

Local Development Planning Utilizing CBMS Data: A Sta. Elena Experience

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Abstract

This paper emphasizes the importance of CBMS data in local development planning. There was a data gap for 9 out of 19 barangays in the municipality of Sta. Elena in the province of Camarines Norte, Philippines due to past boundary disputes. In response to this, the municipality implemented CBMS in 2003 to obtain necessary local level socio economic data. Currently, municipality uses the results of the CBMS survey to analyze poverty situation of its 19 barangays, assess the needs of the locality, and help decisionmakers in allocating development funds rationally resulting to improved governance.

Profile of Sta. Elena, Camarines Norte

At the southern portion of the Luzon island in the Philippines lies the municipality of Sta. Elena. Part of the province of Camarines Norte in the Bicol Region, it is situated in the northernmost part of the Bicol Peninsula and bounded in the north by the Municipality of Capalonga, south by the municipality of Calauag, Quezon, east by the municipality of Labo, Camarines Norte and west by the Basiad Bay of the Pacific Ocean. The town proper (Poblacion) is 263 kilometers south of Metro Manila.

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The municipality consists of 19 barangays (sub political division) and has a land area of 19,935 hectares, which is the seventh largest in the province occupying about 6.1 percent of the provincial area of 211,250 hectares.

It is a 4th class municipality and was created as the eleventh of the twelve municipalities in the province of Camarines Norte. Its 19 barangays are Basiad, Bulala, Don Tomas, Guitol, Kagtalaba, Kabuluan, Maulawin, Patag Ibaba, Patag Ilaya, Plaridel, Pulong-guitguit, Rizal, Salvacion, San Lorenzo, San Pedro, San Vicente, Sta. Elena (Poblacion), Tabugon and Villa San Isidro.

Copra and other coconut products are among the municipality's major products with 2,966 hectares planted to coconut. Rice production, meanwhile, accounts for 2,572.54 metric tons. This came from 597 hectares of physical rice areas with 359 hectares irrigated and 238 hectares rainfed.

Vegetable production is minimal with only 0.357 hectares planted to it. For fruits/fruit tree produce, meanwhile, the municipality plants the citrus specie particularly the income variety. More than a hundred hectares are planted with citrus and mainly marketed in Metro-Manila for juice extract. Other fruit produce in the municipality are banana, papaya, mango (Indian, carabao), watermelon, singkamas, guava, pineapple, jackfruit, avocado, star apple, atis, and guyabano.

Livestock and poultry production is mainly of the backyard-raising types. Fish and other marine resources, on the other hand, are considered a future potential growth area of the municipality since Sta. Elena has eight coastal barangays located at the Lamon Bay along the Pacific ocean area which is considered as one of the major fishing grounds in the country.

Sta. Elena has the sixth highest number of coastal barangays. In terms of production, the municipality ranks second in the province with a total production posted at about 3,684.96 metric tons. This is quite surprising considering that the municipality has no developed fish port facilities unlike the town of Mercedes and other municipalities in the province.

Sta. Elena also has the largest potential fishpond area in the province at 789.34 hectares, 568.82 hectares of which are developed productive and unproductive fishponds and 220.52 hectares of which are undeveloped.

In terms of seaweed culture, the province has identified suitable sites at an estimated area of 150.34 hectares, the second largest in the province. Shellfish, such as oyster and mussel, is another potential sea farming produce in the coastal barangays of Sta. Elena.

CBMS background in Sta. Elena

CBMS opportunity

As part of the Philippine government's development blueprint program dubbed the Philippine Agenda 21, in particular, the Social Reform Agenda (SRA) whose goal is to improve the poverty incidence situation in the country using a Minimum Basic Needs (MBN) assessment, there was largely a need to have data gathered on all aspects of the municipality. The more comprehensive the data are, the better in order to be able to come up with a development plan for the municipality. The data, however, have to be reliable, regular and timely.

In Sta. Elena, there was a data gap in 9 out the 19 barangays due to past boundary disputes. The requirements dictated by the SRA only heightened the data gap wherein data from the said barangays were hardly made available due to the prevailing adjustment period of the new barangays and some political reasons. It was thus a welcome opportunity when the chance for work with Micro Impacts of Macroeconomic Adjustment Policies (MIMAP)-Philippines Project Management Team on community-based monitoring system (CBMS) in March 2003 came up. It was a good timing because at that time, the municipal government of Sta. Elena wanted to establish a database, in particular a social sector database, suited to municipality's needs and comprehensive enough to be expandable to other sectors. The presence of geographic information system (GIS) component which is more readily appreciated by local decisionmakers is also welcomed.

The municipality had financial constraints then and the CBMS program with its GIS-based database was provided for free then.

Once the municipal government made the decision to implement the CBMS, training workshop on data collection was conducted in May 2003 and data collection was completed by the end of August of the same year using more than 50 enumerators.

An investment was also made in the procurement of a computer from savings from capital outlays to enable the municipal government to process the database and the mapping component.

The data encoding for the CBMS database contained 7,521 household data. Two encoders and two computers were utilized for this purpose which were also shared with other office work.

The enumerators were also tasked in the preparation of their barangay spot maps. For this, they had to rely on their common knowledge of the barangay with respect to the location of households, infrastructure facilities such as roads and buildings, and more particularly, the knowledge of where the subdivision of the barangay into smaller puroks is. The enumerators had difficulty on this task largely because of lack of adequate skills in mapping. They, thus, had to seek assistance from other knowledgeable persons in the barangay in the preparation of the spot map.

Local government units (LGUs) make decisions that involve land or geographically related issues ranging from land development to environmental health, peace and order or basic service delivery. Because of this, LGUs find the geographic information system (GIS) beneficial for planning since it combines geographic data (the locations of man-made and natural features on earth like houses, streets, and rivers) and information (names, addresses, classification, and coordinates) to generate maps for visualization and analysis. As a result of continuous development in information technology too, the GIS is able to visualize maps, through the use of digitized maps with references utilizing global coordinates. Data are more emphasized in digitized map presentation and thereupon are more readily appreciated and better understood by both decisionmakers and laymen.

At Sta. Elena, spot maps were digitized, albeit with some difficulty, using the Natural Resource Database (NRDB), a software with mapping capabilities, of the CBMS Program and a certain degree of resourcefulness.

CBMS survey results

The following highlights the results of the CBMS survey in Sta. Elena, Camarines Norte.

Demography

Sta. Elena has a total household population of 7,521 households. With the population count reaching 38,091 persons, the average household size is 5 persons per household.

Barangay Poblacion has the highest population count among the barangays with 7,690 persons and 1,559 households. Barangay Villa San Isidro, on the other hand, has the lowest population count with 329 persons and 61 households.

Health and nutrition

Child deaths

Results of the CBMS survey in 2003 reveal that out of 7,389 children aged 0-6 years old, 59 died in the municipality in the past year (Table 1). Thirty-eight were males and 21 were females. The highest rate recorded was in Barangay Santa Elena (Poblacion) where 32 children died. The deaths were mostly due to neonatal deaths among infants and measles among children.

Meanwhile, there were nine and seven children in Barangays Maulawin and San Lorenzo, respectively, who died in the past year. Infant deaths were mostly due to still birth while child deaths were caused by water-borne diseases such as typhoid and dehydration from intestinal disorders.

Malnutrition

Data for the municipality show a 4.6 prevalence of malnutrition among

**Table 1. Number and proportion of child deaths (0-6 years old)
Municipality of Sta. Elena, Camarines Norte, 2003**

Barangay	Total number of Children 0-6 years old	Child Deaths	
		Magnitude	Proportion
Basiad	532	4	0.8
Bulala	363	1	0.3
Don Tomas	405	0	0.0
Guitol	128	0	0.0
Kabuluan	298	0	0.0
Kagtalaba	265	0	0.0
Maulawin	480	9	1.9
Patag Ibaba	116	0	0.0
Patag Ilaya	107	0	0.0
Plaridel	266	1	0.4
Pulongguitguit	336	1	0.3
Rizal	389	1	0.3
Salvacion	131	1	0.8
San Lorenzo	1250	7	0.6
San Pedro	285	0	0.0
San Vicente	204	0	0.0
Sta. Elena (Poblacion)	1484	32	2.2
Tabugon	290	2	0.7
Villa San Isidro	60	0	0.0
STA. ELENA	7,389	59	0.8

Source: CBMS Survey, 2003

children ages 0-5 years old (Table 2). The highest number of malnourished children was 38 in both barangays of Bulala and Maulawin. Barangay San Lorenzo ranked third with 31 malnourished children and Barangay Kabuluan, fourth, with 29. Of the 285 cases of malnutrition, 262 are moderately malnourished, with 118 males and 144 females. Severely malnourished number of children was recorded at 23 cases with 10 males and 13 females. Most cases are from impoverished households.

In response to this, a feeding program was launched in 2004 through the *Kapit Bisit Program*, and another program for 6- to 36-month old children in 2005.

Table 2. Number and proportion of malnourished children (0-5 years old), Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Children 0-5 years old	Malnourished Children	
		Magnitude	Proportion
Basiad	439	7	1.6
Bulala	318	38	11.9
Don Tomas	338	0	0.0
Guitol	107	14	13.1
Kabuluan	242	29	12.0
Kagtalaba	222	14	6.3
Maulawin	404	38	9.4
Patag Ibaba	100	0	0.0
Patag Ilaya	90	10	11.1
Plaridel	220	25	11.4
Pulongguitguit	283	22	7.8
Rizal	321	27	8.4
Salvacion	115	11	9.6
San Lorenzo	1,082	31	2.9
San Pedro	247	0	0.0
San Vicente	171	2	1.2
Sta. Elena (Poblacion)	1,245	9	0.7
Tabugon	251	7	2.8
Villa San Isidro	48	1	2.1
STA. ELENA	6,243	285	4.6

Source: CBMS Survey, 2003

Education

Elementary school participation

There are 15 publicly run elementary schools in the municipality plus one privately run facility. Four barangays do not have an elementary school.

The data in Table 3 show a 78.8 elementary school participation rate among children aged 6-11 years old. Barangay Patag Ibaba recorded the highest participation rate at 91.3 percent while Barangay Villa San Isidro registered the lowest at only 69.5 percent in view of the lack of school facility in the barangay.

Table 3. Elementary school participation, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Children 6-11 years old	Elementary School Participation Rate	
		Magnitude	Proportion
Basiad	488	408	83.6
Bulala	304	242	79.6
Don Tomas	347	271	78.1
Guitol	95	70	73.7
Kabuluan	275	222	80.7
Kagtalaba	224	163	72.8
Maulawin	427	312	73.1
Patag Ibaba	92	84	91.3
Patag Ilaya	94	74	78.7
Plaridel	244	205	84.0
Pulongguit	332	249	75.0
Rizal	413	334	80.9
Salvacion	124	100	80.6
San Lorenzo	1,068	826	77.3
San Pedro	248	199	80.2
San Vicente	175	145	82.9
Sta. Elena (Poblacion)	1,372	1,060	77.3
Tabugon	292	250	85.6
Villa San Isidro	59	41	69.5
STA. ELENA	6,673	5,255	78.8

Source: CBMS Survey, 2003

Secondary school participation rate

Of the seven secondary schools in the municipality, four are public high schools and two are private high schools. There are also proposals for the opening of two more secondary schools.

Table 4 shows that the municipality recorded a 45.2 secondary school participation rate. This means that for every 100 children aged 12-15 years old, there are only 45 who are attending secondary school.

At the barangay level, Barangay San Vicente had the highest rate at 57.3 percent while Barangay Villa San Isidro got the lowest rate at 19.5 percent.

Barangays with low participation rates mostly do not have secondary school facilities in their locality.

Water and Sanitation

Access to safe water supply

Data from the CBMS survey show a low proportion of households without access to safe water supply. Safe water supply is defined here as water coming from community water system, deep well and artesian wells. The most common sources of safe water in the rural barangay are the water systems maintained by the barangay or the

Table 4. Secondary school participation, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Children 12-15 years old	Secondary School Participation Rate	
		Magnitude	Proportion
Basiad	280	135	48.2
Bulala	218	82	37.6
Don Tomas	214	96	44.9
Guitol	70	36	51.4
Kabuluan	194	100	51.5
Kagtalaba	120	37	30.8
Maulawin	251	98	39.0
Patag Ibaba	56	26	46.4
Patag Ilaya	55	21	38.2
Plaridel	143	79	55.2
Pulongguitguit	166	48	28.9
Rizal	226	121	53.5
Salvacion	69	19	27.5
San Lorenzo	661	253	38.3
San Pedro	167	73	43.7
San Vicente	110	63	57.3
Sta. Elena (Poblacion)	790	418	52.9
Tabugon	192	105	54.7
Villa San Isidro	41	8	19.5
STA. ELENA	4,023	1,818	45.2

Source: CBMS Survey, 2003

municipal government as well as deep wells that are treated and monitored by the health office.

Out of the total number of households in Sta. Elena, 38.2 percent do not have access to safe water supply (Table 5). In terms of barangays, meanwhile, a high 96.7 percent was registered by Barangay Villa San Isidro (59 out of 61 households) as not having access to safe water supply. Barangays Patag Ilaya and Salvacion followed with both 96.2 proportion of households without access to water supply. Most of the households in these barangays get their drinking water from shallow wells or spring sources that are not properly maintained.

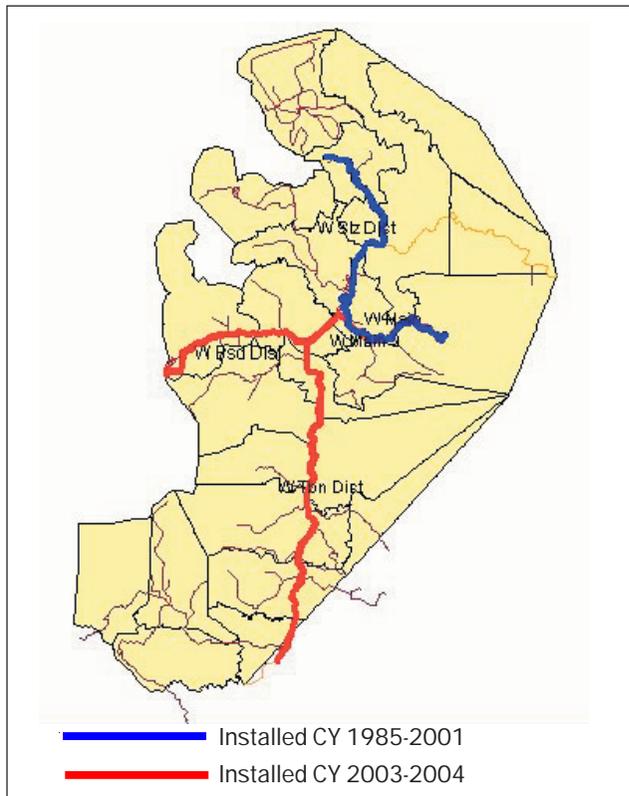
Table 5. Households without access to safe water supply, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Households	Households without Access to Safe Water Supply	
		Magnitude	Proportion
Basiad	494	264	53.4
Bulala	332	73	22.0
Don Tomas	432	145	33.6
Guitol	117	94	80.3
Kabuluan	390	46	11.8
Kagtalaba	226	194	85.8
Maulawin	442	201	45.5
Patag Ibaba	126	48	38.1
Patag Ilaya	106	102	96.2
Plaridel	297	216	72.7
Pulongguitquit	337	124	36.8
Rizal	445	112	25.2
Salvacion	133	128	96.2
San Lorenzo	1,191	262	22.0
San Pedro	295	272	92.2
San Vicente	208	61	29.3
Sta. Elena (Poblacion)	1,559	332	21.3
Tabugon	330	142	43.0
Villa San Isidro	61	59	96.7
STA. ELENA	7,521	2,875	38.2

Source: CBMS Survey, 2003

On the other hand, Barangay Kabuluan was shown to have the lowest proportion of households without access to safe water, followed by Sta. Elena (Poblacion), Bulala and San Lorenzo. This is attributed to an existing municipal water system run by the municipal government and prioritized for development to provide access to safe water. The terrain of the municipality contains ample sources of spring water but a sizeable amount of investment to distribute said resource was needed. Fortunately, the municipal water system project was developed (Map 1) and it now services 1,300 paying concessionaires that allows the government to recover its capital investment at affordable rates and some areas with socialized schemes. The project is being proposed to be expanded to other barangays.

Map 1. Water system main pipeline in Sta. Elena



Access to sanitary toilet facilities

Of the total number of households surveyed in the municipality, 40.9 percent do not have access to sanitary toilet facilities (defined as water-sealed or flush toilet facilities).

The barangays of Patag Ilaya and Patag Ibaba have the highest proportion of households without sanitary toilet facilities (94.3 and 92.1 percent, respectively). On the other hand, Sta. Elena (Poblacion) and Rizal show the lowest proportion of households – 9.7 and 13.3 percent, respectively – that do not have to sanitary toilet facilities (Table 6).

It was noted that most of the barangays without access to sanitary toilets are those that have low access to water in general. Rural upland/coastal barangays are the ones mostly experiencing this problem.

Shelter***Informal settlers (squatters)***

Squatter households are those who are living in their own houses in rent-free lots without consent of the lot owner, and those who are living in rent-free houses and lots without consent of the owners.

Sta. Elena registered a low rate of squatting with 3.0 percent or 224 out of 7,521 households existing in the municipality. The biggest number of squatting households is found in Barangay Pulongguit with 94 households. In the Poblacion area, there are 45 squatting households while in Barangay San Lorenzo, 30 such households were recorded.

Squatters or informal settlers, although minimal, are usually migrants who are looking for economic opportunities in the municipality. The rapid population growth has also contributed to the growth of informal settlers and the municipality has been host to a varied cultural mix of the country.

Households living in makeshift housing

With regard to living in makeshift housing, 2.3 percent of the total households are living in makeshift houses.

Table 6. Households without access to sanitary toilet facilities, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Households	Households without Access to Sanitary Toilet Facilities	
		Magnitude	Proportion
Basiad	494	240	48.6
Bulala	332	142	42.8
Don Tomas	432	221	51.2
Guitol	117	92	78.6
Kabuluan	390	140	35.9
Kagtalaba	226	176	77.9
Maulawin	442	280	63.3
Patag Ibaba	126	116	92.1
Patag Ilaya	106	100	94.3
Plaridel	297	142	47.8
Pulongguitguit	337	181	53.7
Rizal	445	59	13.3
Salvacion	133	113	85.0
San Lorenzo	1,191	561	47.1
San Pedro	295	108	36.6
San Vicente	208	52	25.0
Sta. Elena (Poblacion)	1,559	151	9.7
Tabugon	330	156	47.3
Villa San Isidro	61	44	72.1
STA. ELENA	7,521	3,074	40.9

Source: CBMS Survey, 2003

Barangay Poblacion has the highest number of households living in makeshift housing with 37 households. Barangays San Lorenzo, San Pedro and Bulala were found to have 26, 24 and 22 households living in makeshift housing.

On the other hand, there are four barangays without households who are living in makeshift housing namely: Patag Ibaba, Patag Ilaya, Pulongguitguit and Villa San Isidro.

Income and livelihood

Unemployment

CBMS data recorded the unemployment rate for the municipality at

14.2 percent or a total of 1750 unemployed out of the 12,357 labor force population. Barangay Poblacion has the most number of unemployed at 322.

Barangays Pulongquit-guit and Kagtalaba has the lowest unemployment rate in the municipality at 9.3 percent of labor force population. Programs in employment generation are enhanced by providing skills development training to the labor force and establishing linkages for job generation through the Public Employment Service Office (PESO) of the municipal government.

Poverty

Of the total 7,521 households in the municipality, 5,327 are poor while 2,194 are non-poor. The poverty threshold used was P12,006 for rural and P 15,300 for urban areas for 2003. The poverty threshold was computed by inflating the provincial poverty threshold by the average provincial consumer price index in the last 12 months.

Barangay Salvacion was found to have the highest proportion of households with income below the poverty threshold (94.0%) while San Pedro registered the lowest at 55.9 percent (Table 7). Barangay Salvacion is a coastal barangay and the lack of accessibility to barangay roads plays a big role in the non-capability of households to generate income.

Agriculture is still the major source of income of the residents and financial constraints hamper the development of this sector. In response, short term agricultural programs have been initiated to provide livelihood projects to farmers and fisherfolks. Aside from loan assistance for farm inputs ranging from fertilizer to seed inputs, skills development trainings are also regularly conducted to increase the capability of the workforce and women to contribute to the households' income opportunities.

Results of the CBMS survey show that 3,940 out of 7,521 households have income below the food threshold. The food threshold used was P8,278 for rural and P9,776 for urban areas for 2003.

Table 7. Households with income below the poverty threshold, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Households	Households with Income Below Poverty Threshold	
		Magnitude	Proportion
Basiad	494	425	86.0
Bulala	332	290	87.3
Don Tomas	432	369	85.4
Guitol	117	85	72.6
Kabuluan	390	230	59.0
Kagtalaba	226	204	90.3
Maulawin	442	294	66.5
Patag Ibaba	126	116	92.1
Patag Ilaya	106	96	90.6
Plaridel	297	219	73.7
Pulongguitguit	337	229	68.0
Rizal	445	282	63.4
Salvacion	133	125	94.0
San Lorenzo	1,191	826	69.4
San Pedro	295	165	55.9
San Vicente	208	172	82.7
Sta. Elena (Poblacion)	1,559	911	58.4
Tabugon	330	247	74.8
Villa San Isidro	61	42	68.9
STA. ELENA	7,521	5,327	70.8

Source: CBMS Survey, 2003

Data at the barangay level indicate that Barangays Patag Ibaba and Salvacion have the highest proportion of households with income below the food threshold level at 84.9 and 82.0 percent, respectively. Meanwhile, Barangays San Pedro and Poblacion got the lowest proportion at 31.2 and 36.9 percent, respectively (Table 8).

Food shortage

Food shortage had been experienced by 274 households in the municipality with Barangay Maulawin having the most number at 83, followed by Barangays Pulongguit-guit and Kagtalaba at 49 and 38, respectively.

Table 8. Households with income below the food threshold, Municipality of Sta. Elena, Camarines Norte, 2003

Barangay	Total number of Households	Households with Income Below Food Threshold	
		Magnitude	Proportion
Basiad	494	376	76.1
Bulala	332	252	75.9
Don Tomas	432	320	74.1
Guitol	117	55	47.0
Kabuluan	390	153	39.2
Kagtalaba	226	170	75.2
Maulawin	442	200	45.2
Patag Ibaba	126	107	84.9
Patag Ilaya	106	81	76.4
Plaridel	297	173	58.2
Pulongguit	337	149	44.2
Rizal	445	194	43.6
Salvacion	133	109	82.0
San Lorenzo	1,191	540	45.3
San Pedro	295	92	31.2
San Vicente	208	157	75.5
Sta. Elena (Poblacion)	1,559	576	36.9
Tabugon	330	206	62.4
Villa San Isidro	61	30	49.2
STA. ELENA	7,521	3,940	52.4

Source: CBMS Survey, 2003

As generally expected, the proportion of households with income below the poverty and food threshold correlates with food shortage. In order to partially address the situation, food programs geared toward agricultural production or backyard food production from vegetable gardening to swine dispersal have continuously been promoted and funded at the municipal level.

Peace and order

Victims of crime

In terms of the peace and order situation, 60 households have members

that were victims of crime in the past year. Fifty-nine cases of theft were recorded with a total of 84 victims for the past year.

The lack of police personnel does not help the peace and order status as shown by the present police manpower of 18 serving 38,091 residents. The standard should be one policeman for every 1000 population

Barangay San Lorenzo had the most number of crime victims at 32 for the past year. Only six of the nineteen barangays had crime victims.

Uses of CBMS data in Sta. Elena, Camarines Norte

Change in planning

A fourth class municipality such as Sta. Elena has an average annual budget of Php 35,000,000.00, 20 percent or roughly Php 7,000,000.00 of which is mandated to be utilized as development fund. From calendar year (CY) 2001 to 2003, social sector development investment averaged to 32 percent of the development fund. With the implementation of the CBMS program and the establishment of a social sector database, major improvements in social sector budget allocation have been realized.

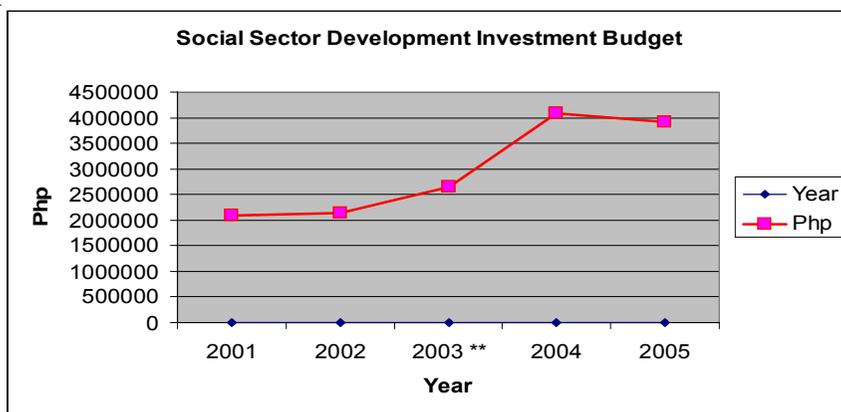
As shown in Table 9, after the implementation of the CBMS program in 2003, an increase in social sector development investment of close to 1.5 million pesos or a 54 percent increase in fund prioritization was realized. Major increases were seen in the funding for child programs, particularly the Child-Friendly Movement under the Fifth Country Program for Children (CPC V) for nutrition programs in 2004. With better planning tools, the municipal officials had a better grasp in prioritizing social development. Before, most of the funds were allocated for infrastructure projects but with better information, a more balanced development budget had been prepared.

Maximizing funds by convergence/focusing

A decrease by four percent in the social sector development allocation for Sta. Elena was programmed for 2005. However, despite this, further

Table 9. Social sector development investment budget CY 2001-2005, Municipality of Santa Elena, Province of Camarines Norte

YEAR	2001	2002	2003 **	2004	2005
ANNUAL INVESTMENT	2,080,000	2,150,000	2,652,594	4,092,000	3,913,000
Nutrition	40,000	-	25,000	145,000	65,000
Child Programs	10,000	-	50,000	105,000	22,000
Non Children Programs	30,000.	-	-	20,000	25,000
Literacy	-	-	20,000	40,000	20,000
Safe Water Provision	2,000,000	2,000,000	2,082,000	3,500,000	3,505,000
Livelihood Dev't.	-	-	196,000	100,000	100,000
Capability Building					
a. Database Establishment	-	30,000	35,700	20,000	60,000
b. Trainings	-	-	98,894	66,000	30,000
Administrative/ Advocacy	-	120,000	145,000	96,000	86,000



efficiency in fund utilization has been achieved since the planning had made use of the data in the CBMS database. Additionally, field validation allowed the municipality to maximize sectoral planning through convergence of manpower and funds.

An example of focusing funds was utilized in supplemental feeding when in CY 2004, Php120,000.00 was allocated to improve the nutritional status of 300 grade 1 pupils and a counterpart fund

was provided by the Department of Education in the amount of Php 100,000.00 for de-worming and other health status monitoring components. Said program was supervised by the school nurses for the 10 schools covered by the program. With the success of the program, planning for replication was shifted to a different age group that was not previously covered and was discussed in planning sessions utilizing CBMS data. The planning group proposed a feeding program for CY 2005 for 6- to 36-month old children who are severe and moderately severe malnourished. After validating the data, though, it was found out that the said age group has only 97 cases of malnutrition and funds needed for the proposal shall amount to Php 40,000.00 only. Thus, the proposal was approved with less fund allocation but without sacrificing the objectives of the said project. This just showed that with better data information and planning tools more interventions could be proposed and implemented without sacrificing objectives.

Because the availability of a reliable database has been proven, it is necessary to periodically update said database to better analyze development of poverty indicator changes with the development interventions introduced.

Maximizing funds by reliable investment

Another major social sector investment in Sta. Elena is the municipal water system. As clearly presented also in Table 9, an increase of more than 50 percent in investment in the water system was realized. While addressing accessibility to safe water, the entrepreneurial nature of the project allowed the local government to recover its investment like a business. Although a substantial portion of the development fund has been invested in the Municipal Water System since 1995, the bulk of the capital investments was funded by loans and this proved to be well worth the investment. The municipal government is now on its third loan component and was dutifully been able to keep up with loan repayments while earning additional revenue (an annual average revenue of Php 1,300,000.00) from the water system.

Utilizing the CBMS database, the municipality was able to better analyze investment opportunities with additional benefit of providing safe water to more households and improved health status of service areas. Currently, the Municipal Water System is providing safe water to 1300 households and with the additional investments in 2004 and 2005, the program hopes to provide the same service to 700 more households.

Social sector programs that benefited through CBMS

Fifth Country Program for Children (CPCV)

Launched in CY 2002 was the advocacy on upholding child rights through the UNICEF's Fifth Country Program for Children. Data regarding children then were inadequate through the Minimum Basic Needs Program of the Social Reform Agenda. Much was needed to identify the status of children not defined by the MBN survey.

Malnutrition

Before, agencies such as the Departments of Education, Social Welfare and Health through their municipal counterparts implemented separate nutrition programs based on their clientele:

- The Municipal Health Office (MHO) covers the nutritional needs of the unborn or those from ages zero to two years old, and includes pregnant mothers as well.
- The Municipal Social Welfare Office covers the supervision of Day Care Services that monitor the nutritional level of three to five years old in-school children.
- The Department of Education, through their schools, caters to in-school children with ages ranging from 6 to 12 years old.

With the CBMS database and the Fifth Country Program for Children (CPCV), a convergence of available funds and focus on the number of children in need of nutrition program was realized.

Line agency programs were budgeted with focus on the severe and moderately severe nutrition cases by age group such as:

- a) CY 2004 Supplemental Feeding Program for in-school Grade 1 students (6-7 years old). A feature of this program is the counterpart sharing by the municipal government and the Department of Education, contributing an additional P100,000.00 for vitamin supplements and de-worming tablets administered by school health nurses. Nutrition posts were also established with the provision of weighing scales to the schools.
- b) CY 2005 identified 97 cases of severely malnourished and moderately malnourished children 6 to 36 months of age as validated by the MHO with regards to CBMS data that were not covered by existing health programs.

Maternal health

Noted in the survey are cases of child death (neonatal) due to lack of information or unawareness on maternal health. This, in turn, led to programs that address the situation through trainings and re-trainings of Birth Attendants (Hilot) and replenishment of their birth attendant kits.

Support programs pertaining to literacy of adults through literacy class for mothers and Education for All programs were also identified.

Scholarship program

Enacted this year is a Legislative ordinance implementing an Educational Assistance Program geared to provide an opportunity for deserving secondary school graduates of indigent family to be supported by way of scholarship assistance for their tertiary or collegiate education.

Three major criteria or requirements of the program are as follows:

- a) Applicants are residents of the municipality;
- b) Applicants belong to the top ten graduating students of their schools; and

- c) Applicants belong to indigent families or those with incomes below the poverty threshold.

Some of the social sector programs and project which benefited from prioritization of investments based on CBMS data and information are enumerated also in Table 9.

One of the reliable tools for determining residency and income status has been the CBMS database

CBMS database as a planning tool

Agriculture-infrastructure sector

Planning units in government are tasked to come up with comprehensive proposals for various priority concerns of the executive department. For the municipality of Sta. Elena, this would refer to the office of the Mayor. Majority of municipalities in the Philippines, however, do not have enough funds to hire staff at the planning office. The lack of personnel is partially solved through the provision of technical knowledge to the existing personnel through trainings and of the acquisition of information technology equipments.

The Infrastructure for Rural Accessibility Program (IRAP) introduced in 2001 for local government units (LGUs) in the Philippines was meant to help LGUs come up with better planning and prioritization capacity. The IRAP was to serve as a guide in prioritizing projects pertaining to improve accessibility of rural areas to economic centers of the municipality. It utilizes database software but mapping under this program is done manually on paper. Majority of databases today that pertain to a resource such as land needs a map-based database capability. Map-based or GIS softwares, however, are not currently affordable to most LGUs. It was, thus, the good fortune of Sta. Elena in 2003 to have availed of the CBMS database which featured the NRDB mapping software. This equipped the municipality with a much-needed tool in government planning.

Presenting situational analysis to the executive and legislative body of government is better understood with the use of maps rather

than numerical tables. A better understanding of the prevailing situation informs decisionmakers and aids them into properly acting or planning to improve such situation. Box 1 shows how the map-based NRDB software helped the municipality in qualifying for the availment of funds through the preparation of a project proposal

Other uses

Land use planning at the municipal level

The CBMS program database has allowed the municipality to prepare its Municipal Land Use Plan with more confidence that it would be comprehensive and responsive enough to the needs of the municipality and its residents. The CBMS-NRDB is now being utilized to prepare the land-use plan which is compatible with other GIS software. Even at the barangay level, the benefits of the program are evident and will help the barangays prepare their Barangay Land Use Plans.

Preparation of project feasibility studies/proposals

The lack of manpower in the municipality can be facilitated by the availability of a reliable database and can decrease the capability gap of well-funded government units in terms of preparing proposals when needed, particularly for demand-driven projects where many municipalities compete with each other to access funding sources.

Conclusion

In conclusion, the CBMS program has provided Sta. Elena with opportunities to better serve its clients, the public. The program has provided the municipality:

1. A planning tool that is comprehensive enough to analyze the poverty situation of the locality.
2. The mapping tool (NRDB Software) that makes it simple enough to relate to and be understood by its clients and chief executives and decisionmakers so that development funds can be rationally and effectively implemented by the local government.

3. A realistic assessment of the needs of the locality to guide the municipality in charting its course of action ultimately to alleviate the impoverished sector of our society.
4. The tool to improve local governance by providing realistic and timely information to decision makers to effectively utilize all the resources of government in serving the public, especially those whose income are below the poverty line.
5. Planning officers with additional knowledge that helps contribute to better planning and development of their localities in particular and of the whole country in general.

Box 1. Sample use of CBMS map-based data

Last February, the municipality of Sta. Elena was invited to participate in the Infrastructure for Rural Productivity Enhancement Sector (InfRES) Project that was meant to fund projects that will;

- a. Increase agricultural productivity by improving road accessibility to develop additional agricultural areas; and submission of a project proposal; and
- b. Improve poverty incidence status through increased economic opportunities.

A requirement to avail of the program is that a municipality has completed the accessibility profile through the IRAP. A constraint of the program, like most funding programs is that it is demand-driven and that the funds are limited and cannot finance all municipalities in the Philippines. Only 105 municipalities can be financed by the program at roughly an average of P55,000,000.00 per municipality. It is thus understood that those who could qualify at the earliest would have a better chance to avail of the fund.

Qualifying for the InfRES Project has three tiers namely;

- a. submission of a project proposal;
- b. those who pass shall then go to a Feasibility Study Preparation; and
- c. upon final approval is the implementation stage.

The municipality was given two weeks to submit a 26-page project proposal to belong to the second tranche of applicants. It was fortunate that we have completed the IRAP in 2001 and we had the CBMS database that we were able to submit a respectable Php 54 million project proposal within the target timeframe.

To analyze the accessibility of the road network and impact area assessment, the IRAP data and NRDB map-based software were used. The CBMS data were utilized as evaluation tool for prioritization of project areas “barangays” (poverty incidence). Improvement of road accessibility of rural barangays was prioritized based on population density. The maps generated from the NRDB helped to identify where most of the beneficiaries are located.

A more comprehensive and easier preparation of the project proposal/ feasibility study was thus made possible for the municipality due to the availability of a database.

The INFRES project proposal was done in 2 weeks and included:

- projects that can be funded by InfRES: road improvement, potable water system and communal irrigation system; and
- presentation in the Municipal Development Council was easier to understand by the Barangay Captains and sectoral representatives.

Comments

- The paper is interesting and appreciated the use of CBMS data for very practical purposes at the local level.
- Provide information on how to generalize the use of CBMS with mapping tool across the countries and how to integrate periodical national level data collection efforts with local level data collection exercises. If it is possible to convince local authorities to use CBMS to collect data, then provide details on how to aggregate these kinds of data at a larger level (above the local levels).
- It is encouraging to see that CBMS data are actually being used to inform the planning process. Provide concrete examples of how the data are being used by policy makers to allocate resources. For example, is there a big increase in social sector development as a result of this data availability?
- Provide information if the system could give explanation on certain data. For example, child mortality rate, education and enrolment rate.
- Provide details on how to use the CBMS data as a planning tool. For example, if malnutrition was an issue in a particular area, how do we know which intervention to go with the CBMS data and what data would one use to figure out which intervention will give the biggest gain?
- It is interesting to see the use of CBMS as a basis for starting a database in the municipality. The database is being expanded in response to new efforts such as agriculture. This can be the basis for institutionalizing a kind of database system for data generation and data provision.
- Provide information on the earlier data collection method before CBMS was implemented.

- Provide information on the level of interactions made to collect data for the CBMS.