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THE STATISTICAL SYSTEM OF AFGHANISTAN

A General Overview With Guidelines for Improvement

Prepared at the Request of

His Excellency Dr. Abdul Wahed Sarabi

Minister of Planning

USAID/Kabul

1970

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H. E. Abdul Wahed Sarabi
Minister of Planning
Kabul, Afghanistan

Your Excellency:

In accordance with your request, presented herewith is a report on the characteristics of the statistical system of Afghanistan as it exists at present, and guidelines for its improvement.

In the review considerable attention has been given to current statistical series and surveys. It is not enough to say that the statistical output is not good. Rather, it is important to point out why it is not good because this suggests the path to improvement.

The major weakness in the present system is that statistics are primarily considered to be a clerical function of compiling whatever is available, largely from administrative records. Research and estimation, using the powerful tools now available through modern statistical technology is ignored. It is no surprise, therefore, that there is very little output from the system, and that the output is of poor quality. This general attitude very likely accounts for the level of financial and equipment resources available for statistical activities, and the low quality of statistical personnel, who are poorly trained, poorly paid and poorly led. There must be a significant upgrading and institutionalization of a statistical system to show that modern statistical technology can provide adequate and useful statistics at a reasonable cost.

There is a real awakening, especially in the Ministry of Planning but elsewhere as well, of the urgency for developing a modern informational system, and of the necessity to link decision making to a data base. Through the use of small samples designed according to modern probability theory, such a system can be achieved at a modest cost. The system will pay for itself many times over, by reducing the number of costly errors which are made when no reliable information is available to guide the decision maker.

This report does not list all the kinds of information which should be made available. Such lists are available in U.N. publications such as Series M Number 31. The problem will be to establish a system of priorities of what should be done first, with the financial and equipment resources that are likely to be made available.

For this purpose it is recommended that you appoint a ad interim Statistical Planning Committee under your chairmanship, which will:

1. Make a thorough review of the present system.
2. Prepare a draft general statistics law which will provide a firm legal base for the system, will create a Central Statistics Authority who will head a Central Statistics Office, and which will establish a Supreme Statistics Council to determine statistical policy.
3. Determine the priorities of statistical programs during the Fourth Five-Year Plan and a longer range program.
4. Determine a five-year training program for expanding the skills of personnel in the system.
5. Determine the internal and external resources required to execute the five-year statistical program.

In the attached report, detailed suggestions are made on these points, including suggestions: for the content of the draft general statistics law; a five-year priority statistical program; a five-year training program; and for the type of external technial assistance required to fulfill these programs.

Recommendations are also made to:

(a) Postpone the population census until such time as the statistical system has been developed sufficiently to conduct a worthwhile census. This would be at least until the end of the fourth five-year development plan and perhaps longer.

(b) Emphasize the use of small probability samples to obtain estimates of the population, its characteristics and behavior at the national level, with heavy emphasis on the control of quality.

(c) Organize the Central Statistics Office along functional lines including a field organization for collecting data, and a data processing organization for tabulating the data. The Central Statistics Office would be headed by the Central Statistics Authority, who would be the secretary to the Supreme Statistics Council. The Central Statistics Authority would organize a Technical Advisory Committee through which he would guide, render service to, supervise, and coordinate all other agencies engaged in statistical activities, in order to secure uniform concepts and definitions, uniform classification systems, and an adequate level of quality.

May I express my appreciation for the valuable cooperation rendered to me and to Mr. Marzetti during the brief period of this review. If there is anything the U.S. Bureau of Census can do to help you in the development of Afghanistan's statistical system, we will do all in our power to assist you.

Mr. Bartlett Harvey, USAID Mission Director, has a copy of this report and has expressed great interest in its findings. If after studying the report you wish to discuss its findings with him, he will await your call.

With very best wishes toward the success of your program, I remain

Respectfully yours,

Bruno A. Schiro
U.S. Bureau of the Census

THE STATISTICAL SYSTEM OF AFGHANISTAN: A GENERAL OVERVIEW WITH GUIDELINES FOR IMPROVEMENT

1.0 INTRODUCTION

1.1 At the request of His Excellency, Dr. Abdul Wahad Sarabi, Minister of Planning, RGA, the USAID Mission/Afghanistan made available the services of two U.S. Bureau of Census Statisticians to make a general overview of the statistical system of the Royal Government of Afghanistan and to provide recommendations and guiding principles for future action. Mr. Lawrence Marzetti, Chief, Overseas Consultation Service, International Statistical Programs Office, participated in this review during the period May 2 through May 6, 1970. Mr. Bruno A. Schiro, Principal Statistics Advisor to the Government of Pakistan, participated in this review during the period April 12-20 and again from May 2 to May 17, 1970. During the period of Mr. Schiro's first visit it was agreed that for the short period available, it would not be possible to develop a comprehensive and detailed program for statistical development; but that following the general review, if so desired by the RGA, it would be necessary to make the services of a team of advisors available for some 60-90 days, to assist in a more detailed development scheme. Such a scheme would entail execution over a period of five to ten years or more; and hopefully this scheme could become an integral part of RGA's Fourth Five-Year Plan.

1.2 General Procedures Followed

The general procedures followed in the review consisted of (1) visits to the major statistical units of the RGA and discussions with chief officials of these units; (2) interviews with major multilateral and bilateral agency officials, advisors, and users of data; (3) review of reports, publications, and memoranda relating to the statistical system of Afghanistan. The list of officials interviewed and the reports consulted appear in Appendices I and II.

1.3 Limitations

In the short time available, it was not possible to visit all of the agencies and officials engaged in statistical activities. A sense of humility requires that it be recorded that as a result, our knowledge of details contains large gaps, and some may even be not in accordance with the facts. Nevertheless, in the broad outlines, we believe that our assessment of the

current situation will stand the test of more detailed investigation, and we have a reasonable basis for recommending the direction improvements should take.

2.0 The Need for Statistics

The RGA has been engaged in a substantial social and economic development effort for some fifteen years. It is now in the midst of its third Five-Year Development Plan. Some 70 percent of the development effort is financed through external assistance. The approach to development has been described as a "mixed guided economy." The government engages heavily in public industrial activity; it fixes prices of some major crops and consumer items; it varies the import and export taxes in the pursuit of economic policy; it provides substantial tax and other incentives to encourage private enterprise development in specific fields; it varies the surrender requirements of foreign exchange earnings by type of exports; and it places quantity restrictions on some imports. What is being attempted is extremely difficult, for the government cannot compel but can merely enable private citizens to carry out certain economic functions. If the government's investment schedule or foreign trade regulations are not realistic, grave and costly errors can occur, such as appear to have occurred in creating excessive capacity in specific manufacturing activities; or private investment may be discouraged, or trade will diminish. Since the quality of government decisions are of the utmost importance in directing the economy, there must be a high premium placed on adequate and timely statistics. The process of directing the economy is greatly aided by an economic planning system which consists of five year planning, annual development planning, including an annual statement of monetary and fiscal policy, project review, and project monitoring. It is apparent that in order to utilize effectively the planning system already developed, and to improve that planning system, an improvement must take place in the statistical system.

One of the six obstacles to effective development programming and effective execution cited by the IBRD Mission in its 1969 Economic Report for Afghanistan, relates to the absence or unreliability of statistical information. (See Appendix III).

Foreign Aid donors are also important users of statistics and often have exacting requirements for statistics in justifying continued assistance. Foreign Aid donors need statistics for formulating aid policy advice, programming aid, judging the feasibility of particular projects, judging the fulfillment of self-help pledges, and judging the impact of their assistance efforts. In view of the substantial dependence on external assistance in the development program, this requirement is of particular importance in Afghanistan.

3.0 Description of the Present Afghanistan Statistical System

The statistical system of Afghanistan is in a very early state of development. Statistics are viewed as the compilation of whatever is available and not the estimation of a "true" total. The system is not on a firm legal footing; is administratively poorly organized; has virtually no output of general purpose statistics; relies almost exclusively on administratively generated statistics, most of which are of low reliability; data collected become available after great time lags. The personnel engaged in statistical activities, with a number of exceptions, are poorly trained, poorly paid, and poorly led. Equipment resources, such as adding machines, desk calculators, reproduction facilities and vehicles are inadequate. There is no automatic data processing equipment available in the country. The uses of statistics are not widely appreciated in government agencies in Afghanistan, with important exceptions. There appears to be little understanding of the lead time necessary to develop capability to man a statistical system, and little understanding of the financial and equipment resources required to operate the system.

On the asset side, there is a real awakening, especially in the Ministry of Planning, of the urgency for developing an information system. The country has an excellent set of aerial photographs from which maps of the entire country have been developed. This resource is extremely useful in developing an area sampling capability, although for some purposes considerable nomenclature work and boundary identifications need to be done. No other country in the region has this asset. The country's public accounting system of revenues and expenditures is in the process of becoming improved. Monthly

revenues by major and minor classes are published with a one to two month time lag. Monthly expenditures by major and minor classes of expenditures are about to be published regularly with a two-month time lag. An economic classification of expenditures is possible with clear distinction maintained between ordinary and capital expenditures.

3.1 Statistics are viewed as the compilation of whatever is available, and not as the estimation of a "true" total or average.

As practiced in Afghanistan today, statistics is viewed by most administrators and too many statisticians as the simple clerical compilation of whatever is available (or even worse of whatever crosses the statistician's desk), and not as the estimation through statistical methodology of the "true" total or "true" average that exists. This attitude is fundamentally incorrect, and until it is recognized and changed it will prevent the development of an adequate statistical system.

Consider an example:

In the measure of industrial production among large establishments, a proforma is mailed out to large establishments registered by the Ministry of Industries and Mines. After a specified period of time the returns are compiled. Usually the returns do not cover all registered establishments. Thus, the total compiled will vary from one time to another depending on the response rate. No attempt is made to follow-up on the nonresponses before use is made of the data. No attempt is made to investigate the quality of reporting by the responding establishments, including whether the responding establishment has understood the questions asked. No attempt is made to include large establishments which should be registered, but are not registered. No attempt is made to include large establishments created under the investment program of the Ministry of Commerce. As a result, the total "compiled" from one time period to another reflects changes in the number of reporting establishments, and has little or no relation to the changes or the total for all large establishments. It would be better to measure time to time relative changes by including only establishments which report in both time periods; or follow-up on the nonresponding establishments by a prompt personal visit. It is necessary to make some checking on nonregistered establishments; it is imperative to include the establishments programmed by the Ministry of Commerce.

3.2 The statistical system is not on a firm legal basis.

There is no general statistics law which gives government the right to compel reporting by establishments, households or persons, or which provides penalties for failure to report or for premeditated false reporting to a bonafide statistical agent. Nor is there a legal principle which guarantees to establishments, households or persons that their responses to statistical inquiries will be held in strict confidence, will be used for statistical purposes only, and will not be used for administrative action against the respondent, nor divulged to any unauthorized person, including other agencies of the government. Without firm establishment of this confidentiality of response principle, it will be difficult to win the cooperation of respondents to report the facts to the best of their knowledge. Legislation including these two principles, the legal obligation to report, and the confidentiality of the respondents report, is recommended by the United Nations and is in fact widely adopted throughout the world.

3.3 The system is administratively poorly organized. There are some 25 statistical cells in various ministries and agencies throughout the government, estimated to have some 250 employees, with a total budget of _____. (See Appendix IV for a listing of these agencies). There is no legal basis for coordinating the work of these statistical units, to establish priorities of program, to encourage the adoption of uniform definitions, uniform classification systems, quality standards, and to avoid wasteful duplication of work. Nor is there much attempt to provide coordination on a de-facto basis, although recently some, but not enough, effort has been made by the Ministry of Planning. This essentially leaderless, highly decentralized system makes for inefficient utilization of scarce skilled personnel. There have, however, been some notable attempts at cooperation between at least two ministries in conducting certain statistical inquiries, in order to make use of the very few skilled personnel available.

There is no single "right" answer to statistical organization as can be witnessed by the fact that some countries have highly centralized systems and some countries have highly decentralized systems, both working well. However, the countries with a decentralized system almost uniformally have a "coordination" agency which assumes the national leadership in the pursuit of uniformity of concepts and definitions and in the avoidance of duplication. The major advantage of a centralized system is that it is more efficient in the utilization of

scarce skills, of equipment and of financial resources, and coordination of effort is more easily achieved. The major advantage of a decentralized system is that the statistical unit in each agency is more closely associated with the users of the data, and therefore more responsive to the needs of specialized users. However, in Afghanistan this latter advantage does not appear to have been exploited, since there has been little data generated, and what has been produced does not appear to have been used by the parent agency. Even in a centralized syste, however, there is present a number of statistical cells located in a variety of agencies which service the parent agency, or which prepare statistics generated out of administrative reporting of the parent agency. Examples of this are statistical reporting of revenues and expenditures which are generated out of government accounting systems in the Ministry of Finance, and education statistics which are produced from the internal enrollment reporting, and teaching staff reporting of schools to the Ministry of Education. Where these systems are working well, there is no reason to force them into a centralized system. In these two cases cited they appear to be working well in Afghanistan.

3.4 The system has virtually no output of general purpose statistics, relies almost exclusively on administratively generated statistics, many of which are of low reliability.

3.41 Among the notable attempts at producing general purpose statistics are the population census of Greater Kabul made by the Ministry of Planning; the household expenditure survey of Kabul and of Lashkargah made by the Ministry of Planning; the socio-economic surveys of housing and living conditions in some six cities made by the Central Authority for Housing and Town Planning; the pilot census of agriculture and the survey of agriculture made by the Ministry of Agriculture; the consumer price index, prepared by the Ministry of Planning; work under the Faculty of Agriculture, Kabul, University; and ad hoc feasibility studies.

1. Population Census of Greater Kabul

The census was conducted in August 1965 as a pilot project in preparation for conducting a national census of Afghanistan. It was conducted with the assistance of several UN statistical experts, by the population census General Directorate of the Ministry of Interior. The cost was between three and four

million afs. A substantial and very good effort was made at developing an up-to-date map of Greater Kabul, starting with the Municipality maps of Kabul and updating the map to cover new areas and areas outside Kabul City. The map was of sufficient scale to show numbers for each compound or structure, and individual enumeration areas within which each enumerator was to work. The geographic control appears to have been very good. About 1,000 high school students, trained for a period of two weeks, were the enumerators. They were paid 10 afs per day to cover lunch expenses. Transportation and drivers were provided by various Ministries. The enumerators worked under a supervisor who was responsible for a large number of enumerators. A household listing form was used, followed by an individual household questionnaire. Although a post enumeration quality check was contemplated, of every 30th or 40th household, to evaluate the quality of coverage of the population count, it apparently was not done (according to Ministry of Interior President of Statistics). Because there are no data processing facilities in Afghanistan, the Kabul Census was tabulated in Iran by the Iran Statistical Center's computer. Although the tabulation was received within three months, the results were not published until two years later. It is regrettable that some evaluation of the coverage by a post enumeration sample survey technique was not executed, since without it no estimate of the reliability of the census count can be made. Even in the United States, with the most sophisticated statistical system in the world, the population census is estimated to underestimate the population by about 3 percent, and some segments of the population by as much as twenty percent. With the type of unpaid high school enumerators employed in the Kabul census, one might expect a serious under-enumeration in the order of 5 to 10 percent. With a slightly additional expenditure of several thousands of afs, speculation as to the magnitude of the undercount could have been narrowed to a tolerable range, and taken into account by the users of the data.

As indicated earlier, this census of Greater Kabul was conducted as a pilot census in preparation for a national census of Afghanistan to be conducted with the assistance of a team of UN advisors. By the time the advisors had arrived much of the staff who had been trained on the Kabul census had been transferred to other duties. Because the necessary funds were not provided, the national census work could not go on. The budget for the

national census is estimated to be 130 million afs including some $500 thousand for foreign exchange over a four-year period. No attempt has ever been made nor does there appear to be any consideration by the Ministry of Interior of conducting a sample census of population at a small fraction of the cost of the planned full census. Although there are some 42 employees in the Directorate General of Population Census of the Ministry of Interior, these employees are doing nothing because funds for the national census have not been made available and because there is no other statistical program in this department.

2. Household Expenditure Survey of Kabul

This survey was conducted by the General Directorate of Census and Surveys, Department of Statistics, Ministry of Planning in cooperation with the Ministry of Agriculture. The sample design consisted of fifteen percent of the enumerator assignment areas of the Kabul Census. These areas were prelisted on a listing form which collected information on structure location, name of each household head, occupation and income. Some 1700 households or 2.4 percent of all households were then selected on a systematic fashion at the central office and then assigned for enumeration of a detailed household expenditure and income questionnaire of some fifteen pages. The sample design appears to have been carefully executed. What is not clear is the extent to which the forty Ministry of Agriculture employees and forty high school girls who worked in pairs as enumerators, were supervised. Although trained for ten days, this is one of the most difficult types of surveys to conduct, requiring extremely resourceful and skillful enumerators. Although it is reported that a post-enumeration quality check was conducted, the results have either been lost or not analyzed. The degree of pretesting of the survey procedure and questionnaire seems to have been insufficient, for in the middle of the survey it was found necessary to drop the global income question asked on the prelisting of households. Neither was the question on occupation used to stratify the households for sample selection, since without data processing facilities, this would have been a very complicated task. This survey experience represents a good example of wasted resources because of inadequate pretesting; the pretest, if adequate, would have discovered this inability before the survey was continued. By trying to collect difficult

and time-consuming information on the prelisting, which was not usable, considerable funds were wasted. Again because no data processing facilities are available in Afghanistan, the questionnaires were sent to Iran for tabulation; one of the survey directors also went to Tehran to assist in the tabulation and to solve editing and coding problems as they arose. Although the survey was conducted in the summer of 1968, the tabulation which was returned from Tehran recently has as yet not been analyzed. Part of the delay seems to be caused by inability to decode the tabulations as the coding system was misplaced. In any event, it may be some time before publication of the results is realized.

3. Lashkargah Household Expenditure Survey.

A sample survey in the Lashkargah area was conducted after the Kabul Survey; this survey was hand tabulated and limited results published; because of the complexity and costliness of hand tabulation, the only variable used in the tabulation was family income class. Five groups of expenditures only were tabulated. Expenditure by item detail has not yet been published. Other variables such as family size, occupation of head, literacy status, age of head, tenure status of dwelling and type of family were not used in the presentation of income and expenditure data because of the lack of data processing facilities. This experience represents a good example of not being able to exploit the resources put into an expensive and difficult survey. After collecting a great wealth of detailed data, the detail could not be utilized, and much valuable information was lost because hand tabulation is so extremely difficult, especially in two-way and three-way classification tabulations. The major advantage of data processing equipment, is that once the data are put on cards or magnetic tape, all sorts of detailed analytical tables can be obtained at little additional cost. Thus, the benefits realized from the total costs of the survey (planning costs, sampling costs, enumeration costs, editing and coding costs) are considerably greater when the data collected are fully tabulated.

4. Socio-Economic Surveys of Housing and Living Conditions.

Some six cities have been surveyed or are still in process of survey. The Kandahar Survey is completely finished, the Jalalabad Survey is under final review, and the Kabul Survey is in tabulation. These sample surveys have been undertaken by the Central Authority of Housing and Town Planning, to find out

the social and economic characteristics of urban areas. The survey program represents one of the most laudible attempts to link policy determination and plan formulation with statistical information. This approach is admirable and should be encouraged; it bodes well for future planning activities in Afghanistan. Some 1,500 families were covered in Kabul, 500 families each in Jalalabad and Kandahar. In Kabul, central office staff were used as enumerators; in the other cities, unpaid high school students were used. Oral instructions were given to the enumerators; no written instructions were prepared. The questionnaire was a printed four-page document. It lists the household composition of persons and relationships to head, along with basic demographic characteristics, and birth place. Migration patterns are collected including reasons for settling in this city and reasons for migration, regardless of how long ago the migration occurred. It also obtains occupation and income prior to migration, and property ownership in the native place, including frequency of visit and family members in the native place. Detailed questions are obtained on housing arrangements including tenure, type of structure, size of rooms in square meters, age of house; kitchen, bath, water, refuse, electricity and heating facilities; and opinions about the satisfactory nature of the house and neighborhood to the respondent. Distances from house to ten different places of work, school, public bath, etc., are obtained; employment status and industry in which employed; monthly income from main sources; family monthly expenditure for nine categories of expenditure; and an opinion question about what is important in making a town a good place to live. Although it was stated that the questionnaire was pretested, there is much to suggest that many of the questions are unanswerable by the majority of respondents, especially for example, the global question on monthly income prior to migration as well as others. While it is recognized that these six surveys are "pilot" surveys, it is hoped that these questionnaires will be substantially simplified after the results are analyzed before the surveys are conducted in the remaining 56 cities and towns now contemplated to be covered. Although it was stated that the surveys "got 80 percent of correct answers," there was no systematic check on enumerator quality; no attempts were made to evaluate the results on the basis of a small sample follow-up.

What is perhaps most disconcerting to a professional statistician is the design of the sample. From each ward in the city, the enumerator was instructed to select five sample households and interview them. There is no possibility of calculating the probabilities of selection of the household; furthermore, to the uninitiated high school student the chances are very high that he selected the "easiest" respondents to interview, including his own family, possibly. It is a well known fact that the most difficult respondents are the high income respondents, being more sophisticated and more likely to "refuse" to cooperate. Also, the smallest families, with the simplist living arrangements might be preferred by the enumerator because it eases his burden. Thus, the enumerator had a vast choice in which to make his selection without any restrictions. Because of this feature, one is at a complete loss to place any reliance on the survey results. This experience represents a good example of the waste of resources in an otherwise well-designed albeit overly ambitious survey, simply because a professional statistician was not consulted on the sample design. It would have been a relatively easy task to draw a small sample of blocks in the city, to prelist the households in the block, obtaining nothing more than the location of the household and the name of the head of the household, and then to select in a systematic fashion 500 households from these prelistings. The selection would have been done by a supervisor trained in the importance of unbiased sampling technique. With this type of probability sample, the probability of selection of each household is known, an estimate of the city totals could have been made, and the range of sampling error could have been calculated. It is heartbreaking to see the staff of this statistical unit laboring over the most complex, error-prone hand tabulating process, drawing detailed and complex charts, not to mention analytical conclusions which are likely to be entirely unwarranted and misleading. Compare, for example, that the Kabul household expenditure survey conducted by the Ministry of Planning provided an estimate of the annual per capita income at $70, versus $40 which this socio-economic survey for Kabul reports.

5. Pilot Census of Agriculture

In 1965 a pilot agriculture census was conducted in Nangahar Province. This pilot census covered sixty villages containing 15,000 households and

8,000 farm operator holdings. The census was done with the assistance of two Indian statistics advisors. The results were taken to India and tabulated there. Six copies of five volumes each were provided to various ministries of the R.G.A. (Reportedly one was provided to the Ministry of Planning.) All copies provided have apparently disappeared, including the copy given to the Ministry of Agriculture. Fortunately one copy is available with the present statistical advisor (Colombo Plan) who brought it with him from India. Much valuable information is obviously contained in this report, including the data which would permit calculation of variances, so necessary in the design of future sample surveys. The results have never been analyzed. Attempts should be made to locate the missing copies, or at least the one remaining copy should be photostated before it accompanies the advisor back to India. This represents a good sample of the lack of interest in statistical experimentation, as well as the lack of a good reporting or research library which can preserve valuable reports.

6. Nation-wide Agriculture Inquiry

In 1966-67 the Ministry of Agriculture conducted a nation-wide inquiry "covering" altogether 15,620 villages identified in Afghanistan. The inquiry took more than 6 months to complete and employed some 60 investigators. Investigators visited the villages and completed a proforma by interviewing village head men, school teachers, and other locality "experts". The results were tabulated by hand and completed some three years after the inquiry. A report was written, but so far has not been published. A single table had been mimeographed and made available to anyone who requested it. This table shows for each province the number of villages, the agricultural population, the number of landowners and livestock holders, the area of arable land and orchards by irrigated and non-irrigated, and totals separately of 10 types of livestock and poultry. While this represents a very dedicated administrative effort to collect data to use as a benchmark, and demonstrates what can be done by a determined and interested leadership, nevertheless, it is difficult to assess the validity of the results. Had the Ministry reserved a very small fraction of the total funds available to follow-up in 1% of the villages, or about 150 villages with a real household inquiry in these 150 villages,

comparisons could have been made between the "reports" for these villages and the household survey. With this follow-up, some estimate of the net bias in the reported results could have been made and published, which would have permitted users of the data some basis for appraising and adjusting the results. There appears to have been no attempt to assess the data by comparison with other independent estimates such as comparing these data with the data available for certain sections of the country from the Cadastral Survey.

These data have been used to adjust the annual estimates of crop and livestock production. Annual changes are based largely on reports (opinions) of the Directorate General in each of the provinces who reports on an average percentage change from the crop of the preceeding year. While some farm surveys have shown yields per jerib there is no consistent program for measuring yield fluctuation per jerib in each year. There has never been an attempt to measure acreage under cultivation through a sample survey, nor any objective crop reporting yield surveys.

7. The Urban Consumer Price Index of the Ministry of Planning.

This index has been maintained for about 9 years by the Ministry of Planning. A price index consists of two major components: (a) the weighting diagram by which the items included in the index are given a specific relative importance in the calculation of the overall index, and (b) the monthly collection of prices to calculate the price ratios by which the index is moved forward each month. The weighting diagram was based on some very rough guesses of national income. It implies that the average urban family in Afghanistan spends 93 percent of its total budget on food, and 7% on all other living costs. The best objective evidence recently made available through the Lashkargah Household Expenditure Survey shows that the average urban family spends about 66% of the total budget on food, and 34% on all other goods and services. This is undoubtedly a much more realistic measure of the pattern of expenditure of urban families than is implied by the weighting diagram currently employed in the price index. No other nation in the world, including nations as poor or poorer than Afghanistan, shows such a high proportion of total expenditures going to food. In neighboring countries of this region, the pattern is more like that shown by the Lashkargah Survey. Thus the index weighting diagram greatly distorts the relative

importance of food versus other goods and services consumed by urban families. Since food prices have risen far more rapidly over the years covered by the index than non-food items included in the index - the index for all items is 208.3 as of 1347 (on a 1340 base) as compared to 105.4 for all non-food items - the distortion in the weighting diagram greatly overestimates the change in the price level which has occurred since the base period 1340, as measured by the items included in the current price index. The index, therefore, has serious limitations as a tool for measuring real changes in income, or as a deflator for GNP accounts. Its use would underestimate the growth in real income. To the extent that the IMF uses the index to measure the inflationary impact of monetary policy since the base period, the IMF is being misled as to the type of policy to pursue with respect to Afghanistan. It should be noted that this discussion has relevance to the period since the base period. During shorter periods when food prices are falling, as has occurred recently, the decline in the price index is also overstated. This may account in part for the recent poor correspondence between the price index movement and the change in the money supply.

With regard to the second major component of the price index, the collection of prices for the some 24 items included in the index, there are also serious limitations in the work. Because the D'Afghanistan Bank has branch offices in the provinces, the responsibility for collecting prices for use in the index has been given to that agency. Proformas are sent monthly to the branch offices. The branch office assigns the time of one person to go to the Bazaar - which bazaar is not specified - and to collect the prices of the commodities as specified on the proforma. This person is not trained, nor does he have any written instructions to guide him, nor any understanding of the conceptual requirements and methodology of price index measurement. A basic requirement is that prices be collected for the same quantity and quality (grade) of commodity at each pricing period, preferably from a fixed sample of stores. In consequence, and there is evidence on the work sheets to confirm this, spurious price movements are introduced by erratic switching from a low quality grade to a high quality grade and vice versa, and by difference in the number of provinces reporting for an item since no control

is maintained on the non-response. (If a low-price province does not report for a month, this raises the national average price even though there may have been no price changes reported from the previous month.) It appears that the D'Afghanistan Bank in performing this work considers it a burden to be done after the duties for which it is directly responsible have been performed. In consequence there is no supervision of the work and there is a suggestion that prices may be recorded on the proforma without a visit to the bazaar, and based on personal impressions only. The time lag between the reference month for pricing, and the month of receipt of the report may be as much as four months. Efforts by the Ministry of Planning to obtain more prompt reporting from the Bank, have not met with any success.

The work sheets for the Index calculation are poorly designed and discourage the comparison of current prices with the previous month's prices of the year because these are not on the worksheet for ready reference and comparison. Consequently, no control or editing of the data appear to be resorted to, even though obviously incorrect reports have been received.

There is no wholesale price index series for the country. Prices paid to farmers are also not available.

8. The Faculty of Agriculture of Kabul University with assistance from the Wyoming University Contract Team has over the years conducted a number of farm surveys in various parts of the country. The findings from these research study surveys have been published and distributed as bulletins and technical information papers by the University. The subjects covered in these farm surveys include farm costs and returns in producing wheat, cotton, sugar beets (Baghlan Kunduz areas); grapes (Kohdaman Valley); utilization and economics of tractors and irrigation pumps on Afghan farms (country-wide); a dairy cattle farm survey and numerous descriptive farm and marketing surveys which provide information on farm production practices, yields, and marketing practices. The research is conducted by Afghan professors and senior students in the Faculty of Agriculture with assistance and guidance by members of the Wyoming University Contract Team which includes some 12 to 15 professional agriculturalists in various subject matter areas such as agronomy, horticulture, livestock, agricultural engineering, and agricultural economics. The Faculty

of Agriculture is the only part of the University that is doing systematic research and is the only organization in Afghanistan that conducts farm management and marketing surveys. Also, considerable survey data of a socio-economic and technical nature has and is being collected in conjunction with specific agriculture and irrigation development pre-investment feasibility studies. These studies are usually carried out by foreign technicians utilizing Afghan counterparts. Examples of such regional development feasibility studies which have been conducted include the Helmand-Arghandab, Herat, Kunduz-Khanabad, Parwan, and Pakita areas. In addition, a number of general descriptive surveys have been made mostly by foreign researchers with assistance from Afghan counterparts covering a wide range of subject matter disciplines.

3.42 Among administratively generated statistics are series based on customs control, revenue collection and government expenditures from the government accounting system, education administration, motor vehicle registrations, civil registrations, postal and telephone administrative records and licensing activities.

1. Foreign Trade Statistics

Statistical series on the volume and value of imports and exports are maintained by the Ministry of Commerce's Statistics Cell. Some 5 employees of the Ministry of Commerce are stationed at the Kabul Customs Office, and one or two others at each of the five other customs control points throughout the country. The procedure calls for the import and export documents to be seen by the statistical clerks, although there are no stamps or signature required on the basic documents to show that they have actually seen and recorded for statistical purposes. There is therefore ample opportunity for many documents not to be recorded. On a proforma are recorded the name of the importer/exporter, the value, quantity and date of the physical clearance of goods, the country of origin or destination, and the name of the goods shipped. The information is taken from the invoice or bill of lading and other trade documents attached. (There is presently no customs import or export document with a serial number to be recorded by the statistical clerk which could be used as a control check to determine missing documents.) These proformas are then sent to the Statistics Department of the Ministry of Commerce where the data are coded and quantities

converted to standard units. The United Nations Standard International Trade Classification System (SITC) is used for coding exports to a 7 digit classification scheme and imports to a 6 digit classification scheme. The coders do not have access to the original shipping documents, but must rely on whatever description has been transcribed by the statistical clerks located at customs. There are no quality control procedures either at the customs operation or at the coding operation. No attempt is made to check on a small sample basis the transcription work at customs, or the coding work at the central office. If there is anything that will encourage transcribers or coders to become careless in their work, it is such consistent disinterest or neglect of this work on the part of supervisory staff over the years. Undoubtedly substantial errors are made in transcription, especially of type of imported goods, and substantial errors are made in coding, largely because of poor description transcribed. Much use is made of the miscellaneous classes "not elsewhere classified."

Because no data processing facilities are available, the data are sent to the IBM Service Bureau in Tehran, and are published with a time lag of 5 to 10 months. Last year a shipment was lost, necessitating retranscription of the data at customs. Both monthly and annual data are tabulated. Unfortunately the monthly data do not add to the annual totals, usually by a factor of 50% or more. Annual totals are adjusted, for a variety of reasons, and these adjustments are not carried back to the monthly series. Certain types of transactions are added to the annual series, but not the monthly series. For example foreign donated and project imports are not included in the monthly series, but it is not certain why since all duty free goods and project imports must clear customs procedures in a fashion similar to commercial imports. Similarly the 6 digit classification in 1347 did not agree with the 3 digit total by a factor of 20%.

Since the customs procedures are presently undergoing revision and improvement, this will afford an opportunity for improvement in the foreign trade statistics. For example, a single import document and export document may be adopted to which invoices/bills of lading may be attached. If this customs document contains the data presently being transcribed, and if the document is prepared in duplicate or triplicate, one copy could be routed to

the statistical cell without the necessity of error-prone hand transcriptions. However, the Ministry of Commerce, although it has heard of customs procedures revision, has not yet taken steps to discuss this possibility for improvement with the customs authorities. In this connection, it may be noted that five different groups of employees are handling the import/export documents for statistical and other purposes: D'Afghanistan Bank, Ministry of Finance, two distinct units from the Ministry of Commerce (one for the ordinary trade statistics herein discussed, and one group getting data by merchant), and the Customs itself which produces some weekly statistical reports. If data necessary to all these users were entered on the basic customs documents, and tabulated by data processing equipment promptly, considerable accuracy, economy, and efficiency could be realized.

The quality of the Commerce Series of trade statistics tends to be judged in terms of the D'Afghanistan Bank's series on imports and exports which in theory is identical with the Ministry of Commerce Series, and represents a complete duplication of work. Although there are good grounds for believing that the Bank's series are more complete (the Bank must stamp the export document before Customs will clear the goods) than the Commerce series, there are methodological differences which account for much of the difference. Another Bank series on Foreign Exchange Receipts records the transaction at the time of the receipt of the foreign exchange. This may be six to eight months or more after the physical shipment of goods takes place. The Ministry of Commerce series measures the transaction at the time of physical shipment. Since many exports are shipped for sale at international auction markets and the realized value at time of shipment is unknown, the Ministry of Commerce values the goods at the prevailing price at the time of shipment, while the Bank series reflects the actual price at time of auction. Some regular monthly attempts should be made to reconcile the three series, to show how much of the difference can be accounted for by time lag and valuation difference as well as other differences of coverage, such as receipts for services, not covered by the Foreign Trade Statistics of the Ministry of Commerce.

2. Education Statistics

This series appears to be of reasonable quality with totals for the

nation and by province (also Kabul City). There is annual reporting on number of institutions (by type); enrollment by grade and sex; number of teaching staff (by qualification); number of pass, fail, and dropouts by grade; number of school buildings (by sponsorship); enrollment and teaching staff in teacher training vocational schools, and other special institutes. This series of educational statistics, developed under UNESCO assistance, demonstrates what can be accomplished by a rational administrative reporting system. Its coverage appears to be complete with the exception of vocational schools run by the Ministries of Agriculture, Health and Defense. It is not known whether any systematic quality control check is maintained over the specific systems. It is regrettable, however, that data collected in March 1968 could not be tabulated and published before July 1969. If modern data processing facilities were available, not only could the timeliness of publication be much improved, but far more analytical tables, with cross classification could be easily prepared at perhaps less cost. Undoubtedly this use of data processing facilities would permit greater accuracy in the compilation as well.

3. Financial Statistics

Monthly revenue and expenditure statistics are as good as the government accounting system and Afghanistan is in the process of developing a good accounting system. Major problems still exist with respect to reconciliation between the Ministry of Finance records and the D'Afghanistan Bank records, as well as statements on assets and liabilities, but these are expected to be gradually cleared up with the assistance of IMF and other financial advisory assistance. (See Appendixes V and VI for further details.) There is a Monthly Statistical Revenue Report showing details for 9 major and 47 minor revenue classes. These reports are prepared by each Mustafiat and assembled in central headquarters. This report is available with a one to two month time lag. On the expenditure reporting a revised (simplified) system of classification was instituted at the beginning of this year. In the past there was an annual report. This year a monthly report showing 8 major and 43 minor classes of expenditures will be made available. Some two and one half years ago there were more people available to observe the quality of reporting and classification done by the various reporting units. Presently, there are not enough people available to go out to the provinces to control

quality and to train reporters. Although most agencies report within one month of the reference date, others take as long as two months to report their expenditures. There is a current attempt to build the quality control staff up to levels prevailing earlier, which included 6 persons plus 5 Peace Corps Volunteers. Although there has never been an economic classification of accounts as recommended by the U.N., the reporting system is adequate, with some modifications, to permit its preparation.

It should be noted that public enterprises are outside the government accounting system. This is an area where uniform accounting systems need to be adopted to improve the quality of reporting for all purposes including statistical analysis. Neither are municipalities covered by the present financial statistics system.

Although there is no formal statistical cell, there are some 30 persons working on the general ledger, revenue and expenditure accounts within the central office. Two NCR Bookkeeping machines have been used since 1964-65; the plan was to put the general ledger on these machines, but this plan has not yet materialized. The machines are on a one-shift operation, but no report is maintained on the degree of utilization at the present time.

Disbursements data on a monthly basis for each development project by major object (and shortly by minor object) are to become available shortly. This is a valuable tool for monitoring project implementation.

4. Vital Statistics

The statistics on birth and death rates generated out of the Civil Registration System of the Ministry of Interior have been described as totally unreliable; this is not surprising, as the same situation holds true in Iran and Pakistan. Vital event reports reach the central headquarters after one year at least and recorded on registers. Although males have been registered primarily for recruiting for the armed forces, some three years ago, registration of females, who are employed or go to school, began in Kabul. This female registration has spread to other large cities. There are approximately 2,000 employees in Civil Registration work, with 45 in the central office. Only some 5 employees have university degrees.

3.5 The personnel engaged in statistical activities, with a number of exceptions, are poorly trained, poorly paid, and poorly led.

So far as can be determined there are a total of three persons who have received degrees in statistics. One person (Mr. Mohmmand) spent four years at Iowa State University in the U.S. and majored in statistics. He is at present not working in a statistics department. One person (Dr Ayoubi) received a Master's Degree in Statistics in France, and a Ph. D. Degree in Econometrics at the University of Cologne. He is presently working as a Professor in Economics at the University of Kabul and teaches several statistics courses. At present he does no consulting work for the government. It has been stated that there is a third person who received a Ph. D. Degree in Mathematical Statistics, but this person is not presently employed. This statement has not been verified. A fourth person (Dr. Eltezam) received a Ph. D. Degree in Econometrics in the U.S. He is presently President of Kabul Customs and a member of the Supreme Economic Council.

Among the some 250 persons engaged in some form of statistical activity, perhaps not more than a very small percent have been university trained in statistics. Under the UNDP Program, from 1952 to present some 25 persons were sent abroad for training in statistics. Three of these had training of 3 months or less, 5 had training of 4-6 months, 7 had training from 7 months to a year, and 10 had training of one year or more. (See Appendix VII). It is not known how many still are employed in statistical cells; but it can be assumed that many have forgotten what they learned because of their lack of opportunity to apply in actual work experience what they learned. For example, of the 42 persons engaged in the Population Census Directorate, it is stated that over half have had some training abroad, but since they are not productively employed, this knowledge gained is very likely lost to a considerable extent.

The USAID Mission has trained some 13 persons since 1956, most of whom are employed in a statistical related capacity. (See Appendix VIII).

Salaries, though low, do not appear to be lower than other technician salaries. However, there appears to be very low prestige status for persons engaged in statistical work. Persons of doubtful value or "personnel problems," it has been stated, are often relegated to statistical cells.

Morale is low because of the feeling that statistics are not considered important, and productivity is low.

The greatest single weakness appears to be lack of qualified leaders who are both skilled statisticians, good administrators, and well motivated. Salaries are insufficient to provide proper motivation, and the promotion system is based solely on seniority. Thus, there is no incentive to do good work.

There does not appear to be any form of formal in-service training program conducted by the government agencies, although on-the-job training is going on in agencies with which some advisors are assigned. For a time there was a vocational training program at the Ministry of Agriculture, but this has ceased to exist.

In the Economics Department of the University of Kabul, Dr. Ayoubi teaches three level courses (I, II & III level) covering general statistics, some set theory, probability theory, sampling, and theory of distribution. He has written a textbook for the first level and is about to complete a text for the levels II & III. Although there has been considerable discussion about plans for an applied Research and Statistics Department, no action has as yet been taken by the University authorities.

3.6 Equipment resources such as adding machines, desk calculators, reproduction facilities, and vehicles, are inadequate. There is no automatic data processing equipment in the country.

Although most agencies had only a few adding machines, hand calculators, or electric calculators, it was not clear whether the needs exceeded the available number of machines or whether persons were trained sufficiently to utilize the machines fully. A number of machines were out of order and could not be repaired because of lack of servicing facilities. In the case of the Ministry of Finance, there was some indication that the two National Cash Register bookkeeping machines were seriously under-utilized.

Questionnaire design in some agencies were done by hand, suggesting lack of access to appropriate printing equipment. A number of instances were cited where reports were not published because there was no duplicating equipment available or no stencils available. A list of 15,620 villages developed by the Ministry of Agriculture for its 1967 Nation-wide Agricultural

Inquiry has never been duplicated for distribution to other agencies because of shortage of duplicating equipment and stencils.

Lack of equipment resources are directly related to the lengthy time lag between collection and compilation of data and availability for use. As has been previously stated, resort to hand tabulation introduces serious errors into the compilation process and limits the ability to develop two-way analytical tables so as to fully exploit the data which has been collected at considerable cost.

A major deterrent to the introduction of automatic data processing equipment has been the limited uses to which it can be applied. Although it is reported that the IBM Corporation has conducted some market assessment of the current demand for equipment in Afghanistan and has concluded that it is not a profitable venture, no leadership has been taken by the government in assessing its long-term needs in the form of a feasibility study of the entire government, public enterprises, and private sector possibilities. Such a study should be conducted by a data processing expert not connected with a commercial computer company. Although the initial costs may be substantial, included in the calculation of costs should be the costs incurred by faulty decisions because of lack of timely and accurate information. (For example, it is understood that bill collection of electrical companies is exceedingly inefficient; gains in electric revenues collected could be substantial when computerized and should be considered in the feasibility study.) It must be remembered, too, that a substantial lead time is required to develop technical and managerial capability in this field.

While it is still premature to discuss what kinds of equipment should be obtained, before a thorough feasibility study is conducted, it may be of interest to note here that the prevailing opinion of experts in data processing technology is that for a nation which has no data processing experience, it is better to skip the "conventional" stage, and to go initially to computers. The arguments are as follows: Conventional equipment is no longer being manufactured. The only conventional equipment available is "used" equipment which will create serious maintenance problems and the more used it is the more error-prone it becomes. In dust-laden atmospheres, conventional equipment has as great need for air conditioned, dust-proof

space, as do electronic computers. The availability of engineers to maintain conventional equipment is more of a problem than electronic computer engineers. Electronic computers have few moving parts, suffer fewer breakdowns, and require far less maintenance than conventional equipment. Electronic computers are far more accurate, far more flexible and of course far speedier. Electronic computers permit extensive editing, calculation of check ratios and other checks that are not possible with conventional equipment. Modern computers and modern computer languages are fairly easy to operate and program.

3.7 The uses of statistics are not widely appreciated in government agencies with important exceptions. A considerable effort needs to be made in acquainting administrators and policy makers with the analytical uses of data in decision making. This can, perhaps, be accomplished best by attaching deputies to these persons with training in economics. There appears to be little understanding of the lead time necessary to develop capability to man a statistical system, and little understanding of the financial and equipment resources required to operate the system.

In part, this state of affairs is nurtured by the manner in which statistical activities are carried on; i.e., by the tendency for the statistical offices to act merely as clerical compilers of data which almost anyone who can do arithmetic can perform. Government officials naturally conclude that no professional skills are required to do this kind of simple clerical work, nor is there any need to pay adequate salaries for this low-level work. Furthermore, government officials conclude that a system which relies heavily on administratively generated statistics can do so without substantial financial and equipment resources. They conclude that the financial resources required are those which are needed to operate the administrative machinery, and only slightly additional resources are needed to add up the administrative records.

Another behavior pattern of the current statistical system also reinforces this governmental-wide attitude. With the output of the present statistical system there has been hardly any discussion in writing of the methodological and coverage problems encountered. Thus, when statistical series appear in printed tables there are no headnotes or few footnotes which call to the attention of the user the limitations associated with improper or inadequate coverage of the reports, which openly discuss the

degree of non-response, problems of non-comparability of data, and which discuss what kinds of increased coverage or which kinds of new actions should be taken to improve the coverage and quality of the series. Without such open and frank methodological discussion, the conclusion the resource-allocating official can arrive at is that somehow here is the data, it looks good, there is no reason to provide additional resources. The statistical agency which does not describe in the highest professional sense the limitations of the data (in some form) along with the presentation of the data: (a) runs the risk of misleading the user of the statistics, or (b) will eventually be held responsible for either hiding the facts or being so incompetent that it was not aware of the facts. Worst of all, this failure to make widely known the limitations of the data and to point out ways in which it can be improved, eliminates from use one of the most effective weapons available to the statistical agency in the fierce competition for available resources.

Somehow the statistical system must break out of this circular trap which it is now in. In a sense it must "win its spurs" by demonstrating that with the use of modern statistical methodology, adequate, reliable and useful statistics can be obtained at a very reasonable cost. The prime requirement will be, as soon as possible, to identify a technically qualified statistician who is also an energetic, experienced administrator to provide leadership to the statistical system. If such a person cannot now be found in the statistical profession, then it is necessary that an energetic experienced administrator with professional training in a related field, such as econometrics, and with a full comprehension of the needs and uses of statistics be selected. In this event it is important that his deputy, or deputies, be technically qualified statisticians.

3.8 On the assets side, there is a real awakening, especially in the Ministry of Planning of the urgency for developing a modern information system.

3.81 This report would not have been written without the full awareness of the Minister of Planning of the (1) need for developing a modern information system, (2) the lead time necessary to do so, and (3) that the financial and equipment resource implications of such a system were of such a magnitude as

to require a clear commitment at the highest levels prior to embarking on such a development scheme. The Minister was aware that such a commitment could not be achieved without a comprehensive statement of the problem and the steps required to achieve a viable statistical system.

The Ministry of Planning is the primary user of statistics currently. Its major requirements are for estimates of nation-wide totals and averages, including a system of GNP accounts. In establishing priorities, primary consideration should be given to the needs of the Ministry of Planning. Fortunately these needs can be satisfied by the use of small sample surveys designed under the principles and techniques of modern statistical methodology. It is not necessary nor is it desirable to engage in full censuses of population and housing, or full censuses of agriculture and business establishments, as the first order of business of an infant statistical system. The need for such censuses will eventually arise, but at a time when the statistical system is more capable of handling them, and the financial resources of the nation are more equal to the task.

3.82 Also on the assets side is the Cartographic Institute and its aerial photomaps, stereoscopic photomaps, equipment and printing facility. Presently developed on transparancies are topographic maps based on aerial photos, which clearly show the location of structures, compounds and other physical features. The entire country has been mapped in this fashion at a scale of 1:50,000. There are 1,614 sheets of the scale. There are 19 sheets at the scale of 1:500,000. These sheets (i.e., 1:50,000) cost 15 afs per sheet if the purchaser supplies his own paper and ammonia, and 30 afs per sheet without paper and ammonia. (In the petroleum areas 119 sheets have already been printed.) Aerial photos were taken for the major cities as late as 1968-69, and maps will soon be available for major cities at a scale of 1:5,000 for Kabul (32 sheets) Jalalabad, Kandahar, Herat and other places. These scales are suitable for sampling design purposes. It should be noted that the maps do not have district, subdistrict, or village boundaries plotted. For the generation and use of many types of data, it is essential that the government embark immediately on a program to clearly

delineate administrative boundaries. While these plottings are essential for many purposes including for a Population Census which must show population for all political subdivisions down to village level, such boundaries, though desirable, are not necessary for a sample survey designed to show national totals only. The stereoscopic photo maps properly interpreted and ground verified, are an excellent source for determining land under cultivation, by type of cultivation.

4.0 Guidelines for Improvement

4.1 Establish an ad-interim Statistical Planning Committee under the chairmanship of the Minister of Planning to prepare a first five-year development scheme for establishing a viable statistical system for Afghanistan. The draft scheme should be ready for the consideration of the Supreme Economic Council and the cabinet within six months of the date of establishment of the committee. The final scheme should be available in time for incorporation into the Fourth Five-Year Plan. All funds for the implementation of the scheme should be from the development budget. The Executive Secretary to the Statistical Planning Committee should be the best technically competent, energetic and administratively competent person available, and a likely choice for the position of the head of the newly created central statistics office. The composition of the committee should include an experienced economist, one or more working statisticians, a representative from the University of Kabul, and such other membership as shall be deemed appropriate. Foreign technical advisory assistance to the committee should consist of economists already advising the Ministry of Planning, and several senior statistical experts, at least one of whom should have had wide experience in statistical administration and experience in overseas work. The statistical staff of the Ministry of Planning plus heads of other statistical cells throughout the government should act as the Secretariat to the Statistical Planning Committee.

4.2 Functions of the Statistical Planning Committee

4.21 Make a thorough in-house review of the present statistical system, identifying its weaknesses, its resources, somewhat along the line of Section

3.0 of this report, but in greater detail. This review should include an inventory of budget, equipment, and personnel in each agency showing academic qualifications, work experience, and technical training, if any, of the staff. The review should identify the output of each agency in terms of frequency, quantity, quality, and appropriateness to industrial needs, to policy, and to economic planning requirements. A decision should be made for each statistical cell whether the work should continue to be done in its present location, transferred to a central statistical office, or abolished.

4.22 Prepare a draft general statistics law, in the broadest and most flexible terms possible which will:

1. Establish the legal basis for the statistical system to compel reporting from establishments and persons and which will guarantee the confidentiality of the response (see Section 3.2).

2. Empower the administrative branch of government to appoint a central statistics authority (who will be the head of the Central Statistics Office), and competent authorities who under the general supervision of the central statistics authority may be appointed to collect, compile, analyze and publish special purpose or general purpose statistics as deemed necessary. (Note: This, then, permits freedom of action to have a central statistics office and in addition to have competent authorities such as the Afghanistan Bank to produce monetary and banking statistics; the Education Ministry to produce education statistics, or the Ministry of Finance, to produce financial statistics. For any subject area of statistics, government has flexibility of choice to have a particular set of statistics produced either by the Central Statistics Office or any other office of its choice, as circumstances permit and experience suggests without the need for amending the general statistics law.)

3. Empower the government to appoint a Supreme Statistics Council for the determination of statistical policy.

4. Prescribe the functions and powers of the Central Statistics Authority. These should include:

(a) To collect, compile, analyze and publish census and sample surveys and investigations including population, housing, agriculture and

economic censuses and surveys, and other subject areas as may be deemed necessary.

(b) To act as the supervisory and coordinating authority for all statistical activities carried out by competent authorities, or by any other agency of government which may be engaged, directly or indirectly, in the generation of statistical information.

(c) To appraise the output of the statistical system in terms of frequency, coverage, quality, timeliness and relevance to the country's needs, and to provide advice, assistance and guidance to competent authorities and any other agency engaged directly or indirectly in the generation of statistics.

(d) To standardize concepts, definitions and classification systems relating to statistics.

(e) To disapprove the continuance of any existing or proposed survey, investigation, or generation of any statistical information, if it does not meet acceptable standards of quality as prescribed by the Central Statistics Authority, or if it is already being performed by another agency.

(f) To approve all newly proposed questionnaires proforma and other inquiries which will be used to collect data from ten or more agencies, institutions, establishments, households or persons. In providing approval, the Central Statistics Authority shall review the objectives, collection and tabulation procedures, sampling schemes, and proposed tables to be prepared, and make recommendations for their improvement if necessary.

(g) To act as advisor to the Minister of Planning on the development budget, and the Minister of Finance on the ordinary budget, in the review of performance and determination of annual budget for competent authorities and statistical cells of any other government agency.

(h) To make recommendations to the Civil Service Commission relating to standards of training of statisticians and rules for recruitment, promotion, and salary of staff.

(i) To assist, develop and coordinate a program for in-service, institutional and foreign training for statistical personnel covering all statistical cells for approval by government; to act as the coordinator and certifying agency for government in the selection of personnel for such training.

(j) To assist, develop and coordinate a program for requesting the services of foreign experts, technicians and consultants to assist in the improvement of the statistical system for the approval by government; to act as the Coordinator in the request, selection, approval of qualifications, and assignment of such personnel, for approval by government.

(k) To act as the Executive Secretary to the Supreme Statistics Council. (Note: The Central Statistics Office will act as the Secretariat to the Supreme Statistics Council.)

(l) To prepare an annual report to the Supreme Statistics Council on activities, progress, problems and recommendations for future action, including new statistical surveys and series, based on annual reports received from competent authorities and other government agencies.

(m) To serve as chairman of a Technical Advisory Committee consisting of key members of the Central Statistical Office, and of the competent authorities and other agencies of government, for purposes of developing standardized concepts, definitions, and classification systems, and for purposes of developing adequate quality standards for statistical work, and efficient and timely performance of duties, including avoidance of duplication of effort. For this purpose to appoint working panels for development of specific programs, which shall report to the Technical Advisory Committee.

(n) To provide a Central Data Processing Service to all other agencies of government, to public enterprises and to private enterprises or individuals on a reimbursable cost basis.

(o) To act as an information center to all government and nongovernment agencies, and to the public at large, and to prepare such weekly, monthly, quarterly, annual, and ad hoc publications as may be required.

(p) To publish periodically technical reports on the concept, methodology and limitations of such surveys and statistical series, as are produced by the statistical system, with specific descriptions of how such surveys and series can be improved.

(q) To act as a central clearing house for all requests from abroad for statistical information, and as the coordinator for relations with statistical offices of international agencies and regional agencies including the United Nations, the IBRD, the IMF and ECAFE; to receive and provide exchange of publications with other countries.

(r) NOTE: It would be preferable for the Central Statistical Office to be an autonomous, independent agency reporting directly to the Prime Minister's offices, provided that the Planning functions are likewise moved up to a co-ordinate level. This would give the Central Statistics Authority a prestige which he will undoubtedly need to perform the difficult tasks assigned. It would also give the office an independence of action from any other agency, including the Planning Agency, and thus minimize the possibility of charges of manipulation of data for purposes of "showing a good record." (For similar reasons of prestige and relations with other Ministries, the Planning function should also report directly to the Prime Minister's Office, preferably to a Deputy Prime Minister for planning and statistics.)

4.23 Establish a system of priorities of specific statistical programs to be developed during the five-year plan, which will be consistent with the financial resources available, and consistent with skill resources available.

1. This system of priorities should be established by the economists in the Ministry of Planning, with wide consultation with others. As an illustration there is recommended what appears to be the maximum that the statistical system can be expected to produce over the next Five-Year Plan. These recommendations are based on the discussions held during the review. However, there must be a decision, and the decision should be based on a realistic appraisal of domestic resources, as well as likely grants of technical advisory services which will be required. Furthermore, the

adoption of such a system of priorities will permit a rational and related system of priorities for a five-year training scheme of staff overseas.

2. While there has been much discussion for conducting, as the first order of business, a population census of the country, it is recommended that it be postponed at the very minimum to the end of the Fourth Five-Year Plan or later. For reasons similar to those given below, it is also recommended that all other censuses (except the very general sample census that will precede the planned KAP Study for the Family Planning Program) be postponed to a later period. (See Appendix X: On Postponing the Population Census of Afghanistan.)

(a) A complete population census is the only way that the geographic distribution of the population by minor civil divisions can be obtained. However, it is not necessary to conduct a complete census of the population to obtain a reliable estimate of the population for the nation as a whole, together with demographic, fertility and economic characteristics of the nation's population. Such information can be obtained by use of a small sample survey at a fraction of the cost of a full population census, provided such a sample survey is planned carefully and uses modern statistical technology.

(b) On the basis of Afghanistan's present planning capability, one can argue that there is at present no urgent need for having demographic and economic characteristics reported separately for each village in the country. The urgent need is to have such information for the nation as a whole, since most planning is taking place at the national level, and is based on national totals.

(c) While such a sample survey will produce an estimate of the population to which a probable sampling error must be attached, nevertheless, a well structured sample survey will very likely produce a result which is more reliable than a poorly conducted complete census. This paradox arises because there are other errors that creep into the work of either a sample survey or a census. These are often referred to as "non-sampling" errors. These errors arise because of the use of poor procedures, poor geographic

control, poor question wording, poor instructions, poor quality of enumerators, poor supervision of enumerators, poor responses, and poor tabulation procedures. There are many other sources of error also.

(d) To conduct a total population census will require the employment of some 20,000 enumerators or more. One can easily see that in a country with a low literacy rate it will not be possible to get good quality enumerators, especially if they are unpaid enumerators or very low-paid enumerators. Furthermore, it will be difficult to train such enumerators adequately, and even more difficult to supervise them adequately. Errors arising from these sources tend to be much larger than the sampling error of a well designed survey. Although Afghanistan has an excellent set of maps, prepared from aerial photographs, these maps do not have the district, subdistrict, and village boundaries plotted on them. It would take about two years to field determine and to plot these boundaries. Thus, if a census were undertaken now, it would be difficult to have a good geographic control, and many areas would either be omitted, or covered twice by the census enumerators. Furthermore, the census data could not be presented adequately by minor civil divisions without such geographic control. (For an estimate of the population for the nation as a whole, such boundary plottings, though desirable, are not required.)

(e) In the case of a small sample survey for the nation as a whole, Perhaps only some 200 enumerators would be required. For this small number one can exercise recruitment standards which would result in a much higher level of quality of enumerator. Such a small group of enumerators can also be trained more thoroughly and supervised more thoroughly. Relatively more of the resources available for the total job can be put into quality control procedures to minimize the nonsampling errors, and a more reliable estimate can be obtained.

3. In the discussion to follow on the priority program of statistics the priority numbers assigned are for new statistical field survey programs only. It is not intended to imply that no attention be paid to improving the existing administratively generated or other statistical program throughout the governmental agencies presently being conducted. In fact, it is assumed that the attention of the present Statistics Department of the Ministry of Planning of the Statistical Planning Committee, and, later, of the newly created Central Statistics Office will be immediately directed more vigorously toward the identification of existing data sources, and towards the establishment of control devices to improve the quality, coverage, and timeliness of these data. For example, the Ministry of Finance staff to follow-up on the quality of reporting procedures in Financial Statistics should be appointed as soon as possible; the Ministry of Education Statistics Unit should develop a small sample follow-up of the reporting of teachers, schools, and attendance records to identify the degree of misunderstandings, and other misreporting problems in the system; the Ministry of Commerce should immediately begin to hold discussions with Customs officials on building in the statistical requirements of foreign trade statistics in the revised Customs systems presently under consideration; the idea of an Information Center should be vigorously pursued to make what information is generated more readily accessible, etc. This is not a short-term process but an ever on-going process. Whatever statistical advisors are obtained from abroad will also assist in this process.

In the consideration of priorities for a statistical program, heavy emphasis should be placed on those series which will do most to provide the building blocks of the basic expenditure tables of the GNP accounts and the basic value added economic sector tables of the GNP accounts.

4. Priority I. Conduct a sample survey of the nation to provide an estimate of the population separately for all urban areas combined, and all rural areas combined. This will require a sample of about 10,000 households in urban areas, and about 10,000 households in rural areas. Select all major cities and a sample of smaller cities. Sample design work including map work will require one year. Questionnaire design, instruction writing, first and second pretests, one year; systems work for tabulation, two years; programming

work including computer edit routines, 1¼ years; training of supervisors (on-the-job work including pretests, map work, etc.) nine months. Post enumeration quality check, one month. Editing and coding, six months. Tabulation on computer, six months. Analysis and report writing, nine months. Total elapsed time from start of planning, about 2½ years. Staff requirements: planning-10; map work and field identification-20; supervisors-20; enumerators-150. (See Chart A rough calendar of operation.)

The sample survey of the population would provide the basic demographic characteristics (age, sex, marital status, religion, mother tongue); fertility characteristics (number of sons ever born, number of sons still alive; number of daughters ever born; number of daughters still alive); place of birth (for life time migration patterns); migration in the last one year; literacy status; current attendance in school; highest grade completed; current labor force participation; economic sector of employment; occupation, and employment status (employer, own account worker, employee, unpaid family helper); housing characteristics (tenure status, type of structure, number of rooms, facilities available, electricity, type of cooking fuel, running water, bath.)

5. Priority II. National Household Expenditure Survey showing results separately for all urban areas combined and all rural areas combined. Using the same sample design as for the population sample survey, select a sample of 2,500 households in rural areas and 5,000 households in urban areas. Divide each sample into 12 subsamples, one subsample to be surveyed in each month for 12 consecutive months, to reflect seasonal variations in expenditures and to spread the workload so as to reduce staff requirements. This will require about twenty enumerators in rural areas for twelve months; and twenty enumerators in urban areas for about 12 months. Planning work could start in the first year and survey work could begin in the month after the population survey is taken. Tabulations should be available 1½ years after the survey starts.

This survey would provide purchase rates and average family expenditure and quantity purchases for item detail; subgroup and group totals; quantity and value of home grown food consumed; quality and value of other home produced items for consumption and for sale to others; consumption patterns

by income class, by size of family, by type of family, by age of head, by employment status, and by other selected variables; average family income by source of income, by money income and by nonmoney income; depending on pretest results, perhaps some information on consumer debt patterns, assets and liabilities patterns.

6. Priority III. Develop a revised Consumer Price Index for urban areas to show separate indexes for all cities over 100,000 population, and a total index for all urban areas combined. The revised weighting diagram will come from the National Household Expenditure Survey. Begin a program of experimental pricing at the same time as the Expenditure Survey Program begins; drawing a sample of stores from the listing sheets used in the Sample Survey of the Population. Collect prices monthly from the sample outlets, using the same enumerators who are employed on the Urban Household Expenditure Survey. Weighting diagram will be available in the fourth year and the revised index could be published by the second half of the fifth year.

7. Priority IV. Survey of privately financed construction activity. Using the same primary sampling units as in the sample design for the population survey, design a survey to measure the volume and value of privately financed construction activity for all urban areas combined and for all rural areas combined. Planning for this survey could start in the third year and fieldwork could begin in the fourth year. This survey would be conducted once in every quarter, on a regular basis to provide a quarterly measure of the volume and value of construction starts, construction completions and construction put in place.

8. Priority V. Quarterly survey of the labor force. This survey would measure the participation rate of the labor force and could carry special purpose questions of a varying nature at each quarter. This survey could be developed right after the population sample survey if sufficient staff were available.

9. Priority I-V. To do what has been suggested would require a very substantial planning effort on the part of the Central Statistical Office, which will probably just have been created. It is assumed, however, that the present statistical organization of the Planning Ministry will in the

CHART A

Approximate Calendar of Events For Priority Program

Priority Program

	1st year				2nd year				3rd year			4th year	5th year
I Sample Survey of Population													
Sample design	x	x	x	x									
Questionnaire design	x	x											
Instruction writing		x	x										
First pretest			x										
Second pretest				x									
Printing of questionnaires					x								
Systems work	x	x	x	x	x	x	x	x					
Programming for computer				x	x	x	x	x					
Training of Supervisors		x	x	x									
Training of enumerators					x								
Survey Date						x							
Post enumeration sample check						x							
Editing and coding						x	x						
Punching or Key to tape						x	x	x					
Tabulation on computer								x	x				
Analysis and report writing									x	x	x		
Staff Requirements													
Planning and analyses	10	10	10	10	10	10	10	10	10	10	10		
Mapwork & pretesting	20	20	20	20									
Supervisors				20	20	20							
Enumerators					150	150							
II National Household Expenditure Survey													
Planning	x	x	x	x	x	x							
Survey							x	x	x	x			
Tabulation								x	x	x	x	x	
Supervisor requirements						20	20		20	20			
Enumerator requirements						40	40		40	40			

Priority Program	1st year	2nd year				3rd year				4th year				5th year			
III. Price Index Revision																	
Planning																	
Experimental Pricing				x	x	x	x	x	x	x	x	x	x	x	x	x	x
Weighting Diagram									x	x	x	x					
Calculations for base period												x	x	x			
Publication															x		
IV. Privately Financed Construction Activity																	
Planning		x	x	x	x	x	x	x	x								
Field Work						x	x	x	x	x	x	x	x	x	x	x	x
Quarterly Survey of Labor Force	Starting time depends on additional supervisory and enumerator staff																
V. Quarterly Survey of Labor Force	Starting time depends on additional supervisory and enumerator staff																

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meantime be performing the survey functions of the Central Statistical Office. Depending on developments, it would be better to drop priorities IV and V and to do a good job of I, II and III. This would in itself be a highly commendable effort. The time period over which these tasks are accomplished may have to be spread out considerably. Nevertheless, when priorities I-V are accomplished in whatever time span the government decides to commit the necessary financial and technical resources, there will have been a substantial improvement. Priorities I, II and III permit the rudimentary calculation of the GNP expenditure tables, assuming the public investment activity can be obtained from central sources. Priority III provides a highly useful basis for measuring changes in real income, and also provides substantial insights into what is happening in the economy, pinpointing sectors where the demand-supply relationship is out of balance, provided that the pricing work is done well and prices reasonably free. Priorities I and V give the basis in part for establishing a benchmark and a measure of change for purposes of developing a manpower plan.

10. Nothing has been said about developing an agricultural statistics program. There is a very excellent resource available to provide a benchmark estimate of the total land under cultivation by categories of cultivation and by irrigation, from the use of the stereoscopic aerial photomaps in the possession of the Cartographic Institute (see Appendix XII). Considerable ground verification has already been done. This benchmark could be brought up-to-date by the use of area sample surveys on an annual basis, or by the use of aerial photography on a sample basis. In this age of satellites and precise aerial photography, there is a good chance that the solution can be found through this technique. Nevertheless, the Ministry of Agriculture should be encouraged to develop small sample surveys using the objective crop cutting experiments to measure changes in yield for the major crops. Although agricultural statistics should have a high priority in the five-year statistical program, it (painfully) has been limited to training of staff on the grounds that it undoubtedly presents the most difficult methodological problems, and that it will take time to train staff to the level where such work can be tackled seriously. Furthermore, some series of early objective crop forecasting should be developed for the major crops. Some livestock is of major importance, posting of enumerators along

the regular trails at certain passes to count the livestock and the Nomads as they move from summer pasture to winter to spring pastures needs to be experimented with.

4.24 Establish a Five-Year Training Program, reflecting the priorities of statistical work determined, and longer run requirements to improve the quality of University staff and to expand the University curriculum in statistics.

1. Identify all Afghans presently abroad and studying in universities, together with field of study. Identify all Afghans presently in Afghanistan who have had training in statistics.

2. Select ten promising high school or university graduates for two to four years study in the United States for a Master's Degree level course. Among the top five who achieve a Master's Degree, allow them to continue on toward a Ph. D. Degree. Suggested universities: Iowa State, University of North Carolina, for mathematical statistics and sampling and survey design; University of Chicago for demography; University of Michigan for statistical survey techniques; University of Indiana for computer science technology.

3. Establish a schedule for training as soon as possible, preferably beginning September 1970, in accordance with the suggestions contained in Chart B. The logic in the chart, in addition to reflecting priorities determined in Section 4.23, also assumes that it will be most difficult to select qualified persons in the early years, and as the staff of the statistical system grows, so will the selection possibilities. See also Appendix XI for the types of courses available in the U.S. The chart also reflects the assumption that there will be required a heavy input of statistical advisors who will be conducting on-the-job training programs during the five-year program.

4.25 <u>Determine the technical assistance requirements consistent with the priority program aimed at.</u> To accomplish the statistical program outlined in 4.23, it is clear that, given the present level of Afghanistan technical skills in modern statistical technology, technicians from abroad will be required to advise on the planning and execution of the work. These technical advisors will have a greater impact if they operate primarily as technician trainers to Afghans who will be responsible for the operations. On-the-job training is a powerful means for transferring skill techniques in statistical operations.

CHART B

Five-Year Overseas Training Program:
Non Academic, and Academic

Field of Study**	No. of Months	U.S. Agency	Number of Trainees 1st	2nd	3rd	4th	5th
Household Sample Survey	12	Bureau Census	2	2	1	1	
Manufacturing Statistics	12	Bureau Census			1		1
Price Indexes and Household Expenditure Surveys	12	Bureau of Labor Statistics	1	1			
Construction Statistics	12	Bureau Census		1	1		
Foreign Trade Statistics	12	Bureau Census			1		
Control of Nonsampling Errors	12	Bureau Census				2	2
Sample Design		Bureau Census			1	1	
Data Processing, EAM Equipment and EDP Systems and Programming	6	Bureau Census	2*		2*		2*
Agriculture Crop Reporting	12	Bureau Census & US Dept Ag	1	2	1	1	2
GNP Accounting	12	Office of Business Economics				2	2
Balance of Payments	3	IMF				1	1
Statistical Administration and Coordination	12	Bureau Census			1	1	
Population Census Methodology	12	Bureau Census					4
Total, Nonacademic			6	6	9	9	14
Total Academic	4-8 yrs	Various Universities	10	10	10	10	10

* Must successfully pass IBM Aptitude Test.

** All trainees must be exposed to systematic training in communications, coordination, and statistical administration.

The chances of completing the priority program suggested will be directly related to the timing by which these technicians can be in the country. It usually takes six months to recruit an advisor from the time the request is accepted and approved by the donor country. To the extent possible the country to which the major portion of trainees are sent for training in statistical technology should also be the country from which the technicians are recruited, so as to achieve as much consistency of approach as possible. Different countries have their own different approaches to statistical technology in practice. Undoubtedly the United States has the outstanding capability in applied statistical technology, and has been the leader in the control of nonsampling errors, which is an important consideration in the selection of technicians to work in Afghanistan.

The attached Chart C shows the technician requirements to accomplish the priority program suggested.

It is very likely that no one donor can provide all the inputs required. In discussions with the multilateral agencies, namely the UN, the IBRD, the IMF, and with USAID, all expressed a deep interest in developing a joint effort to assist the RGA in meeting its needs for technician, training, and equipment resources under a well-structured statistical development effort. It is understood that the UN already has budgeted two advisory positions which it can fill when such a program is developed. The IMF is planning to provide an IMF statistician to work with the D'Afghanistan Bank to improve its monetary, banking, and credit statistics. There is already an Agriculture Statistics Advisor (Colombo Plan) working with the Ministry of Agriculture. There is also a Statistics Advisor of the USSR Advisory Group to the Ministry of Planning. The Statistical Planning Committee under the Minister of Planning's chairmanship affords a highly suitable mechanism for providing the focal point for the coordination of this joint effort among all the donors.

The Principal Statistics Advisor will work with the Central Statistics Authority and will supervise and coordinate the activities of the other advisors. He will advise the Central Statistics Authority on statistical policy, on the organization of the Central Statistics Authority, on the coordination and development activities of the Central Statistics Authority and its secretariat,

CHART C

CHART C

Technician Requirements

For Priority Program*	1st	2nd	3rd	4th	5th
Principal Statistics Advisor	X	X	X	X	X
Sampling Advisor	X	X	X	X	
General Surveys Advisor	X	X	X	X	X
Price Statistics Advisor	X	X	X	X	
Construction Statistics Advisor		X	X	X	X
Analytical Demographer			X	X	X
Data Processing Advisor	X	X	X	X	X
Provision for one-three months assignments in specialized areas	X	X	X	X	X
Agriculture Statistics Advisor				X	X

*Does not include (1) one IMF Statistics Advisor to be provided by IMF for a period of four years to D'Afghanistan Bank in field of Monetary, Banking and Credit Statistics, or (2) one Agriculture Statistics Advisor, at Ministry of Agriculture, whose tour expires at end of 1971.

in improving the quality, coverage, and timeliness of existing series, and on the development of an in-service training capability.

The Sampling Advisor will work with the sampling design division to develop the urban and rural primary sampling units design and secondary sampling units design for the proposed surveys, and will conduct experiments for sampling the mobile population. He will assist on pretesting such devices.

He will advise on the design of post enumeration sample survey checks. He will advise on the development of suitable blow-up factors to be applied to the sample data to obtain the estimates for urban, rural, and the nation as a whole. He will also develop sampling quality control procedures to apply to editing and coding operations, and to machine tabulation operations. He will design program for the calculation of within and between Primary Sampling Units (PSU) variances for computer processing. He will demonstrate and advise on developing cost estimates of travel time and interview time separately for the determination of optimum sample design considering both the variance within and between PSUs and costs associated with travel and interview time. He will advise on the application of sampling techniques for general purpose and special purpose statistics.

The General Surveys Advisor will train staff on survey technology dealing with questionnaire design, quality control devices, supervisor activities, training of enumerators, field instruction manuals, development of uniform concepts, definitions and classification systems. He will advise on field organization staffing patterns. He will train in pretesting, reiterative pretesting and post enumeration quality control techniques.

The Price Statistics Advisor will train in the development of the conceptual and methodological framework of the Consumer Price Index. He will assist in the development of a comprehensive Household Expenditure and Income Survey and its associated questionnaire suitable for obtaining expenditure and income data, and the value of home-grown and consumed goods, in sufficient detail so as to provide a weighting diagram for the price index, but also to provide valuable information on consumer behavior patterns in both urban and rural areas, on housing tenure patterns, on consumer credit and debt patterns,

and on the structure of consumer assets and liabilities. He will advise on the development of field procedures and price schedules, and on the experimental pricing program from which the final list of items to be included within the index will come. He will advise on the development of tabulation procedures and editing quality control procedures. He will advise on the structure of the index, including its groups and subgroups to be published.

The Construction Statistics Advisor will advise on the survey design, questionnaire design and office and field procedures for a benchmark survey of the volume and value of privately financed construction activity, to be followed by a quarterly survey to measure the volume and value of construction starts, construction completions, and construction put in place during the year.

He will also advise on the development of a system for obtaining the volume and value of publicly financed construction activity from all government agencies, public enterprises and provincial and municipal agencies by type of construction.

The Analytical Demographer will advise in the demographic analysis of the population survey tabulation and in the development of appropriate demographic measures and indexes. He will also propose techniques for measuring on a sample basis, the annual birth and death rates so as to develop a series measuring the annual population growth. This survey design should suitably control the serious nonresponse biases invariably associated with collection of this type of data. Such a technique might include the use of the Chandrasekar-Deming correction system. This survey would be started in the second five-year statistical development program.

The Data Processing Advisor will train systems analysts and programmers in basic computer systems, and in suitable programming languages such as COBOL and assembler language. He will advise in the design of questionnaires on the precoding requirements and layout of the questionnaire for ease of machine operation and minimization of error possibilities. He will train programmers in the programming of the tabulations on each survey, including the application of edit routines for quality control. One of the greatest advantages in the use of computers is the opportunity afforded for quality

control, calculation of key ratios, by which the data can be approved, and efficient computing of missing data. He will assist programmers in the debugging of programs. He will conduct a feasibility study on the potential demand for a single computer service bureau localed within the Central Statistics Office which will provide services for all other applications including commercial applications, on a reimbursable basis. There is no question that Afghanistan will need one or more computers within the near future. It is not difficult to obtain the computer hardware on relatively short notice. What is difficult, and what requires a substantial lead time is the development of personnel to do the systems work and programming work for efficient use of the computer. If the government decides to continue sending its data processing requirements abroad for the next few years, it is poor management to turn the entire job over to another government or to a commercial enterprise. The Afghanistan Government should assume responsibility for the systems work and the programming work, and should be in a position to assure to its own satisfaction that the work is performed to an adequate level of quality. This is a responsibility which it must not avoid. By training personnel to do this work, the major institutional requirement, that is, the "poeple-ware" will be in a position to install Afghanistan's own computer bureau. At the very minimum the Central Statistical Office should develop its own capability to perform the punching of machine cards in Afghanistan, or better yet, to obtain equipment which is now available to transcribe the data to magnetic tape. This avoids the cost of punch cards, the magnetic tape is reusable, and it will lower the cost of air freight charges by a substantial factor.

5.0 Organization of the Central Statistical Office. The present Statistics Department of the Ministry of Planning is organized along subject matter lines with the possible exception of the Population Census and Survey Unit. Each subject matter unit is responsible for all the work including obtaining reports, tabulating reports, and analyzing the results. While this may be a satisfactory organization for the present limited operation, it is unsatisfactory to cope with the suggested Priority Plan of Work over the next five years.

Not a single statistical cell in the government has a field operation to collect data throughout the country. This undoubtedly accounts for the low output since there is nobody available to do the statistical ditch-digging of collecting data from primary sources throughout the nation.

There has been some discussion of transferring some sixty employees of the Statistics Department of the Ministry of Agriculture to field offices localed in each of the 28 provinces of Afghanistan. When this happens, it will be notable and first step toward a field operation capability, and may well require a change in the priority statistics program suggested.

The Central Statistics Office must be organized along the following functional lines if it is to cope with the proposed five-year program.

1. Office of the Director

   (a) Coordination Division and Secretariat to the Supreme Statistics Council and Technical Advisory Committee.

2. Subject Matter Specialists

   (a) Population, manpower and demographic statistics

   (b) Prices and household expenditures

   (c) Construction statistics

   (d) Manufacturing statistics

   (e) Financial, monetary, banking, trade and balance of payments statistics

   (f) GNP accounts

3. Sampling and Survey Methods Research

   (a) Sample design

   (b) Geography and map control

   (c) Methods research and quality evaluation control

4. Field Operations

   (a) Receipts and dispatch control

   (b) Field operations instructions

   (c) Field inspection control

   (d) Field supervisor and enumerator training

   (e) Regional offices in major cities

      (1) Field offices appropriately distributed

         --Field Supervisor

         --Enumerators

         --One jeep vehicle for each regional and field office

5. Data Processing

   (a) Editing and coding

   (b) Machine card punching or key to magnetic tape processing

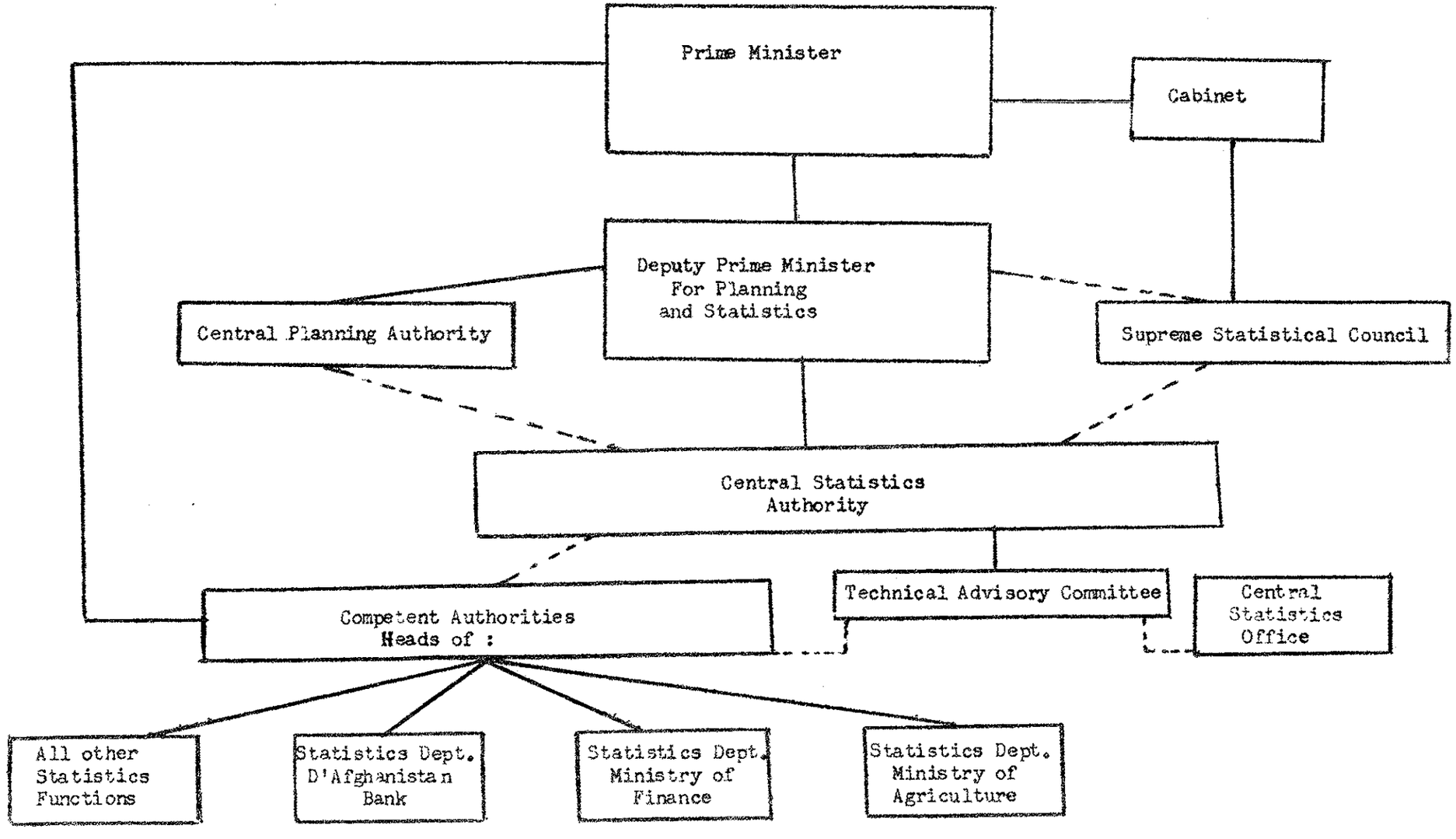
   (c) Computer systems and programming

   (d) Quality control

6. Reproduction Facilities and Chart Making
7. Publications including the Functions of the Information Center.
8. In-Service Training
9. Administration and Housekeeping

CHART D

A Suggested Organization of the Statistical System of Afghanistan



APPENDIX 1

OFFICIALS CONSULTED

Ministry of Planning

Name	Title
H.E. Dr. Abdul Wahed Sarabi	Minister of Planning
Mr. Ali Ahmad Khorram	President, Planning Department
Mr. Mohamad Khan Jallalar	President, Department of Finance and Secretary General, Supreme Economic Council

Statistics Department
Ministry of Planning

Mr. Mohammad Yusuf Farand	President
Mr. Siddiq Amir	Director General of National Accounts
Mr. Mohammad Nassir Nasser	Director for Banking & Prices Statistics
Mr. Ghulan Ghaus	Director for Foreign Trade Statistics
Mr. Sher Aga Keshaware	Director General for Private Investment
Mr. Abdul Ghafoor Malikzaadah	Director General Censuses and Surveys

Statistics Department
Ministry of Agriculture

Mr. Fazl Rahim Mohmand	General Director, Economics Department
Mr. Saxema	Agricultural Statistics Advisor (Colombo Plan)

Cartographic Institute
Ministry of Mines & Industries

Mr. Muzaffaruddin Yacubi	President

Statistics Department
Ministry of Commerce

Mr. G. Hussain Bayet	Director General

Ministry of Finance

Dr. Zabioullah Eltezam	President, Kabul Customs and Member Supreme Economic Council
Mr. Cecil Piatt	Advisor to Customs President General
Mr. Larry Young	Advisor to the Minister - Public Administration Service
Mr. Irving Olsen	Advisor to the Minister - Public Administration Service

Central Authority for Housing and Town Planning

Dr. Faqir	General Director
Mr. Abdul Wahab Fanaii	Director, Socio-Economic Department
Dr. Majumdar	Advisor in Sociology (Colombo Plan)

University of Kabul

Dr. H. Youssof Ayoubi	Professor of Statistics
Mr. Murad Ali Asiel	Faculty of Economics

Ministry of Mines & Industries

Mr. Mohammad Aref Mehr	President of Industries
Mr. G. Dastaguir Nory	Director General

Karakul Institute

Mr. Howard Nyberg	Consultant

Ministry of Education

Mr. James Canfield	Advisor, Curriculum Development

Ministry of Interior

Mr. Neymatullah	President, Cadastral Survey Organization
Mr. M. Fakir Dewagali	President, Statistics Department
Mr. Assadullah Mohaddedi	Director, Statistics Department
Mr. James Root	Land Inventory Advisor

D'Afghanistan Bank

Mr. Ghulam Hossein Jawany	President, Foreign Exchange Department
Mr. Jaques Coldefy	IMF Banking Technician

International Bank for Reconstruction and Development

Mr. Manuel Zenick	Resident Representative

International Monetary Fund

Mr. Richard Selby	Resident Representative and Advisor to Governor, D'Afghanistan Bank

United Nations

Mr. Per Amundsen	Deputy Resident Representative
Mr. Charles Wood	U.N.D.P.

Robert R. Nathan Associates

Mr. Marvin R. Brant	Chief of Party
Mr. Glen L. Parker	Industrial Economist
Mr. Robert D. Foster	Financial Economist
Mr. Richard F. Saunders	Agricultural Economist

U.S.A.I.D.

Mr. Bartlett Harvey	Director
Mr. Lawrence Crain	Chief, Public Administration Division
Mr. Joseph Motheral	Chief, Agriculture Division
Mr. Thomas Gibson	Program Economist
Mr. Cecil Uyehara	Assistant Director for Program Development
Mr. John Patterson	Program Officer
Mr. Cornelius Zondag	Chief, Private Enterprise Division

Others

Mr. Louis Lung	Chief of Mission, ASMIC-CINAM
Mr. Paul Lalande	Biological Geographer, University of Toulouse c/o Cartographic Institute, Kabul
Mr. Koliakov	Statistical Advisor, USSR Advisory Group to the Ministry of Planning

APPENDIX II

Publications, Reports and Memoranda Consulted

Reorganization of the Ministry of Planning, Draft for Discussion Only
Robert R. Nathan Associates, Inc. April 5, 1970

Functions of the Ministry of Planning, Unpublished
Ministry of Planning April 5, 1970

Ministry of Finance Monthly Revenue Report - Monthly Series

Important Monthly Data that Are Available, or Through Ministry of Planning Efforts Can Be Made Available, Unpublished March 31, 1970

Annual Report of Development Assistance Other Than That Provided by UNDP.
UNDP Resident Representative in Afghanistan covering the period 1 January - 31 December 1969.

Survey of Progress 1968-1969, Department of Statistics, Ministry of Planning
Kabul, September 1969

Education Statistics, Afghanistan 1968/1347. Directorate of Statistics
Ministry of Education July 1969

A Systems Appraoch to Economic Analysis
D.H. Niewiaroski, Robert R. Nathan Associates March 3, 1969

Manpower and Education in Afghanistan: Report of the Manpower Committee
Education Commission, Ministry of Education, Kabul March 1969

Report of Visit to Iran Statistical and Economic Agencies
October 11-23, 1968 D.H. Niewiaroski, Robert R. Nathan Associates Nov 11, 1968

Staff and Organization of Statistical Departments and Offices of Government and Private Enterprises and Agencies, Ministry of Planning, Department of Statistics 1.4.1345

Population Census Project Final Report, by O.J.C, Francis, UNDP
July 1968

Public Finance (Statistics) Ministry of Planning
January 25, 1965

Expenditure Classifications - Summary: Major Object and Minor Object Classifications
Ministry of Finance, Budget Manual, Royal Government of Afghanistan
Prepared by Public Administration Service USAID/Kabul for Ministry of Finance
November 1965

Money and Banking Statistics, Ministry of Planning
December 16, 1964

Urban Consumer Prices (Statistics), Ministry of Planning
December 21, 1964

Automatic Data Processing, R.H. Allen, Robert R. Nathan Associates, Inc.
September 21, 1964

The Need for Sensitive Economic Indicators on a More Timely Basis, Louis J. Walinsky, Robert R. Nathan Associates, Inc., December 6, 1962

Some Considerations Concerning the Tasks of the Statistical Department of the Ministry of Planning in the Near Future, Dr. Kurt Hendrickson, German Economic Advisory Group, October 1962

Proposal to Establish a Central Statistical Office, J. Richard Huber, Robert R. Nathan Associates, Inc. July 28, 1962

Minutes of Special Statistical Meetings (on Foreign Trade) of June 21, 1962 J.R. Gunn, Statistical Advisor to the Ministry of Commerce, June 1962

A Long Range and an Immediate Statistical Program, Louis J. Walinsky Robert R. Nathan Associates, Inc. December 9, 1961

Afghanistan's Foreign Trade Statistics, Statistical Department, Ministry of Commerce (Circa 1962)

Survey of Statistical Reporting on the Royal Afghan Government with Recommendations on Improving Present Procedures, Public Administration Service, USOM/Afghanistan May 1958

A Report on Statistical Reporting Procedures in The Ministry of Finance, Public Administration Service USOM/Afghanistan May 1958

Afghanistan FY 1971 Country Field Submission Annex XII (with Bibliography) USAID/A June 1969

Report on Field Trip to Kabul 5 August to 5 October 1967 Pedro F. Florentino, Regional Advisor (Economic Statistics) UNDP

CURRENT ECONOMIC POSITION AND PROSPECTS OF AFGHANISTAN

REPORT OF THE IBRD

May 27, 1969

Constraints to Development

31. The obstacles to effective development programming and implementation in Afghanistan are numerous and pervasive. Some are inherent, such as limited natural resources, geographical isolation, and uncertain weather conditions. Others are deeply routed in customs and traditions. There are many others, however, for which practical solutions are possible over varying periods of time, provided the necessary measures are taken, including strengthening existing institutions or creating new ones. They include the following:

(i) The country has been unable to effectively mobilize its own resources for development. Afghanistan is poor, but public savings have been far below the potential, and until recently the possibilities of channeling private savings into productive investment jave failed to receive adequate government support. Agriculture, which accounts for more than 50 percent of GDP, contributes very little to public revenues, which have not increased appreciably in the last four years. As a result, total development expenditures have amounted to barely 8 percent of GDP over the past seven years, and the Government's surplus of revenues over ordinary expenditures has amounted to only about 1 percent of GDP. Central Bank

borrowing has been another 1 percent, and the balance (6 percent of GDP) has been financed from commodity and project assistance.

(ii) There is an acute and continuing shortage of competent managers, technicians and skilled manpower in both Government and industry. The ability to identify, prepare and implement development programs and projects is particularly limited. There is a large number of experienced traders in Afghanistan but an industrial managerial group has not emerged, primarily because there is so little private manufacturing. In agriculture the shortage of extension workers and small irrigation design engineers is likely to be a serious obstacle to the planned expansion of output. Some training programs in these foreign personnel may be expected to continue.

(iii) The interaction of the executive branch of Government and the Parliament is hampered by the fact that the idea of overriding national needs is not widely appreciated in the Parliament where interests tend to be tribal and local. Thus reaction to legislative proposals frequently takes the form of negative criticism. Measures essential to development, including annual budget, as well as laws establishing new institutions may therefore be rejected or long delayed.

(iv) Most of the statistical information required to plan and carry out development is either lacking or is quite unreliable.

There are no national accounts and no means of determining the real value of capital expenditures. Virtually no data exists on the size, composition and growth of population. The amount classification and use of arable land is unknown. The country's agriculture is predominantly for subsistence but reliable information on investment and output of the nonmonetized part of the sector is lacking. The The thirty-one state and mixed enterprises are either far behind in reporting the results of their operations or do not report at all. There is no central planning, control or coordination of statistics in the Ministry of Planning. The Ministry of Planning receives whatever information is available from Ministries and other Agencies which are relatively autonomous in deciding what data to generate and release. Much of the published information is essentially guesswork.

(v) The agriculture sector is characterized by small holding and low yields. The rural population is largely illiterate and production and marketing cooperatives and extension services are very inadequate. The weather is extremely variable and in irrigated agriculture a large part of the available water is lost due to badly maintained facilities, poor water control and highly uncertain water rights. A major constraint is the lack of agricultural credit. Reorganization of the Agricultural Development Bank will help but it will take considerable time for the Bank to make an impact. In the meantime farmers are at the mercy of money lenders, ginneries, traders and other intermediaries.

(vi) As will be discussed in more detail, the response of private investors to the investment law has been encouraging but major problems to expansion of industry remain. Among Afghan businessmen there is a traditional preference for trading and money lending, in which turnover of capital is rapid and risks are short term. Relatives and close friends are also greatly preferred as customers. Local markets for manufactured goods are small. This, together with the country's land-locked position and the high cost of transportation for imported materials means that production costs tend to be high. The mutual suspicion of Government and private business seems to be lessening somewhat, but there is still much uncertainty regarding the Government's own intention in respect to industrial investment and the threat of nationalization of successful private industries remains. The industrial sector badly needs short- and long-term credit which the banking system is unable or unwilling to provide. The Industrial Development Bank Law was proposed two years ago but has not been passed yet. Little or nothing is being done about the extensive smuggling of competitive goods. Public sector industrial enterprises which comprise the bulk of the country's manufacturing activities, lacking incentives and competent management, are highly inefficient.

Copy from IBRD document "Current Economic Position and Prospects of Afghanistan" (ma).

Staff and Organization
of
Statistical Departments and Offices
of
Government and Private Enterprises and Agencies

Ministry of Planning
Department of Statistics
General Directorate for Census
and Sampling

1.4.1345

Summary translation from Dari: M.M.Asiel
4/11/70

* * * *

Special Survey of Statistical
Offices

The General Directorate for Census and Sampling, Department of Statistics, Ministry of Planning conducted a special survey during the period of Saur 18th to Jawza 12, 1345. The purpose of this survey was to study the staff, organization, working method, future plans and programs of the statistical departments and offices of government and private enterprises and agencies.

Two kinds of questionnaires were prepared and distributed:

i. on staff's age, sex, education and salary level and field of study; and

ii. contained two parts:

a) on age, sex, education and salary of the head of the statistical units; and

b) or organization, present and future (annual and long-run) plans and programs, and personnel requirement for the implementation of the programs.

The general conclusion arrived at from the analysis of the results of this survey is that the statistical offices and departments are, in general, characterized with limited organization, insufficient equipment and trained personnel, and as a result, incomplete and unsatisfactory programs and functions hindering the performance and progress of the enterprises.

The following agencies and enterprises were surveyed:

1. Directorate of Statistics, General Transport Department;
2. Directorate of Statistics, for Orders, Government Monopolies;
3. Office of Operation Statistics, Civil Aviation Department;
4. Directorate of Statistics, Ministry of Communications;
5. Directorate of Statistics, Ministry of Mines and Industries;
6. Directorate of Statistics, Ministry of Information and Culture;
7. Directorate of Statistics, Planning Dept., Ministry of Education;
8. Directorate of Statistics, Planning Dept., Ministry of Health;
9. Office of Statistics, Office of the Minister of Finance;
10. Directorate of Planning, Agriculture Statistics, Ministry of Agriculture and Irrigation;;
11. Department of Statistics, Ministry of Interior;
12. Department of Statistics and Planning, Ministry of Commerce;
13. General Directorate for Study and Research, Afghanistan Bank;
14. Directorate of Statistics, Afghan Textile Company;
15. Directorate of Statistics, Pashtany Tejaraty Bank;
16. Directorate of Statistics, Kabul Province Governor's;
17. Directorate of Statistics, Rural Development Dept., Ministry of Interior;
18. Agricultural and Mortgage Bank;
19. General Directorate for Population Survey, Ministry of Interior;
20. Directorate of Statistics, Chamber of Commerce;
21. Office of Statistics, B ank-i-Milli;
22. Department of Statistics, Ministry of Planning;
23. Directorate of Statistics, Ministry of Justice;
24. Directorate of Statistics, Ministry of Public Works; and
25. Ariana Afghan Airlines.

Organization:

The organization and statistical offices and departments in most of the agencies and enterprises surveyed, is incomplete and needs to be revised. For example, the Ministry of Finance, an important central agency for financial affairs of the country, is lacking an office specially for statistical information. Except a small division in the Minister's office and that is only for information for the Minister, other offices are handling their own information, and one has to collect data from various departments and offices of the Ministry. Similarly, the Ministry of Mines and Industries, responsible partly for extensive statistical activities of the Mining and Industrial sectors of the economy, there is only a directorate of statistics with very limited staff and organization. There are no statistical units in some other enterprises, e.g. Ariana Afghan Airline, Agricultural and Mortgage Bank, etc., while on the contrary data and statistical information seems to be vital for their activities and performance. One can argue, then, that, except two or three public or private enterprises, the organization of statistical offices and departments are, generally, not related to their field of activities or their methods of work (procedure). As such, their contribution to the progress and expansion of the enterprise and thus to the social and economic development of the country is very insignificant. Hence, 14 offices and departments (1-5, 9-13, 17, 19, and 22) of

the units listed above are supposed to collect, represent, analyze, and imply data and information for economic development and future programs of their related agencies. Other agencies are also using the data and information provided by these 14 units.

The other aspect of these statistical units is that the importance of statistics has been ignored in selection and appointment of the staff members of these organizations. Over half of the staff are persons with background and qualifications that are below baccalaureate, while the rest is also lacking, generally, any special or professional training in statistics. This situation has also affected adversely the proper functioning of the units and created lack of coordination and effectiveness. Nine units (1, 2, 11, 13, 14, 15, 16, 17 and 20) are following their pattern and programs without any ambition and tendency to bring changes and improvements in them in the future. Only four (4, 7, 8, and 9) on the basis of planned activities, and seven units (6, 9, 12, 19, 22, 23, and 24) without any specific plan, have claimed to expand their activities in the future.

Except four units (4, 7, 8, and 10) the rest have all avoided to give information about their personnel requirements in the future. These four units have shown their requirements for 7, 33, 12, and 500 persons for 5-7 year programs, respectively. The General Directorate for Census and Sampling, Ministry of Planning, has claimed to need 45 persons for its future programs.

Method of Data Collection by the Statistical Units:

The result of the study on methods of data collection by 25 enterprises (except Agricultural and Mortgage Bank and Ariana Afghan Airline) with regard to sources of data and its time-coverage is summarized below:

1. Collection of Data by Sourves:

   a. 14 enterprises (1-4, 7, 8, 10, 12-15, 17, 23, and 24) collect data directly from their branches and agencies; and

   b. six enterprises (5, 6, 9, 16, 20 and 22) collect data indirectly from other enterprises through communication or interviews.

2. Time-coverage of the Data collected:

   Time-coverage of data collection varies according to the nature of data and the pruposes of the enterprises concerned with. Broadly, one can classify:

Unit 7	collects weekly data
Units 12 and 22	collects 15-days data
Units 5,7,9, and 22	collect monthly data
Units 1,2,4,12,14,15,16,22, and 23	collect 2 month data
Units 22 and 24	collect quarterly data
Units 11 and 22	collect 6 month data
Units 6,7,10,12, and 22	collect annual data

No information is given by units 3,8,13,17,19,20 and 21.

3. Only units 7, 17, and 22 have provided information on their methods of data collection. Their method is simply to send prepared forms to the related sources.

Staff-Members of the Statistical Organizations:

The purpose was to study the age and sex combination, education and salary level of the members of the units. From 250 persons, in the organizations, 222 persons were actually employed with a sex composition of 214 males and only 6 8 females. The largest percentage of the employees fell within the age groups ranged 21-35 years, and a salary scale ranged Afs. 900-2100 per month.

Recommendations:

1. Reorganization of the Department of Statistics in the Ministry of Planning as a Central Statistical Organization;

2. Introduction of a Statistics Law;

3. Organization of new statistical units or reorganization of existing ones in the agencies and enterprises, and revision of their functions and procedures with the consultation of the Central Statistical Organization;

4. At least, University graduates, specially graduates of the faculty of economics, should be appointed as the head of the statistical units; and

5. Training of the staff and provision of incentives for them.

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APPENDIX (1)-Appendix Staff Members of the Department of Statistics
Ministry of Planning

No.	Name	Rank and Position	Education and Training	Present Duties	Employment Period
1	M. Y. Farand	5 in 2	Graduate of College of letters post-graduate studies in economic development	President of Statistics	
2	A. Siddiq Amir	6 in 3	Graduate of Econ. & econ. studies in Paris	General Director for National Accounting	11 years
3	Miss Raoufi	8 in 6	graduate of economics	member of Financial statistics Directorate	4
4	M. S. Hassan	7	Baccalaureate, Planning Course of Ministry of Education and one year study in Tehran (statistics)	" "	9
5	G. Ghaus	4	Baccalaureate, and three year study in Stanford, USA	Director of Foreign Trade Statistics	6
6	Miss Nazifa	8	Graduate of Economics, studying statistics for one year in Tehran	Member of Foreign Trade Statistics	4
7	Mahmud Shah	in 4	Baccalaureate, and one year study in London (Civil Servant Adm.)	Director of Transport and Communication stat.	9
8	Abdul Ahad	8 in 6	Graduate of Law, six month study of planning in Poland	Member of Directorate for Transport & Communication	4
9	M. Nasser	6 in 4	graduate of economics, post-graduate study in administration and commerce	Director of Banking and price statistics	6
10	K. A. Sultan	8	graduate of Law and studying in Tehran (statistics)	Member of Money and Banking	3½
11	M. C. Miakhale	4	Baccalaureate and advanced course on communication for two years	Director of Social Service Statistics	7
12	Miss Afifa	8 in 6	Graduate of economics	Member	
13	M. Sarwari	6 in 4	Graduate of science and 6 month studies in USA	Director for Agric. and Industrial Stats.	3

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APPENDIX IV(a)-2

1	2	3	4	5	6
14	K. Joyan	8 in 6	graduate of economics and one year study in France	member of agric. and industrial statistics	3 years
15	Malikzadeh	6 in 3	graduate of Faculty of Letters post graduate studies in Public Adm.	General Director for Census	9
16	M. R. Mayel	7	graduate of economics, one year study in US Census Bureau, studying in Holland	Director for Census and	7
17	M. Ashraf	9 in 6	Baccalaureate	Member	1
18	M. S. Noorzai	6 in 3	graduate of Law, six month study of language and management	General Director for Manpower Statistics	11
19	M. I. Afifi	8 in 6	Graduate of Economics	Member " "	4
20	M. M. Ali	6 in 5	graduate of Law, and 9 month study of language and public adm in Beirut	Director for Manpower Stat.	7
21	A. A. Elyas	8	graduate of Law, studying in US Census Bureau	Member of " "	4
22	Alimi	8	Baccalaureate, studying Demography (India)	Member of " "	5
23	G. S. Rasikh	5	Graduate of faculty of letters, studying demography in India	Director for Publications	4
24	M. A. Kargar	8 in 6	graduate of Law	Member " "	2
25	S. Qadruddin	10 in 9	Baccalaureate	Member " "	4

Translated from Dari
/ma
4/12/70

APPENDIX V

Public Finance (Statistics)

January 25, 1965

The government budget is of key importance in the operation of the Afghan economy. The flow of revenue in relation to expenditures has inflationary or deflationary effects on the economy. The sources of revenue and the directions of expenditure as well as the totals have important effects on the private as well as the public sectors. Reliable information for previous years is essential to guide decisions concerning revenue measures and spending policies. Current information within the year is essential to determine how budget decisions made at the beginning of the year are being executed. The Ministries of Finance and Planning not only need such statistics for their own operations but also have a responsibility to make the information available in convenient form for use by the Prime Minister and Council of Ministers. Da Afghanistan Bank and other interested agencies.

The Statistics Department of the Ministry of Planning should undertake the regular maintenance and gradual improvement of statistics on government receipts and expenditures and on internal and external borrowing.

In addition to collecting and tabulating the data provided by the Ministry of Finance, the Statistics Department should be continuously working with the Ministry of Finance to improve the statistics by devising adjustments for the purpose of applying more appropriate definitions and concepts; working for greater usefulness, completeness, accuracy and promptness of reporting and establishing the regular publication of monthly and annual data on a consistent basis.

The definitions of government receipts and expenditures used in the summary tabulations should be devised with care so that the resulting surplus or deficit is a meaningful indication of the net economic impact of government financial activities. This requires a considerable number of adjustments to the data provided by the Ministry of Finance. The attached paper on definition of budget receipts and expenditures lays down certain principles that should be adhered to and makes a number of specific recommendations for the kinds of adjustments needed. The tabulations of government receipts and expenditures used in the 1962-64 Survey of Progress and other recent tabulations done in the Ministry of Finance incorporate some of the recommended adjustments, but further refinement of the data is needed and the Statistics Department should collect the information with which these further refinements can be made. For example, present revenue tabulations exclude Ministry of Finance revenue category 900 because that category contains a mixture of items that are not properly counted as revenues, such as proceeds from external and internal borrowing and beginning cash balances, but include deposits into commodity assistance accounts maintained by the Central Bank because these deposits do represent government receipts from the public. However, certain transactions of the commodity assistance accounts have not been included in the present tabulations because of a lack of data. Under the agreement with the United States, R.G.A. expenditures for the local costs of the Kabul-Kandahar highway were counted in the budget as R.G.A. expenditures several years back, although the money, which has been sitting in an account, is even now only gradually being paid out to contractor employees. This leads to a serious distortion of statistics on government expenditures and actual cash deficits, overstating the deficit in the early period and understating it now. It is not known how widespread this practice is with respect to other U.S. Government-aided projects, but an attempt should be made to collect data on this and to make appropriate adjustments to both current and historical statistics. Likewise, a new adjustment will have to be devised to take care of deposits into the trust fund which will be set up for proceeds of sales of U.S. transportation loan trucks.

The procedures agreed to with the German Government for handling proceeds from German commodity assistance and the local costs of German-aided projects will also lead to a distortion of government receipts and expenditures unless a suitable adjustment is devised. Under the present arrangement, proceeds from German commodity assistance and the local costs of development projects financed by these proceeds reportedly will be left out of both the revenue and expenditure accounts of the Ministry of Finance.

Another problem that has been with us for many years but is without solution for lack of satisfactory data is the handling of USSR commodity assistance. In the budget at the beginning of each year, anticipated proceeds of Russian commodity assistance are counted below the line as a separate revenue item outside the revenue categories 100-800. However, the actual proceeds are merged with other revenues of the Government Monopolies and the Silo so that it is not possible to compare actual revenues with estimates made at the beginning of the year or to make other than a rough estimate of what actual proceeds have been. The Ministry of Planning should try to get actual data for past years and encourage the Ministry of Finance to set up new accounting procedures that will show this revenue item separate and distinct from other revenues of the Government Monopolies.

Considerable improvement is required in the accuracy of monthly statistics on government expenditures by agency for the ordinary and development budgets. There have been innumerable tabulations, no two of which have come up with the same figure. The Ministry of Finance does not regularly tabulate and distribute statistics on monthly government expenditures. These data are available only if someone from the Ministry of Planning goes to the Central Accounting Office at the Ministry of Finance and makes his own tabulation from the records. This problem will not be solved by issuing a letter or directive to the Ministry of Finance telling them to send us figures on government expenditures monthly, since they do not have the Statistics Department to draw up a monthly reporting form in cooperation and consultation with the Central Accounting Office. This will make the data more useful to both the Ministries of Planning and Finance.

A very major problem with the present finance statistics is the fact that the deficit calculated from Ministry of Finance revenues and expenditures differs enormously from the deficit calculated from Central Bank figures on the net government debit position with the Bank. No reconciliation of these two measures of deficit has ever been worked out. It is of the utmost importance to find the solution to this long standing problem. First of all, the government has made an agreement with the International Monetary Fund to limit the government deficit to a certain amount yet the deficit calculated from Central Bank records (which are the ones more apt to be looked at by the IMF) exceeded the deficit calculated from Ministry of Finance records last year by afs 300 million. It is necessary to discover the reasons for such a large difference before the R.G.A. can argue successfully with the IMF that the Ministry of Finance measure rather than the Central Bank measure should be used. Another important reason to work out the reconciliation is to have a much more current measure of government surplus or deficit. As things stand now, government revenue data are available from the Ministry of Finance about one month after the end of the month covered by the data, while expenditures data have a three to four month lag. If we understood the reasons for the difference between the Central Bank and the Ministry of Finance totals, we could use the Central Bank data on government position with the Bank (available shortly after the end of each month) to obtain a much prompter figure on government deficit and, implicitly, government expenditures. The time lag would be cut by three months, greatly speeding the flow of important data to the proper policy making officials.

Another project for the work program of the Public Finance section is the collection of better data on foreign loans and grants actually received in the past and statistics on the present foreign indebtedness adequate for the purpose of making a projection of future debt service requirements. The figures on foreign loans and grants used in the last Survey of Progress were estimates rather than actual figures and they can be improved on in several respects. We have given the Statistics Department a list of the information required from the Ministry of Finance before an accurate projection of future debt service requirements can be made.

A longer range project of the Ministry of Planning in this field should be to help and encourage the Ministry of Finance to collect and publish monthly public finance statistics regularly in a publication that would be automatically available to all interested persons inside and outside the government. This can be accomplished over a period of time by gradually incorporating statistical series that are developed in the Ministry of Finance's present monthly bulletin. This bulletin is now filled with a lot of less important intra-ministry material and is altogether devoid of any factual information.

As mentioned above, one man assigned to the public finance field should be quite adequate for the Ministry of Planning's purposes. Robert R. Nathan Associates team members have invested considerable time in coaching the staff member presently assigned to this statistical field in concepts, definitions, procedures, tabulations, etc. We have helped him set up a large data book containing all recent and historical statistics available in this field that were not in our possession, we showed him where to get the information needed to keep this data book up-to-date, and introduced him to all the officials in the Ministry of Finance and the Central Bank with whom he needs to deal in maintaining these data. The job of maintaining the presently available series should not take more than a few hours a month, so that the remainder of this person's time could be available for research and development in the problem areas listed above. However, this staff member has been assigned a number of other activities not related to public finance. As a result, he has not even been able to keep the existing series up-to-date, much less work on projects to improve these series. This staff member should receive close guidance and supervision in establishing procedures for regular maintenance of presently available series and, when this has become routine, in carrying out a longer term program of research and development.

APPENDIX VI

EXTRACT FROM A REPORT ON

STATISTICAL REPORTING PROCEDURES

IN THE

MINISTRY OF FINANCE

May, 1958

Prepared and Submitted by

Public Administration Service -- USOM/Afghanistan

SUMMARY OF FINDINGS

Visits made to the various departments were conducted primarily for the purpose of ascertaining the methods used in the gathering and dissemination of statistical information, with less emphasis placed at this time on the actual content of the information. This methodology was phrased in terms of what information is gathered, from where is it obtained, when obtained, how obtained (type of forms used, etc.), what analysis of the data is made, and to whom or where are the data sent. As a result of these visits the following general comments are made:

1. There is evidence of lack of training and experience on the part of the personnel who gather, report and use the statistical data. This condition stems in part from insufficient training in the area of arithmetic and computing, and from frequent shifting of administrative personnel (Mamurs and Directors, etc.) from directorate to directorate, and from department to department.
2. One of the more serious problems is the inadequate filing system and equipment. Important papers and documents are tied up in tape and piled on the floor. There is an overemphasis on the use of registers for the recording of information, which makes an alphabetical system of filing almost impossible, and requires excessive space since a register book must be retained as long as there remains one listing in it. Very little information is retained in the offices from which it emanates but is sent to the Ministry of Finance storehouse where it is inaccessible for the purposes of ready reference.
3. There is a noticeable lack of computing equipment, either adding machines or desk calculators. In the course of visits to the directorates in the Ministry of Finance no such machines were observed in any of the offices. This is a very serious lack since a great deal of statistical work requires the addition of categories of items which may be randomly dispersed throughout the page of a register--if an adding machine is not available this operation requires either the addition of such figures by memory or the separate writing of each figure, both inaccurate and slow processes.

4. From a technical point of view the nature and design of some of the forms used leaves something to be desired.

   A. The nature of the forms suffers from:

      (1) The low grade of paper used;

      (2) The poor quality of the printing;

      (3) The fact that many forms are not printed;

      (4) Some forms are printed in Persian, some in Pushto, and some in both. It is not uncommon for an employee to be unable to read the headings in one or the other language.

   B. The design of the forms is not always indicative of the information to be listed on them, for column headings are not specific, and there is overemphasis on columns entitled "Remarks" or "Explanation" which are used for listing certain specific and important data.

5. There is a lack of means for duplicating information on several copies of a form. The present system is to write out in longhand the same information on each copy--there appears to be no carbon paper in use at the present time. It is obvious that the present method of "duplicating" leads to considerable extra work, most of which is so uninteresting as to result in frequent mistakes.

6. The receipt and transmittal of information is at the present time both tardy and intermittent.

7. The purpose in the collection of information and data is not always clear to those who collect, report or receive it. Information is collected for a purpose, and this purpose should be made known to all those persons involved in the collection process.

8. There is a serious lack of data analysis in terms of:

   A. Computations of section (directorate or department) totals and computation of time (monthly, quarterly, etc.) totals which would permit a more up-to-date and refined analysis of the total situation. It is recognized that this is partly due to the previously mentioned lack of computing equipment.

   B. Computation of current cumulative totals and provision for their posting to the presently used forms and registers.

C. Basic informative and research studies in terms of inter-analysis of data, with respect to that which emanates only from the Ministry of Finance or partly from the Ministry of Finance and partly from other Ministries and agencies. The mere collection of vast amounts of data is useless unless they are collected for a known purpose, whether that be only in terms of a pure information source or in terms of an analytical and research approach.

9. Little use appears to be made of the presently accumulated data for even basic informative purposes--the presently collected records on fiscal transactions are "made available" to the Minister but there is no channel for the general dissemination of the basic material that is gathered.

10. There is a tendency to "control" and "supervise" expenditures and operations of departments in the Ministry of Finance by simply resorting to a comparison of present data with that collected in a previous month or other period. To merely compare current with previous expenditures or revenues and to write enquiries asking the reason for increases or decreases is not "controlling" in a desirable sense.

11. Office working conditions are poor. The offices are overcrowded, with sometimes little space in which to walk between the desks or in which to keep documents and important papers. The lighting system is also unsatisfactory.

APPENDIX VII

TRAINING IN STATISTICS UNDER U.N.

Name	Country of Training	Ministry	Field	Year	Duration in Months
1. Statistics					
Sahobjam Sarwari	Ceylon	Commerce	Statistics	1953	12
Abdul Waheb Dilawari	Ceylon	Commerce	Statistics	1953	12
Hamidullah Tarzi	Ceylon	Commerce	Statistics	1956	2
Abdul Kader Kharuty	Ceylon	Finance	Statistics	1953	12
Mohd Yusuf Ayubi	India	Finance	Statistics	1956	2
Mohd Ghaus Alizo	India	Finance	Statistics	1956	2
Mohd Osman Mohsen	Ceylon, U.K., India	Mines & Industries	Statistics	1954	12
Fateh Mohd Terzi	U.S.S.R	Mines & Industries	Industrial Statistics	1956	4
Abdul Ali	Ceylon	Education	Statistics	1951	6
Hazeqa Safi	Far East	Education	Educational Statistics	1969	9
Mohd Nabi Salehi	India	Education	Statistics	1956	12
Abdullah Younossi	India	Da Afghanistan Bank	Statistics	1956	2
Mohd Jan Azizi	India	Interior	Statistics	1969	12
Mohd Omar	India	Agriculture	Statistics	1952	12
Fazl Rahim	India	Agriculture	Statistics	1952	12
Sayd Aziz Mahmoodzaha	India	Public Health	Statistics	1952	3 1/2

TRAINING IN STATISTICS UNDER U.N. (continued)

Name	Country of Training	Ministry	Field	Present Position	Year	Duration in Months
2. Census						
Mohd Yar Gharanie	Japan	Interior	Census Training		1958	3 1/2
Mohd Jan Azizi	India	Interior	Demography		1962	12
Mohd Ismail Ibrahimi	U.S. Bureau Census	Interior	Population		1968	10
Said M.S. Emadi	U.S. Bureau Census	Interior	Census		1968	10
Qudratullah Safi	U.S. Bureau Census	Interior	Demography		1969	10
Najibullah Amerikhal	U.S. Bureau Census	Planning	Demography & Research		1959	12
Ghulam Sarwar Rasekh	Chembro Demographic Training Center, India	Planning	Demography		1969	11
Sayed A.H. Alemi	Chembro Demographic Training Center, India	Planning	Demography		1969	11
Ghulam Naqshbandi	Japan	Agriculture	Census Training		1958	3 1/2

Appendix - (A) Training in Statistics Under USAID

Name & Father's Name	PIO/P No.	Country of Training	Field of Training	Present Position & Business Address	Duration of Training
Agriculture -- Project # 306-11-190-002-1-					
AFZALI, Mohd Omar S/O Haji Mohd Afzal	60098 40170 70134	U. S. A. U. S. A. Mexico and Phillipines	Ag Statistics Ag Extension Wheat and Maize Program	Dir. Gen. of Extension Dept., Min of Agr., Kabul	8/56 to 8/57 12/64 to 10/65 3/67 to 4/67
Eng. & Transp. -- Project # 306-56-370-036-1-(CAAG)					
RAD, Yar Mohammad S/O Khair Mohammad	60105 70046	U. S. A.	Statistics	Chief, Statistics Section, Air Authority	8/66 to 9/67
HERATI, Ghulam Sakhi S/O Haji Ali Khan	60069 70047	U. S. A.	Basic Statistics	Statistical Dept., Air Authority	8/66 to 9/67
Public Admin. -- Project # 306-51-750-029-1-					
FARAND, Mohd Yusuf S/O Mohd Yaqub	20149 30085 40007	U. S. A.	Social Science	Pres., Statistics Dept., Ministry of Planning	8/62 to 2/64
GHIASI, Abdul Raouf S/O Abdul Ghiasi	40147	U. S. A.	Banking research	Gen. Dir., Da Afghanistan Bank, Research Dept.	5/64 to 8/64
KESHAWARZ, Sher Agha S/O Akhtar Mohd	70273 70250	Lebanon	International Statistical Course		10/61 to 5/62
NASSIR, Mohd S/O Mohd Nader	50130	Iran	Public & Business Administration, Statistics	Min. of Planning	9/65 to 10/66

Name & Father's Name	PIO/P No.	Country of Training	Field of Training	Present Position & Business Address	Duration of Training
Public Admin. -- Project # 306-51-750-029-1-					
OEMANY, Mir Abdul Qadir S/O Ghulam Qadir	50145	Iran	Accounting and Statistics	Acct. and Inspection Prime Ministry	2/66 to 2/67
PANJSHERI, Abdul Raouf S/O Habibullah	50146	Iran	Government accounting & statistics	Inspector, Prime Ministry, Post Audit Department	2/66 to 3/67
WASEY, Abdul S/O Sidiq Younossie	20060 10136	U. S. A.	Manpower & Labor Statistics	Resigned from RGA	12/61 to 8/63
Public Admin. -- Project # 306-11-755-080-1-					
SAMI, Abdul S/O Wali Mohammad	70106 80034	U. S. A.	Statistics and economic policy and planning	Just returned; no position as yet	9/67 to 8/68
Public Admin. -- Project # 306-11-720-080-1-					
MAYEL, Mohd Rafiq S/O Mohd Asif	080-70149	U. S. Bureau of Census	Census Surveying & Sampling		9/68
Public Admin. -- Project # 306-51-750-029-1-					
AMERKHAIL, Najibullah S/O Ghulam Mohd	40024	U. S. A.	National income acct.	No longer at Kabul Univ.; now studying in Germany	11/63 to 3/68

Prepared at the request of Mr. Schiro

UN Assistance to the Government of Afghanistan
in the Fields of Economics, Statistics and Census

APPENDIX IX

A. EXPERTS

Agency/Programme Project No. Project Title	Post	Incumbent	Duration of Assignment
UN/TA 212-57 Economic Survey (Economic Development and Planning)	1) Senior Economic Adviser	M. Hassanein	1957 - 1962
	Senior Economist	I. A. Velitchko	1962 - 1964
	" "	A. Novikov	1964 - 1966
	2) Asst. Economic Adviser	S. Storgaard	1959 - 1961
	Asst. Economist	M. Y. Kazi	1961 - 1966

Purpose: to assist, advise and teach in the fields of economic development, economic planning and statistics, including advice in connection with the Five-Year Plans and the 'Survey of Progress'.
(NB - A single UN economic adviser was provided from about 1952).

UN/TA 280-63 Statistics (continuing as: UN/68/1 Population Census)	1) Population Census expert	D. B. Climenhaga	1964 - 1967
	Population Census (Head)	O.J.C. Francis	1967 - 1968
	2) Assoc. Population Census expert	W. Burger	1964 - 1966
	-do-	L. O. Vidaeus	1968 - 1969
	-do- (Data processing)	A. Peiper	1968 - 1969
	3) Population Census expert	P. C. Mathur	1967 - 1968

Purpose: to assist in the taking of a Kabul Census, and in the preparation for a national census.
12 expert man-months programmed for 1970, 1971 and 1972, but so far not under recruitment.

COLOMBO PLAN		
Agricultural Statistician	October 1968-October 1971	To advise the Ministry of Agriculture on agriculture census 1 expert for five years
IMF		
Advisor to the Governor Da Afghanistan Bank	1968 - 1970	To advise on financial and monetary matters, especially balance of payments and foreign exchange.
Accounting Advisers Da Afghanistan Bank	1966 - 1970	To provide assistance in the modernization of the accounting systems of the Central Bank and its branches and to introduce greater mechanization
UNESCO		
UNESCO Team of 6 Advisers Ministry of Education		Teacher education and assistance in education statistics.

APPENDIX X

On Postponing the Population Census of Afghanistan*

Bruno A. Schiro
U.S. Bureau of Census

The actual Census enumeration takes place in usually a two to three week period and the field operation is over. Thousands of enumerators participate for only a short time. They must be recruited quickly, trained thoroughly, and supervised thoroughly. They must be told what area of the country they are supposed to cover and assurance must be build into the assignments such that no part of the country is left unassigned, nor is any part assigned to more than one enumerator. For the work to be done in two or three weeks the assignment for a enumerator must be not longer (in terms of number of people and distance to travel) than what can be handled in the designated time. They must be equipped with maps showing the boundaries of their assignment area. They must have sufficient questionnaires available at the time of enumeration. These questionnaires must be printed well in advance of the Census date such that they can be distributed to all parts of the country by Census date, and with a lead time for the provincial offices to assess whether they have received the predetermined requirements. Field offices and storage facilities must be available. Printing time for the millions of questionnaires must be known precisely and ample allowance made for delivery assurance. Depending on printing capacity, perhaps 6 to 9 months may be required. The questionnaire, the instructions, the many control forms must be finalized by printing time start. To achieve this deadline all pretesting work must begin at least 18 months earlier than printing date to finalize question wording, perhaps in several languages, to finalize instructions and training devices, to finalize supervision and quality control procedures and to finalize control, receipt and despatch forms and procedures, by printing date. We are now two to two and one-half years before census date. To begin pretesting 18 months earlier than printing date, user requirements must be selected and discussed with wide participation throughout government and (hopefully) the private sector.

*See also Section 4.23 (b)

These user requirements must be translated into table formats, and geographic levels by which the data are required. Data requirements by geographic levels will determine what must be collected in the Big Count as well as the type of data processing facilities required. The type of processing will determine the nature of the questionnaire, and the type of codes to be preprinted if machine processing is to be used. These decisions must be reached at least 6 months prior to pretesting time and cannot be changed, except for minor details. Data processing equipment must be ordered sufficiently in advance to assure delivery, and training of staff to operate the equipment must be started in time to assure trained staff requirements by one month after Census date. However, staff to design the tabulation system must be available at the time user requirements are being discussed. They must receive training abroad at least one year prior to that date; similarly other top planning staff must be trained and in place by this date. This would include sampling experts, survey procedures experts, persons trained in Census Administration, in Census Training Methods, in Census Questionnaire Design, in Census Publications Procedures, Census Geography and Map Control Procedures. We are now four to four and one-half years from Census date.

We have been describing a complete logistics problem that starts with a small corp of experts, that gradually builds up in complexity to have field staff to do mapping work and pretesting work, requiring vehicles, to training of trainers, who train other trainees and supervisors in a pyramidal fashion who finally recruit, train and supervise the thousands of enumerators, who within a few weeks have completed the field enumeration. Then the tabulation starts with punch operator training and editing and coding operations which may continue for two to three years depending upon the number of staff and complexity of tabulations required. With the tabulation completed we then have the demographic skilled staff to analyze the results.

The institution which has been described with its corp of skilled personnel, field capability, training, tabulating and publishing capability is not something

that can (or should) be thrown together once every ten years to conduct a census and then to be dispersed until ten years later at which time it is again resurrected to prepare another census. This institution must develop gradually, it must preserve the skills and experience gained in the previous census, by having an intercensal program of sample surveys to provide monthly, quarterly and annual data so essential to the social and economic development process. Experienced staff is the most costly and difficult resource to develop, and once developed must be preserved and improved. Only then can the Census program with its massive requirements once in 10 years in terms of temporary (2-3 week) enumerator staff, its requirements for a field organization, for tabulation, etc., be competently managed, and efficiently and economically executed.

This suggests then that a permanent Central Statistical Office with monthly, quarterly and annual statistical survey program requiring the skills, facilities and field organization comparable to that required, but at expanded dimensions once every ten years to conduct the Census, should be the agency responsible for the Population Census. This same agency would also be responsible for the Agriculture Census program, for the Industrial Census and for the Business Census that will eventually be required - say within the next 20 years - by the RGA. The manner in which these various censuses are spread over the ten year cycle will determine the degree of efficiency by which the central planning staff is utilized and will even out the peaks and valleys of requirements of field organization, data processing organization, etc., accordingly.

Since it is unlikely that the RGA can develop the staff skills and the institutional requirements to conduct such an operation as discussed above before five years from the establishment of a Central Statistical Office, it is recommended that the target date for a full National Census be set at the end of the Fourth Five-Year Plan, <u>or later</u>.

STATISTICAL TRAINING FOR FOREIGN PARTICIPANTS

Lawrence Marzetti, Chief, Overseas Consultation Services
International Statistical Programs Office
U. S. Bureau of the Census

I. Training Opportunities

During the past twenty years, considerable benefit has accrued to statistical agencies in developing countries through acceptance of foreign training opportunities. Such training has been proveded by multilateral organizations in regionally established statistical training centers, and by various governments on a bilateral basis. In the forefront has been the willingness of U. S. Government agencies, such as the Bureau of the Census, the Bureau of Labor Statistics, the Office of Business Economics, Department of Commerce, and the Department of Agriculture in making available its experience, staff, and resources in providing specialized statistical training programs within their areas of specialization, case study, workshops, in-service as well as academic training.

II. Bureau of the Census Programs

A. Background

Over the past twenty years, the Bureau of the Census through its International Statistical Programs activity has provided specific training programs to over 1300 foreign participants, attending its courses

for six months or longer periods. Literally thousands more have been provided training programs, observations, and consultations from a few days to three months. The Bureau has received participants from over 100 countries through the years. Whereas the Bureau has received scores of participants from the middle management to policy level staff members from each of several countries, very few Afghans have applied for its statistical training services.

B. Types of Programs Offered

1. Technical Training Programs

a. Joint FAO/US Agriculture Census Training Program (conducted in collaboration with the U.S. Department of Agriculture).

b. Population Census Planning and Demographic Research.

c. Economic Census and Statistics.

d. Sampling and Survey Methods.

e. Data Processing.

f. Foreign Trade Statistics.

The above courses are normally ten to twelve-month programs beginning in September of each year.

2. Workshop Programs

These are case study activities designed to train qualified technicians to be instructor-directors of national training programs. Names chosen for case studies represent mythical countries which, for training purposes, are presumed to be carrying out statistical activities.

a. "Atlantida" - Household Sample Surveys (two-month programs)

b. "Agrostan" - Agriculture Census Planning (three-month program)

c. "Providencia" - Economic Censuses (two-month program)

d. "New Florencia" - A case study for 1970 Censuses of Population and Housing.

3. Academic Opportunities Program

The Bureau of the Census will place, in American universities, qualified statisticians from other countries who will pursue studies in statistics or related fields. These opportunities are designed to meet the special need of statistical offices and other organizations in developing countries for university-trained statisticians.

4. Special Courses

a. Census Tabulation System (CENTS)

Beginning June 1, 1970 the Bureau of the Census will offer for the first time a special workshop for eight weeks that will cover instruction and actual computer work on new computer programming techniques. The Bureau has developed a software tabulation package that may be used by participating countries, and will supply a neew to those countries which have asked for such technical assistance. The package, name CENTS, for Census Tabulation System, will be directly applicable to the IBM System 360/25, 360/30, 360/40, and 360/50 computers and can be tailored to fit the tabulation needs of most countries. CENTS has been designed for use in the 1970-1971 world-wide censuses of housing and population.

APPENDIX XII

Prepared by Mr. Louis Lung
Chief of Mission ASMIC-CINAM and
Mr. Paul Lalande, Biological Geographer
(Includes a law classification possible from photo interpretations)

COMPUTATION OF CULTIVATED AREAS

1 - OBJECTIVE

To compute the area of cultivated lands

- by categories of cultivation
- by administrative divisions

2 - PROCESS

Recognition on topographical maps, photomaps and stereoscopical maps of the cultivated lands; computation of the areas with a planimeter.

3 - IT IS INTERESTING

to make the land and resources inventory in order to:

- in the short run reach a fair evaluation of the return of the land tax

- in the long run prepare agricultural and regional planning

4 - AGENCIES CONCERNED

- Ministry of Planning
- Ministry of Mines and Industries (Cartographic Institute)
- Ministry of Interior (Department of Land Inventory)
- Ministry of Agriculture and Irrigation

5 - ORGANIZATION

Since several Ministries are involved, it is suggested to create a special "task force", and "ad hoc" Committee appointed by and working under the authority of the High Economic Council.

5.1 - COMPOSITION

- one representative of each Ministry concerned

- experts appointed for their knowledge and qualification with consultative voice.

5.2 - MANAGEMENT

The "ad hoc" Committee will have:

- a President responsible for the performance of the task

- a Secretariat held by the Ministry of Planning

The control and supervision of the practical tasks would be performed by M. LALANDE acting as a Consultant

6 - BASIC MATERIAL

- Stereoscopic photomaps (available at the Cartographic Institute)
- photomaps to the 1/50.000th and to the 1/100.000th (-do-)
- topographical maps to the 1/100.000th (available at the Cartographic Inst)
- Vegetation map to the 1/500.000th (available at M. LALANDE's)

7 - NECESSARY PERSONNEL

- 3 good Cartographers
- 3 qualified assistants

8 - LOCATION

The Committee would meet and the work will be done in the Cartographic Institute where two independent rooms would be at their disposal.

9 - DELAY TO PERFORM THE COMPUTATION
12 months

10 - BUDGET

A Budget will be prepared forecasting:

- the necessary furniture and specially special closets with horizontal drawers to keep maps
- The necessary tools and specially stereoscopes to read the steroscopic maps
- the print of stereoscopic maps, photomaps, topographical maps of cultivated areas.
- Miscellaneous office instruments
- etc.

OBSERVATION

This Committee could also be given the task to draw on the topographical map to the 1/50,000 the boundaries of administrative divisions and subdivisions (Walli, Okoumali, Alakadari, etc...)

To perform such a task it would be necessary for cartographers to go on the spot and interview many local personalities with the participation of high ranking offices from the Ministry of Interior.

Approximate delay: 2 years.

Ministry of Planning
Kabul May 10th 1970

85

Classification of Lands

1 - First class orchards and vineyards

Intensive production - well taken care of - well irrigated when necessary - well located near cities.

Production: mainly fleshy fruits: grapes, oranges, lemons, grapefruits, apricots, peaches, pears, apples, cherries, plums, pomegranates, mulberries, figs and almonds.

2 - Lands cultivated with wheat and rice every year. Very well irrigated, fertile.

2 crops a year with every 2 or 3 years a period of rest or intermediate cultivation (clover, alfalfa)

3 - Lands cultivated with wheat and a second crop other than rice (corn, cotton....) every year.

well irrigated

2 crops a year with every 2 or 3 years a period of rest or intermediate cultivation (clover, alfalfa)

Lands cultivated with vegetables, melons, ...usually as a second crop.

4 - First class forests.

- Production: wood for carpentry
tall pine trees, cedar tree, piecea...

Accessibility: road closedor under construction without excessive cost

- 2nd class orchards

Production: dry fruits, nuts, etc.
or fleshy fruits without intensive production,
mulberries, hambluck, etc.

- clear pistachio forests in the North

- Gelroza forests. (Pine nuts)

5 - Lands giving only one crop a year because of lack of water

Production, wheat, corn...
- First class pasture lands in low valleys or low places

6 - Lands for dry farming in the Northern or Azzarodjat able to give one crop of wheat every year with a period of rest every 2 or 3 years.

- 2nd class forests

Production: wood for heating.

7 - Lands for intermittent irrigation

(every 2 or 3 years) or dry farming with low yield
Production: usually wheat

8 - 2nd class pastures

- steppes, steppes with some trees, clear forests in humid regions of Nouristan and Pakita

- steppes, steppes with some trees, clear forests in dry regions between 2.000 and 3.500 meters altitude

9 - 3rd class pasture lands

- steppes, steppes with some trees, clear forests in dry regions under 2.000 meters altitude

- subalpine and alpine steppes in high mountains above 3.500 meters altitude

10 - 4th class pasture lands

- degraded steppes near big centers

- subdesertic and desertic steppes