4.10 Case Study: Needs Assessment

Disclaimer: This is a first attempt to provide guidance in preparing the information product needed for the CLUP and is intended to be used hand-in-hand with Volumes 1 and 2. As more knowledge is gathered, the IP will be updated. Likewise, revisions may be required due to new or changing land use policies. Furthermore, data will continuously be prepared by the custodians, which may require updates.

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Step 1: Background and Objective of the GIS Analysis

The Needs Assessment Analysis in this example will focus on equity promotion provided by the LGU to facilitate a participative decision-making in the CLUP preparation process. It is hoped to promote active participation by the CLUP stakeholders: citizens, politicians, civil society, other interest groups, businessmen, etc. and exert profound impacts on community empowerment, innovation and social change.

The objective is to prepare a CLUP so it shows the basic needs and demands of the current municipal/city population vis-à-vis the existing public services, facilities and utilities, with the participation of the stakeholders.

Step 2: Identify the Indicators to Evaluate Objective Fulfillment

There is a number of systems for local monitoring and diagnosis of basic needs fulfillment.

In September 2000, the United Nations General Assembly adopted the Millennium Declaration renewing the global commitment to peace and human rights and setting specific goals and targets towards reducing poverty and the worst forms of human deprivation. The **Millennium Development Goals** (MDGs), set within 2015, affirm and reinforce the agreements on the goals and targets toward eliminating extreme poverty

worldwide. Its eight objectives have measurable outcomes, timelines for achievements, and clear indicators for monitoring progress. As the goals are holistic and interrelated, the process of working together in partnership at the national, regional and local levels is very important. Meeting the requirements for MDGs will entail collaborative efforts of major, stakeholders – the national and local government units as well as the private sector for interventions geared toward mainstreaming the MDGs in the local development agenda.

The **Community Based Monitoring System** (CBMS) intends to address data requirements for development planning and monitoring at all geopolitical levels including municipalities. CBMS is also intended to play a crucial role in poverty monitoring. CBMS is currently being implemented in the Philippines as well as in many other Asian countries. It promotes the use of Core Local Poverty Indicators (CLPIs) which include a set of indicators that capture the multi-dimensional aspects of poverty.

GIS integrates common database operations such as query and statistical analysis with the unique visualization and geographic analysis benefits offered by maps, which makes it most useful in the CLUP Needs Assessment activity. As 80% of the goods and services the municipality provides has a positional reference, for example locations of schools and roads, GIS helps to maximize all available resources in providing the right policy framework and the right environment for helping the general public gain access to the best quality of life possible.

This IP gives examples on how a CLUP Needs Assessment is outlined using GIS, based on the indicators provided by the Systems mentioned above. The primary common denominator is the barangay for services and utilities within the socio-economic and the infrastructure planning sectors. Demographic data is available at barangay level, and this simplifies analysis of the current situation analysis and the projection of needs. As mentioned in the IP description for the respective Planning Objects, these indicators show the degree of fulfillment of an agreed planning standard or a specific objective/target/goal set by the Municipality. In most cases, for each indicator there is a given standard. For example, if the indicator found in the legend says 'Barangay with insufficient (or not acceptable) provision of potable water' there is an underlying planning standard saying that 'xx % of the households not having access to potable water within the housing unit' is classified as 'insufficient/not acceptable.' For further details, see Vol. 2.

Step 3: Create the Database

The Needs Analysis Information Product can be seen as a comprehensive summary of the planning objects found in the Socio-economic and Infrastructure Baseline IPs, where only the 'problems' are portrayed and the results of the Analysis are presented by four components with the following common denominators:

Indicator	Socio-economic Services and Facilities	Infrastructure Utilities
Provision of a public service, facility or utility (education, transport, etc) compared	*Barangay* (polygon)	*Barangay* (polygon)
Condition of a specific service, facility or utility unit (a school, a road, etc.) compared	*Feature Object* (point)	*Feature Object* (polyline, point)

It should be observed that the analysis is not aimed to show any negative picture about the municipality's inability to provide services and utilities. The objective is to show the current issues that need to be tackled in the plan in order to improve the situation (see Step 4 in Volume 1).

There are five tables to be used for the Needs Analysis:

ND01 Needs Analysis: Social Services by Barangay;
ND02 Needs Analysis: Economic Services by Barangay;
ND03 Needs Analysis: Infrastructure provision by Barangay;
ND04 Needs Analysis: Social Condition by Facility;
ND05 Needs Analysis: Infrastructure Condition by Utility

Below are examples on indicators that will be found in the GIS. First the **social indicators** related to the **barangay** as per ND01:

Barangay Unique ID	Name of barangay	Administration: No = Barangay with no barangay hall/office; Yes; NA= Not applicable	Housing/ Shelter: No= Barangay with unacceptable proportion of informal settlers; Yes; NA= Not applicable	Health: No = Barangay with a critical health situation; Yes; NA= Not applicable	Education: No = Barangay with unacceptable net enrolment ratio in primary education; Yes; NA= Not applicable	Protection:No = Barangay with unacceptable high crime rate; Yes; NA= Not applicable	Recreation: No = Barangay with poor access to open areas and recreational facilities; Yes; NA= Not applicable	Social Welfare: No = Barangay with unacceptable proportion of households with income less than poverty threshold; Yes; NA= Not applicable
B_ID	B_NM	B_ADM	B_H	B_HEAL	B_SCH	B_PROT	B_REC	B_SOC

Second is the Economic Services by Barangay based on table ND02:

Barangay Unique ID	Name of barangay	Commerce: No = Barangay with undeveloped commerce; Yes; NA = Not applicable	Industry: No= (Urban) Barangay with undeveloped industry; Yes; NA = Not applicable	Tourism: No = Barangay with undeveloped tourist facilities; Yes; NA = Not applicable	Agriculture: No = (Rural) Barangay with low agricultural yield; Yes; NA = Not applicable	Forestry: No= (Rural) Barangay with low forest yield; Yes; NA = Not applicable	Mining: No= (Rural) Barangay with low mining yield; Yes; NA = Not applicable	Economy: No = Barangay with unacceptable proportion of persons aged 15 and above who are not working but are seeking work; Yes; NA= Not applicable
B_ID	B_NM	B_COMRCE	B_IND	B_TOUR	B_AGRI	B_FOR	B_MINE	B_ECO

Third is the Infrastructure provision by Barangay based on table ND03:

Barangay Unique ID	Name of barangay	Transport: No = Barangay with insufficient provision of transport facilities; Yes; NA = Not applicable	Water: No= Barangay with unacceptable proportion of households without access to safe water; Yes; NA = Not applicable	Sanitation: No = Barangay with unacceptable proportion of households without sanitary toilets; Yes; NA = Not applicable	Power supply: No = Barangay with insufficient provision of electricity; Yes; NA = Not applicable	Communication: No= Barangay with poor cellular or line connection; Yes; NA = Not applicable
B_ID	B_NM	B_TRA	B_W	B_SANI	B_AGRI	B_COM

Fourth is the Social Condition by Facility based on table ND04:

Facility Unique ID	Name of Facility	Administration: No = Non functioning barangay hall/office; Yes; NA= Not applicable	Health: No = Non functioning health centre/unit with a critical health situation; Yes; NA= Not applicable	Education: No = Non functioning primary school unit; Yes; NA= Not applicable	Protection:No = Police staion with inadequate resources; Yes; NA= Not applicable	Recreation: No = Non functioning recreation area; Yes; NA= Not applicable
FAC_ID	FAC_NM	FAC_ADM	FAC_HEAL	FAC_SCH	FAC_PROT	FAC_REC

Fifth is the Infrastructure Condition by Utility based on table ND05:

Utility Unique ID	Name of utility	Transport: No = Road in critical need of improvement; Yes; NA = Not applicable	Water: No= Non functioning safe water utility; Yes; NA = Not applicable	Sanitation: No = Dump site in a critical condition; Yes; NA = Not applicable
UTIL_ID	UTIL_NM	UTIL_TRA	UTIL_W	UTI_SANI

Note that some of the indicators are coordinated with the CLPIs above in order to harmonize information and avoid duplication of efforts.

The Custodian of Needs Analysis data is the MPDO.

The feature types will be polygons (barangays), polylines (infrastructure objects) and points (socio-economic and infrastructure objects).

The following steps need to be taken.

Step 4: Analyze the Data

Overlay analysis is the process of putting two or more layers on top of each other in the GIS to determine areas of convergence of certain features that give a comprehensive picture for a particular purpose, and thus enable the elimination or screening out of those features that are not suitable for that purpose.

The needs assessment layers, if properly constructed, are most useful in the diagnosis of development issues or the process of problem-finding. The problem-finding analysis involves a three-step process. The first step consists of making meaningful observations or making sense out of the data displayed in Needs Analysis. The second step is probing into the causes or explanations behind the observed conditions. This aspect of the inquiry is important in that it probes into the causes of observed conditions and thus provides the clue to finding more fundamental solutions by attacking the causes rather than the symptoms of the problems. The third step further explores the implications of the observed condition if no significant intervention is exerted by anyone anywhere to change the situation. Implications may be negative or positive according to the perceptions of various groups and sectors of society. It is when negative implications predominate will the observed condition be regarded as a problem.

The analysis can be extended further into determining appropriate policy interventions. This part of the analysis can simply be called the solution-finding phase and is found in Step 6 of the CLUP preparation process and in the building of Scenarios. Policy

interventions need not be limited to targeting the negative implications of observed conditions. Positive implications need to be maintained and strengthened through policies that seek to sustain the beneficial effects. Nonetheless, policies intended to remedy the negative implications by eliminating the causative factors deserve priority attention.
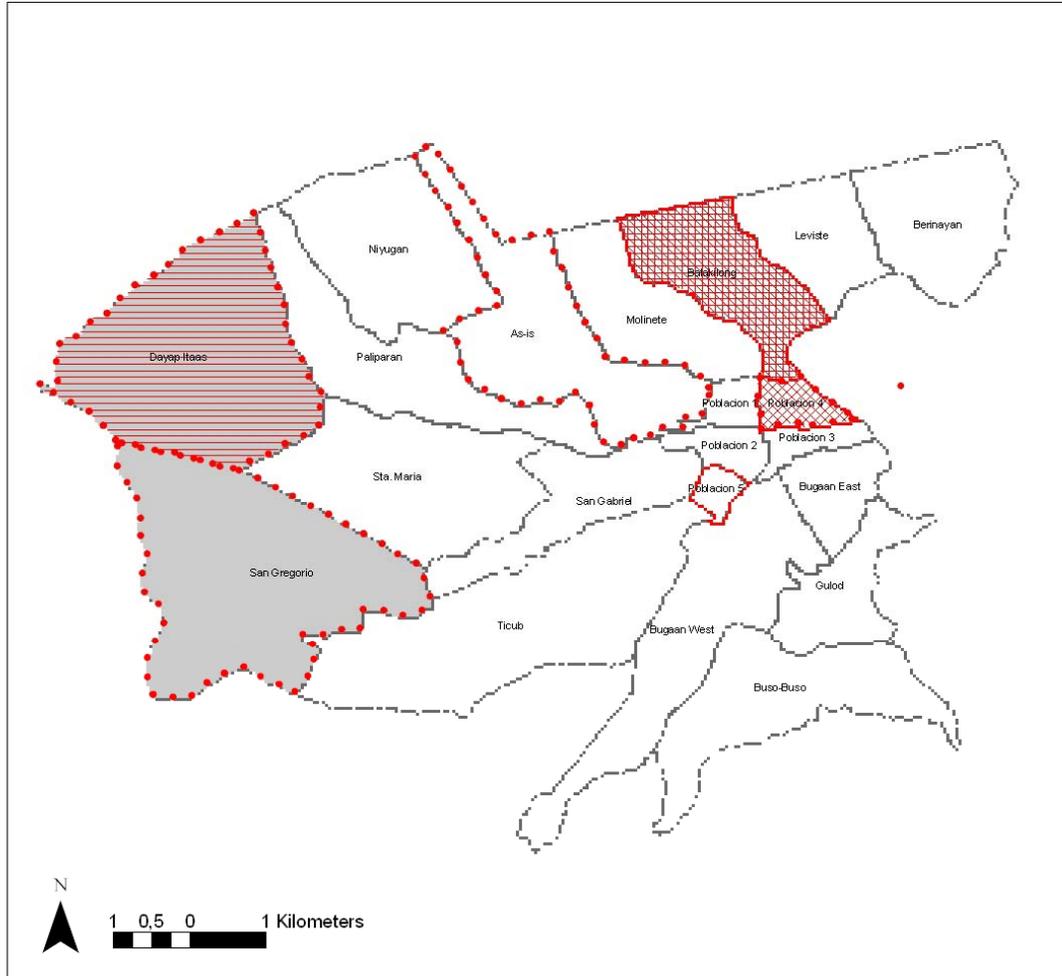
Step 5: Present the Data

The Needs Analysis layers can be put on top of a simplified Base Map. The examples below are just examples and do not reflect the actual situation in the LGU.

Given the number of overlays, the Need Assessment aspects should be shown on more than one map as per the table ND01-05.

The figure below shows how a printed version of the Socio Services by Barangay can look like based on the Layout View. The more combinations of fillings, raster, hatching, outlining, etc. are found on a specific barangay area the more 'problems' need to be solved:

TOOLBOX

CLUP NEEDS ANALYSIS

Leviste
Berinayan
Niyugan
Balakilong
As-is
Molinete
Paliparan
Dayap Itaas
Poblacion 1
Poblacion 4
Poblacion 2
Poblacion 3
Sta. Maria
Poblacion 5
Bugaan East
San Gabriel
San Gregorio
Gulod
Ticub
Bugaan West
Buso-Buso

N

1 0,5 0   1 Kilometers

SOCIO SERVICES BY BARANGAY

- Barangay with unacceptable proportion of households with income less than poverty threshold
- Barangay with poor access to open areas and recreational facilities
- Barangay with unacceptable high crime rate
- Barangay with unacceptable net enrolment ratio in primary education
- Barangay with a critical health situation
- Barangay with unacceptable proportion of informal settlers
- Barangay with no barangay hall/office
- Barangay boundary