

# MIMAP Project Philippines

Micro Impacts of  
Macroeconomic Adjustment  
Policies Project

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## Monitoring Systems for Poverty Tracking

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# **MONITORING SYSTEMS FOR POVERTY TRACKING\***

**by**

**Celia M. Reyes\*\***

## **1. MONITORING POVERTY IN THE PHILIPPINES**

### **1.1 Impact of Macroeconomic Adjustment Policies**

The analysis of the micro impacts of macroeconomic adjustment policies is quite new. It developed out of the concern that adjustment policies adopted by governments to correct macroeconomic imbalances have affected various groups in the economy differently. The experience of several countries who have undertaken adjustment policies have indicated that these policies tended to be deflationary and that most of the adjustment costs have been borne by the more vulnerable groups. The predominantly deflationary nature of adjustment policies led to depressed employment and real income resulting to higher poverty incidence. Moreover, some macro policies have direct negative effects on the welfare of these vulnerable groups (Cornia, Jolly and Stewart, 1987).

In response to the search for alternative adjustment paths that would minimize the social costs, the Micro Impacts of Macroeconomic Adjustment Policies (MIMAP) Project was conceived. Under Phase I of the MIMAP Project, Lamberte et al (1991) developed a general framework for analyzing the micro impacts of macroeconomic adjustment policies. Their main finding was that there were many studies looking at the impacts of macroeconomic adjustment policies on macro aggregates and also several studies examining the proximate determinants of household or individual welfare. However, there was very little research linking the two sets of studies together.

The MIMAP Phase II Project was able to identify the links between macroeconomic adjustments policies and households/firms. Moreover, a set of indicators were identified that could monitor the welfare status of the households. Unfortunately, empirical testing of these hypothesized relationships and monitoring of these indicators were not undertaken because of the inadequacy of the existing data systems and quantitative models in the Philippines. Hence, MIMAP Phase III was developed.

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The overall goal of the MIMAP Project is to provide policy makers with a good information base on the possible impacts of macroeconomic adjustment policies at the firm, household and individual levels, particularly those belonging to the vulnerable groups. This will be achieved by developing and institutionalizing a monitoring system consisting of a set of macro and micro level indicators.

## **1.2 State of Monitoring of the Welfare of Vulnerable Groups**

The review of Lamberte et al (1991) points out the lack of a monitoring, information and feedback system to assess the impact of macroeconomic adjustment policies on the micro level. While there are regular and timely data on macro variables such as inflation rate, exchange rate, and trade balance, there is no systematic and regular collection of information on the "human dimension".

Data on household/individual welfare can be obtained from censuses, surveys and administrative reporting systems of various national agencies. The Family Income and Expenditure Surveys of the National Statistics Office provide data on family income every three years. They become the basis for the national and regional estimates of poverty incidence. The labor force surveys of NSO generate quarterly employment figures for the Philippines, the regions, and the provinces. The Census of Population and Housing conducted by the NSO gives information on the number of makeshift houses for practically all barangays every 10 years. The National Nutrition Survey of the Food and Nutrition Research Council yields estimates of the prevalence of malnutrition every 5-6 years for the Philippines and the regions. There are additional surveys which provide data on other aspects of the well-being of the population.

The censuses, however, are too infrequent to provide regular and updated information on the welfare status of the population sub-groups. Moreover, the sampling design of many of these surveys allow estimates of the variables only down to the provincial level. What are needed by policymakers and local government planners are data for municipalities and even barangays. The coverage and reference periods of these surveys are different, making it impossible to get a comprehensive profile of the population subgroups at a specific point in time. Moreover, the collection of data is few and far between, and processing adds a few more years, so that its usefulness for policy design diminishes. On the other hand, the administrative reports usually are delayed and incomplete in coverage. Thus, the existing sources of information are insufficient to meet the requirements of a MIMAP monitoring system which calls for regular and frequent monitoring of the welfare conditions of the vulnerable groups.

Presently there is no known established statistical system at the barangay level where information is regularly collected for the use of the local leaders. Government agencies, such as the Department of Agriculture, Department of Agrarian Reform,

Department of Health and the Department of Local Government undertake some data collection for their own needs. In some barangays, some data collection is undertaken on an ad hoc basis to satisfy their requirements for reporting and planning.

Gironella et al (1993) cites several reasons why statistical information has not been produced nor effectively utilized at the village level. One is the lack, if not the absence, of training of the villagers on the production or use of these statistical information for planning and decision-making. Second is the statistical information provided is at a higher level of disaggregation for it to be useful at the village level. Third is the statistical information may not have reached the community due to poor communication/transportation services in the area. Fourth is the environment for objective planning and decision-making at the village level has not been given the attention and support it needs.

In an assessment of existing and proposed monitoring systems of government agencies and NGOs, Reyes and Alba (1994) noted the following:

1. There is a great demand for community-based monitoring systems. Government agencies and nongovernmental organizations have responded to this demand by setting up their own monitoring systems.
2. Almost all of the monitoring systems have some of the minimum basic needs indicators. However, they favor input indicators over output indicators. And while many of them include indicators relating to the provision of credit and other inputs, few attempt to measure the effect of these inputs on the welfare status of the beneficiaries.
3. The monitors being tapped to collect the data consist of local government unit personnel.
4. Existing monitoring systems have very limited geographical coverage. Only a few provinces are included in most if not all of the existing and proposed monitoring systems. There is less convergence when we get down to the barangay level. Thus, the chances of utilizing information from the different systems to provide a comprehensive picture of a barangay or even a province are very slim.
5. The collection of data is coterminous with the lifetime of a specific program/project. Consequently, there are no time series data on socioeconomic variables.
6. Monitoring systems of NGOs sometimes focus of specific groups that are not necessarily vulnerable. Some NGOs are mandated by their sponsors to assist only certain groups.

7. Most NGOs do not maintain their presence at the lower administrative levels, i.e., barangay and municipal.

Thus, we find that there are bits of information from many of these community-based monitoring systems but they are not consolidated in such a way that they become useful for policy-making.

### **1.3 Proposed Monitoring Systems**

Since the present statistical systems does not provide for regular and frequent information on the welfare conditions of specific population subgroups (either functional or geographical groupings), it is necessary to develop monitoring systems that would provide the required information. MIMAP has identified three approaches that would provide policymakers with a good information base on the possible impacts of macroeconomic adjustment. These are: (1) the installation of a community-based monitoring system in the barangays, (2) extraction of these items of information from national surveys, and (3) regular surveys, e.g. a rider to a national survey.

At the time that MIMAP was proposing this community-based monitoring system in 1992, there was yet no initiative on the part of the government to go into this. However, more recently, many government agencies have realized the need for a set of indicators to monitor the welfare status of the population on a regular basis. This is an offshoot of the present administration's program towards poverty alleviation. It is very likely that a community-based monitoring system will soon be institutionalized.

Despite the eagerness of the different government agencies to install monitoring systems in many barangays, the fact is that it will take some time for these community-based monitoring systems to generate the desired reliable information on the welfare status of the population, even for just selected population sub-groups.

To address the immediate needs of policymakers and local planners, it becomes necessary to look at the available data from existing censuses and surveys, particularly those that are regularly conducted. The National Statistics Office (NSO) conducts the Census of Population and Housing, the Family Income and Expenditure Survey, the Labor Force Surveys, among others, periodically. It would be very desirable if data for smaller areas e.g. municipalities, can be obtained from these censuses and surveys. Using some statistical techniques, the MIMAP team is now exploring the feasibility of generating statistics for municipalities from surveys that are designed to provide national, regional or provincial data only. The initial results have to be validated but they seem to be promising.

Another alternative is having a survey to generate the desired information. Since it would take some time to implement a community-based monitoring system on a large scale, a complementary monitoring system can also be utilized to provide policymakers with the needed information. A rider to a nationwide survey, which could be faster to implement, can provide data for a wider geographic area. The Integrated survey of Households (ISH), which is conducted almost every quarter primarily to generate data on labor force and employment, is a possible vehicle for such a survey.

Section 2 of this paper provides some details about the proposed extraction of small area statistics from existing surveys and the proposed rider to the ISH. Section 3 discusses the proposed community based monitoring system. Section 4 presents the results of the validation of some of the indicators being considered for inclusion in the poverty monitoring system. The new initiatives of the government in poverty monitoring are presented in Section 5.

## **2. SURVEYS FOR POVERTY STATISTICS**

### **2.1 Generation of Small-Area Statistics**

In the past, the government relied on a centralized planning scheme where planning was done mostly at the national level. Thus, data disaggregation at the regional and provincial levels had been sufficient. However, with the advent of decentralization, there is a need for data at the municipality and even barangay levels.

One of the major limitations of existing surveys is that they provide estimates only for national, regional and sometimes provincial levels. Small area estimation techniques can be used to generate estimates of selected indicators for municipalities. Barrios (1996) tries several methodologies including: (1) synthetic estimation, (2) regression estimator, (3) base unit method, and (4) structure preserving estimation. Data on income, employment, literacy rate, school attendance and housing indicators are generated for the municipalities of Laguna and Negros Oriental. The estimates still have to be validated to determine which methodology is more appropriate for specific indicators.

### **2.2 Household Survey**

A rider to a nationwide survey can provide data for the poverty indicators<sup>1</sup>. The Integrated Survey of Households (ISH), which is conducted almost every quarter primarily to generate data on labor force and employment, is a possible vehicle for the poverty indicators rider.

*Coverage.* The proposed rider will cover sample households in sample barangays. Given the present sampling design of the ISH, this would provide estimates of the welfare status of the population disaggregated by rural/urban category and by province. Alternatively, a different sampling scheme can be employed in areas where there is a preponderance of vulnerable groups. Surveys minimize the loss of information arising from averaging over the whole population, and thus, provide a clearer picture of what is happening to these groups.

*Indicators.* The monitoring system will provide data for the MIMAP indicators previously identified. Since employment and income are already contained in the core module, the rider will consist of a few additional indicators. Other regular surveys and riders of the NSO can also be a source of additional information for the sample households. In fact, some of the MIMAP indicators are already being collected in these surveys. This further lessens the scope of the proposed MIMAP rider.

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<sup>1</sup> Based on the paper by Reyes on "Monitoring Systems for MIMAP", 1995.

*Flow of information.* The NSO will undertake the survey of households as a rider to the ISH during the same quarter each year. Since the acquisition of accurate data on nutrition requires some specialized knowledge, information will be obtained by NSO personnel from the administrative reports of the Barangay Nutrition scholar or midwife assigned to an area.

Processing will be done by the NSO as a standard operating procedure. Barangays covered in the survey will be provided with the results from their areas for their own planning needs and as a means to validate the survey results. The results of the nationwide surveys will be made available to policymakers.

### **3. THE PROPOSED COMMUNITY-BASED MONITORING SYSTEM**

#### **3.1 Components of a Community-Based Monitoring System**

Florentino and Pedro (1992) define the distinctive character of the MIMAP Monitoring System in that it:

- Focuses on poor households and disadvantaged population groups.
- Disaggregates the collected information into functional groups.
- Adopts the concept of mobilizing and developing the capability of communities for data generation and utilization.
- Reports the data collected to the next higher geopolitical level for immediate intervention to address welfare gaps among the vulnerable groups, and ultimately reaches macroeconomic planners in order to influence adjustment programs.
- Creates and maintains the MIMAP data banks at each geopolitical level.
- Utilizes the information generated by monitoring systems already in place as a support indicator system.

#### **Issues**

While the basic features of the MIMAP Monitoring System have been outlined by Florentino and Pedro, there are still some issues that have to be resolved.

***What kind of data should be collected?*** The data collected should provide reliable information on the welfare conditions of the vulnerable groups.

There are issues related to the measurement of welfare status. No single index of welfare status can be used. UNICEF recommends the "Under 5 Mortality Rate (U5MR) as the best available single indicator of overall social development since most of the factors that define it comprise the essential needs of all human beings" (Florentino and Pedro, 1992). The U5MR reflects not only the nutritional and health status of children but also such determinants as nutritional and health knowledge and practices of mothers, level of immunization, available maternal and child health services, income and food available to the family, the availability of clean water, and the state of environmental sanitation. Nevertheless, because its coverage is broad, other indicators are needed as supplements in order to interpret its movements. Thus, it seems that one needs to consider several

measures or indicators to gauge the conditions of the household or individual and to capture the multi-dimensional character of poverty.

A related issue is how sensitive these indicators are to changes in macro policies. Since we would like to modify current policies that inflict great costs to the vulnerable groups, we need know their impact on these groups immediately. Therefore, indicators that are sensitive to policy changes are preferred even if they measure only one facet of human welfare.

Having identified a suitable set of indicators, there are problems ranging from lack of data to inconsistency in the definitions or estimation methodologies. Srinivasan (1992) points out the difference in coverage, the biases, and measurement errors in national accounts and survey data related to income distribution.

There is also the issue regarding the merits of "self-rating" versus "objective rating". In the former, the individual rates himself and this rating is used to distinguish his status. The Social Weather Station, for instance, uses this approach in its regular surveys to distinguish between the "poor" and the "non-poor". The objective rating, on the other hand, distinguishes the status of the individual based on some criterion or poverty line. Mangahas (1992) points out that the latter is as subjective as the former. The main difference is whose norm is being used in the classification. In the latter, some person or institution exercises its subjectivity by choosing the criteria for classifying everyone while in the former, the people exercise their own subjectivity to classify themselves.

For the monitoring system to be institutionalized at the barangay level, it should meet the data requirements of the barangay for making its development plan. It should also facilitate the identification of problems faced by the community and their possible solutions.

Moreover, the data should be quite easy to collect. Thus, it is envisioned that the monitoring system will revolve around the 16 minimum basic needs (MBN) indicators and will be supplemented by other data relevant to that particular community. Nineteen MBN indicators were drawn up by an inter-agency group for the use of Presidential Commission to Fight Poverty in identifying the "poor" groups but MIMAP has trimmed it down to 16 indicators in view of the difficulty of getting information on the other 3 indicators from community-based monitoring systems.

**Indicators: Output vs. Impact and Input** Because policymakers must minimize the adverse effects of macroeconomic policies on the vulnerable groups, it is important for them to know not only the changes in the welfare status but also the causes and origins of the changes. Impact indicators reflect changes in welfare status. Changes in these indicators can usually be related to process indicators which reflect access to and availability or use of basic goods and services. The changes in the process indicators are due to a number of underlying factors which can be measured by input indicators.

There is a need to distinguish between these types of indicators. While it is recognized that we need all these indicators to design better programs and to take remedial action, if necessary, there are several ways of attaining specific outcomes. Thus, while impact indicators may be the same across communities, the input indicators may vary reflecting the different approaches used by the different communities.

Impact and output indicators should be used more than input indicators. Moreover, they should be easy to operationalize since data collectors are mostly barangay volunteers and not trained enumerators.

While there is growing consensus on the use of minimum basic needs indicators to monitor welfare conditions, the actual indicators used may vary. Moreover, their scope may also change. The proposed MIMAP indicator system consists of 16 indicators covering health nutrition, water and basic sanitation, income, shelter, peace and order, basic education, and political participation. The official Minimum Basic Needs Indicators includes 33 indicators covering additional areas of concern such as clothing, family planning and family care/psycho-social well-being.

***Who will be the community-based monitors?*** A basic issue addressed in the design of the MIMAP monitoring system is the choice of monitor to be utilized. The monitor is expected to do the following: (1) collect primary data; (2) process the data; (3) collect secondary data; (4) consolidate the data available at the municipal/barangay level and; (5) maintain the databank at his level. This should be examined both at the barangay and municipal/city levels.

At the barangay level, there are many potential monitors. Gironella, in an effort to develop a community-level statistical system responsive to the needs of the community, assessed the effectiveness of different barangay-level monitors. She identifies five groups of potential *Tagapangalap ng Inpormasyong Lokal (TIL)* for the barangay: (a) the councilmen; (b) barangay teachers; (c) educated youth; (d) adult volunteers; and (e) Barangay Nutrition Scholar.

The results of Gironella's study indicate that barangay teachers, the BNS, adult volunteers and the educated youth can be tapped to provide the necessary manpower for the generation of grassroots statistics. The performance of barangay teachers was consistently better than that of the other enumerators. The educated youth and the adult volunteers required special qualification. The educated youth must be at least an elementary school graduate while the adult volunteer must be able to cope, physically and mentally, with the demands of the work.

Based on the findings of Gironella and the experiences of existing monitoring systems, we have identified the following monitors at the barangay level:

- (a) Barangay Nutrition Scholar (BNS)
- (b) Barangay Council Member

The Barangay Nutrition Scholar Project, started in 1977, aims to provide each barangay with a trained community worker called Barangay Nutrition Scholar, to deliver or facilitate the delivery of basic nutrition and health services. Based on a review of the program in 1984, there were 12,807 BNS trained with deployment coverage of almost 9,000 barangays. The Project was institutionalized through the issuance of Presidential Decree No. 1569 which provides for a BNS in every barangay. The inclusion of the BNSP in the National Priority Plan and the extension of civil service eligibility to deserving BNS who have served satisfactorily for at least two consecutive years further strengthened the BNS system. Presently, there are about 14,500 barangays out of the 45,000 barangays in the country who have a BNS. The Project targets an additional 1,000 BNS every year.

According to this 1984 review, "the Project has demonstrated the viability of a community-based worker able to closely monitor the nutritional status of children and to bring program services closer to program targets through direct service delivery and referrals." The viability of the BNS as a community-based monitor is further supported by the experience of BIDANI.

Using the BNS as the local monitor offers many advantages: (a) there is an existing structure that provides for a BNS in every barangay; (b) the salaries are provided by the local government so there is minimal cost involved; and (c) the BNS has the skill needed to obtain nutrition indicators, the only ones among the MBN indicators that require some level of expertise.

Since there is a barangay council in every barangay, the barangay council member is a likely monitor. As Gironella (1993) explained, "the councilmen were among those identified (as potential *Tagapangalap ng Inpormasyong Lokal*) because they have direct contact with their constituents and therefore were perceived to be in the best position to collect data from the villagers without antagonizing them". Moreover, the barangay council members are directly benefited because they can use the data as inputs in the preparation of the annual development plan for the barangay.

Though barangay teachers generally have better educational background and therefore are better data enumerators, the duties of barangay monitor will be outside their regular responsibilities. In their jobs as teachers, they have no direct need for the data collected. Moreover, not all barangays have barangay teachers.

At the municipal/city level, the following have been identified as potential MIMAP monitors:

- (a) the Municipal (City) Planning and Development Coordinator;
- (b) the Local Information Officer;
- (c) the Local Government Operations Officer; and
- (d) NSO personnel.

The Municipal (City) Planning and Development Coordinator is the most likely choice as MIMAP monitor. In fact, the MPDC (CPDC) has been used in the BIDANI system. Other monitoring systems, such as CBCMS, SWCDIS, and the CBIS and LIS for the evaluation of PPAC, propose to use the coordinator as well. An evaluation of these monitoring systems show that he is quite capable of performing the task. More importantly, he exists in all municipalities and his duties include the monitoring and evaluation of the implementation of the different development programs, projects, and activities in the local government unit concerned in accordance with the approved development plan. However, the system still has to be improved. The most important component of the new system would be training the MPDC (CPDC) in the planning process. He has to be able to use the database in planning new programs and projects as well as in evaluating the impact of these programs and projects. He also needs to know how to process the data sent to him from the barangays in such a way that he will be able to generate the needed information.

For bigger municipalities and cities, it is possible to appoint a local information officer to serve as the MIMAP monitor. Among the responsibilities of the information officer is to "formulate measures for the consideration of the *sanggunian* and provide technical assistance and support to the governor or mayor, as the case may be, in providing the information and research data required for the delivery of basic services and provision of adequate facilities so that the public becomes aware of said services and may fully avail of the same."

Section 18 of the Local Government Code of 1991 provides that "local government units shall have the power and authority to establish an organization that shall be responsible for the efficient and effective implementation of their development plans, program objectives and priorities". This implies that the LGU can establish a small unit to maintain a local database that will provide inputs for its development plans. A potential MIMAP monitor therefore is the Local Government Operations Officer (LGOO), who is a field personnel of DILG. It would relatively be easy to institutionalize this because all that is required would be for the Secretary of DILG to amend the duties and responsibilities of the LGOO. Aside from establishing and maintaining the database on all barangay officials, his duties may be expanded to include the database on the MBN indicators.

Another option in the choice of the monitor is personnel from NSO. However, the NSO does not have field offices in all municipalities. Instead, the municipality can tap NSO district offices for MIMAP monitoring as the PRRM Project does for the development of its district-based statistical and information system. The advantage of

using the NSO personnel is that minimal training in data collection and processing will be required. On the other hand, some other institution or office will have to do the data analysis.

***Who has access to the data?*** Gironella et al (1993) noted that "*since the grassroots live practically as "one big family", the information that will be collected must be those that can be shared with everyone: that is, confidentiality of responses while a must in statistical systems may be difficult in an environment of mutual sharing.*"

Aside from income and expenditure data, the rest of the MBN indicators are not the type of information that individuals would be unwilling to share with others. The general public should have access only to the processed data while the program implementors and other relevant personnel are given the household/individual data to determine the target population for their programs. For instance, information on who the malnourished children are in the community should be made available to health workers.

There is also the advantage that the monitor, being from the same village, can "validate" the responses of the individuals. It becomes important then, that the monitor is someone who is respected in the community.

***How should the system be implemented?*** If there is an existing (or planned) monitoring system in the barangay, the strategy is to collaborate with the government agency or NGO who initiated the information system. If the proponent is willing, the existing monitoring system can be adapted to the MIMAP system. This implies that the MBN indicators will be incorporated in the existing indicator system. This will not be too difficult considering that the various monitoring systems already include some of the MBN indicators. Alternatively, the MIMAP monitoring system will be installed to generate data not sufficiently covered by the existing monitoring system. MIMAP monitors will then rely on the government agency or NGO for the data on the other indicators.

### **3.2 Proposed Community-Based Monitoring System**

***Objective.*** The MIMAP Monitoring System seeks to provide policymakers with regular and frequent information on the possible impacts of macroeconomic adjustment policies on households and individuals, particularly those belonging to vulnerable groups. This will be achieved by developing and institutionalizing a monitoring system consisting of a set of macro and micro level indicators. In addition, the CBMS would also provide the data inputs for action at the local level.

***Coverage.*** Poor households and disadvantaged groups will be the focus of the MIMAP Monitoring System. The Strategy Paper of the Presidential Commission to Fight

Poverty identifies the following as some of the vulnerable groups: (1) lowland landless agricultural workers; (2) lowland small farm owners and cultivators; (3) upland farmers; (4) artisanal fisherfolk and; (5) urban poor. The proposed monitoring system will be installed in sentinel or index areas.

The government has identified twenty priority provinces where poverty alleviation efforts will be focused. These are the following: (1) Abra, (2) Agusan del Sur, (3) Antique, (4) Apayao, (5) Aurora, (6) Basilan, (7) Batanes, (8) Benguet, (9) Biliran, (10) Eastern Samar, (11) Guimaras, (12) Ifugao, (13) Kalinga, (14) Masbate, (15) Mountain Province, (16) Romblon, (17) Southern Leyte, (18) Surigao del Sur, (19) Sulu, and (20) Tawi-Tawi. Monitoring systems in these areas would be very useful in assessing the impact of these programs on the welfare status of the people in these provinces.

It should be noted, however, that only 11 percent of the poor (based on income) population was in these provinces in 1991 and 12 percent in 1994<sup>2</sup>. Among the so-called "rich" provinces, there are pockets of poor communities. Meanwhile, there are rich barangays in the priority provinces.

Thus, it is being proposed that the monitoring system be installed in the 20 priority provinces as well as in barangays outside the priority provinces. These communities will be the poor<sup>3</sup> barangays in fifth and sixth class municipalities. In addition, depressed barangays in urban cities will also be selected.

The impact of government policies on the rest of the population should also be monitored. It is possible that new policies will adversely affect a non-poor community and make it poor. It is also likely that the new economic environment may hurt certain groups of individuals and create additional vulnerable groups. Therefore, in the long-run, it would be ideal if community-based monitoring systems will be installed in all barangays.

**Indicators.** The indicators have been chosen based on the multi-dimensional character of poverty and have largely been confined to output and impact indicators. The set of indicators presented in Table 1 closely resemble the Minimum Basic Needs indicators of the Presidential Commission to Fight Poverty. The 16 indicators correspond to the minimum basic needs covering: (a) health; (b) nutrition; (c) water and sanitation; (d) income; (e) shelter; (f) peace and order; (g) basic education; and (h) political participation.

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<sup>2</sup> Based on the 1991 and 1994 Family Income and Expenditure Surveys. The proportion does not include the poor in Biliran and Guimaras because data is not available.

<sup>3</sup> Based on available welfare indicators as well as the perception of the officials of the municipalities and barangays.

The MBN approach is being used by more and more government and nongovernmental agencies as (1) a strategy for poverty alleviation, (2) a tool for focused targeting, and (3) a tool for monitoring and evaluating development projects. Inter-agency groups have been formed to come up with a set of MBN indicators that can be used by the different groups.

This core set of indicators may be supplemented by other indicators which are relevant to that particular community. While the information collected by the barangay monitors may differ across barangays, the MBN indicators will be a subset common to all.

To be able to explain the observed trends in welfare status, these indicators have to be supplemented by barangay, municipality and provincial profiles and secondary data. The profiles would provide data on resources/facilities in the area available to the households. For example, the presence or absence of barangay health stations, while not an indicator of the welfare status of the household, would be an important variable in trying to explain the health status of the households in the area.

**Monitors.** At the barangay level, the proposed community-based monitors are the barangay health workers (BHW) and the barangay nutrition scholars (BNS), barangay council members, and some community volunteers such as the Mother Leaders of the community. A barangay council member, preferably the barangay chairman or the secretary, will be the coordinator.

At the municipality level, the MIMAP monitor will be the Municipal (City) Planning and Development Coordinator.

The Provincial Planning and Development Coordinator (PPDC) will consolidate the reports of the MPDCs and CPDCs in his province and forward the same to the National Statistics Office.

**Frequency of Collection.** Primary data collection is undertaken every quarter by the barangay monitors. Data that do not vary quickly over time may be collected less frequently, e.g., annually. Secondary data, if available, are used to supplement the primary data.

**Processing of Data.** The barangay monitors will collect primary data and process it to meet the information needs of the barangay in the preparation of its development plan. The original household data is kept at the barangay hall for the use of the program implementors. It will serve as the data bank for the community.

The barangay monitors will collate data into initial tables. They will send the household data and initial tables to the city/municipality coordinator.

The city/municipality coordinator further processes and consolidates the data from the different barangays (n-way classification tables). He also supplements this with data from other government agencies and institutions. This will serve as the databank at the municipal level. Any additional table generated at this level will be fed back to the barangay.

The city/municipal coordinator will submit the data to the provincial monitor who will further consolidate reports from the different municipalities and produce summary tables.

The provincial monitor submits the provincial data to the national monitor, preferably the National Statistics Office (NSO), who will aggregate data on a national level. These will then be made available to the macroeconomic planners to serve as inputs in their design of adjustment policies and other measures. Figure 1 gives the flow of information of the MIMAP Monitoring System.

***Strategy for Implementation.*** The proposed MIMAP monitoring system will be pilot tested in selected areas to be determined by the sampling design. Its viability, and in particular, the feasibility of tapping the identified monitors at the barangay and municipal levels to collect the MBN indicators will be tested.

If there is an existing monitoring system in the barangay, the MIMAP team will collaborate with the government agency or NGO who initiated the information system.

Once the local government units can adequately handle the collection, processing, analysis, and utilization of data at the barangay and municipal level, MIMAP will recommend that it be made a regular function of these units.

As these different monitoring systems become institutionalized, they could be linked together to form a wider base of information. This could be the key to the establishment of a nation-wide statistical system at the grassroots level.

***Dissemination of Information.*** The information collected will be made available to the planning bodies, program implementors, and other interested organizations. The intention is for this to be a crucial input in the policy-making and planning process.

### **3.3 Pilot Tests of the Community-Based Monitoring System**

#### **3.3.1 Bulacan as the Pilot Test Area**

Bulacan has the third lowest poverty incidence in the country, falling below only the National Capital Region and Cavite. Its poverty incidence was 17.3 in 1994, as against

the national figure of 37.5, and much lower than its previously recorded poverty incidence of 24.1 in 1991. Despite its above average performance in reducing poverty, it still had pockets of poor communities.

Two barangays of Pandi, Bulacan were selected as pilot communities. Pandi is a fifth class municipality. Barangay Masuso is a developing barangay with home and livestock industries gradually growing to complement the existing rice production. Because of its development, it has become a natural magnet for migrants from nearby places and other provinces. The study of Barangay Masuso yields interesting insights into the dynamics of a progressive barangay and the problems accompanying its development. In contrast, Barangay Real de Cacarong is a more isolated place. Agriculture is its major source of livelihood. Its population is basically one of upland farmers, a group identified as vulnerable by the Presidential Commission to Fight Poverty.

**Objectives of the Pilot Test.** The pilot test has two objectives:

(1) To evaluate the monitoring system outlined in the previous section and provide insights as to its feasibility on a nationwide scale.

The MIMAP team had to determine whether the set of MBN indicators could be collected through a community-based monitoring system. It had to determine whether the chosen barangay monitors could collect the data on minimum basic needs and whether the questionnaire could capture all the needed information. It also required an assessment of the conduct of survey operations.

(2) To validate the availability of information on minimum basic needs from existing monitoring systems in the barangays and municipalities.

**Pilot Test.** The pilot test involved the following activities: (1) community dialogues; (2) review and evaluation of the existing data collection activity; (3) revision of forms/questionnaires; (4) preparation of manuals and other training materials, including their translation into the native dialect; (5) selection and training of monitors and enumerators; (6) survey operations; (7) data processing; and (8) data analysis.

The pilot test of Barangay Masuso's monitoring system was conducted in September, 1995. The survey of Barangay Real de Cacarong was conducted in February, 1996.

**Evaluation of Existing Monitoring Systems.** In Bulacan, monitoring systems exist at the barangay, municipal and provincial levels. In particular, Barangays Masuso and Real de Cacarong undertake several data collection activities, including the following:

1. Barangay Profile Survey

2. *Buwanan Talaan sa Pagbabago ng Demograpiya* (Monthly Monitoring of Demographic Changes)
3. *Lingkod Lingap sa Nayon* Monthly Weighing
4. Municipal Profile Survey

A more detailed discussion of these data collection activities is in Annex A.

Out of the four surveys, only the monthly weighing was done consistently. In general, data collection activities were infrequent and irregular. Since the surveys were initiated by the municipal or provincial governments, the forms were submitted to the requesting office without any analysis or discussion of the survey results within the community. Consequently, none of the data were used by the barangay leaders for their own planning exercises.

Many of these surveys provide information on nutrition and health. However, these are not available for the same reference period and are not collected regularly, making it difficult to extrapolate a comprehensive profile of the community and track the status of its households over time.

Many of the MIMAP indicators were captured by the existing survey forms. With minor revisions, all MIMAP indicators can be incorporated into one of them.

In sum, a system to regularize the collection of data is needed.

***Proposed Questionnaire.*** The Community Based Monitoring System uses the Household Profile Questionnaire as its basic census form. It was designed after existing monitoring systems were reviewed and evaluated. The Questionnaire compiles data on the household's demographic and social characteristics, its composition and its perception of its social and community status. It is structured to capture the Minimum Basic Needs Indicators defined by MIMAP (refer back to Table 1.) Other indicators reflect additional information needs of the barangay. The questionnaire is six pages long (see Annex B.)

The survey's desired respondent is the head of the household or his/her spouse. In the absence of both, an adult member of the household is selected. The enumerator interviews the respondent and writes down the responses in the questionnaire. During the pilot test, it took about twenty minutes to accomplish each questionnaire.

***Survey Operations, Data Processing and Analysis.*** Prior to the survey operations, the enumerators were given a one day training on how to conduct an interview and how to accomplish the questionnaires. They were briefed on the objectives of the survey.

The Barangay Health Worker, the Barangay Nutrition Scholar, and the Mother

Leaders conducted the survey together with the MIMAP team. In Barangay Masuso, the survey operations lasted two weeks, covering 361 households which accounted for a population of 1,835. In Barangay Real de Cacarong, the survey operations were completed in three days, covering 104 households totaling 551 individuals.

The Barangay Nutrition Scholar filled out the level of malnutrition of the children in each household. Data on malnutrition was obtained from his records.

The MIMAP team processed the questionnaires and generated preliminary tables from the survey results. The team also prepared a profile of each barangay based on the status of the community vis-à-vis the minimum basic needs indicators.

In the case of Barangay Masuso, the team presented the results to barangay officials and the enumerators during a planning workshop. In the same forum, the local government officer (LGO) of Pandi briefed the barangay officials on the process of making a development plan.

***Evaluation of Survey Operations.*** The Barangay Nutrition Scholar (BNS) or Health Worker and the Mother Leaders were capable of conducting the household survey, once they were given proper training. Though not all barangays have a BNS, there is a budgetary provision for the scholar in every barangay. In the two barangays visited, the BNS and Health Worker were the same person. As only the nutrition indicators required some level of expertise, it is advantageous to use the BNS, because he has these skills.

The questionnaire was adequate to capture all necessary information. In addition, it contained input and perception indicators. Most of the data was easy to collect. Exception was information on household incomes. Because the questionnaire is intended to be completed quickly, it may not be a good tool to extract information on this variable.

***Integrated Questionnaire vs. MBN Questionnaire.*** The Household Profile Questionnaire met most data requirements of the barangay, municipality and the province. As such, it minimized the data collection efforts and provided a more comprehensive profile of community members. The major drawback discovered during the pilot test involved time. It took the MIMAP team a month to evaluate the existing monitoring systems and to design an appropriate questionnaire. Thus, the integrated system cannot be implemented in many barangays instantaneously.

Alternatively, a separate questionnaire can be designed focusing only on MBN indicators. The Department of Social Welfare (DSWD) uses a two-page questionnaire that collects data on 33 indicators. The form is called the Philippines Basic Needs Approach to Improved Quality of Life Monitoring Form (Annex C). Each of its questions is answerable by yes or no. The DSWD has pilot-tested the form in more than 300 barangays all over the country. As it is designed exclusively for MBN indicators, it can be administered to any barangay even without studying that barangay's existing monitoring

system. Thus, it can be implemented very quickly in many barangays. Its major drawbacks are that it cannot substitute for an on-going monitoring system, nor is it adequate to meet the other data needs of the barangay.

### **3.4 Are They Meeting Their Minimum Basic Needs in Pandi?**

#### **3.4.1 Profile of Barangay Masuso**

Majority of the households in Barangay Masuso met their needs for shelter, health, basic education and literacy, and participation in electoral processes. However, the barangay did not do very well in the area of nutrition. In terms of cash incomes, Barangay Masuso can definitely be classified as poor. This profile presents the survey results in detail. There were 361 households with a total population of 1,835.

##### On Survival Needs:

##### *Health*

- a. Ninety four households had at least one live birth in 1994. Seven households had infant deaths within the past year.
- b. Two hundred eleven households had children 1-6 years old in 1994. Six households reported child deaths.

##### *Nutrition*

- c. Out of the 237 households with children 0-6 years old, 129 households had at least 1 malnourished child. 259 children, or 63%<sup>4</sup> of the 410 children aged 0-6, had varying degrees of malnutrition.

##### *Water and Sanitation*

- d. Eighty-two percent of the households had sanitary toilet facilities. Only fifteen percent, or 55 households, did not have these facilities. For those households without sanitary toilets, 10 used open pits, others used the *sapa* or stream, and 5 did not respond.

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<sup>4</sup> The percentages presented in this section are in relation to the number of households who responded to the particular item.

- e. All residents had access to potable water. Very few people -- only those with a *jacuzzi* or electric pump -- had piped water. There was no community water system. Only 37% had their own water supply.
- f. There was no garbage disposal system. While this was not a major problem during the summer, since many residents burned their trash, many threw their garbage in the *sapa* or stream during the rainy season. As a result, what used to be a clean stream, abundant in fish, is now black and smelly. In many places, it has narrowed because of the trash dumped into it.

On Security Needs:

*Shelter*

- g. Twenty-one households, 6%, live in makeshift houses. Forty six households, or about 13%, had houses with earth flooring.

*Peace and Order*

- h. About 4% of the households had at least one member who was a victim of crime. One person was murdered. Thirteen households were robbed during the past year.

On Enabling Needs:

*Income and Livelihood*

- i. Ninety three percent of the households had at least one employed member. Not all the individuals 15 years old or older were part of the labor force. Out of the 1,045 individuals 15 years or older, 526 were employed. The employment rate could be considerably higher than 50%, if we take into account that not all of the jobless are seeking work.<sup>5</sup>

In addition to unemployment, the seasonal nature of employment was another major problem. Many residents worked for the *bihonan*, a noodle factory. The factory operates from November to May and closes during the rainy season. While a few workers, supervisors and managers were paid even when the factory was closed, the rest were not paid during the shutdown. Instead, they were allowed to make *bale*, or borrow against their

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<sup>5</sup> The questionnaire used in Barangay Masuso did not allow us to determine who were in the labor force. The questionnaire was subsequently revised to take this into account.

future earnings.

- j. In 185 of the 335 households with at least one employed member, at least one employed member expressed a desire for more hours of work. They cited the inadequacy of their present incomes as the primary reason for their seeking more work.
- k. Ninety-seven households, 28%, have monthly per capita income greater than the 1995 monthly per capita poverty threshold of P 994.35 in Region III. Twenty six households reported no income prior to the month of the survey operation. This estimate is based only on cash income.

Thirty four households reported receiving income in kind. Eight of the 26 households without cash income earned non-cash income.<sup>6</sup>

#### *Basic Education and Literacy*

- l. There were 200 households with children between the ages of six and twelve. This is the relevant age for elementary school education. In 30% of these households, at least one eligible child was not enrolled.

In terms of the number of children in this age group, 288 out of 364 (79%) were enrolled. This is considered low because there is a public elementary school within the barangay.

- m. 124 households had children between thirteen and sixteen. In 54% of these households, eligible children attended secondary or high school. This meant that 66 children in this age bracket, belonging to 57 households, were not enrolled in high school.<sup>7</sup>
- n. There were 58 households with at least one member aged ten years or older who was illiterate. The total number of illiterates in the barangay was 78.

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<sup>6</sup> It is very likely that the respondents' reported income underestimated the annual income. The questionnaire asked for income of the household during the past month. The low income reflected the time the survey was conducted, which was when the *bihonan* factory was closed and the harvest season was nearing. The seasonality of income was taken into account in the revisions for the Barangay Real de Cacarong survey.

<sup>7</sup>Some of these children were actually enrolled in the elementary school. Perhaps a better indicator is the number of children in school, regardless of their level.

### *Political Participation*

- o. Sixty three households had members who were involved in at least one political organization. Cooperatives and labor unions were considered organizations.
- p. Ninety four percent of the households had at least one registered voter.
- q. Ninety three percent of the households participated in the last elections.

### ***Summary: How are they faring in Barangay Masuso?***

To track the status of each Barangay Masuso household, a point was assigned for each minimum basic need met by that household. Given that basic needs were measured in terms of sixteen indicators, a full score of 16 points means that the household meets all its basic needs. In contrast, if the household does not meet any of its basic needs, it gets a score of zero.<sup>8</sup>

Very few households met all their minimum basic needs, as indicated by Table 2. Only 7 out of 361 households, or two percent, did so. Six percent met 15 of their basic needs. Fifty-five percent satisfied at most 12 needs. Nineteen percent satisfied at most 10 needs. All the households except one met at least 6 of its minimum basic needs. The poorest household surveyed met only 3 basic needs.

Table 3 shows the total number of households and the proportion of households that met each particular need. All households had access to safe water supply. In addition, most households lived in adequate houses, had at least one employed household member, and were able to vote.

However, the barangay's number of malnourished children was alarming. About 129 households or 36 percent had malnourished children. 63 percent of children aged 0-6 were malnourished. Possible intervention programs for this problem are education for mothers on proper nutrition, feeding programs for the children and family planning.<sup>9</sup>

Although most households had at least one employed member, other household

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<sup>8</sup> It should be noted that when a household had no response to any of the MBN indicators, no effort was made to impute an answer. Thus, the MBN score of at least 17 households may have been underestimated by 1 point, and at least four households by 2 or 3 points.

<sup>9</sup> When the MIMAP team presented these results to the barangay leaders, the project that they wanted to implement was the construction of the town hall.

members were looking for work and not finding it. Moreover, underemployment was a problem for many of the employed. Incomes of 72 percent of the households fell below the poverty threshold.

While actively involved in political processes, only 18 percent of the households were part of any organization.

Poverty was also concentrated in certain areas. Many of the most poor households (with the most numerous unmet needs) lived in Barokan, the *purok* where many of the bihonan employees reside. A number of them had availed of the factory's voluntary separation and were thus unemployed. They were also requested to leave the land on which they had built their houses, because the land belonged to the factory and they were no longer under its employ.

### **3.4.2 Profile of Barangay Real de Cacarong**

Despite its isolation, Barangay Real de Cacarong seemed to perform better than Barangay Masuso in that more households met a greater number of their basic needs. Barangay Real de Cacarong had severe transportation and infrastructure problems. A one way trip on a tricycle to the nearest market cost 20 pesos. Thus, residents would not go to the market unless they had 100 pesos to spend.

#### On Survival Needs

##### *Health*

- a. Nineteen out of 104 households had at least one live birth in 1995. Three households had infant deaths within the past year.
- b. There were no reported deaths of children for the whole barangay during the previous year.

##### *Nutrition*

- c. Out of the 65 households with children 0-6 years old, 14 households had at least 1 malnourished child. There were 19 children, or 15% of the 127 children, with varying degrees of malnutrition.

##### *Water and Sanitation*

- d. Seventy percent of the households had sanitary toilet facilities. Only about ten percent, or 10 households, did not have these facilities.

- e. All residents had access to potable water. Very few people -- only those with a *jacuzzi* or electric pump -- had piped water. There was no community water system. Only 28% had their own water supply.
- f. There was no garbage disposal system. Most residents burned their trash, while some deposited them in pits dug in their backyards.

On Security Needs:

*Shelter*

- g. Five households, or about 5%, lived in makeshift houses.

*Peace and Order*

- h. About 4% of the households had at least one member who was a victim of a property-related crime.

On Enabling Needs:

*Income and Livelihood*

- i. Ninety four percent of the households had at least one employed member. Out of the 240 individuals in the labor force, 185 were employed. This gives an employment rate of 78%.

The seasonal nature of employment was a major problem. Many residents were farmers. Because the area is mainly upland, the lack of irrigation did not allow residents to farm all year round. Even vegetable farming during the dry season was minimal because of the difficulty of pumping water. Many were rendered jobless until the start of the rainy season. During the dry season, some spent time in other means of livelihood such as mango picking, hog raising, and quarrying. For each truckload of rocks, a resident got P300 for two days of work while the owner of the land got P200. Large holes were left on the ground of the quarry site by the miners. These holes may become an environmental problem.

A potential income-generating activity was quail raising which a few residents started in their backyards. Unfortunately, many residents opted to sit and wait for the rains. Some residents voiced the opinion that the main problems in their community were the absence of irrigation and of livelihood opportunities in their area.

- j. Out of the 185 employed persons in the barangay, 140 individuals expressed a desire for more hours of work. This translates into an underemployment rate of 76 percent. Seventy-seven percent of the households had at least one member underemployed. They cited the inadequacy of their present incomes as the primary reason for their seeking more work.
- k. Forty households, 40%, had monthly per capita cash income greater than the 1995 monthly per capita poverty threshold of P 994.35 in Region III. Seven households reported no income prior to the month of the survey operation. Two out of these seven households earned income in kind.

#### *Basic Education and Literacy*

- l. 58 households had children between the ages of six and twelve. 81% of these households had all their elementary age children enrolled in school. There were 98 children in this age bracket. Eighty of these children, or about 81 percent, attended primary school. This was considered a good ratio because the barangay school in the area was only up to Grade 2. Children in higher grades had to travel (most of them walked) to the next barangay where the nearest elementary school was located.
- m. 36 households had children between thirteen and sixteen. 64% of these households allowed their children to attend secondary or high school. Out of the 45 persons in this age bracket, 25 individuals -- or 55%-- attended secondary school. In 13 households, there were children in this age bracket who were not enrolled in high school.
- n. There were 20 households with at least one member aged ten years or older who was illiterate. The total number of illiterates in the barangay was 22.

#### *Political Participation*

- o. Forty-two households had members who were involved in at least one political organization. Cooperatives and labor unions were considered political organizations.
- p. Ninety seven percent of the households had at least one registered voter. Out of the 280 eligible voters in the barangay, 255 were registered voters.
- q. Ninety six percent of the households participated in the last elections. A total of 238 people, or 93 percent, exercised their right to vote in that election.

### ***Summary: How do they fare in Barangay Real de Cacarong?***

Barangay Real de Cacarong fared well in terms of health, political participation, peace and order, shelter, nutrition, basic education and literacy. No child death occurred in the survey period. All households had access to safe water supply.

Using the same scoresheet as Barangay Masuso's, only four households, or 2%, met all their minimum basic needs. 14% of the households met 15 of their basic needs, while 41% met 12 of their basic needs. All households met at least 8 of their minimum basic needs. Table 4 summarizes these results. Table 5 shows the number of households and the corresponding proportion of those households who met each particular need.

Most of the households with many unmet needs were located in Gulod, the area farthest from the municipal hall of Pandi and the area with the steepest terrain. (Refer to Table 6.)

### **3.4.3 Comparing Scorecards**

Comparisons between the two barangays yielded interesting insights. Based on their scorecards, it seems that Barangay Real de Cacarong fared better than Barangay Masusô<sup>10</sup>. Its proportion of households who achieved at least a specific number of minimum basic needs was always higher as shown in Table 7. Despite the fact that on the surface, Barangay Masuso was a more progressive barangay than Real de Cacarong, the problems accompanying its development actually made it 'more poor' than the isolated, agriculture-based Real de Cacarong. The higher participation rate in cooperatives of Barangay Real de Cacarong households may partly explain why employment and incomes are higher than in Barangay Masusô.

In both barangays, the major problem was the lack of employment opportunities. A review of the accomplished questionnaires suggests possible links between lack of job opportunities and the low educational attainment of the unemployed and underemployed.

This was aggravated by the poor infrastructure facilities in the areas. Irrigation facilities were either absent or inadequate. Roads were poor and public transportation facilities were inadequate. The problem was more severe in Barangay Real de Cacarong where the difficulty in pumping water made dry-season farming almost impossible. Its isolation was pronounced: a one way trip via tricycle to the nearest market is 20 pesos. Thus, the residents do not go to the market anymore if they only have 100 pesos to spend.

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<sup>10</sup> The caveat here is that questionnaire used in Barangay Real de Cacarong was an improved version of the one used in Barangay Masusô. Moreover, non-response was reduced in Barangay Real de Cacarong as a result of improved training for the enumerators. Thus, the data are not exactly comparable.

The provision of sanitary toilet facilities would address the needs of more households in Barangay Real de Cacarong than in Barangay Masusô.

The weather affects the two communities in different ways. While the "bihonan" workers of Barangay Masusô hope for an extended summer season so they can continue working, the upland farmers of Barangay Real de Cacarong eagerly wait for early rains so that they can start preparing their lands for the once-a-year palay crop.

#### **3.4.4 Recommendations**

1. The most striking observation of the pilot test was that the barangays needed a system to regularize the conduct of the existing surveys. Based on the pilot test, the MIMAP survey can generate most of the data needs of the barangays.
2. Since the data on malnutrition requires weighing of the children, this information need not be collected from the households during the time of the interview. Instead, the regular reporting system of the barangay on nutrition can be tapped for this purpose. Data could be culled from the records of the BNS.
3. The DSWD approach of utilizing the same two-page questionnaire in all barangays would allow the government to generate information on MBN immediately. In the longer term, however, when the capability of the local government units has been sufficiently built up, an integrated approach to data collection should be pursued.
4. While the barangays are supposed to prepare development plans every year, both sample barangays did not. This could be true for many other barangays. There is still a lack of awareness of the responsibility of barangay officials. This is further aggravated by the lack of expertise in preparing a development plan.

There is an urgent need to build up the capabilities of the local government units (LGUs) so that they can design and implement programs to address the poverty in their jurisdiction. Since decentralization, LGUs have become responsible for:

- a. agricultural extension;
- b. primary health care -- provincial health services; district, municipal, and medicare community hospitals; field health services; purchase of drugs and medicines;
- c. repair and maintenance of infrastructure, including barangay road, water supply and communal irrigation projects; and
- d. several Department of Social Welfare poverty alleviation programs.

Training on development planning skills would enhance their capabilities.  
Training should include:

- a. Survey enumeration
  - b. Data processing and analysis
  - c. Maintenance of data base
  - d. Project identification, prioritization, monitoring
  - e. Budgeting
6. The ideal time for the survey operation is toward the latter part of the year, i.e. September or October. This is to ensure that an up-to-date profile of the barangay will be available to the barangay council when it prepares its development plan for the coming year.
7. Most of the data are easy to collect. For example, information on access to sanitary toilet facilities and potable water are easy to obtain and subject to little or no measurement error.

While we initially thought that identifying makeshift houses would be easy, it turned out to be difficult. This was because although part of the house was concrete and did not look makeshift, the other part of the house was makeshift or improvised.

The most difficult information to get was income of the household, partly because of the irregularity of incomes and/or the multiplicity of sources of income. In many households, especially those deriving part of their income from agricultural activities, the flow of income was seasonal. Moreover, part of the income was in kind, thereby posing some valuation problems.

While asking for income for the whole year would tend to address the seasonality of income, the problem of recall is so great that it also tends to put into question the accuracy of the income estimates. On the other hand, trying to limit the reference period to a shorter period, such as a month to minimize recall problem but this may tend to underestimate or overestimate annual income depending on when the survey was conducted.

Moreover, the respondent is sometimes not knowledgeable of the incomes of the other members of the household. Some household members shift from one job to another depending on the availability of productive employment.

Since the questionnaire is intended to be used by a local monitor with minimal training in enumeration and to be done very quickly, this questionnaire

may not be a good source of information on household incomes. Perhaps other indicators could be used as proxy for income. The proxy indicator will not be used to estimate income but will be used to track changes in the income class of the household over time.

8. There is a need to further validate the indicators. Section 4 addresses this problem of validation.

## **4. VALIDATION OF THE MBN INDICATORS**

### **4.1 ADEQUACY OF INCOME AS A MEASURE OF POVERTY<sup>11</sup>**

Poverty impact assessment obviously depends on how poverty is defined or measured in the first place. Traditional measures of poverty incidence -- such as the official estimates of poverty and food thresholds -- have mainly been based on income. Recently, however, there is a growing consensus that deprivation cannot be measured by income alone. The more popular proposition is to supplement income with other household outcome indicators, e.g., health, nutrition, and education, among others, in measuring poverty incidence. Development workers have begun to look at development with the view that indicators should not be limited to measures of income but should also include other indicators of human development. Income, it is argued, cannot fully capture the extent of human development even if it is a "fundamental means or even a requisite".

The Presidential Commission to Fight Poverty uses the Minimum Basic Needs (MBN) indicators as the official set of poverty indicators. These MBN indicators are grouped into three, namely; survival, security, and enabling needs. Income is but one indicator of enabling needs.

The question, however, is - is income really as deficient an indicator of poverty as it has been portrayed? And if so, to what extent?

#### **The Test**

A simple way of checking whether income is deficient as a measure of poverty or not is to compare the MBN indicators across income groups. If income is indeed a poor measure of deprivation, then the comparisons will show weak relationships between income groupings and household poverty indicators.

To do the comparison, the 1992 Socioeconomic Survey of Special Group of Families (SESSGF) is used. This survey is designed to provide socioeconomic information on families belonging to the bottom (poorest) 30 percent of the households covered by the 1991 Family Income and Expenditure Survey (FIES). Herrin and Racelis (1994) provide a complete descriptive analysis of the survey. The SESSGF does not have income data but the mother survey - the 1991 FIES - does. Thus, the SESSGF was merged with the FIES dataset to get household income and income decile classifications of households.

At the outset, the basis for determining the composition of the bottom 30 percent

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<sup>11</sup>This section draws from the study of Orbeta (1995) on "How Adequate Is Income as A Measure of Poverty?".

was the per capita income of households taken from the preliminary results of the FIES. When the final tabulation was done, some households had to be reclassified. About 9 percent of households were misclassified as constituting the bottom 30 percent. In this study's comparison, only those households correctly classified **as the bottom 30 percent** according to the final FIES tabulation were used.

## **The Results**

***Survival Needs.*** There are three subgroups of indicators under survival needs, namely, health, nutrition, and water and sanitation indicators.

A look at the data on the number of live births per ever-married woman (EMW), aged 15 to 49 in the household, reveals the norm that higher income is associated with lower number of births. The average number of live births falls from 5.3 to 4.55 as one moves from the 1st (poorest) income decile to the 3rd income decile. In the case of the number of child deaths, on the other hand, there seems to be no significant difference among income groups. Child deaths average at 0.20, 0.17, and 0.25 for the 1st, 2nd and 3rd deciles, respectively.

Meanwhile, data on toilet facilities also support the norm that higher income is associated with better toilet facilities. As one goes up from the lower to the higher income deciles, the use of better toilet facilities, e.g., water sealed and closed pit, increases in proportion as seen in Figure 2. In the case of sources of drinking water, there is an increasing proportion of households using safe water sources, e.g., community and tube/piped well systems, as one goes up the income ladder. The figures are 61.49, 63.79, and 66.30 percent for the 1st, 2nd and 3rd deciles, respectively.

Unfortunately, there are no nutrition indicators in the *SESSGF*. It appears, though, that as far as survival indicators are concerned, income adequately captures the incidence of deprivation.

***Security Needs.*** Security indicators are grouped in two, namely, shelter, and peace and order. Only indicators for shelter, however, are available from the survey.

Shelter indicators include data on the type of roof and walls. The proportion of households using strong materials increases as one climbs the income ladder (Figure 3). The proportion of households using strong wall materials, for instance, goes up from 18.7 percent for the 1st decile, to 20.97 percent for the 2nd decile, to 26.92 percent for the 3rd decile.

Again, it seems that in the case of security indicators, income can also adequately represent the extent of poverty even if the comparison is based only on shelter indicators.

**Enabling Needs.** Enabling indicators are classified into three, namely, income and livelihood, basic education and literacy, and political participation.

A comparison of poverty incidence, in the usual sense, among the bottom 30 percent households shows that practically all of them fall below the poverty threshold. All households in the bottom decile also fall below the food threshold. The proportion of households who do not reach the food threshold level, though, considerably declines from 100 percent to 82.72 percent and 25.11 percent for the 2nd and 3rd deciles, respectively.

Employment is measured by the proportion of household members 15 years old and above who did some work for the past quarter. Available data show that, as expected, the average employment ratio rises with income. However, as noted in Herrin and Racelis (1994), the average employment ratio for the bottom 30 percent is higher than the national average, indicating that these are mostly low-paying jobs.

What is also noteworthy is that for the lowest income decile, the proportions of the young (15 to 24 years old) and of the very old (65 years and above) who are working are higher than for the second and third deciles. For instance, among the young employed, 58.22 percent come from the lowest decile while 55.61 percent come from the second decile. For the very old who are still working, 51.28 percent belong to the lowest decile while 46.77 and 45.10 percent are from the second and third deciles, respectively. This pattern confirms a well-known coping mechanism among poor households such that children, women and older members work to support the sagging income of households (Herrin 1987).

Education indicators include school participation by household members 7 to 24 years old and literacy for household members 10 years and above. Surprisingly, there appears to be an inverse relationship between income and the literacy rate among members 10 years and older. The lower the income, the higher the proportion of household members who are literate, i.e., 89.38 percent for decile 1, 87.69 percent for decile 2, and 83.92 percent for decile 3. In the case of school attendance by school-aged children, the relationship between income and attendance is not very clear. The lowest income class (with 77.37 percent attendance rate) beats the second (with 64.99 percent) and third income deciles (with 74.90 percent) in school participation rates of children 7 to 24 years old.

Finally, turning to indicators of political participation, Figure 4 shows that there are only marginal differences across income groups in terms of the proportion of households whose members participated in at least one cooperative. Thus, the relationship between income and membership in a cooperative is not clear.

Given the foregoing, it can be said that the relationship between enabling needs indicators and income is mixed at best.

**Other Indicators.** There are also other relevant indicators which may be considered. For example, access to basic services such as health facilities is vital when illness or injury occurs. Available information shows that the relationship between income and use of health facilities when household members get sick is not very clear. The difference in the propensity of using health facilities when members get sick across income groups is very marginal. The proportion of those who visited a health facility when they were sick fluctuates slightly from 61.38 percent for the 1st decile to 60.08 percent for the 2nd and 62.95 percent for the 3rd.

Another surprising result is that lower income groups appear to have more preventive care needs than households in higher income groups. The propensity of using a health facility when members are not sick seems to be higher among the lowest income group compared to higher income groups. As the data show, the proportion of those who were not sick and yet used a health facility increases from 7.63 percent for the 3rd decile to 8.81 percent for the 2nd to 15.51 percent for the 1st decile.

### **The Verdict: Not Bad After All**

A cursory examination of the results seems to indicate that, **except for enabling needs indicators, income, after all, is a good indicator of deprivation at least for families belonging to the bottom 30 percent.** Conversely, if income data are difficult to generate, then several MBN indicators can represent income well. The use of alternative indicators in lieu of income such as the type of roof is popular in rapid appraisal systems.

## **4.2 Further Validation of MBN Indicators<sup>12</sup>**

### **4.2.1 Objectives of the Validation**

Orbeta's study, summarized in the previous section, found that income adequately captures the incidence of deprivation in terms of survival needs (e.g., health indicators, water and sanitation indicators) and security needs (e.g., shelter indicators). However, a major drawback of the study was that its analysis was limited to the bottom 30% of the population, i.e., the three poorest deciles. Thus, its conclusions could not automatically apply to the other deciles. This section expands the investigation into the adequacy of income as a measure of poverty to the rest of the population.

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<sup>12</sup> Based on the paper "Using MBN Indicators for Poverty Monitoring" by Reyes, Cancio and Ilarde (1996).

**Objectives.** The objectives of the study were two-fold:

- 1) To test whether there are any important relationships between various MBN and non-MBN indicators and income.

This will prove that income can adequately capture other aspects of deprivation. It may also point to a set of indicators which could be collected in lieu of, or as a supplement to, the income data of the FIES. These indicators may be collected more easily and more frequently in view of the fact that, unlike income, these indicators are more easily observed and measured; and

- 2) To come up with a set of indicators that will help in distinguishing between the poor and non-poor.

#### **4.2.2 Data Set and Methodology**

This study uses the 1991 FIES as its major source of data. Thus, only those poverty indicators (MBN and non-MBN) contained in the FIES were evaluated. Special tabulations based on survey data of the 1991 FIES were made to provide deeper insights than those normally afforded by officially published FIES tabulations.

#### **4.2.3 Testing the Income - Basic Needs Relationship**

Since MBN indicators are grouped under three headings namely, survival needs, security needs, and enabling needs, the discussion will proceed in a like manner. All indicators, whether MBN or not, will be evaluated under the appropriate grouping. The only exception would be other indicators that are meant to help in distinguishing between the poor and non-poor but which are not necessarily part of man's basic needs.

**Survival Needs.** Survival needs encompass health, nutrition, and water and sanitation indicators. However, only *water and sanitation indicators* are available from the 1991 FIES.

##### o Access to Potable Water

Even in the larger population, *the proportion of households with (without) access to potable water (e.g., faucet or piped water) rises (falls) steadily, as one moves from the low income households to the higher income households* (see Figure 5). For the bottom 30%, this proportion ranges from 55% to 63% percent. What

is unexpected is the fact that only 93.3% of households in the 10th decile have access to potable water. More specifically, 3.8% of those in the 10th decile continue to source their water from dug wells, 1.8% buy it from peddlers, 0.7% draw it from rivers, and 0.4% rely on rain! (See Table 8.) In addition, among those with access to potable water, the proportion without their own water source, i.e., those who get water from a shared/communal/common source, fluctuates somewhat for the lower half of the population and falls consistently only after the 6th decile. The fall in this variable probably reflects the fact that a shared water source is a giffen good, in the sense that it is an inferior choice for most people as one would usually prefer to have an exclusive water source.

Thus, it seems that income is able to capture access to safe water but not the type of ownership of potable water sources. On the other hand, the use of common water sources may be used to distinguish the bottom 60 or 70 percent.

#### o Access to Sanitary Toilet Facility

Likewise, Figure 6 shows that *access to sanitary toilet facilities (e.g., water sealed, closed pit) continuously improves with, and thus may be proxied by, income*. However, this variable may not be very effective in distinguishing the poor, as for even the poorest decile, there is almost a 50% chance that a household has access to a sanitary toilet facility. Of course, the figures are much higher for the richer income deciles but the startling thing is, even for those in the 9th and 10th deciles, only 90.4% and 96.6% can access a sanitary toilet. Table 9 even indicates that almost 2% of 10th decile households use other means (e.g., pail system) of disposing sewerage. Moreover, the proportion of households with no access whatsoever to either a sanitary or even an unsanitary toilet drops from the 20 to 30 percent range for the bottom 30% of the population, but not to zero for the top 20% as one would expect. Rather, for the 9th and 10th deciles, it drops to 3% and 0.6%! (These figures may be due to coding errors).

In terms of distinguishing the bottom 50%, a more useful variable would be the use of unsanitary toilet facilities. This variable drops significantly only after the 5th decile.

**Security Needs.** Security needs are composed of shelter, and peace and order indicators, but only the former is contained in the FIES. Therefore, only *shelter indicators* are discussed.

#### o Roof and Wall Construction Materials Used

From Table 10, we can see that the proportion of houses whose roof and/or

walls are constructed of strong (light) materials monotonically rises (drops) as income increases. The composition of houses per decile, in terms of construction materials used, reverses from 80% light, 14.4% strong and 5.6% makeshift for the 1st decile, to 94.8% strong, 4.7% light and 0.5% makeshift for the 10th decile. Therefore, *for the strength or lightness of construction materials, income can proxy well*. On the other hand, the non-zero makeshift figures for the 9th and 10th deciles are queer, but we presume some coding error. They are also rather flat at 3 to 5 percent for the first seven deciles before dropping in the last three, and could therefore be used to indicate membership in the bottom 80%.

#### o House Tenure Status/ Ownership

The proportion of households that can be defined as squatters seems to fluctuate at the 2 to 3 percent range for most deciles except for the 9th and 10th deciles where it falls to 1.7% and 1.0%, respectively (see Table 11). The type 1 squatter is a household that stays without consent on a house and lot. The type 2 squatter owns the house but squats on the lot. This latter type of squatter is more predominant.

*Income is not able to capture this variable, and at the same time, this variable is not very useful in distinguishing between income groups.* Even for urban areas, where squatting is expected to be more prevalent (and is proven to be so in Tables 12 and 13) and where income disparities are more pronounced, the data follows the same pattern. Thus, at most, data on squatting can only be used to distinguish between urban and rural areas.

Conversely, as the anti-thesis of squatting, ownership of both house and lot fluctuates between 60 to 63 percent before rising to 65.7% and 70.6% for the 9th and 10th deciles, respectively (see Figure 8). However, Figure 9 shows that the trend for rural areas is a little better since it is generally upwards, except for a sudden decrease at the 5th decile. Moreover, ownership rates are much higher for rural areas, ranging from 62.1% for the 1st decile to as high as 83.7% for the 10th. In comparison, ownership rates in urban areas lie in the 53 to 57 percent range before moving up to 61.3% for the 9th decile and 68% for the 10th decile. But in both areas, the prevalence of full ownership seems to be too high (and too flat) in all income deciles to be of much use in distinguishing between income groups.

#### o Access to Electricity

Based on Figure 11, income appears to be closely related to access to electricity. *The percentage of those with (without) access to electricity rises (falls) steeply with income, from 19.2% for the first decile to 97.7% for the last income decile.* On a regional basis, access is expectedly greatest in the Metro Manila

(96.6%), Central Luzon (84.9%) and Southern Tagalog (71.1%) regions. On the other hand, it is poorest in the brownout-plagued Autonomous Region of Muslim Mindanao (19.9%), in Eastern Visayas (36.7%) and in Western Mindanao (42.8%) (see Table 15).

**Enabling Needs.** Enabling needs are grouped into income and livelihood, basic education and literacy, and political participation. However, only *income and livelihood indicators* will be discussed due to data constraints.

#### o Household Head Employment Status

One of the indicators currently being proposed as a proxy for income is the employment status of the household head. Surprisingly, however, *the proportion of households with employed heads actually DROPS monotonically as we move up the income deciles!* This is illustrated in Figure 12. From 93.7% in the 1st decile, this proportion slides to 74.9% for the 10th. That leaves one-fourth of the household heads in the richest decile without work!

One explanation for this result could be that the richer household heads derive income from sources that may not be classified as employment. Indeed, Table 17 reveals that the percentage of households deriving income from sources other than wages and salaries, and entrepreneurial activities tends to increase (though not consistently) as we move across the income deciles. For the 10th decile, up to one-third of the households rely on other income sources, which include netshare in crops, fruits, etc., remittances from abroad, domestic cash receipts and assistance, rental income, interest income, pension and retirement benefits, rental value of dwellings, net receipts from sustenance activities, dividend income, and gifts.

In particular, the data shows an increasing reliance on *foreign remittances* as the main source of income for higher income deciles. For example, for the 1st and 2nd deciles as few as 0.7% and 1%, respectively, rely on remittances while for the 9th and 10th deciles, as high as 13.2% and 19.8%, respectively, do so. As shown in Table 18, the unemployment rate<sup>13</sup> of heads of households dependent on remittances increases as income increases (which is not at all surprising). For instance, the unemployment rate for remittance-dependent households in the 1st decile is only 16.8% while for the 10th decile more than half (53%) are unemployed. This could help explain why there are relatively more unemployed households in richer deciles.

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<sup>13</sup> Unemployment rate as used here refers to the proportion of household heads who are not working to the total number of household heads. The latter would include even those individuals who are not in the labor force. Thus, this is not comparable to the official definition of unemployment rate.

It is also possible that at higher income deciles, there are more family members working to support the family such that the household head can afford to be unemployed. However, this contention is unsupported by the information contained in Table 19. On the contrary, for households where the head is unemployed, there seems to be an increasing, albeit inconsistent, tendency for none of the other household members to be employed either, as one moves from the lower to the higher deciles. The rate is especially high for the 10th decile at 44.3%, compared to only 27 to 34 percent for the 1st to the 8th deciles. Also, certain obvious errors were highlighted by this exercise. Table 20 shows that even for households where the head is employed, some households are still reported to have zero employed members. On the other hand, for households in the NCR with no employed member, Table 21 still shows about 3% earning wages and salaries!

Another factor that we should consider is the age composition of household heads in each decile. Figure 15 shows that for all income deciles, the bulk of household heads are aged 25 years or older. However, the percentage of household heads aged 25-44 years old falls from 59.9% for the 1st decile to 40.7% for the 10th, those aged 45-64 years old increase from 29.9% (1st decile) to 42.4% (10th decile), and so do those aged 65 and above from 8.1% (1st decile) to 15.2% (10th decile). This means that on average, household heads in higher income groups are older. Since Table 23 also indicates that the unemployment rate for the older groups (45-64 years and 65 or above) tends to be higher for higher deciles (perhaps since richer households can better afford to support their older members), this could partially account for the rising unemployment rate of household heads. Another noteworthy characteristic of the lower income deciles is the fact that all household heads aged 0-17 belonging to the bottom 50% are employed. In contrast, for the richer half of the households, there is a tendency for young household heads to be unemployed (again perhaps because they can better afford to be so, as they could be supported by their rich parents). In fact, for the 6th and 8th deciles, they are completely unemployed. The difference between the lower and upper halves in terms of unemployment rates is so stark, that this variable may be used to distinguish between the two groups (see Figure 16).

It also appears that *gender* plays a role in this phenomenon of increasing unemployment of household heads. Table 24 shows that, although the unemployment rates for both female and male-headed households tend to increase as income rises, the unemployment rate of female-headed households (which ranges from 29 to 46 percent) is larger than that of male-headed households (4 to 18 percent). Since the same table also shows that the proportion of female headed households increases for higher income deciles (7.4% for the 1st decile versus 26.8% for the 10th), this combination of characteristics drives the unemployment rate higher for the richer deciles.

#### o Household Head Educational Attainment

It turns out that a better alternative to the preceding indicator is the educational attainment of the household head. In fact, Table 25 indicates that it is quite unlikely that a household head from the bottom 30% graduated from, or even just reached, college. The percentage of households who were able to do so is as low as 3% to 4% for the bottom 30% and as high as 35.7% and 58.7% for the 9th and 10th deciles, respectively. Therefore, *the collegiate education of the head of a household may also be proxied by income*, and may be taken as an indication that the said household is not likely to belong to the bottom 30%.

#### ***Other Indicators.***

#### o Ownership of Durables

Another criteria that may be used to supplement income information is the ownership or non-ownership of particular durable goods. In other words, asset ownership or wealth information may be helpful in determining income. Looking at Figure 19, one can readily see that for most types of durables, the probability of ownership increases as income increases.

The patterns of durable ownership are interesting. For the more basic home appliances like radios, ownership is too high and common among all income groups to be of much use in distinguishing between the poor and non-poor. The ownership of luxury items like aircon and freezers, on the other hand, is too scarce to distinguish any more than a handful of those who belong to the upper 30% of the households. Meanwhile, intermediately priced goods like VTRs, stereos and refrigerators appear to have intermediate properties. For instance, *ownership of refrigerators and stereos seem to be clustered on the upper 60% of the households. But since the ownership rate for refrigerators is higher, then it would be more effective in filtering or identifying as many of the rich as possible.*

#### **4.2.4. Summary**

In summary, it appears that income can proxy for the probability of meeting survival needs such as access to potable water and sanitary toilet facilities. In terms of security needs (shelter), we found that income can proxy for strength of housing materials used and for access to electricity, but not for house tenure status. For enabling needs, we found that income can track the educational attainment of household heads but not the employment rate of household heads.

Except for the employment aspect, these results are more or less consistent with

those of the bottom 30% study of Dr. Orbeta. That is, we can conclude that income is able to capture many other aspects of deprivation, especially in terms of survival needs. The evidence starts to get murky, however, with respect to security and enabling needs. We have also shown that the ownership of certain durables (such as refrigerators) by a household may be a reasonable and easily obtainable indicator in distinguishing between the poor and non-poor.

These results are captured more succinctly by Figure 20 where the scores for each decile are the proportion of households that satisfy the "tests". It shows that these variables are highly correlated with income. The relationship with income is especially clear for strong housing, access to sanitary toilets, and access to potable water. Thus, we can say that even based on non-income dimensions of deprivation, the lower income groups perform worst and may be thus referred to as the poorer segment of the population. In other words, *those who are poorer in income tend to be poorer in basic needs.*

However, Figure 20 only shows the relative ranking of deciles, i.e., who's poorer than who. It does not point to who exactly are to be considered poor, and who are not. Thus, the question of whether and how we can distinguish between the poor and non-poor remains, and this is the question we turn to in the next section.

### **4.3 Redefining Poverty**

Traditionally, the poor are determined by a comparison of their household or individual income to the appropriate poverty threshold for that size of household or type of individual. The poverty threshold is defined by the government based on a particular diet and expenditure pattern. Based on this measure, the poverty incidence in 1994 is 35.7 percent of households or 41.3 percent of the population.

The report "A Strategy to Fight Poverty" commissioned by the Presidential Commission to Fight Poverty identifies the poor based on resource base and source of income. Thus, the poor groups -- already mentioned in earlier sections -- are the following: (1) lowland landless agricultural workers, (2) lowland small farm-owners and cultivators, (3) upland farmers, (4) artisanal fisherfolk, (5) industrial wage laborers, (6) hawkers and microentrepreneurs, and (7) scavengers.

There has been growing awareness of the multidimensional nature of poverty. Minimum basic needs (MBN) indicators have become in vogue so much that the government has adopted an official set of MBN indicators. But how will the MBN indicators be used in monitoring poverty?

Because of the limited resources to undertake poverty alleviation programs, it is necessary to do focused targeting, that is, to provide assistance to those who are the

poorest. While this would tend to minimize cost (since you are not providing subsidies to everyone), the administrative cost of implementing targeted programs may be so huge. The Philippine government has decided on geographical targeting which minimizes the cost of looking for the poorest. Thus, it has identified 20 priority provinces. Only 11 percent of the poor population live in these provinces.

The same PCFP report ranks the provinces based on eight MBN indicators and on this basis, identifies 19 priority provinces. This list is not identical with the official list of priority provinces.

MBN indicators can provide information on the different aspects of deprivation. But it is not clear how one can use these indicators to identify the poor.

One way of identifying the poor is to set the *minimum* or *norm* for the basic needs of a household, and then determine who do not meet these norms. This is what the MBN system was supposed to do. However, it seems that its indicators were too numerous (some 33 indicators) and some standards too high (e.g. no family member affected by natural disaster, children aged 3-6 attending day care/preschool) that it may not allow the government to focus its targeting of the poor. Moreover, although norms were set for individual indicators, no norm was set as to whether one needs to *satisfy all* requirements to be considered non-poor (or equivalently, if one needs to *fail at least one* requirement to be considered poor), or whether one needs to *fail all* requirements to be considered poor.

In view of the foregoing, we have attempted to assume various norms to see the impact on poverty incidence. The requirements that were tested are access to potable water, access to sanitary toilets, non-makeshift house, non-squatting tenure status, and above basic educational attainment of the household head. Note, however, that these variables are not defined in exactly the same manner that they are under the official MBN indicators.

First, we supposed that only those who could not meet ALL the aforementioned requirements are to be considered poor, or perhaps as "poorest of the poor". Not surprisingly, such a strict norm leads to a very focused identification of the poor as it turns out that only 0.02% of the households are in such an extreme state of deprivation. However, the data unexpectedly shows that these "poorest of the poor" households are middle income households belonging to the 5th to the 8th deciles! This perverse result is perhaps attributable to the classification of water sourced from peddlers as unpotable. It turns out that all the "poorest of the poor" source their water in this manner so that if such water were reclassified as potable, then there would be no such defined poor.

More lax definitions of poverty (e.g. failure to meet any 1, 2, 3 or 4 out of the 5 requirements) obviously lead to larger estimates of poverty incidence. For instance,

restricting the poor to be those who do not meet any 4 out of the 5 requirements results in an estimate of poverty incidence of below 0.33% of the household population. Alternatively, defining poverty as the failure to satisfy at least 3 of the requirements provides an estimated poverty incidence of less than 4.8% of the households. Meanwhile, counting all households that fail at least 2 of the requirements leads to a 23% poverty incidence estimate. On the other hand, if we consider a household poor if it is not able to meet at least one requirement, then the proportion of poor households would be magnified to almost 56%!

#### **4.4 Future Directions**

There is a need to further validate the set of MBN indicators. Agencies and research groups using MBN indicators can perhaps use the results obtained so far to examine the indicators being used. Some of the criteria that can be used to evaluate the indicators are the following:

- (1) Information content;
- (2) Reliability of data obtained;
- (3) Ease in collecting the data at the barangay level by barangay monitors.

More importantly, there should be further studies as to how to use these MBN indicators in identifying who should be the beneficiaries of poverty alleviation programs.

## **5. NEW INITIATIVES ON POVERTY MONITORING**

The growing demand for regular and updated information on the welfare status of population subgroups is being addressed by the Philippine Statistical System in at least four ways.

The National Economic and Planning Authority and the National Statistics Office are planning to implement an Annual Family Income Survey. The survey will be conducted annually and will provide national, regional and provincial estimates of poverty incidence and other poverty indicators.

Meanwhile, the Statistical Research and Training Center has contracted the University of the Philippines Statistical Center to develop methodologies for generating small area statistics from available surveys.

The National Statistics Office, in collaboration with the Presidential Commission to Fight Poverty, Department of Social Welfare and Development, MIMAP and other agencies is undertaking a project on Poverty Statistics Enhancement. One of the outputs of the project is an improved MBN monitoring system that will be installed in North Cotabato.

The National Statistics and Coordination Board is also planning to create an inter-agency committee to develop an integrated poverty monitoring and indicator system that will harmonize existing socio-economic information systems and on-going initiatives.

With all these developments, the institutionalization of a poverty monitoring system will soon be realized.

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# TABLES

## Table 1

### MIMAP Indicators and Variables for Various Geopolitical Levels

AREA OF CONCERN	INDICATORS: Municipal/Provincial/ Regional/National Levels	VARIABLES: Barangay Level
<b>A. Survival</b>		
<b>Health</b>	1. Infant mortality rate	Number of livebirths; Number of infant deaths (< 1 yr. old )
	2. Child mortality rate	Number of living children; Number of deaths of children (1-6 yrs. old)
<b>Nutrition</b>	3. Prevalence of acute and chronic malnutrition	Number of children (0-6 yrs. old) by height, weight, sex, age
<b>Water &amp; Sanitation</b>	4. Proportion of households with sanitary toilet facilities	Number of households by type of toilet facilities used
	5. Proportion of households with access to safe water	Number of households by source of water supply
<b>B. Security</b>		
<b>Shelter</b>	6. Proportion of households in makeshift housing	Number of households by type of construction materials used for roofs and walls of dwellings
<b>Peace &amp; Order</b>	7. Crime incidence	Number of victims of crimes by type of crime
	8. Incidence of armed encounters	Number of victims of armed encounters
<b>C. Enabling</b>		
<b>Income &amp; Livelihood</b>	9. Proportion of households with income greater than the poverty threshold	Income of households
	10. Employment	Number of household members (15 yrs. old & above) who are either at work (i.e., worked for at least an hour during the reference period) or with a job/business.
	11. Underemployment	Number of employed persons wanting more hours of work
<b>Basic Education and Literacy</b>	12. Elementary enrolment	Number of children (6-12 yrs. old) attending the elementary level
	13. Secondary enrolment	Number of family members (13-16 yrs. old) attending the secondary level
	14. Basic literacy	Number of family members (10 yrs. old & above) able to read and write a simple message in any language or dialect
<b>Political Participation</b>	15. Proportion of households involved in at least one community organization	Number of households with members who are involved in at least one community organization
	16. Proportion of households who participated in formal electoral processes	Number of households with eligible/registered/actual voters

**Table 2**

**Performance of 361 Households in Barangay  
Masusô vis-à-vis the 16 MBN Indicators**

<b>Scores</b>	<b>Number of Households</b>	<b>Proportion (in percent)</b>
0	0	0.0
1	0	0.0
2	0	0.0
3	1	0.3
4	0	0.0
5	0	0.0
6	2	0.6
7	2	0.6
8	14	3.9
9	15	4.2
10	34	9.4
11	47	13.0
12	83	23.0
13	85	23.5
14	49	13.6
15	22	6.1
16	7	1.9
	<b>361</b>	<b>100</b>

**Note :** Each point represents one basic need that is being met. A score of 16 means that all of the basic needs are being met by the household. A zero score means that no basic need is being met.

**Table 3**

Number of Households and the Corresponding Proportion to Total Number of  
Respondent Households Meeting the Minimum Basic Needs  
(BARANGAY MASUSÔ)

<b>M I M A P Indicators</b>	<b>Rank</b>	<b>Number of Households</b>	<b>Proportion<sup>a/</sup> (in percent)</b>
<b>Households with access to safe water supply</b>	1	357	100
<b>Households with no deaths of children (1-6 yrs. old)</b>	2	315	98.1
<b>Households with no infant death</b>	3	314	97.8
<b>Households not in makeshift housing</b>	4	343	95.5
<b>Households with at least 1 member who is a registered voter (18 yrs. old and above)</b>	5	332	94.1
<b>Households with at least 1 member who participated in the May 1995 election</b>	6	321	93.3
<b>Households with at least 1 employed member (15 yrs. old and above)</b>	7	335	92.8
<b>Households with no members who were victims of crimes</b>	8	304	89.4
<b>Households with all members who are literate</b>	9	303	84.6
<b>Households with all members 13-16 yrs. old attending secondary schooling</b>	10	302	84.1
<b>Households with all children 6-12 yrs. old attending elementary schooling</b>	11	301	83.6
<b>Households with access to sanitary toilet facility</b>	12	291	81.7
<b>Households with no malnourished children (0-6 yrs. old)</b>	13	232	64.3
<b>Households with no underemployed worker</b>	14	150	44.8
<b>Households with income greater than the poverty threshold</b>	15	97	28.4
<b>Households with at least 1 member who is a member of any organization</b>	16	63	17.7

a/ Divisor used is the total number of households less the number of households who did not respond to the particular item.

**Table 4**

**Performance of 104 Households in Barangay  
Real de Cacarong vis-à-vis the 16 MBN Indicators**

<b>Scores</b>	<b>Number of Households</b>	<b>Proportion (in percent)</b>
0	0	0.0
1	0	0.0
2	0	0.0
3	0	0.0
4	0	0.0
5	0	0.0
6	0	0.0
7	0	0.0
8	1	1.0
9	1	1.0
10	6	5.8
11	12	11.5
12	23	22.1
13	21	20.2
14	21	20.2
15	15	14.4
16	4	3.8
	104	100

**Note :** Each point represents one basic need that is being met. A score of 16 means that all of the basic needs are being met by the household. A zero score means that no basic need is being met.

**Table 5**  
 Number of Households and the Corresponding Proportion to Total Number of  
 Respondent Households Meeting the Minimum Basic Needs  
 (Barangay Real de Cacarong)

M I M A P Indicators	Rank	Number of Households	Proportion <sup>a/</sup> (in percent)
<b>Households with access to safe water supply</b>	1.5	104	100
<b>Households with no deaths of children (1-6 yrs. old)</b>	1.5	104	100
<b>Households with at least 1 member who is a registered voter (18 yrs. old and above)</b>	3.5	101	97.1
<b>Households with no infant death</b>	3.5	101	97.1
<b>Households with at least 1 member who participated in the May 1995 election</b>	5.5	100	96.2
<b>Households with no members who were victims of crimes</b>	5.5	99	96.1
<b>Households not in makeshift housing</b>	7	99	95.2
<b>Households with at least 1 employed member (15 yrs. old and above)</b>	8	98	94.2
<b>Households with no malnourished children (0-6 yrs. old)</b>	9	90	86.5
<b>Households with all children 6-12 yrs. old attending elementary schooling</b>	10	89	85.6
<b>Households with all members 13-16 yrs. old attending secondary schooling</b>	11	88	84.6
<b>Households with all members who are literate</b>	12	84	80.8
<b>Households with access to sanitary toilet facility</b>	13	74	71.2
<b>Households with at least 1 member who is a member of any organization</b>	14	42	40.4
<b>Households with income greater than the poverty threshold</b>	15	40	40.0
<b>Households with no underemployed worker</b>	16	27	27.6

a/ Divisor used is the total number of households less the number of households who did not respond to the particular item.

**Table 6****Distribution of Households by Area and by MBN Scores  
(Barangay Real de Cacarong)**

Scores	Purok			Total
	Parang	Libis	Gulod	
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	1	1
9	0	0	1	1
10	1	0	5	6
11	0	6	6	12
12	1	8	14	23
13	1	7	13	21
14	5	9	7	21
15	5	4	6	15
16	2	2	0	4
Total	15	36	53	104

**Table 7**  
**MBN SCOREBOARD**

MBN Scores greater than or equal	Proportion of Households (%)	
	Masusô	Cacarong
0	100	100
1	100	100
2	100	100
3	100	100
4	100	100
5	100	100
6	100	100
7	99	100
8	99	100
9	95	99
10	91	98
11	81	92
12	68	81
13	45	59
14	22	38
15	8	18
16	2	4

**TABLE 8**  
**SOURCE OF WATER SUPPLY**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>POTABLE</b>	656,101 54.78	688,142 57.45	750,494 62.66	825,182 68.90	851,043 71.06	919,410 76.76	946,794 79.05	1,004,137 83.84	1,065,231 88.94	1,117,872 93.33
<b>Own Use</b>	139,657 11.66	176,512 14.74	211,497 17.67	259,943 21.71	318,515 26.59	381,381 31.85	483,716 40.39	611,742 51.09	766,203 63.96	961,848 80.33
Faucet	57,995 4.84	73,964 6.18	77,384 6.46	111,690 9.33	143,876 12.01	206,664 17.26	267,585 22.34	383,619 32.04	535,125 44.67	741,900 61.96
Tubed well	81,661 6.82	102,549 8.56	134,113 11.20	148,253 12.38	174,640 14.58	174,717 14.59	216,130 18.05	228,123 19.05	231,078 19.29	219,947 18.37
<b>Shared</b>	516,444 43.12	511,630 42.72	538,997 45.02	565,239 47.20	532,528 44.45	538,029 44.93	463,078 38.67	392,395 32.77	299,028 24.96	156,024 13.03
Faucet	269,839 22.53	259,328 21.66	244,920 20.46	269,297 22.49	270,815 22.61	270,672 22.60	256,911 21.45	239,009 19.96	176,030 14.69	97,808 8.17
Tubed well	246,605 20.59	252,302 21.07	294,077 24.56	295,943 24.71	261,713 21.85	267,357 22.33	206,167 17.21	153,386 12.81	122,998 10.27	58,216 4.86
<b>UNPOTABLE</b>	541,618 45.22	509,374 42.54	446,720 37.31	372,251 31.09	346,889 28.96	278,054 23.22	250,843 20.94	193,148 16.13	132,694 11.08	79,443 6.64
Dug Well	277,654 23.18	283,873 23.71	267,854 22.37	225,230 18.81	204,270 17.05	164,389 13.73	131,885 11.01	106,682 8.91	62,848 5.25	45,717 3.82
Spring, River, etc.	248,286 20.73	202,996 16.95	147,953 12.36	114,503 9.56	97,565 8.14	70,419 5.88	64,118 5.35	40,636 3.39	25,845 2.16	7,933 0.66
Rain	5,021 0.42	8,631 0.72	9,720 0.81	11,930 1.00	10,450 0.87	5,014 0.42	6,558 0.55	5,397 0.45	6,202 0.52	4,642 0.39
Peddler	10658 0.89	13875 1.16	21194 1.77	20588 1.72	34605 2.89	38232 3.19	48282 4.03	40433 3.38	37800 3.16	21151 1.77
<b>TOTAL</b>	1,197,719 100.00	1,197,518 100.00	1,197,215 100.00	1,197,434 100.00	1,197,934 100.00	1,197,464 100.00	1,197,636 100.00	1,197,285 100.00	1,197,926 100.00	1,197,314 100.00

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 9**  
**TYPE OF TOILET FACILITY USED**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>SANITARY</b>	580,384 48.46	627,367 52.39	700,282 58.49	753,817 62.95	799,093 66.71	886,479 74.03	957,083 79.91	1,025,317 85.64	1,082,985 90.41	1,157,091 96.64
water sealed	333,221 27.82	398,911 33.31	453,353 37.87	520,503 43.47	585,977 48.92	674,304 56.31	776,311 64.82	885,984 74.00	974,184 81.32	1,083,062 90.46
closed pit	247,164 20.64	228,456 19.08	246,929 20.63	233,314 19.48	213,116 17.79	212,175 17.72	180,772 15.09	139,334 11.64	108,801 9.08	74,030 6.18
<b>UNSANITARY</b>	261,434 21.83	256,269 21.40	238,574 19.93	226,794 18.94	218,382 18.23	180,968 15.11	145,950 12.19	116,953 9.77	78,516 6.55	33,164 2.77
open pit	224,340 18.73	215,184 17.97	192,492 16.08	173,472 14.49	155,055 12.94	121,519 10.15	86,949 7.26	63,606 5.31	46,417 3.87	10,589 0.88
others (pail system,etc.)	37,094 3.10	41,085 3.43	46,081 3.85	53,322 4.45	63,326 5.29	59,449 4.96	59,001 4.93	53,346 4.46	32,099 2.68	22,575 1.89
<b>NONE</b>	355,901 29.71	313,881 26.21	258,359 21.58	216,822 18.11	180,458 15.06	130,017 10.86	94,603 7.90	55,015 4.59	36,424 3.04	7,060 0.59
<b>TOTAL</b>	1,197,720	1,197,517	1,197,214	1,197,433	1,197,932	1,197,464	1,197,636	1,197,285	1,197,925	1,197,316

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 10**  
**TYPE OF CONSTRUCTION MATERIALS USED IN HOUSE**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>STRONG*</b>	172,765 14.42	231,599 19.34	301,413 25.18	405,802 33.89	487,512 40.70	650,528 54.33	767,371 64.07	895,423 74.79	1,009,444 84.27	1,134,417 94.75
<b>LIGHT**</b>	958,128 80.00	922,458 77.03	850,889 71.07	746,942 62.38	672,055 56.10	512,368 42.79	400,149 33.41	280,622 23.44	177,164 14.79	56,644 4.73
<b>MAKESHIFT***</b>	66,826 5.58	43,460 3.63	44,913 3.75	44,589 3.72	38,365 3.20	34,569 2.89	30,116 2.51	21,239 1.77	11,317 0.94	6,253 0.52
<b>TOTAL</b>	1,197,719	1,197,517	1,197,215	1,197,333	1,197,932	1,197,465	1,197,636	1,197,284	1,197,925	1,197,314

\* houses with strong or predominantly strong roof and walls

\*\* houses with light or predominantly light roof and/or walls

\*\*\* houses with makeshift or predominantly makeshift roof and/or walls

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 11**  
**TENURE STATUS OF DWELLING**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>OWN BOTH House &amp; Lot</b>	728,390 60.81	735,256 61.40	724,840 60.54	754,526 63.01	725,040 60.52	732,799 61.20	754,151 62.97	739,700 61.78	786,887 65.69	845,342 70.60
<b>RENTING</b>	58,305 4.87	87,715 7.32	84,982 7.10	102,466 8.56	135,725 11.33	161,970 13.53	171,320 14.30	222,072 18.55	230,105 19.21	237,176 19.81
House & Lot	6,315 0.53	17,739 1.48	20,460 1.71	28,237 2.36	52,984 4.42	78,578 6.56	101,156 8.45	148,441 12.40	177,099 14.78	201,160 16.80
Lot	51,990 4.34	69,976 5.84	64,522 5.39	74,229 6.20	82,741 6.91	83,392 6.96	70,163 5.86	73,632 6.15	53,006 4.42	36,016 3.01
<b>RENT-FREE</b>	384,524 32.10	346,796 28.95	356,574 29.77	301,191 25.15	305,656 25.52	269,354 22.49	242,508 20.25	205,265 17.14	160,824 13.43	102,980 8.60
Lot	339,575 28.35	300,579 25.10	302,597 25.28	244,167 20.39	252,085 21.04	202,126 16.88	161,464 13.48	142,579 11.91	97,912 8.17	51,163 4.27
House & Lot	44,949 3.75	46,217 3.86	53,977 4.51	57,024 4.76	53,571 4.47	67,228 5.61	81,044 6.77	62,686 5.24	62,912 5.25	51,818 4.33
<b>SQUATTING</b>	26,500 2.21	27,749 2.32	30,819 2.57	39,249 3.28	31,511 2.63	33,342 2.78	29,657 2.48	30,247 2.53	20,109 1.68	11,817 0.99
On Lot	25,487 2.13	25,206 2.10	28,675 2.40	37,668 3.15	30,522 2.55	31,194 2.61	26,220 2.19	30,247 2.53	17,436 1.46	11,321 0.95
On House & Lot	1,013 0.08	2,543 0.21	2,144 0.18	1,581 0.13	989 0.08	2,148 0.18	3,437 0.29	0 0.00	2,673 0.22	496 0.04
<b>TOTAL</b>	1,197,719	1,197,516	1,197,215	1,197,432	1,197,932	1,197,465	1,197,635	1,197,285	1,197,925	1,197,316

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 12**  
**TENURE STATUS OF DWELLING: RURAL**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>OWN BOTH House &amp; Lot</b>	568,223 62.08	545,985 63.14	521,912 63.35	506,678 67.56	441,724 65.77	406,030 68.88	378,330 72.77	288,770 73.60	244,251 78.21	165,074 83.68
<b>RENTING</b>	34,885 3.81	47,455 5.49	40,155 4.87	36,540 4.87	41,359 6.16	36,549 6.20	23,126 4.45	20,739 5.29	15,983 5.12	11,876 6.02
<b>RENT-FREE</b>	294,845 32.21	251,419 29.08	243,639 29.57	188,862 25.18	173,798 25.88	136,748 23.20	112,687 21.67	78,552 20.02	47,865 15.33	19,701 9.99
<b>SQUATTING</b>	17,380 1.90	19,821 2.29	18,202 2.21	17,891 2.39	14,783 2.20	10,152 1.72	5,784 1.11	4,303 1.10	4,212 1.35	613 0.31
<b>TOTAL</b>	915,333	864,680	823,908	749,971	671,664	589,479	519,927	392,364	312,311	197,264

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 13**  
**TENURE STATUS OF DWELLING: URBAN**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>OWN BOTH House &amp; Lot</b>	160,167 56.72	189,271 56.87	202,928 54.36	247,848 55.39	283,316 53.83	326,769 53.75	375,821 55.45	450,931 56.02	542,636 61.27	680,268 68.02
<b>RENTING</b>	23,421 8.29	40,261 12.10	44,827 12.01	65,926 14.73	94,366 17.93	125,421 20.63	148,194 21.87	201,333 25.01	214,122 24.18	225,300 22.53
<b>RENT-FREE</b>	89,679 31.76	95,378 28.66	112,935 30.25	112,329 25.10	131,858 25.06	132,605 21.81	129,821 19.16	126,713 15.74	112,960 12.75	83,280 8.33
<b>SQUATTING</b>	9,119 3.23	7,929 2.38	12,618 3.38	21,359 4.77	16,728 3.18	23,189 3.81	23,874 3.52	25,944 3.22	15,897 1.80	11,203 1.12
<b>TOTAL</b>	282,386	332,839	373,308	447,462	526,268	607,984	677,710	804,921	885,615	1,000,051

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 14****HOUSEHOLD WITH ELECTRICITY  
By National Per Capita Income Decile  
(In Numbers and Percentage)**

	<b>1st</b>	<b>2nd</b>	<b>3rd</b>	<b>4th</b>	<b>5th</b>	<b>6th</b>	<b>7th</b>	<b>8th</b>	<b>9th</b>	<b>10th</b>
<b>With Electricity</b>	230,327 19.23	344,171 28.74	469,109 39.18	585,431 48.89	691,774 57.75	840,313 70.17	933,240 77.92	1,027,827 85.85	1,095,852 91.48	1,169,832 97.70
<b>Without Electricity</b>	967,392 80.77	853,346 71.26	728,106.00 60.82	612,002 51.11	506,158 42.25	357,151 29.83	264,396 22.08	169,458 14.15	102,073 8.52	27,482 2.30
<b>Total</b>	1,197,719	1,197,517	1,197,215	1,197,433	1,197,932	1,197,464	1,197,636	1,197,285	1,197,925	1,197,314

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 15****HOUSEHOLDS WITH ELECTRICITY  
By National Per Capita Income Decile  
(In Numbers and Percentage)**

<b>Region</b>	<b>With Electricity</b>		<b>Without Electricity</b>		<b>Total</b>
<b>Philippines</b>	7,387,878	61.7	4,587,565	38.3	11,975,443
<b>NCR</b>	1,588,946	96.6	55,444	3.4	1,644,390
<b>Region I</b>	481,142	71.6	190,384	28.4	671,526
<b>Region II</b>	283,225	57.9	206,151	42.1	489,376
<b>Region III</b>	1,014,346	84.9	180,594	15.1	1,194,940
<b>Region IV</b>	1,148,556	71.1	467,300	28.9	1,615,856
<b>Region V</b>	360,754	43.8	462,955	56.2	823,709
<b>Region VI</b>	481,011	45.0	588,702	55.0	1,069,713
<b>Region VII</b>	438,128	48.4	466,308	51.6	904,436
<b>Region VIII</b>	242,571	36.7	418,773	63.3	661,344
<b>Region IX</b>	204,685	42.8	274,065	57.2	478,750
<b>Region X</b>	371,448	54.2	314,045	45.8	685,493
<b>Region XI</b>	434,622	52.4	395,409	47.6	830,031
<b>Region XII</b>	166,946	45.4	200,377	54.6	367,323
<b>CAR</b>	109,750	48.2	117,969	51.8	227,719
<b>ARMM</b>	61,748	19.9	249,089	80.1	310,837

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 16**  
**EMPLOYMENT STATUS OF HOUSEHOLD HEAD**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>EMPLOYED</b>	1,122,717 93.74	1,121,674 93.67	1,087,978 90.88	1,065,166 88.95	1,065,855 88.97	1,053,724 88.00	1,004,149 83.84	962,735 80.41	945,138 78.90	896,841 74.90
<b>UNEMPLOYED</b>	75,002 6.26	75,843 6.33	109,237 9.12	132,267 11.05	132,077 11.03	143,741 12.00	193,487 16.16	234,550 19.59	252,788 21.10	300,474 25.10
<b>TOTAL</b>	1,197,719	1,197,517	1,197,215	1,197,433	1,197,932	1,197,465	1,197,636	1,197,285	1,197,926	1,197,315

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 17**

**MAJOR SOURCE OF INCOME**  
By National Per Capita Income Decile  
( In Number and Percentage of Households )

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>Wages/ Salaries</b>	357,477 29.8	408,597 34.1	447,625 37.4	495,504 41.4	524,224 43.8	582,299 48.6	627,643 52.4	656,744 54.9	655,266 54.7	521,909 43.6
<b>Entrepreneurial Activities</b>	689,776 57.6	648,922 54.2	596,697 49.8	536,485 44.8	497,804 41.6	455,758 38.1	380,285 31.8	318,585 26.6	268,167 22.4	270,205 22.6
<b>Other Sources of Income</b>	150,466 12.6	139,998 11.7	152,893 12.8	165,444 13.8	175,905 14.7	159,407 13.3	189,708 15.8	221,957 18.5	274,493 22.9	405,201 33.8
Cash receipts, Assistance from Abroad	8,144 0.7	11,627 1.0	25,929 2.2	31,907 2.7	45,137 3.8	52,897 4.4	87,663 7.3	116,993 9.8	157,575 13.2	237,067 19.8
<b>Total</b>	1,197,719	1,197,517	1,197,215	1,197,433	1,197,933	1,197,464	1,197,636	1,197,286	1,197,926	1,197,315

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 18****EMPLOYMENT STATUS OF HEADS OF HOUSEHOLDS WHOSE MAIN SOURCE OF INCOME  
COMES FROM CASH RECEIPTS, ASSISTANCE FROM ABROAD**By National Per Capita Income Decile  
( In Number and Percentage )

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>Employed</b>	6,780 83.2	9,222 79.3	14,984 57.8	16,437 51.5	26,398 58.5	30,059 56.8	44,634 50.9	56,179 48.0	68,090 43.2	111,434 47.0
<b>Unemployed</b>	1,364 16.8	2,405 20.7	10,945 42.2	15,470 48.5	18,739 41.5	22,838 43.2	43,029 49.1	60,814 52.0	89,485 56.8	125,633 53.0
<b>Total</b>	8,144	11,627	25,929	31,907	45,137	52,897	87,663	116,993	157,575	237,067

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 19**  
**NUMBER OF EMPLOYED MEMBERS FOR HOUSEHOLDS w/ UNEMPLOYED HEAD**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>ZERO</b>	20,246 27.0	22,380 29.5	33,313 30.5	38,921 29.4	44,852 34.0	39,682 27.6	64,094 33.1	74,175 31.6	91,022 36.0	133,133 44.3
<b>ONE</b>	34391 45.9	33026 43.6	44172 40.4	54775 41.4	50914 38.6	55876 38.9	62615 32.4	78542 33.5	85380 33.8	85475 28.5
<b>TWO</b>	13991 18.7	13056 17.2	18550 17.0	19144 14.5	28085 21.3	27971 19.5	44238 22.9	45247 19.3	40193 15.9	48674 16.2
<b>THREE</b>	3,267 4.4	3,149 4.2	7,657 7.0	11,288 8.5	4,353 3.3	12,947 9.0	13,753 7.1	25,628 10.9	22,495 8.9	19,911 6.6
<b>FOUR or more</b>	3,107 4.1	4,231 5.6	5,546 5.1	8,140 6.2	3,873 2.9	7,264 5.1	8,787 4.5	10,958 4.7	13,698 5.4	13,282 4.4
<b>Average Number of Employed</b>	1.2	1.1	1.2	1.2	1.0	1.3	1.2	1.3	1.2	1.0
<b>TOTAL</b>	75,002	75,843	109,237	132,267	132,077	143,741	193,487	234,550	252,788	300,474

**TABLE 20**  
**NUMBER OF EMPLOYED MEMBERS FOR HOUSEHOLDS w/ EMPLOYED HEAD**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>ZERO</b>	2,224 0.2	1,422 0.1	400 0.04	1,265 0.12	282 0.03	1,169 0.1	1,868 0.2	1,711 0.2	931 0.1	433 0.05
<b>ONE</b>	724768 64.6	664496 59.2	630126 57.9	595255 55.9	604810 56.7	545284 51.8	498124 49.6	396741 41.2	370177 39.2	345121 38.5
<b>TWO</b>	265934 23.7	300054 26.8	297086 27.3	309167 29.0	315154 29.6	355243 33.7	334019 33.3	388873 40.4	391047 41.4	369190 41.2
<b>THREE</b>	72,152 6.4	91,033 8.1	98,975 9.1	97,573 9.2	95,444 9.0	96,842 9.2	107,265 10.7	107,375 11.2	110,065 11.6	103,287 11.5
<b>FOUR or more</b>	57,639 5.1	64,670 5.8	61,392 5.6	61,905 5.8	50,166 4.7	55,185 5.2	62,873 6.3	68,036 7.1	72,918 7.7	78,811 8.8
<b>Average Number of Employed</b>	1.5	1.6	1.6	1.7	1.6	1.7	1.8	1.9	1.9	2.0
<b>TOTAL</b>	1,122,717	1,121,675	1,087,979	1,065,165	1,065,856	1,053,723	1,004,149	962,736	945,138	896,842

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 21**

**Major Source of Income of Households  
in the 10th Decile w/ no Employed Member : NCR**

	<b>Number</b>	<b>Percentage</b>
<b>Wages and Salaries</b>	1,713	3.0
<b>Entrepreneurial Activities</b>	399	0.7
<b>Other Sources of Income</b>	54,112	96.2
<b>Total</b>	56,224	

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 22**

**AGE OF HOUSEHOLD HEAD**  
By National Per Capita Income Decile  
( In Number and Percentage of Households)

	<b>1st</b>	<b>2nd</b>	<b>3rd</b>	<b>4th</b>	<b>5th</b>	<b>6th</b>	<b>7th</b>	<b>8th</b>	<b>9th</b>	<b>10th</b>
<b>0-17</b>	601 0.05	496 0.04	1,202 0.10	0 0.00	398 0.03	1,899 0.16	1,675 0.14	588 0.05	2,167 0.18	703 0.06
<b>18-24</b>	24,233 2.02	33,058 2.76	31,589 2.64	23,355 1.95	33,710 2.81	35,600 2.97	28,534 2.38	20,548 1.72	23,416 1.95	19,773 1.65
<b>25-44</b>	717,501 59.91	644,663 53.83	602,955 50.36	570,045 47.61	550,239 45.93	552,318 46.12	530,947 44.33	516,266 43.12	503,545 42.03	487,555 40.72
<b>45-64</b>	358,090 29.90	418,353 34.94	444,490 37.13	459,683 38.39	456,311 38.09	460,668 38.47	467,783 39.06	480,990 40.17	503,547 42.03	507,170 42.36
<b>65 &amp; over</b>	97,295 8.12	100,947 8.43	116,979 9.77	144,351 12.06	157,274 13.13	146,980 12.27	168,697 14.09	178,893 14.94	165,249 13.79	182,114 15.21
<b>Average Age</b>	43	44	45	47	46	46	47	48	48	49
<b>Total</b>	1,197,720	1,197,517	1,197,215	1,197,434	1,197,933	1,197,464	1,197,636	1,197,285	1,197,924	1,197,316

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 23****UNEMPLOYMENT RATIO OF HOUSEHOLD HEADS by AGE**By National per Capita Income Decile  
( In number and Percentage )

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>0-17</b>	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1,899 100.00	1,285 76.75	588 100.00	1,563 72.12	294 41.84
<b>18-24</b>	1,384 5.71	1,273 3.85	1,103 3.49	0 0.00	1,931 5.73	1,089 3.06	3,080 10.79	2,665 12.97	2,946 12.58	6,637 33.57
<b>25-44</b>	20,890 2.91	9,929 1.54	17,805 2.95	23,290 4.09	21,897 3.98	26,163 4.74	35,562 6.70	50,670 9.81	52,470 10.42	72,235 14.82
<b>45-64</b>	21,331 5.96	24,425 5.84	40,974 9.22	43,803 9.53	43,410 9.51	57,172 12.41	72,353 15.47	84,182 17.50	105,338 20.92	106,451 20.99
<b>65 &amp; over</b>	31,398 32.27	40,216 39.84	49,355 42.19	65,175 45.15	64,839 41.23	57,418 39.07	81,207 48.14	96,445 53.91	90,469 54.75	114,856 63.07
<b>Total</b>	75,003	75,843	109,237	132,268	132,077	143,740	193,487	234,550	252,786	300,474

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 24**

**EMPLOYMENT STATUS OF HOUSEHOLD HEADS by SEX**  
 By National Per Capita Income Decile  
 ( In Numbers and Percentages)

		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>Male</b>	Employed	1060171 95.55	1061919 96.07	1006022 93.74	968835 92.40	984840 92.53	965924 92.27	908578 89.98	860694 87.35	822408 85.74	721744 82.36
	Unemployed	49364 4.45	43472 3.93	67206 6.26	79703 7.60	79502 7.47	80903 7.73	101221 10.02	124599 12.65	136729 14.26	154536 17.64
	Total	1109535 92.64	1105391 92.31	1073228 89.64	1048538 87.57	1064342 88.85	1046827 87.42	1009799 84.32	985293 82.29	959137 80.07	876280 73.19
<b>Female</b>	Employed	62546 70.93	59755 64.86	81956 66.10	96331 64.70	81015 60.64	87800 58.29	95571 50.88	102041 48.13	122730 51.40	175097 54.54
	Unemployed	25639 29.07	32371 35.14	42031 33.90	52564 35.30	52575 39.36	62837 41.71	92266 49.12	109951 51.87	116058 48.60	145938 45.46
	Total	88185 7.36	92126 7.69	123987 10.36	148895 12.43	133590 11.15	150637 12.58	187837 15.68	211992 17.71	238788 19.93	321035 26.81
<b>Total</b>		1197720	1197517	1197215	1197433	1197932	1197464	1197636	1197285	1197925	1197315

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 25**  
**EDUCATIONAL ATTAINMENT OF HOUSEHOLD HEAD**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>NO GRADE</b>	121,117 10.11	106,105 8.86	83,324 6.96	78,974 6.60	72,473 6.05	71,600 5.98	54,331 4.54	35,412 2.96	22,954 1.92	12,459 1.04
<b>ELEMENTARY</b>	833,022.00 69.55	824,051.00 68.81	782,676.00 65.37	735,512.00 61.42	679,594.00 56.73	596,475.00 49.81	534,058.00 44.60	447,516.00 37.38	342,917.00 28.63	213,000.00 17.79
grade 1-3	225,121 18.80	191,415 15.98	189,308 15.81	171,397 14.31	157,340 13.13	138,134 11.54	124,335 10.38	90,451 7.55	56,438 4.71	31,883 2.66
grade 4	168,211 14.04	151,986 12.69	150,902 12.60	121,950 10.18	111,809 9.33	93,885 7.84	78,899 6.59	68,023 5.68	47,153 3.94	27,637 2.31
grade 5	101,488 8.47	110,710 9.24	88,590 7.40	83,421 6.97	73,413 6.13	76,975 6.43	66,754 5.57	47,632 3.98	38,810 3.24	25,081 2.09
elemetary graduate	338,202 28.24	369,940 30.89	353,876 29.56	358,744 29.96	337,032 28.13	287,481 24.01	264,070 22.05	241,410 20.16	200,516 16.74	128,399 10.72
<b>HIGH SCHOOL</b>	212,529.00 17.74	237,305.00 19.82	287,738.00 24.03	311,332.00 26.00	353,523.00 29.51	387,427.00 32.35	397,437.00 33.19	429,873.00 35.90	403,998.00 33.72	269,068.00 22.47
1st-3rd yr High School	123,419 10.30	136,015 11.36	149,430 12.48	134,080 11.20	150,909 12.60	156,979 13.11	145,970 12.19	139,827 11.68	112,549 9.40	65,433 5.46
High School Graduate	89,110 7.44	101,290 8.46	138,308 11.55	177,252 14.80	202,614 16.91	230,448 19.24	251,467 21.00	290,046 24.23	291,449 24.33	203,635 17.01
<b>COLLEGE</b>	31,051.00 2.59	30,056.50 2.51	43,476.20 3.63	71,614.00 5.98	92,343.00 7.71	141,963.00 11.86	211,811.00 17.69	284,486.00 23.76	428,055.00 35.73	702,788.00 58.70
College Undergraduate	28,207 2.36	22,898 1.91	34,427 2.88	54,712 4.57	63,872 5.33	97,649 8.15	136,949 11.44	159,035 13.28	193,943 16.19	234,089 19.55
College Graduate	2,844 0.24	7,159 0.60	9,049 0.76	16,902 1.41	28,471 2.38	44,314 3.70	74,862 6.25	125,451 10.48	234,112 19.54	468,699 39.15
<b>TOTAL</b>	1,197,719	1,197,518	1,197,214	1,197,432	1,197,933	1,197,465	1,197,637	1,197,287	1,197,924	1,197,315

Source: 1991 Family Income and Expenditures Survey (FIES)

**Table 26**  
**OWNERSHIP OF DURABLES**  
 By National Per Capita Income Decile  
 (In Number and Percentage of Households)

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
<b>RADIO</b>	622,575 51.98	697,682 58.26	772,069 64.49	804,472 67.18	833,127 69.55	893,249 74.60	960,443 80.19	1,004,379 83.89	1,023,619 85.45	1,058,512 88.41
<b>TV</b>	34,403 2.87	71,076 5.94	123,279 10.30	217,793 18.19	310,906 25.95	453,326 37.86	609,714 50.91	782,232 65.33	927,786 77.45	1,074,734 89.76
<b>VTR</b>	3,850 0.32	4,602 0.38	9,529 0.80	16,044 1.34	23,817 1.99	48,410 4.04	73,092 6.10	124,037 10.36	237,843 19.85	538,603 44.98
<b>STEREO</b>	8,706 0.73	16,413 1.37	27,414 2.29	48,051 4.01	71,302 5.95	110,412 9.22	175,653 14.67	258,558 21.60	386,115 32.23	642,628 53.67
<b>REFRIGERATOR</b>	8,873 0.74	18,061 1.51	30,637 2.56	54,141 4.52	93,696 7.82	176,400 14.73	306,406 25.58	485,079 40.51	711,112 59.36	978,895 81.76
<b>FREEZER</b>	656 0.05	605 0.05	1,138 0.10	4,132 0.35	2,408 0.20	4,256 0.36	5,930 0.50	15,716 1.31	21,522 1.80	69,685 5.82
<b>AIRCON</b>	1,264 0.11	670 0.06	2,056 0.17	4,270 0.36	5,297 0.44	7,102 0.59	7,375 0.62	13,495 1.13	24,553 2.05	134,356 11.22
<b>SALA SET</b>	125,398 10.47	169,002 14.11	259,454 21.67	334,246 27.91	433,537 36.19	576,639 48.15	673,795 56.26	836,686 69.88	949,749 79.28	1,089,979 91.04
<b>DINING SET</b>	118,301 9.88	153,994 12.86	209,801 17.52	267,351 22.33	340,389 28.41	465,739 38.89	561,446 46.88	744,137 62.15	880,757 73.52	1,045,358 87.31
<b>VEHICLE</b>	5,032 0.42	8,158 0.68	8,586 0.72	21,845 1.82	26,782 2.24	38,737 3.23	53,680 4.48	102,707 8.58	157,716 13.17	380,683 31.79

Source: 1991 Family Income and Expenditures Survey (FIES)

**TABLE 27**  
**ESTIMATES OF POVERTY INCIDENCE**  
**by Norm**

<b>Norm*</b>	<b>No.of Households</b>	<b>% of Total Households</b>
<b>1) All Five</b>	2,221	0.02
<b>2) Any Four</b>	38,987	0.33
<b>3) Any Three</b>	564,203	4.70
<b>4) Any Two</b>	2,754,791	22.99
<b>5) Any One</b>	6,698,790	55.92

\* Norms refer to combinations of these characteristics: lack of access to potable water, lack of access to sanitary toilets, makeshift house, squatter, educational attainment of household head is at most elementary

FIGURES

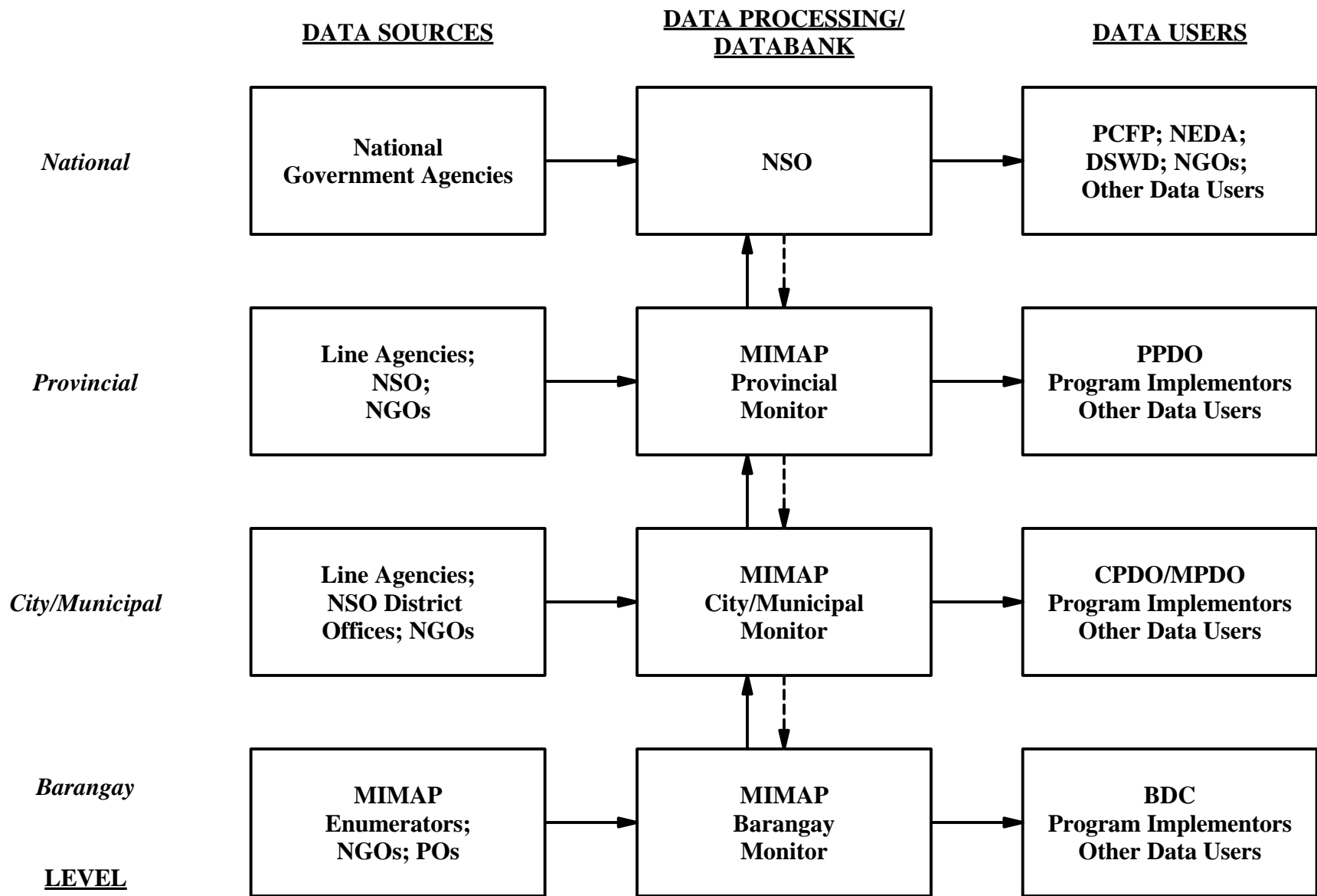
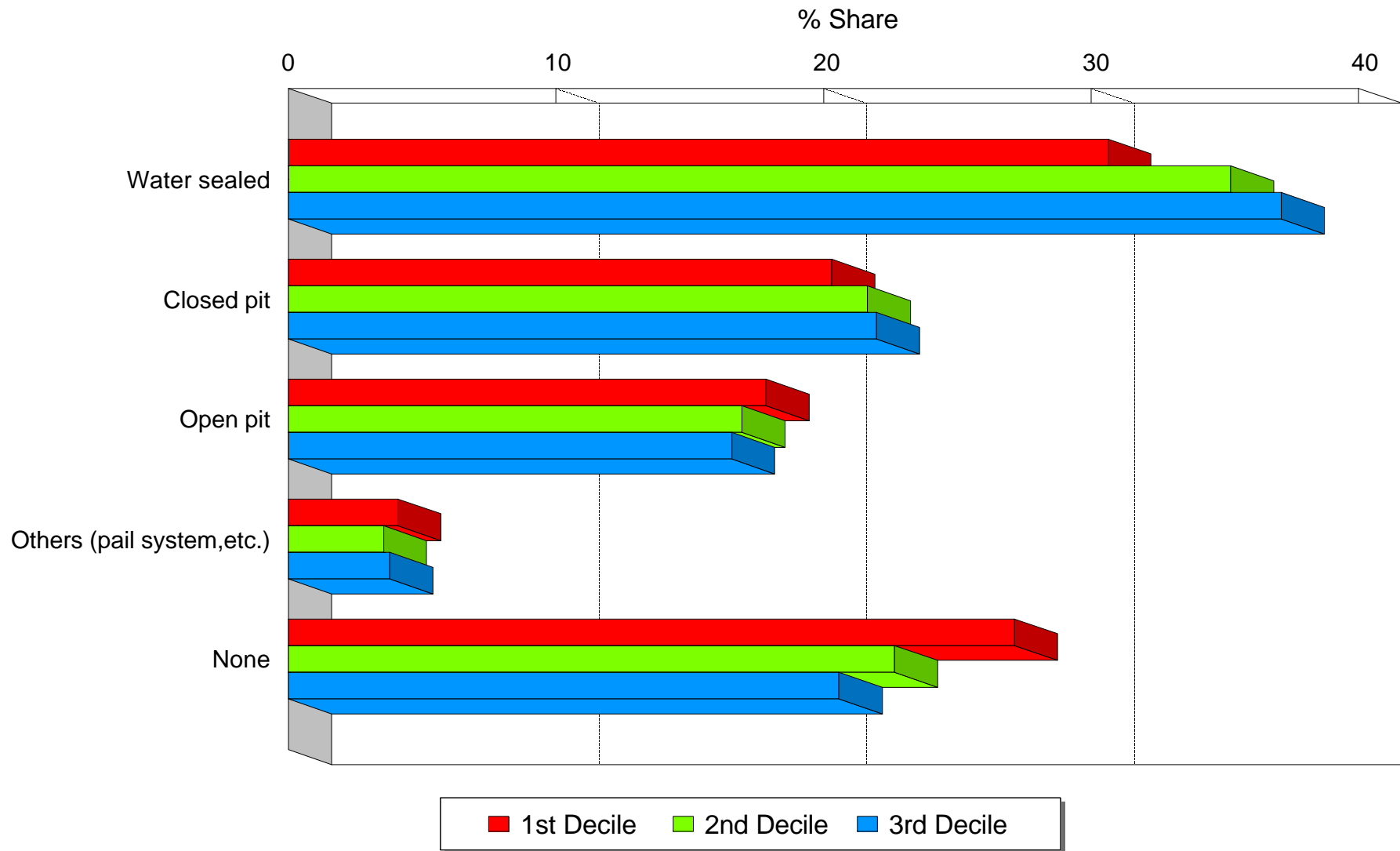


Figure 1

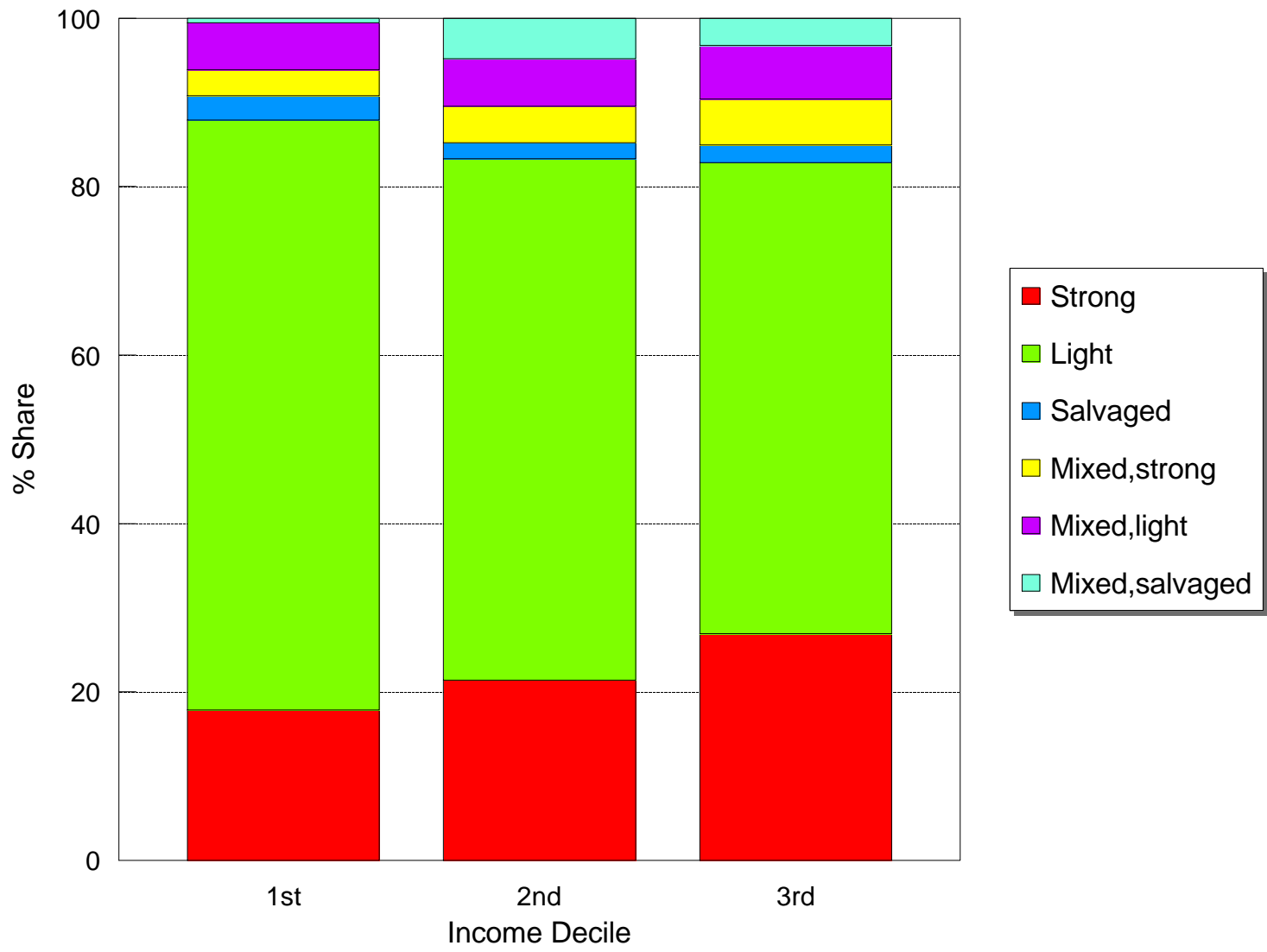
**MIMAP MONITORING SYSTEM  
FLOW OF INFORMATION**

Figure 2  
Toilet Facility Access



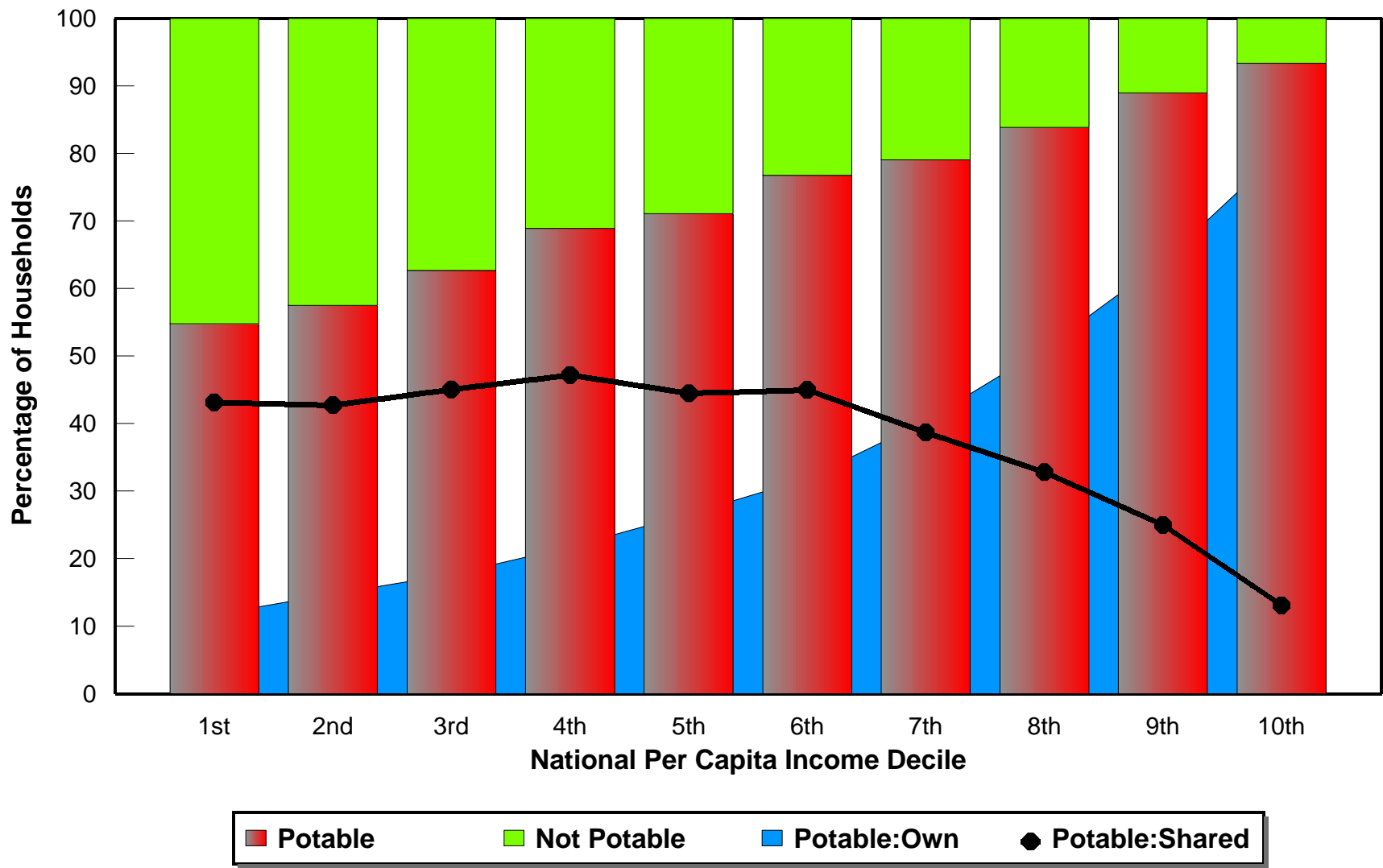
Source: 1992 Socioeconomic Survey of Special Group of Families

Figure 3  
Roofing Materials Used



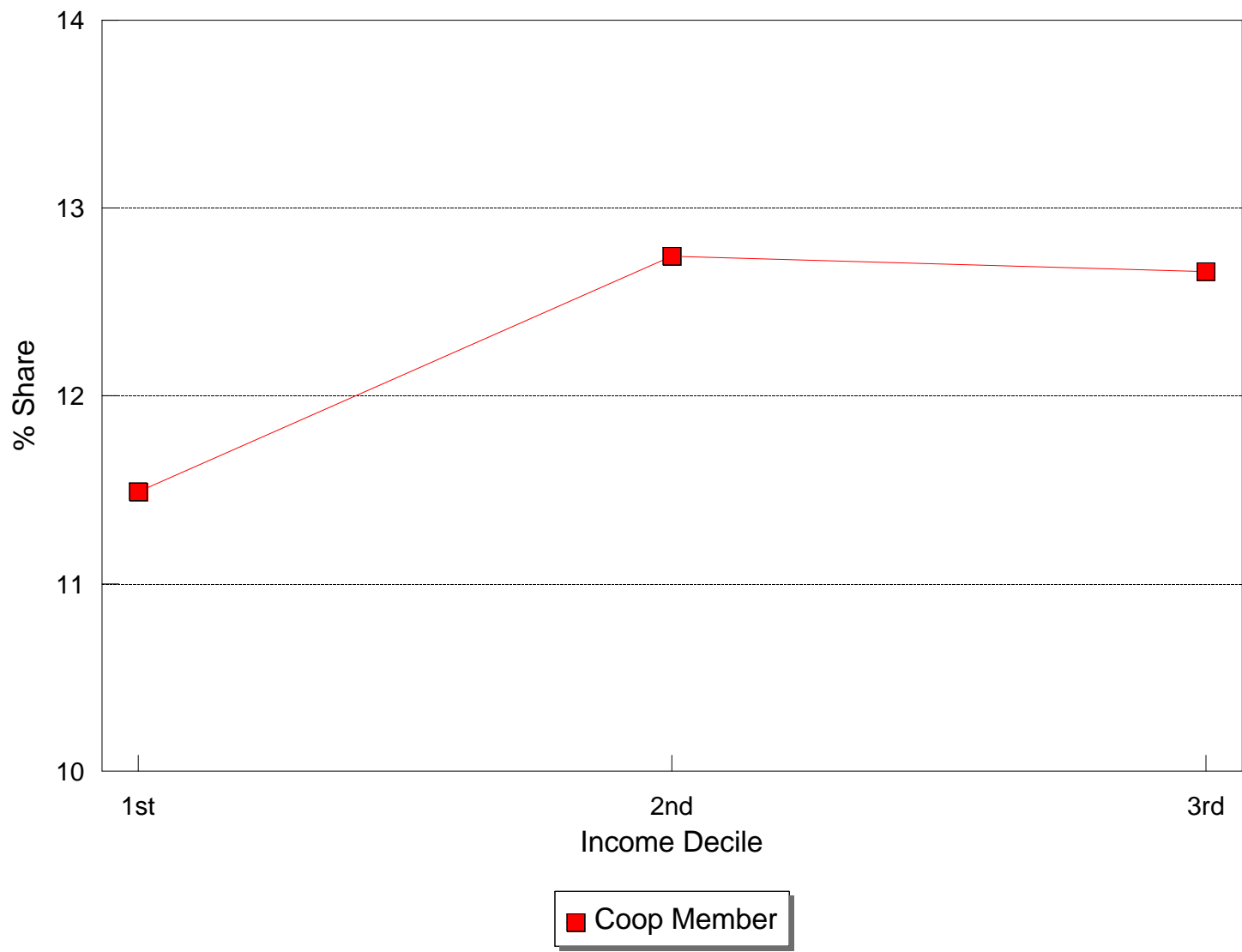
Source: 1992 Socioeconomic Survey of Special Group of Families

**Figure 5**  
**Source of Water Supply**



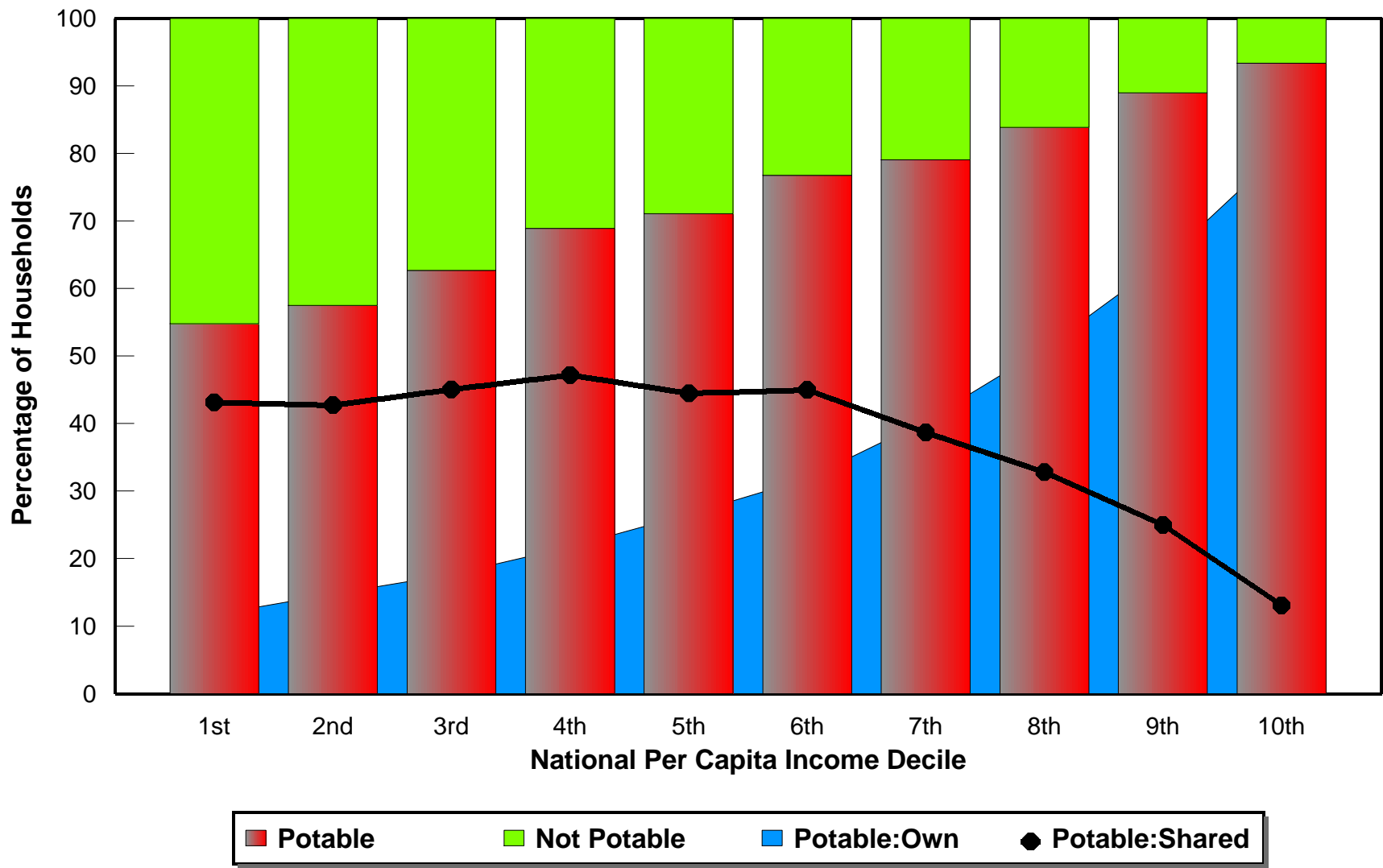
Source : 1991 FIES, NSO

Figure 4  
Membership in Cooperatives



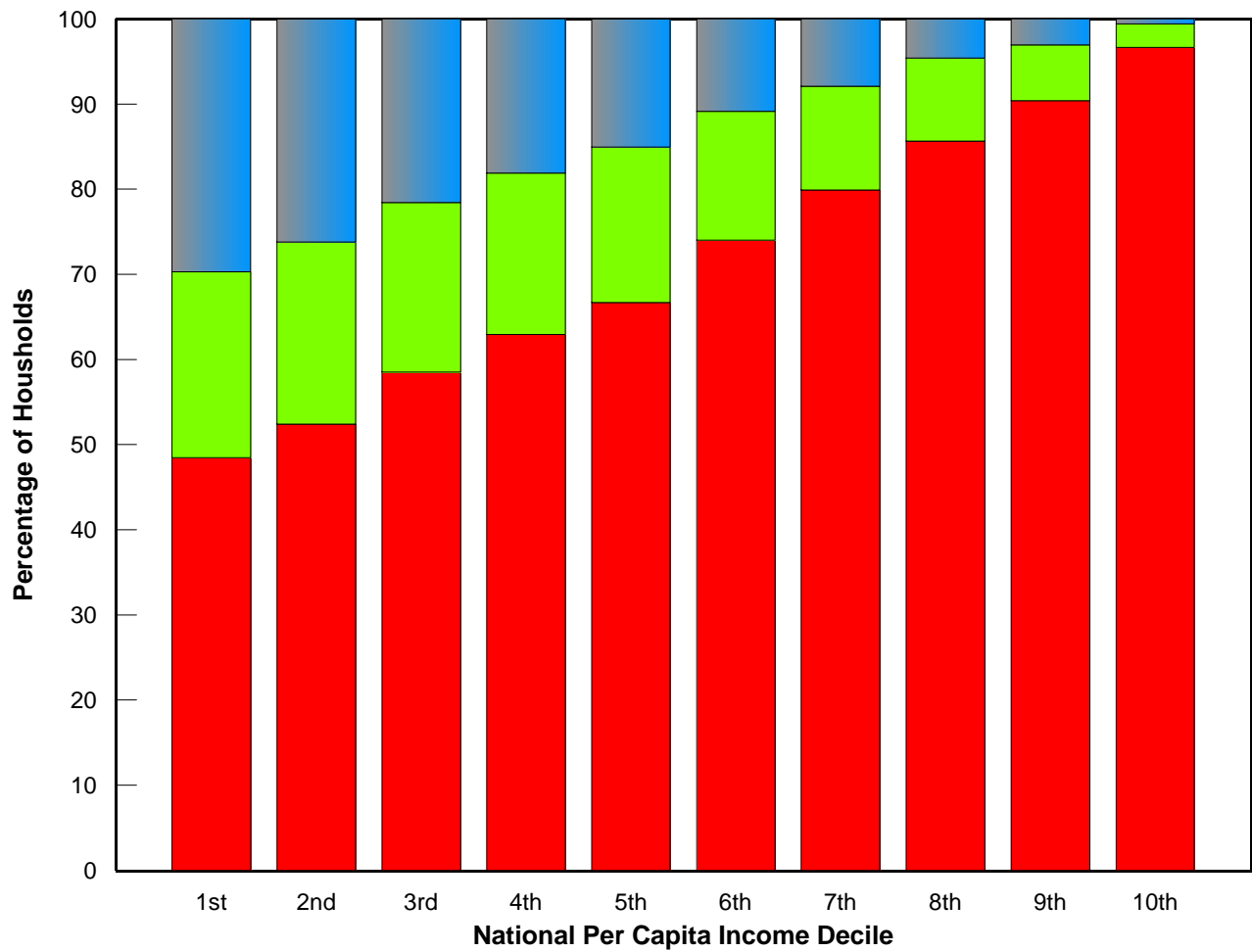
Source: 1992 Socioeconomic Survey of Special Group of Families

**Figure 5**  
**Source of Water Supply**



Source : 1991 FIES, NSO

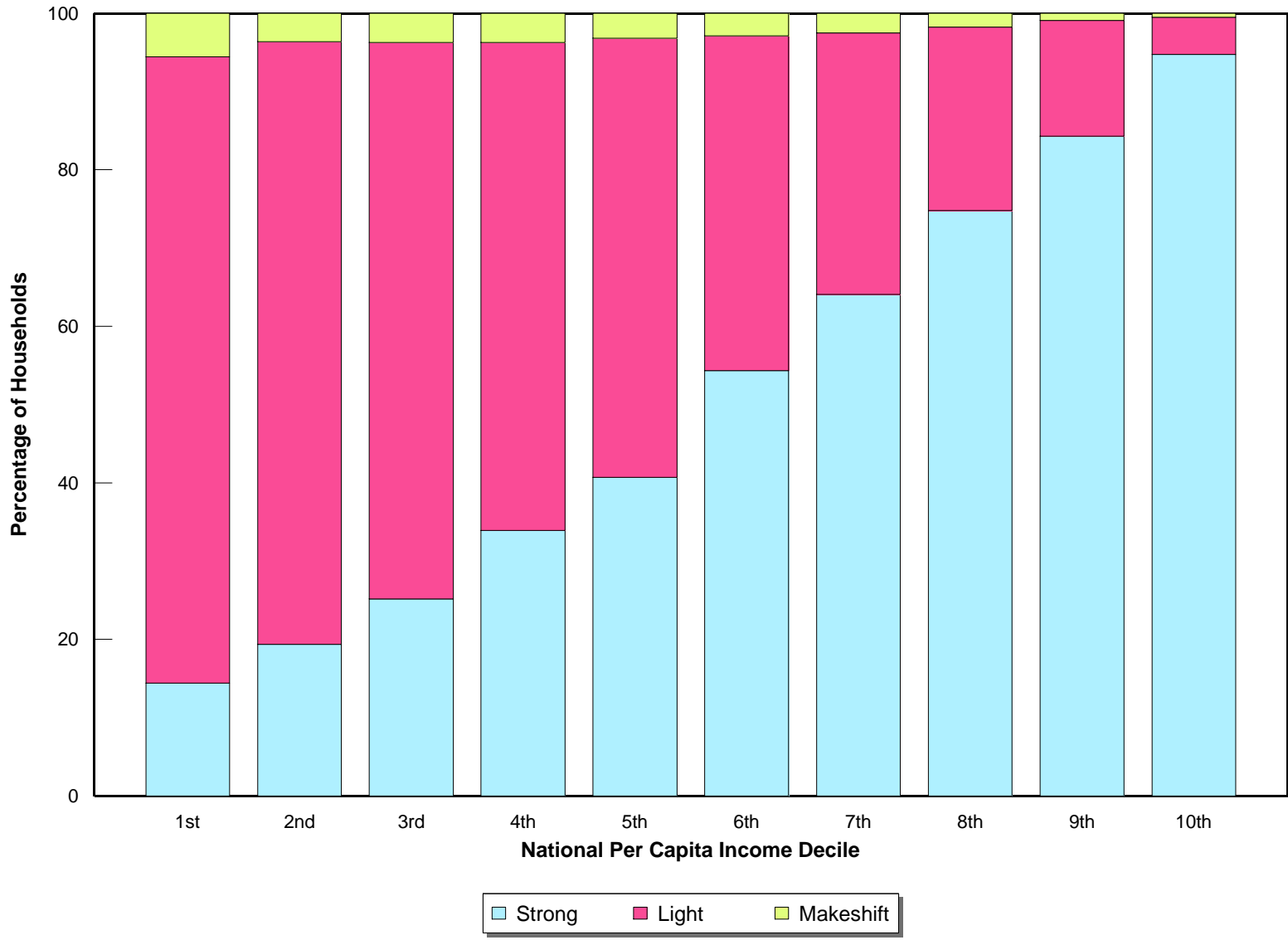
**Figure 6**  
**Access to Sanitary Toilet Facility**



Source : 1991 FIES, NSO

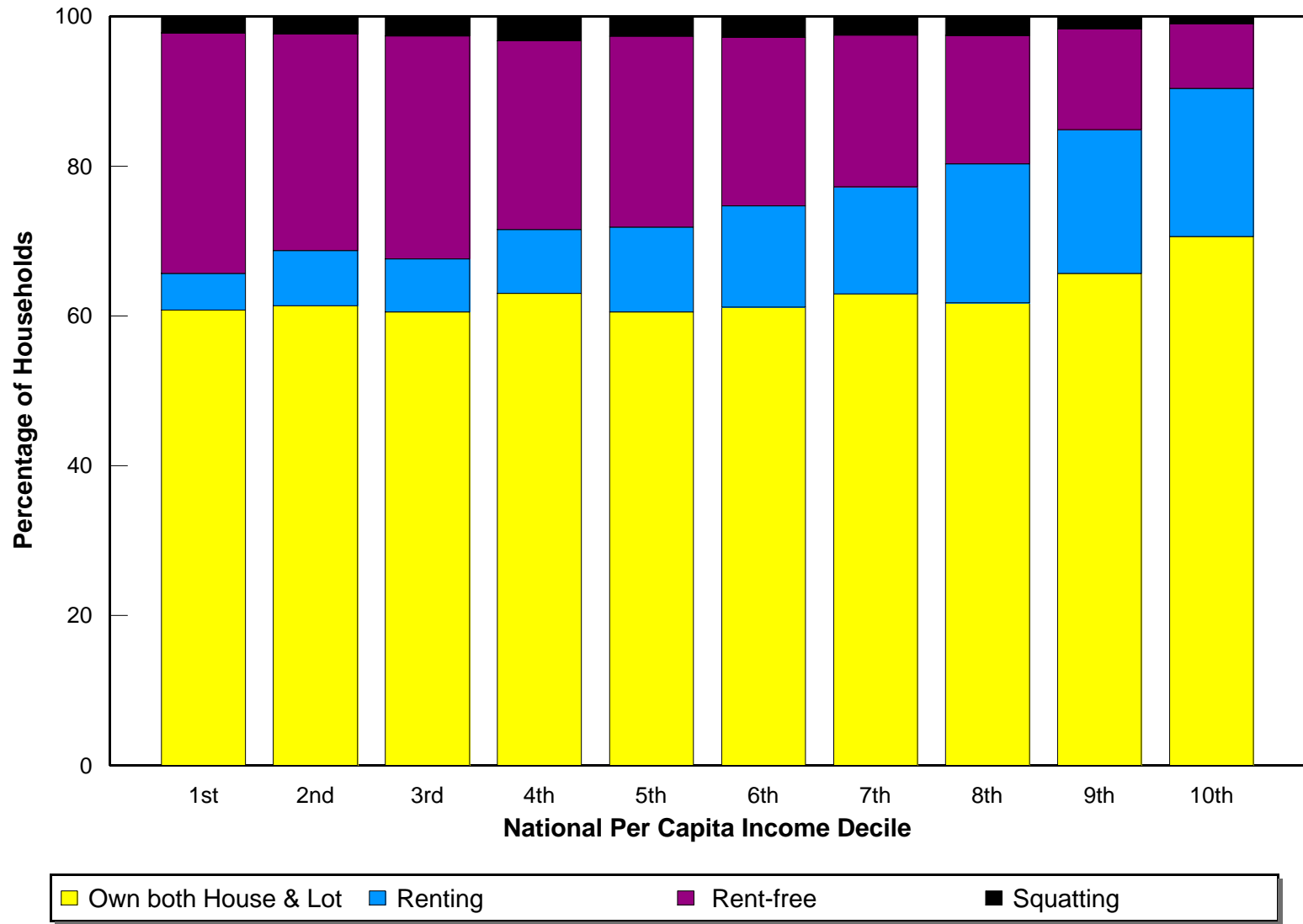
Sanitary Unsanitary None

Figure 7  
Construction Materials of House



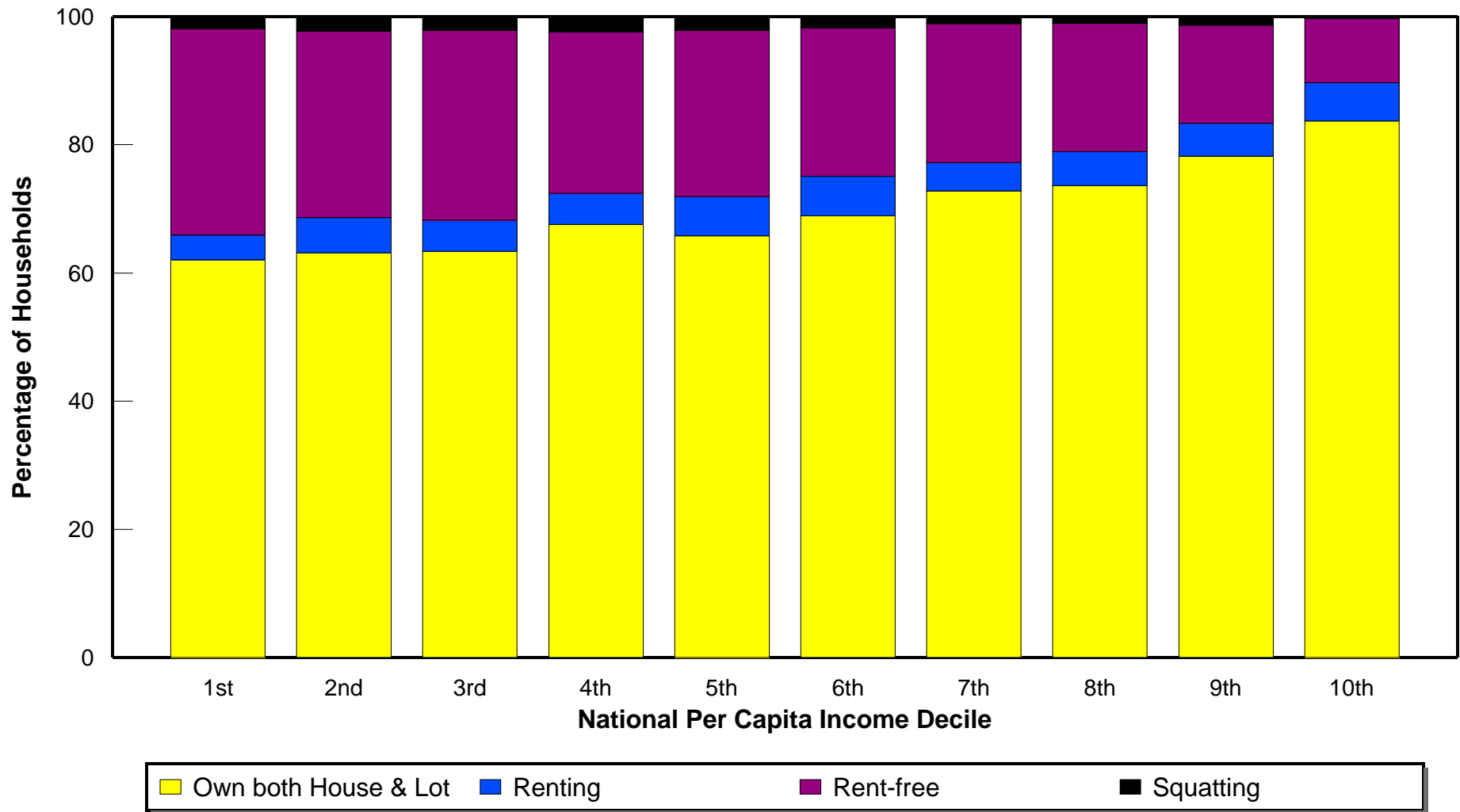
Source : 1991 FIES, NSO

**Figure 8**  
**Tenure Status of House**



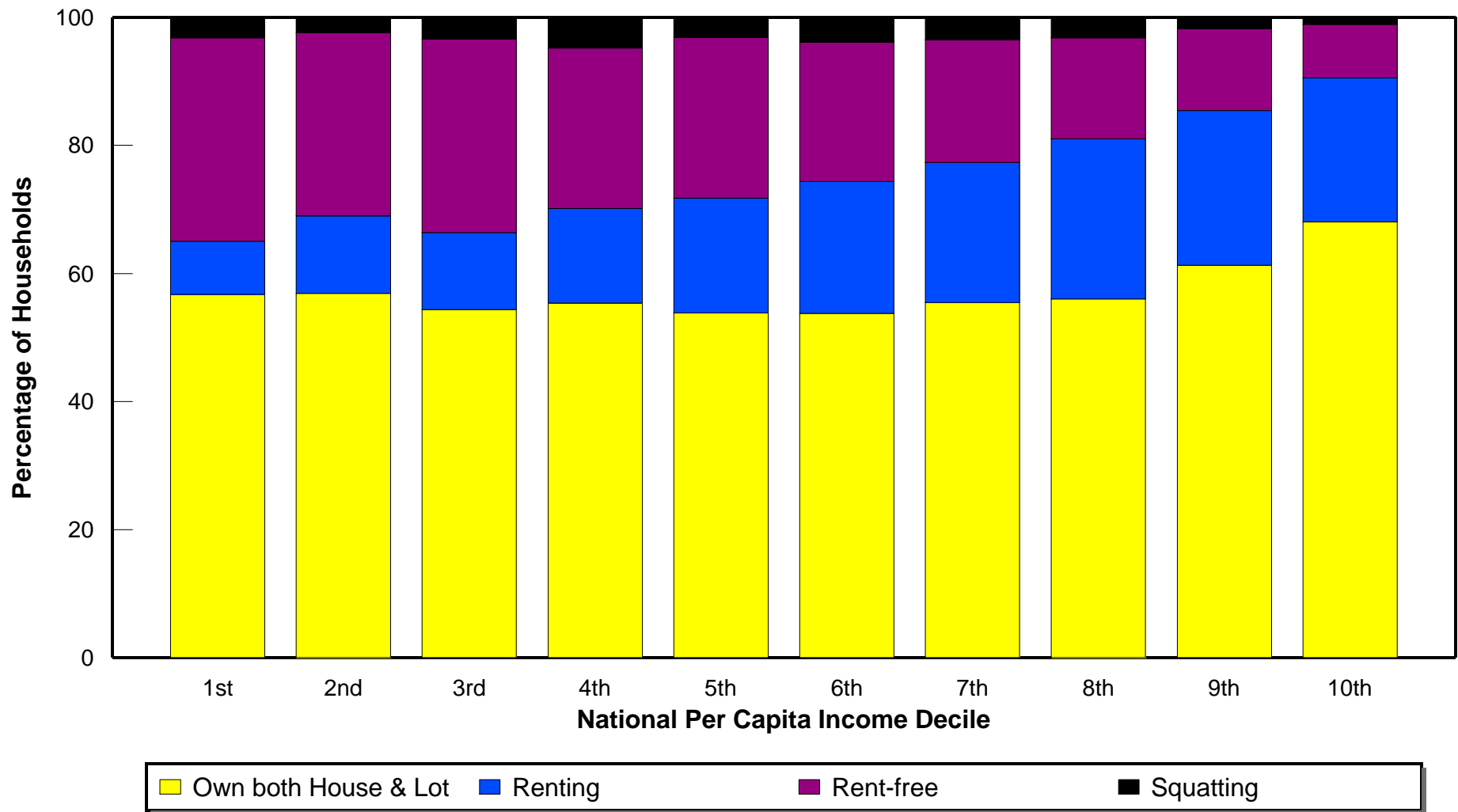
Source : 1991 FIES, NSO

**Figure 9**  
**Tenure Status of House : Rural**



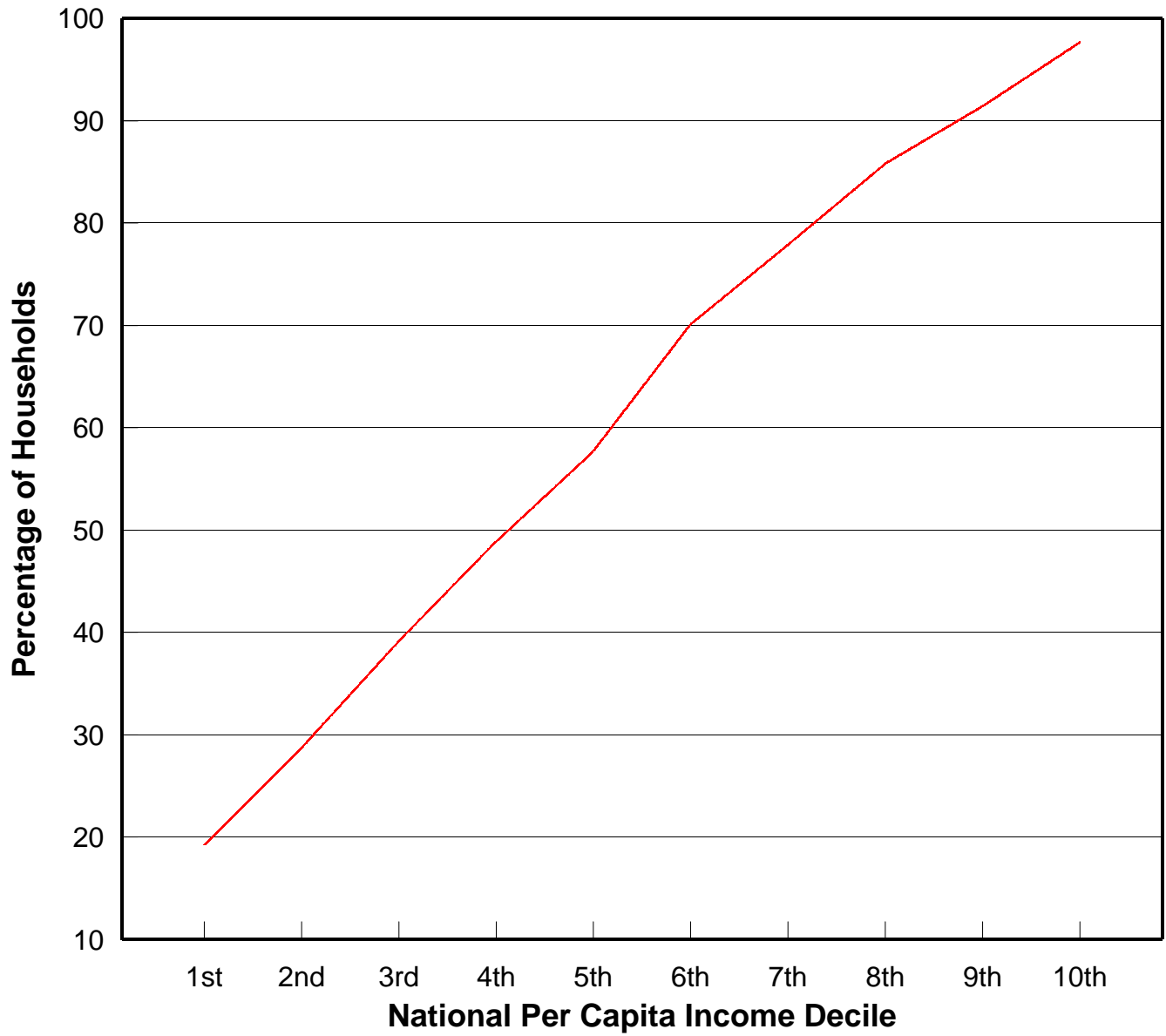
Source : 1991 FIES, NSO

**Figure 10**  
**Tenure Status of House : Urban**



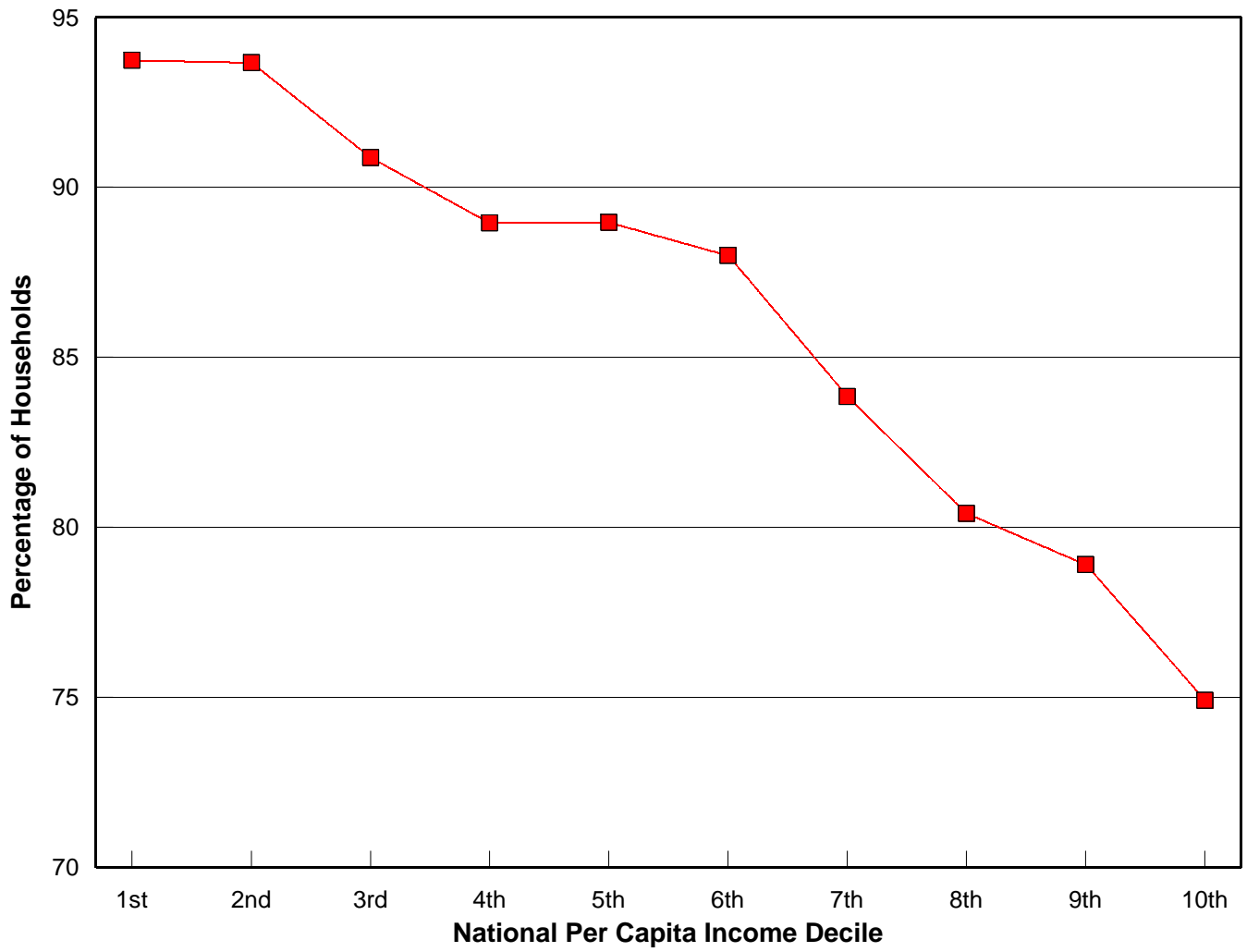
Source : 1991 FIES, NSO

**Figure 11**  
**Households with Electricity**



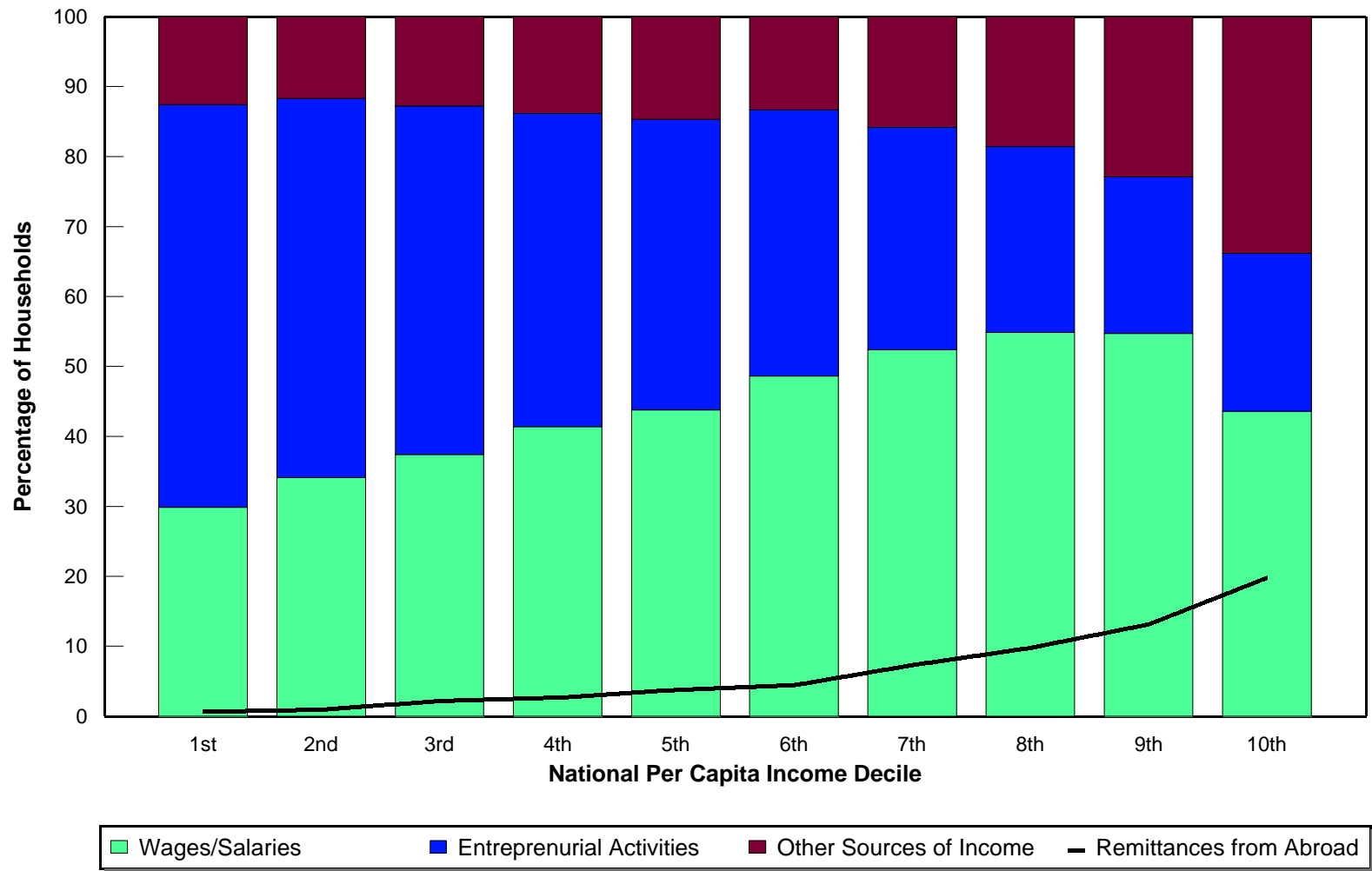
Source : 1991 FIES, NSO

**Figure 12**  
**Households with Employed Head**



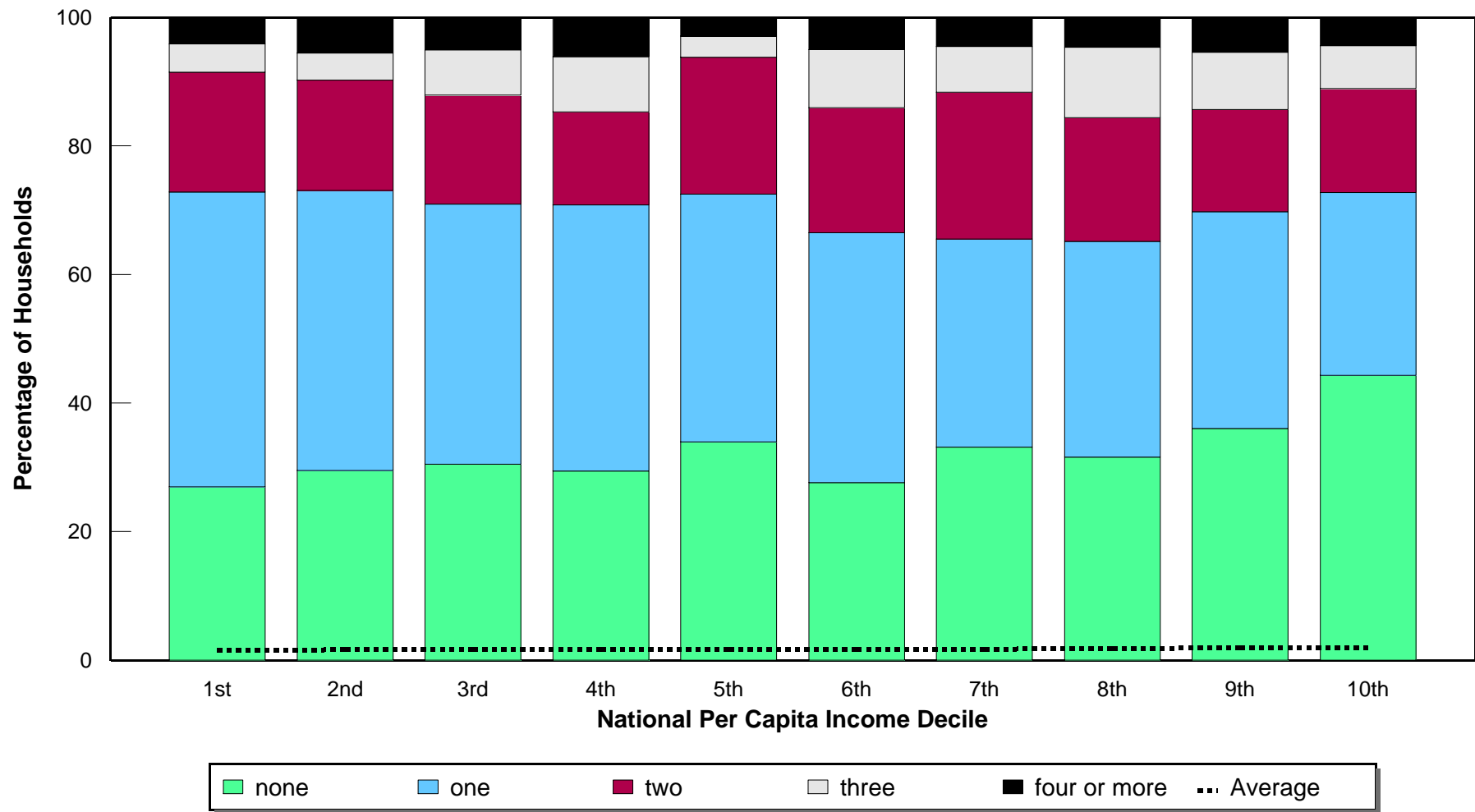
Source : 1991 FIES, NSO

**Figure 13**  
**Major Source of Income**



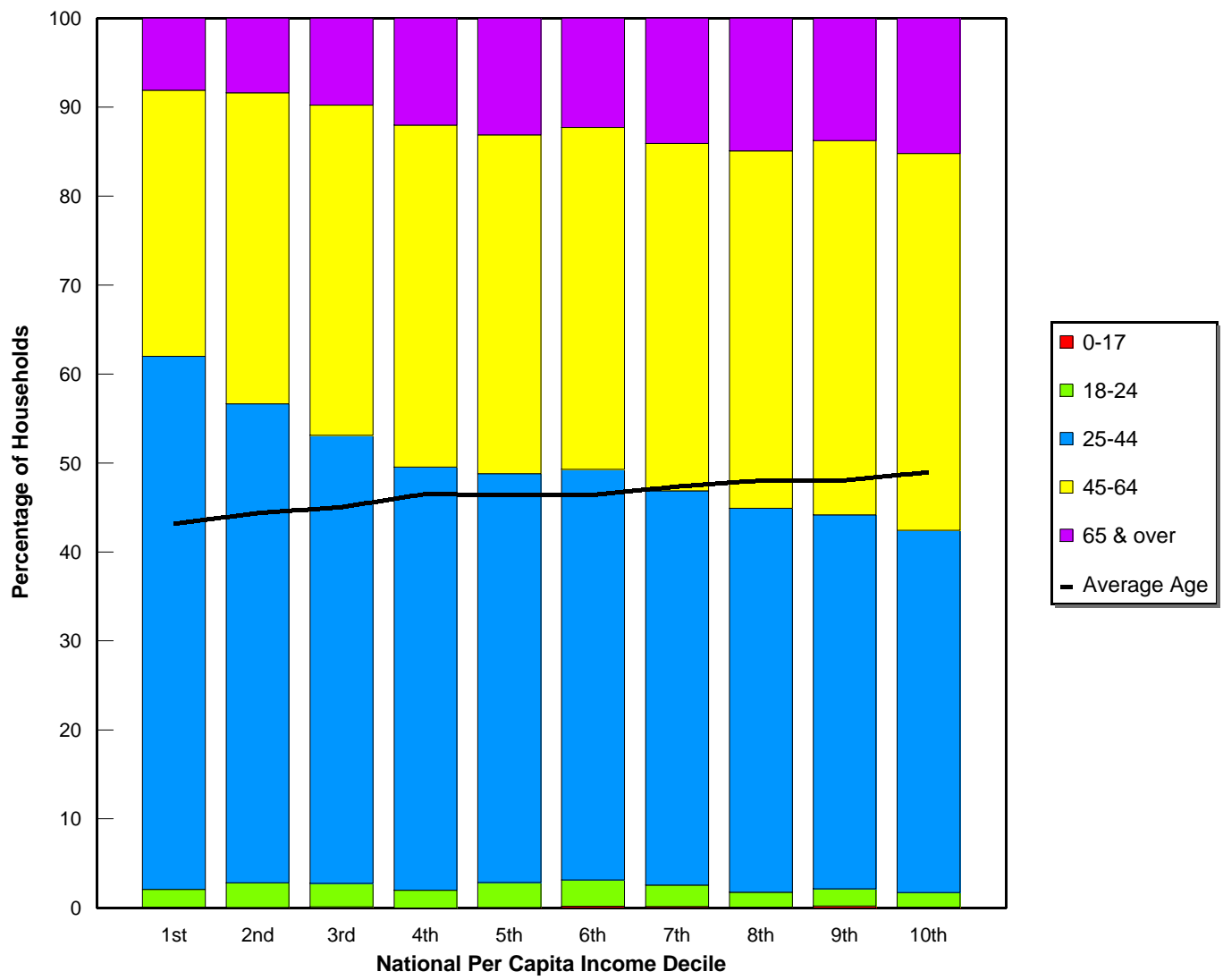
Source: 1991 FIES, NSO

**Figure 14**  
**Number of Employed Members for Households with Unemployed Head**



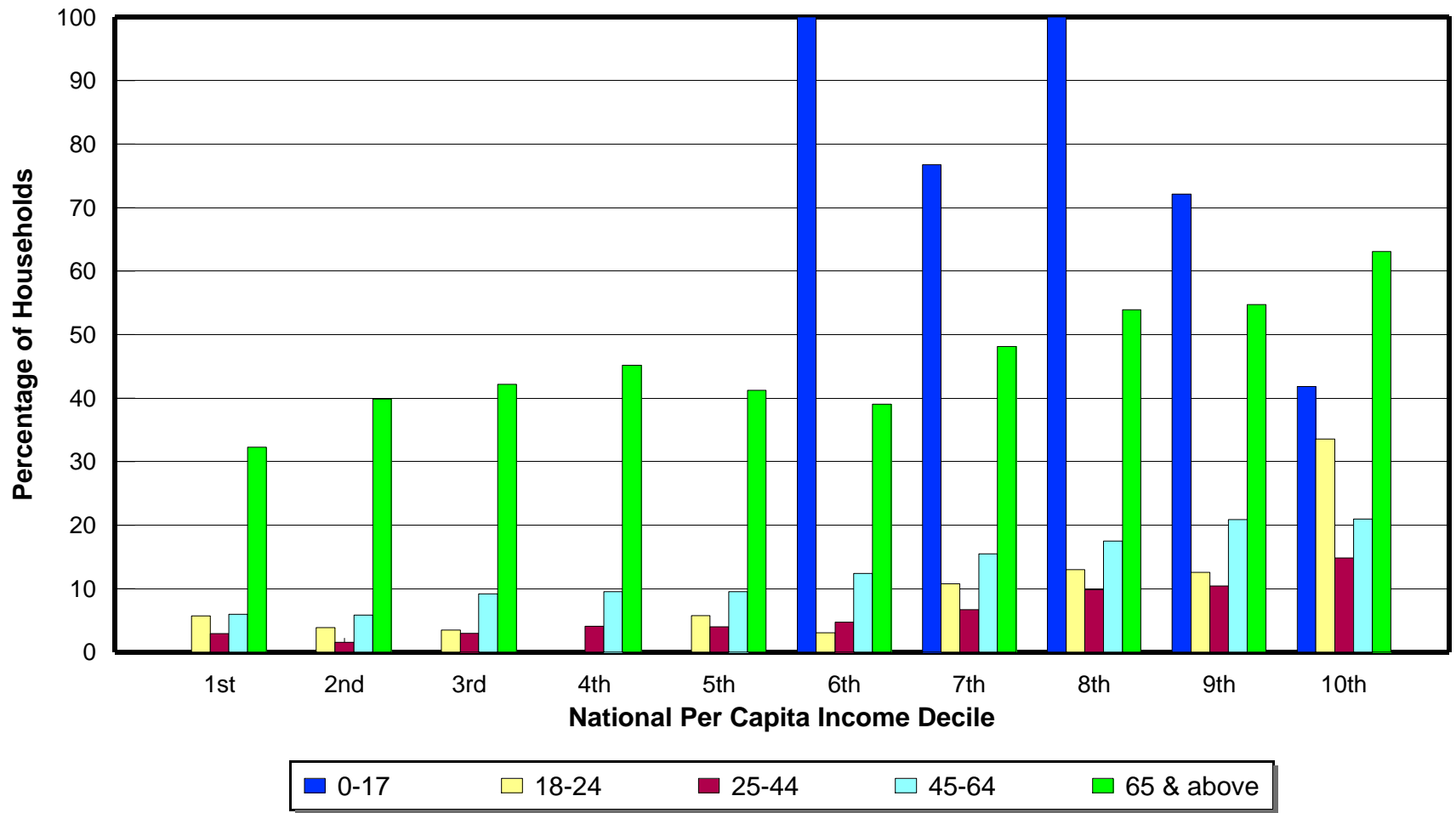
Source : 1991 FIES, NSO

**Figure 15**  
**Age of Household Head**



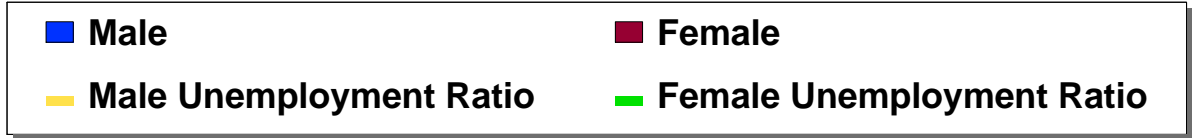
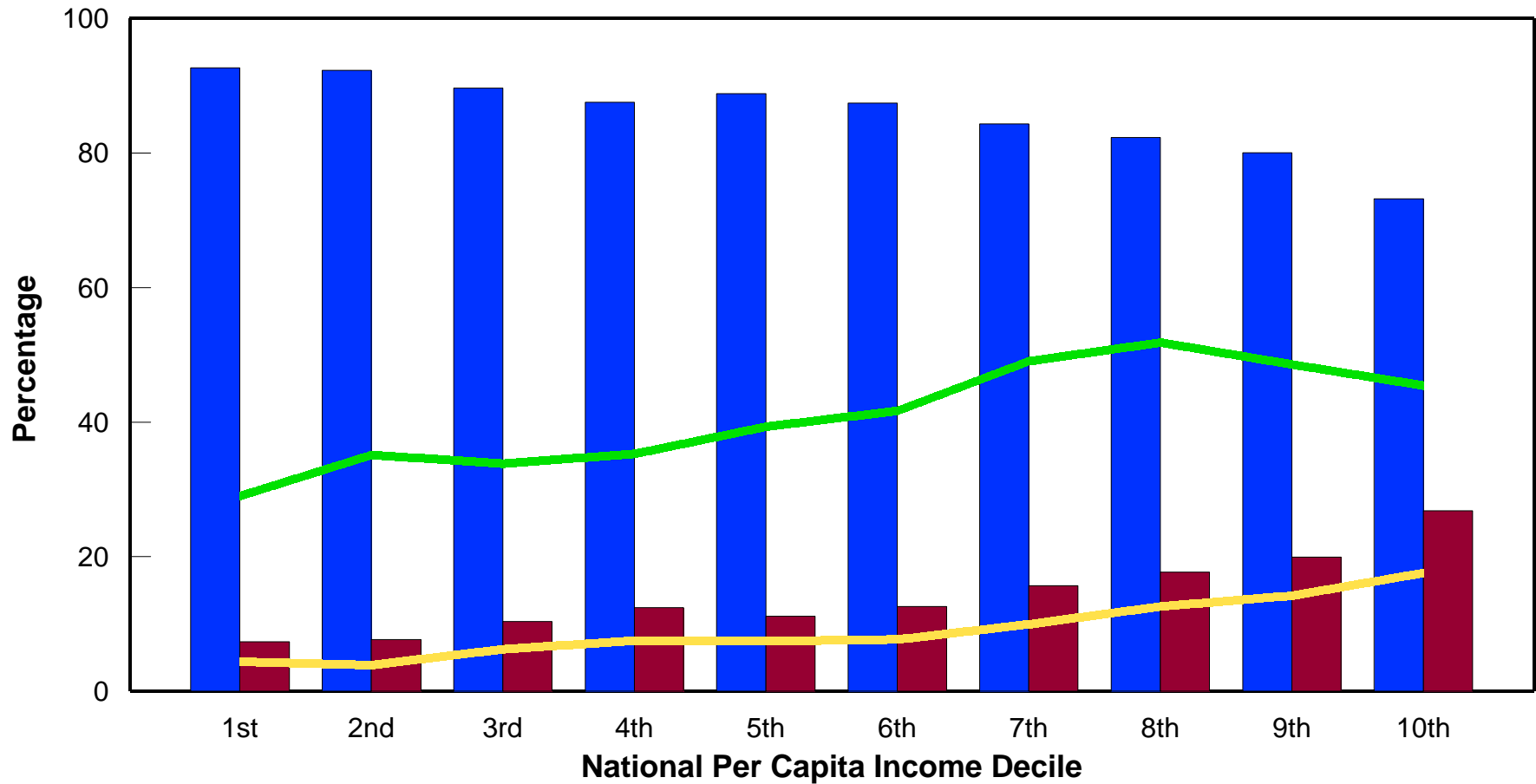
Source : 1991 FIES, NSO

**Figure 16**  
**Unemployment Ratio of Household Heads by Age**



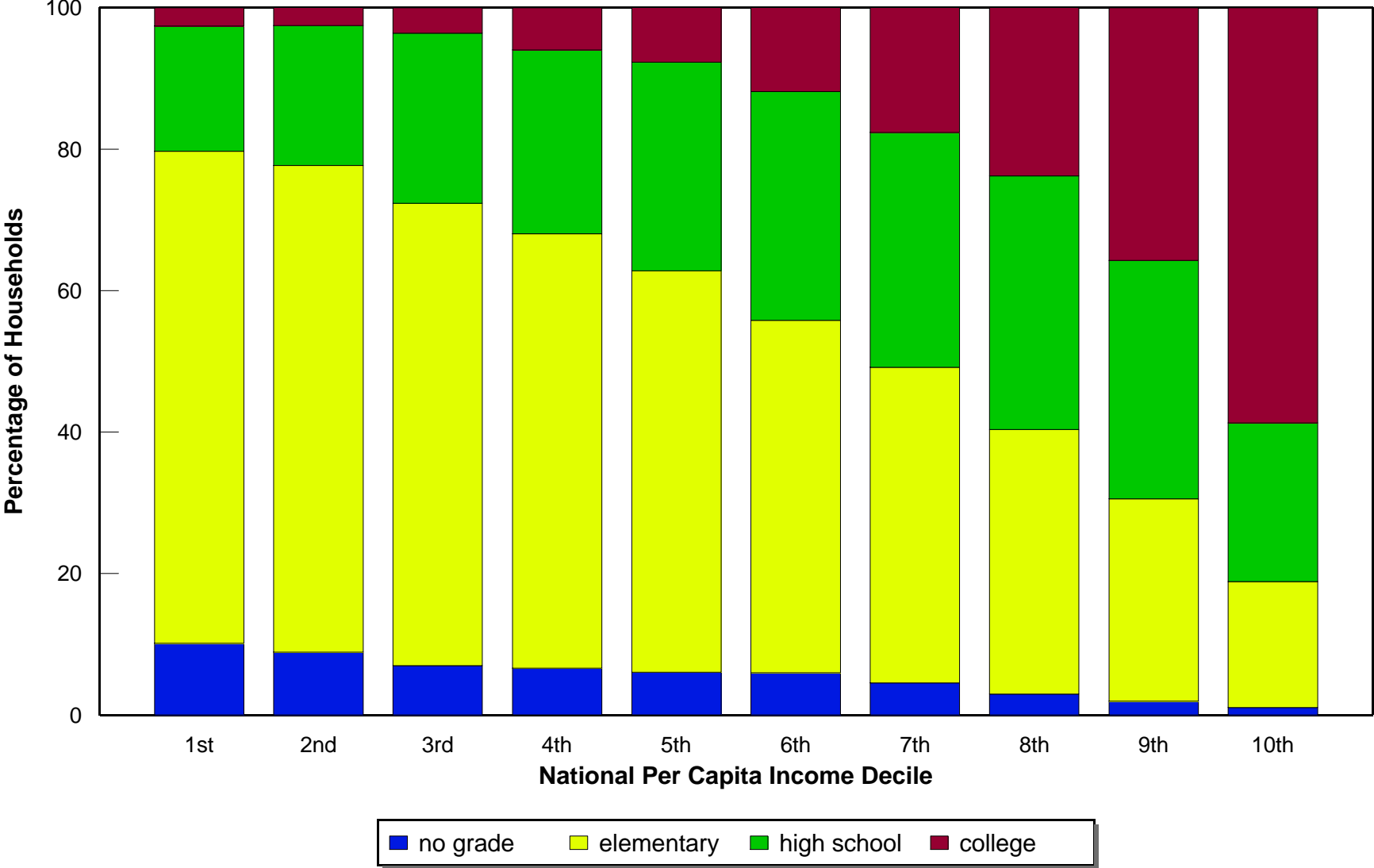
Source : 1991 FIES, NSO

**Figure 17**  
**Composition of Household Heads and Unemployment Ratio by Sex**



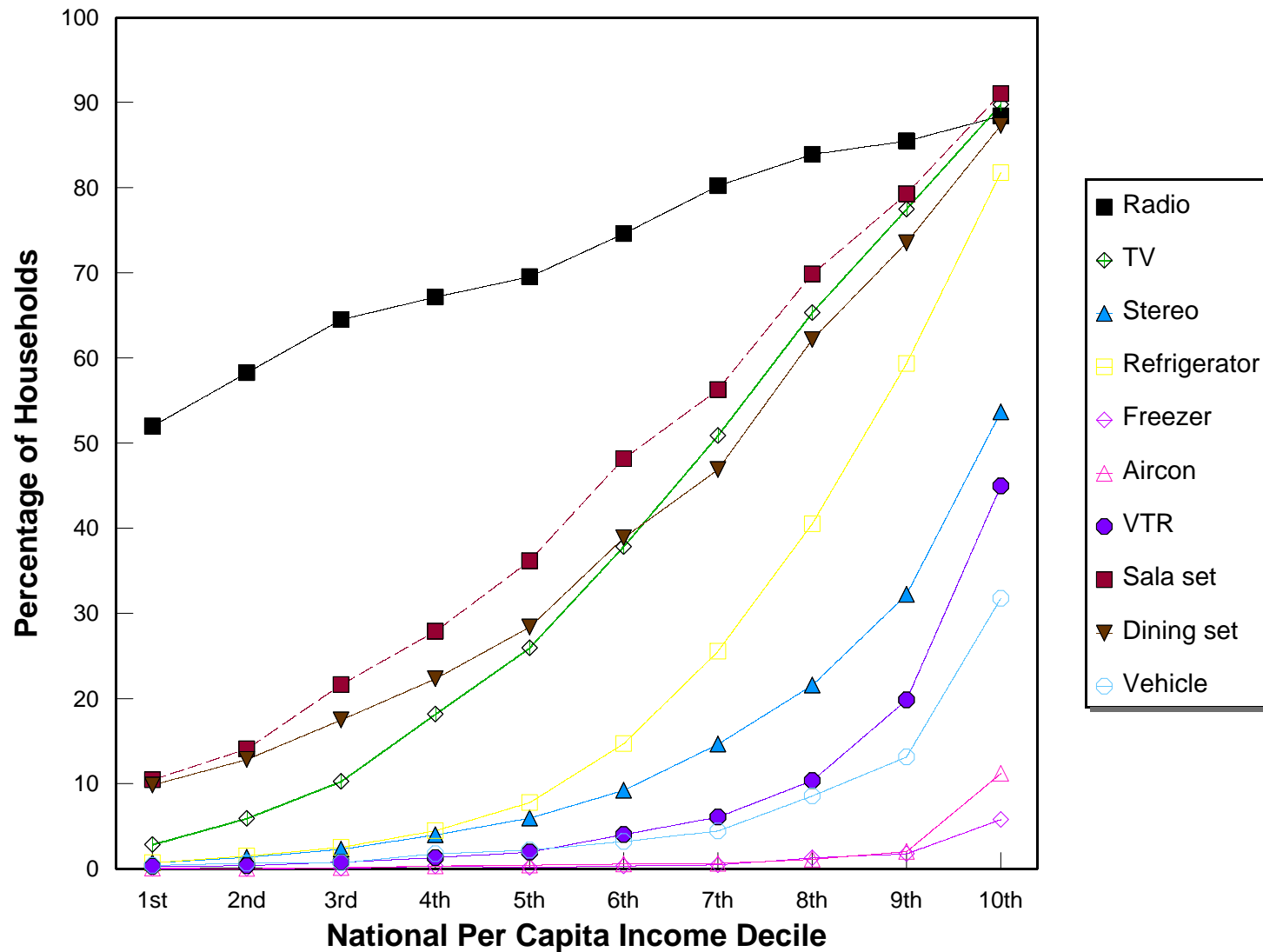
Source : 1991 FIES, NSO

**Figure 18**  
**Educational Attainment of Household Head by Income Decile**



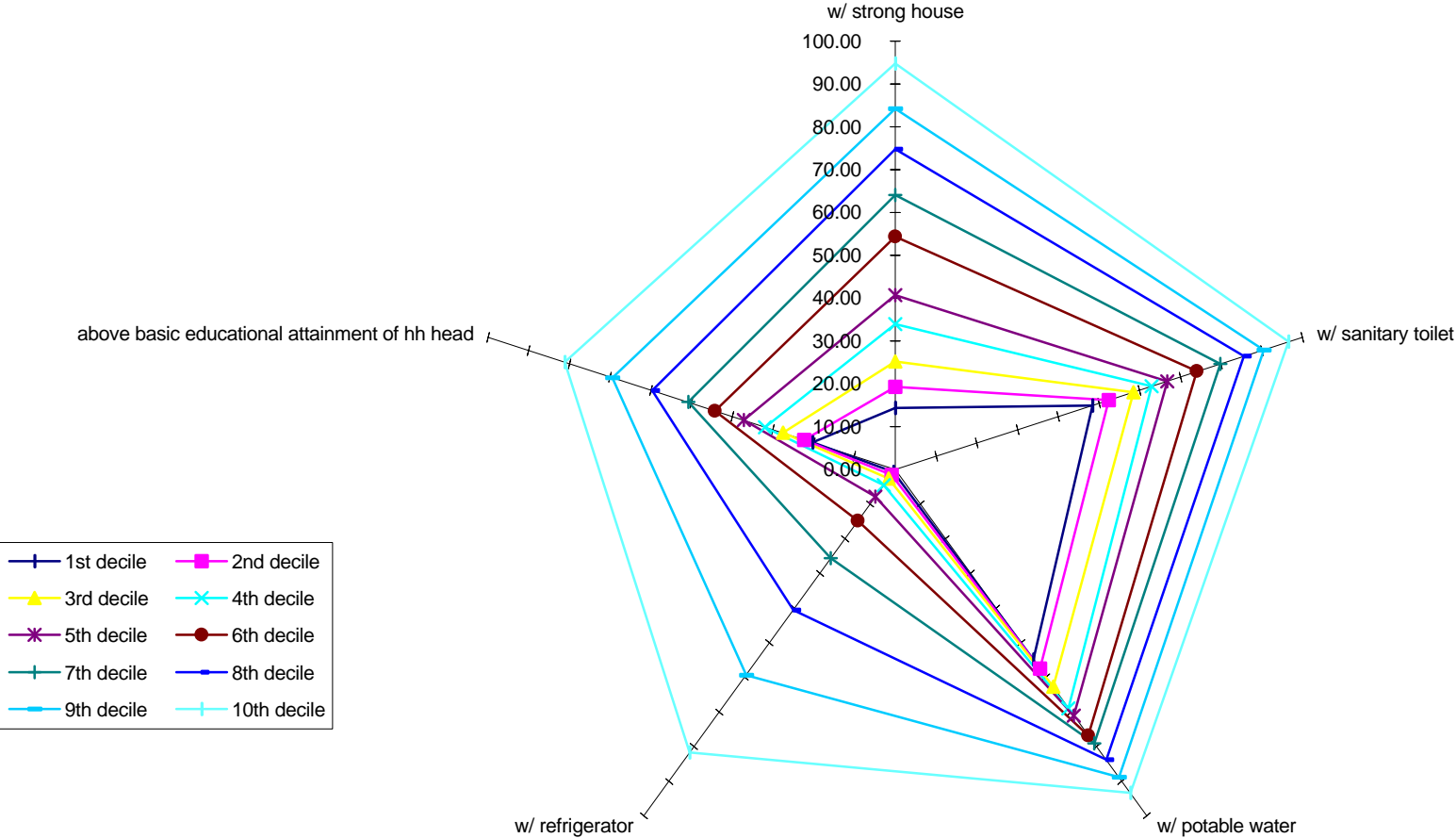
Source: 1991 FIES, NSO

**Figure 19**  
**Ownership of Durables**



Source : 1991 FIES, NSO

**Figure 20**



ANNEXES

## ANNEX A

### Data Collection Activities in Barangays Masuso and Real de Cacarong

In Bulacan, monitoring systems exist at the barangay, municipal and provincial levels. The data collection activities in Barangays Masuso and Real de Cacarong are as follows:

#### 1. Barangay Profile Survey of the PSWDO (Form 1)

The survey is conducted by the Provincial Social, Welfare, and Development Office (PSWDO). Community Affairs Officers (CAO) of the PSWDO are assigned to different municipalities of the province. The CAOs implement the survey through close coordination with the *Lingkod Lingap sa Nayon* (LLN) officers. The LLN are barangay volunteers commissioned by the provincial government for nutrition campaign and surveys. Information for the survey is collected by the LLN every 5 years.

The main objective of this survey is to generate data on the socioeconomic profile of the community. Also, the survey aims to determine community problems regarding population, nutrition, health, and livelihood in order to help the community to develop measures and programs to address these issues.

This survey can provide information for the following MIMAP indicators:

##### i ) Health

- number of livebirths
- number of living children ( 0-6 years old )

##### ii ) Nutrition

- nutritional status of children ( 0-6 years old )

##### iii ) Water and Sanitation

- type of toilet facilities used by the household
- source of water supply

However, the choices for the questions are limited. For toilet facilities, the specified choices are 1) flush; 2) de buhos and, 3) *hukay / balon*. In the case of the source of water supply, the options are 1) *poso artesiano*, 2) *NAWASA*, and 3) *balon*.

##### iv ) Political Participation

- membership of households in an organization

It does not specify the type of organization.

Aside from this questionnaire, a tabulation form was designed to facilitate the collection of the data from all the barangays. The available MIMAP indicators are as follows:

i ) The type of toilet facility and the source of water supply.  
However , the choices are also limited as was the case of the questionnaire above.

ii ) Frequency of monthly income of household members.  
The monthly income per household member was never asked in form 1.

iii) Number of overweight, normal, first, second and third degree malnourished children.

## **2. *Buwanang Talaan sa Pagbabago ng Demograpiya (Form 2)***

The PSWDO initiated the *Buwanang Talaan sa Pagbabago ng Demograpiya* in 1987. This is a monthly survey intended to update the demographic profile of each barangay and provide insights on the population-related problems of each barangay. This will help the barangays to implement and construct measures to address these problems.

This data collection activity can be the source of the following health indicators.

i ) number of births per month;

ii ) number of deaths occurring per month.

Although there are no disaggregation for infants ( less than 1 year old ) and for children aged 1-6 years old, these required information can be taken from the form.

## **3. *LLN Monthly Weighing Report (Form 3)***

The LLN Monthly Weighing Report is an initiative of the PSWDO. This is a monthly report done by the LLN to examine the state of nutrition of children, as well as, to develop measures to alleviate the occurrence of malnutrition in the barangay.

The LLN Report gives the nutritional status of children (0-6 years old) based on their weights. It gives the number of children by nutritional status.

## **4. *Barangay Profile Survey Questionnaire (Form 4)***

The Barangay Profile Survey Questionnaire was a special project of the Planning Division of the PPDO in 1994. It was intended to gather data from the grassroots level to assists the division in the conceptualization of barangay development plans and to validate the information coming from the Municipal Profile Survey Questionnaire. However, the survey was not very successful. Only a few complied with this requirement.

The Barangay Chairman or Secretary was tapped to conduct the barangay survey. A Sangguniang Kabataan member, on the other hand, served as the monitor

in some barangays. Completed questionnaires were returned to the Planning Division of the PPDO for tabulation and processing.

The available MIMAP indicators are as follows :

- i ) number of births (in 1990 and 1993)
- ii ) number of deaths (in 1990 and 1993)  
However, it is not recorded according to age.
- iii ) source of water supply  
It specified the number of water district and the number of households served by these water districts, the number of artesian wells, public and private. Other types are to be specified.
- iv ) average household income
- v ) number of registered voters  
It does not specify voters' participation in the electoral process.

## **5. Municipal Profile Survey Questionnaire (Form 5)**

The survey questionnaire is an annual undertaking of the Research Division of the PPDO. It is used in the preparation of the Socioeconomic Profile of Bulacan. It is also utilized by the MPDC (Municipal Planning and Development Coordinator ) in drawing-up their Municipal Development Plans. The MPDC is responsible in accomplishing the survey questionnaires. Afterwards, it is submitted to the PPDO for data processing. There is no standard procedure by which the MPDC can acquire the needed information from the barangays.

The following are the available MIMAP indicators in the survey :

- i ) Income and Livelihood
  - number of persons in the labor force per barangay.
  - number of employed per barangay
- ii ) Basic Education and Literacy
  - elementary enrolment (by schools)
  - secondary enrolment (by schools)
- iii ) Water and Sanitation
  - number of households served by water district (by barangay)
- iv ) Political Participation

- list of organization and the number of membership

It is not clear how the data for the different barangays are obtained by the MPDC. There is no established database for the barangays and there is no data collection activity specifically for this.



Punan ang sumusunod na impormasyon batay sa kasagutan ng nakapanayam. Tiyakin na wasto, kumpleto at makatotohanan ang bawat impormasyon sa talaan.

(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
B I g.	Pangalan	Relasyon sa Puno ng Kabahayan	Petsa ng Kapanganakan		Lugar ng Kapanganakan (Bayan, Probinsiya)	Kasarian 1. Lalaki 2. Babae	Katayuang Sibil	Tagal ng paninirahan sa barangay	OCW ba ? 1. Oo 2. Hindi	Taglay na Kapansanan	Pangalan ng Samahang Kinaaaniban	Relihiyon	Para sa 18 taong gulang pataas Botante (noong eleksyon ng Mayo)	
			Buwan	Taon									Nakarehistro Ba ?	Nakaboto Ba ?
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
Marami ba sa sampu ang miyembro ng Kabahayan ? 1 Oo, Gumamit ng panibagong talaan 2 Hindi		<b>Tala-pilian para sa (3)</b> 1 Puno    4 Manugang    7 Ibang kamag-anak 2 Asawa    5 Apo    8 Katulong 3 Anak    6 Magulang    9 Iba pa (itala)				<b>Tala-pilian para sa (7)</b> 1 walang asawa    3 biyudo/ biyuda    5 Iba pa (itala) 2 may asawa    4 hiwalay sa asawa			<b>Tala-pilian para sa (10)</b> 0 wala    4 pipi't bingi 1 bulag    5 pilay 2 pipi    6 iba pa bingi    (pakisulat)			<b>Tala-pilian para sa (12)</b> 0 Wala 1 R. Catholic    4 Aglipay 2 Protestant    5 Islam 3 Iglesia    6 Iba pa Ni Cristo    (itala)		(13) 1 Oo  2 Hindi

I.D. Number:

(14)	(15)	(16)	(17)	(18)	(19)		(20)	(21)	(22)		(23)	(24)		(25)														
Blg.	Natapos na Pag-aaral (taon/baitang)	Nag-aaral pa ba? 1. Oo 2. Hindi	Nakakabasa at Nakaka-sulat ba? 1. Oo 2. Hindi	Kasanayan (Skills)	Ano ang iyong trabaho noong nakaraang linggo?		Saang Negosyo/ Industriya Nagtra-Trabaho?	Gaano katagal ka na sa iyong pangunahing trabaho?	Ano ang iyong kita noong nakaraang buwan?		Naghahanap ng dagdag na oras sa trabaho? 1. Oo 2. Hindi	Kung walang trabaho sa (19), ano ang dahilan? Naghahanap ka ba ng trabaho? 1. Oo 2. Hindi		(0-6 na taon) Antas ng Kalusugan *														
					pangunahin	iba pang trabaho			pera (in cash)	bagay (in kind)																		
1.																												
2.																												
3.																												
4.																												
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												
<b>Tala-pilian para sa Kasanayan ( 18 )</b>					<b>Para sa Trabaho ( 19 )</b>			<b>Tala-pilian para sa Negosyo/Industriyang Pinagtrabahuhan( 20 )</b>				* Ang Antas ng Kalusugan (25) ay para sa 0-6 taong gulang na bata. Hayaan lamang na blanko ito. Ang impormasyon ay makukuha sa LLN Weighing Report.																
1 dressmaking	9 livestock raising	2 cosmetology	10 radio/TV mechanics	3 handicrafts	11 automotive mechanics	4 wood carving	12 welder	5 painting	13 food processing/cooking	6 gardening	14 pottery making				7 typing	15 reflexology	8 poultry raising	16 iba pa (itala)	Hal. Palay farmer Filing Clerk Fruit Vendor, etc...	1 Agriculture	2 Fishing	3 Forestry	4 Manufacturing	5 Construction	6 Electricity, Gas and Water	7 Mining & Quarrying	8 Wholesale, retail trade	9 Transport, Storage & Communication

I.D. Number:

**PANUTO:**Lagyan lamang ng ekis ( X ) sa loob ng puwang ( ) na tugma sa sagot ng nakapanayam.

### TIRAHAN

26. Lupang kinatatayuan ng bahay

(Kanino po ang loteng ito?)

- ( ) pag-aari  
 ( ) inuupahan  
 ( ) hindi pag-aari / may pahintulot ng may-ari  
 ( ) hindi pag-aari / walang pahintulot ng may-ari  
 ( ) iba pa, ( pakisulat) \_\_\_\_\_

27. Bahay na tinitirhan

(Kanino po ang bahay na ito?)

- ( ) pag-aari  
 ( ) inuupahan  
 ( ) hindi pag-aari / may pahintulot ng may-ari  
 ( ) hindi pag-aari / walang pahintulot ng may-ari  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

28. Ilan po ang silid-tulugan sa loob ng bahay na ito?

29. Kasangkapan sa bahay

(Mayroon po ba kayo ng mga sumusunod:)

Kasangkapan	Ilan po ?	Ilan po ang gumagana ?
radyo		
stereo/component		
telebisyon		
betamax / VHS		
refrigerator/freezer		
bentilador		
plantsa de koryente		
washing machine		
microwave		
telepono		
aircon		
iba pa, (itala)		

30. Pag-aaring sasakyan

(Alin po sa mga sumusunod na sasakyan mayroon kayo?)

Sasakyan	Ilan po ?	Ilan po ang umaandar ?
trak		
kotse		
traysikel		
dyip (owner)		
dyipni (pampasahero)		
iba pa, (itala)		

31. Pinagkukunan ng enerhiya

(Ano po ang pinagkukunan ng enerhiya sa bahay?)

- ( ) koryente  
 ( ) gaas  
 ( ) LPG  
 ( ) uling  
 ( ) kahoy  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

32. Panluto

(Ano po ang ginagamit na panggatong sa pagluluto?)

- ( ) koryente  
 ( ) gaas  
 ( ) LPG  
 ( ) uling  
 ( ) kahoy  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

33. Pinagkukunan ng tubig sa pagluluto at pang-inom :

(Ano pong uri ng pinagkukunan ng tubig ang ginagamit ninyo sa pagluluto at pang-inom ?)

- ( ) sariling gamit, sistema sa tubig ng barangay  
 ( ) pangmaramihang kabahayan, sistema sa tubig ng barangay \_\_\_\_\_  
 ( ) deep well, sariling gamit \_\_\_\_\_  
 ( ) deep well, pangmaramihang kabahayan \_\_\_\_\_  
 ( ) artesian well, sariling gamit \_\_\_\_\_  
 ( ) artesian well, pangmaramihang kabahayan \_\_\_\_\_  
 ( ) balon  
 ( ) bukal, lawa, ilog, ulan  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

34. Ilan po ang gripo sa loob ng bahay ?

35. Uri ng palikuran

(Ano po ang uri ng palikuran ang ginagamit ninyo?)

- ( ) flush, sariling gamit  
 ( ) flush, pangmaramihang kabahayan \_\_\_\_\_  
 ( ) de buhos, sariling gamit \_\_\_\_\_  
 ( ) de buhos, pangmaramihang kabahayan \_\_\_\_\_  
 ( ) hukay na may takip  
 ( ) hukay na walang takip  
 ( ) wala  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

36. Pamamaraan ng pagtapon ng basura

(Ano po ang inyong pamamaraan ng pagtapon ng basura?)

- ( ) kinokolekta ng basurero  
 ( ) sinusunog  
 ( ) hukay na may takip  
 ( ) hukay na walang takip  
 ( ) iba pa, (pakisulat) \_\_\_\_\_

**Nota:** Sagutin batay sa uri ng materyales na ginamit at sa ng pagkakangawa sa nasabing bahagi ng bahay:

37. Anong materyales ang ginamit sa dingding ?

- ( ) concrete / brick / stone  
 ( ) wood  
 ( ) half concrete / brick / stone and half wood  
 ( ) galvanized iron / aluminum  
 ( ) bamboo / sawali / cogon / nipa  
 ( ) asbestos  
 ( ) glass  
 ( ) makeshift / salvaged / improvised materials  
 ( ) no walls  
 ( ) iba pa (pakisulat) \_\_\_\_\_

38. Anong materyales ang ginamit sa bubong ?

- ( ) galvanized iron / aluminum  
 ( ) tile / concrete / clay tile  
 ( ) half galvanized iron and half concrete  
 ( ) wood  
 ( ) cogon / nipa / anahaw  
 ( ) asbestos  
 ( ) makeshift / salvaged / improvised materials  
 ( ) iba pa (pakisulat) \_\_\_\_\_

39. Anong materyales ang ginamit sa sahig ?

- ( ) natural floor/ earth / sand  
 ( ) wood / palm / bamboo  
 ( ) ceramic tiles  
 ( ) marble  
 ( ) cement  
 ( ) iba pa (pakisulat) \_\_\_\_\_

**PANGKABUHAYAN**

40. Lupang sakahan o palaisdaan/pinagyaman  
( Mayroon po ba kayong lupa na sinasaka o palaisdaan ? )  
 Lupang sinasaka  
 Palaisdaan  
 Wala  
 Iba pa , (pakisulat) \_\_\_\_\_

*Kung mayroong lupang sinasaka o palaisdaang pinagyayaman, tanungin ang (41) at (42).  
Kung wala, pumunta sa (43).*

41. (Kanino po ang lupang sinasaka / palaisdaan ninyo?)  
 pag-aari  
 inuupahan  
 hindi pag-aari / may pahintulot ng may-ari  
 hindi pag-aari / walang pahintulot ng may-ari  
 iba pa, (pakisulat) \_\_\_\_\_

42. Kasangkapan pang-agrikultura / palaisdaan  
(Ano po ang kasangkapang pang-agrikultural / pangpalaisdaan na pag-aari ninyo ? )  
 hand tractor  bangka  
 kalabaw / baka  
 iba pa, (pakisulat) \_\_\_\_\_

43. Negosyo/Pinagkakakitaan  
(Mayroon po ba kayong negosyo o pinagkakakitaan?)  
 Mayroon  Wala

Kung ang sagot sa ( 43 ) ay wala, pumunta sa ( 46 ).  
Kung ang sagot sa (43) ay mayroon tanungin ang (44) at (45).

44. (Ano po ang negosyo o pinagkakakitaan ninyo?)  
 tindahan  
 patahian  
 babuyan  
 manukan  
 iba pa, pakisulat \_\_\_\_\_

45. (Magkano ang kita ninyo sa isang taon?)

46. Paghahalaman/Paghahayupan

(Ano po ang alagang hayop ng kabahayan ? ) Alagang hayup	( Ilan ? ) Bilang	(Ano po ang tanim na punong kahoy ng kabahayan ? ) ( Ilan ? ) Tanim na punongkahoy	( Anu-ano po ang tanim na gulay ng kabahayan?) Tanim na gulay
1		1	1
2		2	2
3		3	3
4		4	4
5		5	5

**PANGKALUSUGAN**

**Nota:** Ang mga sumusunod na impormasyon ay para lamang sa Ina ng kabahayan.

47. Edad/gulang nang mag-asawa/magsama  
 Ama: \_\_\_\_\_  
 Ina: \_\_\_\_\_

50. Kalagayan ng pagiging ina  
 nagpapasuso  
 nagdadalantao  
 wala alin man

48. Kayo po ba ay nagdalang-tao noong nakaraang taon?  
 Oo  
 Hindi Kung hindi, pumunta sa 49.

51. May balak pa bang mag-anak?  
 wala  
 mayroon, (pakisulat ang dahilan) \_\_\_\_\_

- kung Oo : (noong nakaraang taon)  
 Ilan po ang inyong ipinagdalang-tao ?   
 Ilan po dito ang inyong ipinanganak ?   
 Ilan po dito ang lalaki ?   
 Ilan naman po ang babae ?

52. Ano po ang gamit na kontrasepto ng mag-asawa ?  
 rythm method  withdrawal method  
 pills  iba pa, (itala) \_\_\_\_\_  
 pagtatali/vasectomy  wala  
 condom

49. Mayroon po ba kayong namatay na anak noong nakaraang taon ?  
 Mayroon  
 Wala Kung wala, pumunta sa 50.

53. May miyembro ba ng kabahayan na nagkasakit noong nakaraang anim na buwan ?  
 Mayroon  Wala

- kung mayroon : (noong nakaraang taon)  
 Ilan po ang namatay niyong anak ?   
 ano po ang edad ng anak na namatay?  
 bagong panganak:   
 sanggol (0-11 buwan):   
 batang may edad na 1-6:

54. Kanino o saan nagpagamot?  
 ospital  
 health center  
 private clinic  
 albularyo  
 iba pa, (itala) \_\_\_\_\_

Kung ang sagot sa (53) ay mayroon, tanungin ang ( 54 ).

**PANLIPUNAN**

- 55. Ano po ang libangan ng pamilya?  
\_\_\_\_\_
- 56. Anu-ano po ang suliranin ng inyong barangay?  
\_\_\_\_\_
- 57. Kung may suliranin, kanino kadalasang lumalapit ?  
\_\_\_\_\_

**KAPAYAPAN AT KAAYUSAN**

58. Biktima ng mga Krimen:  
(Mayroon po bang miyembro ng kabahayan na naging biktima ng sumusunod na krimen noong nakaraang taon? )

- Krimen
- pagpatay ( ) mayroon ( ) wala
  - pagnakaw ( ) mayroon ( ) wala
  - panggahasa (rape) ( ) mayroon ( ) wala
  - iba pa,(pakisulat) \_\_\_\_\_  
\_\_\_\_\_

**OVERSEAS CONTRACT WORKER**

*Kung may miyembro ng kabahayan na nasa ibang bansa ( tignan ang bilang 9 ), tanungin ang mga sumusunod:*

- Pangalan ng Kasapi na OCW : \_\_\_\_\_
- Número ng Kasapi na OCW ( tignan sa column 1 )
- 59. Saang bansa siya nagtrabaho ?
- 60. Kailan siya umalis patungong ibang bansa ?
- 61. Hanggang kailan siya mamamalagi sa ibang bansa ?
- 62. Nakatatanggap ba kayo ng pera na padala na galing sa kanya noong nakaraang taon ?  
( ) Oo ( ) Hindi kung Hindi, pumunta sa 63
- Kung Oo, gaano kadalag magpadala ?  
( ) buwan-buwan  
( ) tuwing ikalawang buwan  
( ) tuwing ikatlong buwan  
( ) minsan sa isang taon  
( ) iba pa, (pakisulat) \_\_\_\_\_
- Kadalasan, magkano ang ipinadadala niya ?
- 63. Nakatatanggap ba ng padala na bagay/produkto na galing sa kanya noong nakaraang taon ?  
( ) Oo ( ) Hindi
- Kung Oo, Anu-ano ang mga ito ? Magkano ang bawat isa ? (katumbas sa piso )

Bagay	halaga
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

*Kung higit pa sa isang tao ang nagtrabaho sa ibang bansa, tanungin muli ang bawat tanong na sa itaas.*

# ANNEX C

Philippine Minimum Basic Needs (MBNs) Approach to Improved  
Quality of Life Monitoring Form



