Community-Based Monitoring System in the Philippines

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Poverty reduction remains to be one of the biggest challenges faced by the Philippines. Not surprisingly, the country has adopted poverty reduction as the main goal of all its development efforts. However, to wage a successful fight against poverty, it is important to know the nature and extent of poverty as well as who the poor are, where they are, and why they are poor.

A. State of Poverty Monitoring in the Philippines

Data relating to the different dimensions of poverty are traditionally obtained from national censuses and surveys conducted by the National Statistics Office (NSO) as shown in Table 1. These surveys and censuses, however, are conducted infrequently and at irregular intervals. Moreover, they are conducted at different time periods making it impossible to have a comprehensive picture of the different dimensions of poverty at a particular point in time. Thus, we do not know if the ones who are poor based on income are also poor with regard to literacy, nutrition, and housing, among others.

Furthermore, data from these sources are very aggregated. The available national, regional and sometimes provincial data are not sufficient to meet the demands of local government units (LGUs), particularly cities/municipalities and barangays, which need disaggregated information for diagnosing poverty at the local level and identifying appropriate interventions.

More recently, there has been greater emphasis on targeted programs because of limited financial resources to implement poverty
reduction assistance programs. Several programs of national government agencies such as the Philhealth – a government subsidized health insurance program for the indigents – and of LGUs such as livelihood and scholarship programs are intended for the poor. Unfortunately, data are not available to support such targeting schemes. Consequently, there have been difficulties in identifying eligible beneficiaries. When disparities are large within municipalities/cities and barangays, pure geographic targeting is not enough. Geographic targeting can be used as the first step in prioritizing areas, but household/

### Table 1. Available sources of data in the Philippines

<table>
<thead>
<tr>
<th>Available Sources of Data</th>
<th>Implementing Agency</th>
<th>Frequency of Collection</th>
<th>Data Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Income and Expenditures Survey (FIES)</td>
<td>National Statistics Office (NSO)</td>
<td>Every 3 years</td>
<td>Family income and living expenditures and related information affecting income and expenditure levels and patterns in the Philippines, including poverty incidence</td>
</tr>
<tr>
<td>Annual Poverty Indicator Survey (APIS)</td>
<td>NSO</td>
<td>Every year when the FIES is not conducted</td>
<td>Socioeconomic profiles of families and other information relating to their living conditions but not poverty incidence</td>
</tr>
<tr>
<td>National Nutritional Survey (NNS)</td>
<td>Food and Nutrition Research Institute (FNRI)</td>
<td>Every 5 years</td>
<td>Food situation and nutritional status of the population</td>
</tr>
<tr>
<td>Census of Population and Housing (CPH)</td>
<td>NSO</td>
<td>Every 10 years</td>
<td>Size, composition and distribution of population in the Philippines</td>
</tr>
<tr>
<td>Functional Literacy, Education and Mass Media Survey (FLEMMS)</td>
<td>NSO</td>
<td>Irregular</td>
<td>Number of functionally literate population and their socioeconomic characteristics</td>
</tr>
<tr>
<td>National Demographic and Health Survey (NDHS)</td>
<td>NSO</td>
<td>Every 5 years</td>
<td>Demographic, maternal and child health issues in the Philippines</td>
</tr>
<tr>
<td>Labor Force Survey (LFS)</td>
<td>NSO</td>
<td>Every quarter of the year</td>
<td>Levels and trends of employment, unemployment and underemployment</td>
</tr>
</tbody>
</table>

Sources of Data

- Implementing Agency
- Frequency of Collection
- Data Obtained

Family income and living expenditures and related information affecting income and expenditure levels and patterns in the Philippines, including poverty incidence

Socioeconomic profiles of families and other information relating to their living conditions but not poverty incidence

Food situation and nutritional status of the population

Size, composition and distribution of population in the Philippines

Number of functionally literate population and their socioeconomic characteristics

Demographic, maternal and child health issues in the Philippines

Levels and trends of employment, unemployment and underemployment
individual level targeting is needed to be able to minimize leakages and reduce exclusions.

**B. Decentralization policy and local governance structure**

The passage of the Local Government Code (LGC) in 1991 represented a major step in decentralization in the Philippines. Before the LGC, the LGUs’ main functions were levying and collection of local taxes, regulation of business activities, and administration of garbage collection, public cemeteries, public markets and slaughterhouses. The LGC paved the way for increased local autonomy, expenditure responsibility and revenue authority. In particular, the principal responsibility for the delivery of basic social services and the operation of the facilities were devolved to LGUs. The devolved areas are: agricultural extension and research; social forestry; environmental management and pollution control; primary health and hospital care; social welfare services; repair and maintenance of infrastructure; water supply and communal irrigation; and land use planning. Consequently, personnel of National Government Agencies (NGAs) who were doing these tasks before the passage of the LGC were devolved to the LGUs.

In addition, the LGUs were given taxing authority to be able to generate resources to complement the Internal Revenue Allotment (IRA) that they get from the national government. A new scheme has been devised to determine the share of LGUs from the revenues collected by the national government and this is based primarily on population and land size.

Likewise, the Social Reform and Poverty Alleviation Act of 1997 gave the LGUs the frontline role in the fight against poverty. The law tasks the LGUs to be responsible in the formulation, implementation, monitoring and evaluation of the Anti-Poverty Reduction Agenda within their area of jurisdiction.

In the Philippines, there are 5 geopolitical levels. A region is a sub-national administrative unit comprising of several provinces having more or less homogenous characteristics such as ethnic origin of inhabitants, dialect spoken, and agricultural produce, among others.

The province is the largest unit in the political structure which is headed by an elected governor. It consists, in varying numbers, of municipalities and, in some cases, of component cities. Its functions
and duties in relation to its component cities and municipalities are generally coordinative and supervisory.

The municipality/city is a political corporate body endowed with the facilities of a municipal/city corporation and exercised by and through the municipal/city government in conformity with law. The municipality is headed by an elected mayor. It is a subsidiary of the province which consists of a number of barangays within its territorial boundaries, one of which is the seat of government found at the town proper (poblacion). There are three classes of cities in the Philippines: the highly urbanized, the independent component cities which are independent of the province, and the component cities which are part of the provinces where they are located and subject to their administrative supervision.

The barangay is the smallest political unit into which cities and municipalities are divided. It is the basic unit of the political system. It consists of less than 1,000 inhabitants residing within the territorial limit of a city or municipality and administered by a set of elective officials headed by a barangay chairman (punong barangay).

As of December 2006, the Philippines have 17 regions, 81 provinces, 118 cities, 1,510 municipalities and 41,995 barangays or villages.

Implementation of targeted programs has been a major weakness of most LGUs in the country as they lack reliable/credible baseline data, particularly poverty statistics. LGUs still rely on centrally produced data like NSO/NSCB data for their planning. These data however are not disaggregated at the municipal/city government and barangay government levels – the lower level LGUs that are primarily at the forefront of policy or program execution – thereby making it difficult for proper targeting and programming.

The Community-Based Monitoring System (CBMS), as shown in Figure 1, seeks to address the existing gaps in data at the local level for diagnosing extent of poverty at the local level, determining the causes of poverty, formulating appropriate policies and program, identifying eligible beneficiaries and assessing impact of policies and programs. There is also a need to support the decentralization process by capacitating LGUs to collect, analyze and use data in local planning and program implementation.
C. Features of CBMS

CBMS is an organized way of collecting household level information at the local level. It is, however, more than just a data collection system. It seeks to integrate the use of data in local level planning and program implementation. It is also intended to promote evidence-based decisionmaking.

The CBMS is also a tool to support the decentralization process by providing the LGUs with a system to improve local governance. It builds the capacities of LGUs to develop policies and programs that meet the needs of the people.

The CBMS has several features: (1) it is LGU-based while promoting community participation; (2) it taps existing LGU personnel and community volunteers as monitors; (3) it has a core set of indicators; (4) it involves complete enumeration of all households in the LGU; and (5) it allows for the establishment of databanks at each geopolitical
level by submitting its collected data to the next higher geopolitical level. These key features enhance the capacity of local governments in detecting and reducing poverty.

i. **LGU-based while promoting community participation**

The LGU takes the lead in the data collection and processing, serves as the repository of the database and uses the data in the formulation of the development and investment plans. Members of the community are likewise involved in the data collection and validation, processing, analysis and formulation of the plans.

Moreover, the CBMS empowers the communities by ensuring their participation in diagnosing poverty and identifying appropriate interventions. It builds the capacity of local governments in using poverty statistics as inputs in the formulation of development plans and as basis in the formulation of poverty reduction programs and projects.

ii. **Taps existing LGU personnel and community volunteers as monitors**

The CBMS taps local personnel to do the data collection, processing and analysis of the data. As shown in the CBMS flow of information (Figure 2), coordination among the different levels of government is very important.

iii. **Has a core set of indicators**

There are 14 core indicators (Table 2) that are being measured to determine the welfare status of the population. These indicators capture the multidimensional aspects of poverty and have been confined to output and impact indicators. Since the CBMS is designed to be LGU-based, it is important that indicators are easy to collect and process. Information is collected through surveys of all households in the community. The local people themselves are data collectors and processors.

The system is flexible and can accommodate community-specific indicators to reflect the other concerns of the community. For instance, indicators related to environmental concerns are included in the CBMS system in Palawan. On the other hand, Camarines Norte has included indicators related to natural calamities in its indicator system.
iv. Involves enumeration of all households

The CBMS utilizes household surveys to collect information at the household and individual levels. It involves complete enumeration of all households to provide information on not just how poor the barangay or municipality/city is but more importantly, on who and where the poor are.

A census would provide the LGU with a comprehensive profile of households that would allow household and individual-level targeting.

v. Establishes databanks at all geopolitical levels.

Data are submitted to the next higher geopolitical level, allowing for the establishment of databanks at the barangay, municipal/city and provincial levels.

A national agency such as the National Anti-Poverty Commission (NAPC), the Department of Interior and Local Government (DILG) or the National Economic and Development
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Authority (NEDA), is envisioned to be the national repository of the data. Such national repository can be the source of data for identifying the eligible beneficiaries to targeted programs of the national government.

Design of the System

Methodology

Once a local government unit decides to adopt the CBMS, the following activities, as illustrated in Figure 3, need to be done:

Advocacy/Organization

Advocacy is vital in the CBMS implementation. The implementation starts with several consultative meetings and orientation with the LGU. This is a necessary step in order to convince and solicit support from the local chief executive (LCE) - the governors, mayors and barangay captains, as well as councilors of the province and municipalities.

Table 2. CBMS Core Indicators

<table>
<thead>
<tr>
<th>BASIC NEEDS</th>
<th>CORE INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Health</td>
<td>1 Proportion of children’s deaths (0-5 years old)</td>
</tr>
<tr>
<td></td>
<td>2 Proportion of women deaths due to pregnancy-related causes</td>
</tr>
<tr>
<td>B. Nutrition</td>
<td>3 Proportion of children 0-5 years old who are malnourished</td>
</tr>
<tr>
<td>C. Housing</td>
<td>4 Proportion of households living in makeshift housing</td>
</tr>
<tr>
<td></td>
<td>5 Proportion of households who are squatters</td>
</tr>
<tr>
<td>D. Water and Sanitation</td>
<td>6 Proportion of households with no access to potable water supply</td>
</tr>
<tr>
<td></td>
<td>7 Proportion of households with no access to sanitary toilet facilities</td>
</tr>
<tr>
<td>E. Basic Education</td>
<td>8 Proportion of children aged 6-12 years old who are not in elementary school</td>
</tr>
<tr>
<td></td>
<td>9 Proportion of children aged 13-16 years old who are not in secondary school</td>
</tr>
<tr>
<td>F. Income</td>
<td>10 Proportion of households with income below the poverty threshold</td>
</tr>
<tr>
<td></td>
<td>11 Proportion of households with income below the food threshold</td>
</tr>
<tr>
<td></td>
<td>12 Proportion of households that experienced food shortage</td>
</tr>
<tr>
<td>G. Employment</td>
<td>13 Proportion of persons who are unemployed</td>
</tr>
<tr>
<td>H. Peace and Order</td>
<td>14 Proportion of persons who were victims of crime</td>
</tr>
</tbody>
</table>
Once CBMS is approved for implementation, the governor or mayor issues an executive order to institutionalize the CBMS in the LGU and designate a CBMS Technical Working Group (TWG) to coordinate the project.

A memorandum of agreement (MOA) is deemed necessary to be prepared prior to the start of the CBMS implementation. Said agreement spells out the rationale for the adoption and implementation of the activity and sets the expected outputs of the activity and the extent of work to be done. Furthermore, said agreement specifies the timetable and resource requirements for the conduct of the activity and designates the key players and their corresponding responsibilities. More importantly, the MOA serves as a legal document that signifies the commitment of all concerned groups to carry out the activity.

The work plan is jointly drafted by the designated CBMS Technical Working Group Leader from the local government unit and by a designated staff from the partner organization that will provide the technical assistance.

**Figure 3. General Activities in CBMS**
Likewise, the CBMS TWG conducts an evaluation of data requirements and existing monitoring systems and identifies data gaps. This entails a review of available sources of needed information in the locality vis-à-vis recent requirements for planning and monitoring. In particular, sources of information may be reviewed on the basis of frequency of data collection, level of disaggregation of data provided, and access to the said information. Common sources of information are administrative reports, socioeconomic profiles, national statistical yearbooks, on-line databases, and other reports on special surveys conducted by the national government as well as local and international non-government organizations.

Once the gaps between data requirements and available sources of information have been identified and assessed, the next step would be to assess how to incorporate these gaps to the core CBMS data collection and processing instruments.

Since the CBMS is LGU-based, the LGU needs to invest some resources in the implementation of the CBMS. The implementation of CBMS requires both human and financial resources.

- **Human resources**

  The design of the CBMS entails the participation of key government personnel at the provincial, city/municipal, and barangay levels to perform critical roles in the implementation of the CBMS. Depending on the level of capacities and institutional arrangements at each geopolitical level, key personnel may be designated as monitors, field supervisors, survey enumerators and data processors. In some cases, students, teachers, on-the-job trainees, religious group representatives, barangay officials and other community volunteers are tapped to take part in the implementation of the system. Detailed minimum qualifications of manpower required for data collection and processing are discussed further in the succeeding sections of this paper.

  The quantity of manpower needed for the implementation of the system varies, depending on the extent and coverage of the implementation of the system as well as on the desired pace of completion of work.

  It is required, however, for the participants to attend all the CBMS trainings and activities, specifically in the survey, processing
and report writing, in order for them to be literate. Officials from the village select the enumerators and other training participants in these activities with the minimum requirement that they have the basic literacy skills. Otherwise, it would be hard for them to participate and conduct or even complete the survey and other activities. If the enumerators and processors are not properly equipped or trained, the quality of the data would suffer, thus making it impossible to get an accurate picture of the welfare situation in the community.

- **Financial and physical resources**
  
  To implement the CBMS, the LGU needs to allot a budget that would at least cover the following expenses for the conduct of corresponding core CBMS activities:
  
a. Training workshops

  This would at least include payment for the meals of participants in the training workshop and reproduction of training materials. Other related cost items are pen and paper for trainees, and rental of equipment and training venue.

b. Data collection

  This would include fees for the reproduction of the household questionnaire (CBMS Form 1) and barangay profile questionnaire (CBMS Form 2) and their corresponding manuals (CBMS Manual 1-2 and 3, respectively).

  In some cases, LGUs provide for monetary incentives to the survey enumerators.

c. Data processing/consolidation

  This would include the cost for reproduction of tally sheets and manuals (if the LGU would adopt the manual data processing) and/or computer hardware for the encoding of data (if the LGU would adopt the computerized data processing).

  The computerized data processing software is provided for free by the CBMS Network Coordinating Team.

d. Validation of data

  This would include cost of printing of materials, i.e., digitized maps for presentation, transportation cost of monitors in participating in the validation workshops, and communication cost
for coordinating the validation activity.

e. Database management
   This would include the cost for a computer hardware that would be used to store and update the CBMS Database.

f. Dissemination
   This would include costs relating to the publication of CBMS-related reports, construction of data boards, and organization of fora to present results and recommendations to stakeholders.

   The cost of a CBMS implementation may be shared by the province, city/municipality, and the barangay. In some instances, other target users of data such as non-government organizations with existing projects in the locality may also be tapped to share in the cost of implementing a specific CBMS component, i.e., data processing.

   LGUs have also employed some cost-saving measures. LGUs utilize existing equipments in their offices. They also tap the services of on-the-job trainees, practicum students, and volunteer workers as well as existing government personnel.

Pre-Implementation activities

i. Data collection
   The collection of data under the CBMS process is undertaken through a survey covering all households in all barangays across localities in a particular city, municipality (town) or a province. Trained enumerators from the barangay are tapped to administer the survey.

Survey instruments
   The survey or data collection is carried out using the household profile questionnaire (HPQ) or likewise referred to as CBMS Form 1. The questionnaire focuses on obtaining information on the CBMS core indicators from households. Demographic and other social characteristics can also be obtained from the questionnaire. To ensure comparability and consistency with the statistics produced by national government agencies, the concepts and definitions of the indicators are similar to what these agencies have.

   CBMS Form 1 has two accompanying manuals: an enumerator’s manual and a field editing manual. The former
serves as a guide for the enumerators on how to conduct the survey. The latter, meanwhile, is a guide also for the enumerators on how to edit the accomplished household profile questionnaire.

Another questionnaire that needs to be accomplished is the barangay profile questionnaire (BPQ) or CBMS Form 2. It is a six-page questionnaire that gathers data on the physical and demographic characteristics and available basic services and service institutions in the barangay. The barangay chairman or secretary is the intended respondent for this questionnaire. This form also has a corresponding manual (manual on accomplishing BPQ) that, along with the manuals for the HPQ, is given during the CBMS training for enumerators as references.

Additional modules for the household and barangay profile questionnaires can be provided to get information on other indicators deemed relevant to the community. These indicators are identified by the community during the evaluation of their existing monitoring systems and information gaps.

Enumerators

The proposed enumerators for the survey are the barangay (village) health workers and nutrition scholars. Every village in the Philippines has these two officers. They perform a vital role in the care and monitoring of the nutritional welfare of children aged 0-5 years old. Other community volunteers can be tapped as enumerators depending on the need and size of the population of the community. The survey operation is under the supervision of the village head or barangay captain and other officers of the village.

A requirement for the choice of enumerators is that they should be able to write, read and do simple computations. Enumerators are tasked to completely interview all households in the assigned area or barangay.

The number of enumerators needed in a barangay can be determined by calculating the number of persons needed to finish the survey operation in one month (22-man-days) given that an enumerator can accomplish 10 household questionnaires per day. This is the standard procedure. The computation, however, may vary depending on other factors: manpower and
financial capacity of the LGU, the household population and land area that will be covered during the survey operation.

**CBMS Training Module I. Training for CBMS Data Collection**

Enumerators undergo a three-day CBMS orientation and training program for data collection. The training covers a general orientation on the background and rationale for CBMS; procedures and hands-on exercises on the CBMS data collection forms and the data collection field operations.

A training of trainors from the province and municipalities is conducted at the provincial level. The participants are technical staff from the provincial and municipal offices like the planning and development office (PPDO/MPDO), social welfare and development office (PSWDO/MSWDO) and local government office (LGO). Each LGU can send around 3-5 participants who will act as trainors in their respective localities. Box 1 enumerates the role of the CBMS Data Collection Trainors.

<table>
<thead>
<tr>
<th>Box 1. Role of CBMS Data Collection Trainors</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Conduct training of enumerators in their respective municipalities</td>
</tr>
<tr>
<td>· Make sure concepts and definitions are well understood by enumerators and supervisors</td>
</tr>
<tr>
<td>· Ready to train additional enumerators or replacement enumerators, if necessary</td>
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</tbody>
</table>

The “Training of CBMS enumerators at the barangay level”, is also a 3-day training program. It is conducted at the municipal level. The participants are enumerators from the barangays. Each training can accommodate about 60-80 participants. If there are more than the prescribed number of participants, the trainings can be done in several batches.
The training is intensive and technical in nature and is conducted using PowerPoint presentations. A requirement for the choice of enumerators is that they should be able to write, read and do simple computations. In this training, the participants are introduced to the concept of the CBMS. Their role as CBMS enumerators is emphasized and they are taught how to conduct an interview and how to systematically carry out the survey operation. The participants are asked to organize themselves and delegate team leaders. Purok and/or barangay team leaders act as coordinators of the survey operation at the purok/barangay level. Aside from conducting interviews, the purok and barangay team leaders act as supervisors as well. Box 2 details the contents discussed during the data collection module.

At the same time, there are also assigned field supervisors from the MPDO and/or PPDO. These officers from the municipality or province supervise and ensure that the enumerators are doing the data collection activity.

Participants are likewise introduced to the field enumeration forms (Barangay Profile Questionnaire-BPQ and Household Profile Questionnaire-HPQ) and a step-by-step procedure on how to accomplish these forms. Here, the participants are also introduced to concepts and definitions in order for them to understand and collect the needed information in the HPQ and BPQ.

Part of the BPQ is the barangay spot map. Here, the enumerators are taught how to construct barangay spot maps. The spot map would be very useful in locating and plotting households in the
barangay, updating the barangays’ household population, and planning the survey operation.

In administering the HPQ, for instance, the participants are taught how to collect income from various sources such as salary and wages, entrepreneurial activities and other sources of income, and to compute for total income of the households from all identified income sources. During the training, participants are given the manuals for both HPQ and BPQ as references.

The trainings also engage participants in classroom exercises and field exercises to test and hone their skills in asking the questions in the questionnaire and tallying the respondent’s answers in the questionnaires. They are also trained to correct their own work by doing field editing procedures so that errors and non-responses can be minimized during enumeration. Box 3 provides the objectives and details done in each exercise.

**Box 3. Training Exercises**

Objectives of the exercises

- To help enumerators familiarize themselves with the Householder Profile Questionnaire
- To equip enumerators on how to ask questions found in the questionnaire
- To practice conducting an interview
- To teach enumerators how to check accomplished questionnaires

**Exercise 1: Classroom Exercise**

Participants group themselves into two
Role-playing – Enumerator and Respondent
Evaluation of classroom exercise

**Exercise 2: Field Exercise**

Conduct actual field interview
Each participant interviews one household
Evaluation of field exercise

**Exercise 3: Field Editing Exercise**

Done during the lecture on field editing
Participants are asked to check accomplished questionnaires from the classroom and field exercise
**Survey proper**

The survey operation usually starts not later than a week after the training has been conducted. The duration of survey operations depends on the number of households in the village as well as the area in which the enumerators have to cover for the survey operation. Usually, however, it takes one month, more or less, to finish the survey operation in one village given that an enumerator can accomplish ten questionnaires in one day.

From the pool of enumerators, a barangay team leader is assigned. As mentioned earlier, these team leaders act as coordinators of the survey operation at the purok/barangay level. Aside from conducting interviews, the barangay team leaders act as supervisors as well.

The barangay team leader is also responsible for the updating of the barangay spot maps. The barangay spot map and a masterlist of households are used as guide in locating households in the village.

There are assigned field supervisors from the municipal/city planning and development office (M/CPDO) and/or provincial planning and development office (PPDO). These officers supervise and ensure that the enumerators are doing the data collection activity. The duties and functions of the enumerators and field supervisors are explained in detail in the CBMS enumerator’s manual.

**Data processing**

One of the most critical steps in the CBMS implementation is data processing since results that will come out from this procedure will be the basis for planning and program implementation. LGUs have the option to manually process their data using tally sheets or use computerized data processing system. The approach to be adopted depends on the level and extent of capacity of the local government unit.

**Manual processing**

For villages or municipalities that do not have computer capabilities or need immediate results from the CBMS survey, data
processing is done manually with the use of processing and consolidation forms. It is likewise advantageous since it usually takes lesser time to finish than computerized processing. The processing can be done in one month. In addition, it does not require any equipment such as computers to process, which most of the barangays are lacking. There are two forms that will be used in manual processing: tally sheets and data boards. The former is used to record data for households meeting the given indicators while the latter is used to record the results of computations of CBMS core and other additional indicators. The forms are translated into the Tagalog dialect for easier understanding by the data processors. Formulas and definitions of the indicators are also included for easier reference.

In terms of personnel, it is important that manual data processors should come from the pool of CBMS enumerators. This is because they are more familiar with the concepts, definitions and the accomplished household profile questionnaires, thereby making the processing easier and more accurate. Explanations on the importance of the data that will be processed and discussions on the concepts and definitions of the indicators are some of the topics explained during the training. The participants are trained in processing the results from the survey questionnaire where, among others, they are taught how to compute proportions and rates of the CBMS core and other additional indicators. They are also trained to understand and interpret these indicators. Hands-on exercises using accomplished household profile questionnaires are also being done.

After the purok (sub-village) and barangay tally sheets have been accomplished and verified, barangay statistics can now be generated using the barangay data board. After verifying the accuracy of these statistics, they can now be submitted to barangay level officials who will utilize the information for planning and program interventions.

The results will also be submitted to the municipal/city levels for encoding. Municipal/city level aggregates are then submitted to the provincial level for consolidation.
b. **Computerized processing**

The CBMS computerized data processing system (CBMS-CDPS) was developed to process household-level information gathered through the CBMS survey in order to send output indicators/statistics from the household level up to the highest geopolitical level. The computerized processing is done mostly at the municipal level mainly because most barangays neither have computers nor the capacity to do computerized processing. Computerized data processing involves data encoding, map digitizing, database consolidation and database building, and indicator/poverty mapping. Processing can be done in 3 months.

There are three softwares used in the CBMS computerized processing system, namely:

i. the CBMS computerized data encoding system (based on the Census and Survey Processing (CSPro) software), a software package for entering, editing, tabulating, and disseminating data from censuses and surveys;

ii. the CBMS Statistics Simulator (StatSim). An application needed to output the CBMS indicators and custom indicators from the encoded data; and

iii. the CBMS-Natural Resources Database Professional (NRDB Pro). The software used to generate or store all information (spatial and non-spatial data) gathered from the CBMS survey.

Data processors from local partners should at least be computer literate. He/She must have attended the training on data collection to better understand the processing system. He/She must also be a regular staff or under contract with the LGU for the duration of the CBMS implementation and have the capability to train the other members of the data processing team.

The technical staffs of the planning office are usually assigned as data processors. Other technical staff from other offices like the social welfare office, local government office and health office are also tapped as encoders and processors. The LGUs also utilize other volunteers such as practicum students under the employment program of the LGU.
For equipments, it is preferred that aside from available computers that will be used to encode household level data and digitize maps, a computer that will house solely all CBMS data is made available.

**CBMS Modules II and III. Computerized data processing**

For the computerized data processing, the training is divided into two parts. The first part is the Training on Encoding Accomplished Household Profile Questionnaires and Digitizing Maps (Module II). It is a 3-day training workshop composed of two parts: 1) encoding raw survey data, and 2) digitizing barangay spot maps.

The CBMS encoding system is used to encode the data from the questionnaire. The encoding system is based on the Census and Survey Processing software (CSPro). In digitizing spot maps, the Natural Resource Database Professional (NRDB Pro), a spatial database program, is used.

At the end of the training, the participants are expected to be competent in encoding household-level CBMS data and in digitizing barangay spot maps with infrastructure facilities, purok boundaries and household locations in the CBMS-NRDB.

The second part, training on Processing of Encoded CBMS Data and Building of the CBMS Database (CBMS Training Module III) can be conducted once the LGUs met the training requirements. Here, the participants are taught how to consolidate the encoded household data with the digitized maps using the CBMS Statistics Simulator (StatSim) to form the CBMS database for the barangay. In this stage, the CBMS core indicators are computed together with additional indicators that the LGUs deem necessary. They should also be able to create a data structure for a barangay-level and municipal level database. Lastly, they should be able to produce indicator maps for the CBMS core and other related indicators.

**CBMS-NRDB**

The conventional tools of presentation and dissemination of data have always been in the form of tables, charts and graphs. However, with the advent of the GIS (Geographic Information System) technology, data in maps have now become the popular medium for presentation.

Maps can be used to view the status of a community, e.g., municipality across villages changing their images according to
severity of characteristics. Condition of a particular household vis-
à-vis other households in the community can likewise be viewed. The location of these households can be displayed with different colors according to their attributes. The use of maps in presenting welfare conditions of the community has greatly facilitated the understanding of the poverty situation by the local policymakers and the communities.

However, available commercial software programs for GIS are quite expensive and are not usually affordable to the local government units due to their limited financial resources.

Fortunately, in 1999, Mr. Richard Alexander\(^1\) developed the Natural Resource Database (NRDB), a freeware capable of storing spatial (lines and polygons) and non-spatial (texts and numbers) data. It can also generate maps, reports and graphs ideal for presentation and analysis of poverty attributes in the community.

NRDB was originally developed for the provincial government of Bohol in the Philippines to house data relating to coastal, forestry, mineral, solid waste management and pollution of the province. In 2000, it was adopted by the provincial government of Palawan, Philippines as part of their community-based monitoring system (CBMS). As such, the socioeconomic data gathered through CBMS were incorporated in the NRDB together with environment-related data.

Since 2000, the NRDB has become a critical component of the CBMS. The CBMS Team has used it for CBMS-based poverty mapping and for storing and displaying household- and individual-level information. CBMS-NRDB now refers to these particular uses of NRDB by the CBMS practitioners. The CBMS Network Team continues to work with Mr. Alexander to enhance the program and to make it more user-friendly.

The CBMS-NRDB is simple yet a very helpful software. The installer and main program uses a minimal 11MB memory and disk space executed in the Windows platform. However, the size of the

\(^{1}\)A British volunteer who spent three years working for the Bohol Environment Management Office through the assistance of the Voluntary Service Overseas (vso.org.uk). The project was supported by the British Embassy and the European Union.
database file increases as the data inputs increase. This freeware is readily downloadable from the net (http://www.nrdb.co.uk).

Aside from Windows Operating System, CBMS-NRDB basically needs Microsoft Office, particularly MS Excel and MS Access, principally for data management. Excel and Access play a vital role in the organization of the database.

Aside from basic data such as numbers and text, the CBMS-NRDB is able to hold spatial data to form maps. These data can be acquired by manually digitizing spot maps prepared by the enumerators. Other important spatial data such as location of wells, elementary and secondary schools, health centers, halls, road networks, rivers, and other structures vital for planning can also be added.

CBMS-NRDB enables users to create themes in the maps. These themes adopt a color scheme creating a more meaningful set of data analysis. For example, green and red colors could be assigned to households to indicate access and no access to safe water supply, respectively, in the barangay. Meanwhile, the condition of the puroks (sub-villages) can be colored in different shades of blue – the darker the shade, the better is the performance of the sub-village for a specific indicator. At an instant, it enables the viewer to see the location of depressed households or puroks in terms of the specified indicator. Map 1 is a sample thematic map.

Aside from maps, the CBMS-NRDB can yield reports and graphs. Basic time-series tables can also be generated. Figures such as histograms, time-series graphs and pie charts can likewise be constructed to make analysis of trends.

*Software limitations*

The CBMS-NRDB is not a full GIS software. It is a database software with mapping tools. In view of this, analyses are limited to thematic mapping and visual analysis.

Defining the structure is a crucial step in the creation of the database. This needs to be done only once but it is very important to get the structure right to avoid redoing the whole database. To prevent redoing things, the user could configure ahead before actual construction of the database.

Although the CBMS-NRDB is able to produce maps, charts and reports, the manipulation of the features of these tools is limited.
Common problems encountered
The current program designed for the CBMS-NRDB training is part of the intensive three-day training on computerized processing and CBMS-NRDB. However, the two-day training proved to be insufficient for the actual preparation of the CBMS-NRDB files. Thus, the program was re-designed into a four-day training workshop in order to devote more time to hands-on exercises on digitizing maps and importing and managing data in the database.

Meanwhile, while it is suggested to local CBMS partners to send trainees who are computer-literate and involved in the CBMS implementation, some LGUs find it difficult to send qualified participants because they lack the staff who suit the requirements. Due to the fast turn-over of JO (Job-Order) employees, LGUs prefer sending regular employees. However, these employees cannot commit to devote their full attention to actual processing and preparation of the CBMS-
NRDB because they are loaded with a lot of other work in the office. Experiences of the CBMS partners also confirm that this endeavor needs full-time attention of the person(s) preparing the database. Thus, it is suggested that LGUs should evaluate their capacities and estimate the number of man-hours and computer units needed to ensure completion of the database.

Computerized versus manual processing: An evaluation

Computerized operations really present a more attractive set of processing solutions through comprehensive, replicable, efficient, and controllable flow of steps and outputs given a well-tested computer-based system accompanied by a competent operator. Thus, these characteristics more or less make the CBMS Computerized Data Processing System more attractive and preferable than Manual Data Processing. However, the computerized system may not be a viable option for some LGUs due to human and hardware resource constraints.

In the computerized processing, all the entries in the household profile questionnaires are encoded. This implies that most of the information could be processed, tabulated and analyzed down to the household levels. Furthermore, as a cycle, the information could be reprocessed, retabulated and re-analyzed whenever updates or revisions in some external information attributed to the information in the questionnaire such as poverty thresholds, definitions, among others, are called for. Computerized processing implies a more efficient and controllable flow of steps. Once the questionnaires are completely and validly encoded, the processing can be done much faster.

These features indicate the weak point of the manual mode. Only the core indicators and some comprehensive and supplementary indicators can be drawn from the manual processing. Household indicators are not included in the output. In addition, once the indicators in the manual processing are submitted, they cannot be revised unless the questionnaires are to be encoded again.

Nonetheless, despite its attractive features, computerized processing may not be feasible for some LGUs since it will require hardware and competent personnel to do the task. Only few municipalities have automated their databases. Moreover, computerized processing poses another constraint: time. More time is needed in computerized processing.
generate results at a faster rate than computerized processing. Local officials usually face dilemmas and compromise between the two modes given their available resources and preferences. One dilemma is when they conduct manual processing and realize that they need other analyses in relation to their findings. Manual processing gives them limited options and encoding the household profile questionnaires is not feasible. On the other hand, choosing a computerized processing will entail more resources and time allotment on their part.

**Validation of survey results**

This activity entails field and desk validation of survey results. Field validation involves the presentation of the processed data from the survey to the community in organized fora to elicit reaction on the data accuracy and to gather feedback on the possible explanations for specific outcomes of the survey.

The validation of survey results is a vital component in the implementation of a CBMS. For one, it is an important mechanism to ensure that the local leaders and the rest of the community are informed of the results of the survey. Furthermore, it provides an avenue for verifying the accuracy of the findings of the survey by facilitating discussion on the possible reasons for the said findings. In a field validation exercise, the survey results in table and map forms are presented to and validated by the community through a one-day meeting.

The validation exercise likewise serves as venue in identifying the major problem areas of the community and identifying the possible interventions needed to resolve these problems. This then facilitates the integration of CBMS results in the preparation of the community’s annual development plan and in the drafting of a socioeconomic profile.

The validation activity is intended to be undertaken at all geopolitical levels to be participated in by the CBMS focal persons at each level as well as community/sectoral leaders and volunteers.

Barangay Assembly: The key participants for this activity at the barangay level are the barangay (village) captain and development council members, barangay health workers and nutrition scholars, the enumerators themselves, other officers in the barangay such as teachers,
sector representatives, indigenous leaders, and people from the community.

Municipal level: The key participants are members of the municipal/city development council, the league of barangay captains, sectoral leaders/department heads, concerned non-governmental organizations and the CBMS technical working group members.

Provincial level: Key players in the validation exercise are the provincial development council members, the league of mayors, sectoral leaders/department heads, the CBMS technical working group members, and NGOs and private organizations.

A standard validation guideline is given to the LGU on how to conduct the activity. The standard program includes an overview of the objectives of the activity, presentation of CBMS survey results, discussion on the results of the survey, identification of major problems and prioritization, recommendation from development council members and identification of next steps and timeline of activities.

Expected outputs of the validation are: (a) documentation of the proceedings, including the discussions and comments of the community on the data presented, (b) explanations/reasons for the findings, (c) information/data that need to be corrected, (d) priority needs identified and possible interventions, and next steps/timeline.

**Database management**

Database management refers to the storage, modification, and extraction of information from a database to produce the desired outputs such as reports, maps and proportions. The CBMS Database System has been developed consisting of several modules on data encoding, processing, digitizing and mapping. The system uses all freeware such as CSPRO, NRDB and the CBMS Statistics Simulator (StatSim) developed by the CBMS Team.

Data collected from the CBMS surveys are encoded and stored into the database system, which will be used to generate processed data in the form of proportions, maps and reports. These results are used during the validation exercises to ensure accuracy of the data. If there are corrections in the data as a result of the validation exercise, the revised data are then incorporated in the database.
Database management is done by the CBMS monitors at the provincial and city/municipal levels. In most cases, the database is maintained by the staff of the local planning and development offices.

**Uses and Applications of CBMS Data**

CBMS has a number of potential concrete uses particularly in the areas of local governance and poverty monitoring. Specifically, data gathered from CBMS are proven useful in the following ways:

**CBMS builds the capacities of LGUs and communities**

CBMS can be used to further nourish, if not build, the capacities of local government units as well as members of communities in addressing the needs of their respective localities by maximizing the use of their existing resources.

The system provides an organized process that can be used to empower communities for a more evidence-based and participatory approach to development planning and welfare monitoring. Through the implementation of a CBMS, capacities of LGUs and communities are enhanced through trainings on data collection, processing and validation as well as on analyzing and using the set of information that they have on hand. The administration of the process develops capacities of local and community leaders for mobilizing human and financial resources. CBMS also stirs up the spirit of volunteerism among local communities and paves the way for a greater sense of accountability among them in diagnosing, addressing and monitoring their respective community’s development concerns.

**CBMS creates databases at the local level**

One of the features of the CBMS is that databanks are established at each geopolitical level. CBMS can help enrich these databanks by providing a complete set of household, barangay, municipal/city and provincial level information.

With the CBMS processing system lodged at the municipal level, the municipalities are able to create their own CBMS databases. The CBMS databases are usually established at the municipal planning and development office (MPDO). Establishing a local database enables them to share and disseminate CBMS
results to other offices, non-government organizations and other interest groups.

The CBMS database is also shared with the barangays. Since most barangays do not have computers to enable them to establish their own CBMS database, the MPDO likewise serves as a CBMS resource center for barangays. For those barangays with computers, the MPDO assists the barangay in establishing their barangay CBMS database and provides training to barangay staff on how to use the database.

Once the municipal database is established, the database is submitted to the province. The provincial planning and development office is tasked to collect all municipal databases at their level. These municipal databases are then consolidated to come up with the provincial CBMS database.

The CBMS can likewise complement existing databases. Since it provides a regular source of information on socioeconomic attributes of communities, LGUs can use the CBMS information to further enrich the contents and usefulness of existing local databases.

A number of LGUs were able to get funding support from international organizations in the past for setting up databanks containing information on children, environment and the like. CBMS can help enrich these databases by providing a complete set of household, barangay, municipal/city and provincial level information.

National Repository of CBMS Data

At the national level, activities are ongoing regarding the establishment of a CBMS National Repository. The CBMS Team started the repository with the CBMS databases collected from partner LGUs. The national repository of CBMS data is a database containing individual and household level information generated from the CBMS surveys of various LGUs. The database is intended to be used by national government agencies, private sector, donor agencies and other relevant stakeholders.

Specifically, the national repository would:

- facilitate the access and use of the integrated CBMS database by national entities in their advocacy work with key decisionmakers; and
- support government and non-government funding sources in strengthening evidence-based planning and
monitoring as well as in aligning their interventions to national priorities and facilitating the implementation of targeted programs.

Most importantly, the repository would facilitate evidence-based targeting of eligible beneficiary households or individuals of certain programs of national government agencies, thereby helping to achieve the government’s objective to have a faster and sustained reduction in poverty.

The CBMS Team is working closely with the NAPC in establishing the repository at their agency. NAPC has accepted the role as the repository of the CBMS in order to promote the use of the CBMS information in targeting national poverty reduction programs.

**CBMS serves as inputs in poverty mapping**

One of the outputs of the CBMS database is poverty maps. Through the CBMS-NRDB platform, LGUs are able to produce poverty maps to present and report CBMS results in a spatial representation. With poverty maps, policymakers, planners and other stakeholders can easily understand and analyze situations and problems in communities within their jurisdiction. Poverty maps are useful in identifying spatial patterns and can provide insights on the reasons affecting specific aspects of poverty. They can also be used in visualizing the location of the poor and in describing their conditions. CBMS, through poverty mapping, aids in identifying the location of municipalities, cities, barangays and even households which are in dire need of basic services. Poverty maps can help local planners in identifying priority areas and target beneficiaries of anti-poverty programs.

**CBMS serves as inputs for the preparation of development profiles**

CBMS data also provide vital baseline information for the preparation of barangay, municipal/city, and provincial socioeconomic profiles, annual investment plans, land use plans, infrastructure project proposals, and other related development reports. Most of the LGU partners have used their CBMS results to enrich their existing profiles, reports and plans. In Camarines Norte, for instance, the CBMS data have been used as benchmark
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information for the preparation of Barangay Socioeconomic Profiles (SEP) and project proposals for development projects.

In Palawan, CBMS data have been used as basis for the preparation of the province’s first Human Development Report for the year 2000. Likewise, NGOs like the Conservation International, European Union through the Palawan Tropical Forest Protection Program and Southern Palawan Planning Council in Palawan have used CBMS data for resource profiling of environment project sites in the Province. Palawan’s Provincial Office of the Philippine National Red Cross has used CBMS data in facilitating the preparation of a Disaster Management Preparedness Plan for selected barangays in the Province. CBMS data have also been used for the preparation of the Comprehensive Land Use Plan of Palawan.

Since CBMS data provide baseline information at the local level, a writeshop on the Preparation of Socioeconomic Profile and Barangay Development Plan using CBMS Data (CBMS Training Module IV) was conceptualized to promote the use of CBMS information for the preparation of reports, plans, proposal and other related documents for LGUs. The writeshop has become a regular training program given by the CBMS team to all LGU partners.

Box 4. Data Sources for the Preparation of SEP and BDP

- Validated CBMS Survey Results
- Documentation of validation workshops in the barangay
- Completed Barangay Profile Questionnaire
- Barangay Spot Map
- CBMS Maps
- List and description of existing projects and programs in the barangay
- List of proposed projects for the barangay in response to the top problems identified during the CBMS validation workshop and also discussed during a barangay development council meeting
- Other relevant administrative reports/documents
- Other existing databases
Participants of the writeshop include the Barangay Captain, Barangay Secretary, Barangay Treasurer, members of the Sangguniang Pangbarangay, the lead enumerator or team leader, and other barangay officials.

The objective is to develop the materials, revise and put them into final form as quickly as possible. At the end of the module, the participants should be able to: 1) discuss the basic features of local development planning, 2) identify the major actors in the activities of planning and their responsibilities, 3) explain and interpret the data gathered from CBMS, and 4) prepare a draft Barangay Development Plan (BDP) based on CBMS survey results. Box 4 outlines the data sources for the preparation of the SEP and BDP.

The module is a three-day training program. There are 6 mini-writeshop sessions. A workbook is used to guide participants through the writing process. A BDP Template is also available which will serve as a style-guide in encoding the writeshop outputs. General guidelines and tips for writing the SEP are discussed first before every writing session. There is sharing of learning experiences after every writing session. At the end of the sessions, a draft each of the SEP & BDP is produced.

CBMS facilitates resource allocation
One the most common dilemmas among local chief executives is how to efficiently and effectively use and manage the meager financial resources of the local government unit given the many competing projects and programs that need to be delivered in their localities. CBMS tries to address this issue by providing the necessary information that would reveal to decisionmakers an up-to-date development situation of communities in terms of core areas of welfare.

A case in point is that of the Provincial Government of Palawan. CBMS data have been used as a basis for providing a general report to provincial planners as well as to different sectoral leaders on the status of human development in the entire province.

In other CBMS sites, local chief executives are likewise faced with simultaneous requests for funding for development projects like water project, construction of health centers, road construction,
among others, from the different barangay/community leaders. In this case, the barangay/household level information that CBMS provides can help decisionmakers assess and decide on which areas should be prioritized such as the information presented in Map 2 and how they helped the local chief executive in making the necessary prioritization.

**Map 2. Proportion of Households with Access to Safe Water in Two Barangays in Labo Camarines Norte, 2003**

CBMS information aids the design, targeting and impact monitoring of social services and development programs

CBMS provides disaggregated information that reveals the community’s needs based on the CBMS household survey and corresponding explanations for such deficiencies as gathered during the validation forum and supplemented by information gathered from the barangay profile questionnaire. In this light, CBMS can serve as a useful tool for the design of appropriate interventions to address particular development needs as shown in Map 3.
CBMS can also facilitate targeting by providing information on who are the eligible beneficiaries for specific programs. Sector-specific indicators can be used to identify who should receive the interventions.

**Map 3. Proportion of households with access to sanitary toilet facilities. Before and After Intervention, Brgy. Sta. Cruz, Labo, Camarines Norte, 2003**

For instance, households with malnourished children should be the beneficiaries of supplemental feeding programs. Furthermore, composite indicators (combining the different indicators using statistical techniques) can be used to rank the poorest households in the barangay or municipality. Several methods were already explored and being tested to integrate the CBMS core indicators to identify the poor. This will be particularly useful in identifying eligible beneficiaries for programs such as the Philhealth program for the indigents and the scholarship program for the poorest families.

Finally, CBMS can serve as a supplemental tool or even a main source for vital information for monitoring the impacts of development programs that have been implemented in the communities by various organizations.
CBMS can be used as a tool in localizing the MDGs

CBMS can be used as a tool in monitoring the Millennium Development Goals (MDGs) at the local level. With the Philippines’ commitment to meet the MDGs, it becomes imperative to monitor the performance of the country vis-à-vis the targets. Initial monitoring indicates that spatial disparities are large, necessitating concerted action in areas where performance is very low. Through CBMS, indicators of the MDGs can be generated providing LGUs with critical information needed in the attainment of the MDGs.

CBMS indicators were also harmonized with the MDGs. Through a memorandum circular, the DILG was able to harmonize the CBMS indicators with the MDGs which LGUs may use to assess their situation and gather baseline information to institute measures to help meet the country’s MDGs by 2015. A minimum set of 13 Local Poverty Indicators was introduced in 2003 and in 2004, one more indicator was added on maternal mortality rate. Today, these are known as the 14 Core Local Poverty Indicators. They are matched with the MDGs in order to allow the monitoring of each goal and target set in the MDGs as shown in Table 3. The monitoring of achievement may be done not only at the municipal level but also at the barangay level.

Modes of dissemination

Advocacy is a critical component of the CBMS. Through advocacy, findings from the CBMS surveys are disseminated to policymakers and program implementers with the aim of generating corresponding actions for possible interventions. The target audiences are the community leaders/officials, city/municipal development council, potential donors for prospective projects, and other interest groups. They are responsible for translating the results and findings generated by the CBMS data into more appropriate policies/measures and programs.

Dissemination of CBMS findings are done through publications, poverty maps, computerized database and meetings and fora.

Aside from the extent of poverty in the communities, which are determined based on the results of the CBMS survey, information
Table 3. CBMS Indicators in correspondence with the MDGs

<table>
<thead>
<tr>
<th>MDG</th>
<th>CBMS Core Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1: Eradicate Extreme Poverty</strong></td>
<td>Proportion of households with income less than the poverty threshold</td>
</tr>
<tr>
<td></td>
<td>Proportion of households with income below the food threshold</td>
</tr>
<tr>
<td></td>
<td>Proportion of 0-5 year old children who are moderately and severely underweight</td>
</tr>
<tr>
<td></td>
<td>Proportion of households who eat less than 3 full meals a day</td>
</tr>
<tr>
<td><strong>Goal 2: Achieve Universal primary Education</strong></td>
<td>Proportion of 6-12 year old children who are not in elementary school</td>
</tr>
<tr>
<td></td>
<td>Proportion of 13-16 year old children who are not in secondary school</td>
</tr>
<tr>
<td><strong>Goal 3: Promote Gender Equality</strong></td>
<td>(Data can be generated from indicators of Goal 2 since they can be disaggregated by gender)</td>
</tr>
<tr>
<td><strong>Goal 4: Reduce Child mortality</strong></td>
<td>Proportion of children under 5 years old who died</td>
</tr>
<tr>
<td><strong>Goal 5: Improve Maternal Health</strong></td>
<td>Proportion of women who died due to pregnancy-related causes</td>
</tr>
<tr>
<td><strong>Goal 7. Ensure environmental sustainability</strong></td>
<td>Proportion of households without access to safe water</td>
</tr>
<tr>
<td></td>
<td>Proportion of households without access to sanitary toilet facilities</td>
</tr>
<tr>
<td></td>
<td>Proportion of households who are squatters</td>
</tr>
<tr>
<td></td>
<td>Proportion of households with makeshift housing</td>
</tr>
<tr>
<td><strong>Goal 8: Develop a Global Partnership for Development</strong></td>
<td>Proportion of population who are 15 years old and above and are not working but are actively seeking work</td>
</tr>
</tbody>
</table>

that are also disseminated are the possible reasons and interventions generated through the community validation activities.

**CBMS Development Grant Program**

To further disseminate and promote the use of the CBMS, the CBMS Team, in partnership with the UNDP and Peace and Equity Foundation (PEF)², launched the CBMS Development Grant Program in September 2005. The program aims to support evidence-based policy on social programs and to help reduce poverty and development

²The Peace and Equity Foundation (PEF) is a non-stock, non-profit organization that manages and preserves the value of the PEACE Bonds endowment fund to promote opportunities for the poor to liberate themselves from poverty.
disparities across barangays and municipalities by financing poverty reduction programs identified from the data gathered through the CBMS.

As of December 2006, the program has awarded 22 grants to partner LGUs and people’s organizations to support social and developmental projects designed to address community needs identified through the CBMS.

The CBMS team has also published the conference proceedings as part of disseminating the research papers presented in the conference.

Status of Implementation and Next Steps

A. Local

CBMS is now being adopted and used as part of the local development planning and monitoring process by a growing number of local government units in the country. Many LGUs all over the country have already formed partnership with the CBMS Philippine Team, apportioning resources from their own development funds for the implementation and utilization of the CBMS in their respective localities.

The CBMS Philippines Team is working toward the expansion of the coverage of the CBMS implementation in the country. Since 1999, the Team has provided free technical assistance to LGUs that are willing to implement the CBMS.

As of February 2007, the CBMS is being implemented in 28 provinces – 16 of which are implementing it province-wide. This covers 348 municipalities and 24 cities covering 9,088 barangays.

LGU-initiated CBMS

The team provided technical assistance to the province of Palawan in 1999 and has continued its collaboration with the province in subsequent CBMS implementation in 2002 and 2005.

The costs of implementation have been borne largely by the local government units, indicating that they see the usefulness of the system. This bodes well for the sustainability of the system.
The provincial government of Palawan has shared its experiences in the conduct of the CBMS in several conferences and workshops which led to a wider advocacy and promotion of the system for local planning and development. Following Palawan’s example, the provinces of Camarines Norte (2003, 2005), Bulacan, (2005) Agusan del Norte and Bataan (2006) have also implemented CBMS with the assistance of the CBMS team. The team has also rendered assistance to several cities and municipalities.

In 2005, Mandaue City in the province of Cebu implemented the CBMS in its 27 barangays. The city government of Pasay followed suit with its own CBMS implementation covering 201 barangays. Map 4 shows the extent of coverage of the CBMS in the Philippines as of February 2007.

**Regional partnerships**

**Region VIII - Eastern Visayas**

In Eastern Visayas, an NGO active in the region spearheaded the implementation of the CBMS. In 2005, 16 pilot municipalities from four provinces in Eastern Visayas implemented CBMS in partnership with the Institute for Democratic Participation in Governance (IDPG) and the regional planning body of Eastern Visayas. The participating LGUs committed PhP1.2 million while the IDGP committed PhP 5 million for the project. An estimated 850 enumerators have been mobilized to gather household-level information from an estimated 80,431 households in the 486 barangays in these municipalities.

In February 2006, the Regional Development Council (RDC) of Region VIII issued Resolution No. 8A “endorsing the conduct of poverty mapping in all barangays of the region using the CBMS as a tool”. Now, the coverage has expanded to all 6 provinces in the region covering 101 municipalities and 2 cities or 2,999 barangays. With the successful campaign and expansion of the CBMS in the 6 provinces in Eastern Visayas, the RDC has issued a resolution endorsing the conduct of poverty mapping in all barangays of the region using the CBMS.

**Region IV-B – MIMAROPA**

With the implementation of the CBMS in 2 provinces, namely, Palawan and Marinduque, in the MIMAROPA region, the Regional
Development Council issued RDC Resolution No 12-074-2005 adopting the CBMS as a tool in developing its regional and economic database. Romblon has started its CBMS implementation this year. Full regional coverage is expected in 2008 with the CBMS implementation in the provinces of Oriental Mindoro and Occidental Mindoro in 2008.

Region V – Bicol Region

With the successful implementation of CBMS in the 7 municipalities of Camarines Norte in 2003, the Regional Statistical Coordination Committee (RSCC) has passed a resolution in 2005 recommending the adoption of the CBMS by LGUs in Region V. Upon passing the resolution, a MOA was signed between the CBMS Team and Regional Offices of DILG, NEDA and NSCB to implement CBMS in the LGUs in Region V. An inter-agency monitoring task force was formed to advocate the adoption of the CBMS as a tool in benchmarks that could be used as basis in formulating local plans and policies as well as a tool in monitoring and evaluating the results of planned local interventions in the five provinces and seven cities of the region.

With the collaboration of the CBMS task force in Region V, the CBMS is now being implemented in several cities and municipalities, namely, Iriga City, Lupi and Minalabac in the province of Camarines Sur, Ligao City and Libon town in Albay province, and Sorsogon City in the province of Sorsogon.

B. National

The adoption of CBMS is in line with various national and local government efforts relating to poverty monitoring and improved local governance which lead to several issuances and circulars from these agencies pledging support in the implementation and use of CBMS. Through resolutions and policy issuances, CBMS is being advocated and implemented for capacity building of local government units on poverty diagnosis and planning, and adopted as a tool for localizing the MDGS and for generating local poverty statistics.

Among the memorandum policy issuances of concerned national government agencies relating to this are as follows:
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• **DILG Memorandum Circular 2001-105**
  Issued in August 2001, the circular enjoins all local chief executives to undertake local programs on poverty reduction and economic transformation and emphasized the need to designate Local Poverty Reduction Action Officers (LPRAOs) and to formulate a Local Poverty Reduction Action Plan (LPRAP).

• **NAPC En Banc Resolution No. 7**
  Issued in March 2003, the resolution directs LGUs to adopt the 13 core local poverty indicators as the minimum set of community-based information for poverty diagnosis and planning at the local levels and to integrate such information in their local poverty monitoring system and local level action plans and program.

• **DILG Memorandum Circular 2003-92**
  Issued in April 2003, it provides policy guidelines for the adoption of the 13 core local poverty indicators for planning. The guidelines shall aid the LGUs in assessing and understanding poverty and its dimensions at the barangays, municipalities, cities and provinces, with the end view of formulating an LPRAP and implementing the plans and programs to reduce poverty.

• **DILG Memorandum Circular 2004-152**
  Issued in November 2004, the circular encourages LGUs to intensify efforts in implementing programs, projects and activities toward the achievement of the MDGs.

  LGUs are further encouraged to conduct a monitoring system such as the MBN-CBIS, CBMS, IRAP, among others, to monitor and diagnose the nature and extent of poverty using the 13+1 core indicators in order to determine appropriate interventions and focus targeting.

• **NSCB Resolution No. 6, Series of 2005**
  In 2005, the Executive Board of the National Statistical Coordination Board (NSCB) issued a resolution recognizing the CBMS as a tool for strengthening the statistical system at the local level that will generate statistics for monitoring and evaluation of local development plans, including the progress of the local governments in attaining the MDGs.
The NSCB Technical Staff has initiated an advocacy program for the adoption of the CBMS by the LGUs through the RSCCs, the technical arm of the Board in the regions.

- **SDC Resolution No. 3, Series of 2006**
  In July 2006, the Social Development Committee (SDC), which advises the President and the NEDA Board on matters concerning social development, including education, manpower, health and nutrition, population and family planning, housing, human settlements, and the delivery of other social services, issued Resolution No. 3, Series of 2006 adopting the CBMS as the prescribed monitoring tool for the generation of the Core Local Poverty Indicator Database. The committee noted that the “CBMS is a very viable and cost-effective system that can be used in generating the 13+1 core local poverty indicators and ensure uniformity and standardization of CLPI databases by all LGUs.”

- **PhilHealth Board Resolution No. 982, S.2007**
  In March 2007, the Philippine Health Insurance Corporation (PhilHealth) adopted the CBMS as the principal source of data in identifying indigent families to be enrolled under the sponsorship program of the National Health Insurance Program (NHIP).

Likewise, the Philippines Development Forum Working Group on MDGs and Social Progress envision a 100 percent LGU coverage of the CBMS by 2010. The PDF Working Group on MDGs, co-chaired by the Department of Social Welfare and Development (DSWD) as lead convenor and the United Nations as co-lead convenor, serves as a forum for government and development partners to engage in dialogue and agree on common issues for collaboration in basic education, health and social sectors under the umbrella of the MDGs. The working group has

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3 The Sponsored (Indigent) Program aims to provide Medicare privileges to the marginalized sector of Filipino society. Target members of the Program are those belonging to the lowest 25 percent of the population. The Program is implemented in partnership with the local government units (LGUs) and PhilHealth. The LGU and the National Government through PhilHealth share the annual premium payment of ₱1,200 per indigent household to get enrolled.
recognized the importance of the CBMS as a critical tool for planning, budgeting and evaluation and for tracking the MDGs at the community level. They have recommended that the pace of institutionalizing the CBMS methodology needs to be accelerated to reach the Philippine target of 100 percent coverage by 2010. There is still a long way to go to reach this goal but with the support coming from the NAPC and DILG and increasing interest from LGUs, the scaling up of the CBMS to reach more LGUs in the coming years may hopefully be fast tracked.

National partners

*DILG*

The DILG, with its oversight role over the local governments, has been tasked as the lead agency for the localization of the MDGs in the Philippines. Seeing the potential of the CBMS as a poverty monitoring tool at the local level, the Department has sought the assistance of the CBMS team to implement the CBMS in several pilot LGUs.

In 2005, through a memorandum of agreement between the CBMS Team and the DILG through its Bureau of Local Government Development (BLGD), the CBMS data collection and processing instruments for training modules in localizing the millennium development goals, poverty diagnosis and planning were adopted. The CBMS team has trained a pool of trainors from the BLGD of the DILG as well as trainors from the regional offices of the Department. In addition, the instruments on CBMS data collection, data encoding, processing and mapping software developed by the Team were provided to the BLGD at no cost.

CBMS has been incorporated in the various projects of the DILG particularly on poverty diagnosis and benchmarking local MDGs indicators. Under the project “Strengthening Local Government Capacity for Poverty Assessment, Plan Formulation and Monitoring” of the World Bank-ASEM Technical for Poverty Monitoring and Analysis, the DILG-BLGD provided technical assistance to 3 provinces, namely: Marinduque, Camiguin and Masbate in institutionalizing the CBMS in their respective provinces.
CBMS is also being advocated to be used by cities for localizing the MDGs. Under this program, 2 cities namely, the Science City of Munoz and Tanauan City, have implemented the CBMS with support from the UNDP.

The DILG also conducted advocacy and mobilization activities at the national and regional levels in order to scale up the establishment of the CBMS as the instrument to generate core local poverty indicators for poverty diagnosing, planning and monitoring local progress on the MDGs. Through these efforts, the Department has established regional trainors and MDG focal persons within their regional offices. This has resulted in the expansion of the CBMS to LGUs in Regions I, V, VI, VII, IX and X.

**NAPC**

The NAPC has forged a partnership with the CBMS Team in implementing the CBMS in two provinces in 2005. With support from the UNDP, the project aims to provide the NAPC with the necessary information and skills to further localize the CBMS. Through the project, the CBMS Team was able to train at most 6 technical staff from NAPC on the CBMS implementation, processing and training modules.

Identified pilot areas in Mindanao are the provinces of Zamboanga del Sur and Agusan del Norte. NAPC is also planning to expand its CBMS coverage to include 10 poor provinces in Mindanao.

**Lessons Learned**

Below are some of the lessons gained from the various experiences in implementing the CBMS:

1. Local poverty monitoring system is an important component of the overall poverty reduction strategy. It facilitates the diagnosis of extent of poverty, the identification of the causes of poverty, the formulation of appropriate interventions, the targeting of eligible beneficiaries, and the assessment of impact.

2. The chances for nationwide institutionalization are better if CBMS data are useful at both the national and local levels.
3. Previous targeting schemes of national government agencies suffered from the lack of information to identify eligible beneficiaries. The need for household-based information by the national government agencies creates the demand for CBMS data at the national level.

4. Decentralized system of governance creates local demand for CBMS data.

5. It is important to work with local governments at the outset since they will ultimately bear the costs and benefits of the CBMS. Local governments are willing and able to implement local monitoring systems.

6. It is important to include only a core set of indicators to make the system viable. Whenever relevant, a few community-specific indicators may be added to the core set of indicators.

7. It is important to adapt the CBMS system to realities/capacities in the country. Thus, indicators, data collection methodology, data processing, and other aspects of the CBMS may be customized.

8. Capacity-building of local government personnel on diagnosing poverty at the local level using CBMS data is critical. Introducing a new system requires capacity-building over a period of years.

9. It is useful to incorporate new technology in the processing, analysis and dissemination of data.

10. Computerized processing facilitates analysis and retrieval of data.

11. The use of the GIS in presenting the data is very effective. With GIS maps, spatial disparities are readily highlighted, households with unmet needs are easily located, and projects to address unmet needs are correctly positioned.

12. Data on household income are difficult to collect in the CBMS partly because of the irregularity and multiplicity of sources. However, income is a very useful indicator since it is very sensitive to economic changes and shocks. One way to address this problem is to provide adequate training to enumerators to be able to collect good and reliable estimates of household income through CBMS. Other indicators can be used in
combination with income to validate income-based poverty status.

13. It takes a long time for a monitoring system that involves many stakeholders to be institutionalized. Continuing advocacy efforts are thus needed to convince national and local policymakers and program implementors to adopt a system. It is critical that a resource center for CBMS that can provide technical assistance to local government units intending to adopt the system is present. Even for LGUs that have been doing it, capacity-building programs to switch to new CBMS technologies and do further analysis of the data are still needed. The first version of the CBMS utilized manual processing at the barangay level and computerized processing at the municipal and provincial levels while the current version promotes the use of computerized processing at all levels.

14. Incentives should be developed to encourage other LGUs to adopt the system. For example, the use of CBMS data by national government agencies to identify beneficiaries of national programs will encourage LGUs to adopt the system.