



**Ministry of Local Government, Rural Development & Cooperatives
Local Government Division
Local Government Engineering Department (LGED)**

4.1 Guidelines for Financially Independent Accounting System in Water supply and waste management sector

**Project Coordination Office (PCO)
City Governance Project (CGP)**

February 2018



**Assisted by
Japan International Cooperation Agency (JICA)
and
Urban Management Unit, LGED**

Table of Contents

1. Introduction.....	2
2. Justifications	3
3. Relevant Issues as described in ICGIAP.....	3
3.1 Task	3
3.2 Action by	3
3.3 Time Schedule.....	4
3.4 Indicator	4
4. Objectives and Indicators.....	4
4.1 Objectives.....	4
5. Relevant Organizations, Stakeholders and their roles and Responsibility	4
5.1 Role of Project Coordinating Office (PCO)	4
6. Necessary Tasks and Procedures.....	4
6.1 Create financially independent accounting system for two sectors (water supply and waste management).....	4
6.2 Carry out cost recovery for O&M cost in water supply and waste management by properly adjusted water tariff and conservancy rate respectively	6
7. Implementation Schedule	7
8. Cost of Implementation (if necessary).....	7
Annex I Concept of ICT system for water supply sector	8
Annex II Concept of ICT system for waste management sector	10

1. Introduction

Rapid urbanization accelerated by industry led economic growth has been taking place in Bangladesh. Potential of economic growth in urban areas is worthy of notice. There are 335 Local Government Institutions which cover 8% of total geographical area of Bangladesh and 30% of total population, while accounting for 60% of total national growth. On the other hand, the negative impact of dramatic change in urban areas is observed. The negative impacts are because the functions of municipalities and city corporations prescribed in Local Government (Pourashava) Act 2009 and Local Government (City Corporation) Act 2009, which are very relevant to the demand of city dwellers and urban development, are not implemented in an appropriate manner. In order to improve the public services provided by urban local governments, several urban development projects are being or were implemented by Local Government Divisions (LGD) and local government and engineering departments (LGED) with financial assistance of different development partners and government's own funds. Based on the experiences gained through implemented projects, effective activities for improvement of urban governance have been formulated as a program that has been well accepted. The urban governance improvement programs have been implemented to ensure good governance of those urban local government institutions namely Paurashava for equal, social harmony and planned development. Initiating urban governance improvement, LGD and LGED with financial support of JICA commenced a project named City Government Project (CGP) in 5 City Corporations.

This guideline has been prepared on financial reform point of view to ensure that CCs can raise revenues independently and also allocate their resources for expenditures. To realize cost-recovery of the water supply and waste management sector, it is necessary to introduce “financially independent accounting system.” This enables CC to carry out financial control (management of profit and loss) under one independent account.

2. Justifications

Fundamental policy of financial reform is to enhance sustainable self-financing of CCs. The extent of financial autonomy depends on the extent to which CCs can raise revenues independently and also allocate their resources for expenditures. Upon understanding of fundamental policy, CCs are expected to manage sectors for which CCs are responsible (i.e. water supply and waste management sector) by using their own resources. To achieve such object, an establishment of “financially independent accounting system (self-financing accounting system)” is essential.

The current financial status of the water supply sector in the targeted CCs is breakeven (i.e. tariff can only cover O&M expenditure) or negative. An increase in O&M expenditures accompanying the expansion of relevant facilities in the future will cause deficits in the water supply sector. Waste management sector in CCs has almost same tendencies as water supply sector. It is forecasted that the deficit in these sectors could be serious, ultimately undermining the whole financial sustainability of CCs. Therefore, it is envisaged to introduce financially independent accounting system in the water supply and waste management sector for CCs.

3. Relevant Issues as described in ICGIAP

3.1 Task

To realize cost-recovery of the water supply and waste management sector, it is necessary to introduce “financially independent accounting system.” This enables CC to carry out financial control (management of profit and loss) under one independent account. CC should conduct the following steps.

- Task1: Create financially independent accounting system for two sectors (water supply and waste management)
- Develop a computerized system for financially independent accounting system
 - Open two independent bank accounts, one for each sector
 - Revenues from holding tax (water rate/conservancy rate) and tariff is earmarked for expenditures of O&M and repair/rehabilitation related to those sectors
 - Financial control/accounting transactions (management of profit and loss) will be carried out under one independent account
- Task 2: Carry out cost recovery for O&M cost in water supply and waste management by properly adjusted water tariff and conservancy rate, respectively

3.2 Action by

CC Mayor,
CEO and

head of accounting section with assistance of consultants, PCO

3.3 Time Schedule

Task 1: Within 1st batch of project

Task 2: Within 2nd batch of project

3.4 Indicator

(1) 1st Performance Review

Preparation of financially independent accounting system initiated

(2) 2nd Performance Review

Proper tariff examined

4. Objectives and Indicators

4.1 Objectives

- To realize cost-recovery of the water supply and waste management sector
- To carry out financial control (management of income-expenditures) under one independent account
- To enhance transparency of financial management for these sectors

5. Relevant Organizations, Stakeholders and their roles and Responsibility

5.1 Role of Project Coordinating Office (PCO)

- PCO will engage ICT Company as a subcontractor to develop the Integrated Financial Management System (IFMS) including functions of financially independent accounting system.
- A subcontractor under PCO will install and set up the IFMS to CCs.
- A subcontractor under PCO will provide CCs with training program of utilization of IFMS.

6. Necessary Tasks and Procedures

6.1 Create financially independent accounting system for two sectors (water supply and waste management)

(1) Develop a computerized system for financially independent accounting system

- In the process of development of software for the IFMS, CCs should provide necessary assistance to the subcontractor, such as provision of CC's needs/requirements on the software and information on current ICT environment in CCs.
- IT sections in CCs should make sure that the IFMS is installed to relevant departments/sections and IFMS is functioning properly.

(2) Open one independent bank account for two sectors respectively

- CCs should open two bank accounts in a private bank; one for water supply sector, another for waste management sector.

(3) Deploy accounting officers to water supply section and conservancy department/section

- CCs shall deploy accounting officers to two sections respectively in order for them to carry out daily accounting transactions utilizing IFMS, since accounting transactions on financial independent accounting system are more complicated and workload related to accounting is expected to increase.
- Such accounting officers should work only on their respective sectors.

(4) Revenues from holding tax (water rate/conservancy rate) and tariff is earmarked for O&M expenditures related to those sectors

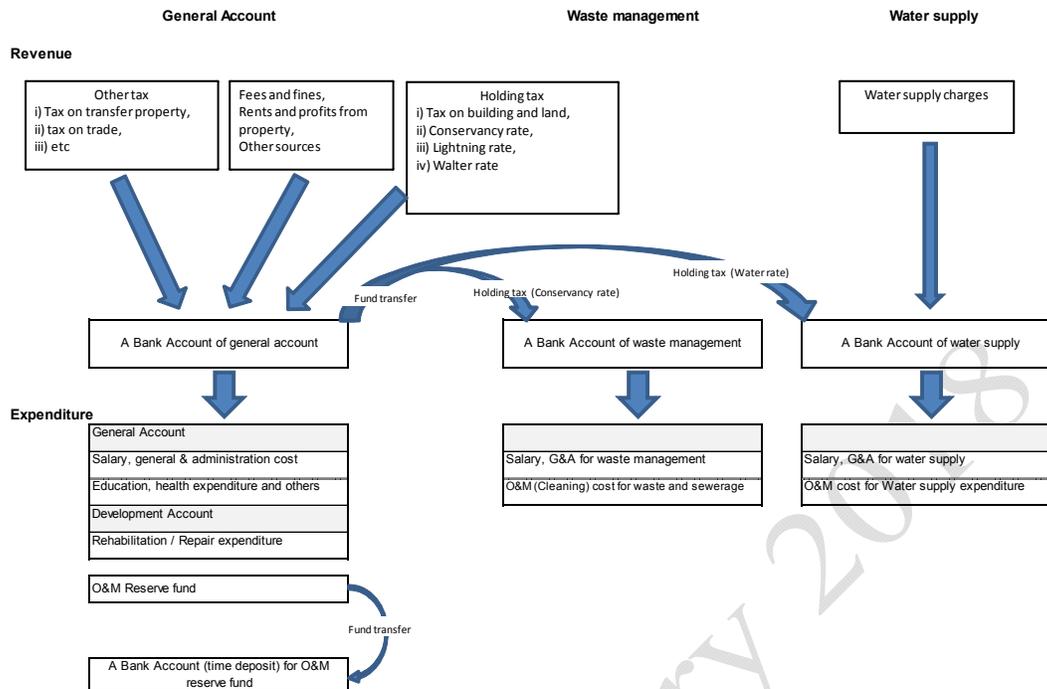
The following is a principle for accounting for financially independent accounting system. Also, a concept of accounting structure and funds flow is shown in the figure below.

Water supply sector

- Revenues from holding tax (water rate) should be transferred from a bank account of CCs' general account to a bank account for water supply sector.
- Tariff should be paid from users to a bank account for water supply sector.
- Such revenue should be earmarked for O&M expenditures for water supply sector. In principle, the said income should not be diverted to expenditures for other purposes.

Waste management sector

- Revenues from holding tax (conservancy rate) should be transferred from a bank account of CCs' general account to a bank account for waste management sector.
- Such revenue should be earmarked for O&M expenditures relevant to waste management sector.



(5) Accounting transactions / financial control (management of income-expenditures) will be carried out under one independent account

- Each section in CCs (water supply section, conservancy department/section), in cooperation with accounting section, should carry out daily accounting transactions.
- Technical Cooperation Project (TCP) will prepare Accounting Manual so that relevant officers can carry out daily transactions without hindrance. TCP will also provide training program to relevant officers in CCs.
- Financial control (management of income-expenditures) will be undertaken under one independent account by using IFMS.

6.2 Carry out cost recovery for O&M cost in water supply and waste management by properly adjusted water tariff and conservancy rate respectively

(1) Financial simulation will be carried out

- Each section in CCs (water supply section, conservancy department/section), in cooperation with TCP, should carry out financial simulation for middle and long term based on the data from IFMS.

(2) Appropriate tariff will be examined, and then financial plan will be prepared by CCs

- CCs should examine appropriate tariff level based on measured rate system which can cover O&M costs (i.e. capital repair, recurrent repair, and regular operation cost) based on the above financial simulation.
- Each section in CCs, in cooperation with CEO and accounting section, will prepare financial plan for middle and long term based on the output from the simulation.

(3) Tariff level will be determined in City Council

- To determine new tariff, City Council in CCs should deliberate newly introduced tariff level, as well as introduction of measured rate system.

(4) Water meters will be installed, and measured rate system will be introduced.

- CCs should install water meters to each holding where water is supplied from CCs when water supply facilities are newly constructed.
- Measured rate system will be introduced to holding where water is supplied from CCs. Then, water charge will be imposed to holdings based on new tariff.

(5) Financial status will be monitored

- Each section in CCs, in cooperation with accounting section, will monitor financial status (e.g. income-expenditures, accounts receivable) on a quarterly basis.

7. Implementation Schedule

Activity	Task / TOR	1st Year				2nd Year				3rd Year				4th Year				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
4.3 Establish integrated computer systems	Task 1: Develop and install the integrated computer systems which linked accounting-tax database-budget (the systems included functions of Financially Independent Accounting System and Reserve Fund for rehabilitation) in cooperation with PMO																	
	Task 2: Ensure implementation of the integrated computer systems by training staffs in CC (the systems included functions of Financially Independent Accounting System and Reserve Fund for rehabilitation)																	

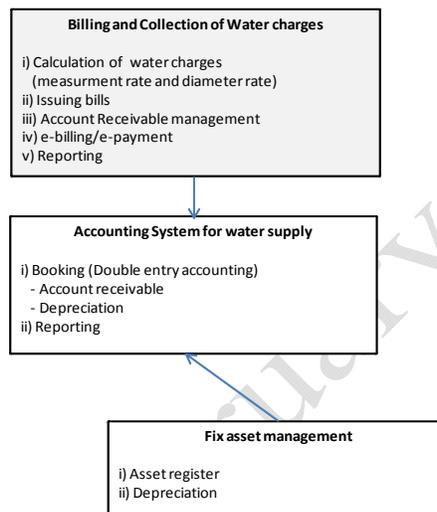
8. Cost of Implementation (if necessary)

There is no additional cost to execute this task.

Annex I Concept of ICT system for water supply sector

Financial Management System for Water supply sector is a part of Integrated Financial Management System (IFMS), and it is a module for transactions related to Water supply sector of CC. This module consists of three sub-systems; (1) Billing and Collection System for water charge, (2) Accounting System for water supply, and (3) Fixed asset management System. Each sub-system is a stand-alone system. Data exchange between the sub-systems is planned only between (1) and (2). Between another sub-system, necessary data input one from another will be done through accounting transaction in manual.

The Module with three sub-systems will be located in water supply section, and main users will be accounting officers in the water supply section.



(I) Billing and Collection System for water charge

i) Outline

Billing and Collection System for water charge are a sub-system for a comprehensive management system for water charge, which enable to carry out (a) calculation of water charge, (b) issuing bills, (c) account receivable management, (d) e-billing/e-payment, and others.

Billing/collection software exists in the targeted CCs. However, it is essential to update a system in order to add several required functions such as calculation of measurement rate basis water charge¹, e-billing/e-payment and so on. Taking into account demand for computerization, a *Billing and Collection System for water charge* should be newly developed through modification of the existing systems.

ii) Function

- To calculate water charge by both measurement rate and diameter rate method
- To issue bills
- Account receivable management:
 - To recognise collection status of each subscribers (e.g. paid amount, arrears and others)
 - The system should have functions of swift tracking, reference, amendment, monitoring.
- e-billing/e-payment
- To output a bundle of data (related to paid/unpaid) to *Accounting System for Water supply sector* in order to book received/account receivable monthly basis in *Accounting System for Water supply sector*.

¹ The existing billing and collection system can deal with only calculation for diameter rate basis water charge.

- To generate required reports
- iii) Reporting
 - Bills for subscribers. New format should be developed by referring current format since the current one is design subject to diameter rate basis.
 - A slip of total paid/account receivable (monthly basis)
 - Others (to be determined through requirement survey)

(2) Accounting System for Water supply sector

i) Outline

Accounting System for Water supply sector is a sub-system for all accounting transaction related to water supply sector of CC. A method of bookkeeping is a double-entry accounting system. Accrual basis will be partially applied to accounting transaction in water supply. Its main features are recognition of account receivable and depreciation cost. To recognise exact collection status from subscribers, account receivable is applied. Also, depreciation cost is recognised as expenditures to achieve cost recovery for initial investment costs.

ii) Function

- To book relevant accounting transaction as a double entry bookkeeping. The system should have functions of swift tracking, reference, amendment, monitoring and others.
- As account code will have two layers (i.e. first layer code - second layer code), data input window should has two input cells.
- Data input (received/account receivable monthly basis) from *Billing and Collection System for water charge*.
- To generate required reports

iii) Reporting

- Cash book
- General ledger
- Trial Balance Sheet
- Statement of income and expenditure
- B/S, Income Statement, Cash flow statement
- Others (to be determined through requirement survey)

(3) Fixed Asset Management System

i) Outline

Fixed Asset Management System is a sub-system for registering newly constructed water supply facilities and other fixed assets owned by water section (vehicles and equipments), calculate depreciation cost. Based on the result of calculation, relevant transactions (depreciation cost, accumulated depreciation, book value) will be booked in *Accounting System for Water supply sector*.

ii) Function

- Asset register for newly constructed facilities and other fixed assets
- Calculation for depreciation cost, accumulated depreciation, book value
- To generate required reports

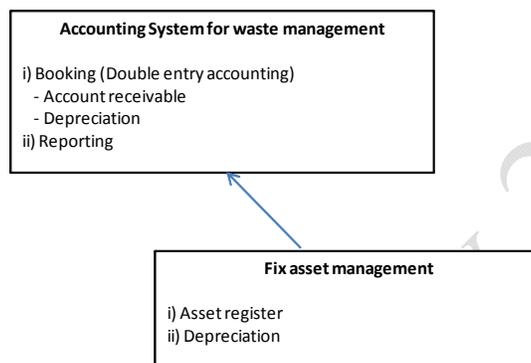
i) Reporting

- Asset registration (acquisition cost, depreciation cost, accumulated depreciation, book value, useful life, depreciation rate, and so on)
- A slip of fix asset transaction (acquisition cost, depreciation cost, accumulated depreciation, book value)
- Others (to be determined through requirement survey)

Annex II Concept of ICT system for waste management sector

Financial Management System for Waste management sector is a part of Integrated Financial Management System (IFMS), and it is a module for transactions related to waste management sector of CC. This module consists of three sub-systems; (1) Accounting System for waste management and (2) Fixed asset management System. Each sub-system is a stand-alone system. Data exchange between the sub-systems is not planned in short term perspective, necessary data input one from another will be done through accounting transaction in manual.

The Module with two sub-systems will be located in conservancy department/section, and main users will be accounting officers in conservancy department/section.



(1) Accounting System for Waste management sector

iv) Outline

Accounting System for Waste management sector is a sub-system for all accounting transaction related to waste management sector of CC. A method of bookkeeping is a double-entry accounting system. Accrual basis will be partially applied accounting transaction in waste management. Its main features are recognition of account receivable and depreciation cost. To recognise collection status of conservancy rate from tax payers, account receivable is applied. And also, to achieve cost recovery for initial investment costs, depreciation cost is recognised as expenditures.

v) Function

- To book relevant accounting transaction as a double entry bookkeeping. The system should have functions of swift tracking, reference, amendment, monitoring and other procedures.
- As account code will have two layers (i.e. first layer code - second layer code), data input window should have two input cells.
- To generate required reports

vi) Reporting

- Cash book
- General ledger*
- Trial Balance Sheet
- Statement of income and expenditure
- B/S, Income Statement, Cash flow Statement
- Others (to be determined through requirement survey)

(2) Fix Asset Management System

iii) Outline

Fix Asset Management System is a sub-system for registering newly constructed waste management facilities and other fixed assets owned by conservancy department (vehicles and equipments), calculate depreciation cost. Based on the result of calculation, relevant

transactions (depreciation cost, accumulated depreciation, book value) will be booked in *Accounting System for waste management sector*.

- iv) Function
 - Asset register for newly constructed facilities and other fixed assets
 - Calculation for depreciation cost, accumulated depreciation, book value
 - To generate required reports

- ii) Reporting
 - Asset registration (acquisition cost, depreciation cost, accumulated depreciation, book value, useful life, depreciation rate, and so on)
 - A slip of fix asset transaction (acquisition cost, depreciation cost, accumulated depreciation, book value)
 - Others (to be determined through requirement survey)

Final_February 2018