

Municipal Services Costing Guidelines

**Municipal Finance and Management Component
Bhutan Second Urban Development Project (BUDP-2)**

Background

The World Bank has been supporting Royal Government of Bhutan by providing technical assistance to strengthen municipal management system under the Bhutan Urban Development Program II (BUDP II). The BUDP II project, through the World Bank's IDA Credit comprised of the following components:

- a. Municipal Finance and Management
- b. Thimphu Northern Area Development
- c. Capacity Building

Under the Municipal Finance and Management, activities to strengthen and reform the institutional systems and financial processes in Thimphu and Phuentsholing Thromdes were undertaken. The main objectives of the activities were:

- a. Strengthen local revenue administration through computerization and re-engineering business processes
- b. Strengthen local government expenditure management and financial management systems and processes
- c. Enhance accountability of Thromdes to citizens through regular performance reporting

The required activities are already completed in Thimphu and Phuentsholing Thromdes. Required financial management system, processes, manuals and guidelines are developed for Thimphu and Phuentsholing Thromdes. Further, Revenue Management System (RMS) and Digitized Asset Register (DAR) are also developed and implemented in Thimphu and Phuentsholing Thromdes.

Additional Financing for BUDP II (Cr. 5431, USD 17.4 Million) is provided by the World Bank. With the additional financing works are being undertaken or planned to be executed under similar component of the main project as Municipal Finance and Management, Thimphu Northern Area Development and Policy Implementation Support. Through the additional financing activities to strengthen municipal finance management in Gelephu and Samdrup Jongkhar Thromdes are underway.

Introduction

The primary objective of this guideline is to answer the basic questions of providing services such as:

- a. What are the services that are being offered to the citizens?
- b. What is the cost of providing such services?
- c. Does the revenue generated from the provision of these services fall short, break-even or exceed the cost of providing services?
- d. Can a shortfall from one kind of service be compensated by an excess from the other?
- e. What are the circumstances in which the Thromdes can raise the revenue? Are pricing policies within the prerogative of the Thromdes?
- f. Can the costs be contained and reduced?

The answers to these questions are key to understand the case of economic feasibility and sustainability of provision of the services, and at the same time keeping the purpose of existence of the Thromde at the backdrop. The provision of municipal services is increasingly becoming costly and complex and municipal bodies are not able to recover the costs adequately due to lack of pricing policies and inefficient cost recovery mechanism, resulting in the neglect of services and maintenance of assets. The declining state of assets results in a poor level of services which leads to unwillingness to pay among the consumers that further affect the asset formation for providing municipal services.

Thromdes in Bhutan provide a wide range of urban infrastructure services to their citizens. It includes both core municipal services such as water supply, sanitation, sewerage, drainage, street lighting, roads and solid waste management; and other services / amenities / facilities like parks, play grounds, crematoria, recreation centres, etc. The mandate for the delivery of these services as well as the authority to recover costs associated with them is also provided in Constitution of Kingdom of Bhutan and other concerned legislations. Under Article 24 of the Constitution of Kingdom of Bhutan and Section 64 of the Local Government Act of Bhutan, 2009 (LGA), Thromdes are entitled to levy and collect appropriate taxes, fees, tolls, duties, fines etc. in accordance with such procedure and ensure that the charges are not excessive, oppressive, not contrary to law, and not higher than the cost of providing the most efficient services subject to limitations as may be provided for by the law/Parliament.

There is no mechanism as yet at GT and SJT to ascertain the cost of providing these services. Revision in the revenue structure is not within the sole prerogative of the Thromde Authority, which is one primary factor attributing to the disincentive it may have caused in establishing a more appropriate service pricing strategy.

In the absence of reliable data on cost of services or even data on cost recovery, GT and SJT Thromdes are now provided with this guideline to attempt to record data as required to be retrieved for basic costing of the services provided and fill in the required gaps and answer the fundamental questions as outlined above, after understanding the costs.

After understanding the costing parameters used and upon derivation of the cost (per unit) of providing the services, the Thromdes would be in a position to:

- a. Analyse the efficiency of the services

- b. Setting user charges/tariff for services
- c. Choosing among alternative methods of providing services, such as out sourcing, contracting out, entering into a concession agreement, or establishing separate municipal entities
- d. Explain and publicly account for the actual costs of the service

Cost Estimation

The following services have been considered to provide a guide on how to compute the cost of providing services for adoption by the Thromdes:

- a. Sewerage Connection
- b. Environment Clearance
- c. Solid waste
- d. Street Lighting
- e. Water Connection
- f. Construction Approval
- g. Census Services
- h. Vacuum Tanker Services
- i. City Bus Services
- j. Site Plan Development Services

While estimating the cost of any service, Thromdes need to look into:

- a. Cost of all resources used to provide the service rather than expenditures made to operate department responsible for the provision of that service;
- b. Cost includes all costs of providing the service, and not just those found in the budget or financial reports of the specific department responsible for delivery of the service; and
- c. Cost includes the cost of the resources used to provide a service during a given period of time, regardless of when cash disbursements are made to purchase these resources.

The fundamental concept that all users must be very clear about is the components of cost which can be segregated into Direct and Indirect Cost.

Direct Costs: A cost that can be assigned specifically to a particular service. Direct costs typically include salaries and wages, repairs and maintenance and those general expenses (such as transport costs, purchase of goods and services and direct administration costs) directly associated with rendering the service. In other words, costs that are directly attributable to providing the service.

The following should be noted when calculating direct service costs:

- a. Salaries, wages, and allowances should include staff directly involved in the rendering of service. The management cost apportioned on the basis of time is generally difficult to ascertain considering the organisation structure of the Thromde and the difference would also likely be immaterial.

- b. Similarly, it is difficult to accurately determine direct general expenses such as telephone, stationary, insurance and training, the electricity consumed by the service department.
- c. Indirect general expenses should be excluded while calculating direct costs for the services delivered.

Indirect Cost: A cost necessary for the functioning of the organisation as a whole, but which cannot be directly assigned to any one service. If exact amount of indirect cost cannot be determined, then a reliable apportionment parameter of that indirect cost must be used for allocating the cost to the provision of the service.

The table below provides an example of distinguishing direct and indirect costs.

| Element of Costs | Methodology of Allocation |
|-------------------------------|---|
| Contractual Services | Direct Cost (if direct usage) |
| Depreciation / use allowance | Indirect Costs (Direct Cost if specific asset) |
| Emergency assistance payments | Direct Costs |
| Equipment rental and payments | Direct Costs (on the basis of actual basis if indirect) |
| Rent | Indirect Cost (on the basis of occupancy) |
| Office Supplies | Indirect Costs |
| Postage | Indirect Costs |
| Printing | Indirect Costs |
| Renovations and improvements | Direct Costs |
| Telephone | Indirect Costs |
| Travel | Indirect Costs |

Apportionment and Allocation

While the cost sheets provided in the guideline can provide a basis of distinction between direct and indirect costs, another concept that would pose a challenge is the apportionment and allocation of shared costs. For instance

- a. Intra-Service Sharing of Human resources: The Construction Approval Section will require the input of an Architect as a core approving member in the construction approval process. If this Section remains unmanned fully, the Architect will be required to be roped in from another division, or even outsourced. The Architect's cost must be shared among the two revenue (cost) centres.

There are two cardinal aspects to keep in mind while computing the cost:

- i. Relevance and
- ii. Materiality

The questions to be asked here are

- i. Is the contribution made by the shared personnel significant?
- ii. Could you have undertaken and concluded the assignment by yourself, even if the shared member was not a part of the assignment?

- iii. Would the non-inclusion of the proportionate cost other member distort the cost of providing services materially?

If all the relevance and materiality conditions are met, then the cost of the shared personnel must form a part of the cost of providing the service. “Man-hours” is the recommended cost driver to be used in this situation. It must be noted that an equivalent amount of cost should be reduced from the Section\Division where the personnel is designated to belong.

- b. Office space (Rent): without a predefined structure for sharing of office rent, if any, apportioning the cost is cumbersome to determine the amount to be allocated to each cost centre.

The recommended cost driver in this case would be “floor area occupancy” for the purpose of apportionment and allocation of cost.

- c. Office utilities: Office utilities constitute electricity, water, telephone and internet etc. Without a reading meter installed for every cost centre, it is difficult to allocate the electricity costs. Most offices use PABX and leased lines posing allocation difficulties.

In the case of apportionment and allocation of electricity costs, “revenue generation” is suggested to be used.

In the case of communication costs, while dedicated lines are directly attributable to the cost centre, a register maintaining details of the calls made from the PABX would allow for an objective allocation. The number of computers connected to the office leased line would provide a basis of allocating the cost of internet.

- d. Consumables: Unless the offices are equipped with a robust inventory management system, allocating the cost of consumables may not be an easy task. The consumables cost is recommended to be allocated based on the issue register maintained by the Stores Section.

In general, a cost sheet looks like the one illustrated in the table below.

| Cost Components | Amount (Actual Expenditure in Nu) | | | | |
|--------------------------------|-----------------------------------|----|----|--------------------|------------------|
| | FY | FY | FY | Average of 3 years | Remarks (if any) |
| Salaries, wages and allowances | | | | | |
| General expenses-direct | | | | | |
| General expenses –indirect | | | | | |
| Repairs and maintenance | | | | | |
| Bulk purchases | | | | | |
| Indirect cost | | | | | |
| | | | | | |
| Total Costs (A) | | | | | |
| | | | | | |
| Unit Sold | | | | | |
| | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| Cost per Unit Sold | | | | | |
| | | | | | |
| Income Generated from Services | | | | | |
| Income Generated per unit of service | | | | | |
| | | | | | |
| Net Income/(Loss) of Service | | | | | |
| Net Income/(Loss) per Unit of Service | | | | | |

The cost sheets for individual services highlighted in the earlier segment are as provided hereunder.

| Sewerage Connection | Amount | | |
|---|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance | | | |
| 3. Depreciation of Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost (nut bolts, glues, pipes, etc.) | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Environmental Clearance | Amount |
|--------------------------------|---------------|
| Particulars | |

| A. Direct Cost | | | |
|---|--|--|--|
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Solid Waste | Amount | | |
|--|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Fuel and Lubricants | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |

| | | | |
|---|--|--|--|
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Street Lighting | Amount | | |
|---|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Street Lights, Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Street Light Power Cost | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipments and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Water Connection | Amount | | |
|------------------------------|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |

| | | | |
|---|--|--|--|
| 2. Repairs and Maintenance | | | |
| 3. Depreciation of Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost (nut bolts, glues, pipes, etc.) | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Construction Approval | Amount | | |
|---|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Machineries and Tools, if any | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |

| | | | |
|----------------------------------|--|--|--|
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Census Services | Amount | | |
|---|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Machineries and Tools, if any | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipment and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Vacuum Tanker | Amount | | |
|--|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (of Tanker) | | | |
| 3. Depreciation of Tanker, Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |

| | | | |
|--|--|--|--|
| 5. Fuel and Lubricants | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipments and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| City Bus | Amount | | |
|--|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (of Buses) | | | |
| 3. Depreciation of Buses, Machineries and Tools | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Fuel and Lubricants | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipments and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |

| | | | |
|---------------------------------|--|--|--|
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

| Site Plan Development | Amount | | |
|--|---------------|--|--|
| Particulars | | | |
| A. Direct Cost | | | |
| 1. Salaries, Wages and Bonus | | | |
| 2. Repairs and Maintenance (Direct Cost) | | | |
| 3. Depreciation of Machineries and Tools, if any | | | |
| 4. Equipment Rental Payments, if any | | | |
| 5. Any other Direct Cost, please specify | | | |
| 6. Advertisement and Awareness Costs | | | |
| 7. Uniforms and Liveries | | | |
| 8. Direct Material cost, if any | | | |
| | | | |
| B. Indirect Cost | | | |
| 1. Office Rent | | | |
| 2. Telephone and Internet | | | |
| 3. Electricity Costs | | | |
| 4. Office Supplies (Consumables only) | | | |
| 5. Depreciation of Office Equipments and Furniture | | | |
| 6. Printing and Stationery | | | |
| 7. Travel Costs | | | |
| 8. Hospitality and Entertainment | | | |
| 9. Any other indirect cost | | | |
| | | | |
| Total No of Units sold | | | |
| Per Unit Cost | | | |
| Revenue generated per unit Sold | | | |
| Net Income/(Loss) | | | |
| Net Income/(Loss) per unit sold | | | |

Management Strategies

Cost information can be used to make better management decisions and improved strategies for providing efficient municipal services. The key areas for this are:

- A. Analysing efficiency of the municipal services;
 - B. Making budget decisions;
 - C. Setting tariffs thresholds for the municipal services;
 - D. Selecting alternative methods / strategy for efficient cost management.
- A. Analysing the efficiency of municipal services:** Cost information can be used to provide answers to a variety of questions about service efficiency such as
- a. Is the service being provided at the most efficient (least) cost?
 - b. Are there areas of cost redundancies that can be avoided?
 - c. Would a change in the cost driver change the cost information scenario?
- B. Making Budgetary Decisions:** A year-to-year cost comparisons may disclose changes in costs which allows for making more objective budgetary decisions by way of outcomes derived from discussions on topics such as
- a. Possible reasons for change in the cost parameters?
 - b. How much will it cost to make an increment in the provision of a service?
 - c. What savings can be generated if the service is reduced or eliminated?
- C. Setting Tariff Thresholds:** Any changes in the existing tax rates, levy, user charges and fees require the concurrence of various stakeholders, in most cases, the Parliament. An objective cost information provides an improved mechanism for comparison and understanding of the current and proposed frameworks featuring the service sustainability thresholds. It should be remembered that costing a service is not the same as pricing it. A service does not necessarily have to be priced to recover the full cost of the service because pricing is a management decision which should include total cost as one factor, but also weighs other, non-financial factors. Such considerations might include the willingness and affordability of consumers to pay, the perceived presence of a general benefit to society of a subsidised price or the desirability of encouraging consumption.
- D. Selecting alternative strategies for efficient service delivery mechanism:** There is a need to look in to alternative arrangements to provide efficient and effective delivery of services to the Thromde citizens. Various options like elimination of service, reassigning personnel, reduce service, improve productivity, outsource of service, increase tariff or retain status quo among others should be considered by the management.

This would ensure that the current or proposed municipal services are delivered to the citizens through most efficient method.