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Government of Bangladesh  
Ministry of Local Government  
Rural Development and Cooperatives  
Department of Public Health Engineering

Government of the Netherlands  
Ministry of Foreign Affairs  
Directorate General of  
International Cooperation

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**NETHERLANDS-BANGLADESH DEVELOPMENT CO-OPERATION PROGRAMME**  
**DPHE-WATER SUPPLY AND SANITATION PROJECTS**

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Programme Office, Netherlands Assisted Water Supply & Sanitation Projects

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# Management Plan for Drainage and Sanitation

Programme Office / October 1993

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### List of acronyms:

18DTP	18 District Towns Project
DPHE	Department of Public Health Engineering
LGRD	Local Government and Rural Development
PCS	Pourashava Conservancy Section
PHS	Pourashava Health Section
PO	Programme Office
PWSS	Pourashava Water Supply Section
WSSC	Water Supply and Sanitation Surveillance Committee

## 1. Introduction

Disposal of solid waste and waste water is one of the most ignored and least studied aspects in the sanitation sector. Absence of facilities or inadequate facilities for the appropriate disposal of waste (solid wastes or waste water) is one of the main reasons for the poor sanitation in the towns. On the other hand, improper collection/ cleaning of solid waste/ waste water and the knowledge and attitude towards the use of the facilities is another main problem in this regard.

Very recently, some effort has been taken to address this problem in the towns. Solid waste disposal and sanitary drainage have been acknowledged as an inseparable component in the integrated approach for public health improvement and environmental betterment. Specially, the Dutch Assistance has provided for construction of drains, supply of sanitary latrines along with the improvement of water supply systems in the Pourashava areas. The other part of assistance in this sector, known as non-technical, include for example: increasing the usage water rate for all purposes against payment, promoting the use of sanitary latrines and drains, implementing hygiene education and ensuring the sustainability of the services, institutional development and mass participation.

Under 18 DTP a proper drainage system has been designed. A certain portion of that is constructed through DPHE to extend appropriate facilities. In addition, every Pourashava inherits some drains constructed in past, and is also constructing more sanitary drains assisted by other projects. Along with the drain cleaning, waste disposal is also a related traditional responsibility for Pourashava and to perform this task there exists a section under Pourashava, namely the Conservancy Section, in short: PCS. As per the objective of the 18 DTP, PCS needs to be strengthened to perform its assigned activities in a sustainable manner, as a section of Pourashava with a view to improving the hygiene and environmental condition and conserving the same.

As such an investigation is required to study the existing institutional arrangement, its compatibility and capability to perform the assigned responsibility, the internal and external constraints, etc. Also, it needs to explore a suitable and workable organizational set up which will be capable to render a sustainable expected service.

It should also be remarked here that building of latrines as is being done under 18DTP should be regarded as a once only activity by the PCS. In reality this is an activity which is now being done on a large scale by private contractors in almost all the towns where 18DTP is active. It is therefore not necessary anymore for the project to construct latrines as a project activity. If latrines have to be provided in a subsidized way then it would be better to purchase these from the private producers and to distribute them to the beneficiaries at whatever subsidized price is set. Thus the PCS will remain with what is regarded as core-tasks which are further spelt out in this report.

## 2. Objectives

Main objective of the paper is to measure the problems and prospects of the existing Conservancy Section and to identify the suitable arrangement for strengthening it to ensure efficient conservancy service.

The specific objectives are as follows:

- i) To produce an activity plan for strengthening of the Conservancy Section which will cover all the following areas:
  - a) Legal
  - b) Organizational structure
  - c) Financial
  - d) Operational procedure
  - e) Beneficiaries involvement
  
- ii) To develop the following tools to ensure the effective operation of the PCS :
  - a) Appropriate motivational campaign plan
  - b) Job description of the PCS staff
  - c) Management and operation procedure of PCS
  - d) Training manual for the supervisory staff of PCS (Conservancy Inspector, Supervisor)
  - e) Management Information System

### 3. Method & Approach

With a view to achieving the above objective, the approach of study was mainly interpersonal and group approach which entail different methods at different steps. A composite diagram can represent its process of resolution involving different factors through various steps (see figure 1).

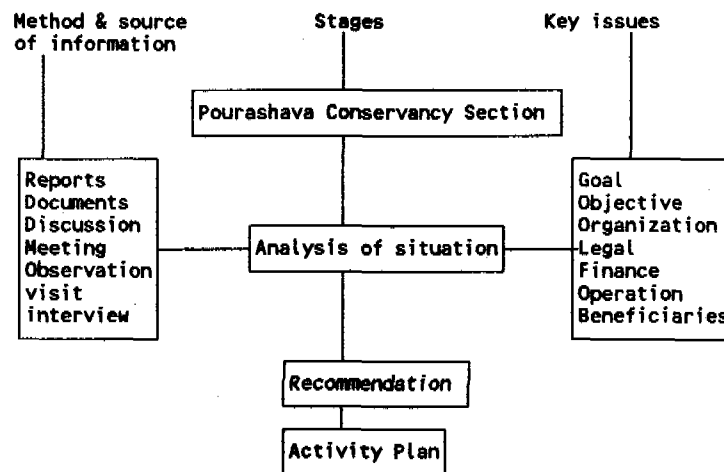


Figure 1: Process of Resolution

### 4. Pourashava Conservancy Section

The Pourashava Conservancy Section is a section under Pourashava assigned to a traditional work of keeping the town clean. The pourashava itself a local government institute managed by an elected Pourashava Council under the Ministry of Local Government & Rural Development. The management of Pourashava is regulated by the Pourashava Ordinance, 1977. The Pourashava Ordinance 1977 assigned the following responsibilities to the PCS :

- i) Keeping the Pourashava drainage clean
- ii) Keeping the roads clean by regular/periodical collection of solid waste/garbage and sweeping
- iii) Maintaining a healthy/hygienic/sanitary condition in the Pourashava.

In addition to the above mentioned responsibilities, 18 DTP has extended its area of work constructing a certain portion of drainage for the improvement of the public health & environment. After completion of the construction of the drainage, regular cleaning of the drain will be on the shoulder of PCS. The overall objective of 18 DTP is to strengthen the PCS so that it can provide sustainable service as a section of Pourashava.

Earlier, 18 DTP acknowledged a government approved structure of management of this section wherein suggestion was made to fill up some vacant positions of supervisory staff and to increase the number of sweepers. The 18 DTP also recommended to provide for separate account keeping, separate budgeting, separate space for office accommodation for PCS. The Programme Office suggested the following structure for a better operation (see figure 2):

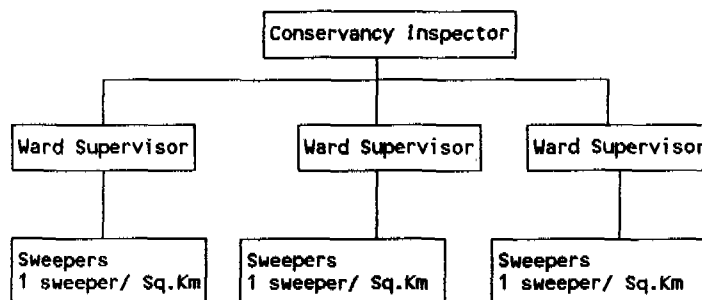


Figure 2: Proposed PCS structure in the 1990 Project General Report

As the pourashava is divided into 3 wards, cleaning activities of PCS were suggested to be divided wardwise under the supervision of one ward supervisor who can be assigned with other health related activities. The Pourashavas could not implement this suggestion as yet.

## 5 Situation Analysis

### 5.1 General Observations

- There is a tendency of Pourashava authorities to shift responsibility on other shoulders for the rapid change of authority ( frequent election and its transitional management)
- Pourashavas are quite indifferent to hear about the programme as they are not directly involved in the physical part of the programme
- Pourashavas expose a very indifferent attitude about the programme activities, as PO will do everything in regard to the programme
- Pourashavas are not interested in the software area
- Pourashavas are reluctant to accept any change
- Pourashava cannot take decisions with regard to structural changes without approval from the ministry.

## 5.2 Organizational situation of the PCS

- PCS has not been organized as per the recommendation of PO
- It does not have sufficient staff for providing service
- There is no work plan
- Staff do not have an idea about the controlling authority
- PCS does not have the necessary equipment and tools
- PCS has a big truck, which is expensive and unsuitable for the small town for operation and maintenance
- PO has recommended organizational set up but no effective step has been initiated for the same.

## 5.3 Management situation of the PCS

- Traditional management practices prevail
- PCS is an integrated part of the total Pourashava management
- In most cases the activities of the PCS are supervised by other persons, belonging to different sections
- There is generally a shortage of staff & sweepers
- Section heads are generally absent
- There is poor managerial ability
- Chain of command is unclear
- Staff are uncertain about pay & allowance
- Staff generally have only part-time involvement with the job
- There is no systematic, specified job description
- No training for increasing efficiency neither for supervisor nor for sweepers has been conducted
- There is a poor supervision & monitoring system of the activities
- There is no reporting system about the activities for the information of the pourashava top management (Chairman, CEO, Secretary)
- There is no knowledge about the objectives & activities of the 18 DTP
- Top management is unaware & indifferent to the management of PCS
- The activities of PCS are treated by its staff as unimportant and insignificant
- Pourashava authorities are reluctant to fill up the vacancies due to financial constraints
- PCS staff are often frustrated due to the uncertain and irregular salary payment by the authority.

## 5.4 Accounts management and financial position of the PCS

- A conservancy rate is collected as a part of holding tax
- Pourashava's holding tax collection rate is usually very low & irregular which determines the financial position of PCS
- No separate bank account has been opened and maintained for PCS
- No separate account system is maintained for the section
- The Pourashavas find it expensive and useless to maintain separate account system as it needs more manpower
- No detailed budget is made for the section



- Expenditure of the section (salary & operation costs) is much higher than that of the collected conservancy rate
- Salary payment of the staff is uncertain
- Due to the low income, procurement of equipment, tools & vehicles is not done
- Pourashava is neither active nor serious to collect conservancy rate along with holding tax.

#### 5.5 Beneficiaries and the PCS

- Beneficiaries are not aware about cleanliness and hygienic environment
- They do not know about the objective of 18 DTP specially in regard to PCS
- They do not know how to use drains, they throw solid waste in the drains instead of in the dustbin
- They are not aware about the bad effect of waste water, which is why they are reluctant to make sullage drain, as this involves expenditure, too
- Due to inadequate number or complete absence of dustbins, they throw solid waste along with polyethylene into the drains
- They mostly have high expectations from the Pourashava but are reluctant to contribute in return
- There is poor participation in the project activities.

### 6. Recommendations

#### 6.1 Organizational structure for the PCS

Pourashava is controlled by the Ministry of LGRD. It cannot change anything of its structure without the approval of this ministry. Moreover, it has other constraints with regard to knowledge and attitude, as well as financial and environmental matters which do not allow Pourashavas to accept any change immediately. Earlier, 18 DTP suggested to fill up some vacant position in PCS, but Pourashavas could not comply with the recommendation due to following reasons: ministry's embargo and financial constraint. Therefore, any recommendation for an ambitious innovative organizational set up may not be acceptable from the viewpoint of feasibility and implementation. In addition to that, under 18 DTP, there is no provision to separate PCS like PWSS for its individual development and sustainability. It is the objective that the advisory assistance will be provided to PCS to strengthen it, keeping it within and under the control of Pourashava authority. Moreover, the activities of PCS are so simple and straightforward that it does not require any complex structure. As such, the structure proposed earlier by the 18 DTP may exist as an ideal form. This structure will not be applicable for the present mostly rural-based pourashavas where conservancy has a little role to play. Therefore, Pourashava should adapt this structure as per its requirements. One Conservancy Inspector will head the section, one Supervisor will be responsible for the cleanliness and under him a group of sweepers will work. To do the transportation of waste, one or more drivers with a helper will work. The Conservancy Inspector will plan the work with the assistance of Supervisor and he/she will implement it getting approval from the assigned superior authority (Secretary, Chief Executive Officer).

The recommended structure of the section in pourashava is shown below :

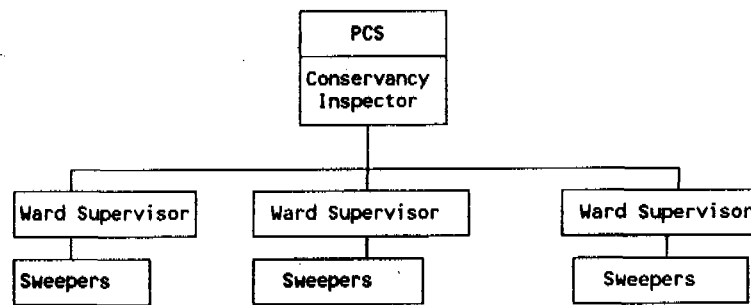


Figure 3: Recommended PCS Structure

In this structure, the PCS will have the same status as other Pourashava sections.

The responsibilities of the PCS will remain the same other than some activities recommended by PO for its better management.

In case of manpower assessment, the actual urban area and its requirements for cleanliness should be considered. It has been observed that most of the pourashava areas (around 70%) under 18 DTP are rural, where need for extra efforts for cleanliness is minimum. Considering the actual area for conservancy, the recommended structure may involve excess manpower which will not be economic. However, in any case, pourashavas need a cost-effective manpower assessment for implementation due to its economic insolvency. For the cost-effective manpower employment it is first necessary to assess the conservancy workload of the pourashava. After the workload assessment the employment can be done following one of the ways noted below as feasible:

- a) Employment based on work volume
- b) Contract service based on volume & quality of work.

#### 6.1.1 *Employment based on work volume*

It is understood that most of the pourashavas can reduce the number of supervisors & sweepers following this type of employment. In this case, one supervisor instead of three, with a limited number of sweepers can perform the cleaning job effectively. However, the number of supervisors and sweepers will be determined by the work load. It needs strong supervision and effective use of office hours for making this method successful. Transportation of waste can be done by the selected sweepers. It can be noted here that the volume of collected waste in these pourashavas can be easily transported by push cart, van or bullock cart. Moreover, road condition of these pourashavas are feasible for bullock cart, whereas a big truck cannot run through all the areas (see figure 4).

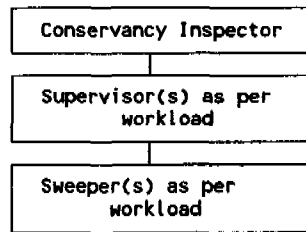


Figure 4: First alternative for a PCS structure

#### 6.1.2 *Contract service based on volume & quality of work*

Following this process, the requirement of supervisor or the number of supervisors will remain flexible and the pourashavas do not need to employ sweepers individually. One or more than one group of sweepers will perform cleaning work on contract, following a workplan and work schedule provided by PCS, which will be supervised by the Conservancy Inspector or Supervisor of PCS. Ideally, for most of the pourashavas, one supervisor can perform all the supervision works of a pourashava and this system will be cost effective. Transportation of waste can be included in the contracted cleaning work. Transport like push cart, bullock cart or van can be provided to the contracted group.

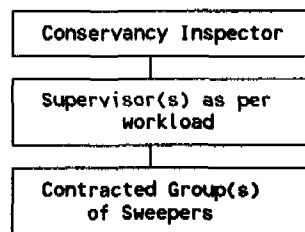


Figure 5: Second alternative for a PCS structure

6.1.3 *Proposed key functions and activities in Conservancy Section during the project period*

Key function

Key activities

Campaign for clean environment

- form ward committees in association with WSSC and PHS, making Ward Commissioner head.
- prepare schedule of campaign
- organize ward meeting/ street meeting
- distribute and stick leaflets & poster in the town
- organize house-to-house visits
- listing of the households for sullage connection
- motivate the beneficiaries for making sullage connection.

Disposal of solid waste & waste water

- prepare the work plan for cleanliness and get it approved by the authority
- prepare an areawise schedule for cleanliness
- distribute work among the supervisor
- prepare a schedule of waste transportation to sanitary field
- prepare ward-wise performance report

Maintenance

- identify the place/spot of drain or road for repairing & inform the pourashava authority
- serve notice to the beneficiaries for constructing sullage connection as per the Pourashava Ordinance, 1977
- identify the instrument & tools to be repaired and replaced and inform the authority for the same.

Key function

Key activities

Construction of dustbins, sullage drains & sullage connections

- assess the need & identify the place for constructing dustbins, drain and inform the authority
- provide list to pourashava authority for taking action against persons who fail to construct sullage connection in the stipulated time as per the notice

Training & human resource development

- organize need-based training for skill development
- organize training for supervisor
- participate in health education & awareness building activities with PHS & WSSC.

Management Information System

- record daily performance report
- prepare a monthly report for Pourashava authority & Programme Office.

## **7 Performance indicator**

The type of services rendered by the PCS are not always quantifiable by nature. It is understood that continued and improved conservancy service will be the main indicator of performance. During the Project period, however, the following criteria will be taken as the indicators for performance of PCS:

- Length of roads earmarked for sweeping, compared to road actually swept. Frequency of sweeping.
- Length of drain earmarked for cleaning and actually cleaned. Frequency of cleaning.
- Number of dustbin/spot for dumping solid waste required versus available/constructed.
- Report of damage.
- Number of tools, equipment, van actually required versus available.
- Time and cost required for adequate repair and maintenance versus actually spent.
- Number of sullage connections to be constructed by beneficiaries / actually constructed.
- Progress of sullage connection construction.
- Number of health awareness building meetings with beneficiaries / actually held.
- Number of training of supervisor / actually held.
- Number of training of sweepers / actually held.
- Management Information System.

## 8 Proposed actions to be taken by the Programme Office

### Main areas

### activities required

Understanding session

- holding meeting with Chairman, Pourashava council and its senior officials to discuss about the proposed development program of PCS.
- prepare a tentative schedule for next course of actions.

Initiation for filling up the vacant position/ rearrangement/retrenchment of the additional staff/ sweepers

- review of the present staff position & sweepers force on the basis of the workload
- determine the number of staff & sweepers to be recruited or retrenched.
- review the legal & financial obstacles for filling up positions or retrenchment
- recommend for recruitment/ retrenchment.

Campaign on awareness about cleanliness and use of drains & dustbins

- prepare a campaign plan with materials
- have Ward Campaign Committees formed, comprised of PCS, PHS & WSSC and the Ward Commissioner as head
- prepare schedule of campaign in consultation with the committees

Main areas

activities required

Campaign on awareness about cleanliness and use of drains & dustbins (cont.)

- recommend for house-to-house visits by ward committee as a part of campaign
- get prepared list of households for sullage connection
- have beneficiaries notified by the Chairman for sullage connection in a stipulated time as per the Pourashava Ordinance 1977
- have beneficiaries motivated for sullage connection by ward committee
- get follow-up done for sullage connection by Ward Committee
- recommend for punitive action by the chairman against the beneficiaries who fail to construct sullage connection in time

Procurement of equipment, tools van

- review the existing equipment, tools, van
- determine the present need
- discuss with the chairman about the fund for the procurement
- get procured or suggest alternative efficient use of existing equipment, tools & van.



Main areas

activities required

Job description

- prepare the Job description of Conservancy Inspector, Ward Supervisor & Sweepers
- provide job description to the respective staff
- orient the staff on job description

Work plan and supervision plan

- prepare a work plan and supervision plan for the Conservancy Inspector
- orient the same for understanding
- provide the work plan and supervision plan for implementation.

Management Information System

- prepare a format for monthly MIS
- brief the Chairman & senior officials concerned about the importance of MIS
- orient the Conservancy Inspector about its preparation
- implement MIS.

Training needs assessment

- compare qualifications and experience of staff with requirements for their duties
- identify additional training needs.

Main areas

activities required

Training module

- prepare a training module for the Conservancy Inspector and Supervisors on Basic management issues, including: supervision & monitoring, reporting, filing and MIS.

Training of the staff

- prepare training schedule for the CI & Supervisor
- organize training for CI & supervisor
- supervisor to organize training of the sweepers for proper & efficient work.

Office accommodation & furniture

- review the present condition of accommodation & furniture
- determine the requirement of space & furniture
- discuss with the Chairman to ensure the required facilities.

Finance

- discuss with senior officials to ensure a separate accounts of the PCS (salary, operation cost & repair cost of tools, equipment etc)
- discuss with Chairman to ensure a detail yearly budget of the PCS.
- discuss with chairman about the regular staff salary payment.