to list blocks and villages should be substantially less.

3. Following the selection of a sample of housing units and at the time of enumeration, the following rules of association should be applied to determine which households should be enumerated:
 - a) For HU's occupied by one or more complete households, enumerate all households.
 - b) If the sample HU is one of two or more HU's occupied by a single household, enumerate the household only if the sample HU is the one where the members of the household normally take their meals. If this rule is not applicable, enumerate the household only if the sample HU is the one where the head of the household normally sleeps.

Discussion

1. The expected reductions in time required for listing result from two factors:
 - a) Except where special households are involved, listers will not have to ask the questions that would be needed to establish relationships between housing units and households.
 - b) Listers will not need to ask the questions about labor force status of housing unit members. This should significantly reduce the number of callbacks needed to obtain the desired information for each unit listed. The loss in terms of information is not great, since more reliable information on labor force status and other topics will be obtained from the enumeration of the sample housing units (and the households associated with them).

2. Data from the FMS (see table below) show that the great majority of housing units were occupied by a single household. The proposed revision of the definition will make multi-household HU's even less frequent. Thus, the listing and sampling procedures will in most cases be simple to apply, and the occasional sample housing unit with no households or with two or more households will cause only minor differences between the target sample size and the actual sample size.

Table 1. Number of housing units, by occupancy, and number of households, by Changwat and stratum: 1983 FMS listing.

Changwat and stratum	Housing units listed		Households listed	Ratio: households to occupied HU's
	Occupied	Vacant		
Khon Kaen				
Munic. area	1,781	112	1,938	1.088
San. district	889	87	895	1.077
Other	2,139	56	2,201	1.005
Satun				
Munic. area	1,863	150	1,940	1.041
San. district	925	59	949	1.026
Other	1,851	67	1,875	1.013

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Attachment A: Proposed housing unit definition

A housing unit is a building or other structure, or a separate and independent unit in a building which is either used for habitation or intended for habitation.

Housing units may be either vacant or occupied. A vacant unit is a house (including mobile and floating houses) or apartment intended for living quarters but not currently occupied. Occupied units may include, in addition to houses and apartments: boats, rafts, vehicles, shelters, garages, offices, barns, rice mills, animal pens and other occupied places. Each such place will be a separate housing unit.

Housing units will not include structures occupied only by institutional households as presently defined for the Labor Force Survey, for example inmates of jails, soldiers or policemen in barracks, pupils in a school dormitory, patients in a hospital, and priests, novices, nuns, and monks' attendants living in a monastery or monks' abode.

Housing units intended for living quarters include the following types:

- 1) Detached houses. Each detached house should be counted as a housing unit, even in cases where a group of detached houses is occupied by the same household. If a detached house is clearly divided into separate apartments, each with cooking facilities, bath-room and separate entrance, each apartment will be counted as a housing unit.
- 2) Row houses. Each unit with separate entrance will be counted as a housing unit. However, two or more contiguous units without walls between them will be counted as one housing unit.
- 3) Apartments. An apartment is a suite of rooms, in a building, with cooking facilities, bath room and entrance separate from other suites in the same building. Each apartment will be counted as one housing unit.

Attachment B: Minimum Data to be Collected in Listing Operation

One line is required for each housing unit and one line for each structure not containing any housing unit. Minimum items needed for sample selection and enumeration purposes are:

1. Address/street
2. House number
3. Type of unit listed on this line:
 - a. Occupied housing unit
 - b. Vacant housing unit
 - c. Other (describe in item 7)

(Items 4 to 6 are for housing units only, leave blank for other units.)

4. Number of persons in housing units:
 - a. In private households
 - b. In special households
5. Housing unit serial number:
 - a. For vacant units and units containing one or more private households.
 - b. For units containing one or more special households.
6. (If occupied) Name of "principal occupant".
7. Remarks

If the listing is to be used for screening, i.e., to identify households eligible for inclusion in surveys on special topics, such as migration, then items needed for this purpose should be added to the listing form.

Comments on items listed above:

Items 1 and 2. These are standard items that have been used on all listing forms.

Item 3. Types of units to be designated as "other" include:

- a) Structures occupied only by institutional households.
- b) Structures not intended or used for living quarters.

Item 4. Separate counts are needed for persons in special households to permit the use of special sampling procedures for these persons. Note, however, that it is not necessary to determine or record the number of private households in each housing unit.

Item 5. Two sets of serial numbers are needed in order to permit and facilitate separate sampling of special households. A housing unit may have either one or two serial numbers. Serial numbers in 5, a should be assigned to all housing units except those containing only special households. Serial numbers in 5, b should be assigned only to housing units containing special households. Serial numbers in each set should be assigned consecutively.

Item 6. The purpose of this item is to assist enumerators in locating housing units selected for the sample, especially when they do not have unique house numbers. If an occupied housing unit contains only one household, the "principal occupant" would normally be the head of the household. If it contains more than one household the "principal occupant" should be the person most likely to be known to the neighbors, such as the owner of the house, or the proprietor of a boarding house.

Item 7. This item is meant primarily for recording additional information that will help enumerators to identify each housing unit. It is especially important to record information here when the housing unit does not have a unique number, or is not located on a named street or road. For listings of structures not containing housing units, record the type of structure.

Aug. 29, 1983

To: Mr. Jabine

NHSCP Consultant

From: Sasithorn Jotikasathra

Labor Force & Education Statistics

Subject: Comments on the "Recommendations Concerning the Use of the Housing Unit as a Listing and Sampling Unit in Household Surveys", a memo of 24 August 1983 from Thomas Jabine to Dr. Kiyom Purakan

From our experience in the pilot survey we have found that using the "Housing Unit" as the unit for listing in the sampling operation is not quite so convenient as we are led to believe. Probably this is because Thailand is a country which is still mainly rural. The new definition seems to be more suitable for societies which are rapidly becoming urban in character.

But even in the urban areas the definition is not always satisfactory. It is not any easier to relocate HUs after they are listed than it is to relocate households.

Moreover, in urban areas there is the constant problem of defining what a housing unit is. It could be argued that the physical arrangements made for sharing kitchens and entrances are more fluid than the social arrangements which define a household, especially because the word "household" in colloquial Thai corresponds very closely to the technical definition. In the urban areas there are a large number of combinations of living arrangements, not all of which can be covered in the definition of housing unit, even the revised definition. The problem constantly came up in the urban areas, especially in the case of row or shop-houses.

In rural areas, there are even stronger reasons against using the housing unit. There is not always a house number for every house in a village, or alternatively, there may be more than one structure with the same house number.

The location of houses is not always clear from a map, since they are mapped only roughly in relation to geographical landmarks such as rivers, roads, canals or mountains. Another group of enumerators, who attempt to follow the original listing, may not be able to locate HUs any better than households (There are data which show the reasons why enumerators cannot find households in the Survey of Children and Youth).

The advantage of using the "household" as the unit of listing in a rural area is that the members of the household are known to everyone in the area, whereas the location of the housing units is only known in relation to a map, which may not be an accurate one.

In the memorandum for consideration, it is said that one objection to using the household as a unit of sampling is that a "household, which consist of groups of persons are volatile, i.e., their composition tends to change frequently." This is certainly true, but we think that its importance is exaggerated. The problem arises mostly in the slum areas of Bangkok. The rest of the population is not so mobile as to cause an insurmountable problem when the interviewing is conducted not long after the listing.

If it is decided to change over, there will be much confusion, and it is questionable whether the gains will be worth the costs. In conducting the pilot multi-purpose survey, problems in training the enumerators arose at every level. The enumerators constantly refused to accept what they considered to be an unclear definition. The difference between the two concepts, housing unit and household, could not be explained in a clear-cut manner, especially since the enumerators were comfortable with the former definition. Instead of convincing the enumerators to see the advantage of the HU, the training resulted in confusing them. We think that this will be the result of a change. The whole problem should be thought about carefully. If there are weaknesses

in our listing operations, is this the best way to correct them? Do we want to make ourselves more dependent on the accuracy of maps? Is the time it takes to list the members of a household really so long, compared with the time it takes to reach an area? Is there not an advantage in listing the members of the household, if we want to find them again for interviewing?

Naitham. Job Matha

Sept. 6, 1983

To: Mr. Amhorn Arunrangsi
Secretary General
National Statistical Office of Thailand

From: Thomas B. Jabine
NHSCP Consultant

Subject: Final Report

This is the final report of my work with the National Statistical Office during the period August 15 to September 9, 1983. This consultancy was carried out under the auspices of the UN National Household Survey Capability Programme and was funded by USAID.

The purpose of this mission, as stated in the NHSCP - Thailand project plan, was to undertake an overall review of project implementation at this stage. In addition, I was instructed to review the results of the Pilot Multipurpose Survey conducted in January 1983, and to assist with planning for the start of a national Multipurpose Survey.

As in previous missions, I have greatly appreciated the gracious reception and full cooperation of the NSO employees with whom I have worked during this period. I should like especially to thank Ms. Phensri Suwansingha, Director of the Statistical Techniques Division and Ms. Cosanee Phooapat, of the same division, who worked closely with me during the entire period.

Copies of this report will be given to USAID, to the UN Statistical Office, and to the Statistics Division of ESCAP in connection with my final reports to them.

Documentation

Some specific recommendations which I have made concerning program strategy and design features for household surveys are contained in the following three memoranda:

1. Memorandum dated 17/8/83 to Dr. Niyom Purakam: "Recommendations concerning the Labor Force Survey and related surveys in 1984"
2. Memorandum dated 28/8/83 to Ms. Phensri Suwansingha: "Recommendations on sampling procedures based on findings from the Pilot Multipurpose Survey"
3. Memorandum dated 2/9/83 to Dr. Niyom Purakam: "Recommendations concerning use of the housing unit as a listing and sampling unit in household surveys"

Copies of these memoranda are available from the Statistical Techniques Division.

Status of the NHSCP-Thailand project

The NHSCP-Thailand project started in July 1981 and is scheduled to run through December 1986.

As stated in the project plan, the long range objective of the project is "...to enable The Royal Thai Government to obtain through household surveys, and in conjunction with data from population censuses and other sources, a continuing flow of integrated statistics that it needs for formulating and implementing plans for social, economic and demographic development and for monitoring their progress."

It should be clear from this statement that the project was intended to embrace all of NSO's household surveys and to aim at the careful planning and integration of these surveys, using cost-effective survey designs, to meet the stated goal. While the proposed Multipurpose Survey is viewed as a major component of this effort, the accomplishments of the project should not be judged only on the progress in developing plans for and implementing that survey.

The long range objective was translated into four "immediate objectives" which were also contained in the project plan. Each of these is listed below, followed by my evaluation of the degree to which it has been or is being met at this stage of the NHSCP-Thailand project, that is, slightly more than two years through its scheduled duration of five and one-half years.

- a) to plan and execute, during the course of the project, a household survey covering (i) labor force, employment and unemployment; (ii) income and expenditure; (iii) food consumption; (iv) migration; (v) use of health, education and other services; and (vi) population change and other demographic characteristics.

Taking into account surveys conducted to date, plus those included in the tentative three-year plan for 1984 to 1986, the NSO has or expects to conduct surveys on all of the above topics except food consumption. More specifically, the situation is as follows:

- i) The Labor Force Survey has been conducted in two rounds annually for 1981 to 1983. Starting in 1984, it is expected that there will be four rounds annually.
- ii) A detailed household income and expenditure survey was conducted in 1981-82 and another is planned for 1986. Some income information has been collected in each round of the Labor Force Survey through 1983. For discussion of future plans see the section of this report on "Recommendations".
- iii) The NSO has concluded that the conduct of surveys on nutrition should continue to be the responsibility of Ministry of Public Health. NSO, as in the past, will provide technical assistance for such surveys.
- iv) Surveys of migrants to selected urban areas have been conducted annually since 1981 and are scheduled to continue during the project period. The listings for the Labor Force Survey are used as the frame for these surveys. A limited amount of migration information has been collected (but not yet published) in the 1981-83 labor force surveys.
- v) Surveys of children and youth, dealing primarily with education, were conducted in 1982 and 1983. A survey of health and welfare was conducted in 1981. The tentative survey plan for 1984 to 1986 includes coverage of the following topics:

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1984 - mass media (radio, television and newspapers)

1985 - social and cultural activities

1986 - health and welfare, housing

The topics listed for 1985 and 1986 are expected to be covered as supplemental modules in selected rounds of a multipurpose survey.

- vi) A survey of population change is scheduled to begin in mid-1984 and continue for two years.

Thus, except for food consumption, it appears that all of the topics listed have been or will be covered in varying depth. Coverage of food consumption will depend on plans of the Ministry of Public Health, which are not known at this time.

- b) to establish more effective mechanisms for communication with users of household survey data concerning the topics to be covered and the dissemination and use of results

The project plan called for two in-country seminars, one in 1982 and one in 1984, to bring together producers and users of household survey data in order to establish survey content and to develop continuing mechanisms for user consultation. It also called for the establishment of "a high-level interministerial committee to help in the planning and implementation of the survey program" and "individual technical working groups to settle the details of each subject-matter survey".

None of these steps has been taken so far. Planning of survey content continues to be done largely through NSO staff contacts with individual users in other agencies and ministries. As an example, the NESDB recently requested that the Labor Force Survey be conducted in four annual rounds instead of two. The NSO plans to do this starting in 1984. Survey content is also affected by international recommendations, especially those concerning data on economic activity. Based on new standards under development by the ILO, the NSO has recently added questions on availability for work to the Labor Force Survey questionnaire.

The NSO is now in the process of reactivating the Statistical Commission, an advisory body to NSO which is provided for in legislation. The commission was active in earlier years but had become dormant. It will be a high-level inter-ministerial group. Members are being appointed and a first meeting may be scheduled for October. While the Commission itself, at least at the start, will be concerned with broad policy issues, it may be possible, under its auspices, to establish committees or working groups to represent users in determining the broad content of household surveys, and in developing the detailed content for specific surveys.

- c) to strengthen the machinery of the NSO for undertaking household surveys, through additional programmes of staff training within and outside the country, services of short-term experts and by streamlining the organization of survey operations.

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For training both in and outside the country, several members of your staff have attended NHSCP-sponsored seminars, varying from a few weeks to several months, on topics relevant to the NHSCP project, such as household survey methods, sampling methods, and non-sampling errors. It has not yet been possible to obtain support for the graduate-level university training that was included in the initial project plan.

The services of short-term experts have been provided mostly according to the schedule laid out in the project plan, the exception being two consultancies in food consumption and nutrition surveys, which have been eliminated because of NSO's decision not to conduct this kind of survey. As you know, I have undertaken 3 consultancies in the past three years to assist with general program planning, survey planning and design, and related matters. ESCAP has periodically provided the services of regional advisors, Mr. M.V.S. Rao and Mr. Gabriel Carceles, both of whom have contributed to the determination of survey content and plans for data analysis. It is expected that Mr. Rao will again be spending time with NSO later this year and will be available for future assistance as requested.

On the matter of streamlining survey operations, this phrase could be interpreted in various ways, but I consider the proposed multipurpose survey to be of primary importance. The basic plan for a multipurpose survey was included in the original project plan. "Core" information on labor force status and income was to be collected on a monthly basis. For the same sample households, data on additional topics were to be collected, with topics rotating on a quarterly, semi-annual or annual basis. The survey was scheduled to begin at the start of 1983. A detailed

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design for it was developed during my consultancy in September and October of 1981.

Since then, the original plan for a multipurpose survey has been substantially modified and there have been delays in implementation. In 1982 a detailed plan for survey content - core items and periodic supplements - was developed and a decision was made to undertake a Pilot Multipurpose Survey in Changwads Khon Kaen and Satun. Its purpose was to test the core items and the supplemental modules scheduled for the first full year of the Multipurpose Survey, as well as certain aspects of the proposed survey design.

The pilot survey was carried out in January 1983, mostly as planned, except that two of the modules - those on income and on rice production and stocks - were not included. It was concluded by the participants and observers that it was feasible to combine two or three topics in a single household interview, and that this did not cause undue burden on respondents. Important information was obtained about new sampling and listing techniques tested in the pilot survey; the results are discussed in the second and third documents listed above.

Plans for implementation of a national multipurpose survey are rather uncertain at present. In a certain sense, conducting the Labor Force Survey in four rounds in 1984, if this is done, could be regarded as a first step. Topics included in the tentative 1984-86 survey plan which could be covered as supplemental modules in a multipurpose survey include:

1984 - mass media

1985 - social and cultural activities

1986 - health and welfare, housing

Possible additional topics are discussed in the section of this report on Recommendations.

- d) To achieve significant improvements in the quality and timeliness of household survey results, and to develop more cost-effective survey designs and procedures.

Several important steps have been taken to improve the quality of survey results and to develop more cost-effective survey designs and procedures. These include:

- i) using blocks and villages, rather than changwads, as primary sampling units.
- ii) elimination of the use of reserve samples.
- iii) preparation and review of completion rates and data on reasons for not completing interviews for each survey and survey round.
- iv) tighter control on substitutions for sample villages.
- v) revision of sample selection procedures for villages in the sanitary district stratum to include households from parts of villages not in sanitary districts.
- vi) revision of the estimation procedure for the Labor Force Survey to reflect the variable selection probabilities within sample blocks and villages.

- vii) calculation of sampling errors for the Labor Force Survey.
- viii) an improved format for the 1983 Labor Force Survey questionnaire to make it easier for interviewers to follow the complex skip patterns and to facilitate the work of the data entry clerks.

There have most likely been other improvements of which I am not yet aware.

Some recommendations for introduction of additional cost-effective survey design features are included in document number 2, listed in the previous section. However, the best way to make the NSO's household survey program more cost-effective will be to take full advantage of the multi-purpose survey approach, as will be discussed in the following section.

With respect to timeliness of the publication of survey results, there does not appear to have been any appreciable change. Last year, the Deputy Secretary General, Dr. Niyom Purakam, set a target of six months for the publication of reports for each round of the Labor Force Survey. The latest publication now available is for Round 2 of 1981, for which data were collected in July to September of that year. A publication is also available for the Migration Survey conducted in the Bangkok Metropolis in November and December of 1981.

Some recommended procedures for reducing processing time for the Labor Force Survey were included in my final report to you last year. A further recommendation appears in the next section of this report.

To summarize the current status of the NHSCP-Thailand project, several important steps have been taken toward meeting the immediate and long-term objectives of the project. All topics proposed for inclusion in the project, except food consumption, have been or are scheduled to be

covered in surveys. Implementation of the key component, a multipurpose survey, has been significantly delayed, and failure to publish results on a timely basis remains as a critical problem. Needs for short-term consultants and short-term training are being met, but support for graduate-level university training of NSO staff has not been provided.

Recommendations

Many recommendations relevant to the NHSCP-Thailand project have been included in my reports from earlier missions and in documents I have prepared this year. Rather than repeat these here, I will confine my remarks to three major areas: first, the need to streamline and "freeze" the labor force module; second, guidelines for making full use of the multipurpose survey approach; and third, technical assistance for the remainder of the project.

1) Streamlining and "freezing" the labor force module

It is recommended that, in preparation for its inclusion as part of a multipurpose survey in 1985, the present labor force questionnaire should be:

- a) shortened,
- b) revised to the extent considered necessary to conform to the new ILO standards for data on current economic activity, and
- c) frozen, that is, no changes of any kind should be permitted in the basic labor force module after the first round in 1985, for a period of at least five years.

This recommendation has two main objectives. The first is to help make it possible to meet the six-month publication goal for each round of labor force data, and possibly even to do better. This goal is critical; until it can be met, the economic activity data produced by NSO will be of limited interest to those in the Government responsible for current economic policies. If the goal is met, NSO will regain its credibility as a basic supplier of up-to-date information to Government policy makers.

In my view this goal can be met. One of the major causes of delay in processing has undoubtedly been the frequent, almost round-by-round changes in the Labor Force Survey questionnaire, forcing revisions in the specifications, instructions, programs and procedures for all phases of the manual and computer processing. Once the content is shortened and frozen, it will be possible to develop an effective set of processing procedures that can be used for each round without revision. The six-month target would probably not be met for the first round of the 1985 survey, but it should be possible to achieve it for the first round of the 1986 survey.

The other main objective is to make the labor force module suitable as a core module for a multipurpose survey. This means including only the minimum items clearly needed for every round. It does not mean never collecting information on other topics related to economic activity. Other topics can be included as separate modules with whatever frequency is considered desirable. However, the basic labor force module should remain inviolate and capable of being processed separately and quickly on a top priority basis after each round.

As part of the process of "streamlining" the labor force module, the concept of "underutilization" should be replaced by NSO's adaptation of the basic economic activity concepts now being recommended by ILC, as described in Mr. M.V.S. Rao's article. Among other things, this will permit dropping no fewer than 16 items on income (items 37 to 52 in the 1983 Round 2 Labor Force Survey Questionnaire). As pointed out in Mr. M.V.S. Rao's article (p.7), it is impractical to obtain meaningful data on income through current labor force surveys, i.e., those with a reference period of one or two weeks. Instead, the article suggests that "In order to obtain comprehensive measures of the relationship between employment and income, the measurements of employment, income from employment, and household income should refer to the work experience of the population over a long reference period, preferably a year..." This is the procedure that was followed in the NSO's 1981-82 Income and Expenditure Survey. Whether a shortened version of the questionnaire for that survey could be included, say in one round each year, as a module in a multipurpose survey is a matter still to be determined.

Rao, M.V.S., "New International Standards for Statistics of the Economically Active Population", Quarterly Bulletin of Statistics for Asia and the Pacific, Vol. XIII, No.4, December 1982

Using the Round 2, 1983 Labor Force Survey questionnaire as a basis for discussion, other items that might be considered for elimination from the core module (although they could be included in supplements) are:

- i) Items 7 to 10, migration. These items are not being used in the Labor Force Survey publication, and more detailed data for migrants are collected in separate surveys.
- ii) Item 13, years required to complete course (for graduates of universities or teacher training and vocational schools).
A single item on educational attainment was used in the 1980 Population Census. This same item could be used in household surveys to maintain full comparability.
- iii) Item 21, days not available for work last week. Since this and item 20 should presumably add to 7, item 21 is redundant, although it might be useful as a check.
- iv) Item 33, total hours worked. The computer can add the two preceding items to get the total.
- v) Items 35 and 36, main occupation and industry in last 12 months. These items are not used in the latest Labor Force Survey publications. It would be preferable to restrict the core module to questions about current economic activity, i.e., last week and collect information on usual activity in a supplementary module, perhaps in one quarter each year.

I have discussed the general nature of this recommendation with Mr. M.V.S. Rao. He was in accord with it and found it consistent with the proposals he made in the report on his mission to NSO in March and April 1982. Since he is now away on another mission, he has not seen all of the details set forth here, and may wish to suggest some changes.

2) Guidelines for making full use of the multipurpose survey approach

The present survey plan for 1984 to 1986 provides, very tentatively, for one supplemental module to be added to the Labor Force Survey in 1985 and two in 1986. As in the past, samples for migration surveys and possibly others (for example, the mass media survey scheduled for 1984) will be drawn from the annual listings of sample blocks and villages for the labor force surveys.

This will be a beginning to a multipurpose survey, but in my view will not come close to taking full advantage of its potential for producing integrated survey data on many topics at a relatively low cost. Therefore, I recommend that the existing plan for 1984 to 1986 be treated as tentative and that strong consideration be given to adding other modules to the labor force survey rounds in all three years. For 1984, an obvious candidate for a supplemental module would be mass media, which is now planned as a separate survey. The Pilot Multipurpose Survey clearly demonstrated the feasibility of combining inquiries on labor force activity and mass media in the same interview.

I do not recommend other specific topics for inclusion in supplemental modules; however, a list of possible topics is included as Attachment A to this report. The choice and scheduling of specific

topics should be made by the NHSCP Working Group, preferably with input from a household survey data user group organized under the auspices of the Statistical Commission.

Following are a few general guidelines that may be helpful in using the multipurpose survey approach successfully:

- a) Whenever a new household survey topic is considered by NSO, it should be included as a supplemental module for the Multipurpose Survey unless it can be clearly established that the topic requires a separate survey. In the latter event, if possible, the sample for the separate survey should be selected, entirely or in part, from the listings for the Multipurpose Survey.
- b) To allow enough time for development and testing, the supplemental topics to be covered in each round of the Multipurpose Survey should be agreed on at least one year prior to the start of field work for that round.
- c) If formal pretesting of a particular topic is considered necessary, in many cases this could be done by adding the proposed module to the Multipurpose Survey for one or more rounds in a few selected changwads.
- d) The integrity of the core module of demographic and economic activity items must be preserved. Additional items, even if closely related to those in the core module, must not be interspersed with them. They must be incorporated in supplemental modules. The processing system developed for the Multipurpose Survey must permit

separate, priority processing of the core module. It should also permit linkage of core data with data from supplemental modules for the same households and persons.

3) Technical assistance for the remainder of the project

The remaining consultancies scheduled for the NHSCP-Thailand project are:

1984 - 3 months - Techniques for survey analysis and dissemination

1985 - 1 month - Overall review of project implementation

In spite of the delay in implementation of a multipurpose survey, I believe it will be helpful to have these consultancies as scheduled.

The development of an expanded program for analysis and dissemination of survey data does not necessarily need to wait for the availability of data from a multipurpose survey, as there is a large amount and variety of data already available from other household surveys. I

believe the ESCAP regional advisors - Mr. M.V.S. Rao, Mr. Lewis, and

possibly others can provide the necessary assistance in this connection.

They are frequently available for short periods between missions to other countries of the region.

An overall review of the project about two years from now, that is, a little more than one year before its scheduled completion, would in my view also be useful.

I am unable to be as specific about training, since I do not have information about additional short-term training to be provided under the auspices of the NHSCP. Undoubtedly you will receive such information from ESCAP and will want to take advantage of these opportunities as you have in the past. While I continue to believe that the graduate training included in the initial plan would be of great benefit to the project and to NSO generally, I regret that I am still unaware of any source of funding for it.

May I suggest that you be in touch soon with Mr. Ali Sahib, Director of the Statistics Division, ESCAP, to give him confirmation of your needs for the remainder of the NHSCP-Thailand project, either as recommended above, or with any changes or additions that you consider appropriate.

Thomas B. Jabine

Attachment A Topics for Consideration as Additional Supplemental
Modules in a Multipurpose Survey

Topics tentatively scheduled for inclusion as supplemental modules in a multipurpose survey are social and cultural activities in 1985, and health and welfare, and housing in 1986. The topics listed below are suggested for consideration as additional modules. The list is intended to be illustrative rather than exhaustive.

1. Usual economic activity The new ILO standards cover both current and usual economic activity. The former refers to a short period, such as one week, and the latter refers to a longer period, generally one year. If the core items, as recommended, cover only current economic activity, it would be useful to collect information on usual activity periodically, perhaps in one survey round each year.

2. Income and related items The collection of reliable information on total annual income of a household or family requires a long and complex questionnaire similar to the one used in NSO's periodic income and expenditure (socio-economic) survey. While it would undoubtedly be useful to collect data on total household income annually, it does not seem feasible to do this in conjunction with a core module that covers only current economic activity. However, it would be possible to collect some income and related data periodically in supplemental modules. Examples are:
 - a) Wage rates and benefits in principal job for wage and salary workers. This information is now being collected in the Labor Force Survey. If, as recommended, it is eliminated from the core

module, it might be useful to collect it in an annual supplement.

- b) Income of employers and own account workers from nonfarm businesses. At a minimum, such a module should include items on gross receipts and operating expenses by major category for each business. If the goal is to estimate annual income, questions to determine the number of days, weeks or months of activity during the past 12 months should also be included. Self-response would be essential for this module which would mean that more callbacks than usual would be needed.

A similar module for farm businesses might be attempted, however, because of the difficulty of getting accurate information, more development and testing are needed. Possibly such a module should cover only information on gross receipts.

3. Health related items A supplemental module on health and welfare is tentatively scheduled for 1986. However, there are a large number of useful sub-topics in the health area, and additional supplements might be considered. For example, it should be possible, within the multi-purpose survey format, to obtain measurements of height and weight or upper-arm circumference of children as a general indicator of nutrition status. Other sub-topics are described in NHSCP documents which I have given to the Director of the Population Surveys Division.

4. Migration If migration items are eliminated from the core module as recommended, a short annual supplement covering the whole Kingdom might be useful. Possibly this could go beyond the definition now in use to cover moves within a municipal area or village.
5. Mass Media This covers radio listening, television viewing and reading habits. A separate survey is scheduled for 1984. It is probably not necessary to cover this topic every year, but it could be included as a supplemental module periodically.
6. General living standards My personal belief is that it would be valuable, especially given the difficulty of collecting reliable data regularly on total household income, to develop a short module consisting of items that are easy to collect and, taken together, would provide a good indication of the general level of living of each household. Collection of this information at least annually would permit analysis of trends, by region and type of area, in the general level of living. One or more summary indexes, based on groups of items, could be useful as classifiers in the analysis of economic activity and other data.

Items for such a module could be taken largely from the content of the 1980 Population and Housing Census.. Some examples of suitable items are:

Demographic items:

School attendance (by age)

Completed education (persons 25 and over)

Literacy (with a suitable lower age limit)

Housing items:

Type of construction materials

Ratio of persons to rooms used for sleeping

Source of water

Bathroom facilities

Electricity in living quarters

Selected appliances

Television

Refrigerator

Electric fan

One or more motor vehicles

One or more bicycles

7. Energy consumption It is extremely difficult to get accurate information on amounts of energy consumed by households. However, it would be feasible and useful to get information on sources (types) of energy used for heating, cooking and other purposes, and on stocks of energy-consuming vehicles and appliances. At least for municipal areas, it would also be of interest to cover method(s) of transportation used in journeying to and from work, as well as length of journey to work.