PART II – PREPARING THE COMPREHENSIVE DEVELOPMENT PLAN

Chapter 3 – Analyzing the LGU Situation

Analyzing the LGU Situation Using the Local Development Indicator System

The LDIS, if properly constructed is most useful in the diagnosis of development issues. This process is known as problem – finding analysis. The **problem finding analysis** involves a 3 – step process:

1. *Information Generation* - This means making meaningful observations or making sense out of the data displayed in the LDI table. It asks the question, "*What do the figures mean*"? There are three useful clues to making observations:

    a. Compare data indicators in two points or periods of time and note whether there has been an increase, decrease or no change in the figures over time.

    b. Compare data/ indicators across two spatial or geographical units and note whether the figure for one unit is higher, lower, or the same as the other.

    c. Compare the data/indicator for your study area with any known national standard or with a selected benchmark.

2. *Extracting Intelligence* – This entails probing into the causes or explanations behind the observed conditions. It asks the question, "*Why*?" This provides the clue to finding more fundamental solutions by attacking the causes rather than the symptoms of the problems.

3. *Further exploration of the implications* of the observed condition if no significant intervention is exerted by anyone anywhere to change the situation. It asks the question, "*So what*?"

> ***Implications may be positive of negative.***
>
> - If **negative implications** predominate, then the observed condition can be regarded as a problem.
> - If **positive implications** predominate, then the observed condition may be regarded as a potential.

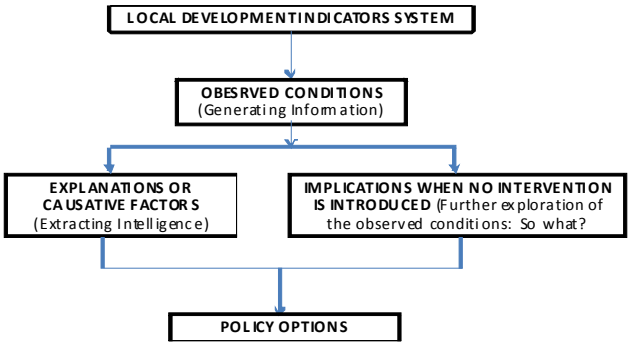
The logic of the problem-finding and solution-finding analysis using the LDIS as the basic source of information can be summarized in the scheme shown as Table 11 (Sample Output of Problem – Solution Finding Analysis).

The analysis can be extended further into determining appropriate policy interventions. This part of the analysis can be called simply the *solution-finding* phase. 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 beneficent effects.

Table 11 - SAMPLE OUTPUT OF PROBLEM-SOLUTION FINDING ANALYSIS

LAND AND WATER			
Observed Conditions	***Explanations (Causes)***	***Implications When Unresolved***	***Policy Options***
Land Classification • Area of alienable & disposable (A & D) land is very small	• Over 84% of total land area is forestland with some areas probably misclassified	• Small area devoted to agriculture & other crops • Small taxable areas (low income for the municipality) • Occupants of untitled lands are considered informal settlers & have no security of tenure • Investors hesitate to develop untitled lands	• Work for release of some forestlands into A & D • Accelerate cadastral survey & titling of A & D lands
Water is a common means of transport among Barangay residents	• Absence of roads and bridges connecting to far flung barangays	• Dangerous especially during sough seas • Slow and poor mobility • Canot be relied upon during emergencies • Limited capacity for large volumes of goods and products to be transported	• Embark on massive road and bridge building • Maintain a municipal-government operated ferry service that is multi-purpose • Construct a pier for safe, reliable docking

Figure 10 - Problem-Finding and Solution-Finding Analyses



The problem-finding and solution-finding analyses can be subjected to highly participatory processes such as seminar – workshops and focused group discussions.

Problem analysis is a useful tool in further analyzing the issues and problems that need to be addressed in the locality. It utilizes the information derived from the database and the local development indicators (LDI) that have been aptly organized for planning purposes. A list of issues and concerns are identified and from these, key issues can be generated that are to be addressed in the CDP. The output of the problem analysis provides the basis in determining relevant programs, projects, policies or legislations that will respond to the identified key issues and concerns.

Issues can be clustered according to sectors in the CDP namely social, economic, physical infrastructure, environment and development administration.

As partners of the national government the LGUs are expected to address poverty as a central concern and other cross-cutting concerns such as gender and environment. (See Box 4 - How to Undertake Problem Analysis)

The **Problem Tree** is a visual representation of how problems are linked and interrelated in a situation. It defines which appear to be causes and effects of an identified core problem and the other problems that appear to result therefrom. This, however, depends on the availability of data and information.

The series of "*problem trees*" summarizes the issues and concerns, problems and constraints identified in the sectoral and inter-sectoral workshops. The problems are organized into cause-effect relationships with the lower boxes representing the causes ("roots") and the boxes above are effects ("foliage"). All problems and issues are presented from the perspective of the local government (institutional sector) the easier for it to identify the appropriate intervention measures.

Box 4 - HOW TO UNDERTAKE PROBLEM ANALYSIS

STEP 1. Identify the problems

Using "metacards," list all the problems. One card per problem. Formulate each problem as a negative condition.

Example: Frequent flooding; Erosion of vast tracts of land

STEP 2. Establish the cause – effect relationship among the problems identified

From among the listed problems try and agree on which is the cause and which is the effect. Differentiate between an immediate cause and a remote cause.

Example: damaged crops is caused by deteriorating forest condition

STEP 3. Establish a convergence point (or points)

The convergence point for all the problems identified is referred to as the "core problem" and becomes the over-riding concern that will have to be addressed

STEP 4. Review the diagram as a whole.

Verify the cause and effect relationship and agree on the soundness and completeness of the problem tree.

Using LGPMS in Situational Analysis

In conducting a situational analysis, LGPMS offers techniques for identifying priority performance and service areas and determining "areas for action". The State of Local Governance Report (SLGR), as a consolidation of LGPMS findings on the performance of the LGU, for example, can serve as a useful reference for surfacing issues.

Using CBMS in Situational Analysis

The CBMS, backed up by disaggregated and geographically-defined data, on the other hand provides tools for diagnosing and analyzing poverty-related issues. This is most helpful in determining the gap between the vision and the actual situation (vision-reality gap). CBMS not only depicts the extent of poverty in an area, but it also establishes the causes of poverty.

Using Population Data in Analyzing the LGU Situation

1. Population is the basis for determining whether the level of public services like schools, health centers, recreational facilities, power and water supply, is adequate/inadequate or accessible/inaccessible.

2. Population projections – Estimates of the total size or of the components of the population which indicate the magnitude of demand for certain goods or services are necessary when preparing sectoral development plans and programs. (See Box 5)

   For example, present and projected population size serves as an important input to assessing housing adequacy and calculating future housing demand.

3. Age – Sex distribution is very important especially in the planning of specific social services and facilities, since they cater to specific segments of the population.

> **Box 5 – Examples of Goods and Services by Age Group**
>
> For example:
>
> - Dependent Age (0 – 14 and 65 and above) would require specialized health services and facilities
> - School Age Groups (3 – 6, pre-school; 7 – 12, elementary; 13 – 16, secondary) would require school facilities
> - Labor Force (15 – 64) will have to be provided with jobs

4. Sex Composition affects the incidence of births, deaths and marriages. It can be used as a basis for looking at its implications on the following:

   a. Spatial mobility; and
   b. Work participation and occupational structure

5. Age Composition

   a. "Young" and "Old" population – The population is said to be:

      i. Expansive – where large numbers of the population are in the younger ages;
      ii. Constructive – where a smaller number are in the younger ages; or
      iii. Stationary – where roughly equal numbers of people are found in all age groups with slight tapering off in the older ages.

   b. Age Dependency Ratio – This indicates the extent to which those who are too young or too old to earn a living depend for support on those who work.

      In the Philippines, those who are below 15 years old are considered too young, and those 65 years old and above too old, too work.

6. Population Growth is the effect of events that tend to add, or take away members from the population such as births, deaths and migration.

a. *Births and deaths* cancel each other out. When the general state of health is good and survival rates of infants and life expectancy at birth are high because of advanced medical care available and accessible to the people, the population is bound to achieve a net positive balance between births and deaths resulting in net population increase.

b. *Migration* is indicative of the relative attractiveness of an area as a place of employment, and corollarily, as a residential area. A positive change is the effect of in-migrants outnumbering out-migrants.

   For a better appreciation of the behavior of the population of the LGU, its growth trend must be shown and compared with those in other cities/municipalities in the province or the region.

7. Population density indicates the pattern of population distribution. It can serve as an indicator of urbanization. It is assumed that the urban population is concentrated in a relatively small area whereas the rural population is dispersed over a wide area.

   According to the definition set by the National Statistics Office, an area is considered urban when its population density is at least 1,000 persons per square kilometer, or when the poblacion or central district of a city or municipality has a population density of at least 500 persons per square kilometer.

Analyzing the Social Sector: Status of Well – being of the Population

The social development sector is concerned with changes in the area or community relative to the following:

1. Social characteristics of the area population;
2. Overall quality of life;
3. Availability and access to social services; and
4. Social justice

Overall quality of life

Quality of life, status of well-being, and general welfare are synonymous terms. But these concepts cannot be measured directly. In measuring the quality of life, the usual practice is to use a composite of indicators covering specific sectors or dimensions of welfare which more easily lend themselves to measurement. These are embodied in the Local Development Indicators System.

One way of assessing the welfare status of the population is through the following steps:

1. Take an inventory of the social support infrastructure, facilities and services.

2. Apply the allocation standards developed and used by the agencies that provide these services to determine whether the study area is adequately served or whether backlog exists.

3. Use output or outcome indicators, such as morbidity rates, malnutrition rates rather than input indicators such as number of hospitals, number of schools in the area. This is due to the fact that, the mere presence or absence of a service is not a reliable indicator of the state of well-being of the people in the area.

Morbidity rates, malnutrition rates, maternal mortality rates and the like are better indicators of health status rather than the number of hospital beds; literacy rates, educational attainment, participation rate, rather than the number of school houses, etc. are more meaningful measures of well – being.

The average household income is a good catch – all or proxy indicator of well – being because its shows whether or not a family can afford the goods and services that the members need.

Income / Poverty Line as a Measure of Well-being

One may also use individual and family income as a welfare indicator although normally it is treated as an economic indicator. It is because income determines the ability of the individual or the family to procure the goods and services he/she/they need that are available in the market. This is also the reason behind the use of the poverty line (a concept that has a very strong income connotation) as a benchmark for measuring the level of well-being.

Availability and Access to Social Services

The physical availability of social services does not automatically mean that the citizens are well served. Some social services are not for free and therefore access is determined by affordability. It is the concern of the social sector to guarantee access to social services by the target population either by providing adequate social services or by removing the different types of barriers to access to these facilities and services.

It is therefore important to determine whether or not social welfare services and facilities are physically available and are located not too far away from the target clientele. And if they physically exist, ascertain if they tend to discriminate wittingly or unwittingly against certain groups on account of their social status or affiliations.

It is a fact that the need for certain goods and services does not occur uniformly throughout the lifetime of individuals and certain groups of the population. At certain stages in their lives people require more of certain types of services than they do others. The graph as show in Figure 11 - Time Relationship between a Birth and Future Service Requirements) illustrates this fact and should aid in formulating appropriate sectoral policies and programs of intervention.

Social Justice

The principle of social justice requires that the distribution of income, wealth, and command over society's resources should be such that the:

1. needs of the population within the territory are adequately met;
2. inter-territorial multiplier effects are maximized; and
3. extra resources are allocated to overcome special difficulties stemming from the physical and social environment.

Similarly, the mechanisms for the allocation and distribution of society's resources (institutional, organizational, political and economic) must be such that the opportunities of the least advantaged groups and areas are as great as they possibly can. Find out if this is true in the LGU.

Preferential treatment for the “least advantaged groups and areas” is how the Constitution defines social justice. Article XIII calls for the “*enactment of measures that protect and enhance the right of all the people to human dignity, reduce social, economic, and political inequalities, and remove cultural inequities by equitably diffusing wealth and political power…*” (Sec. 1, Philippine Constitution).

Thus, it is crucial to find out if the preferred priority laws and policies that need to be enacted are those that:

1. recognize the right of labor to its just share in the fruits of production and of enterprises to reasonable returns on investment (Sec. 3, Philippine Constitution);

2. encourage the just distribution of agricultural lands and at the same time respect of the rights of small landowners (Sec. 4, Philippine Constitution);

3. protect the rights of subsistence fisherfolk, landless farmers, and indigenous people to preferential use of lands, waters and other natural resources (Secs. 5-7, Philippine Constitution);

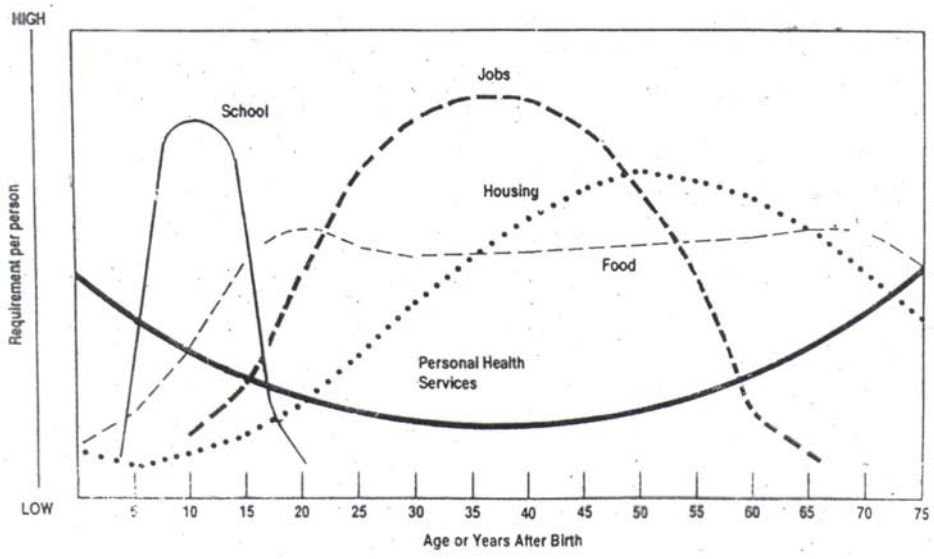
4. make available affordable decent housing and basic services to underprivileged and homeless citizens (Sec. 9, Philippine Constitution);

5. give priority to the health needs of the underprivileged sick, disabled, women, and children as well as free medical care to paupers (Sec. 11, Philippine Constitution);

6. protect working women (Sec. 14, Philippine Constitution); and

7. respect the right of the people to free and independent association and guarantee participation of people’s organizations at all levels of decision making (Sec. 15 and16, Philippine Constitution).

Figure 11- Time Relationship between a Birth and Future Service Requirements



Source: _____

Analyzing the Local Economy

There are three (3) General Welfare Goals that pertain to local economic development: to encourage and support the development of appropriate and self-reliant scientific and technological capabilities, enhance economic prosperity, and promote full employment among the local residents.

Development of self-reliant scientific and technological capabilities

The development of scientific know-how and technological capabilities among the residents is a necessary condition to attaining higher levels and faster rate of economic growth. But the LGU must first ask the following questions:

1. Are the constituents prepared in adopting new technologies?

2. Fr example, has the LGU switched to the use of computers? If so, is the supply of electric power reliable, or is the use of the old manual typewriter still more appropriate?

3. Does the LGU benefit from the optimum capacity of technology?
   Most imported technology incorporates in their design programmed obsolescence so that the user has to continually upgrade hardware and purchase new software. For the sake of self-reliance, does the LGU still use homegrown technologies and indigenous knowledge? If so, have they been discarded, or have they been developed and improved?

Enhancement of economic prosperity

Enhancement of economic prosperity is the principal concern of the economic sector. But the other half of this goal is the promotion of social justice. This is to ensure that the benefits of prosperity do not concentrate in the hands of the few privileged sectors of society.

Examine if:

1. the benefits of prosperity are not concentrated in the hands of the few privileged sectors of society;

2. there are programs, projects and legislative measures that seek to promote full employment as the principal redistributive mechanism;

3. there are mechanisms available for direct transfer payments such as unemployment insurance or substantial non-wage benefits like subsidized health, education, housing and other social services.

Promotion of full employment

Assess the desirability of the LGU as a good place to do business in. Is the climate in the LGU hospitable to private investments? If not, why?

Determine if there are measures to indirectly create jobs by making the locality an attractive place for private investments.

Are there incentives to private investors in the form of fiscal measures such as tax breaks and exemptions from certain fees and charges?

Local government intervention in the economy serves to facilitate market transactions by:

a. eliminating identified bottlenecks, and
b. strengthening the area's competitive advantage.

Food self-sufficiency or security

The economic sector is also concerned with making available in sufficient quantities the food requirements of the local residents. Taking off from the existing level of self-sufficiency in various food commodities as determined in the profile, the economic sector planners shall decide on what level of sufficiency will be targeted. This will in turn determine how much will be produced locally and how much will be procured from outside. The Food and Nutrition Research Institute (FNRI) provides the per capita requirement per year of the following food commodities:

Table 12 - ANNUAL FOOD REQUIREMENT PER CAPITA

COMMODITY	PER CAPITA / YEAR REQUIREMENT (In Metric Tons)
Grains (rice and corn)	0.11434
Sugar	0.021
Assorted vegetables and legumes	0.01265
Root crops	0.0073
Fish	0.03065
Meat & eggs	0.03313

Further, in order for the local government to effectively facilitate the market to accelerate local economic development, local officials and the public must have a basic understanding of how the local economy works. Local officials in particular must be familiar with relevant and applicable techniques of analysis that can help in identifying points of entry or areas of intervention. Some of these are as follows:

1. *Determining the relative size of each sector* – The relative size of each sector can be determined by using some of the measuring units as follows:

   a. Number of persons employed (or engaged)
   b. Volume or value of output
   c. Total amount of investment
   d. Number of establishments
   e. Gross value added

2. *Determination level of urbanization using employment as a measuring unit* – A place may be considered urban or rural by simply taking the ratio of the combined employment in secondary and tertiary sectors to total employment, expressed in percent using the formula below.

$$\textbf{Level of Urbanization} = \frac{E_{(Secondary)} + E_{(Tertiary)}}{E_{(Primary + Secondary + Tertiary)}} \times 100$$

a. A ratio below 50% indicates that the place is still predominantly rural;
b. A ratio above 50% shows that the place is considered urban.

By comparing two ratios between two census years, the direction of change is indicated, whether:

a. the area is growing more or less urbanized, or
b. it is in a steady state.

Decisions can then be taken whether to speed up, slow down or maintain the pace of urbanization depending on the development vision of the local leadership and the residents.

3. *Determining Structural shift in the local economy* – Structural shift in the local economy is shown by changes in the relative share of each sector to the total economy over time.

For example: The increasing share of secondary and/or tertiary sectors and a corresponding decrease in the share of the primary sector indicate a trend towards urbanization.

This concept is illustrated in the table below:

Table 13 - Illustrative Example of Structural Shift in the Local Economy

SECTOR	EMPLOYMENT SHARE				SHIFT % POINTS
	1980	*% Share*	*1990*	*% Share*	
Primary	40	53.3	33	41.25	-12.05
Secondary	16	21.3	22	27.5	+6.20
Tertiary	19	25.3	25	31.25	+5.95
All Sectors	75	99.9	80	100.00	

4. *Determining the Town's Specialization*

A simple measure of an area's specialization is the **location quotient (LQ**). The LQ is an indicator of the relative importance of an area in terms of selected industry types or sectors. Any measurement unit or variable can be used as the specialization variable and the reference variable.

The principal question that the LQ seeks to answer is: ***To what extent are certain activities or characteristics of the area economy associated with other selected activities or characteristics; and how does this association compare with those of the larger area as a whole?***

For the purpose of the LQ analysis, the comparison must be shown between a smaller area and a bigger area to which the smaller unit is a component pert, e.g. a town and its mother province of which it is a part. The formula for determining LQ is as follows:

$$\text{Location Quotient} = \frac{\dfrac{\text{Area specialization variable}}{\text{Area reference variable}}}{\dfrac{\text{Larger area specialization variable}}{\text{Larger area reference variable}}}$$

Note: The LQ is a ratio of ratios so the answer is an absolute number

For example:

a. Measuring unit is "employment"
b. Areas being compared are Town A and its mother province, Province B.
c. The LQ for a particular sector (or activity), say, agriculture is computed as follows:

$$\text{Location Quotient} = \frac{\dfrac{\text{No. of persons engaged in agriculture in Town A}}{\text{No. of persons engaged in all sectors in Town A}}}{\dfrac{\text{No. of persons engaged in agriculture in Province B}}{\text{No. of persons engaged in all sectors in province B}}}$$

The same computation may be repeated for each sector or activity and interpret the results as follows:

- **If the LQ is greater than 1.0, the town is more specialized than the province as a whole in that type of economic activity.**
- **If the LQ is less than 1.0, the town is less specialized in that activity or sector than the province as a whole.**
- **If the LQ is equal to 1.0, the activity is equally important in both the town and the province.**

Knowledge of the town's specialization is a vital input to decision – making. Depending on the LGU vision and objectives of local development, appropriate policies can be developed. For example, policies to accelerate economic growth can be formulated by reinforcing the town's specialization in certain activities or sectors.

5. *Identifying Linked Activities* – The data on specialization can also be used to identify other activities which might be promoted in the locality. This is to **diversify the economy** by promoting businesses that have various forms of linkages with the specialized activity.

Too much specialization makes an LGU very dependent on other areas. Concentrating on one product and one market makes an area highly vulnerable to external market failures and uncertainties.

The common types of economic linkages are as follows:

a. Backward – an activity or industry that provides input materials and services to, say, agriculture, e.g. farm implements, fertilizers, pesticides, certified seeds.

b. Forward – an activity that uses the output of a particular activity, say, sugar milling, e.g. candies, soft drinks, confectionery, is linked in a forward manner.

c. Vertical – where two or more firms produce components of a final output, e.g. parts of a car

d. Horizontal – where two or more firms produce complete products that are complementary in use, e.g. several furniture shops each specializing in one type of furniture like chairs, tables, cabinets, etc.

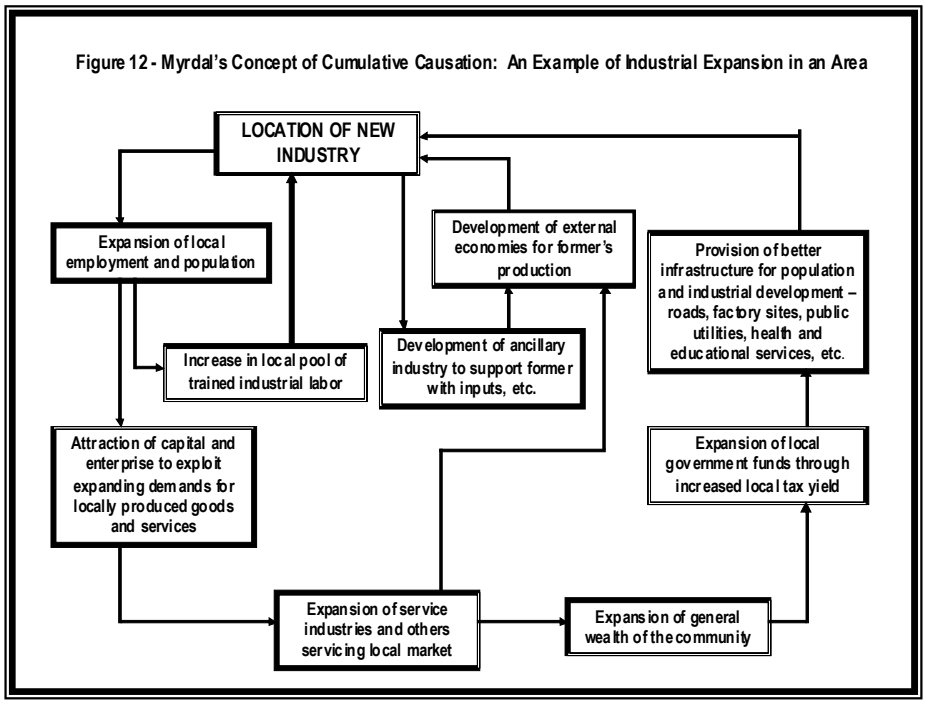
e. Diagonal – where a service cuts across different types of firms, e.g. security services, insurance, messengerial or forwarding services.

f. Residentiary – where services to the employees or managerial staff are provided by the firm or households, e.g. housing, recreation, food catering.

Backward and forward linkages are known as **production linkages**. The others may be referred to as **distribution** or as **trade and services linkages**.

Information gathered about production linkages may be used as basis for a more detailed investigation into the feasibility of attracting new firms that have either a backward or a forward linkage with the local industry to locate in the area.

The advantages of additional industries locating in the area over the short – term and in the long run are described in the model shown in Figure 12 based on the theory of cumulative causation or "spread effects" formulated by Gunnar Myrdal.



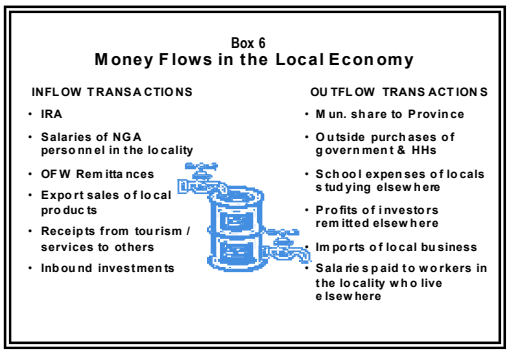
6. *Money Flow Theory* – Another way of understanding the local economy is to assume the following:

a. the geographical / territorial unit is a closed spatial system similar to a water tank that has an inlet pipe and an outlet pipe;

b. both inlet and outlet valves are open at the same time.

The amount of water that is stored in the tank at any time is the net of the inflow and outflow. There is **net storage** when the inflow is greater than the outflow; **no storage** is possible when the outflow is equal to or greater than the inflow.

Similarly, there are transactions that lead to either an inflow of money into or an outflow of money from the local economy.



Calculate the magnitude of each flow on a yearly basis and determine whether there is net storage of money in the local area. At least one of **two scenarios will emerge**:

Scenario 1: There is hardly any storage

Scenario 2: Storage is sizeable

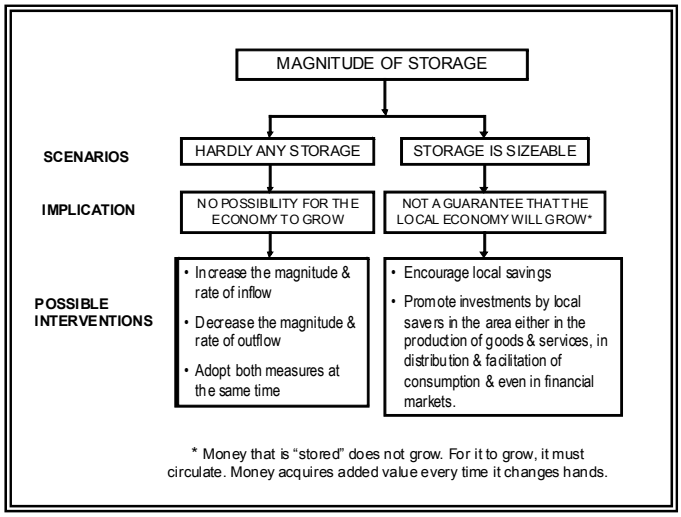
Under Scenario 1, the direct implication is that there is no possibility for the economy to grow. The intervention can be any one or a combination of the following policies:

a. Increase the rate and magnitude of inflow;

b. Decrease the magnitude and rate of outflow; or

c. Adopt both measures at the same time.

Box 7 – Scenarios When There is Net Storage



Under Scenario 2, a sizeable storage of money in the area is not a guarantee that the local economy will grow. Money that is simply "stored" does not grow. For it to grow, it must circulate. Money acquires added value every time it changes hands.

The process of area income multiplication is illustrated in the example shown in Table 14 from A. Bendavid-Val. It assumes an inflow of One Hundred Pesos (Php 100.00) and a forty percent (40%) rate of leakage or outflow. When circulated seven (7) times in the area economy, the original inflow is multiplied two and a half times.

Table 14 – ILLUSTRATION OF AREA INCOME GROWTH

ROUND OF SPENDING	AMOUNT SPENT	AMOUNT THAT LEAKS OUT (40%)	AREA INCOME GENERATED
Initial Inflow			Php 100.00
1ST	Php 100.00	Php 40.00	Php 60.00
2ND	Php 60.00	Php 24.00	Php 36.00
3RD	Php 36.00	Php 14.00	Php 22.00
4TH	Php 22.00	Php 9.00	Php 13.00
5TH	Php 13.00	Php 5.00	Php 8.00
6TH	Php 8.00	Php 3.00	Php 5.00
7TH	Php 5.00	Php 2.00	Php 3.00
TOTAL	**Php 250.00**	**Php 100.00**	**Php 250.00**

Public intervention is necessary in investment decisions of private owners of capital lest they concentrate in areas where the perceived return is greatest, i.e., where the "return period" is shortest… The role of the State to effect switches from one form of investment to another is critical. This can be done by means of fiscal policies and other facilitation measures.

Analyzing the Physical and Spatial Base: Infrastructure Sector

The land use/infrastructure sector is concerned primarily with providing adequate physical base for social and economic development.

Because almost all programs and projects that this sector will identify and propose will impact strongly on the use of land and other natural resources, this sector should:

1. be utilized as the organizing concept for locating infrastructure projects the desired urban form or the preferred spatial strategy; and

2. see to it that land and water use zoning shall take into consideration not only the social and economic functions of intended uses but also the potential hazards posed by the environment upon future uses.

In identifying local infrastructure needs, this sector should consider infrastructure support for, among other things:

1. The preferred spatial strategy or urban form. Ask the following questions:

   a. Are the roads and circulation networks properly designed?
   b. Are there land development or redevelopment schemes?
   c. Is infrastructure development consistent with the preferred urban form?

d. Is infrastructure development used to influence the location of future population and economic activities in the desired locations?

2. The projected levels of food self-sufficiency and production targets.

   a. *Are there p*roduction support infrastructures such as irrigation systems and farm to market roads, as well as post production support facilities like grain drying, cold storage, and public market facilities to help attain economic objectives?

3. Eliminating current backlogs in the provision of social services. Assess existing school, health, welfare, police and fire protection, recreation, and housing stocks against present demand to determine the shortfall in the provision of these services. Perhaps the filling of these service gaps may be given higher priority than the establishment of new facilities.

4. Upgrading the quality of services and facilities to desired standards. Another dimension of shortfalls is the standard of quality of existing services and facilities. Determine if existing roads are not only adequate in terms of total length in relation to the total land area but also if the road surfacing is such that certain sections are rendered impassable during the rainy season. In they are not, there is a serious deficit indeed. Bringing up the quality of existing facilities to desired, if not prescribed, standards is also a matter of priority concern.

5. Reducing vulnerability of the local population to environmental risks and disasters. Some environmental disasters are unpredictable but the severity of their impact depends on the vulnerability of the affected population. Are there ways to reduce vulnerability of the population to environmental risks, e.g. structural measures? Are human settlements located in areas that are out of harm's way?

6. Maintaining the integrity of the environment.

   a. Are civil works properly designed and located to minimize the adverse impact and degradation and to help preserve the integrity of the environment? For example, are there water impoundments, river bank stabilization and similar structures to help modulate the fury of nature and protect it from itself?

   Section 17 of the Local Government Code provides a comprehensive list of infrastructure facilities that should be provided by barangays, municipal, city and provincial LGUs. The infrastructure sector shall use this as a template to ascertain the completeness of coverage of the sector and the appropriateness of the programs and projects that they will propose.

Using Map Overlay Analysis in Analyzing the Physical and Spatial Base

Map overlay or sieve analysis is the process of putting two or more thematic maps on top of each other. Use this to:

1. determine areas of convergence of certain features of land contributing to the suitability of the area to a particular purpose, and
2. eliminate or screen out areas that are not suitable for that purpose.

   Problem areas or "decision zones" can surface and they should be brought up for resolution by the proper authorities either within the framework of the CLUP or outside of it. This type of analysis can also determine the direction of growth of the built up areas of the locality.

Measuring Area Coverage

The supply of land in terms of quantity and quality needs to be assessed because this will indicate to what extent land and other natural resources are an opportunity or a constraint to future development.

To **measure land area**, the dot grid or planimeter may be used, whichever is available. The use of computers will be an advantage. If there are inconsistencies in land areas, especially pertaining to territorial boundaries of the municipality and the barangays, these should be noted by the political authorities of disputant LGUs, with the aid of cadastral surveys or through inter – agency consultations. Only political authorities and the courts have the power to settle boundary disputes.

Analysis of the Existing Infrastructure Support

1. Assess and evaluate existing systems in relation to the intended population to be served to providing indicators to decision – makers about what alternative actions to be taken with respect to a facility or service such as whether or not to:

    a. Freeze the expansion of existing facilities
    b. Extend or expand the existing service
    c. Put up new needed facilities

Box 7
CRITERIA FOR ASSESSING EXISTING INFRASTRUCTURES

1. **Appropriateness** – This can be determined by matching the type of infrastructure available with the level of settlement in which it is located and with the service area and population the facility is intended to serve.

2. **Adequacy** – This has to do with the capacity and quality of the infrastructure in relation to demand for its use.

3. **Level of utility** – This refers to the extent to which the facility is put to use.

4. **Accessibility –** This may be understood in either of these:

    a. *Physical terms* – This refers to either distance or travel time, including travel cost from the user's point of origin
    b. *Design and quality of construction of the facility* – Flashy and stylish designs and sophisticated equipment are normally associated with high income and high social class clientele and may screen off the low income groups from availing of such services and amenities.

2. Assess the effects and side effects (pre- and post – evaluation of impacts) of infrastructure development. Examples of impact assessment include:

    a. Impact on human values and social satisfaction
    b. Impact on employment
    c. Impact on environmental integrity
    d. Impact on public financial resources
    e. Impact on private sector investments

E. Analyzing the Environment Sector

1. *Conduct an Environmental Assessment*

   Environmental assessment follows the Pressure – State – Response (P-S-R) logic of presentation.

   Pressure pertains to the different demands by human society on a given ecosystem for their survival and well – being.

   State refers to the existing conditions of the ecosystem as a result of the application of human pressures as well as threats, human and natural, to the very survival of the ecosystem itself.

   Response includes existing mitigation, rehabilitation, protection and conservation measures that human society has so far devised to ensure the sustainable use and serviceability of the ecosystem.

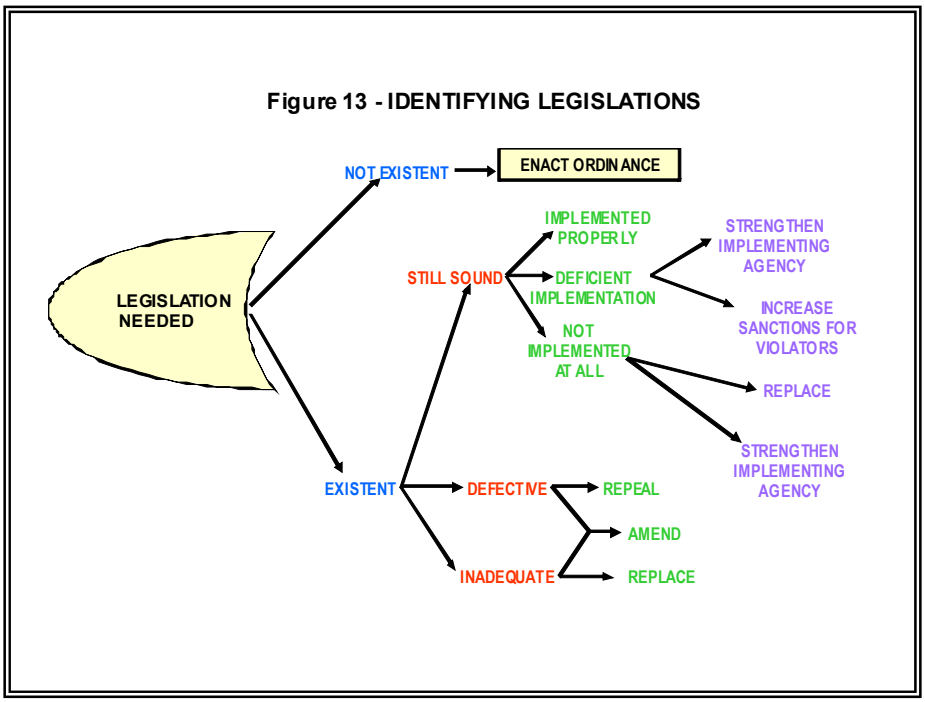
   Shown in Table 15 are the different ecosystems adopted under the Philippine Agenda for Sustainable Development in the 21st Century (PA 21).

   When undertaking environmental assessment, the ecosystem approach, rather than sectoral, is preferable.

The bulk of functions regarding the environment and natural resources devolved to LGUs have to do with implementation and enforcement of national policies and laws. The main concern of the environment sector therefore is to ensure that the proper measures to safeguard and conserve land, minerals, marine, forest and other resources are enacted by the Sanggunian and enforced by the LCE. For every issue identified in each ecosystem as surfaced in the environmental assessment in connection with the preparation of the Ecological Profile or the Local Development Indicators, there should be an assessment of existing policies or legislations that had been developed to address the issue. The fishbone analysis may be used for this purpose. (Figure 13)

Determine if the LGU:

1. Has existing measures that declare, prevent or abate any nuisance.
2. Requires that buildings and the premises thereof and any land within the LGU territory be kept and maintained in sanitary condition.
3. Regulates the disposal of clinical and other wastes from hospitals, clinics and other similar establishments.
4. Provides for the establishment, maintenance, protection and conservation of communal forests and watersheds, tree parks, greenbelts, mangroves and other forest development projects.
5. Regulates the consumption, use and wastage of water.
6. Regulates the construction, repair, and maintenance of public drains, sewers, cesspools, tunnels and similar structures; construction and use of private water closets, privies, and other similar structures in buildings and homes.



7. Provides for an efficient and effective system of solid waste and garbage collection and disposal, and prohibit littering and the placing or throwing of garbage, refuse and other filth and wastes. (Refer to Sections 447, 458 and 468, RA 7160.)

One more concern of the environment sector is to ensure adequate representation of the LGU in the review of environmental impact assessments of proposed projects to be sited in the locality. What are the mechanisms to ensure that this is done?

Another question to ask is if the environmental sector committee able to field the proper experts to sit on behalf of the LGU in the tripartite monitoring teams organized to enforce the conditionalities of the environmental compliance certificates (ECC) issued to environmentally critical projects located in the LGU territory.

Analyzing the Institutional Sector

The Institutional Sector, like the calyx to the flower, coordinates, integrates and supports the other sectors through various mechanisms and arrangements. The principal concern of the sector is to see that the local government officialdom and bureaucracy are properly tooled up and primed up to manage local growth and change.

The **analysis focuses on the planning function as an important aspect of governance**. The result of this assessment should provide a basis for the formulation of the Institutional Development component of the Comprehensive Development Plan. This assessment will center on the following:

a. Structure and functions of the Local Development Council (LDC);

b. Technical capability of the Local Planning and Development Office (LPDO) to carry out its mandated functions and responsibilities;

Table 15 - Ecosystems and Subsystems

FOREST ECOSYSTEM	LOWLAND/ AGRICULTURAL ECOSYSTEM	URBAN ECOSYSTEM	FRESHWATER ECOSYSTEM	COASTAL ECOSYSTEM	MINERALS / MINING	BIODIVERSITY
1. Protected Forest a. Primary growth, closed canopy, virgin b. Second growth with <50% slope or >1,000 elevation	1. Croplands a. Cereals (food and feed crops) b. Other food crops c. Industrial or cash crops	1. Built – up Areas a. Residential b. Commercial c. Industrial d. Institutional e. Utilities and infrastructures	1. Surface waters a. Rivers b. Lakes c. Reservoirs d. Other impoundments	1. Mangroves 2. Marshes, swamps and wetlands 3. Sand dunes 4. Seagrass beds 5. Small islands, atolls 6. Coral reefs	1. Metallic minerals a. Base metals b. Precious metals 2. Non – metallic minerals a. Sand and gravel b. Rock quarry c. Marble quarry d. Coal mining e. Guano	1. Wild flora 2. Wild fauna a. Endimicity b. Rarity c. Threatened d. Endangered
2. Production forest c. Residual dipterocarp d. Rangelands or grazing lands e. Integrated forest management areas f. Community – based forest management areas g. Multiple use zones and buffer zones in NIPAS areas	2. Livestock a. Beef, cattle and dairy b. Poultry and piggery 3. Fisheries a. Fishponds b. Fishpens c. Catch fisheries	2. Urban Wastes a. Solid b. Liquid c. Hazardous 3. Air Pollution a. Mobile sources b. Stationary sources	2. Groundwater			

c. Fiscal management capability of the LGU;

d. Development orientation of the Sanggunian as evidenced by their legislative output;

e. Extent of representation and participation in local governance of non – government sectors; and

f. Vertical and horizontal linkages of the LGU with other government agencies.

Guide Questions for Characterizing the Institutional Sector

1. On the Organizational Structure and Functions of the LDC

a. Is the organization of the LDC in accordance with the provisions of Sections 106 – 108 of the Local Government Code (LGC)?

b. Are the functions of the LDC being exercised by the Council as mandated in Section 109 of the LGC?

c. Is there an Executive Committee created according to Section 111?

d. Are there Sectoral or Functional Committees as called for in Section 112?

e. Are all these bodies functioning properly?

f. Are there any deviations from the mandated structure and functions?

2. On the Functions of the LPDO

a. Are the functions and responsibilities of the office clearly defined and delineated so that overlaps with other offices are avoided or minimized?

b. Are there other functions performed by the LPDO which are outside of its mandate?

c. Whether mandated or not, are these functions consistent with the traditional functions expected of a local planning office, vis-à-vis long – and short – term planning, land use control and regulation, research and planning data base management, project impact monitoring and public information?

3. *On the Organizational Structure and Staffing of the LPDO*

a. What is the position of the LPDO within the organizational framework of the LGU? Does it reflect the value and importance of planning among local government functions? Draw an organizational chart of the LGU.

b. How accessible is the LPDO to the political authorities and the communities?

c. How large is the LPDO personnel complement according to the plantilla? Does the size permit an internal structure with differentiated functions?

d. If there is already an organizational structure, what is the basis of dividing the office into sub – units? Does the structure adequately cover the functions of the office? Draw an organizational chart of the LPDO.

e. Are the plantilla positions filled with personnel with the appropriate qualifications? If not, why? What critical vacancies exist?

4. *On the LPDO's Relationships*

   a. Does the LPDO enjoy the confidence of the mayor or administrator? If not, what are the possible reasons?

   b. Is the LPDO able to provide technical support to the LCE in certain aspects of decision – making?

   c. How effectively is the LPDO providing technical and secretariat support to the LDC?

   d. In what ways does the LPDO provide support to the local legislative council?

   e. How does the LPDO interact with the heads of line departments of the LGU?

   f. Describe the LGU's relationship with non-government organizations, the private sector, and other people's organizations.

5. *On the Fiscal Management Capability of the LGU*

   a. What is the fiscal balance of the LGU for the last three years? Is the LGU operating on a balanced budget or on deficit spending?

   b. What is the level of self- reliance of the LGU? Does it show an upward or downward trend for the last three years?

   c. What are the top sources of local revenues? Are these sources being tapped optimally?

   d. What is the pattern of local expenditures? Does the LGU keep within the limits prescribed by law?

   e. What is the record of the LGU in terms of debt servicing? Does it incur arrearages?

   f. What part of the budget goes into development investment?

   g. Is there a private investment incentive ordinance in the LGU?

6. *On the Development Orientation of the Sanggunian*

   a. What is the total output of the Sanggunian since the start of its term? Of this body of legislative output how many are ordinances and how many are resolutions?

   b. Of these resolutions and ordinances, how many are (or what is the proportion of) intended to maximize utilization of local resources? How many are purely for "socializing" purposes? How many deal with regulating certain activities and land use? A tabular presentation will be helpful.

   c. Does the Sanggunian consult the plan or the planning bodies when crafting legislation? Do the Sanggunian members make an effort to join sectoral and functional committees of the LDC?

   d. Are the Sanggunian sessions open to the public? Are the views of ordinary citizens sought actively as inputs to the legislative process? How?

7. *On Non-Government Sector Participation*

   a. Is the mandatory representation of non-government sectors in the LDC properly complied with?

   b. Is there an effective accreditation process of NGOs/POs represented in local special bodies?

   c. Are there opportunities for participation in local governance of non – government sectors whether accredited or not, whether organized or not?

   d. Is there a working definition of the private sector, NGOs and Pos? Is the definition accepted by all? Are the distinctions important?

8. *On Inter-Government Relations*

   a. Are national agencies operating locally coordinating with the LGU in the implementation of their programs and projects? Do they comply with the Codal provision on mandatory consultation?

   b. Are the barangays effectively involved in all aspects of local governance?

   c. Is there effective coordination by the LPDO of all sectors, LGU departments, and national agencies in planning, programming, budgeting, implementation, and monitoring and evaluation?

What other tools can be used to characterize and analyze the Institutional Sector?

1. *The Community-Based Monitoring System (CBMS)*

   a. *Disaggregated data on poverty at individual and household levels* – The CBMS as a system has the ability to generate information on poverty at smallest geopolitical unit. It can provide socio-economic information at the individual and household levels that are disaggregated by barangay, municipality and province. This can be useful in the comparative analysis of data between one planning unit vis-à-vis another, i.e., municipality with higher and/or lower level LGU, allowing an appreciation of the differences between these areas with respect to certain indicators or attributes.

   b. *Input to social clustering of population – The* CBMS is useful in describing the poverty situation at the individual and household level. The indicators related to income for example can contribute to the clustering of the population based on household income. The implication of such clustering may be viewed as a potential cause of extreme polarization of the local space and society if left unaddressed.

   c. *Status of well-being of the population*. The CBMS adopts either output or outcome indicators such as child morbidity rates, malnutrition rates, educational attainment and participation rate. These indicators can provide a direct, more accurate and meaningful measure of well-being. In addition, the household income has been added as a good catch-all indicator of well-being because it shows whether or not a family can afford the goods and services that the members need for sustaining a good quality of life. The information generated and analysis derived using CBMS does not only regard the community population as a whole, but more importantly it can mirror the status of well being of its members. CBMS-generated data can guide the LGUs in their decisions to address poverty by developing specific interventions for identifiable target beneficiaries in particular locations.

2. *The Local Governance Performance Management System (LGPMS)* – It enables provincial, city and municipal governments to determine their capabilities and limitations in the delivery of essential public services. (LGPMS User's Guide, p.1) The output of LGPMS is called the State of Local Governance Report or SLGR. The SLGR, which is prepared annually, is a narrative account of all the findings of the study based on the input and output indicators identified in the five service areas considered, namely: Social Services, Economic Services, Environmental Protection Services, Legislative Services and Governance & Administrative Services.

The LGPMS has the ability to add qualitative dimension to statistical quantities generated in the system.

By using the Display Data Utility of the LGPMS Reports Generation Module, the actual status of an LGU, as well as the level of its performance pertaining to that indicator against national standards given a particular indicator, is determined. The LGU may therefore use relevant LGPMS data to add qualitative dimension to the statistical data in the ecological profile. As a direct input to the LDI System, LGPMS-generated information also allows the process of making further observations and exploring the implications of these observations.

For example, under the Health and Nutrition service area of the Social Services performance area one of the outcome indicators is the percentage of malnourished children. This is defined as the "percentage of moderately or severely underweight children aged 0-5", represented by the formula:

$$\left[\frac{Number\_of\_malnourished\_children\_aged\_0-5}{Total\_number\_of\_children\_aged\_0-5}\right]x100$$

Also, by using the Display Data utility of the LGPMS Reports generation module, the raw data (number of malnourished children and total number of children aged 0-5) and the result (actual percentage of malnourished children) can be seen. In addition, though, LGPMS assigns the LGU a performance level value based on the computed percentage vis-à-vis certain defined standards, to wit: 5 (very high) – 0-1%; 4 (high) – 2-4%; 3 (medium) – 5-10%; 2 (low) – 11-15%; and 1 (very low) – 16-100%[1].

Thus, the LGU is able to see not only the raw data and result for a given indicator, but is able to gauge its level of performance pertaining to that indicator as against national standards. For instance, while a five percent malnutrition rate may seem acceptably good for some LGU planners and policy-makers, the LGPMS performance level value associated with that figure (3 or medium) would indicate that the said figure is still not that high by national standards.

The LGU may also use an indicator's performance level value to compare itself with other LGUs (vis-à-vis the provincial or regional average, for instance) to see its own relative standing

The advantage of deriving issues from LGPMS results is that the issues surfaced are based on largely verifiable data that relate to the general welfare mandate of LGUs, rather than being mainly based on perceptions that may be subjective and highly "political".

[1] The LGPMS rating schemes for the different indicators can be found in the LGPMS technical notes.

3. *The* ***System for competency Assessment for Local Government (SCALOG***) – It is a self-assessment tool to promote continuous improvements in local government units through the identification of organizational strengths and areas for development that can be addressed through capacity building efforts.(Manual of Administration of SCALOG, p.3) .

   The SCALOG Tool measures the organizational competencies of an LGU using a 5-point rating scale of the various performance indicators of the fourteen (14) service areas spread over the five (5) LGPMS performance areas. (LGPMS Users Manual)