

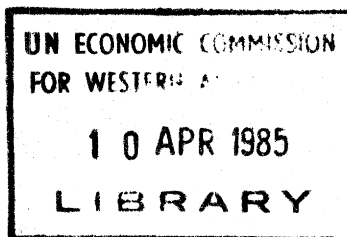
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Statistics Section



SAMPLE DESIGN FOR THE AGRICULTURAL HOUSEHOLD SURVEY  
AND SURVEY OF ECONOMIC ACTIVITIES OF  
WOMEN IN RURAL AREAS OF YEMEN ARAB REPUBLIC

3 - 17 OCTOBER 1983

PREPARED BY

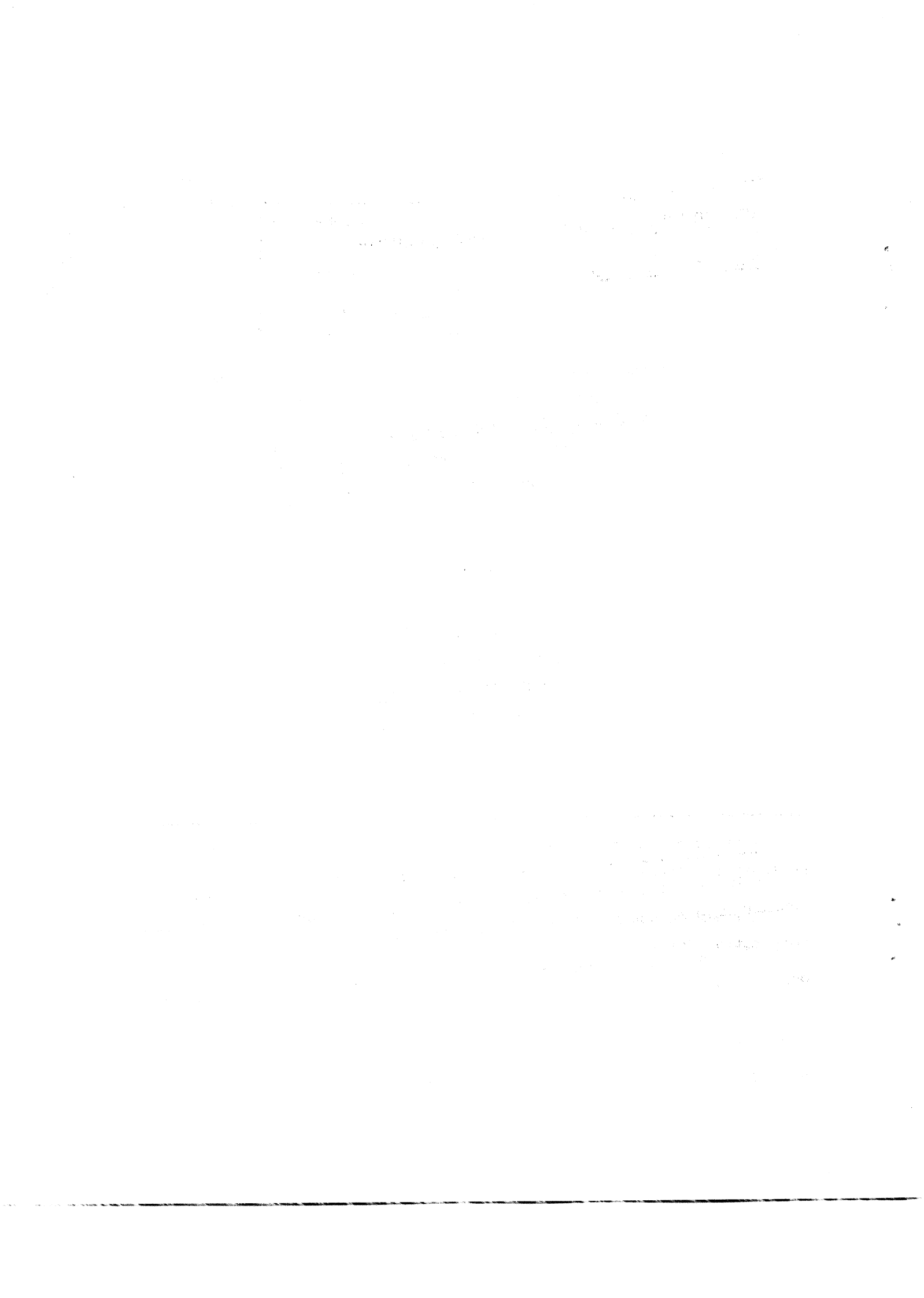
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84-0118



Introduction:

This document reflects the findings and recommendations resulting from a technical assistance mission to Yemen Arab Republic by Mohamed Abdul-Wahab of ECWA. This mission was undertaken during the period October 3-17, 1983.

The Adviser wishes to express his appreciation to the Office of the UNDP for the support received during the visit and also to the various government officials who have contributed to the success of the mission.

## Purpose of the mission

The Mission to Yemen Arab Republic was undertaken at the request of the Government to (1) Review the implementation of the sample design prepared by the Adviser for Agricultural Household Survey and (2) prepare sample design for the proposed survey of the Economic Activities of Women in Rural Areas of Yemen Arab Republic.

On 4 October, 1983 the Adviser had discussions with Mr. Nabil Kahala about the purpose of the mission and also informed him about the National Household Survey Capability Programme (NHSCP); this is a worldwide United Nations sponsored programme. It was different from other UN programmes as it was country oriented and the household surveys are conducted to meet the statistical data needs of planners and administrators according to the statistical data priorities of the country. Secondly, the financing is done by interested donors including UNDP and other UN agencies. There is a NHSCP Unit in each Commission to help the countries of the region for conducting household surveys. The NHSCP Unit consists of Advisers in the fields of Survey Planning, Sampling, Training and Data Processing and in addition ILO has strengthened the team by providing an Adviser on Labour Statistics. The team of ECWA Advisers was associated with the Department of Statistics in the Yemen Arab Republic (YAR) in planning, drafting of questionnaires and Tabulation Plan, Training and field procedures etc. in their recent Agricultural Household Survey.

The next day the Adviser had detailed discussions with the Officer-in-Charge of UNDP and briefed him about the purpose of the mission and the programme the Adviser would undertake in YAR.

### A. Agricultural Household Survey, YAR.

In 1982 a country-wide Demographic Survey was conducted in YAR. It was based on a sample of about 20,000 households. The CYDA Census of Population figures were used as a frame. It was a stratified uni-stage cluster sample.

For the Agricultural Household Survey a sub-sample of fifty percent of the clusters in the rural areas was selected so as to cover about 4,000 agricultural land-holders. (The details of the sample design are given in my Mission Report of April 1983).

During the Demographic Survey a question was asked to separate agricultural land-holders from other households. The list of agricultural holders was prepared on the basis of this information. The general impression was that there was an under enumeration of agricultural land-holders and when the survey was conducted, it was found that the list had included agricultural worker households also.

The field work started on 17 May 1983 and continued for about a month. The team approach was followed. There were a total of twelve teams working in all the Mohafazas. They consisted of a total of 77 enumerators and worked for about 1980 man-days. It may be mentioned here that the country is mountainous with winding dust tracks. Field work in YAR is hard and difficult. It should be appreciated that the field workers covered majority of the selected clusters under these hard conditions specially in the month of Ramadan when they were fasting.

As has been mentioned the ECWA team of advisers along with the Chief Technical Advisor and the National Accounts Adviser fully cooperated with the Department of Statistics on the technical aspects of the survey. The administrative responsibility of conducting the survey was entirely that of the Department. As often happens, when teams of enumerators are moving fast in a difficult country like YAR, it becomes difficult to communicate with them whenever special problems arise and the supervisor exercises his own judgement. The instructions in the manual and as explained during the training course that replacement had to be made on rare occasions were neglected.

These facts were responsible for filling questionnaires for households not in the selected clusters. Three types of biases were introduced (1) Enumeration of households not within the Demographic cluster (2) Non-enumeration of agricultural holders within the clusters and (3) Sometimes replacement of whole clusters. After detailed discussions, it was decided that (1) questionnaires of households that were not in the agricultural household lists were to be checked to see whether these households were in the Demographic list, if so they should be included in the sample, otherwise they should not be included in the sample unless they were new households in the cluster or they were omitted by chance in the Demographic Survey. The idea is to enumerate all Agricultural Households within the boundaries of the cluster as covered in the Demographic Survey, (2) In the survey of the Economic activities of women a question should be asked to locate the agricultural holders and estimate a correction factor of under enumeration of the agricultural holders and (3) we may accept replacement of clusters if they were selected randomly from the same stratum.

The extra questionnaires rejected in this process may be used for conducting special studies and also for estimating enumerator bias etc.

It was also decided that in four selected Mohafazas (Sana'a, Ibb and two other small ones) data for some important variables may be tabulated to analyse the validity of these data.

It should be appreciated that the enumerators had done hard and honest work under very difficult field conditions. It may be noted for future surveys that the field work in YAR should avoid the month of Ramadan, wherein the muslims fast and the enumerator as well as the respondents are not in a mood to answer detailed questions about their economic activities. For efficient field control sub-offices may be established at Mohafaza headquarters and lastly technical modifications like replacement of clusters or households should not be made in the field without consultation with the Advisers in Sana'a and detailed notes must be maintained about how and why these changes were necessitated. It may be pointed out here that the manuals contained

detailed instructions for all aspects of the survey. During the training course these instructions were discussed. After the Pilot Survey special problems were considered and additional instructions were issued in certain cases. The CTA was also in the field during the field work, guiding the enumerators. Unfortunately in certain cases the team supervisors took action without reference to the technical advisers. In Tais they had selected entirely a new set of clusters. There is no explanation in writing how and why this was done. Secondly they had enumerated in certain cases additional households. These households may be (1) within the demographic cluster (2) new households that have moved in and (3) households that were omitted by chance in the demographic survey. Before rejecting any of these schedules all of them have to be thoroughly checked before taking a final decision about using correction factor etc.

B. Survey of Economic Activities of Women in Rural Areas of YAR

Yemeni nationals are working in large numbers in the oil-rich Gulf States. This has created labour shortage specially in the rural areas of the country. This gap has been partially filled by labour from Egypt and other neighbouring African States. It is felt that it will be more economical in the long run to employ local labour than import it. The Central Planning Organization is keenly interested to fill this gap by Yemeni Women. In the 1975 Population Census and 1978-79 Demographic Survey it was found that the women's participation in the labour force was less than 5%. It was proposed to conduct the present survey, in order to ascertain;

- i) The participation of women in the economic activities in the rural areas.
- ii) The earnings of women through agricultural activity.
- iii) The number of hours worked by women in different economic activities

- iv) The characteristics of women who are unemployed and their preference for different types of work.
- v) The factors that prevent women from participating in the economic activities and lastly
- vi) The training facilities needed for women to more actively participate in the labour force

A survey team consisting of Mr. Yahya Qaisal, Director General, Department of Statistics and Ms. Latifa Al-Thour and Mr. Mukhtar Mansour of the Central Planning Organization will be responsible for the conduct of the survey.

The scope of the questionnaire prepared by Dr. Vaidyanathan in consultation with the CTA and the survey team has been broadened to include the study of women in rural areas. The sample design was also discussed. It was evident that according to the resources available, they could employ 20 enumerators for 20 days. If an enumerator filled on an average 5 questionnaires per day, then the total number of questionnaires that can be collected would be  $20 \times 20 \times 5 = 2,000$ . This confined the sample size to 2,000 households. It was also decided that the survey would be carried out in four Mohafazas namely Sana'a, Ibb, Tais and Hodeidah and the clusters used in the Agricultural Household Survey will be covered. On this basis the sample has been drawn. I am grateful to Mr. Magid Basil in helping me to draw the sample.

I am grateful to the Director General of the Department of Statistics and the Survey Team and the CTA for their patient hearing of the views of the Adviser and cooperating in his efforts to reach on agreed solution of the problems of the two surveys.



ANNEX I

This note has been written to clarify the mis-understanding about the composition and replacement of clusters. The Master Sample for the 1982 Demographic Survey was a stratified uni-stage cluster sample. The clusters were designed to be of approximately equal size, size being defined by the number of households. The clusters in each stratum had equal probability of selection. Therefore, in extreme cases a cluster may be replaced by another cluster in the same stratum randomly. The cluster should not be picked up as a matter of convenience and a whole sale replacement of clusters should be avoided. To repeat, the replacement should be done in rare and exceptional cases.

In the Demographic Survey the cluster was defined as the conglomeration of households listed. The Households live in structures which occupied a certain area clearly identifiable in the field, usually a rough sketch map of this area is available for reference for future surveys.

Over a period of time the composition of the houselisting may change because of (1) households moving out of the cluster and (11) new households coming into the cluster. The new households will not be in the original houselisting. Therefore, updating of clusters is suggested after every two years. In the present survey there is a possibility of new households moving in and their enumeration as holders in the agricultural household survey. Secondly there may be under-enumeration because some households, although agricultural holders, were not listed as such.

Therefore, these should be a close scrutiny of the questionnaires, before they are accepted or rejected, to determine whether they belong to or outside the selected cluster.

ANNEX II

List of Persons Seen in Connection with the Assignment

Statistics Department

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|------------------------|--|
| 1. Mr. Yahya Al-Qaisal | Director General                                   |
| 2. Mr. Ahmed Moqbal    | Project Leader<br>(Agricultural Household Surveys) |

United Nations

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|------------------------------|-------------------------|
| 1. Mr. Manzoor Hussain Zaidi | Officer-in-Charge, UNDP |
| 2. Mr. Nabil Kahala          | Programme Officer, UNDP |
| 3. Dr. Kamil K. Al-Adhadh    | CTA                     |
| 4. Dr. M. El-Rouby           | UN Demographer          |
| 5. Dr. Majid Bassil          | UN Adviser              |



