Implementation of Community-based Monitoring System in Tanzania: Some Salient Uses in Dodoma Municipality

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IMPLEMENTATION OF COMMUNITY-BASED MONITORING SYSTEM
IN TANZANIA: THE SALIENT USES IN DODOMA MUNICIPALITY

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1.0 Introduction
Dodoma is the national capital of Tanzania, located at the geographical centre of the country. The municipality covers an area of 2,669 square kilometers of which 625 square kilometers are urbanized. Based on the 2002 National Population and Housing Census, the population of Dodoma was 324,347 of whom 157,469 or 48.5 percent are male and 166,878, or 51.5 per cent are female. The estimated total number of households is 74,914 with an average household size of 4.3 people.

Dodoma Municipal Council recognizes the fact that, good planning and decision making require a comprehensive municipal information system that captures pertinent data and produces meaningful reports (DMC, 2003). The council therefore, has adopted the implementation of a Community-Based Monitoring System (CBMS) which draws from community-collected data to bolster municipal as well as national databases.

2.0 An overview of CBMS Implementation in Dodoma
Among the specific objectives stipulated in the Dodoma CBMS project were providing the policy makers with data to be used for facilitating the prioritization of development plans, preparation of poverty profiles and maps, effective monitoring of developmental programmes and capacity building for the related local actors at the community level.

By using CBMS, the spatial, time related and socio-economic data were captured at the village, ward and municipal level during the project span (2006 – 2007). The system has been test-piloted in one ward (urban area) of K/Ndege which has approximately 2,396 households, and one Village (rural setting) of Nala, which has approximately 2,444 households. It is worth noting that the villages and wards have autonomy in terms of planning and implementation; meaning that the CBMS can fairly be adopted in their specific administration units.
3.0 The Role of Dodoma Municipality in CBMS Implementation

Dodoma municipality remains the key actor in the process of initiating and overseeing the implementation of CBMS related projects. These functions focused on project initiation, adoption of project results and dissemination, facilitation of the related plans and scaling up (replication) of the CBMS methodology.

- **Project initiation**
  The project had to be adopted by the council at the initial stage so that the required arrangements for human resources and the working environment would be accessible during and beyond the span of the project. The project document was therefore submitted for application for funding after the approval by the municipal council. This stage triggered other stages of implementation whereby it was important to introduce the project to various stakeholders namely local community, municipal staff, researchers, non-governmental organizations and governmental departments related to poverty issues.

- **Adoption of project results and implementation:**
  The pilot work was organized and conducted by the municipal council by involving the project stakeholders and thereafter the results were presented at the ward and village level whereby some strategies were proposed to work on the identified problems. While the proposed initiatives are being implemented at the community level, the municipality holds a patronage role to see to it that the plans are feasible and in line with the national policies. Where possible, the municipality takes a further step of soliciting implementation support from the parent ministry by including some of the issues in the nationally funded programmes.

- **Dissemination and scaling-up of the CBMS results (Advocacy):**
Dissemination workshops at municipal and national levels were organized under the umbrella of the municipality. The workshops brought together the representatives from local areas, various influential officials from the government and non-governmental agencies to discuss and give resolutions on how the CBMS results could be implemented sustainably, with an end goal of encouraging the officials to institutionalize the proposed system. This step was an advocacy component in CBMS whereby the scaling up strategies were chatted about and espoused.

It was clear that when CBMS is implemented in other parts of the country, it will facilitate availability of timely routine data to feed into the National policies. Moreover, capacity building for data collection and analysis for monitoring poverty at local level was found to be imperative as it will reduce the need of conducting costly national surveys such as Household Budget Surveys (HBS), Integrated Labor Force Surveys etc. In that light, it can be anticipated that the use of volunteers at local level is among the important characteristics that has made CBMS score high acceptability.

4.0 Salient Uses of CBMS in Dodoma Municipality

As stated earlier, CBMS has led to more need-based approaches for poverty data capturing by targeting the problem areas and beneficiaries, forming the basis of development plans and therefore becomes an influential tool for better allocation of resources for implementing the programmes that address the priority issues in the communities.

4.1 Targeting resources to problem areas and beneficiaries
The Poverty Maps produced by CBMS were presented and interpreted to give spatial perception of the problem areas such as condition of roads, housing distribution and their conditions, location of water sources and other social
amenities. When linked with the data from the household survey report, it has also been possible to identify the beneficiaries of the action plans set forth. Examples of poverty maps are shown in Annex1.

The information provided by poverty maps have been used for communicating geographical differences in performance for different aspects of poverty to a wide audience. This has aided better understanding of the needs of local areas and thereby ensures that poverty issues are addressed in the most effective manner. With these maps therefore, the decision makers were able to know the extent of problems in specific areas and the justification of where to allocate funds for intervention.

4.2 CBMS as a basis for preparation of development plans

During the validation of the survey results, the communities in the pilot areas were informed about the CBMS findings through workshops. This activity prompted an opportunity to discuss the causation of the identified issues and proposed possible interventions needed to address the problem areas as shown in the table below.

<table>
<thead>
<tr>
<th>NALA VILLAGE</th>
<th>Identified Issues</th>
<th>Proposed Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent outbreak of diseases like typhoid and dysentery due to poor access to safe water.</td>
<td>Preparation of Water Distribution project proposal; launching of water-boiling campaign in <em>vitongoji</em></td>
<td></td>
</tr>
<tr>
<td>High rate of trachoma and meningitis cases due to poor housing and unclean surroundings</td>
<td>Promotion of Improved housing with good ventilation and well-organized surroundings</td>
<td></td>
</tr>
<tr>
<td>Poor nutrition and low attendance to clinics by children</td>
<td>Health extension service to be established to monitor at <em>kitongoji</em> level.</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>Intervention</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Low income due to poor crop production</td>
<td>Preparation of village land use plan based on land use suitability.</td>
<td></td>
</tr>
<tr>
<td>Poor accessibility by roads due to erosion and the use of unplanned footpaths</td>
<td>Launching of road rehabilitation routine: assigning road stretch per household. Preparation of road network plan.</td>
<td></td>
</tr>
<tr>
<td>Windy and dusty environment due to low initiatives of tree planting.</td>
<td>Organization of community working groups to raise tree seedlings and demonstration woodlots.</td>
<td></td>
</tr>
</tbody>
</table>

**K/NDEGE WARD**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor register of property tax collection</td>
<td>Establishment of property tax database that can show property ownership, development changes and the related taxation.</td>
</tr>
<tr>
<td>High rate of malaria infection due to poor sanitation, stagnant water and existence of unmanaged lawns.</td>
<td>Launching of cleanliness campaigns at <em>kitongoji</em> level and ensuring that there are local monitors continuously.</td>
</tr>
<tr>
<td>Poor waste management due to uncontrolled disposal system by local authority and individual habits of residents.</td>
<td>Establishment of waste management project that addresses solid and liquid waste disposal: using public private partnership approach.</td>
</tr>
<tr>
<td>Poor services in the unplanned settlement of Oysterbay: roads, power line, water and drainage system.</td>
<td>Preparation of squatter upgrading project: negotiation for soliciting land for the required services and resources for implementation.</td>
</tr>
</tbody>
</table>

Based on the identified issues, three interventions have been implemented as follows:

- **Tree Planting Initiatives at Household Level in Nala Village**

  As agreed during the validation workshop, the windy and dusty surrounding was seen as an issue that calls for intervention. However, understanding that the affordability of most of the villagers is low, the related activities were planned on the self-help basis. That is, the involved costs are shared in kind by using locally existing resources (working time, communal assignments, contribution of
tools/materials and the like). Where necessary the village government funds some technical arrangements that may arise.

The project is supporting the community groups (women, youths) and schools to develop tree nurseries that produce seedlings of varieties of trees and sell to the villagers at an affordable price. At the initial stage, the groups are given some of the working tools and extension service by the council but later on as the nurseries of more seedlings are developed, the activity will be self-supporting.

- **Establishment of House-to-house Collection of Solid Waste**

CBMS data revealed that the problem of solid waste collection is rampant in K/Ndege ward. While some households with ample space in their homesteads do bury garbage in the pits, most of them dispose the waste crudely on the areas around the roads and open spaces. In the squatter area of Oysterbay neighborhood, the situation is even worse as the streets are narrow and the houses are congested with no specific collection points. causing an eye-sore and health hazard in the urban environment.

Through this project, five community working groups have been mobilized and they are able to reach every household and collect solid waste twice per week. Also, secondary collection points have been identified so that the waste is conveniently disposed there by using push carts and later on is collected by the
municipal truck. It was agreed that every household that gets the service pays 500 TZS (0.37USD) per week, starting from July, 2007. As the awareness grows, the user charge may be raised so as to reflect more realistic cost of the service delivered. The Municipal council has incorporated the implementation procedures of this plan in the by-laws in order to regularize the operation.

- **Property tax management**

CBMS data were used to develop a property tax management register that identifies location, ownership, property type and the related administrative attributes. The data were obtained from the household lists and the sketch maps prepared during enumeration exercise.

By using CBMS data, property valuation roll of K/Ndege ward was updated and for some localities (informal low-income housing areas) the flat rates were estimated. The developed register has triggered better monitoring and a substantial increase (35%) in property tax collection. Other components which are anticipated to benefit from the CBMS data in the future include land rent, business licenses, and billboards as shown in the structure of the municipal database below.
Municipal database: Using CBMS data for improving revenue collection (DMC, 2007)

The important components of the property tax database (Annex 2) include:

- **Data Capturing**: Property registration, customer registration and payments
- **Showing Lists**: List of customers and properties
- **Data Processing**: the database administrator can prepare queries for the needed aspect (say, show all customers, residing in neighborhood ‘X’ who have paid to-date).
- **Reports generation**: Financial report of the financial year, summaries of opening and closing balances, penalized property owners, and penalty amount.

The council is currently operating the system at the municipal headquarter but it can be more effective and efficient when it operates at the geopolitical areas where double-checking of data becomes a continuous process.
5.0 Other Potential Uses of CBMS

CBMS data obtained from the household survey and poverty maps can generate information for other uses including:

- Improvement of informal housing: data for decision-making about which areas require interventions in such aspects as improving housing condition, infrastructure provisioning and agreements on land consolidation and spill-over areas during resettlement. Presently, there are three squatter areas which accommodate about 12,000 households living in unbearably continuous high densities that should be arrested.

- The same data can also be used for monitoring urban agriculture by identifying appropriate areas for farming and proposing ways of controlling spontaneous encroachment in marginal land such as water sources and buffer zone. When the local community is involved in land use issues, it can be easier to protect conservation areas against detrimental activities that happen in the proximity instead of relying on higher tier operations.

6.0 The Way Forward

The fact that the Dodoma CBMS project has gained commendable political and executive support it has set up important factors for future successes. Further, the appreciation and interest raised by other villages, wards and municipalities that have seen the results of this pilot work can be considered as an added value to be harnessed through replication of CBMS process.
Certainly, the lessons learnt in the pilot project suggest preparation of better environment for implementing CBMS in other areas by avoiding previous underperformances. On this ground, completion of the preceding CBMS work provides a clearer avenue for examining specific areas of improvement for the operationalization of the system especially on coordination with local key officials, survey design, training, processing and utilization of data.
Annex 1: Poverty Maps – targeting resources.
Annex 2: Property tax database

Data Capturing Forms

Step I: Property Registration form:
All properties must be registered in the database through this form. The Database administrator assigns every property with unique Property Code, Plot Number and Block Number as per properties map.

Step II: Customer Registration Form:
Every property owner is given a Customer Identity (ID) that uniquely identifies the property owner. After filling in the other details as indicated on the form, the details are matched with the property in the combo box by clicking the drop down arrow.
Step III: Payment Form:
Whenever the customer comes to pay for property tax, s(h)e has to produce the ID to the Tax Collector to enable correct capturing of Customer Payment.
LIST OF PROPERTIES:
Clicking on Properties button in Lists group, the list of all properties in the database will be displayed.

LIST OF CUSTOMERS:
The list of all Customers can be seen in the database by clicking the Customers button.
REPORTS

All reports are dynamic queries that generate a result based on parameter keyed.

Financial Report:

In all reports, the database gives an opportunity to write the report title required to be displayed on top of the document.

Steps:
- Enter parameter value of Starting date required.
- Enter parameter value of ending date required.
- The report is displayed!
Types of useful printable reports:

**Outstanding – Mtaa:**
- This report shows outstanding tax payment by mtaa.

**Outstanding – Owner:**
- This report shows the outstanding tax payment by owner.

**Opening and Closing Balance: mtaa**
- This report shows Opening and Closing balance by mtaa.

**Opening and Closing Balance: Owner:**
- This shows the Opening and Closing Balance by owner.

**Penalty:**
- This report shows all Customers subjected to penalty and it calculates the respective tax to be paid.