The MIMAP-Philippines
Community-Based Monitoring System*

Data relating to the different dimensions of poverty are traditionally obtained from national censuses and surveys conducted by national statistics offices. However, these surveys and censuses are conducted infrequently and at irregular intervals. Moreover, they are conducted at different time periods and so a comprehensive picture of the different dimensions is not possible at a particular point in time.

Furthermore, data from these sources are too aggregated. The available national, regional and sometimes provincial data are not sufficient for the use of local government units, particularly cities/ municipalities and barangays. They need disaggregated information for diagnosing poverty at the local level and identifying eligible beneficiaries for targeted programs. The community-based monitoring system (CBMS) seeks to address the existing gaps in the statistical system.

The development of the MIMAP-CBMS started in the Philippines with a design proposed by Florentino and Pedro1 under the MIMAP Phase II Project in 1992. Further refinements were then done to the system in the succeeding phases of the project.

Reyes and Alba2 modified the proposed system in 1994. Then, the proposed system was pilot-tested in 2 barangays in Pandi, Bulacan in 1995 and 1996. As a result of the pilot-test, the CBMS design was further refined and documented in the paper by Reyes and Ilarde3 in 1996. A second round of CBMS survey was conducted in Pandi, Bulacan in 1999. The survey was used to look at the impact of the Asian financial crisis and the El Niño in 1997 and 19984.

The CBMS was implemented provincewide in Palawan in November 19995. This was followed by the implementation of the CBMS survey in Puerto Princesa City

* Prepared by the MIMAP-Philippines PMO for the CBMS Training Workshop and Steering Committee Meeting in Hanoi, Vietnam, January 6-11, 2003.


3 Refer to the paper "A Community-based Monitoring System for Poverty Tracking" by Celia M. Reyes and Kenneth C. Ilarde, April 1996.

4 See MIMAP Project Updates, June and December 1999.

5 Refer to the paper "Utilizing a Community-based Monitoring System (CBMS) for Development Planning in the Province of Palawan" by Anne Bernadette E. Mandap, November 2001.
in November 2001. The second round of CBMS survey in the province of Palawan was conducted in 2002.

The most recent improvement in the system is the identification of a core set of indicators in 2002. The system was further simplified to enable all types of local government units (LGUs) to implement the system.

**OBJECTIVE:** The MIMAP CBMS seeks to provide policymakers with a regular and frequent information on the possible impacts of macroeconomic adjustment policies on the welfare of households, particularly those belonging to the vulnerable groups.

Specifically, CBMS seeks to provide the following:

- An organized system of collecting information for policymaking and program implementation at all geopolitical levels;
- Up to date information on the welfare status and needs at the community and household levels;
- A tool in monitoring and evaluating the impact of projects and programs; and
- A tool for better local governance.

**FEATURES:** The CBMS combines the best features of existing monitoring systems and incorporates new features.

- **LGU based**
  - Adopts the concept of mobilizing and developing the capability of communities for data generation and utilization
  - Dissagregates the collected information into functional groups
  - Reports the data collected to the higher geopolitical level for immediate intervention to address welfare gaps among vulnerable groups, and ultimately reaches macroeconomic planners in order to influence adjustment programs
  - Creates and maintains databanks at each geopolitical level
  - Utilizes the information generated by monitoring systems already in place as a support indicator system

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6 Based on the paper, "Diagnosing Poverty at the Local Level", prepared by Dr. Celia M. Reyes, CBMS International Network Leader and MIMAP-Philippines Project Director for DILG, NAPC and NEDA. April 2002.
Tap existing LGU personnel as monitors
The monitors are expected to supervise the collection of primary data, collect primary data, consolidate the data available at the provincial/municipal and barangay level, and maintain the databank at their level (Figure 1).

At the barangay level, the proposed monitors are:

- the barangay health workers (BHW);
- the barangay nutrition scholars (BNS);
- barangay council members; and
- other community volunteers.

At the municipal level, the monitors will come from the Municipal (City) Planning and Development Office led by the Municipal (City) Planning and Development Coordinator.

The Provincial Planning and Development Coordinator (PPDC) will lead the Provincial Planning and Development Office staff as the monitors at the provincial level.

National level consolidation and monitoring will be done by either the National Anti-Poverty Commission (NAPC) or the Department of Interior and Local Government (DILG). The NAPC is the agency tasked with coordinating all poverty reduction policies and programs while the
DILG has the mandate to supervise and enhance the capabilities of the LGUs for self-governance, and implement plans and programs on local autonomy.

Has a core set of indicators

The indicators have been chosen based on the multi-dimensional character of poverty and have been confined to output and impact indicators. These fourteen (14) MIMAP core indicators corresponding to the Minimum Basic Needs (MBN) which cover aspects of social welfare in (a) health; (b) nutrition; (c) housing; (d) water and sanitation; (e) basic education (f) income; (g) employment; and (h) peace and order (Table 1).

TABLE 1: List of Core Indicators

<table>
<thead>
<tr>
<th>BASIC NEEDS</th>
<th>CORE INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Health</td>
<td>1. Child mortality rate</td>
</tr>
<tr>
<td>B. Nutrition</td>
<td>2. Malnutrition prevalence</td>
</tr>
<tr>
<td>C. Housing</td>
<td>3. Proportion of households living in non-makeshift housing</td>
</tr>
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<td></td>
<td>4. Proportion of households who are not squatters</td>
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<tr>
<td>D. Water and Sanitation</td>
<td>5. Proportion of households with access to potable water supply</td>
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<td></td>
<td>6. Proportion of households with access to sanitary toilet facilities</td>
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<tr>
<td>E. Basic Education</td>
<td>7. Literacy rate</td>
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<td></td>
<td>8. Elementary participation rate</td>
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<td></td>
<td>9. Secondary participation rate</td>
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<tr>
<td>F. Income</td>
<td>10. Proportion of household with income above the poverty threshold</td>
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<td></td>
<td>11. Proportion of households with income above the food threshold</td>
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<tr>
<td></td>
<td>12. Proportion of households eating 3 meals a day</td>
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<tr>
<td>G. Employment</td>
<td>13. Employment rate</td>
</tr>
</tbody>
</table>

LGUs can add other indicators that are regarded as relevant to their communities. For example:

- For areas with armed conflict: Proportion of households affected by armed conflicts
For areas prone to natural disasters: Proportion of households affected by natural disasters (volcanic eruption, typhoons, flood, earthquakes, lahar, etc.)

For agricultural communities: Proportion of farm households who are landless.

For indigenous people communities: Proportion of households with access to ancestral domains.

For unenergized areas: Proportion of households with access to electricity.

To be able to explain the observed trends in welfare status, these indicators have to be supplemented by barangay, municipal and provincial profiles and secondary data.

INSTRUMENT FOR DATA COLLECTION: CBMS collects data for all households in the barangay. The household profile questionnaire is designed to be the basic census form of the CBMS (Annex A). The questionnaire focuses on obtaining information on the MIMAP core indicators. Data on demographic and other social characteristics of the household members can also be obtained using the questionnaire.

Additional modules can be used together with the core questionnaire to get information on other indicators deemed relevant to the community.

Information about the barangay are obtained from the Barangay Profile questionnaire (refer to Annex B) with the Barangay Chairman as the respondent. The questionnaire gathers data on the physical and demographic characteristics and available basic services and service institutions of the barangay.

Enumerator’s manuals have been prepared for both the household and barangay questionnaire.

PROCESSING, CONSOLIDATION AND VALIDATION OF DATA: The CBMS process involves various steps at the local level. The initial step of the CBMS process is the collection of data through household survey. Then, preliminary processing and consolidation of the data is done at the barangay level. Part of this process involves the validation of survey results through community meetings and consultations. This is done to ensure the reliability and accuracy of the gathered information. During these meetings, key informants are asked to explain the reasons for the observed welfare status to identify the cause of poverty. This will ensure that appropriate interventions are identified and implemented.
After it has been validated, the data serves as inputs for the preparation of the annual development plans of the barangay. The original household data is kept at the barangay for the use of the program implementors. The monitors also supplement this with other data from other government agencies and institutions. This will serve as the databank at the barangay level.

A copy of the barangay data and the development plans are then submitted to the municipal planning and development coordinator. The latter will process and validate the barangay data and consolidate the data with data from the other barangays. The validation exercise would come in the form of barangay assembly of barangay captains and officials. The monitor also supplements the CBMS data with other data from other government agencies and institutions. This will serve as the databank at the municipal level and likewise serve as inputs for the preparation of the annual investment plans of the municipality.

The information generated by the city/municipal monitors is submitted to the provincial monitor. The latter consolidates and validates the data from the different municipalities and produces summary tables. Data would be presented and validated in a provincial convention participated in by the provincial governor, the provincial planning body, municipal mayors and planning coordinators as well as representatives of various sector committees under the provincial government. The consolidated information will in turn serve as the provincial databank. The data is then used as inputs in planning and project-prioritizing process of the provincial government.

The provincial monitor submits the provincial data to the national monitor, preferably NAPC and/or DILG, which will do the over-all consolidation and validation of submitted provincial data. The consolidated information are then made available to the macroeconomic planners to serve as inputs in their design of adjustment policies and other measures.

**DISSEMINATION AND USE OF CBMS DATA:** The information collected will be made available to the planning bodies, program implementors and other interested organizations through data boards at all geopolitical level, computerized databanks at the municipal and provincial levels and publications. This aims to provide relevant inputs in formulating programs and policies.

The information from the CBMS may be used at all geopolitical levels:

- To monitor regularly the welfare conditions of households and individuals
- To provide inputs to development plans and socio-economic profiles
- To provide the basis for resource allocation
- To help identify target beneficiaries for programs and projects
To provide inputs for program design, implementation and monitoring

**GEOGRAPHIC INFORMATION SYSTEM:** MIMAP-Philippines has piloted the use of geographic information system (GIS) in presenting the socio-economic characteristics of the households living in the province of Palawan, municipalities and barangays. The use of GIS has been very useful in monitoring welfare conditions of local areas and as a basis for program implementations and resource allocations.

MIMAP-Philippines uses the software ARCVIEW in generating the maps. In addition, Palawan has adopted the software developed by Mr. Richard Alexander, called the Natural Resource Database (NRDB) in developing its own database management system which easily translate socio-economic data into GIS maps. NRDB, which has a freeware version, can address the high cost of GIS software such as ARCVIEW.

Maps 1, 2 and 3 show examples of maps showing the welfare conditions at each geopolitical level. Map 1 shows the disparities across municipalities in a province. Map 2 reveals the situation in the different barangays in one municipality. Finally, Map 3 highlights the variation across puroks in a barangay and it also shows whether the household is meeting or not that particular basic need.

**RECENT DEVELOPMENTS ON THE CBMS IMPLEMENTATION IN THE PHILIPPINES AND FUTURE DIRECTIONS:** The CBMS experience in Palawan has drawn interest from the national government agencies and LGUs as well. MIMAP Philippines provided technical assistance but the province shouldered all the direct costs in the implementation of the CBMS.

**Province of Palawan**

The provincial government of Palawan formally operationalized the province-wide implementation of the CBMS in November 1999 through a joint effort with the municipal government units of Palawan as signified in the Executive Order No. 15 issued by Governor Salvador P. Socrates. MIMAP-Philippines provided technical assistance but the province shouldered all the direct costs in the implementation of the CBMS. The CBMS household survey was conducted in the first quarter of 2000 covering 354 out of the total 426 Barangays in 21 out of the total 23 municipalities.

Through the results of the CBMS survey in 2000, the provincial government was able to assess the human development of the province and its municipalities. The data has also been used in goal formulation, target-setting, for impact monitoring specifically on its effect on people's welfare condition and for goal and policy adjustments. Because of the benefits of CBMS, the provincial government restructured its local development planning to incorporate CBMS data. This was
manifested in the Executive Order No. 3, issued in January 2002 by the Honorable Joel T. Reyes, governor of Palawan, which mandates the following:

(a) the use of CBMS data as a basis for planning;  
(b) synchronizing the time frame of planning activities; and  
(c) the allocation of 20 percent development fund of all LGUs to CBMS-based plans.

MIMAP-Philippines presented the CBMS results in GIS maps for the first 10 municipalities which completed the survey and data processing. In addition, MIMAP-Philippines provided the province with the software, ARCINFO, so they can do the same for the other municipalities.

More recently, Palawan has adopted a customized version of the Natural Resources Database (NRDB) as its database management software. NRDB was originally designed for natural resources database, hence its name. It had to be modified slightly to accommodate CBMS data.

Palawan has published its first Human Development Report (HDR) for 2000 using the CBMS results. This was made possible with the technical and financial assistance from MIMAP-Philippines.

Palawan is currently implementing the CBMS survey for the year 2002. As of November 2002, 5 municipalities, namely Aborlan, Cuyo, El Nido, Magsaysay, and Narra have completed the data collection and processing and are in the validation stages in their CBMS process. The other 16 municipalities are still in the collection and processing stages.

Puerto Princesa City

In 2001, the City of Puerto Princesa adopted the CBMS and the survey was implemented in 12 pilot barangays.

Data from the CBMS in Puerto Princesa are now available, as processing and validation of results in 8 barangays were completed and partial processing and validation of the remaining 4 barangays are still being done. The data are now being used by data users like the planning office, students and other researchers which has interests in these selected barangays. Furthermore, the 8 databoards showing the various CBMS indicators are now available in the planning office.

As an added feature, GIS was used to translate the CBMS data into maps. This was done to make the data from the CBMS more meaningful and the information simpler and easier to do special analyses of some selected indicators.

In addition to the maps showing the indicators for the barangays, MIMAP-Philippines PMO prepared GIS maps showing the data for different puroks and individual households. The first prove to be very useful for determining priority
puroks, while the latter was useful in identifying eligible household beneficiaries for targeted interventions.

The planning office will also publish socio-economic profiles of the 12 barangays as a way of further disseminating the CBMS results of these barangays.

For the year 2003, Puerto Princesa recently approved the expansion of the implementation of the CBMS to 27 more barangays increasing the coverage area of the CBMS to more than half of its 66 barangays.

Other LGUs

The Palawan experience in CBMS has been showcased in various fora on the national and local levels. The provincial government of Palawan has shared their experience in the conduct of the CBMS in several conferences and workshop inside and outside of Palawan which led to a wider area in advocating the system and promoting its use for local planning and development.

Among those who have expressed formal interest to adopt the CBMS are local officials from the municipality of Labo, Camarines Norte, Mandaue City in Cebu, Davao City and Quezon City.

An initial meeting with local officials led by Honorable Mayor Winifredo Oco of Labo and the MIMAP Philippines Project Management Office was held last October 25, 2002. In that meeting, it was agreed that MIMAP would provide technical assistance for the implementation of CBMS in Labo with the full cooperation and commitment of the municipality.

Likewise, the local government of Mandaue City in the province of Cebu is considering implementing the system in their entire locality as an approach to community development.

Officials from Quezon City in Metro Manila are very much interested in implementing CBMS in sentinel areas in the city.

Also, the city planning and development office of Davao City expressed their interest for CBMS as they found the system to be relevant for their continuing efforts to better serve their constituents.

All these LGUs seek technical assistance from the MIMAP-Philippines PMO in the CBMS implementation in their locality in 2003.

Developments at the National Level

During the National Conference on the CBMS held in Palawan on November 19, 2002, the NAPC, National Economic and Development Authority (NEDA), DILG,
the Department of Social Welfare and Development (DSWD) all agreed on the usefulness of CBMS for planning, budgeting, and execution of projects. They encouraged all LGUs to adopt the system.

At the national level, the institutionalization of a local poverty monitoring system, a mechanism for targeting poor communities and assessing the impact of poverty reduction programs, has been proposed during the en banc meeting of the NAPC last November 21, 2002. The design of the proposed system⁷ and the list of core indicators to be considered, which was based from an extensive evaluation of existing monitoring systems in the country, was initially presented by Dr. Celia M. Reyes to the Minimum Basic Needs (MBN)-Technical Working Group chaired by NAPC last June 2002 for review. The proposed system will soon be presented to an expanded MBN-TWG that will include representatives from the leagues of local authorities and basic sectors.

There will also be a meeting with the Department of Budget and Management and donor agencies to discuss resource requirements in setting up the system. A joint memorandum circular of NAPC and DILG with other agencies will be developed to indicate responses to policy institutional issues and arrangements among key stakeholders. After which, the system will be presented to the NAPC en banc in January 2003 for possible adoption. Once approved by the NAPC en banc, the Secretariat will proceed to institutionalize the system.

SOME LESSONS LEARNED:

1. Chances for nationwide institutionalization are better if CBMS data are useful at both the national and local levels.

2. 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.

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

4. It is important to work with local governments at the outset since they will ultimately bear the costs and benefits of the CBMS.

5. 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 Based on the paper, "Diagnosing Poverty at the Local Level", prepared by Dr. Celia M. Reyes, CBMS International Network Leader and MIMAP-Philippines Project Director for DILG, NAPC and NEDA. April 2002
6. It is important to adapt the CBMS system to realities/capacities in the country - customize indicators, data collection methodology, data processing, etc.

7. Capacity building of local government personnel on diagnosing poverty at the local level using CBMS data is critical.

8. The use of 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.

9. Data on household income is difficult to collect in CBMS partly because of its 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.
References:


Map 1. Households with access to safe water supply by municipality, Province of Palawan: 2000

Range
- Significantly below average
- Below average
- Above average
- Significantly above average
- No data

National Average: 78.1%
Provincial Average: 51.83%

Data Source: CBMS Survey 2000
Prepared by: MiMAP Project Philippines

- Berong: 0.00%
- Aramaywan: 0.00%
- Isugod: 12.05%
- Maasin: 5.63%
- Tabin: 23.04%
- Kalatagan: 10.11%
- Pinaglabanan: 5.68%
- Alfonzo XIII: 0.00%
- Panitian: 1.17%
- Malagao: 1.87%
- Sowangan: 4.65%
- Tagusao: 1.37%
- Calumpang: 0.00%
- Quinlogan: 1.72%

Range:
- Significantly below average
- Below average
- Above average
- Significantly above average
- No Data

Municipal Average Rate: 4.22%
Provincial Average Rate: 4.70%
National Average Rate: 9.20%

Data Source: CBMS Survey 2000
Prepared by: MMAP Project Philippines
Map 3. Households with income greater than the food threshold by purok, Brgy. Salvacion, Puerto Princesa City, 2001