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SOLID WASTE MANAGEMENT THROUGH PARTNERSHIPS: A STUDY ON THE ROLE OF FACILITATING AGENCIES

BY

SHAIFIUL AZAM AHMED

A Doctoral Thesis submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy of Loughborough University

September 2004

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Abstract

This research examined the role of facilitating agencies in promoting public-private partnerships (PPP). Bangladesh’s solid waste management sector was taken as a case study. As is the case in many developing countries, municipalities in Bangladesh could not cope with rapid urbanization resulting in a large proportion of solid waste remaining uncollected. The private sector took the opportunity to fill this gap in service. They started providing house-to-house garbage collection and charging citizens for this service. Therefore, two streams of service providers—public and private—became active in the sector. In some cities the two streams remained separate without coordination. In other cities the two sectors formed partnership with support from facilitating agencies. This research investigated the roles played by the facilitating agencies. Three broad aspects were investigated: (1) necessity of facilitating agencies, (2) the role of a facilitating agency in sustainability of partnership, and (3) the role of a facilitating agency in effectiveness of partnership. Four cities were included in the study with varying degree of PPP and facilitation. Primary data were collected from public and private sector staff, elected representatives, and citizens through interview, questionnaire survey and observation.

PPP is a promising mechanism for urban service delivery. This study on the role of facilitating agencies may illustrate how to achieve and sustain PPPs in developing countries.

Key words: public-private partnership, facilitating agency, solid waste management, developing countries, Bangladesh, urban service, public sector, private sector.
Dedication

Dedicated to my mother Hasna Banu and my father Abdul Awal
Acknowledgement

The completion of this thesis was only possible through the help, encouragement, and assistance of a number of people. First of all, I am greatly indebted to my supervisor Dr. S. Mansoor Ali, who inspired me to take this journey of learning. His advice and guidance was a constant source of encouragement. Other members of the Water, Engineering and Development Centre (WEDC) have also provided support. In particular, I am grateful to Dr. M. Sohail Khan for his useful advice and encouragement. I also thank Ms. Tricia Jackson for her advice and assistance in searching literature.

In Bangladesh, Mr. Hasnat Iftekhar Hossain provided invaluable assistance in carrying out the fieldwork. I am grateful to the team of young people who conducted data collection. My special thanks to the community members, elected representatives, and respondents from various organizations who freely shared data and information. I particularly thank Mr. Monir Alam Chowdhury of PRISM Bangladesh for sharing his insight.

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I deeply appreciate the sacrifice made by my family members for my study. My parents, wife Julie, and daughters Tahira and Muntaha, all endured my negligence and absence with patience. I could not have undertaken this research without their support and encouragement.

Above all, I am thankful to Almighty Allah, who provided me the opportunity and strength to carry out this work.
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Chapter 1

1 INTRODUCTION

1.1 Introduction to the study

Solid waste management (SWM) has become a priority urban sanitation issue in recent times. This is mainly due to the global trend of urbanization. The world’s urban population has been rising steadily. As a result, a great demographic shift is taking place in the world. For the first time in history, more people are expected to be living in urban areas than rural areas. The vast agglomeration of people in the cities is giving rise to a huge volume of solid waste. Managing the great quantity of solid waste effectively and efficiently is a challenging problem.

No city can avoid addressing the solid waste problem. Inadequate SWM poses a serious public health hazard. Poor refuse disposal encourages fly breeding. Drains blocked with garbage cause water logging and provide breeding ground for mosquitoes. Piles of uncollected garbage encourage rodent breeding, promoting rodent-borne diseases. The U.S. Public Health Service has identified 22 human diseases that are associated with improper SWM (Hanks, 1967, cited in Tchobanoglous et al., 1993). The outbreak of plague in Surat, India in 1994 was partly due to uncollected garbage piles (Tysmans, 1995). It is a testimony to the public health hazard resulting from poor SWM. Solid waste generated in a city must be collected and disposed safely through proper SWM to prevent environmental pollution and spread of diseases.

SWM basically constitutes the operations of collection, transportation and disposal. The apparent simplicity, however, is deceptive. SWM is a complex and costly operation. It often consumes a large portion of a city’s budget. Cities employ a large number of workers, engage a fleet of vehicles, construct and operate costly landfill sites, and bear other related expenses for SWM. Cities in the developed countries have financial resources and skills to handle the solid waste problem adequately. The problem is more acute in developing countries. This is because the rate of urbanization is faster in the developing countries. There is a corresponding rapid increase in the generation of solid waste. At the same time, the municipalities in developing countries typically lack the financial resources and skills needed to cope with this crisis. This raises the important issue of how to deliver quality service in spite
of the financial and skill constraints of the public sector. Complacently overlooking the shortcomings of the public sector in delivering quality service poses a risk to public health. It is, therefore, imperative to search for alternatives to traditional service delivery mechanism to keep the cities in developing countries healthy and liveable.

Public-private partnership (PPP) is a potential alternative to the traditional service delivery by the municipalities or the public sector alone. Under PPP arrangement, both public and private sector agencies share the responsibility in providing service. The arrangement can take many forms, but the common distinguishing feature is a shared governance structure and decision-making process. In such partnership, the private sector's dynamism is combined with the public sector's custodianship of public interest. In theory it seems like a natural and effortless merger of interests. In practice, attaining PPP, especially within the institutional constraints present in developing countries, is not easy.

The experience in Bangladesh illuminates the typical difficulties in attaining PPPs; but it also has interesting cases of success. As in many developing countries, municipalities in Bangladesh could not cope with rapid urbanization resulting in a large proportion of solid waste remaining uncollected. The private sector took the opportunity to fill this gap in service. They started providing house-to-house garbage collection and charging citizens for this service. Therefore, two streams of service providers—public and private—became active in the sector. In some cities the two streams remained separate without coordination. In other cities the two sectors formed partnership with support from third-party facilitating agencies. The involvement and the success of the facilitating agencies varied between cities, presenting an opportunity for detail study of the effect of facilitation on PPP.

Using the opportunity, this research investigated the delivery of SWM services through PPP and the role played by the facilitating agencies in promoting this alternative form of service delivery. Three broad aspects were investigated: (1) necessity of facilitating agencies, (2) the role of a facilitating agency in sustainability of partnership, and (3) the role of a facilitating agency in effectiveness of partnership. Four cities were included in the study with varying degree of PPP and facilitation. Primary data were collected from public and private sector staff, elected representatives, and citizens through interview, questionnaire survey and observation.
PPP is a promising mechanism for urban service delivery. This study on the role of facilitating agencies may illustrate how to achieve and sustain PPPs in developing countries.

1.2 Background of the study

1.2.1 The global problem of solid waste management

Solid waste management has become a global concern due to the rapid global urbanization. The world's urban population reached 2.9 billion in 2000 and is expected to rise to five billion by 2030. The rate of urbanization has been increasing in recent years. Only 29% of the world population lived in urban areas in 1950. This proportion rose to 47% in 2000. By 2030, urban dwellers are projected to account for 61% of the world's population. At the current urban growth rate, the number of urban and rural dwellers in the world will become equal by 2007. What is more striking, however, is that almost all the population growth of the world between 2000 and 2030 is expected to be absorbed by the urban areas of the less developed regions (UN, 2004).

The rising urban population is generating solid waste at ever-faster rate. It was estimated that about 1.3 billion metric tons of municipal solid waste was generated globally in 1990 (Beede and Bloom, 1995). At present the yearly production of solid waste in the world may be about 1.6 billion metric tons. A considerable amount of money goes into managing such huge volume of solid waste. Asian countries alone spent about US$ 25 billion on solid waste management per year in the early 90s; the figure is projected to rise to around US$ 50 billion by 2025 (Hoornweg, 1993). These figures testify that solid waste management has become a large, complex and costly service.

1.2.2 Solid waste management in developing countries

Developing countries have the double burden of rapid urbanization and resource limitation. As a result, the public sector municipalities are unable to meet the demand for SWM. For example, it is estimated that only 50% of the solid waste generated in Dhaka city is collected by the Dhaka City Corporation (DCC, 1999). The estimate is even lower for Karachi for which the figure is only 33% (URC, 2004).

The reason that cities in developing countries are not completely overwhelmed by the uncollected solid waste is the active presence of a multitude of people whose livelihood is connected to solid waste. These people include waste pickers, itinerant waste buyers, and
even recycling factories. They, however, collect only items that have some value, either as biomass fuel or recycling. The biodegradable organic part of the solid waste that has no such value remains uncollected. So the citizens ultimately face a deplorable environmental problem with the putrefying mass if the public sector is not able to provide adequate solid waste collection service.

Frustrated with poor response from the public sector, activists, community based organizations (CBOs), entrepreneurs or NGOs in many countries resort to providing solid waste collection service. These micro-enterprises mainly provide primary collection, picking up garbage from house to house and depositing those into secondary points, for a nominal service charge to the citizens. For example, such primary collection was started in a neighbourhood of Dhaka city in 1986. The house-to-house garbage collection by tricycle vans was very successful in cleaning up the neighbourhood of garbage heaps. The citizens were happy with the cleaner environment for which they only had to pay a small service charge. Today hundreds of micro-enterprises provide this service throughout Dhaka city. The secondary collection and final disposal is provided by the public sector Dhaka City Corporation.

The two sectors are, therefore, natural allies as they are dependent on each other for providing SWM service to the citizens. It is, however, interesting to note that in many developing countries the public sector and the private sector often do not form partnership. The two sectors co-exist and serve the citizens without much interaction between themselves. Partnership would be expected to occur spontaneously for such closely dependent operators as it offers mutual benefits. But in reality such PPP for solid waste management is difficult to reach. A number of barriers including lack of institutional capacity, experience or incentive may prevent the formation of mutually beneficial partnerships.

1.2.3 Public-private partnerships in SWM

PPPs came into being through a series of events. Until the late 1970s, private sector participation was limited to government and development agencies awarding contract to private agencies. There was limited collaboration outside the contractual agreement. By the 1980s, globalisation, free market, and privatisation become the new economic thrusts. Soon the poor performance of government agencies and their inability to adapt to market processes
became apparent. As a result, a wave of deregulation and privatisation was pursued across the globe in the 1980s and 1990s. Subsequently, international organisations started to champion the greater role of the private sector in providing public services efficiently and cost-effectively.

British policies towards the private sector have been the forerunners in this transformation. In the 1980s the British government divested its interest in public services such as water, gas, electricity and railways. Disillusionment with some of the results has now led to a more moderate approach where the government’s role is to regulate and safeguard the public good. The private sector is now encouraged to form joint ventures with the public sector. Such PPPs are promoted to provide high-quality public services including some SWM services (Thomas and Curtis, 2003).

The application of PPP in SWM has been to a different degree between the developed and developing countries. Many types of partnerships are being practised in developed countries including such novel arrangement as entities owned by municipalities but operated as commercial companies (Vasuki, 2004). However, in many developing countries, forming such partnerships is faced with hurdles. The institutional and legal environment may not be conducive, experience and skills may not be available or other unknown factors may act as impediments.

1.2.4 Promotion of PPP in SWIVI by facilitating agencies in Bangladesh

PPP for SWM was not promoted by the government, the public sector or the private sector in Bangladesh. Instead, it was promoted by third-party external agencies that acted as facilitating agencies to assist the public and private sector agencies to achieve PPP. Some of these facilitating agencies are bi-lateral development agencies; some are multi-lateral specialised agencies; while others are not-for-profit entities. These facilitating agencies worked in various cities of Bangladesh with varying degrees of involvement in promoting PPP for SWM, while in some cities there has been no involvement of facilitating agencies.

This backdrop provides a rich ground to investigate the role of facilitating agencies. Some studies have been carried out by the facilitating agencies themselves to assess the results of PPPs (Huq, 2002; Danida, 2000; Saha, 2004). However, these were mainly conducted from the point of view of those agencies, and were meant to assess their own progress.
1.3 Research problem statement

The key research area of this study is the delivery of SWM services through PPP and the role of facilitating agencies in promoting and sustaining such PPPs in Bangladesh. The Solid waste management sector was taken as a special case to investigate this topic. The primary research question was “why the role of a facilitating agency is necessary for sustainable partnership of private and public sector in delivering solid waste management services in Bangladesh?” In exploring this question, the study investigated PPP in the context of SWM in an interdisciplinary way using various lenses such as applied management, sociology, and political economy, all the while maintaining a practitioner’s perspective.

1.4 Justification and Purpose of the research

Urban service delivery has become a vexing problem. This problem is likely to get worse with the rising urban population. This is particularly alarming for developing countries where the urbanization is fast and the public sector is beset with resource constraints. Partnership between the public and the private sector is, therefore, a promising mechanism to address the dilemma. But achieving PPP, particularly in view of the institutional capacity limitations in developing countries, presents its own set of challenges. The experience of facilitating agencies in Bangladesh in promoting PPP presents an option for overcoming the barriers.

The role of facilitating agency in promoting PPP has been limited. There have been many studies on PPP, mainly in developed countries. There are fewer studies on PPPs in developing countries, and even less on PPPs for SWM. There has been no thorough investigation on the role of facilitating agencies in promoting PPP for SWM in Bangladesh. Therefore, this study may generate important insights and add to body of knowledge on the subject.

The purpose of this research was to thoroughly investigate the role of facilitating agencies in forming and sustaining PPPs for SWM in Bangladesh. The study investigated the topic in an interdisciplinary way incorporating applied management, sociology and political science viewpoints. Accordingly, the study addressed a broad range of stakeholders including the public sector, the private sector, elected public representatives, and citizens. The findings are holistic and useful for practitioners. The study findings could also lead to some guiding principles for PPP in urban service delivery.
1.5 Significance of the research

The findings of the study are important in the light of rapidly urbanising developing countries, as it sheds light on attaining alternative forms service delivery. The guiding principles extracted from the findings would be useful in developing policy guidelines. Although the research was limited to Bangladesh, the findings would be useful for policy makers and practitioners in other countries as well in addressing concerns about enabling public and private agencies to deliver better service to urban citizens. In particular, the perceptions of citizens and policy-makers would be useful as partnerships among community, public sector and private sector promise a more sustainable option than simple partnership between the public and private sector alone (Mumtaz and Wegelin, 2001).

1.6 Scope of the research

The study was conducted in four cities of Bangladesh with varying degrees of facilitation for PPP in SWM. The cities were: Khulna, Patuakhali, Sylhet and Dhaka. Khulna city received the most intensive and longest facilitation, followed by Patuakhali and Sylhet. Dhaka city received no facilitation for PPP in SWM.

Data were collected on the necessity of a facilitating agency in forming PPP, the sustainability of the PPPs and the effectiveness of the PPPs. Data were collected from public sector officials and staff, private sector officials and staff, elected representatives and citizens. In-depth interview, semi-structured questionnaire survey, and observation tools were used in collecting data.

1.7 Overview of methodology

An analytical framework was developed to investigate the primary research question and test the hypothesis. Three broad aspects form the basis of the framework: (1) necessity of facilitating agencies, (2) the role of a facilitating agency in sustainability of partnership, and (3) the role of a facilitating agency in effectiveness of partnership. A set of secondary research questions, indicator parameters and associated variables were developed. Tools used to collect data to evaluate the variables were: interviews, semi-structure questionnaires, and observations. Computer software packages were used in processing and analysing data. The findings are presented followed by review and comparison with pertinent literature.
1.8 Structure of the thesis

The thesis is structured to present the investigation, findings and conclusions in a logical order. Chapter 1 introduces the subject, purpose and scope of the thesis. Chapter 2 presents a literature review dealing with both theoretical and practical issues on the subject. Chapter 3 describes the methodology of data collection and the analytical framework. Chapter 4 gives the context of the investigation to familiarize the reader with necessary background information including descriptions of the cities under investigation. The next three chapters present the findings of three key areas of investigation. Chapter 5 presents the findings on the necessity of facilitating agencies in forming public-private partnership. Chapter 6 discusses the findings on sustainability of public-private partnership and the facilitating agency's role in it. Chapter 7 describes the findings on effectiveness of public-private partnership and the facilitating agency's role in it. Chapter 8 discusses the implications of the findings. Finally, chapter 9 concludes the thesis with the major insights gained in understanding the role of a facilitating agency in public-private partnership, followed by a set of recommendations emanating from the research. The structure is shown in schematic in Fig 1.1.
Chapter 1: Introduction
- Global problem of SWM
- SWM in developing countries
- PPP and facilitating agency
- Justification, purpose and scope of the research
- Structure of the thesis
- Summary

Chapter 2: Literature review
- Core concepts of PPP and facilitation
- Theories on partnership
- Practical examples of partnership
- Research gaps
- Summary

Chapter 3: Methodology
- Hypothesis
- Research questions
- Research design
- Data source and data collection
- Analytical framework

Chapter 4: Context of the research
- Facts on Bangladesh: rapid urbanization
- Potential for public-private partnership
- Efforts by facilitating agencies
- SWM and PPP information on four cities: Khulna, Patuakhali, Sylhet and Dhaka

Chapter 5: Necessity of a facilitating agency
- Barriers against PPP
- Support needed to achieve PPP
- Contribution of facilitating agencies
- Benefits of facilitation
- Contribution of co-factors
- Summary

Chapter 6: Sustainability of partnership
- Dependence on facilitating agency
- Satisfaction with PPP
- Summary

Chapter 7: Effectiveness of partnership
- Mutual recognition by public and private sector
- Platform for discussion
- Collaboration between public and private sector
- Service delivery improvement by PPP
- Summary

Chapter 8: Discussion and implications of findings
- Response to research questions
- Hypothesis testing
- Implications of findings
- Summary

Chapter 9: Conclusion and recommendations
- Conclusions
- Recommendations
- Suggestion for further research
- Summary

Fig. 1.1: Structure of the thesis in schematic
1.9 Summary

Solid waste management is a vexing problem in many developing countries. Rapid urbanization on one hand, and resource constraint of the public sector on the other, means a growing disparity between the demand for service and the capacity to meet the demand. One of the options for meeting this challenge is promotion of public-private partnership, an arrangement by which both public and private sector share the responsibility of providing SWM service to the citizens.

PPPs have been in operation in developed countries for providing urban services, but it is difficult to attain in developing countries. This study explores the means of achieving PPPs for SWM by investigating the roles of facilitating agencies that assist the public and private sectors to forge partnership.

The findings of the study would be useful for governments and development agencies involved in the improvement of urban services. It would assist them in taking decision regarding public-private partnership for delivering urban services, and investing in facilitating agencies to achieve PPPs. Taking such decision may be imperative for the developing countries to protect public health and serve the growing urban population.
Chapter 2

2 LITERATURE REVIEW

2.1 Introduction

Delivering basic services to the fast-rising urban population is a growing concern, particularly for the developing countries. The traditional service providers, the public sector municipalities, in these countries are confronted with the double problem of growing demand and resource constraint. Public-private partnerships (PPP), as an alternative to the traditional service delivery, may be a potential mechanism for the developing countries. Achieving PPP, however, is challenging under the prevalent limited institutional capacity in these countries. A few facilitating agencies in Bangladesh, however, have attempted to assist the public and private sectors to overcome the barriers and form PPPs for delivering solid waste management (SWM) services. An assessment of their roles, successes and limitations could lead to better policies and reforms in governance and urban service delivery.

The primary goal of this study is to investigate the role of facilitating agencies in promoting PPPs with SWM as a special context for investigation. This framework is represented in Fig 2.1, in which a facilitating agency assists PPP and this in turn improves SWM. SWM is a function influenced by many factors that include political, social, technical, institutional, and financial issues. This study, therefore, is an interdisciplinary investigation with a practitioners' perspective.

![Fig 2.1: Study framework: facilitating agency (FA) assisting PPP to improve SWM](image)

In view of the above elements, the purpose of this literature review was to get a full grasp of the core issues, theories, and practices of PPP, SWM and facilitation and find the gaps in the existing knowledge to design a worthy research. Both theories and actual practices were
reviewed to learn the theoretical basis of partnership and its application in reality. This chapter presents a review of literature pertinent to these fields. It also allows the reader an orientation into the theoretical and practical background to the problem.

The first sections of this chapter introduce the basic definitions and concepts of waste management including a historical perspective. This is followed by a presentation of the core concepts of PPP and facilitation. A review of the theories on partnership and their reflections on solid waste management follow next. Subsequently, relevant practical experiences on public private partnership are discussed. Based on the above, the key research gaps are identified in the following section. The chapter concludes with a summary.

2.2 Publications reviewed

The strategy for identifying the relevant literature relied heavily on the Internet and other electronic resources rather than physical books and journals. At the initial stage the Google search engine was used to sift through the Internet using general key words like “public-private partnership” and “PPP”. It resulted in a surprisingly rich body of literature. It also pointed the direction to other resourceful web sites.

One of the most useful web sites found was that of the PPP for Urban Environment program of UNDP (www.undp.org/pppue). This site contains a wealth of information on PPP as applied to the improvement of urban environment. Other websites visited were:

- World Bank (www.worldbank.org)
- Loughborough University (www.lboro.ac.uk)
- UMP (www.unhabitat.org/programmes/ump/)
- UN sites (www.un.org, www.unfpa.org)
- Development Planning Unit (www.ucl.ac.uk/dpu)
- Institution for public-private partnerships, inc. (www.ip3.org)

In addition to the Internet, specific electronic databases were also consulted. The librarian of WEDC resource centre at Loughborough University helped in this search. The databases searched included: Geobase, Applied Social Science Index and Abstracts (ASSIA) and Cambridge Scientific Abstracts (CSA). Key words used in searching the databases were: public sector, private sector, participation, urban, facilitator, etc. in various combinations.
Relevant journal articles cited by the databases were retrieved from electronic archives such as Ingenta (www.ingenta.com) and Sciencedirect (www.sciencedirect.com).

However, not every item was available in electronic form. Especially textbooks and older literature was available only as hard copies. For such items Pilkington library of Loughborough University was extensively used. In addition a few libraries in Bangladesh, particularly those of the Bangladesh Institute of Development Studies (BIDS) and the Academy of Public Administration and Planning (APAP) were used. Some out of print books were purchased online from www.amazon.com. Some of the items were collected by writing to the publishers or authors.

In selecting the literature for detail study and review, the strategy was to start from a list as extensive as possible. The selection was then reduced by reading the abstracts and titles through a process of elimination of irrelevant items. It was found that a lot of research has been conducted on PPP, but mostly in developed countries. The number of literature dwindled as progressive filters of developing countries, facilitating agency, solid waste management, and finally Bangladesh was applied.

More than 50 documents were finally selected for detail review. A complete list is given in the Bibliography section. The review is presented in an orderly manner in the next sections.

2.3 Solid waste management background

This section presents background and history of solid waste management. The historical development of SWM is reviewed to probe the challenges that were faced by the developed countries, as they hold the key to many problems that the developing countries are facing now with their rapid urbanisation.

2.3.1 Concepts of solid waste management

General waste

An appreciation of the concept of ‘waste’ in general is useful for investigating the specific issues of solid waste management. Definitions of waste invariably refer to lack of use or value. Waste in simple terms means useless remains. Waste physically contains the same ingredients as are found in useful products; it only differs by its lack of value (White, Frank and Hindle, 1995). However, the lack of value or use is relative. What is useless waste to some may be quite valuable resource for others. Indeed, waste has been termed as a
resource in the wrong place at the wrong time. Solid waste, as a particular category of general waste, is no different. This concept is important for SWM especially for developing countries where such incentives encourage many people to seek livelihood. This concept is relevant for this research from the point of view of sustainability as well. Sustainability of public-private partnership for waste management may depend on the incentives present in managing the waste.

**Solid waste**

Solid wastes are all the wastes arising from human and animal activities that are normally solid and are discarded as useless or unwanted (Peavy et al, 1985). Most authors separate all solid wastes into three categories: municipal solid wastes, industrial solid wastes, and agricultural and mining wastes.

This study focuses on municipal solid waste only. Municipal solid wastes (MSW) include materials from households and commercial enterprises, and encompass such items as food wastes, paper wastes, glass, metal, plastic, rubber, leather, wood, and small amounts of miscellaneous materials (Wanielista et al., 1990). Food waste and domestic garbage constitute the major portion of MSW in developing countries (Hoornweg, 1999).

The composition of waste is also an important factor for public-private partnership. The private sector operators involved in solid waste management in developing countries are often small and have limited capacity. They may not have the financial strength to handle operations that need large investment or complex management (Plummer and Slater, 2001).

**Solid waste management**

Solid waste management is the discipline associated with the control of generation, storage, collection, transfer and transport, processing, and disposal of solid wastes in a manner that is in accord with the best principles of public health, economics, engineering, conservation, aesthetics, and other environmental considerations, which is also responsive to public attitudes (Tchobanoglous et al., 1993). Solid waste management includes administrative, financial, legal, planning, social and engineering functions. As a result, modern SWM requires an interdisciplinary approach involving political science, city and regional planning, geography, economics, public health, sociology, demography, communications, and conservation, as well as engineering and materials science. From simple means of garbage
disposal, SWM has become a complex practice involving many branches of science. The next section reviews the history of SWM in developed countries, as they may illustrate important lessons for the developing countries.

### 2.3.2 Evolution of solid waste management

Solid waste management evolved from taking simple measures to a complex discipline. The history of the gradual progress of solid waste management in developed countries links it to political initiatives to protect public health, emergence of regulations, and institutional models of implementation. As developing countries become more urbanised, they would face similar problems, and might have to adapt the solutions taken by the developed countries in view of the available resources. The history nevertheless provides important lessons for the developing countries. A review of the history is presented in this section.

**Historical background**

From the earliest primitive human society there has been attempts to dispose of solid waste. Burial of solid waste was practised by the earliest civilisations and was specified by Moses as a required practice for Israel (Dewan and Sudarshan, 1996). During the flourishing of the Minoan civilisation on Crete from 3000 to 1000 BC, solid wastes were placed in large pits with layers of earth at intervals (Dewan and Sudarshan, 1996). In the early days, disposal did not pose difficulty as habitations were sparse and land was plentiful. Disposal became problematic with the rise of town and cities where large numbers of people started to congregate in relatively small areas. On one hand, the density of population increased in these centres of congregation, and therefore waste generated per unit area also increased. On the other hand, available land for disposal of waste decreased in proportion. Uncollected waste posed great public health hazard. Littering of food and other solid wastes in medieval towns – the practice of throwing wastes into the unpaved streets, roadways, and vacant land – led to the breeding of rats, with their attendant fleas carrying bubonic plague. The lack of any plan for the management of solid wastes thus led in the epidemic of plague, the Black death, that killed half of the fourteenth-century Europeans and caused many subsequent epidemics with high death tolls (Tchobanoglous et al, 1993). This necessitated some form of planning and management to dispose of solid waste safely.
More recent recorded history is available from European cities. For nearly a thousand years, western cities were indescribably filthy. A bare century ago, household waste and refuse were just tossed into the street. Black, evil-smelling mud covered medieval city streets. This product of soil, household waste, stagnant water, human excrement, horse manure and pig and chicken droppings transformed streets into a disgusting quagmire. King Philip II of France ordered to pave and clean the streets of Paris in 1184. The result was not encouraging as cleaning was quickly abandoned. In 1348 during a black death epidemic, the Provost of Paris issued an ordinance instructing citizens to sweep the streets in front of their homes and to have mud and refuse transported to designated sites, However, little heed was paid to the regulation despite fines and punishment. In 1506 King Louis XII formed a “mire removal service”. Attempt to finance this service by public tax was met with general hostility and the ordinance melted into oblivion. Royal decrees of 1562 and 1666 met the same fate. In the late 18th century, social reformers tried to engage beggars, paupers, invalids or the elderly who were burden on the society to clean the city. Before the end of the 19th century Pasteur inspired a new wave of thinking by discoveries about germs. This raised public awareness about cleanliness and prompted greater state intervention in refuse-collection services (After Lieberherr-Gardiol, 1998).

The history of solid waste management in London city is also similar. In early times each house in London had a heap of refuse outside it. In 1297 there was a legal obligation on London households to keep their front pavement clean. Weekly removal of garbage started in 1354 through a government order. The city authority assumed the responsibility to remove waste from roads and households, and was given the power to fine households that did not cooperate. The collected waste was transported by boats and dumped in Essex marshes. Simply throwing of refuse into watercourses was also practised. In 1358 King Edward III forbade throwing of rubbish or filth into the River Thames. An act of 1388 ordered all collected waste to be carried away to designated places and not to be dumped into rivers.

The arrangement for refuse collection and disposal, which had been established in London by the beginning of the fifteenth century, remained essentially unchanged for 500 years. An order in 1407 instructed Londoners to keep their waste indoors until collection time. The authorities, however, found it extremely difficult to enforce the regulations. In 1414 the city
authority declared their willingness to pay any informer to identify offenders who littered roads. But by 1741 London streets were strewn with heaps of garbage. In 1758 Corbin Morris proposed the cleaning of the entire metropolitan area under one uniform public management. The collected waste was to be conveyed by boats away from the city to deposit in the countryside. Finally, the Public Health Act of 1875 initiated the system of regular refuse collection and disposal by the local authority. Under this Act the Sanitary Authority started regular garbage removal service. The residents were required to place refuse in receptacles for this service. The Public Health Act of 1891 directed Sanitary Authority to engage people to ensure street sweeping and garbage disposal and make any necessary bylaws (After Dewan and Sudarshan, 1996).

The SWM practice gradually led to sophisticated technology and institutional models. Many forms of partnerships were also formed in the developed countries. For example, specialised agencies that are owned by the public sector but operate commercially as corporate bodies (Vasuki, 2004). In essence SWM gradually evolved from a 'no system' into a more complex management system in the developed countries. The important lesson for developing countries is that there is a need for institutional change to address the growing demand for SWM. Stagnation in this regard poses threat to public health and suffering to citizens.

2.3.3 SWM in developing countries

In modern solid waste management, the waste travels through a complex stream from generation to final disposal, intercepted at various stages for resource recovery and recycling. Fig 2.1 shows a schematic diagram of the solid waste management stages and actors for Bangladesh, a typical developing country. This diagram is adapted from Cotton et al. (1999). As seen in the diagram the private sector has entered into the primary collection node—a niche where it has some comparative advantages. The citizens are willing to pay the private agencies to enjoy a cleaner environment and the convenience of a doorstep service. But the private agencies are dependent on the public sector municipality for secondary collection and final disposal of solid waste. The municipality also needs the service by the private sector to keep the neighbourhoods clean. A partnership between the two sectors, therefore, has a potential because of the interdependence.
2.3.4 The public sector

The public sector engaged in solid waste management is typically municipalities or city corporations. Usually a solid waste management division or a conservancy section housed within these organisations is responsible for solid waste management. In developing countries, much of the work like sweeping, loading and unloading waste, and drain cleaning are done manually. Therefore, a large number of labourers are employed by the public sector. In addition, the staff includes supervisors, officers and managers. Labour unions often wield considerable influence over the whole organisation. Elected officials such as commissioners are also important stakeholders. (Cointreau-Levine, 1994).

The public sector operates under several limitations. Firstly, public laws govern the operations of municipalities. Municipalities derive their mandate for managing solid waste through the public laws. The provisions of these laws limit their scope of activity. For example, in the case of Bangladesh, municipalities are responsible only to collect waste from community bins and not from individual houses (Pourashava Ordinance, 1977 and Dhaka City Corporation Ordinance, 1983). They cannot provide house-to-house service even if there is demand for this service. Secondly, the laws allow municipalities to generate revenue by levying tax on citizens, thereby giving them a stable financial footing. However, sometimes the national government may influence the way a municipality may collect and use revenue. The Government of Bangladesh, for example, has set an upper limit of 7% of tax collected from households for expenditure on solid waste services (Diaz et al, 1998). In doing so, it has prescribed the quality of service that the municipalities are able to deliver. Municipalities may not find enough resources available to them for any structural changes, as they are mostly dependent on tax revenue and grant from the central government. City revenues, such as property tax, change relatively slowly, as tax increases are unpopular. This puts a further limit on municipalities.
<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Typical Actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
<td>Households, commercial activity, industry, public places, etc.</td>
<td>Waste generators</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Storage</td>
<td>Storage of waste near the source of generation</td>
<td>Waste generators</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Collection</td>
<td>Collection of waste from primary storage and disposal at secondary</td>
<td>Waste generators; MSEs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Storage</td>
<td>Communal bins, containers</td>
<td>Municipality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Collection</td>
<td>Collection of waste from secondary storage and transportation to final</td>
<td>Municipality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Disposal</td>
<td>Landfill or crude dumping</td>
<td>Municipality</td>
</tr>
</tbody>
</table>

Adapted from Cotton et al. (1999).

Fig 2.2 Stages of waste stream

The public sector SWM operations also suffer from deficiency in two areas: efficiency and community participation.

*Low efficiency*: Productivity of municipal staff is usually lower than private sector employees. Trade union restriction, inadequate supervision, and unsatisfactory equipment contribute to this dismal condition. Also unhelpful bureaucratic procedures result in an
inflexible management style. Public sector management has severe limitation in disciplining personnel for non-performance or in providing upward mobility for workers with good performance (Cointreau-Levine, 1994; Plummer, 2000; Ali, 1999).

**Lack in community participation:** Community participation, that is, involvement of citizens in planning, implementing, and monitoring of activities is often an essential ingredient for the success of public service delivery. Accountability cannot be ensured when people’s voice is not heard. The World Development Report (2004) represented the accountability in public service delivery as a tripartite relationship among citizens, politicians and service agencies. The long route of accountability connects citizens and service agencies via politicians. However, in a weak local governance situation, citizens can exert little influence over their service agencies through their elected representatives. A direct relationship between the citizens and service providers constitutes a “short route of accountability”. This route ensures a far more strong accountability, as citizens can effectively monitor and retaliate against any laxity in service delivery. However, the entire SWM operations by the public sector are often done with little or no participation from the communities (Plummer, 2000). As a result most citizens perceive the municipal administration as remote, inaccessible and non-responsive.

It is not easy for the public sector to be innovative as their activities are bound by government rules. There is little incentive for them to change the way of delivering service. As a result, municipalities are not demand-responsive. It is difficult for municipalities to increase their work force or to introduce service mechanism that may offer the most appropriate solution (Plummer, 2000).

### 2.3.5 The private sector

The private sector actors in SWM comprise both formal and informal types. The formal actors are legitimate and recognized enterprises such as NGOs, community-based organizations, and micro-enterprises. They are usually registered with regulatory bodies. Their motive for involvement in SWM may range from social contribution to pure profit.

There is also an informal sector in SWM in many developing countries. These people earn their livelihood from solid waste related activities. Most of the private operators are ‘informal’ workers. The term ‘informal’ sector may be used to refer to the economic activities which have the following characteristics: non-permanence and casualness, outside the scope of existing
company law or government regulations, carried on in small-scale by less capitalised establishments mostly relying on household labour (Salahuddin and Shamim, 1992). The International Labour Organization (ILO) adopted the informal sector as a conceptual category and identified the following attributes as characteristics of the informal sector enterprises: ease of entry, family ownership of enterprise, small-scale operation, reliance on indigenous resource, use of labour intensive and adapted technology (often low level technology), acquisition of skills outside the formal schooling system, and unregulated and competitive markets (Ibid.). Informal sector activities are not regulated or controlled by government agencies - they exist and operate because of market forces or other socio-economic factors (Ali, 1999).

The above definition fits very well the activities carried out by the multitude of people who depend on solid waste to earn or supplement their income. The informal sector includes the waste pickers, and itinerant waste buyers, and small-scale informal businesses. In low-income countries the size of the informal sector is significant because of poverty, unemployment or underemployment.

For forming public-private partnership to deliver SWM service the most potential actors in developing countries are NGOs, CBOs and micro-enterprises. Organising the informal sector is not easy, and as a result both municipalities and facilitating agencies that promote PPP may be reluctant to work with the informal sector. There are small and large-scale recycling industries in the formal sector, but they are not involved in service delivery unlike the NGOs and CBOs. As described earlier, NGOs, CBOs and micro-enterprises are already within the formal private sector are already rendering SWM service in many countries. These actors are reviewed in detail below.

2.3.6 CBOs

Community-based organisations are informal institutions that are formed by members of a community to address a need such as a library, sports facility, etc. Sometimes these organisations respond to deplorable environmental conditions in their locality by initiating solid waste management operations, mainly primary collection and street cleaning. They are usually run by activist youths with support from the community. Social service motive is the primary moving force in such operations. Breaking even financially is sought rather than
making a profit. Sustainability of this type of initiative depends on the activists and champions of the project.

2.3.7 NGOs

NGOs can enter into SWM related activities for a number of motives – social concerns for waste pickers, introducing new recycling technology (e.g. composting), extending micro-credit, concern for the poor environment in which their beneficiaries live, or simply because they are contracted by other agencies to implement a project, etc. They are driven mainly by the need to achieve their goal, and not to make profit. Their scope of work may include primary collection, rehabilitation of waste pickers, building awareness in the communities, dissemination of information, research, introduction of new technology, etc. NGOs traditionally work closely with communities and there is usually good co-operation from the community members. Sustainability of NGO initiated operations depends on the length of their ‘interest’ in the project or on external source of funding. However, sometimes the initiatives may be picked up by entrepreneurs and developed into self-sustaining enterprises.

2.3.8 Micro-enterprises

Micro-enterprises are for-profit business operations. Entrepreneurs run these businesses. Entrepreneurs are by definition innovators and agents of change. Their focus is on creativity, innovation and the constant search for new products or process ideas. They want to know what their customers want and strive to deliver that at the best competitive price (Carson et al, 1995).

Micro-enterprises enter into the SWM business because they see a gap in service delivery and existence of a demand for fulfilling that gap. They find this niche and charge for their services. For example, they may find a demand for house-to-house garbage collection that the municipality cannot provide, and seize the opportunity by providing the service in a neighbourhood for small charges to the households. Their approach is very much demand-responsive, and they keep close contact with their clients. As their operation is profit-oriented, there is good sustainability potential.
Key points

- Rapid urbanisation is taking place in developing countries. This means more people to serve, more area to cover and more solid waste to manage.
- Solid waste management consumes a significant portion of municipality budget. Yet the public sector in most developing countries are at present able to collect only a small portion of the total refuse generated. The situation is likely to get worse in future if business as usual attitude is adopted.
- Municipalities often suffer from low productivity and lack of community participation.
- A large number of private sector actors are active participants in solid waste management in many developing countries.
- Effective partnership between the public and the private sector is not commonly found in developing countries.

2.4 Core concepts on public-private partnership

The previous section described how the public sector may find it difficult to deliver satisfactory solid waste management services on its own due to management inertia to change and address the demands for service (Plummer, 2000). A number of alternative arrangements are available to address this situation, ranging from full privatisation to public-private partnership. This section describes some core concepts behind these alternatives focusing on public-private partnerships and their relevance to solid waste management.

Privatisation is a reduction in government activity or ownership within a given service or industry through participation of the private sector. Privatisation may be achieved by divesting government enterprises to private ownership or by commercialising government agencies making them accountable and financially autonomous enterprises (Cointreau-Levine, 1994).

Public-private partnerships are alternatives to full privatisation in which government and private companies assume co-responsibility and co-ownership. Through these partnerships, the advantages of the private sector - dynamism, access to finance, knowledge of technologies, managerial efficiency, and entrepreneurial spirit - are combined with the social responsibility, environmental awareness, local knowledge and job generation concerns of the public sector (PPP-UE, 1999).
Public-private partnerships can assume many forms depending on the needs of the two sectors. Gentry (1999) offers a spectrum of possibilities for public-private partnership, as presented in Figure 2.3. This shows an endless form of partnership is possible between the public and private sector.

Fig 2.3: Spectrum of possible relationships between public and private sector service providers

2.4.1 Institutional models for public-private relationships

Mitchell-Weaver and Manning (1991) have given a conceptual overview of public-private partnerships in third world development. According to them, there may be at least three different models of institutional relationships. These are: Elite Committees, NGOs and Quasi-Public Authorities. The public and the private side come to a partnership for entirely different reasons, and with different responsibilities. The very idea that public and private sectors can define common ends, means or measures of success is foreign to both sectors. Thus the first difficulty in coming to terms with public-private partnership is the need to imagine a new institutional reality. Following is a description of the three models.

2.4.1.1 The Elite Committee Model

An elite committee public-private partnership is a group of people who gather together to influence each other’s public and private organisational decision-making. Members of the elite committee come from non-profit organisation, private enterprises, government bureaucracy and elected offices.
In this model, the committee or board members usually are highly recognised and respected leaders in the public and private sectors. The relationship between the public and private parties is one of negotiation. The committee works to reach a consensus on mutually desirable strategies and to mobilise resource brought by partners. This kind of committee can exert influence on public policy by their members' high "position" or "image".

2.4.1.2 Non-Governmental Organisation Model

The non-governmental organisation model is one in which a partnership is forged between a government and an NGO. The NGO may be service organisation, a membership organisation or a co-operative. Usually this model does not require a separate governing body. Direction setting and decision-making occurs in "task-force" type meetings where concerned parties meet.

The relationship between parties in this model is one of delegation. The public side provides organisational, material or financial resources. The private side carries out the mission with policy-level direction from the public side. In this model there is no emphasis on negotiation. Rather the public party chooses the strategy and "shops around" to find, or is sought out by, an NGO partner to achieve a goal. The respective roles of the public and private sides are given in Table 2.2. This model is most likely to occur at regional or local level.

Table 2.2. Roles of public and private partners in a typical public-NGO model

<table>
<thead>
<tr>
<th>Public Sector</th>
<th>Private Sector (NGO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loaning money</td>
<td>Investing money</td>
</tr>
<tr>
<td>Promoting an idea, land or city service for investment</td>
<td>Managing the implementing organisation</td>
</tr>
<tr>
<td>Disseminating information</td>
<td>Delivering services</td>
</tr>
<tr>
<td>Providing training</td>
<td>Entrepreneurial risk-taking</td>
</tr>
<tr>
<td>Re-orienting bureaucracy to deal effectively with NGOs</td>
<td>Intermediation between existing agencies</td>
</tr>
<tr>
<td></td>
<td>Research and development</td>
</tr>
</tbody>
</table>
2.4.1.3 Quasi-Private Authority Model

In the quasi-public authority (QPA) model, government creates a new organisation with both public and private characteristics. The goal of the new organisation is to provide goods or services to enable private organisation enter into a market and remain competitive. The QPA model links government, NGOs, and/or private enterprise through creation of a single hybrid organisation that represents the interests of all parties. In the QPA model the relationship between QPA and NGOs or private enterprises is one of mutual facilitation. The QPA model is different from privatisation (in which the public and private sides have a contract relationship) because the NGO and private enterprise partners are active participants in the decision-making regarding tactical choices on the kinds of activities that should occur, who should do them, and what sort of incentives should be employed. The roles of the public and private side are similar to that of the NGO model.

2.5 Facilitation

Facilitation is the provision of opportunities, resources, encouragement and support for a group to succeed in achieving its objectives. It is a process of enabling and empowering a group to maximise their own potentials (Bentley, 1993). Through this process, a facilitator helps a group to analyse issues, learn from experience and work as a team to draw conclusions. A facilitator assists a group to clarify its goals and positions, remain focused on the goals, bring out all the knowledge and skills of the group members, and prevent any individual from dominating and cutting off relevant ideas (Dismukes et al., 1997). Robson and Beary (1995) recommended that facilitators use the following tools to accomplish the above.

- Developing empathy: Facilitators must be able to see things through the eyes of the client group. This will develop a trustworthy relationship.
- Listening carefully: Facilitators must hear what is really said and avoid "selective perception" or hearing only what they want to hear.
- Eliciting information: Facilitators should use open questions and follow-up queries to help the group clarify its position and goals.
- Positive confrontation: Facilitators must assist the group to avoid muddled, distorted discussion by guiding towards convergence of ideas.
Facilitation is different from manipulation. Manipulation is a process of influencing a group to the manipulator's own end. It is important to recognize the distinction. Table 2.3 describes the difference between manipulation and facilitation.

Table 2.3. Differentiating characteristics of manipulation and facilitation

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Manipulation</th>
<th>Facilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes</td>
<td>Predetermined by the manipulator</td>
<td>Determined by the group</td>
</tr>
<tr>
<td>Agenda</td>
<td>Hidden, not expressed to the group</td>
<td>Transparent to the group</td>
</tr>
<tr>
<td>Control</td>
<td>Tight</td>
<td>Loose</td>
</tr>
<tr>
<td>Suggestion</td>
<td>Towards manipulator's goal</td>
<td>To assist the group to analyse</td>
</tr>
<tr>
<td>Persuasion</td>
<td>Pushes the group towards manipulator's goal</td>
<td>Assisting the group to learn from the experience of similar initiatives</td>
</tr>
<tr>
<td>Avoidance</td>
<td>Chooses not to recognise the ideas put forward by the group</td>
<td>Takes careful consideration of the ideas of the group</td>
</tr>
<tr>
<td>Exercising power</td>
<td>Forces the group to take a decision of the manipulator's liking</td>
<td>Allows the group to take decision</td>
</tr>
<tr>
<td>Rescuing</td>
<td>Does not allow the group to struggle, curtails unwanted opinions, &quot;rescues&quot; the group to predetermined end.</td>
<td>Allows the group to struggle and find solution</td>
</tr>
</tbody>
</table>

Adapted from Bentley (1993)

However, it should not assumed that a facilitator is a passive spectator. Facilitation may also be forceful to bring desired outcome. For example, there may times when a group needs, and asks for, some direction. When this is given openly and stated clearly, there is no sense of manipulation. Figure 2.4 below shows the facilitation spectrum.

In reviewing the contributions of a facilitator, it is seen that a facilitator assists in bringing out the latent potential of the target group. The target group, due to some obstacles, is unable to exploit their potential to the optimum. The facilitator assists the group by persuading them to focus on the goals and formulate solutions as a team.
The above frame is applicable to the topic of this research. The public and the private sector agencies may be seen as the group that is unable to exploit the potential to work together. A number of obstacles, such as lack of institutional linkage or required team-building skills, prevent the two sectors to resolve this problem on their own. The facilitating agencies in Bangladesh have tried to bridge the gap between the two sectors. They initiated dialogue between the public and private agencies, helped them to focus on the common goal of SWM service delivery, allowed them to formulate joint solutions. In addition, elected representatives and citizens were also brought into this team.

This gives an opportunity to investigate the role of the facilitating agencies in building PPP, their successes and limitations in the light of the facilitation theories. The literature reviewed gives a basis for analysing the role of the facilitating agencies in terms of the tools they used and the outcome. However, such analysis requires the a thorough understanding of PPPs in theory and practice. Literature review on these is presented in the next sections.

2.6 Theories on partnership

This is an interdisciplinary study to investigate PPP with SWM as a special context. Therefore, PPP is examined from a number of disciplines. PPP is a subset of a broader concept of collaboration. Why do individuals or organisations collaborate and co-operate? We turn to theories from sociology, economics, political science and management science to understand reasons behind partnership and collaboration.

2.6.1 Sociological theories on Partnership

Abuyuan (1999) has explored sociological theories on partnership. According to this author, partnership emanates from collaboration. One may analyse partnership using sociological theories by viewing it as collaboration since the main ingredient of partnership is collaboration. A partnership is defined as a group of two or more parties who interact with and depend on each other. They collaborate with one another and behave in ways that suit mutual expectations. Why do people or organisations collaborate? There are two parallel lines of thought from sociology: functionalism and general systems theory.

2.6.1.1 Functionalism

Functionalism views organisations in the same light as biological beings. Social institutions behave like biological organisms in the sense that they have to survive and adapt to the
changing environment just like biological organisms. This they do by means of interdependence among their parts. Therefore, according to this theory the survival of an organisation depends on its ability to foster and maintain effective co-ordination among its various branches. If the spirit of collaboration or partnership fails among its parts, an organisation is no longer able to function properly and faces extinction.

2.6.1.2 General systems theory

The General Systems Theory emphasises the similarity of processes that occur among many different types of relationships. Whether one is dealing with a machine, an organism or an organisation, it is fruitful to analyse their process as having a supply of resources (input), a conversion mechanism (throughput) and the production of an object (output). The systems theorists analyse systems from three different viewpoints: (1) system relations to determine the nature of relationship between various components of a system; (2) system effectiveness to judge how satisfactory are relationships among various components of a system for the whole system to survive or make optimum use of resources; (3) system dynamics to investigate what forces a system to change and the direction in which the change occurs.

2.6.1.3 Relevance to solid waste management

Public/private partnerships in solid waste management fit functionalism theory well if we view them as parts of a whole organisation that delivers services. Here the partners (public and private) may be seen as interdependent organs of a larger organisation each having its specialised function but working as a whole towards the common goal of delivering effective service.

The general systems theory is also pertinent to partnership arrangement in urban service delivery. Here the components of the system are various public and private agencies. They receive resources (input) in the form of taxes and service charges. They participate as components of a system in collecting, transporting and disposing domestic waste (throughput). Their combined output is a cleaner, liveable city.

Of particular interest to us are the analytical tools provided by this theory. To find out the necessary ingredients for an effective partnership arrangement, we may analyse such arrangement following the general theorists. The nature of relationship among public and
private agencies, the degree of optimum usage of resources by the partners, and dynamics of change in the partnership arrangement all are useful in the analysis of partnership.

Both functionalism and general systems theory helps in visualising partnerships as adapting, living beings vying for survival in a changing world. This perspective is valuable in analysing the evolution and future direction of partnership.

1.9.1 Partnership theories from economics

2.6.1.4 Historical perspective

Mitchell-Weaver and Manning (1991) gave an overview of the economic development policies. Prior to the 1960s, strategies to promote growth in developing countries were mostly capital and technology intensive. These strategies were implemented in a 'top down' fashion. People at the receiving end were at most 'passive participants'.

Community development: By the late 1950s and 1960s, it was clear that the projects were not resulting in significant benefit to the people. This was due to the mechanistic nature and lack of input from the local people. This suggested that input from local people was an important ingredient for success. The result was a paradigm shift toward the concept of 'community development' in project planning. However, community input in problem identification and solving was generally not sought, and local people essentially participated as 'active recipients'.

People-centred approaches: In the 1970s and 80s, analysts argued that communities had inherent capacities, knowledge and beliefs about the systems in their daily lives – the very systems development planners wished to 'improve'. It was acknowledged that genuine attempts at local participation should not exclude these knowledge and beliefs, and people should be actively involved in every stage of the project cycle. This meant that local people had an important role to play in decision-making, planning, implementing and evaluating development projects.

The democratising forces emerging in the late 1980s and 1990s in most of the developing world further expanded the scope and meaning of participation. Along with demanding more plural forms of political force, civil societies also demanded more pluralistic approach to participation to complement the state and market in charting the course of development.
The contemporary idea of public-private partnerships (PPPs) as an approach to economic development had its origins in American and British public policy during the late 1970s. Faced with a mushrooming budget deficit and stagnant economy, the Carter administration tried to curb government spending by championing the concept of privatisation. It advocated spinning off feasible programmes to the private sector to be operated on a for-profit basis.

Mangal (1999) pointed that the above idea was reinforced and formalised in the United Nations Conference on the Environment and Development at Rio in 1992, which officially recognised that the challenges to development can only be overcome by greater collaboration between government, the private sector and civil society. It was recognised that structural and political differences among different groups of people influence the nature and ultimate success of development projects. Participatory development, therefore, became a process of 'partnership' requiring dialogue among, and 'negotiation' between the different stakeholders occupying different positions on socio-economic grid. This paved the way to explore linkages between the public and private sectors, and find creative ways to jointly seek solutions to environmental problems.

2.6.1.5 Economic theories

Numerous comparative economic studies have been conducted that contrast similar public and private corporations. The majority of evidence shows that the private sector consistently generates higher profits and operates more efficiently. Economists point to the Property Rights theory and the belief that it is the rights of ownership that creates incentives to excel (Hart, 1998).

In the private sector, people and commercial enterprises succeed by paying no more than necessary. Businesses pay the market rate — it pays no more than necessary for labour, supplies and capital. In contrast, government also procures goods and services from the market, but market competitiveness is not effectively applied. The result is higher cost for public service. In recent decades there has been increasing concern about the cost of government, and there have been serious budget difficulties at every level of government even in developed countries like the United States (Cox, 1996).

Larkin (1994) stated that a diminishing distinction between the public and the private sectors was noticed by Dahl and Lindblom as early as 1953. As the combination of the two
sectors was becoming more widespread, a new term of “mixed economy” was coined to describe such arrangements (Hull and Jhern, 1983 in Larkin, 1994). Bozeman (in Larkin, 1994) examined some characteristics of the mixed economy in detail. He argued that business firms are becoming more independent of government agencies and many government agencies are becoming more like business firms. He observed that both public and private sector agencies behave in a traditional manner with regard to certain issues and display the behaviour of their counterpart in other matters. Bozeman also found the formation of hybrid organisations making the dichotomy of public and private sector even less distinctive. Etzioni (in Larkin, 1994) argued that these hybrid or ‘third sector organisations’ hold a great deal of promise for many of our domestic problems. These third sector organisations provide a means to combine the efficiency and expertise from the business world with public interest, accountability and broader planning of government. According to Etzioni, the new organisations are important as alternatives, not replacing the existing order, but balancing roles played by public and private sector agencies. The above observations were, however, limited to developed countries, particularly to the United States.

2.6.1.6 Relevance to solid waste management

The above economic theories are pertinent to partnership for solid waste management, as this is a basic service that must be provided to all citizens, and profit cannot be the main motive. The public agencies cannot completely withdraw from this sector because this has public health and public good dimension. The question, therefore, is how to minimize the cost and maximise the resource utilisation, while maintaining the best possible quality of service. A hybrid or mixed organisation composed of both the public and the private sector may offer such opportunity provided that rights of property or ownership are not compromised.

1.9.2 Political science theories on partnership

Political scientists have promulgated various theories to explain collaboration. These theories can be broadly divided according to their way of explanations. A summary of these is presented here from the study of Micko (1999).

2.6.1.7 Power-based explanations

Hegemonic stability theory claims that co-operation is achieved under the influence of a single actor having vastly superior power compared to all other partners. The dependence
theory is similar to the hegemonic stability theory but its primary emphasis is on economic power.

2.6.1.8 Interest-based explanations

According to this school of thought co-operation is realised when the actors find it in their own particular self-interest to co-ordinate their policies with the rest. Supporters of this theory attempt to show that co-operation is possible even under anarchy if the interest is served.

Interest-based theories (also known as game theory) identify three key determinants to co-operation. The first of these is "mutuality of interest". Mutuality of interest dictates that parties will engage in co-operative actions only if it is in their rational self-interest to do so. The second important component of co-operation is a "shadow of the future". When parties expect to engage in long-term relation, they are likely to engage in co-operative behaviour. Thirdly, there is the importance of repeated interaction or "norm of reciprocity". According to the norm of reciprocity, co-operation emerges when the players can (1) identify non-co-operative parties or defectors, (2) they are able to focus retaliation on defectors, (3) they have sufficient long-run incentives to punish defectors.

2.6.1.9 Knowledge-based explanations

Authors in this school of thought argue, for example, that unless visions of the problems and their appropriate solutions are widely shared, co-operation will not be shared.

2.6.1.10 Relevance to solid waste management

Public/private partnerships are unique cases of collaboration. All three political science approaches (power, interest, and knowledge) require some pre-conditions for partnership. Partnership is possible if the partners agree on a definition of the problem, find co-operation an effective means for solution, and formulate a common strategy shared by all. Interest-based explanations argue that "mutuality of interest" and "interdependence" increases the likelihood of partnership. Therefore, if the stakes are high for both public and private enterprises (such as public pressure against accumulating heaps of garbage on the streets), and they both benefit from co-operating, partnership may form easily. Although traditionally urban services, including solid waste management, came under the purview of the public sector alone, it is becoming clear that certain portion of these services may be delegated to the private sector. In such cases both parties have mutual interest and depend on each other
for achieving the goal of providing urban services. Therefore, according to this explanation there is a good chance for such alliances to form.

Game theory suggests that the 'shadow of the future' and the 'number of interactions' both play a role in collaboration. Both of these factors are high in public/private partnership for solid waste management. Such arrangements are expected to last for long-time. Therefore, both public and private agencies would have stake in ensuring that the collaboration works. They also have to interact frequently, which again improves the chance of collaboration as 'cheating' is likely to result in 'retribution' and a quick breakdown of collaboration. This in turn would jeopardise both parties. Therefore, it appears that they have the incentives to maintain a co-operative stance.

Pre-conditions for collaboration also indicate that all actors are self-interested utility maximises. As such they should calculate the benefits of partnership and compare it with accrued costs for such arrangement. This requires a time-consuming exercise to assess the costs and benefits to all parties. However, once the benefits are found greater than the costs, the parties would find it more convincing to form alliance. Here the role of a 'catalyst' or facilitating agency such as an NGO or research institution becomes important as the above usually remains beyond the expertise or resources of most public or private service providers.

Sustainability of collaboration depends on how private and public agencies adjust to new institutional order. Public-private partnership means that private parties would have some control over public agencies and vice versa. This may result in re-distribution of resources such as elimination of a branch of public agency or laying off sweepers. These can adversely affect partnership.

Other challenges include inequitable service delivery, for example, where a less affluent section of a city is left out of the service area. In order to create a sustainable public-private partnership in urban service delivery, such arrangement should ensure fair pricing, equitable service delivery to all neighbourhoods regardless of their socio-economic standing or adjusting of service provisions to match specific community needs and affordability to pay.

2.6.2 Management theories on partnership

To meet the needs of society three distinct sectors – public, private and non-profit – have emerged although their boundaries are not always completely distinct. Each of these sectors
has its comparative advantage. Traditionally each sector used to restrict itself to its own sphere of activities. Lately, however, organisations have grown to realise that co-operating with others outside of its sphere can create much value. Aikenhead (1999) has investigated various theories of management to reflect upon public-private partnership, a summary of which is given below.

Traditionally partnership among organisations occurred rarely and in small scale. The perception of the business world has been one in which the players fight bitter battles, not satisfied with only winning but needing also to see others lose. But increasing demand, complexity and limitation of resources have forced organisations to recast their views. They have begun to realise the importance of developing a collaborative advantage. It is often no longer possible to win when other are losing. The focus has shifted from 'win-lose' to 'win-win'.

2.6.2.1 Resource dependency theory

Resource dependency theory posits "alliances and networks operate as alternative mechanisms to markets or hierarchies for addressing specific strategic needs." (Saxton, 1997 in Aikenhead, 1999). That is, partnerships build up to combine resources as a strategy to meet specific needs.

2.6.2.2 Co-opetition framework

Aikenhead (1999) also examined the co-opetition framework, which is summarised here. The co-opetition framework offers a new way to view the interaction of organisations. It adds a player to the traditional value net of customers, suppliers and competitors. This new element is called 'complementor'. "A player is your complementor if customers value your product more when they have the other player's product than when they have your product alone" (Brandenburger and Nalebuf, 1996 in Aikenhead, 1999). The definition of competitor is the opposite of that of a complementor. A competitor makes the product of its rivals less attractive. It is common for organisations to fill both the roles of competitor and complementor at different occasions. This increases the chance of co-operation. However, before an organisation can see the value of co-operation it must emerge out of two traditional mind-sets: the 'business-as-war' and the 'either-or'. The first of these parochial ideas views all players as potential enemies that should be vanquished. The second does not allow exploration of
alternative relationship between organisations. To help avoiding these biased, detrimental approaches it is important that an organisation learns to use the power of perspective. An organisation should draw its value net from the perspective of itself as well as other players. Then the benefits of co-operation amongst the players will become clear. It is particularly important that an organisation draws the value net of any new entrant, as there is a tendency to view new entrants solely as competitive threats rather than complementary opportunities. Finally, the theory of co-opetition is not simply about being nice. It is about co-operating with others to best exploit the comparative advantage of each organisation. In fact, a complementor can and should suffer a little but overall benefit from the arrangement. The core precept of co-opetition theory is that it does not matter if others win – or lose – it matters if the organisation itself benefits.

2.6.2.3 Relevance to solid waste management

Transpiring the above spirit to partners in solid waste management could be difficult. For example, the public sector may be reluctant to relinquish power to the private sector. Being seen as the provider of service is very appealing to the politicians as this ensures a rapport with their constituents. Transfer of part of the services to the private sector greatly dilutes their image as “friends in need”. Under partnership arrangement, municipalities may also feel as left out with responsibility but without means to intervene when necessary. On the other hand, intense competition among the private providers may make the opportunity less lucrative. With careful planning and participation from all sides such difficulties may be minimised. However, it requires all partners to realize that in partnerships their individual interest is not compromised, rather the arrangement enhances the efficiency and opportunity. Here may be a role for a facilitating agency.
2.7 Practical examples

There are many examples of public-private partnership in urban water and sanitation service delivery. A number of them are working on solid waste management. However, to understand how these arrangements operate, literature on general public-private partnership in urban service delivery in both developed and developing countries was included in the review.
It was invariably found that the primary reason for private sector to enter the urban service delivery was the inability of the public sector to provide satisfactory level of service. Sometimes the two sectors continue to provide service in isolation of each other. This is the case in Dhaka, where over 250 community-based enterprises (CBE) are providing door-to-door primary collection, but there is no linkage or partnership between them and the public sector agency Dhaka City Corporation (Ali, 2003). In addition, the CBE service is limited to middle and high-income areas for financial reasons, leaving the low-income areas unserved. More extensive operation by private firms, in absence of much linkage with the public sector, occurs in Nairobi (Post, 2003).

2.7.1 Forms of partnership

In cases where partnerships do occur, the forms of such arrangement are quite varied. Sometimes it is minimal, as in the case of some neighbourhoods in Karachi, Pakistan where the linkage between the CBEs and the public sector is simply an informal agreement to pay some amount of money to the municipal truck driver to haul away waste from the secondary disposal points (Ahmed, 2003). In the case of Khulna, Bangladesh the partnership was initiated by a formal memorandum of understanding with the Khulna City Corporation. This formal linkage apparently opened doors to dialogue and joint solution to problems (Rahman, 2003). On the other end of the spectrum, the public sector withdrew completely from street sweeping, primary collection and secondary transport operations, and handed over the responsibility to a private firm in Nairobi, Kenya. Initially this contractual arrangement showed some improvement, but it ran into trouble because of a labour dispute (Ikiara, 2003).

2.7.2 Promoters of partnership

The drivers of partnership are also found to be diverse. In Biratnagar, Nepal a foreign private firm pushed for partnership with the public sector for solid waste management (Plummer and Slater, 2001). In Accra, Ghana, it was promoted by the donor community; in Hyderabad, India the state government was the promoter of partnership (Post, 2003). The decentralization and liberalization policies along with support of politicians contributed to partnership in Bamako, Mali (Keita, 2003). International and national facilitating agencies promoted partnership in Khulna, Bangladesh (WSP, 2000).
2.7.3 Impediments to partnership

Interference from politicians was identified as one of the major impediments to partnership. They resent the loss of control and patronising power over their constituents when private sector agencies enter into the service delivery business (Kabuba, 2003; Agrawal, 2003; Gupta, 2003). Rigid and unsympathetic bureaucracy was also cited as an obstacle (Keita, 2003; Mwangi, 2000). NGOs with a hidden agenda of attracting donor funds was seen as a hindrance (Russel and Vilder, 2000).

2.7.4 Need for facilitating agency

The above sections showed that the linkages between the public and private sector are often weak in many cities of the developing countries. Capacity is lacking in both sectors to form partnership. Even when partnerships are attempted, they sometimes fail due to capacity problems as in the case of Nairobi. But there are other impediments as well. Political and bureaucratic hindrance, and even hidden agenda of the private sector could hamper PPPs. Nevertheless, government, international firms, donor agencies and even politicians have been found to be the promoter of PPP in different countries. It shows that some form of external persuasion and facilitation may be often necessary to achieve PPP in developing countries.

The necessity of a facilitating agency was recognized by several initiatives. In Karachi, community-based enterprises turned to facilitating agency for advice on how to receive cooperation from the public sector (Ahmed, 2003). The need for a facilitating agency to build capacity of the public and private sector partners was voiced in Bamako (Keita, 2003). Even in the case of UK, a developed country and pioneer in public-private participation, the necessity for an independent facilitating agency was recognized to initiate and nurture the process (Roberts, 2000). The UK government created a special facilitating agency in July 1999 called “Partnerships UK” to assist public-private partnerships (UK Govt., 2000). Similarly, the South African government established the Municipal Infrastructure Investment Unit, a not-for-profit company tasked with providing technical assistance and grant funding to municipalities investing in innovative service delivery partnerships (Schur, 2000).

2.8 Research gaps

From the above discussion it is apparent that there has been substantial theoretical research on partnership from disciplines as varied as sociology, economics, political science
and management science. However, the number of serious research related to the implementation of public-private partnership in comparison to the number of projects seems to be much less.

Recent publications on partnership for urban services indicate that public-private partnership holds a great potential for improving service delivery (Cities Alliance, 2001). However, experts caution about the difficulty in achieving successful partnership. For example, Vilaplana (1998) mentioned that the public and private agencies are normally not interested in bringing innovation or transforming their own culture. Their motivation is in maximising of benefits with minimal risks. Vilaplana (1998) further states two important traits: partnerships require negotiation and compromise, and citizens are often left out of strategy development although they are involved in partnership projects. Conducting negotiations and bringing citizens into the decision-making process requires specialized skills that are often not available at the public or private service agencies. Maxwell and Conway (2000) added that successful partnership depends on ownership, coordination, transparency and accountability. Again, attaining these qualities are often beyond the skills available within the public or private service agencies in developing countries. Indeed attaining successful partnership for urban service delivery is difficult even for resourceful cities. Mumtaz and Wegelin (2001) mentions "the provision of urban services that support productive enterprise and allow private enterprise to operate efficiently is a massive undertaking regardless of the resources available". The author made a number of important observations:

- There are few cities where the local authority is able to provide all required services. In recent times, NGOs have tried to enter into service delivery to fill the service gap. The local authorities sometimes view them as encroachers and sometimes they are tolerant.
- Partnerships that involve public agencies, private agencies and citizens suggest a more viable option than public-private partnership dichotomy alone.
- The specialised public agencies are often not accountable to the people.

It shows that there is a need to investigate further how to build partnership between the public sector and the private sector, and also bring the citizens into the nexus to improve overall service delivery and accountability.
Another important barrier against attaining partnership is lack of conceptual clarity. Mwangi (2000) observed that the lack of adequate conceptualisation surfaces when the partners are faced with practical problems of policy formulation, implementation and evaluation. One of the recommendations to counter this problem was alliance between city authorities and specialised research-oriented organizations (Wacker, 1999).

The publications reviewed mentioned the qualities required to attain successful partnership. However, the way to enable the public and private sector agencies was not found to be researched extensively. There were a few examples of facilitating agencies to assist the process from UK and South Africa. But the necessity, role or effect of a facilitating agency in bringing about public-private partnership in low-income countries is still to be researched. No analytical information were found on the role of facilitating agencies in forging public-private partnership for a specific urban service—solid waste management. In particular, the areas of investigation could be:

- The necessity of facilitating agencies;
- Sustainability of partnerships and the role of facilitating agencies;
- Effective public-private partnerships for solid waste management.

2.9 Summary

The literature review provides insights into the core concepts behind solid waste management, public-private partnership and facilitation. Theories on partnership from the disciplines of sociology, economics, political science and management are presented with discussion on their relevance to solid waste management. Practical experiences with public-private partnership from both developed and developing countries were reviewed to find the common elements. The literature review showed that there is strong theoretical background for public-private partnership, but analyses of practical examples in developing countries are weak.

In particular, the literature review indicates no systematic research on the role of facilitating agencies in promoting public-private partnerships for solid waste management in developing countries. Although some publications voiced the importance of facilitating agencies, no substantive analytical information was found on:
- The necessity of facilitating agencies;
- Sustainability of partnerships especially after withdrawal of facilitation; and
- Effective forms of public-private partnerships for solid waste management.

These gaps in knowledge are used to define the key research questions described in the Methodology chapter.
Chapter 3

3 METHODOLOGY

3.1 Introduction

This chapter considers the methodological approaches adopted in the research, and the rationale behind them in the light of standard scientific methods. The objectives of the research and the research questions are stated. The research design, including constraints and assumptions, are explained. The process of data collection and the framework for data analysis are described. Overall, this chapter explains the choice of research methods and data collection, the validity and reliability of data, and the analytical framework.

3.2 Objectives

With a fast-growing urban population, management of solid waste is becoming an increasingly difficult problem for the public sector in Bangladesh to tackle alone. There is scope for the private sector to contribute to this service. This is evidenced by the existence of many private agencies engaged in primary collection. However, experience in integrating the two sectors is limited. Sustainable integration of the public and the private sector could become essential in future to keep cities healthy and liveable.

This study broadly looks into the public-private participation in the solid waste management sector in Bangladesh. The specific aim is to investigate the role of a facilitating agency in building sustainable public-private partnership in this sector. The findings are expected to assist in formulating policy and strategy for the sector.

The objective of this study is to understand the role of facilitating agencies in building partnership between the public and private sector agencies involved in solid waste management in Bangladesh. The study investigates whether a facilitating agency is necessary to forge partnership between the public and private solid waste management agencies. The study explores why, where and how facilitation is needed. A case study method is adopted.

3.3 Hypothesis

Proposing a hypothesis is an essential part of the research strategy. The researcher must provide a set of solutions to the research problem in a propositional manner. This statement is
the hypothesis. The hypothesis predicts relationship between variables. The validity of the hypothesis is tested through the research.

The hypothesis of this research is stated as "the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh."

3.4 Research Questions

The primary research question is "why the role of a facilitating agency is necessary for sustainable partnership of private and public sector in delivering solid waste management services in Bangladesh?"

A number of secondary questions leading towards answering the primary question were developed. These were disaggregated into three main aspects, namely (1) necessity of facilitating agency, (2) sustainability, and (3) effective partnership:

**Necessity of facilitating agency:**

*Why the two sectors cannot form partnership without a facilitating agency?*

The purpose of this question is to understand what are the barriers that prevent the two sectors to form partnership without any intervention from a facilitating agency. If the barriers are not surmountable by the two sectors in their own capacity then facilitation may be necessary.

*What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?*

The purpose of this question is to investigate the needs of the partners in adapting to partnership arrangements. If the resources available within the partners cannot meet the needs then external assistance by a facilitating agency may be necessary.

*How does a facilitating agency contribute to partnership?*

The purpose of this question is to understand what a facilitating agency does that results in partnership between the two sectors. The activities, process, resource and competence extended by a facilitating agency may shed light on the necessity of such specialized agency as well as the capacity required of such agency.

*What are the benefits of facilitation?*
The purpose of this question is to investigate the benefits of intervention by a facilitating agency. A significant difference in the operations and scope of service delivery between areas where a facilitating agency exists and where it does not may indicate the necessity of a facilitating agency.

*Is the role of a facilitating agency sufficient or are other co-factors necessary?*

The purpose of this question is to explore whether other co-factors are also necessary in addition to a facilitating agency.

**Sustainability:**

*What happens when the facilitating agency withdraws?*

The purpose of this question is to investigate whether the partnership arrangement continues, expands or deteriorates once the facilitating agency reduces or ceases its intervention. Continuation or expansion of the partnership may indicate sustainability.

**Effective Partnership:**

*What was the form of the partnership?*

The purpose of this question is to understand the context of the partnership, to know how it evolved, and what were the nodal points of partnership.

3.5 **Operational definitions**

In this research the following definitions apply.

**Facilitating agency:** An agency that assists the public and private sector agencies to form alliance and work as partners for delivering solid waste management services. The facilitating agency is independent. It has no direct interest in providing SWM services themselves. Its intervention in implementation is for a limited period and for demonstration purpose only.

An agency such as the Water and Sanitation Program (WSP) is considered a facilitating agency because its main objective was to foster a partnership between the public and private sector. Its limited intervention was for demonstration only. It had no plan to enter into long-term service delivery.

**Partnership:** A voluntary alliance between the public and private sector to collaborate, coordinate and complement each other, optimising their resources and competence. Partnership does not mean that the two sectors are in effect fused together to act like one
organization. Rather, in partnership the two sectors remain independent, but enter into an arrangement to cooperate and coordinate.

This study explored the partnership arrangement for solid waste management services in Bangladeshi cities where the private sector assumed responsibility for primary collection, while the public sector retained responsibility for secondary collection and final disposal.

**Sustainable:** Sustainable means that the partnership is not temporary; that it continues even if intervention by any facilitating agency diminishes or ceases.

**Public sector:** city corporation or municipality

**Private sector:** Any agency operated by community based organization (CBO), non-governmental organization (NGO) or entrepreneurs.

**Solid waste management:** Collection, transport and disposal of municipal solid waste.

**Integration:** complementary activities with coordination and collaboration by the public and private agencies.

### 3.6 Selection of cities

The process of selecting the cities for the study started with consulting existing literature and personal communication with relevant officials. This revealed that attempts were made to promote public-private partnerships in a number of cities by facilitating agencies such as WSP, Danida, DFID, EU and LGED. A long list of cities was prepared from this initial information gathering. The long list of cities included Khulna, Patuakhali, Sylhet, Mymensingh and Bogra. Out of these, detail current information was available for Khulna and Sylhet. Therefore, exploratory visits were made to Patuakhali, Mymensingh and Bogra. Based on the visit, Mymensingh and Bogra were dropped from the study because it was found that only superficial attempts were made to promote public-private partnership in these cities, and no real partnership existed there.

Finally four cities with varying degree of facilitation were included as cases in the study. These cities are Khulna, Patuakhali, Sylhet and Dhaka. Facilitating agencies were most active in Khulna city followed by Patuakhali and Sylhet. Therefore, Khulna is considered the primary site for data. Secondary sites at Patuakhali and Sylhet were used for corroborating the findings. Dhaka city, with no similar facilitation, was used as a contrast. The locations of the cities are shown in Map 3.1.
Map 3.1: Locations of Cities included in the research

- **Selected Study Cities**
- **Exploratory Cities**

*Source of map: World Bank*
3.7 Study Boundary, Constrains and Assumptions

This study looked into the public-private partnership only in the area of solid waste management in four cities of Bangladesh. City Corporations or municipalities were considered as the public sector, while NGOs and CBOs were considered as the private sector. The focus of the study was on primary collection, secondary collection and final disposal in organized manner. Therefore, informal collection activities by waste pickers or recycling activities by entrepreneurs are excluded.

This research investigated the role of the facilitating agencies in the process of building partnership between the public and private sector agencies for delivering better solid waste management service. Organizations such as Prodipan, WSP and Danida are considered facilitating agencies since they only assisted the process of partnership. Their intervention was for a limited period and scope with the aim of demonstrating the viability and benefits of partnership. In the case of Sylhet city, Sylhet Partnership Company, a hybrid organization that promotes public-private partnership, but at the same time has the intention of providing long-term service was also looked into as both a facilitating agency and a service provider.

Constraint: This researcher works at the WSP and had the privilege of observing the project under study. This may bring in some inadvertent bias. However, his role was rather indirect in the design and execution of the project. The chance of biased conclusions, if any, was further minimized by peer review and objective manner of data collection.

Assumptions: It is assumed that it is not possible for the public or private sector to exclusively address the solid waste management needs in Bangladesh. It is further assumed that despite the possibility of mutual benefit, spontaneous partnership between the public and private sector is not possible under the present institutional and legal arrangement. The third assumption is that it is possible for external facilitating agencies to enable the public and private sector to overcome the barriers and forge sustainable partnerships.

3.8 Research Design

The word ‘research’ originated from the old French word recerchier that meant to search again. It literally implies repeating a search for something and implicitly assumes that the earlier search was not exhaustive and complete in the sense that there is still room for improvement (Sufian, 1998). Research, therefore, is a process of query based on earlier
knowledge. Research can be defined as "a systematic way of asking questions, a systematic method of inquiry". Research involves a quest for knowledge, one that is conducted in a rational way using scientific methodologies (Berger and Patchner, 1988).

The scientific methodology in research contains four basic parts: (1) reviewing existing knowledge, (2) building theory, (3) testing theory, and (4) reflecting and integrating (Bourner, 1996). Two thought processes are used in building theory – inductive and deductive. The inductive process uses specific cases to generalize and build theory. In this case, data collection precedes theory building. The deductive process reaches conclusions about specific instances from general principles. In this case, theory building precedes data collection, and collected data are used to test or refine the theory.

Berger and Patchner (1988) describe seven steps in the research process. The first step is the construction of a theory to explain and predict a phenomenon by viewing relations among specified variables. Concepts and variables are then used to propose a hypothesis derived from theory. Next the concepts and variables in the hypothesis are operationally defined. Based on these definitions, data are collected, analysed and interpreted. The theory is thus verified and refined. This process is presented schematically in Fig 3.1.

```
Theory
  Identify concepts and variables
  Generate hypothesis
  Operationally define concepts and variables
  Collect data
  Analyze data
  Interpret data and present findings
```

Fig 3.1 Steps in the research process

The above process is followed in this research. A literature review was conducted to gain an understanding of the existing knowledge on solid waste management and possibilities of partnership between the public and private sector. Based on this, a hypothesis was proposed (section 3.3), and operational definitions were developed. The following sections describe the
choice of methods, data collection tools and analytical framework. The collected data were interpreted to test the hypothesis.

3.8.1 Menu of methods

There are two basic methodologies in scientific research: quantitative and qualitative. Quantitative methodology is adopted when the research is context-free and the variables are known and static. Quantitative methodology uses deductive logic to develop generalization leading to prediction or explanation of some phenomenon. On the other hand, qualitative methodology is adopted when the variables are not known a priori by the researcher; they rather emerge from the research. This methodology provides rich, context-bound information leading to patterns or theories to explain a phenomenon. Qualitative methodology uses inductive logic.

Creswell (1994) describes six methods of data collection and analysis. Two of these designs are used in quantitative research (experiment and survey), while the rest four are frequently found in qualitative research (ethnography, grounded theory, case study and phenomenological study). A brief description of each is given below.

1. Experiment: In experiments, the researcher exposes subjects to particular conditions. The subjects may be selected randomly (true experiment) or nonrandomly (quasi experiment).
2. Survey: In surveys, the researcher uses questionnaires or structured interviews to collect data. Surveys may be cross-sectional (focusing on a particular time) or longitudinal (spanning over a time period).
3. Ethnography: In ethnographic research, the researcher studies an intact cultural group in a natural setting during a prolonged period of time by collecting, primarily, observational data. This research process is flexible and typically evolves contextually in response to the lived realities encountered in the field setting.
4. Grounded theory: In grounded theory research, the researcher attempts to derive a theory by using multiple stages of data collection and the refinement and interrelationship of categories of information. Two primary characteristics of this design are the constant comparison of data with emerging categories, and theoretical sampling of different groups to maximize the similarities and the differences of information.
5. Phenomenological studies: In phenomenological studies, the researcher examines human experiences through the detailed descriptions of the people being studied. The procedure involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning. In this process the researcher reflects upon his or her own experiences to understand those of the informants.

6. Case studies: In case studies, the researcher explores a single entity or phenomenon bounded by time and activity (a program, event, process, institution, or social group) and collects detailed information by using a variety of data collection procedures during a sustained period of time.

Yin (1994) argues that the choice of research strategy should depend on three conditions, namely, (a) the type of research question posed, (b) the extent of control a researcher has over actual behavioural events, and (c) the degree of focus on contemporary as opposed to historical events. Based on these conditions, a researcher may choose one or more of the five major research strategies, as described in Table 3.1.

According to Table 3.1, the "how" and "why" forms of research questions are tackled by experiment, history or case study. Experiments require control over behavioural events because the researcher aims to study subjects under controlled conditions. Histories are used when there is no direct access or control over events, such as studies on events that occurred in the distant past. For this kind of situation, the researcher must rely on primary or secondary documents, and cultural and physical artefacts as the main sources of evidence. If a research tries to explain a contemporary event that offers no opportunity of control over behavioural events, then case study strategy is the preferred choice. Case studies employ techniques similar to those in histories, but add two additional sources of evidence: direct observation and systematic interviewing.

A case study is an empirical enquiry that investigates a contemporary phenomenon in real-life context (setting). Case studies are especially relevant when the boundaries between the phenomenon and the context are not clearly evident. Case studies are used in situations when there are more variables of interest than data points. The case study methodology uses multiple sources of evidence converging to a conclusion, and is based on prior theories to guide data collection and analysis (Yin, 1994). A case study shines a spotlight on a specific
case or a few cases by detail investigation. The objective is to illuminate the general by looking at the particular. (Denscombe, 2001).

Table 3.1 Relevant situations for different research strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Form of research question</th>
<th>Requires control over behavioural events?</th>
<th>Focuses on contemporary events?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>how, why</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, what, where, how many, how much</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>who, what, where, how many, how much</td>
<td>no</td>
<td>yes/no</td>
</tr>
<tr>
<td>History</td>
<td>how, why</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Case study</td>
<td>how, why</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

Source: Yin, 1994

3.8.2 Selection of methods

A case study method was selected as the research strategy. The selection of research strategy was made based on the considerations mentioned in the previous sections. The first consideration is the type of research question. The primary research question (why the role of a facilitating agency is necessary to foster partnership between the private and public sector in delivering solid waste management services?) is of a "why" type. This type of questions may be pursued using experiment, history or case study method. The experimental method may be excluded because it requires control over events. It is not possible for the researcher to exercise control over integration of the public and private sector for solid waste management in Bangladesh. The history method may also be excluded because the
integration process is currently occurring and there is good access to data. The case study method is the most appropriate method for this research.

The strengths of the case study method fit well with the research question and objectives of the study, and may be utilized to the fullest extent. The table below compares the characteristics of the case study method with those of the present study.

3.9 Maximizing validity and reliability

The two most important quality control items in research design are reliability and validity. Reliability is the relative absence of errors of measurement in a measuring instrument. The essence of reliability is repeatability. If the measuring instrument is good, it should give similar results with little variation over and over again. Reliability is very important because if our measuring instrument is unstable, we might collect imprecise data and come to wrong conclusions. This is especially important for social science research, as the measurements are inherently imprecise. The aim of a good researcher, therefore, is to use an instrument that has a very low tolerance of error, that is, a high degree of reliability.

Reliability can be improved by controlling the factors that affect the process of measurement. Unambiguous, precise words should be chosen for questionnaires and interviews to increase reliability. Clear instructions to observers and recorders as well as respondents should be given. Clear, standardized instruction to respondents ensures more consistent responses because in this way the respondents understand and follow the same directions. The instruments should be administered under standard, well-controlled and similar conditions. Inclusion of additional items in an instrument may increase reliability, especially if the instrument (such as a questionnaire) is short. With a few items to measure a particular attribute, a chance error of measure can have a large effect.

As mentioned above, reliability is to ensure that data collection procedures can be repeated, with the same results. For the case study method, this means that if another investigator follows the same procedures in conducting the case study all over again, he or she would reach the same conclusions. Therefore, an investigator must document all the procedures in detail because without these even he/she cannot repeat the case study exactly (Yin, 1995).
Table 3.2 Comparison between standard characteristics of case study and present study

<table>
<thead>
<tr>
<th>Characteristics of Case Study</th>
<th>Characteristics of This Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigates context-sensitive, contemporary phenomenon in real-life setting.</td>
<td>Attempts in integrating the public and private sector activities for solid waste management in Bangladesh is currently occurring under context-sensitive, real-life conditions.</td>
</tr>
<tr>
<td>Boundaries between the phenomenon and the context are not clear.</td>
<td>Integration of the public and private sector activities has occurred to some degree under several projects, but it is difficult to separate the contributing forces.</td>
</tr>
<tr>
<td>More variables of interest (not all variables may be known beforehand) than data points.</td>
<td>The variables for sustainable partnership between the public and private agencies are not known <em>a priori</em>. The primary and secondary research questions are aimed at finding the variables.</td>
</tr>
<tr>
<td>Multiple sources of data.</td>
<td>Data to be collected from various agencies, communities, beneficiaries, and elected representatives.</td>
</tr>
<tr>
<td>Direct observation and systematic interviewing.</td>
<td>Both direct observation and systematic interviewing were conducted.</td>
</tr>
<tr>
<td>Testing or building theory.</td>
<td>The research hypothesis was tested against collected data.</td>
</tr>
</tbody>
</table>

The validity of an instrument is the extent to which it measures what it is supposed to measure. In social science research the variables are difficult to measure. They often must be measured indirectly. The more indirect the method of measuring variables the greater the question of validity. For example, "income" is easy to measure directly, while "authoritarianism" is not.

Validity in a research design can be improved in several ways. The researcher must be careful to include all necessary variables in the design. Peer review can guard against...
accidental omission of necessary variables. Validity is also confirmed by gathering data from
different sources and in different ways. High degree of validity is confirmed when evidence
from varied sources indicate the same or similar meaning. (after Berger and Patchner, 1988)

The term triangulation is often used to describe collection of evidence by different methods
and varied sources. The term originates from properties of triangles. Triangulation was used
in navigation to find a true position by referring to two or more known coordinates. Similarly,
by triangulation a researcher uses multiple methods and sources of data to investigate a
single topic. This allows the researcher to view the topic from different perspectives. The
researcher thereby gets a more complete and comprehensive understanding of the topic.
Moreover, it gives the opportunity to corroborate the findings when evidence from different
methods and data sources all point to the same conclusions. This way triangulation enhances
the validity of the research.

For the case study method Yin (1995) suggests three types of validity tests for a good
research design:

1. Construct validity: The researcher should establish correct operational measures for the
   concepts being studied. He or she must identify the operational measures (indicators) and
   justify why these are valid. There are three ways to improve construct validity: using multiple
   sources of evidence (all pointing to the same conclusion), establishing a chain of evidence,
   and having the case study reviewed by peers as well as by participants and informants of the
   study.

2. Internal validity: This is applicable to explanatory or causal studies, not descriptive or
   exploratory studies. This pertains to establishing causal relationship, whereby certain causes
   are shown to lead to certain effects, as distinguished from spurious relationships.
   The investigator must question if all the rival explanations have been considered. There
   are three techniques of improving internal validity: pattern matching, explanation building and
   time-series analysis.

3. External validity: This test deals with the problem of knowing whether a study's findings
   are generalisable beyond the immediate case study. The aim is to establish the domain to
   which a study's findings can be generalized. Critics typically state that a single case study
   offers a poor basis for generalization. But this complain emanates from a confusion with
statistical generalization. In statistical generalization, a representative sample is drawn from a universe for study. Conclusions from the sample are then generalized for the universe (or population). Here numbers matter because the larger the sample the more confident is the investigator. However, in case studies the researcher tries to confirm theories by studying cases. Therefore, large numbers are not relevant here, as the investigator relies on argument and evidence.

The generalization, however, is not automatic. A theory must be tested by exposing it to two or more similar situations (cases). The theory is considered valid if the results predicted by it are replicated in these cases. Then the theory may be accepted for a much larger domain with similar conditions.

Reliability and validity improvement steps taken in this study: Careful consideration has been taken to improve reliability and validity of this research. The following table describes the steps taken in this respect.
### Table 3.3 Steps taken in this study to improve reliability and validity

<table>
<thead>
<tr>
<th>Quality Control Measure</th>
<th>Steps Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Observers/enumerators were interviewed and selected based on their aptitude.</td>
</tr>
<tr>
<td></td>
<td>2. Clear, unambiguous instruction was given to the observers/enumerators.</td>
</tr>
<tr>
<td></td>
<td>3. Clear, unambiguous instruction was prepared for respondents.</td>
</tr>
<tr>
<td></td>
<td>4. The questionnaires were finalized after pre-testing in comparable situations.</td>
</tr>
<tr>
<td></td>
<td>5. The entire process was documented for repeatability.</td>
</tr>
</tbody>
</table>

| Reliability             | 1. The research design and data collection tools were developed and refined through peer review. |
|                        | 2. Data were collected in multiple ways: direct observation, semi-structured interview, key informant interview, and focus group discussion. |
|                        | 3. Multiple source of data were used: respondents included from public sector officers and workers, private sector officers and worker, CBOs, elected representatives, and beneficiaries. |
|                        | 4. The study was reviewed by peers, participants and informants. |
|                        | 5. Rival explanations were considered. |
|                        | 6. Findings were matched against similar cases for checking generalization potential. |

### 3.10 Data sources

A variety of sources were used for data collection to acquire "rich" data. The table 3.4 below describes the sources of primary and secondary data. A complete bibliography appears in the reference section.
Table 3.4 Data Sources

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>City Corporation officers and workers</td>
</tr>
<tr>
<td></td>
<td>Ward commissioners</td>
</tr>
<tr>
<td></td>
<td>NGO/CBO officers and workers</td>
</tr>
<tr>
<td></td>
<td>Community members</td>
</tr>
<tr>
<td></td>
<td>Facilitating agency officers</td>
</tr>
<tr>
<td>Secondary</td>
<td>Project inception, completion and evaluation reports</td>
</tr>
<tr>
<td></td>
<td>Thesis</td>
</tr>
<tr>
<td></td>
<td>Journal articles</td>
</tr>
<tr>
<td></td>
<td>Newspaper articles</td>
</tr>
<tr>
<td></td>
<td>Books</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
</tr>
</tbody>
</table>

3.11 Data collection and justification

3.11.1 Semi-structured Interviews

Interviewing is one of the main methods in social research. In the semi-structured interview, some of the questions are predetermined, while others are open. Questions are asked according to a flexible checklist or guide and not from a formal questionnaire. There may be four types of interviews: individual, key informant, group and focus group. Interviews can provide in-depth, inside information if trustful relationship is established with informants. However, this method is also susceptible to 'interviewer bias', distorted perception or preconceived ideas on the part of the interviewer (Mikkelsen, 1995). For best results, "in-depth" interviews are conducted in manner in which the interviewer and the interviewee become "peers" or even "companions". It allows the respondents to use their 'unique way of defining the world', and to 'raise important issues not contained in the schedule' (Silverman, 1998).

Application of semi-structured interviews in this study: Semi-structured interviews were extensively used for data collection in this research (Table 3.5). The main objectives were to probe the questions on partnership between the public and private sectors.
A checklist was prepared to guide the interviews. It was built around the research questions and indicators. The questionnaire was pre-tested by an experienced supervisor during exploratory visits to a few cities. The checklist was finalized based on the observations during the pre-testing. The checklist used was written in Bangla to avoid difficulty in translating during interviews. Samples of the final version of checklist, translated into English, are given in Annex 1.

Interviewees were carefully selected in each city. First a discussion was held with the facilitating agency, city officials and NGOs/CBOs to gain an understanding of the status of public-private partnership for solid waste management. Based on these discussions, a rich mix of public and private sector officials from different wards of the cities were selected. Care was taken to include wards that varying in terms of presence or absence of facilitating agency and duration of facilitation.

The interviewers were carefully selected. Preference was given to seasoned workers with long familiarity with various data collection methods. Most of the interviewers were graduates. Some were university students. An in-house training was given on the background, objectives of the research, and general precautions for maintaining quality in data collection. Then each of the checklist points was discussed in detail until all were confident about the contents and intention behind the queries. Moreover, an instruction sheet was given to each interviewer as a quick reference during fieldwork.

To hold the interviews, first permission was sought from the interviewees. Immediate interviews were taken if permission to do so was given. Otherwise, appointments were made for a convenient time. The interviews were taken by a pair of data collectors. Attempts were made to include at least one female data collector for interviewing women respondents to allow spontaneity and socially comfortable session. The interviews began with a few primer queries to set the tone and put the interviewee in the mode for more detail questions. One data collector chiefly posed the questions and the other took notes. But if necessary the note taker could give cues or assist in eliciting answers. The questioner also took bullet point notes. If an answer was not clear the interviewers exercised more probing. Answers were written down verbatim as much as possible. One or two experienced supervisors accompanied the teams in turns to ensure good quality. The number of interviews was limited
to not more than two per pair to avoid rushing. The pair compared the notes immediately after the interviews and prepared detailed fresh notes in Bangla. There was a discussion session in the evening to allow the data collectors to share their experience with one another. A corrective measure was recommended against any problem was encountered by the supervisors. The final field notes were later translated into English by this researcher. An Aide-mémoire and journal were kept for reference.

3.11.2 Questionnaire surveys

Sufian (1998) mentioned the steps necessary for acquiring accurate data through questionnaire survey. The first step in designing a questionnaire is to decide on the variables of concern. The variables directly linked with the hypothesis and research questions should be included. Other variables of interest such as Intervening variables and background variables should also be included. The questions should be framed based on the set of variables. A set of instructions for the enumerator or the respondent should be prepared. The instructions should clarify the objectives of the questions and how to record responses. The questionnaire should not be made excessively long by including unnecessary questions. The questions should be as specific as possible. "Double barrelled" questions (two or more questions combined into one) should be avoided. The questions should be logically grouped. There should be sufficient space between the questions to record responses. When the draft questionnaire is ready, it should be pre-tested on a small group of respondents similar to the target respondents. The questionnaire should be improved and finalized based on the results of the pre-testing.

**Application of questionnaire survey in this study:** The objective of the questionnaire survey was to corroborate and contrast the findings from the interviews. The questionnaire survey was aimed at the field level workers of public and private agencies, and the households. Therefore, this information is the "voice" from the field level workers and beneficiaries.

The questionnaires were designed around the research questions and indicators. These were a simplified version of the interviews. All questions were open ended to capture the broadest possible viewpoints. The questionnaires were prepared in Bangla. They were pre-tested during exploratory visits to a number of cities. Final versions were prepared based on
the experience of the pre-testing. Samples of the final questionnaires, translated into English, are given in Annex 1.

The same team of experienced data collectors who conducted the interviews also carried out the questionnaire survey. They were given a separate training on the objectives and methods of administering the questionnaire survey.

In selecting the households, first a discussion was held with NGOs/CBOs to identify the wards where public-private partnership intervention with strong role of facilitating agency was present and the areas where such intervention was not present or minimally present. In general, about 10 households were randomly selected for the questionnaire survey. For this purpose, a ward was divided into three or four imaginary parts. Then data collectors entered into a part and randomly selected a house for the survey. If the household was not interested to give time, the next household was approached. In this way data from three to four households were collected from each part of a ward to make a total of about 10 households from a ward. Efforts were made to include all type of households (high income, middle income and slum). The supervisor randomly checked on the data collectors to maintain data quality.

The answers were written on the questionnaire sheet in Bangla. The answers were sorted and coded. The codes were entered into an Excel spreadsheet for analysis. About 5% questionnaire sheets were rechecked to maintain quality in data entry.

3.11.3 Field observations

Observation method has some distinct advantages. It allows the researcher to record the physical environment and behaviour directly without having to rely on retrospective or anticipatory accounts of others. Important features that are difficult to otherwise elicit from the respondents can be recorded by observation. Furthermore, data from observation can be used to check on, and supplement information obtained from other sources. For example, information given by people about their own behaviour in interviews may be compared with actual observation.

There are some limitations to observation as a research method. First, the subjects may behave differently when they are being observed. Second, observations are inevitably filtered through the interpretive lens of the observer.
There are two approaches to observation: structured and unstructured. The aim of the structured approach is to collect accurate quantitative data on particular behaviour or patterns of interaction. It is possible to use structured observation to collect data on a large-scale by employing a team of observers all using the same observation schedule in the same way. The data thus collected may be collated and comparisons can be made on various parameters. The unstructured approach is commonly used for ethnography to study communities (after Foster, 1996).

**Application of observation in this study:** The objective of observation was to investigate the nodal points of vertical integration of the public and private sector activities, and effectiveness of the partnership arrangement. For this study, the structured observation method were used to record collection, transport and disposal by KCC and private agency workers.

Activities and interactions by residents were observed also. Activities and the time of occurrence were recorded. A format and checklist were developed for standard observation. The main purpose was to investigate the nodal points of vertical integration of the public and private sector activities, and effectiveness of the partnership arrangement.

3.11.4 Sampling

As a case study method was selected for this study, the emphasis is on finding patterns from multiple sources of data. Replication, not sampling logic, is the predominant mode of selecting sources of data. The aim is not to find certain prevalence, by selecting a sufficiently large size of sample from a population to give representative data with statistically acceptable confidence level. The aim of this research is to investigate a phenomenon and its context in detail.

**Application of good practice principles in this study:** However, within the case study method, sampling is necessary for such sources of data for which it not practical or desirable to encompass the entire population. In this research, sampling is needed for selecting households and public/private agency staff for questionnaire and interview survey. A non-probabilistic judgmental or purposive sampling was adopted. The sample size is not based on statistical inference, but on subjective background knowledge. For example, intervention and non-intervention areas, and clusters of rich, middle and low-incomes households within those
areas were identified beforehand in consultation with local contacts. Respondents were selected at random within the selected areas. About 10 households in each ward were selected randomly for survey using household list of the area. Two or three respondents from the homogenous groups such as conservancy workers of public and private agency were selected randomly for interview using worker roster. Summary of the qualitative and quantitative database is presented in Table 3.5.

3.12 Database summary

Three data collection tools were used: interview, questionnaire survey and observation. A total of 74 interviews, 234 questionnaire survey and 21 observations were taken from the four cities. Sample data collection tools are given in the Annex section. A summary of the qualitative and quantitative database is presented in Table 3.5.

<table>
<thead>
<tr>
<th>City</th>
<th>Interview Public Sector Officer</th>
<th>Interview Private Sector Officer</th>
<th>Questionnaire Survey Public Sector Worker</th>
<th>Questionnaire Survey Private Sector Worker</th>
<th>Questionnaire Survey Households</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khulna</td>
<td>13</td>
<td>22</td>
<td>3</td>
<td>3</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>Patuakhali</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>Sylhet</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>Dhaka</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>38</td>
<td>12</td>
<td>12</td>
<td>210</td>
<td>21</td>
</tr>
</tbody>
</table>

3.13 Data analysis

Interviews were transcribed from tapes and field notes, verbatim as much as possible. Standardized formats with reference codes were used for transcription. Comments and observations of interviewers and the researcher were preserved. Questionnaire data were coded, entered into computer, and statistically analysed using SPSS 10.0 software. Qualitative textural data were analysed with Atlas.Ti software. Backup copies were made of all materials to guard against accidental loss.

The transcripts and questionnaire data were reviewed to note patterns, ideas and events. These were categorized. Patterns, processes, commonalities and differences were used in
analysis and development of explanations. When required, the emerging explanations were checked against reality by returning to the field and collecting additional data. Generalization and conclusions were drawn from the refined explanations.

3.14 Analytical framework

This research addresses partnership of public and private sector agencies, and the necessity of a facilitating agency to assist the process. As mentioned in section 3.3, the primary and secondary research questions are built around these two themes. For conceptual clarity, the research questions were disaggregated into three aspects: necessity of facilitating agency, sustainability and effective partnership.

The analytical framework is based on a set of indicator parameters and associated variables for measurement of each parameter. These are described in the following sections.

3.14.1 Indicators

Based on the research questions, indicator parameters were identified to help elicit answers. Each of the 10 indicator parameters illuminates certain aspects of the research questions. The parameters are grouped into same three categories as the research questions. These are presented in the table below.
### Table 3.6 Indicator parameters for investigation

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Indicator Parameter</th>
<th>Reasons for selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Necessity of facilitating agency</td>
<td>Barriers against partnership</td>
<td>Barriers, either real or perceived partnerships to form. The role of a facilitating agency is important if there are significant barriers against partnership that may be insurmountable without external intervention by a facilitating agency.</td>
</tr>
<tr>
<td></td>
<td>Support needed by public and private agencies</td>
<td>The kind of support needed by the public and private agencies may indicate the necessity of a specialized facilitating agency.</td>
</tr>
<tr>
<td></td>
<td>Contribution of facilitating agency</td>
<td>The success of a partnership may depend on the kind and quality of contribution from a facilitating agency. This in turn depends on the competence and resource of the facilitating agency.</td>
</tr>
<tr>
<td></td>
<td>Benefits of facilitating agency</td>
<td>Significant difference between areas with and without the intervention of a facilitating agency may indicate its necessity.</td>
</tr>
<tr>
<td></td>
<td>Contribution of co-factors</td>
<td>Factors external to a facilitating agency may influence the partnership arrangement positively or negatively. Such co-factors indicate necessary conditions in addition to a facilitating agency.</td>
</tr>
<tr>
<td>Aspect</td>
<td>Indicator Parameter</td>
<td>Reasons for selection</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Dependence on facilitating agency</td>
<td>Sustainability is indicated by a decreasing dependency on the facilitating agency. In a successful partnership, the two sectors grow as comfortable and confident partners with the passage of time. In this case partnership continues or even expands even when the facilitating agency diminishes or withdraws its support. Partnership is not sustainable if it dissolves with the withdrawal of the facilitating agency.</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>Satisfaction with the partnership arrangement among citizens and staff of the two sectors indicates the likelihood of the partnership to sustain.</td>
</tr>
<tr>
<td>Effective Partnership</td>
<td>Mutual recognition</td>
<td>Mutual recognition between the public and private sector is a requirement for partnership. Recognition for each other's contribution, be it formal or informal, is the first stepping stone leading to partnership.</td>
</tr>
<tr>
<td></td>
<td>Platform for discussion</td>
<td>For partnerships to succeed, there must be a platform for discussion where the public and private sector operators can exchange ideas, identify problems, and jointly formulate solutions. The platform keeps the process organic and evolving with changing demands. It is an indicator of functioning partnership.</td>
</tr>
</tbody>
</table>
Collaborative division of work is an indicator of partnership. Through the partnership process, the public and private sector share the workload. Each selects the tasks in which it has comparative advantage and leaves those in which the other offers so.

Successful partnerships should offer better service delivery. Improvement in service delivery indicates that the two sectors are working with cooperation and coordination.

### Variables and measurement

Each indicator parameter was assigned pertinent variables, and suitable methods were applied to measure their values. The table below describes the variables corresponding to the indicator parameters, along with the methods of measurement and objective of analysis.

#### Table 3.7 Variables and methods of measurement

<table>
<thead>
<tr>
<th>Indicator Parameter</th>
<th>Variables</th>
<th>Methods of Measurement</th>
<th>Objective of analysis</th>
</tr>
</thead>
</table>
| Barriers against partnership | - Perception of public sector staff  
- Perception of private sector staff | - Interview with key public and private sector staff  
- Interview with public and private sector staff  
- Documents | - To understand if there are real or perceived barriers against partnership.  
- To understand how the facilitating agency helped to overcome the barriers. |
<table>
<thead>
<tr>
<th>Indicator Parameter</th>
<th>Variables</th>
<th>Methods of Measurement</th>
<th>Objective of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>- To compare areas with and without facilitating agency.</td>
</tr>
<tr>
<td>Support needed by public and private agencies</td>
<td>- Capacity of public and private agencies</td>
<td>- Interview with key public and private sector staff</td>
<td>- To understand the support needed by the public and private agencies in view of their capacity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public and private sector staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Documents</td>
<td></td>
</tr>
<tr>
<td>Contribution of the facilitating agency</td>
<td>- Perception of public sector staff</td>
<td>- Interview with key public and private sector staff</td>
<td>- To understand the inputs, process of facilitation and achievement of the facilitating agency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public and private sector staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Documents</td>
<td></td>
</tr>
<tr>
<td>Benefits of facilitating agency</td>
<td>- Quality of service</td>
<td>- Observation</td>
<td>- To understand the benefits of intervention by a facilitating agency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with key public and private sector staff</td>
<td>- To compare areas with and without intervention by a facilitating agency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public and private sector staff</td>
<td></td>
</tr>
<tr>
<td>Contribution of co-factors</td>
<td>- Perception of public sector staff</td>
<td>- Interview with key public and private sector staff</td>
<td>- To understand if there are real or perceived co-factors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public and private sector staff</td>
<td></td>
</tr>
<tr>
<td>Indicator Parameter</td>
<td>Variables</td>
<td>Methods of Measurement</td>
<td>Objective of analysis</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>- Perception of private sector staff</td>
<td>private sector staff</td>
<td>- To understand how the co-factors helped or hampered the partnership.</td>
</tr>
<tr>
<td></td>
<td>- Documents</td>
<td></td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dependence on facilitating agency</td>
<td>- Status of partnership</td>
<td>- Interview with public sector staff</td>
<td>- To understand whether partnership underwent expansion, continuation or deterioration since withdrawal of the facilitating agency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with private sector staff</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with citizens</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Documents</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>- Perception of citizens</td>
<td>- Questionnaire survey</td>
<td>- To understand the satisfaction of citizens, public and private sector staff, and their willingness to continue the partnership.</td>
</tr>
<tr>
<td></td>
<td>- Perception of public sector staff</td>
<td>- Interview</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>- Perception of private sector staff</td>
<td>- Documents</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mutual recognition</td>
<td>- Type of recognition</td>
<td>- Documents</td>
<td>- To understand the type of recognition, perceived</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with key public</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Indicator Parameter</td>
<td>Variables</td>
<td>Methods of Measurement</td>
<td>Objective of analysis</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Platform for discussion</td>
<td>- Present/absent</td>
<td>- Documents</td>
<td>- To understand the process of forming and functioning a platform.</td>
</tr>
<tr>
<td></td>
<td>- Process of achievement</td>
<td>- Interview with key public and private sector staff</td>
<td>- To compare areas with and without facilitating agency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public sector staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Functions</td>
<td>- Interview with private sector staff</td>
<td>- To understand what led to mutual recognition.</td>
</tr>
<tr>
<td>Collaboration</td>
<td>- Adjustment in work plan</td>
<td>- Documents</td>
<td>- To understand the collaboration between the public and private sector.</td>
</tr>
<tr>
<td></td>
<td>- Process of initiation and continuation of collaboration</td>
<td>- Observation</td>
<td>- To understand the role played by the facilitating agency towards collaboration.</td>
</tr>
<tr>
<td></td>
<td>- Perception of mutual benefit</td>
<td>- Interview with key public and private sector staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with public sector staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Interview with private sector staff</td>
<td></td>
</tr>
<tr>
<td>Indicator Parameter</td>
<td>Variables</td>
<td>Methods of Measurement</td>
<td>Objective of analysis</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>
| Improvement in service | - Cleaner neighbourhood  
- Perception of citizens  
- Perception of public sector staff  
- Perception of private sector staff | - Observation  
- Questionnaire survey  
- Interview with public sector staff  
- Interview with private sector staff  
- Interview with key public and private sector staff | - To understand service level improvement due to partnership arrangement.  
- To compare areas with and without facilitating agency. |
Fig. 3.2: Analytical framework

Hypothesis
The role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh.

Primary Q
Why the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh?

Aspect 1
Necessity of a facilitating agency

Secondary Q1
Why the two sectors cannot form partnership without a facilitating agency?

Indicator Parameter 1
Barriers against partnership

Variable 1
Perception of Public Sector Staff

Variable 2
Perception of Private Sector Staff

Secondary Q2
What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?

Indicator Parameter 2
Supports needed

Variable 3
Capacity of Public Sector

Variable 4
Capacity of Private Sector

Secondary Q3
How does a facilitating agency contribute to partnership?

Indicator Parameter 3
Contribution of facilitating agency

Variable 5
Perception of Public Sector Staff

Variable 6
Perception of Private Sector Staff

Secondary Q4
What are the benefits of facilitation?

Indicator Parameter 4
Benefits of facilitation

Variable 7
Quality of service

Variable 8
Scope of service

Secondary Q5
Is the role of a facilitating agency sufficient or are other co-factors necessary?

Indicator Parameter 5
Contribution of Co-factors

Variable 9
Perception of Public Sector Staff

Variable 10
Perception of Private Sector Staff

Aspect 2
Sustainability of partnership

Secondary Q6
What happens when the facilitating agency withdraws?

Indicator Parameter 6
Dependence on facilitating agency

Variable 11
Status of partnership

Variable 12
Perception of Public Sector

Variable 13
Perception of Private Sector

Aspect 3
Effectiveness of partnership

Secondary Q7
What was the form of partnership?

Indicator Parameter 7
Mutual recognition

Variable 14
Type of recognition

Variable 15
Process of recognition

Indicator Parameter 8
Platform for discussion

Variable 16
Presence of platform

Variable 17
Process of attainment

Variable 18
Function of platform

Secondary Q8
How does a facilitating agency contribute to partnership?

Indicator Parameter 9
Collaboration

Variable 19
Work plan adjustment

Variable 20
Initiation and continuation process

Variable 21
Perception of mutual benefit in public staff

Variable 22
Perception of mutual benefit in private staff

Indicator Parameter 10
Service improvement

Variable 23
Neighborhood cleanliness

Variable 24
Perception of citizens

Variable 25
Perception of public staff

Variable 26
Perception of private staff
3.15 Modifications to methodology

Strict adherence to the designed data collection and analysis scheme was not always possible in practice. Modifications were made to accommodate real conditions. However, in making the modifications, maintaining the quality of data was given the highest consideration. Notable modifications are explained below:

- The original intention was to tape record the interviews, given the length and complex nature of queries. However, in reality it was found that the recording device was a hindrance to spontaneous conversation. Respondents were uneasy with the recorder in front of them. Therefore, the use of recorders was discontinued. Instead, teams of interviewers with a minimum of two members were used. These teams were carefully selected based on aptitude and experience. Extensive training was given to the teams and mock interviews were held to hone their skills. In taking the interviews, one of the team members mainly handled questions, and the other mainly took notes. The team members jointly prepared fair notes from the rough notes. These notes contained detail information. The discontinuation of recording did not generally pose in loss of data or quality.

- It was found that most respondents were quite eager to give interviews. Even public sector officials and politicians talked candidly. Only in a few cases, it was not possible to interview the intended respondents, as they were either not available or could not reply to the queries (e.g. newly elected officials having no knowledge on the partnership arrangement settled before their tenure). In such cases, a suitable alternative interviewee was selected.

- The original analytical framework was very precise with parameters and variable for each element of interest. In reality, it was not possible to collect qualitative data with such precision. The respondents did not always give direct answers, but gave a wealth of information around the queries. The qualitative data, therefore, were not as precise as intended. However, the long interview and similar questions on a topic from different angles resulted in a rich data set. It was not possible to fit this data directly to the precise variables as is possible with quantitative data. Therefore, the text were first thoroughly read and then interpreted to make them usable as variables. It allowed some subjective
judgement, but the rich data and large number of respondents prevented gross
misinterpretation. In contrast, the short questionnaire data were easily coded and
entered as numerical codes for analysis by statistical software.

- It was originally intended to use a qualitative analytical software (Atlas.ti) to handle the
textural data. But it was found to be very time consuming to process the text in the form
acceptable to the software. It was found that the software mainly assisted as an
electronic notepad to record the researcher’s comments and annotations to the texts.
Compared to the effort required to prepare the data, the output was not very helpful.
Therefore, it was decided to manually prepare textural tables against each topic of query.
It was possible to draw inference by examining these tables. This process was found to
be considerably easier than handling the task by the software.

Although no serious difficulty was faced in the collection and analysis of data, in view of
the experience gained through this research, the following improvements could be made to
the methodology if similar study is undertaken in future.

- It would have been better if the researcher were present at some of the meetings in
which the public sector, the private sector, the facilitating agency, and citizens
participated. The group dynamics and the role of the facilitating agency could be better
documented with this opportunity.

- In this research, data were taken from individuals. Group interaction in solving a problem
was not observed. The effect of the facilitating agencies could have been measured by
organizing workshops with the public sector, private sector, elected representatives, and
citizens to formulate solutions for a common problem. The difference between cities with
and without facilitating agency could have been documented through these workshops.

- The interview checklist (Annex 1) was long and the interviews were arduous. Sometimes
the interviewees were tired and restless. In future studies, two or more sessions could be
held with the interviewees to allow a more relaxed and deeper conversation.

- This research did not include the opinions of existing and potential funders of facilitating
agencies. Responses from this group should be included in future studies for further
investigation into this subject, as facilitating agencies need funding support for their
activities.
3.16 Summary

This chapter explained the methods used in this study to investigate the role of facilitating agencies in integrating the public and private sector for delivering solid waste management services in Bangladesh. Interviews, questionnaire survey, and direct observation techniques were used as tools in collecting data. These tools were used to obtain responses from key actors of public agencies, private agencies, CBOs, community members and politicians. Proper care was taken in developing and administering the tools to ensure reliable and valid data. The collected data were analysed according to an analytical framework. The hypothesis was tested through the analysis. The methodology framework is presented in schematic in Fig 3.3.

Fig. 3.3: Research methodology schematic
Chapter 4

4  Context of the research

4.1  Introduction

This chapter presents the context of the research. The purpose of this chapter is to familiarize the reader with the prevailing setting and background of the locations of this research. The first part of the chapter describes the development of the solid waste management sector in Bangladesh. It addresses the evolution from the traditional management under the sole operation of the public sector to the movement toward a joint operation by both public and private agencies. The effort by the facilitating agencies in realizing effective public-private partnership is introduced next. The latter part of the chapter examines in detail each of the cities where this research was carried out.

4.2  Facts on Bangladesh: the transition from rural to urban

Bangladesh is a small country in South Asia. The landmass is about 147,570 square km. Bangladesh's present population of over 130 million (BBS, 2001) makes its population density one of highest in the world. Bangladesh is also one of the poorest countries with per capita GDP of about USD 444 (Rahman, 2004). However, Bangladesh has registered impressive advancement in a number indicators: GDP increased by 60 during 1990s, income poverty declined by about 1% per year through 1990s, and one of the highest primary school enrolment rates in the developing world (World Bank, 2004). As the country's income increases, so will the amount of solid waste generation.

Bangladesh remains a primarily agrarian country with only about a quarter (23.4%) of its population living in urban areas. But a fast demographic shift is taking place. Urban population in Bangladesh has been rising rapidly over the last few decades. The estimate of growth for 1990-2020 is projected to be 5.4%. This means that about 50% of the population will be living in urban areas by 2020 (World Bank, 2003).

At present municipalities in Bangladesh are able to collect only about half the generated solid waste (DCC, 1999). Weak institutional incentives and capacity have been at the base of the dysfunctional urban service delivery. The challenge will be even greater by 2020 when the demand for removal of solid waste may rise to 50,000 tons/day from the present 10,000 tons/day (World Bank, 2003).
4.3 Potential for public-private partnership in service delivery

Traditionally the government provided almost all services including solid waste management, water supply, telecommunication and electricity. The rising demand and weakness in institutional capacity of government agencies resulted in deteriorating service quality. In recent times the government has been responding by opening up the service sector to private sector participation. At the same time the government is creating regulatory bodies such the Bangladesh Telecomm Regulatory Commission and Bangladesh Energy Regulatory Commission. This indicates the government's intention to move towards a regulatory role. This liberalization has resulted in private sector participation in telecommunication, power generation, air transport and other sectors. For example, there are 2.3 million subscribers of private sector mobile phone companies against 1 million fixed line phones of the public sector service provider (Hossain, 2004). Similarly, in the power sector private companies now produce nearly a quarter of the country's electricity. There is even a mixed sector power company owned by subscribers association and a government entity (Mahmood, 2002).
Outright privatisation of sensitive public services such as solid waste management or water supply may not be desirable. Such services have a public good dimension, and ultimately the government is responsible to provide such service to the citizens. Any abrupt change in responsibility from the public to private agency may provoke disruption of services as neither the public sector nor the private sector at present have sufficient capacity to manage such change. However, some parts of the service elements may be transferred to the private sector with minimal chance of any mishap. Such attempts are already underway. For example, primary collection of solid waste in a number of cities is now handled by the private sector, while the municipalities retain the responsibility for secondary collection and final disposal. Therefore, the movement is toward a public-private partnership arrangement.

The Government of Bangladesh has set up two new facilities with assistance from the World Bank. The first one is Municipal Support Unit. This unit provides capacity support to municipalities that includes skill development for working with NGOs and communities. The second one is the Municipal Development Fund. It has a credit line of US$ 78 million. The MDF has been operating since 2002. This facility is a government owned company. It provides funds to urban local bodies in a mix of loan and grant. These two facilities have opened up new opportunity for innovation in urban service delivery including public-private partnership for solid waste management.

4.4 Toward public-private partnership: efforts by the facilitating agencies

The transition from purely public service delivery to a public-private partnership service delivery may be inevitable. But the transition is not easy. For example, a recent attempt by the Dhaka City Corporation to contract out solid waste management to the private sector in two wards of the city resulted in a sudden drop in service quality, as the inexperienced private operator failed to provide timely secondary collection and garbage started to accumulate at secondary points. Indifference by the public sector to the private sector participation may also result in undesirable outcome. For instance, a number of CBOs in Dhaka are engaging small children in waste collection. Such exploitation cannot be stopped in an unregulated environment. Careful planning and nurturing is needed to accrue the optimum benefit from the public-private partnership. However, the municipalities do not have such capacity. This problem was addressed by some facilitating agencies in Khulna, Patuakhali and Sylhet. This
research investigated the role and necessity of such facilitating agencies in initiating and sustaining public-private partnerships. The following sections describe the context of the four cities covered under this research.

4.5 Solid waste management in Khulna city

4.5.1 Basic information on Khulna city

Khulna municipality was upgraded to Khulna City Corporation (KCC) in 1991. Located in the southwest, it is the third largest city in Bangladesh (Map 2.1). The present population of city is estimated to be around 1.5 million (BBS, 2001). The city covers an area of about 46 square km.

A Mayor, directly elected by the citizens, heads the city. The city is divided into 31 wards. An elected ward commissioner heads each ward. In addition there are 10 women ward commissioners. Therefore, 41 officials (31 ward commissioners, 10 women ward commissioners, and the Mayor) comprise the elected body of the city.

Like all other city governments, KCC is responsible for providing municipal services to the citizens. Solid waste management is a primary duty of KCC. There is conservancy section at KCC to carry out the responsibility of solid waste management. A Conservancy Officer heads this section. The responsibility of the section includes secondary collection of solid waste, final disposal of solid waste, street sweeping, drain cleaning and mosquito control. The conservancy section employs 513 persons on regular and muster roll (daily wage) basis. Of this number, 358 (70%) are engaged in solid waste management. Of them, 290 persons are engaged in secondary collection and 54 persons work at the final disposal of waste (Huq, 2002).

KCC's mandate is to collect solid waste from secondary bins and dispose those safely. For this purpose KCC has constructed about 1,200 masonry neighbourhood bins, 105 larger masonry bins and 50 steel demountable bins. Citizens are supposed to deposit their garbage into these bins. KCC workers collect garbage from these bins, load those onto trucks, and haul the garbage to a dumpsite. The dumpsite is located about 8 km away from the city and measures about 20 acres. Only crude dumping is practiced. Sinha and Enayetullah (2000) estimated 200 ton/day waste generation and only 80 ton/day collection by KCC. On the other hand, Coad (1998) estimated 300 ton/day generation and 74 ton/day collection by KCC.
As a result of the poor collection ratio, much of the uncollected waste remained on the streets or found its way into drains. Heaps of garbage on the roads and drains clogged with garbage created a serious public health hazard. KCC was simply unable to cope with this situation due to budget and staff shortage.

4.5.2 Public-private partnership in Khulna

The Water and Sanitation Program (WSP) of the World Bank introduced the public-private partnership for managing solid waste in Khulna. The idea originated from an initiative in Dhaka. Mr. Mahbub Ahsan Khurram a resident of Dhaka city was frustrated with the growing piles of garbage in his neighbourhood. The Dhaka City Corporation (DCC) was unable to collect waste from the neighbourhood lanes. This prompted Mr. Khurram to start a door-to-door garbage collection in his neighbourhood. He bought a tricycle and converted it into a collection van. He engaged van drivers to go around the neighbourhood and pick garbage from each household. The collected garbage was deposited into a DCC secondary bin. He motivated his neighbours to pay for this service. The effect was remarkable. All piles of garbage disappeared from the roads. His operation, however, remained disjointed from the DCC operations.

Learning from this experience, WSP initiated the Khulna solid waste management project. The objective was to go beyond the Dhaka experience by building partnership between the public and private agencies. WSP hired a local NGO called Prodipan to implement the project. Both WSP and Prodipan acted as facilitating agencies. The project was launched in March 1997. From the very beginning the KCC was made a partner in the project. An MoU was signed with KCC to formalize this relationship. Under this MoU, Prodipan started a demonstration of door-to-door garbage collection service by the private sector (NGOs). Citizens were required to pay a small service charge. Six wards were selected for this pilot scheme. At the onset a massive public awareness campaign was launched. KCC officials, including the Mayor, participated in the public awareness building activities. Ward committees were formed in each of the six wards. Headed by the ward commissioner, these committees became the unifying platforms to bring together citizens, public representatives, KCC and NGOs.
When the door-to-door garbage collection service was fully developed and running smoothly, WSP looked into other aspects of waste management. First, a demonstration compost plant was built near the dumpsite. Both aerobic and vermi-compost process was developed. This technology was demonstrated to a number of local NGOs. Secondly, a ramp was built at the secondary bin site. It was observed that the walls of the secondary bins were very high. In absence of any docking mechanism, the waste from the tricycle vans was unloaded on the ground first. Then it was manually thrown into the bin. The ramp was constructed to reduce the multiple handling of waste. With the ramp in place, the vans were pushed up the slope and then tipped to directly unload into the bin. Thirdly, medical waste was observed mixed up with municipal waste. To address this problem WSP engaged a consultant to design a hospital waste management program. Prodipan implemented this program with tremendous support from KCC. KCC donated a piece of land and the mayor himself motivated hospitals and clinics to join the program by paying a reasonable service charge. In addition, WSP brought in a number of international experts to provide input throughout the lifetime of the project. On the other hand, WSP arranged study tour for Prodipan staff to visit Dhaka and India to observe good practices.

The project ended in December 2001. WSP ensured a clear exit strategy. The door-to-door garbage collection operations in the six wards were handed over to the respective ward committees. The services did not collapse with the withdrawal of the project. They continued to operate. WSP had a larger agenda to scale up the operation throughout the city and also to improve the landfill site. A joint project with KCC was submitted to UNDP for funding. This attempt was not successful as bureaucratic red tape killed the project. However, the success of the project inspired UNDP to arrange a small fund from another project. This small fund, administered by PRISM Bangladesh (an NGO) was used to motivate other NGOs to initiate the door-to-door garbage collection service. WSP continued to provide technical advice as needed. As a result, the coverage of door-to-door garbage collection increased from six wards to 26 wards by 2003 (after Chowdhury (2004) and WSP (2000)).

The facilitating agencies assisted the public sector (KCC), private sector (NGOs/CBOs), citizens and elected representatives to work together. They accomplished this by holding a series of dialogue with the stakeholders and organizing consensus building exercises. Their
relationship with KCC was formalised by a memorandum of understanding that gave them the
mandated to promote the above partnership. They worked closely with citizens and politicians
in analysing the local environmental problems and helped them in developing solutions. They
helped the NGOs/CBOs by training and demonstrating working models of primary collection
including all operational matters such as accounting, management, maintenance of vehicles,
etc. They also helped in establishing common platforms for citizens, politicians and service
providers in the form of ward committees and a citywide forum to hold discussion between the
public and private sector.

Fig 4.1: A tricycle van for door-to-door garbage collection service
Group 1: Intervention wards (6, 12, 17, 24, 27 and 28) with WSP/Prodipan facilitation

Group 2: Control wards (5, 14, 16, 19, 23 and 30) without WSP/Prodipan facilitation
4.6 Solid waste management in Patuakhali city

4.6.1 Basic information on Patuakhali city

Patuakhali municipality is one of the oldest in the country. It was established in 1892. The city area covers 26 square km. The current population is about 80,000.

The city is divided into nine wards. An elected ward commissioner heads each ward. Besides there are three women ward commissioners. An elected chairman heads the municipality. Therefore, the elected city government is composed of 13 members (nine ward commissioners, three women ward commissioners and one chairman).

A conservancy inspector heads the conservancy section. There are three conservancy supervisors to assist the inspector. The conservancy section employs about 60 sweepers. The sweepers use about 30 hand trolleys to collect garbage from dustbins. There are three trucks and two tractors for hauling waste. The city has no dumping ground. At present, solid waste is dumped beside roads and riverbanks.

4.6.1 Public-private partnership in Patuakhali city

The Danish aid agency Danida has a long tradition of providing assistance to Bangladesh in the water and sanitation sector. Danida teamed up with the Department of Public Health Engineering (DPHE) to launch an extensive project in the coastal districts of Bangladesh. The objective of the DPHE-Danida urban water supply and sanitation project is to improve public health through providing better environmental sanitation services. Solid waste management was considered an important element in improving environmental sanitation. Accordingly the project assessed the solid waste management situation in Patuakhali in 1997.

This study found the situation deplorable. There were only 10 dustbins in the whole municipality, drains were clogged with garbage and the city lacked capacity to address the problem. Based on the findings, the project took up a solid waste management pilot scheme as a research and development activity (Danida, 2000).

At onset the project organized a study tour for the chairman and other staff of the municipality to Khulna to learn from the successful project there. The municipality and project staff jointly planned a number of activities based on the experience gained from the tour. They planned two types of waste collection: (1) door-to-door garbage collection by tricycle van, and (2) collection of garbage from neighbourhood level small bins installed by the
The DPHE-Danida project hired an NGO to implement this pilot scheme in three wards (wards 2, 6 and 7). The wards are indicated in Map 4.2. The local NGO mobilized public awareness building, formed ward committee and introduced the collection systems. A total of 636 plastic bins were distributed among the households for in-house primary storage of garbage. BDT 25 (USD 0.42) covering about 20% of the cost of these bins was taken from each household as nominal contribution. About 85 neighbourhood level drum container bins were installed. The service charge for both collection methods was fixed between BDT 5 and 15 (USD 0.08-0.25) per month depending on the affordability of the households. Shopkeepers were charged around BDT 15-20 (USD 0.25-0.33) per month.

The project management unit (PMU) of the DPHE-Danida project acted as a facilitating agency. The PMU planned the activities jointly with the municipality. They organized coordination meetings between citizens, NGOs and the municipality. They carried out a survey to assess the needs for implementing the pilot scheme. They developed monitoring formats and a financial system for the scheme. They also provided training to municipality staff. In effect, the PMU, as the facilitating agency, nurtured the public-private partnership.

As in the case of Khulna, the Danida project also entered into a formal agreement with the municipality to promote solid waste management through PPP. They recruited NGOs to implement door-to-door primary collection. They attempted to build relationship between the municipality, the private sector, elected representatives and the citizens through joint exercises such as rallies and public meetings. However, in comparison with the Khulna experience, they were more aloof from the stakeholders. As a result they enjoyed less trust and friendship with the stakeholders as compared to the facilitating agencies in Khulna.
Group 1: Intervention wards (2, 6 and 7) DPHE-Danida project facilitated public-private partnership.

Group 2: Control wards (3, 4, 5) with service by the Patuakhali Municipality only.
4.7 Solid waste management in Sylhet city

4.7.1 Basic information on Sylhet city

Sylhet municipality was established in 1878. Considering the rapid population growth and increased commercial activity, the municipality was declared as a city corporation in 2003. Sylhet City Corporation (SCC) covers an area of about 27 square km. The present population of the city is about 500,000.

The city is divided into 27 wards. An elected ward commissioner heads each ward. Besides there are nine women commissioners. An elected mayor heads the city corporation. Therefore, the elected city government is composed of 37 members (twenty-seven ward commissioners, nine women ward commissioners, and one mayor).

A conservancy inspector heads the conservancy section. The conservancy section employs about 190 sweepers. There are about 150 municipal secondary dustbins. The sweepers use about 50 handcarts to collect garbage from the dustbins. It is estimated that solid waste generation in Sylhet city is about 180-200 ton/day. Of this amount about 40-50 is collected by SCC. There are five trucks and two tractors for hauling waste. The city has a dumping ground of about 17 acres. Only crude dumping is practiced (SCC, 2004).

A large number of people from Sylhet district migrated to the UK. There is a close linkage between the immigrants living in the UK and their former home city. The UK government also places due importance to this fact. As a result, Sylhet city attracts aid investment particularly from the UK.

4.7.2 Public-private partnership in Sylhet city

Sylhet Partnership (SP) Company has been operating since 2001. It is a not-for-profit organization set up under the Companies Act. It was established as a joint effort of the London Borough of Tower Hamlets (UK), Municipality of Horsens (Denmark) and SCC. The European Union Asia Urbs Programme provided the initial funding. The British High Commission in Dhaka also supported the initiative.

One of the key aims of SP is to provide capacity building support to SCC to deliver better urban environmental management services. Soon after its establishment, SP conducted a community consultation exercise. Solid waste management came out as a crucial area for action. Consequently, an expert from the UK was brought in to assess the situation and make
recommendations for improvement. The consultant produced a solid waste management framework for Sylhet city. The short-term goal of the framework was to set up a primary collection system through public-private partnership. The medium-term goal was to improve the landfill and transform SCC from a service delivery mode to a contract management mode by engaging the private sector. The long-term goal was to further improve the landfill by incorporating mechanisms for prolonging the life of the landfill such as resource recovery (e.g. gas collection) and recycling.

SP started door-to-door garbage primary collection in wards 1 and 22 according to the above framework (Map 4.3). They conducted a survey to assess the needs. They held a number of consultations with the citizens, elected public representatives, and SCC. They started the operation by learning from the experience of other cities in Bangladesh. They maintained a strict control over quality. They opened a complain book and telephone line for speedy redress to problems raised by the citizens.

In addition, they established a 2.5-ton capacity compost plant to convert organic waste into fertilizer. Tea gardens located around Sylhet city provide a ready market for organic fertilizer. The fertilizer is sold through a distributor. The earnings are used to offset part of the operational costs of the organization.

SP maintains a close link with SCC. SCC provides an office space and other facilities to SP. SP continues to support SCC staff with innovative ideas and assists SCC to prepare projects. Their good performance attracted the attention of Municipal Services Project of the World Bank. Consequently, a small grant was issued through WSP to scale up the effort for citywide service delivery.

Some NGOs and CBOs are also providing door-to-door garbage collection service in Sylhet. Yet others such as the Municipal Support Unit (MSU) of Local Government Engineering Department are planning to initiate primary collection service. SP is providing advisory support to MSU and other operators.

SP is playing the role of both a service provider and a facilitating agency. They are providing capacity building and advisory support to SCC and other organizations like a facilitating agency. But at the same time they are also a service organization with a long-term commitment (Saha, 2004).
4.8 Solid waste management in Dhaka city

4.8.1 Basic information on Dhaka city

Dhaka is one of the oldest cities in South Asia. The city's recorded history dates back to the early centuries of our era. Dhaka was under the Buddhist kingdom of Kamrup in the seventh and eighth century. By the thirteenth century it came under Muslim rule. The Mughal Empire made Dhaka their eastern administrative centre in the seventeenth century. Dhaka began to decline after the British gained military control of Bengal in 1757 and assumed the civil administration of the country in 1766. The population declined and the city shrunk as the British established a new capital in Kolkata. However, in the late nineteenth century the city again began to grow. It became the provincial capital of East Bengal in 1905. After the end of the British rule, Dhaka became the capital of East Pakistan. Rapid development took place with this change. An influx of migration started. In 1971, Dhaka became the capital of the independent country of Bangladesh. The city began to grow even faster ever since (Dhaka Municipality, 1966; Ahmed, 2003; Siddiqui et al., 2000).
Dhaka has already reached the rank of a mega-city with over 10 million population. The city covers an area of 460 square km. The city government was revamped, under a Municipal Ordinance, as Dhaka Municipal Corporation in 1978. In 1990, it was renamed Dhaka City Corporation (DCC) through a Local Government Act.

A Mayor, directly elected by the citizens, heads DCC. The city is divided into 90 wards. An elected ward commissioner heads each ward. In addition there are 30 women ward commissioners. Therefore, the city government comprises of 121 members including the mayor.

The responsibility of solid waste management is placed on the Conservancy Department of DCC. A Chief Conservancy Officer heads this department. This position was traditionally neglected although solid waste disposal is one of the most important functions of DCC. However, at present a qualified administrator with Defence Department experience has been recruited. This has raised the image of the department. Moreover, recently a solid waste management coordination cell has been created. A high profile officer with an MBA heads this cell. The purpose of this cell is to restructure DCC and bring all staff and equipment involved in solid waste management under one unit. These testify the growing importance attached by DCC to solid waste management (Faruqui (2004); Patwary (2004)).

At present, the Conservancy Department engages 7,000 workers. The equipment include: 224 trucks and 128 container carriers. DCC has a 72-acre dumpsite in the outskirts of the city. Only crude dumping is practiced.

4.8.2 Public-private partnership in Dhaka city

Private sector participation in solid waste management in Dhaka started with an initiative by Mr. Mahbub Ahsan Khurram. Frustrated with DCC's inability to keep his neighbourhood free from garbage heaps, he started a door-to-door garbage collection service in 1986. He bought a tricycle and converted it to carry garbage. A driver was employed. The driver blew a whistle to indicate his presence and time to bring in garbage to his van by household members. Mr. Khurram had to engage in numerous discussions with his neighbours to convince them and seek their participation. He even offered a 'no satisfaction, no payment' deal to the residents. The citizens were soon pleased to see regular, hassle-free service, and the remarkable improvement in their environment. They started to make regular payment to
sustain the service. There were no longer heaps of garbage on the lanes, as the van picked
garbage from each household and deposited into a large DCC secondary bin placed along a
nearby main road. The experiment was such a great success that the Bangladesh Television
authority aired a small documentary on this initiative.

Inspired by the documentary, similar schemes by NGOs and CBOs began to proliferate.
There was a great demand for such service from the citizens. The city's population became
too dense to construct any neighbourhood level dustbins. Nobody would allow construction of
a dustbin near his house. Citizens destroyed many dustbins because the overflowing dustbins
created a nuisance. The dustbins could only be placed along main roads. This increased the
distance to the nearest dustbins. Then the citizens resorted to throwing garbage on the roads
or into drains, hoping that DCC sweepers would take them away. DCC was overwhelmed and
could not collect the garbage from the roads. Consequently, the roads became very filthy
even in the posh residential areas. Therefore, when the private initiatives came along, the
citizens were quite willing to pay the nominal service charge for the convenience and
improvement in the environment.

At present almost all neighbourhoods in Dhaka has the door-to-door garbage collection
service by the private sector. However, there is hardly any link between the NGOs, CBOs or
entrepreneurs who are running the services and DCC. As a result, no consultation or
coordination takes place between the public and private sector. DCC does not keep any
record of such operators. DCC neither supports nor regulates the private sector. Therefore,
the growth of the private sector involvement in solid waste management in Dhaka has been
unplanned and unregulated.

There have been a few studies on the role of local initiatives and micro-enterprise (Kazi,
1999; Ali, 1999). But there has been no presence of any facilitating agency to promote public-
private partnership in Dhaka as was in the case of Khulna, Patuakhali and Sylhet. This makes
Dhaka as an interesting site to contrast and compare against Khulna, Patuakhali and Sylhet.
Map 4.4: Dhaka city

Dhaka City
PROJECT SITES

Legend

Selected Wards
- Ward - 19
- Ward - 51
- Ward - 59
4.9 Summary

This chapter presented the context of the research to familiarize the reader with the cities where the research was conducted. The underlying institutional situation and the impetus behind public-private partnership were explained. The evolution from purely public sector service delivery to public-private partnership service delivery was traced. Then pertinent facts about each of the four cities were presented. A brief description of the salient features of the city such as the area, population and general solid waste management was given to acquaint the reader with the basic setting of the city. Then the present state of public-private partnership was elucidated with insight into the nature of the public-private partnership and the role of the facilitating agency. This commentary and background information would help the reader in understanding the context of the research and the presentation of results that follow in the next chapters.
Chapter 5

5 Necessity of a facilitating agency in forming partnership

5.1 Introduction

This chapter presents the findings of the research regarding the necessity of a facilitating agency in forming partnership. Five research questions were associated with this important aspect. These were:

1. Why the public and private sector cannot form partnership without a facilitating agency?
2. What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?
3. How does a facilitating agency contribute to partnership?
4. What are the benefits of facilitation?
5. Is the role of a facilitating agency sufficient or are other co-factors necessary?

Each of the research questions was evaluated by an indicator parameter. The indicator parameters were “barriers against partnership”, “supports needed for partnership”, “contribution of a facilitating agency” and “benefits of facilitation” respectively (Fig 5.1). Data were collected by interviews with public and private agency officials including the facilitating agency officials. Questionnaire surveys on households and field workers of public and private agencies, and observations were also conducted to corroborate the findings.

The results were analysed using the analytical framework presented in chapter 3 (Methodology). The qualitative raw data from interviews were carefully reviewed and salient features of the responses were noted against each of the variables associated with an indicator. Then the key elements of the responses were disaggregated according to the type of respondents, e.g., public sector staff, private sector staff and elected representatives. The data from questionnaire survey were analysed by categorising and coding responses. Then numerical data were analysed statistically by the SPSS software. Observational data were examined for events and timings of public and private sector staff activities. These data were used to corroborate the interviews and questionnaire surveys.
Hypothesis
The role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh

Primary Q
Why the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh?

Aspect 1
Necessity of a facilitating agency

Secondary Q1
Why the two sectors cannot form partnership without a facilitating agency?

Secondary Q2
What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?

Secondary Q3
How does a facilitating agency contribute to partnership?

Secondary Q4
What are the benefits of facilitation?

Secondary Q5
Is the role of a facilitating agency sufficient or are other co-factors necessary?

Secondary Q6
What happens when the facilitating agency withdraws?

Secondary Q7
What was the form of partnership?

Secondary Q8
Why the two sectors cannot form partnership without a facilitating agency' facilitating agency withdraws?

Figure 5.1: Research questions, indicators and variables on necessity of a facilitating agency
In analysing the data, patterns, processes, commonalities and differences were noted and used to develop explanations. Generalization and conclusions were drawn from the refined explanations. The findings against the parameters are sequentially presented in this chapter. A summary of the key findings is included in the end.

5.2 Barriers against partnership

The first research question regarding necessity of a facilitating agency was "why the two sectors cannot form partnership without a facilitating agency?" The purpose of this question is to understand what are the barriers that prevent the two sectors to form partnership without intervention from a facilitating agency. If the barriers, either real or perceived, are not surmountable by the two sectors in their own capacity then facilitation may be necessary. Therefore, the indicator parameter was 'barriers against partnership'. The two variables associated with this indicator were 'perception of public sector staff' and "perception of private sector staff". Data were collected by interviewing key officials from the public and private sector agencies. The findings are presented in the following sections.

5.2.1 Perception of the public sector about barriers against public-private partnership

5.2.1.1 Municipal officials

Probing questions such as "why was it not possible for the public sector and private sector to start PPP on their own?" were used to elicit responses on the perception of barriers against PPP. The management level staff of the municipalities identified inability to conceptualise or imagine alternative approaches to delivering services as the main reason why they could not build public-private partnership before any facilitating agency came along. There was a general apathy or indifference to learning and applying innovative approaches. In Dhaka, where there is no facilitating agency working, the response was similar to the other cities. The barrier was identified as having no felt need at Dhaka City Corporation (DCC) to work with NGOs.

The city management staff mentioned that they do not have fund for experimenting with innovative approaches such as PPP. There is also no incentive for innovation in the public sector. The other problem is not having staff with skills such as community participation and public awareness building to appreciate working together with communities and NGOs.
In Khulna, where there was a strong facilitating team, the city's management staffs were motivated to promote PPP. The management staff actively supported the PPP initiative by taking part in public awareness campaigns. They also vigorously cooperated in solving problems such as resistance against service charge. With less facilitation, Patuakhali and Sylhet city officials saw no direct benefit coming to the municipalities from the facilitating agencies although they participated in some partnership building activities with the private sector that were organized by the facilitating agencies. Dhaka city officials, in contrast, mentioned that they simply do not have much contact with the private sector, although hundreds of private operators are active in primary collection. It shows that assistance from facilitating agencies in three cities was able to improve dialogue between the public and private sector that is sadly missing in Dhaka. It appears here that the extensive facilitation in Khulna city resulted in more ownership feeling in the city authority for the PPP arrangement. In contrast, limited facilitation at Patuakhali and Sylhet was not able to invoke the same degree of ownership feeling among city officials. The officials in these cities viewed the assistance from the facilitating agencies as novelties having no direct benefit to the cities. This indicates that facilitation should be extensive in time and involvement to bring about ownership feeling for PPP.

5.2.1.2 Elected public representatives

The elected public representatives (ward commissioners) mentioned that the lack of fund at municipality is the main barrier to promote alternative approaches such as PPP. Most agreed that the facilitating agency was able to promote PPP because they injected new idea, provided seed fund and demonstrated a model of PPP.

Inability to scale up the coverage area under PPP and lack of coordination between the public and private sector were seen as a threat to sustainable PPP in the wards where facilitation took place. Commissioners of these wards sought continued support from facilitating agencies for increasing the coverage area under PPP and improving coordination between the private sector and municipality. They, however, seemed confident about the viability of the PPP arrangement and continued trust of the citizens. For example, one representative expressed the need for imposing fine against littering to deter the few
offenders. He was confident that his constituents would welcome this step rather than object to it.

On the other hand, ward commissioners from the areas without facilitation feared resistance from the citizens against imposition of service charge for primary collection. They also expressed their doubt about the capacity of the private sector to deliver service. Some representatives narrated bitter experience about the poor quality service rendered by the private agencies. They viewed the NGOs/CBOs as having little accountability. It indicates hesitancy about and lack of confidence against the private sector. The same feelings were probably present in the previously mentioned wards. However, the facilitating agencies were able to demonstrate the private sector’s capacity to deliver satisfactory service, and this dispelled the negative feelings of the public representatives.

In reviewing how these results correspond with other studies, it was found that similar hesitation is present in public and private actors to work together on the basis of trust in Hyderabad, India (Post and Baud, 2004). These authors also mentioned that there is political opposition to the transfer of traditional public sector responsibility to the private sector. They stated that CBOs are not automatically perceived as potential partners by local governments. These observations agree well with the responses of the ward commissioners from the areas without facilitation. However, the ward commissioners from areas with facilitation are much more confident about the quality of service delivery by NGOs/CBOs and they are viewed as good partners. This indicates the success of the facilitating agencies in bringing about positive change in the minds of politicians regarding partnership with the private sector.

5.2.1.3 Perception of the private sector about barriers against public-private partnership

In this study, the private sector constituted NGOs and CBOs. In addition, ward committees also found to deliver primary collection services. So these committees were also part of the private sector service providers. Such ward committees were found in Khulna only. These committees are headed by the ward commissioner and composed of social leaders. The ward committee members felt that lack of linkage between NGOs and KCC is the main barrier against PPP. In their opinion, there is usually very little communication between the two sectors. KCC staff and sometimes even ward commissioners exhibit indifference toward NGOs.
The ward committee members thought that the facilitating agency in Khulna was able to break the indifference by raising public awareness including those of the city officials and ward commissioners. They built capacity of the city officials through training and providing assistance in planning and monitoring. Besides, the facilitating agency demonstrated how to run the public-private partnership. Seeing PPP in action convinced the city officials of its viability.

The ward committee members identified a few problems that still remain against PPP. The key problem is inability to scale up operations due to lack of seed fund. They felt that the area under PPP coverage should be increased to reach all households including the poor households, as they are often not included in the door-to-door garbage collection scheme. Enjoying the full benefit of a clean city is not possible if a section of the population is left outside of the service. To achieve this the ward committee members felt a need for continued support from a facilitating agency as there is still some lack of cooperation from KCC, and NGO/CBO capacity is yet to achieve full maturity.

The NGO respondents stated that the main barrier against PPP is lack of innovation and skill at municipalities. Municipalities do not have skill for community participation or engaging with NGOs. Another impediment is frequent change of officials at municipalities. An official may be transferred soon after he/she becomes familiar with PPP. So the process of learning has to start afresh with the newly appointed official unfamiliar with PPP. Therefore, lack of capacity and retaining capacity within a municipality are major obstacles.

The NGOs mentioned some minor barriers also. One of which is rivalry among local NGOs. Some NGOs do not want other NGOs/CBOs to enter into PPP arrangement, as this is seen as loss of opportunity and encroachment into their business. Secondly, local politics also affects PPP. Politicians are sometimes non-cooperative and even hostile to the idea of private sector involvement.

Facilitating agencies were seen to overcome these barriers by building trust and relationship between municipalities and NGOs/CBOs. They conducted survey and brought in experts to impart knowledge and training. They created a conducive environment through public awareness.
The NGO respondents thought that continuing support from the facilitating agencies is required to build capacity of both the public and private sector. The facilitating agencies should also help in formulating favourable policy and strategy for PPP. To accomplish all these the facilitating agencies themselves need a lot of expertise and skill. Some NGOs, particularly in the areas with less facilitation, voiced demand for higher capacity of the facilitating agencies. They also thought that the facilitating agencies should have long-term commitment.

5.3 Support needed for partnership

5.3.1 Support needed to achieve public-private partnership

The second research question was "what support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?" The purpose of this question was to investigate the needs of the partners in adapting to partnership arrangements. If the resources available within the partners cannot meet the needs then external assistance by a facilitating agency may be necessary.

Respondents were asked about the support they need to sustain the present status of PPP (where applicable) and support they need to initiate further PPPs. The responses, disaggregated into municipal officials and elected representatives, and the private sector (NGOs/CBOs) are presented below.

5.3.1 Perception of the public sector about support needed

5.3.1.1 Municipal officials

Support needed to sustain present partnership: Khulna city officials expressed a need for support from the Local Government Ministry in promulgating guidelines on PPP. This would clarify the role of the city corporation in supporting such initiative. Such policy statements would also allow the City Corporation in formalizing relationship with NGOs.

Secondly, city corporation officials need support in initiating and maintaining dialogue with the citizens. Traditionally such dialogue never takes place. But now the city corporation officials see the necessity of maintaining close linkage with the citizens. But they lack adequate skills in this regard. So they need support in terms of training and orientation in this area.
The Patuakhali Municipality officials stated that they need fund to sustain the existing public-private partnership. The pilot project that is promoting PPP will face serious trouble if the external donor agency stops funding suddenly. Such dependency on donor funding is detrimental to the growth of PPP. The government should allocate fund to the municipalities to support such efforts. They also felt a need for support in evaluating the PPP experience and preparing recommendations for municipalities. This capacity is not available within the municipalities. The municipality officials also expressed the need for support in boosting its public awareness building capacity.

In Sylhet, the city officials stated that both private sector and Sylhet City Corporation (SCC) need support to sustain the present PPP arrangement. The private sector needs technical advice on improved tricycle van design and transfer mechanism to unload waste from vans to secondary dumps with minimum manual handling. They need further training on building public awareness, modern management, and good accounting practices. The public sector also needs budgetary support to recruit necessary manpower, equipment and landfill improvement.

In addition, support is needed to motivate the politicians, because institutional reform cannot take place without political support. The politicians should be assisted to become more service oriented. They should be given hard evidence from surveys on the real situation and demand of the people. They should be given responsibility to solve problems with their political influence rather than create obstacles to service delivery. This is a tall order, and requires expertise that is beyond SCC or private agencies. According to the city officials, a specialized facilitating agency with adequate expertise may address this issue.

Support needed to initiate new partnerships: Khulna city officials mentioned that a facilitating agency is needed to initiate new partnerships. Encouraged by the success of the PPP model of service delivery in SWM, the officials want to launch a new PPP initiative to improve the sanitation situation of the city. But they feel that they alone cannot tackle such initiative that involves data collection, public awareness, training NGOs/CBOs, etc. Therefore, they stated that a facilitating agency is required to both launch new PPPs and nurture the already-launched PPPs to maturity.
The Pautakhali municipality officials expressed the urgent need for a proper landfill site to expand the PPP based solid waste management. They need support for this expansion scheme in terms of technical advice, guidance on equipment procurement and access to modern management knowledge to operate a landfill. A facilitating agency may help the municipality in expanding PPP by providing the required technical assistance.

Sylhet city officials felt that the major support is needed to motivate the politicians, because institutional reform cannot take place without political support. The politicians should be assisted to become more service oriented. They also mentioned the need for support from the central government in terms of fund, policy formulation and administrative cooperation. Motivating politicians and conducting advocacy for better policy requires skills and acceptability beyond the capacity of the Sylhet City Corporation. A facilitating agency having extensive knowledge and access to policy-makers can help the city corporation in these areas.

The Dhaka city corporation officials wanted support in the form of technical advice and exposure to modern management methods. They mentioned that a lot of firms come up with fantastic projects under PPP arrangement. But city officials do not have enough technical knowledge to evaluate these proposals (such as plasma technology for waste disposal). They are not sure if these proposals are technically feasible or are attempts by the unscrupulous business houses to make a quick profit. A facilitating agency can assist DCC by making available the experience of these technologies in other countries, and by providing decision-making tools to evaluate new technology proposals.

Dhaka city officials also mentioned budgetary support for procurement of necessary equipment. They need some support on the software side to build better relationship with NGOs. They mentioned that synchronization of dumping waste by NGO operators and collection by DCC at the secondary points could solve a persistent problem of overflowing secondary bins. This requires a close cooperation between the NGOs and DCC. As there is no common platform between the public and the private sector, a facilitating agency can assist in starting a dialogue between two sectors to encourage better coordination.
5.3.1.2 Elected representatives

Support needed to sustain present partnership: In Khulna, the ward commissioners mentioned that there is a need for continued support from the facilitating agencies, as NGOs/CBOs in many wards need more staff and vans. Support from the facilitating agencies is required until the operations run by NGOs/CBOs become financially stable. They estimated that about five years' support is required to make NGOs/CBOs independent. But to achieve this they need to expand their service area, which in turn requires more seed fund. Therefore, the role of facilitating agencies in sustaining the PPP was seen as an important part in terms of nurturing the private sector partners until they become financially and technically sound.

Other recommendations from the commissioners included installation of more secondary bins to make the PPP system more efficient. In this way the catchment area of a secondary bin would be reduced, and less waste would accumulate at a given secondary bin. The tricycle vans would not have to travel long distance to haul waste, so each tricycle van could serve more households. Secondly, A facilitating agency could prepare a report detailing the efficiency gains and the optimum number of secondary bins required. This would persuade the city corporation to install the required number of secondary bins. There should also be some kind of docking mechanism so that the vans can directly unload waste into the secondary bins, thereby avoiding manual loading and unloading at the secondary bin point. This requires a technical innovation. A facilitation agency can assist the city corporation by giving technical advice on a docking mechanism.

Lastly, the commissioners mentioned that their involvement in the PPP arrangement should be increased. The ward commissioners should be given more supervisory roles to protect public interest. For example, some NGOs have been noticed to employ child labour. This is not acceptable. The ward commissioner as protectors of public interest can prevent this type of activity. The facilitating agencies can persuade both the public and private sector to allow the elected representative to play an active role in supporting PPP.

Like their counterparts in Khulna, the ward commissioners of Patuakhali also wanted continued support from facilitating agencies. Their demand from the facilitating agency was for fund and technical advice.
In Sylhet the ward commissioners also wanted long-term commitment from facilitating agencies to provide funding and advice. They wanted support from the city corporation in setting up an adequate number of secondary bins. From the NGOs, they demanded engagement of sufficient number of vans and staff. Some NGOs have done a disservice to the PPP concept by not employing sufficient number of staff or by not commissioning the required number of collection vans. This resulted in poor service quality. Therefore, the elected representatives demanded that the NGOs should be accountable to the ward commissioners to prevent such poor quality service. This requires a stronger relationship between the NGOs and ward commissioners. The facilitating agencies can assist in building this relationship between the NGOs and the elected representatives.

Support needed to initiate new partnerships: The ward commissioners in Khulna expressed the need for fund to expand the public-private partnership coverage. They wanted continued support from facilitating agencies in terms of fund and motivational campaign. The facilitating agencies' assistance was sought for building rapport with citizens and NGOs. Regarding broadening the scope of partnerships, some ward commissioners suggested that street sweeping and drain cleaning could be brought under the private service also.

The main concern in Patuakhali regarding expanding the public-private partnership was about a landfill site. New partnerships cannot be pursued because there is not landfill to accept the increased waste. They expected the facilitating agencies to play an active role in supporting the municipality in designing and operating a proper landfill site. To initiate new PPPs, they wanted support from a facilitating agency in terms of planning, technical advice, consensus building and public awareness building.

The ward commissioners of Sylhet city mentioned that funding and planning support are required from facilitating agencies to initiate new partnerships. They stated that funding should also come from the central government and city corporation. A lot of local consultation should be arranged before embarking on new partnerships, which is another area where help is needed from the facilitating agencies.

The facilitating agencies could also help the private sector in taking good management decisions. For example, NGOs/CBOs should give preference to local people in recruitment, as people from other districts tend to take long vacations. Solid waste management requires
uninterrupted service. So local workers should be hired as much as possible. This seasoned NGOs are aware of this, but new entrants in the business may be unaware. So the facilitating agencies could help the prospective NGOs by giving advice on sound management decisions.

Finally they mentioned that sometimes local politics hampers PPP initiatives. Rivalry between politicians jeopardizes good initiatives. Dialogue, openness and transparency is needed to avoid such political interference. The facilitating agencies can help in this area by organizing discussion meetings where politicians, stakeholders and general citizens can converge on a common approach.

In Dhaka, the ward commissioners wanted support in establishing a clear chain of accountability. Ward commissioners do not have authority to supervise DCC workers. As a result they are helpless to ensure good service to the citizens. They wanted support in formally establishing supervisory control in the hands of the elected public representatives. In the same line, NGOs and DCC should have formal relationship with accountability. A system of reward and punishment should be devised based on performance. The facilitating agencies can help by designing the PPP in way that ensures accountability and performance monitoring.

Secondly, the facilitating agencies could assist by building capacity of the city corporation. The city corporation needs help in procuring the optimum number of trucks for secondary waste collection. At the same time they need modern monitoring system for their truck fleet. This is an area where a facilitating agency may assist DCC.

Finally, the ward commissioners mentioned that there is need for support to arrange exposure visits for ward commissioners. Some of the ward commissioners visited neighbouring countries. This broadened their outlook regarding service delivery to the citizens. facilitating agencies could assist in building capacity of the elected representatives through exposure visits.

5.3.2 Perception of the private sector about support needed

The private sector (NGOs and CBOs) identified the facilitating agencies as key resources for capacity building for both private and public sector. The private sector needs seed fund, technical advice and training for enabling them to enter into PPP arrangements. The private
sector needs training on new technology (such as composting) and management. The respondents stated that the public sector should be given training on supervision and monitoring by the facilitating agencies so that they can oversee the operations of both public and private sector. This is very much necessary for maintaining of service quality monitoring.

The other support they seek from the facilitating agencies is in the area of knowledge generation and dissemination. There is a serious dearth of knowledge on solid waste management. For example, the quantity of waste is generated, the amount of service charge people are willing to pay, the cost estimate of running a door-to-door garbage collection service, etc. are not known to the NGOs. Neither the local NGOs nor the municipalities are capable of conducting scientific surveys and generate the essential data. The facilitating agencies can assist by conducting appropriate survey and disseminating the findings.

Facilitating agencies are also needed for building relationship between the private sector and municipalities. The trust and cooperation from the public sector is very much necessary, because part of the waste handling is done by the public sector. The private sector felt they cannot deliver satisfactory service without cooperation from the municipalities. The facilitating agencies can motivate the public sector as well as general citizenry to support the PPP arrangement.

The private sector, therefore, also sought support from the municipalities. They stated that the PPP arrangement should be formalized by the municipalities. There should be formal agreement between the NGOs/CBOs and a municipality. This will clear any ambiguity or legal barrier against the public and private sector working together. Here the facilitating agency can guide the public to adopt appropriate policy and strategy that is conducive to PPP.

Finally, the private sector respondents raised a very important issue of scaling up the PPP coverage area. It is not possible for the private sector to scale up the service citywide without assistance from facilitating agencies and the public sector. Support from both is needed to upscale the pilot experiments in PPP to a citywide service delivery mechanism.

5.4 Contribution of facilitating agency

The third research question on necessity of a facilitating agency was “how does a facilitating agency contribute to partnership?” The purpose of this question was to understand what a facilitating agency does that results in partnership between the two sectors. The
activities, process, resource and competence extended by a facilitating agency may shed light
on the necessity of such specialized agency as well as the capacity required of such agency.

Perceptions of the public and private sector officials were collected by interviews. The
findings are presented here.

5.4.1 Perception of the public sector about contribution of facilitating agency

Respondents were asked to identify the significant contributions of the facilitating agency
and evaluate the success or failure of the inputs. The findings are presented disaggregated
by municipal officials, elected public representatives and the private sector.

5.4.1.1 Municipal officials

The municipal officials stated that the main contribution from the facilitating agencies was
the injection of the new idea of PPP. It is very difficult for municipalities to change the
traditional way of service delivery. The municipalities greatly appreciated the demonstration of
PPP by the facilitating agencies. A number of innovative technologies and approaches such
as door-to-door garbage collection by private agencies, composting, and hospital waste
management were seen as important inputs from the facilitating agencies.

The other key input from the facilitating agencies was interface between municipalities and
NGOs. Facilitating agencies built relationship between the municipalities and NGOs, elected
representatives, and citizens. They raised public awareness through mass contact with the
citizens. Khulna city officials earnestly joined in this campaign. The idea of close relationship
with the citizens—the clients of the municipalities—was also a new concept that was
introduced by the facilitating agencies.

The appreciation about the facilitating agencies was the strongest in Khulna, where the
facilitation was also the most extensive and well planned. This was followed by Patuakhali
with moderate facilitation. Sylhet city officials observed no direct assistance to them from the
facilitating agency. There is no facilitation in Dhaka city, but the city officials found the idea of
a facilitating agency appealing. They thought there is a good potential in improving the their
relationship with citizens and NGOs through the intervention of a facilitating agency.
Appreciation and sense of value in facilitating agencies was, therefore, associated with the
quality and intensiveness of facilitation.

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In evaluating the outcome of the input by facilitating agencies, the Khulna city officials expressed their satisfaction. They mentioned that the city is considerably cleaner as a result of the efforts of the facilitating agency. In this regard, they thought the facilitating agency was quite efficient in raising public awareness and building capacity of NGOs/CBOs.

In contrast, the city officials in Patuakhali complained about misuse of money by the facilitating agency. They stated, for example, that an expensive truck was given to the municipality, but it is too large to move through the city's narrow streets. So the truck could never be used. They also mentioned a lack of planning by the facilitating agency. The facilitating agency introduced door-to-door garbage collection, but made no provision for a landfill. As a result the municipal officials are finding it very difficult to dispose the city's waste.

In Sylhet, the city officials were satisfied with the field level work of the facilitating agency, but they stated that the coordination between the facilitating agency and the top management of the city is lacking. This indicates that the facilitating agencies must have enough technical competence and long-term commitment to deliver the required assistance.

5.4.1.2 Elected representatives

The response from the elected public representatives (ward commissioners) was similar to the city officials. They appreciated the conceptualisation and introduction of PPP as the most significant input from the facilitating agencies. Formation of ward committees in Khulna was especially appreciated. The ward commissioners identified the public awareness campaign, capacity building of the NGOs, and the demonstration of the PPP model as major contribution by the facilitating agencies.

In evaluating the input by the facilitating agencies, the ward commissioners in Khulna were unanimous in declaring the facilitating agency successful. In Patuakhali, however, they complained about a lack of quality and expertise of the facilitating agency. In Sylhet, the facilitating agency was seen as capable at planning level, but their service delivery quality was less than satisfactory. This corroborated the earlier finding from the municipal officials that the facilitating agencies need to enough technical competence and commitment to provide positive contribution.
5.4.2 Perception of the private sector about contribution of facilitating agency

The private sector found the provision of seed fund to demonstrate the PPP model as the most significant contribution by the facilitating agencies. In general, they also appreciated capacity building through training and public awareness campaign as significant contributions by the facilitating agencies. Most of the respondents agreed that the cities were considerably cleaner after the introduction of PPP.

Apart from the above general response, a few different observations came from Khulna and Sylhet. In Khulna, the private sector found the training and exposure visits organized by the facilitating agency as highly significant input. The international and prestigious image of the facilitating agency (World Bank) was significant, because it attracted the attention of city officials. The technical advice received from the facilitating agency was viewed as essential. In Sylhet, the assistance to SCC by the facilitating agency in preparing new PPP projects to attract investment was deemed as significant input.

In evaluating the success and failure of the input by the facilitating agency, the private sector in Khulna was generally of the opinion that the facilitating agency was successful. They cited that the model introduced by the facilitating agency is working well, the NGOs/CBOs are enabled, PPP is expanding and the ward committees are generally functional. However, they also mentioned some failures of facilitating agencies in Khulna. The withdrawal of the facilitating agency was too soon, before the model was fully mature. Not all areas were covered; especially the poor areas were neglected. An equitable service to all citizens including the poor should have been ensured by the facilitating agency. Some respondents thought that handing over the responsibility to voluntary CBOs was a bad idea. Waste management is a serious business; slackness in service for even one day may cause considerable trouble. So this task should be placed not on volunteers, but on professional organizations, they thought. Some other weaknesses that were mentioned are: the model development was too slow, some citizens still lack awareness, and the monitoring was not strong. But the most significant failure of the facilitating agency was the fact that PPP is still not institutionalised. It has not been formalized by the city by entering into agreement with the private sector. The whole system is running as an ad hoc measure.
In Patuakhali, they mentioned there was a serious technical fault by the facilitating agency. They made no provision of a landfill. There is no place to dispose waste. This is a serious problem for waste management. The private sector is also finding that the facilitating agency did not sufficiently address the issue of how to scaling up of the PPP model. As a result the model has not grown.

In Sylhet, some NGOs mentioned that they have to constantly search for fund, as PPP is not yet a formal system supported by the municipality. This hampers field level activity. They found that the facilitating agency failed to build capacity of the city corporation. SCC is not able to remove waste timely from the secondary points due to lack of staff and vehicle. This problem should have been addressed by the facilitating agency. A few respondents mentioned that there is too much fragmentation of service area among the private agencies. For economies of scale, it is necessary for a private agency to serve a large area. This allows a sufficiently large amount of service charge collection, and more efficient use of staff and vehicles. This issue should have been addressed by the facilitating agency.

5.4.3 Response from the citizens

A semi-structured questionnaire survey was conducted on randomly selected households to triangulate the findings from the interviews with the public and private sector operatives. Key findings from the citizens are presented here.

In all cities, the majority of households in the neighbourhoods where door-to-door garbage collection service is available were found to be subscribing to the service. The percentages of the households subscribing to this service provided by the private sector are given in Table 5.1.

Table 5.1: Percentage of households (within service areas) subscribing to the door-to-door garbage collection service

<table>
<thead>
<tr>
<th></th>
<th>Khulna</th>
<th>Patuakhali</th>
<th>Sylhet</th>
<th>Dhaka</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>79%</td>
<td>80%</td>
<td>76%</td>
<td>75%</td>
</tr>
</tbody>
</table>

It appears that people's willingness to take this service is not affected by the presence of a facilitating agency. A chi-square test resulted in a low significance of 0.247 as described in table 5.2. This represents a weak relationship between people's preference for the service and the presence of any facilitating agency. This indicates that there is a latent demand for
such service irrespective of intervention by any facilitating agency. If such service is available in an area, people are likely to subscribe to it, whether there is a facilitating agency or not.

The households that subscribed to the door-to-door garbage collection service were asked about the primary motivators who influenced their decision to take the service. The results are presented in Table 5.3.

Table 5.2: Relationship between subscription to private service by households and presence of facilitating agency

<table>
<thead>
<tr>
<th>Subscribe to door-to-door garbage collection?</th>
<th>Facilitating agency present?</th>
<th>Total Count (% row, % column)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>142 (85.5%, 83.5)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>24 (14.5%, 75.0%)</td>
</tr>
<tr>
<td>No</td>
<td>28 (78.8%, 16.5%)</td>
<td>8 (22.2%, 17.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>170 (84.2%, 100.0%)</td>
<td>32 (15.8%, 100.0%)</td>
</tr>
</tbody>
</table>

Value df Significance

| $\chi^2$ | 1.338 | 1 | 0.247 |

There was a lot of variation in the result. In Khulna the facilitating agencies and private service agencies was jointly responsible motivating 59% of the households. This response is expected because both facilitating agencies and the private service agencies (NGO/CBO) were active in motivational activity. However, the results also show a high percentage (40%) of the households as self-motivated. This means that no agency directly advocated to them to subscribe to the door-to-door collection system under PPP, but the general increase in public awareness through various campaigns might have influenced them positively.

Table 5.3: Motivating agents identified by households subscribing to private service

<table>
<thead>
<tr>
<th>Motivating Agents</th>
<th>Percentage of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Khulna</td>
</tr>
<tr>
<td>Facilitating agency</td>
<td>32</td>
</tr>
<tr>
<td>Service agency</td>
<td>27</td>
</tr>
<tr>
<td>Self</td>
<td>40</td>
</tr>
<tr>
<td>ward committee/citizen group</td>
<td>1</td>
</tr>
<tr>
<td>Municipality</td>
<td>0</td>
</tr>
<tr>
<td>Elected representative</td>
<td>0</td>
</tr>
<tr>
<td>Neighbour</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

In Patuakhali no household identified the service agency (NGO) as their motivator. Instead, 55% households attributed their motivation to the facilitating agency. This is most probably due to the approach by the facilitating agency to engage NGOs as contractors to implement the PPP project. As a result the NGO service agency did not have much
opportunity or interest in motivational work. The motivational activities were mostly carried out by the facilitating agency itself. Another interesting feature from Patuakhali was that 41% households mentioned that municipality staff had motivated them. This is also due to the approach of the facilitating agency. A disagreement between the facilitating agency and the contracted NGO at some point threatened the operation of primary collection. At that time the municipality provided backup support, and it is still now providing supervision and backup support. This gave the municipality greater opportunity to engage with the citizens in motivational activity. However, the private sector in Patuakhali is in a weak position, and public sector may not have the capacity to extend the same level of intensive service to the entire city. These point to the need for a balanced and long-term outlook by the facilitating agency while designing PPP projects.

In Sylhet, the facilitating agency and service agency jointly motivated 44% of the households. It is interesting to note that citizen groups and elected representatives also motivated 39% households. This again points to the approach taken by the facilitating agency. In Sylhet, citizen groups and elected representatives were given leadership in motivational campaigns. It is reflected in these high identification rates for them as motivational agents.

In Dhaka, where there is no facilitating agency, neighbours were the highest (67%) motivational agents. This was followed by self-motivation (21%). Together these two account for 88% of the households. Only 12% households mentioned being motivated by the private service agency. This indicates a high demand for primary collection service in Dhaka even in absence of motivation by the service providing agency. In highly congested Dhaka city neighbourhood level dustbins have disappeared due to not finding suitable location to place them, as no household allows construction of a dustbin nearby. Therefore, community bins are located only on main road, far from most households. As a result, householders prefer to pay a small monthly charge for doorstep primary collection rather than traverse the long distance to dustbins.

The households that are not subscribing to the door-to-door garbage collection service were asked to give the reasons for their decision. The results are presented in Table 5.4. The results show that poor service delivery is a major cause of non-participation or drop-out rate
as is the case in Khulna, Patuakhali and Dhaka. Non-availability of service also registered high percentages in Sylhet and Dhaka. In these two cities service delivery areas are patchy with pockets of unserved areas interspersed within served areas. Presence of nearby dustbin, ditch or drain discourages people from subscribing to the private service, as they can use these alternatives to avoid paying service charges. But high service charge itself was not seen as a significant reason for not participating in the primary collection service. Lack of motivation was identified as a major reason in Patuakhali. The motivational activity suffered in Patuakhali because the service agencies were not given enough opportunity to participate in the motivational activity, which could be a design fault by the facilitating agency.

Table 5.4: Reasons for not subscribing to private service

<table>
<thead>
<tr>
<th>Motivating Agents</th>
<th>Percentage of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Khulna</td>
</tr>
<tr>
<td>Poor Service</td>
<td>40</td>
</tr>
<tr>
<td>Dustbin nearby</td>
<td>20</td>
</tr>
<tr>
<td>Ditch nearby</td>
<td>20</td>
</tr>
<tr>
<td>Drain nearby</td>
<td>0</td>
</tr>
<tr>
<td>Motivation lacking</td>
<td>16</td>
</tr>
<tr>
<td>Service charge high</td>
<td>4</td>
</tr>
<tr>
<td>Drain nearby</td>
<td>0</td>
</tr>
<tr>
<td>Service not available</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

The household survey results showed that most households are willing to participate in a private service delivery system. But there is a likelihood of some households dropping out or not joining if the service quality is not satisfactory. The household survey also points out that the approach taken by the facilitating agency affects motivational activity and non-participation by households. To be successful, the facilitating agencies should learn from the best practice examples, apply the most suitable participatory approach.

5.5 Benefits of facilitation

The fourth research question regarding the necessity of a facilitating agency was "what are the benefits of facilitation?" The purpose of this question was to investigate the benefits of intervention by a facilitating agency. A significant difference in the operations and scope of service delivery between areas where a facilitating agency exists and where it does not may indicate the necessity of a facilitating agency.
Two queries were used to probe this indicator parameter: (1) "has there been any improvement in the quality of service?" and (2) "has there been any improvement in the scope of service?" The responses to these questions are presented below.

5.5.1 Perception of the public sector about benefits of facilitation

5.5.1.1 Municipal officials

**Improvement in quality of service:** The most significant benefit of facilitation identified by the officials of KCC was a change in the behaviour of the citizens. Citizens no longer throw garbage on the streets in the areas where door-to-door garbage collection under PPP is in operation. The environment has become much cleaner as a result. The problem of drain blockage due to garbage is also gone. The other significant effect was the relationship between the citizens and KCC. Citizens have become closer to KCC. They often make telephone calls for service improvement. KCC tries to respond to the demand of the people.

In Patuakhali Municipality, the quality of service improved for a while. But when the motivational activities was curtailed, some people reverted back to the old practice of throwing garbage on the streets. This was the main complaint from the municipal officials regarding service quality.

In Sylhet, the municipal officials mentioned that there have been many false starts by the NGOs. They started the door-to-door garbage collection service, but could not continue for long. They did not have the capacity to manage the task. However, the areas where the service by the private agencies is continuing are indeed considerably cleaner. But even in these areas some people are still littering the roads.

In Dhaka, the city officials admitted that the neighbourhoods have become cleaner than before due to the door-to-door garbage collection by the private agencies.

**Improvement in scope of service:** All municipal officials mentioned that the volume of waste collected increased due to the garbage collection service by the private sector. KCC mentioned a three-fold increase in its garbage volume. The door-to-door garbage collection service expanded to 26 wards out of the 31 wards of Khulna city. KCC was very pleased with their experience in PPP. Subsequently they prepared a larger project with the help of the facilitating agency. Unfortunately this proposal was not approved due some bureaucratic
problem at the ministry level. Nevertheless it shows the commitment of KCC to promote service delivery by PPP.

There was a less degree of success in improving the scope of service in Patuakhali and Sylhet city. In Patuakhali the PPP initiative was limited to the pilot areas only. It did not expand to other areas. In Sylhet, there was a limited expansion of services. SCC officials mentioned that some areas that never received any SWM service are now receiving primary collection service due to the private sector activities.

In Dhaka, the officials mentioned that NGOs tend to offer their service to the more affluent parts of the city leaving out the poor settlements. The service is, therefore, still fragmented although it covers many parts of the city. The officials stated that they had heard of plans by some private agencies to cover an entire ward, but this has not happened so far.

5.5.1.2 Elected representatives

**Improvement in quality of service:** The ward commissioners from Khulna testified that their areas have become much cleaner than before because of PPP. There are no more piles of garbage on the roads. This has greatly improved the environment.

Besides people are more aware now. They are participating in the door-to-door garbage collection service. This has given them a better level of service. They are willingly paying service charges for the convenience.

The PPP system has made the service providers accountable to the citizens and ward commissioners. People are monitoring the service of the private agencies and KCC as well. KCC now has to listen to the demands of the people. However, some respondents said that this has not produced much effect on the KCC workers. Nevertheless the monitoring and complaints from the citizens demonstrate a greater awareness and concern for protecting the city's environment.

Like in other cities, the ward commissioners in Patuakhali also mentioned that the quality of service has improved due to PPP. There is a marked difference in cleanliness between areas served under PPP and areas not served. However, the lack of landfill site is not allowing the city to enjoy the full benefit of effective garbage disposal under PPP.

Sylhet city ward commissioners expressed similar opinion about the improvement in cleanliness by PPP. They also mentioned that people's awareness and behaviour have
changed due to the introduction of service by the private agencies. However, they mentioned some private agencies are operating with insufficient number of collection vans. This is having a negative effect on the quality of service, as there is delay in garbage collection, and there is no backup if one van goes out of order.

Dhaka city ward commissioners also admitted that the areas with door-to-door garbage collection service are cleaner than other areas. But they mentioned that there is rivalry among NGOs/CBOs and there is no real regulation or protection of public interest if a private agency fails to deliver satisfactory service.

**Improvement in scope of service:** Khulna city ward commissioner expressed satisfaction about the scope of service. More garbage is being collected. The area under primary garbage collection program is increasing. Even slum households are now included in some wards. However, there are still unserved areas that should be brought under service coverage.

The Patuakhali ward commissioners mentioned that the pilot project on primary garbage collection under PPP has not expanded yet. But there is a lot of demand from the unserved wards. This demand is yet to be met.

In Sylhet, the ward commissioners were happy to note that the public-private partnership arrangement is expanding. It has already expanded from neighbourhood to full ward coverage in some places. Effort is taken to cover all households wherever this system is introduced. The volume of garbage collection has also increased due to these activities.

Dhaka city commissioners mentioned that primary collection by NGOs/CBOs does improve cleanliness. But they cautioned that only qualified agencies with sufficient management skill, staff and equipment should be allowed to provide this service. They also demanded that the NGOs/CBOs should be accountable for their service.

**5.5.2 Perception of the private sector about benefits of facilitation**

**Improvement in quality of service:** The private sector in Khulna city claimed that the quality of service has been greatly enhanced by the PPP system. The neighbourhoods have become much cleaner. Drains are no longer blocked with garbage. Even in-house garbage storage has improved with distribution of small bins to households in some wards. The people now enjoy a true doorstep service.
Community participation has greatly contributed to the improvement in service quality. There was some reluctance to pay service charge initially, but when the service quality was proven good, people started to pay without hesitation. Some private agencies have even increased the service charge.

People are now very much aware about environmental protection. Both private and public agencies are facing more accountability from the citizens. They are demanding better service from both sectors. KCC is forced to cooperate under this demand. The NGOs/CBOs are also responding with better management and monitoring.

In Patuakhali, the private sector respondents also mentioned that the cleanliness has greatly improved in areas under primary collection by PPP. Public awareness has improved also. Even household servants are aware about garbage disposal. In-house storage has improved with distribution of buckets. The difference of the PPP system is marked, as people are still throwing garbage outside their houses in the areas not covered under the PPP system.

Private sector respondents in Sylhet city stated that the quality of service has improved considerably. People are now confident about the ability of the private sector to provide reliable service with good quality. They are so confident that people in some areas have destroyed all the neighbourhood level dustbins to discourage people to litter the neighbourhood. However, the quality of service is falling in some areas where relatively weak NGOs are working. Here the service quality is not up to the expectation of the citizens. Garbage collection is a service that must be provided without failure. Even a day's lapse causes suffering to the people. People expect good service in exchange for their service charge.

In Dhaka, the NGOs and CBOs claimed that they are delivering good service to the people. The roads and drains are much cleaner than before. Garbage piles have disappeared from roads.

However, there was a strong demand for partnership approach from the private sector. For example, a private agency contracted by DCC complained about the lack of cooperation from DCC. There are numerous illegal shops on footpaths by the side of roads. These shopkeepers litter the roads. Some citizens ask waste pickers to dispose their garbage giving
them small tips. They just throw it a distance away from the household. As the private agency has no legal power to stop these practices, they resorted to lodging complaint with DCC. But there has been no response from DCC. Moreover, they private company claimed that they cannot receive payment from DCC without paying bribe. They have invested a considerable amount of money in this new business. They are working in earnest even cleaning drains that have not been cleaned in 20 years. But they cannot make expected return on their investment because of corruption at DCC. This indicated that simply contracting out services by the public sector does not necessarily result in service improvement. The private sector respondents mentioned that that the service quality in Dhaka will improve only if DCC and the private agencies work in partnership with joint monitoring, as they need cooperation from each other.

**Improvement in scope of service:** In Khulna, the private sector respondents mentioned that the scope of service is expanding. More areas are coming under primary collection coverage. Even slum households are now included in the program. The slum dwellers are paying a very nominal amount that is affordable to them. But they are treated as clients who pay service charge having the same rights for quality service. The volume of garbage collected is rising as a result of the increasing primary collection.

The scope of service has been broadened through the introduction of new technology such as composting. The organic part of garbage is now being converted into fertilizer. Some NGOs are now operating compost plants to earn additional revenue by selling compost. New service such as a hospital waste management program has been introduced also, further broadening the scope of service.

In Patuakhali, the private sector stated that more garbage is collected in the areas under PPP. The scope of service has expanded by encouraging the municipality staff to improve performance. The public sector conservancy supervisors are now more responsive. Overall efficiency of the municipality has improved in the opinion of the private sector.

In Sylhet, the areas under PPP service are increasing. From the initial beginning at neighbourhood level, whole wards are coming under PPP service coverage now. Some private agencies have constructed secondary dumping bins jointly with SCC. SCC has
responded positively with assigning trucks to carry away the waste from these secondary points.

However, SCC is unable to fully cooperate because they do not have sufficient number of trucks. This is delaying the expansion of PPP as the private sector cannot move into new service areas without assurance of secondary collection by SCC. Some private agencies have resorted to carrying the waste all the way to the final dumping ground by the tricycle vans. But this is an extremely strenuous and inefficient method of haulage.

Composting has been introduced in Sylhet to broaden the scope of service. Some NGOs are successfully running these plants and earning extra revenue by selling compost. There is reportedly a good market in Sylhet for organic fertilizer as there are many tea gardens around the city.

In Dhaka, the private sector mentioned that there must be a conducive environment for the private and public sector to work together and expand the services. Simply contracting out services to the private sector may not result in expected improvement. The two sectors need each other to offer the citizens good service. A policy is necessary to clearly define the framework of the new rules of business. This may require some support by facilitating agencies.

5.6 Contribution of co-factors

The fifth and last question on necessity of a facilitating agency was "Is the role of a facilitating agency sufficient or are other co-factors necessary?" The purpose of this question was to explore whether other co-factors are also necessary in addition to a facilitating agency.

5.6.1 Perception of the public sector about contribution of co-factors

Respondents were asked to identify any co-factors other than the facilitating agencies that contributed, positively or negatively, to the process of PPP. The findings are presented below.

5.6.1.1 Municipal officials

Respondents from Khulna stated that Mayor took personal interest in making the PPP system a success. He attended many public meetings, took part in rallies and discussed the matter with all actors on many occasions. This inspired other KCC staff to lend their support. Overall, KCC assumed a very positive attitude to PPP and provided administrative support whenever necessary. They even donated some tricycle vans to NGOs/CBOs for primary
garbage collection. Regarding any negative factor, the respondents mentioned service charge on citizens. Many viewed this as double taxation, because households pay taxes to KCC. Part of the tax is used for solid waste management. A new service charge for door-to-door garbage collection was viewed as an additional burden. This was a particular problem in the beginning of the initiative. However, later this feeling subsided greatly as the convenience and result of the door-to-door garbage collection became apparent.

In Patuakhali, the respondents stated that the municipality staff and ward commissioners played a significant role. Ward commissioners motivated the people to participate in the door-to-door garbage collection scheme. The municipality staff took care of secondary collection and disposal. Local media also played a part in motivating people. In discussing the negative factors, the respondents mentioned that the motivation campaign has become weak, and as a result some people are reverting to throwing garbage on the streets. Service quality must be maintained and motivation should be continued until people become habituated.

The Sylhet City Corporation staff thanked the citizens for the success of the PPP system. Without their participation and regular payment of service charge this system would fail. No impediment to PPP was mentioned.

In Dhaka, the city corporation staff stated that it is necessary to formalize PPP. This will encourage partnership and also help in regulation and quality control. Actually DCC has the authority to enact such bylaws. But there is some inertia at DCC policy-making level against passing such bylaws. Here facilitating agencies can play a role by assisting DCC in passing necessary bylaws and motivating them to increase budgetary allocation for solid waste management.

5.6.1.2 Elected representatives

Most ward commissioners identified support and participation from citizens as the most important co-factor. Regarding any negative co-factors, ward commissioners mentioned institutional weakness of municipalities as the worst impediment. The municipalities need to become more innovative, proactive and close to the people they serve. They need to build their capacity to achieve this. A woman ward commissioner mentioned that female ward commissioners are marginalized and not given opportunity by the municipality to assist in
development activities including solid waste management. Some mentioned lack of environmental laws such as fine against littering as a negative factor.

5.6.2 Perception of the private sector about contribution of co-factors

Positive co-factors: The NGOs/CBOs mentioned participation and support by citizens as the most significant co-factor for the success of PPP. They also acknowledged contribution by the ward committee, municipality staff and NGOs.

Negative co-factors: The payment of service charge was identified as the most significant hindrance to PPP. People were confused by the apparent double taxation, as they were required to pay both municipality and the private sector for solid waste management. A few respondents also mentioned resistance from some municipal workers as a hindrance to PPP.

The areas where facilitation was weak, the NGOs complained about lack of capacity building, negligence by the facilitating agency, lack of data, and lack of equipment as hindrance. In short, they expressed dissatisfaction about the weakness in facilitation.

In Sylhet, there was a particular complain about city corporation not having sufficient number of trucks for secondary collection. This causes pile up of garbage at the secondary point, for which the NGOs are blamed.

Enabling co-factors needed: In response to the question regarding what enabling factors are needed, the respondents mentioned that ward committees should be a citizens body recognized by the municipality. Every ward should have such body. They should have some rights to monitor and municipal workers should be accountable to them. Municipalities should meet with the citizens' representatives on monthly and yearly basis to learn about the demand of the people.

Some respondents voiced the need for policy on public-private partnership. There should be clear decision about service charge. The decision should be disseminated to eliminate confusion about double taxation. There should be guideline about number and location of dustbins. Many respondents felt that the cities should become binless when door-to-door garbage collection service comes into operation to discourage people from littering. Municipalities should not have any fixed budget allocation for construction of bins that forces them to construct bins whether needed or not. The policy may also guide the municipalities to promote PPP by financial and administrative support.
There was an interesting suggestion about mechanical drain de-sludging vehicle. The current practice is to manually lift silt from the drains and pile up beside roads to dry. After drying for some days the workers load dried silt on truck to haul it away. But the drying of sludge creates a permanent nuisance on the roads. A mechanical drain cleaning vehicle could solve this problem by directly loading the sludge without any need for drying. A facilitating agency may provide guidance on procurement of such equipment.

### 5.7 Summary and discussion of key findings

The key findings regarding the necessity of a facilitating agency in forming public-private partnership are presented below along with comparisons from relevant literature.

<table>
<thead>
<tr>
<th>Research Question 1</th>
<th>Indicator Parameter</th>
<th>Key Findings</th>
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| Why the public and private sector cannot form partnership without a facilitating agency? | Barriers against partnership | - The most significant barrier against PPP was a lack of capacity to conceptualise and implement innovative approaches by municipalities. They also do not have fund for experimentation.  
- There is no felt need among municipalities to work with NGOs and citizens.  
- Advocacy with municipalities for PPP hardly possible by NGOs, CBOs or citizens.  
- NGOs/CBOs lack fund to initiate or scale up PPP. |

The finding about the public sector's negative attitude towards the private sector is in agreement with other studies. For example, Ikiara (2004) mentioned that municipal officials in Kenya do not see NGOs/CBOs as potential partners. Others authors have also identified the lack of technical and institutional capacity in the public sector to form partnership with NGOs/CBOs as barriers (World Bank, 2000). The responses from this study suggest an explanation for this negative attitude. The public sector officials stated here that they have difficulty to conceptualise alternative service delivery mechanisms, as they do not have the luxury of experimenting with such alternatives. As a result, they cannot easily transcend beyond the traditional way of service delivery by the public sector alone, in spite of the visible shortcomings.
Ikiara (2004) stated that the prevailing attitude among government officials toward non-state initiatives is mostly negative. However, we find that the attitude among Khulna city officials is different. They seem to greatly appreciate the contribution by NGOs/CBOs. They actively participated in promoting the activities of these non-state initiatives. Therefore, this study indicates that it is possible to reverse the negative attitudes of the public sector with effective intervention by a facilitating agency.

It was interesting to note that not being able to conceptualise alternative options of service delivery was perceived as a key barrier. Plummer and Slater (2002) have mentioned that the primary skill lacking in municipalities is about partnerships, their benefits and opportunities that they offer. Such inertia in not moving from the familiar path has been identified as a barrier to PPP by Bennet et al. (2000) as well, who also mention that this tendency is often broken under crisis situation. However, in this study, it was found that the facilitating agencies were able to bring change without the aid of any apparent crisis.

<table>
<thead>
<tr>
<th>Research Question 2</th>
<th>Indicator Parameter</th>
<th>Key Findings</th>
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| What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements? | Support needed for PPP | • Motivation, building awareness and advocacy for PPP were identified, as major needs.  
• Both public and private agencies requested technical and management advice for PPP.  
• Fund support, especially for scaling up PPPs, was sought. |

Bennet et al. (2000) have mentioned infusion of technical knowledge and management efficiency and funds from the private sector makes PPPs excellent arrangements to tackle serious urban service problems. The assumption here is that the private sector has access to finance and knowledge of technology and management. This study indicates that in developing countries small-scale private operators often do not have such access to finance or technical competence. The public sector also similarly handicapped. This is the reason why assistance in technical and management matters, and seed funding was so earnestly sought by both private and public agencies. Therefore, in conditions like this, intervention from a facilitating agency is necessary to create an enabling environment, through knowledge infusion and seed funding, in which PPPs can flourish.
**Research Question 3**

**Indicator Parameter**

<table>
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<tr>
<th>How does a facilitating agency contribute to partnership?</th>
<th>Contribution of an FA</th>
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<table>
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<th>Key Findings</th>
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<tbody>
<tr>
<td>▪ Major contributions of facilitating agencies were injecting new ideas of service delivery under PPP and supporting demonstration of PPP model.</td>
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<tr>
<td>▪ A significant achievement was building relationship among municipality, NGOs/CBOs, elected representatives and citizens.</td>
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<td>▪ facilitating agencies themselves must have sufficient expertise to successfully support PPP.</td>
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Multinational donor agencies have underscored the need for public-private-community partnerships rather than simple partnership between the public and private sector (Edes, 2003; Mumtaz and Wegelin, 2001; Bennet et al., 2000;). However, Post and Baud (2004), through their extensive literature review, have shown that linking communities with the public sector is very difficult. They further mention that community involvement often depends on non-structural and uncertain elements such as NGO support. In this context, the semi-structural ward committees formed in Khulna with assistance from the facilitating agencies were remarkable. This finding indicates that specialized facilitating agencies may be successful in forming the public-private-community partnership. But the success may depend on the competence and commitment of the facilitating agency. It was found that facilitating agencies were much less successful in Patuakhali and Sylhet. The PPPs in these cities had much weaker linkage with the community. This brings out the point that competence and commitment should be essential qualities of the facilitating agencies.

Recent literature on facilitating multi agency service delivery recommend that a facilitating agency should have strong links to the top management, independence in decision-making, and excellent communication skills to bridge the gap between prospective partners (Government of New Zealand, 2004). This corroborates very well the qualities exhibited by the facilitating agencies in Khulna city. They had the full access to and confidence of the city's Mayor, no interference in their decisions, and a series of successful consensus building exercises. These qualities of the facilitating agencies, in addition to their rapport with the...
stakeholders and a demonstration of commitment, possibly led to the success of PPPs in Khulna.

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<th>Research Question 4 Parameter</th>
<th>Key Findings</th>
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<tr>
<td>How does a facilitating agency contribute to partnership?</td>
<td>Benefits of facilitation</td>
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<tr>
<td></td>
<td>- The areas under PPP are considerably cleaner.</td>
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<tr>
<td></td>
<td>- Behaviour change is a significant achievement.</td>
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<td></td>
<td>- Volume of waste collection increased considerably under PPP.</td>
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<td></td>
<td>- Facilitation helped in initiating PPP; further assistance needed for scaling up.</td>
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The key contribution of the facilitating agencies under this study was the introduction of private sector service delivery in partnership with the public sector. The most significant benefit of this arrangement was the marked improvement in cleanliness. Similar improvement in cleanliness has been noticed in Hyderabad, India and Nairobi, Kenya (Galab, 2004; Ikiara, 2004). Such improvement in cleanliness is attributable to the more accountability of the private sector workers and stronger supervision by these agencies. In addition, the private sector engages appropriate technology more easily. For example, in Bangladeshi cities, they are using tricycle vans for primary collection. These vehicles are a variant of ubiquitous rickshaws. They are locally made and easily repaired. The appropriate vehicles and strong supervision by the private sector operators mean that the citizens get reliable primary collection service. This good quality service, coupled with rigorous awareness campaigns, effectively stopped littering on the streets.

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<th>Research Question 5 Parameter</th>
<th>Key Findings</th>
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<td>Is the role of a facilitating agency sufficient or are other co-factors necessary?</td>
<td>Contribution of Co-factors</td>
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<td></td>
<td>- Support from citizens, elected representatives, municipal officials and elected representatives required for successful PPP.</td>
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<td>- PPP arrangement should be formalized through appropriate policy.</td>
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The findings of this study showed that the success of PPPs is a function of support from citizens, politicians, the public sector and the private sector. This model is more complex than a simple partnership between the public and private sector. It is more difficult to incorporate citizens and elected representatives into the model. However, successfully doing so may yield
good dividend in terms of sustainability and effectiveness, as was the case in Khulna city. The public-private-community model has been also stated as more viable by other authors (Mumtaz and Wegelin, 2001).

One of the shortcomings of the facilitating agencies studied in this research was their inability to promote policy changes. The successes, although commendable, remained isolated examples in absence of favourable government policy. A policy and regulatory framework is a necessary element to flourish PPPs, and this is a key area for intervention by facilitating agencies (SEFI, 2001). Perhaps this lack of policy advocacy by the facilitating agencies was a cause of PPPs not flourishing in the cities of Bangladesh.

This chapter began with the aim of finding whether a facilitating agency is necessary for forming PPP in Bangladesh with solid waste management as a special case. Five pertinent research questions were used to investigate this aspect. In conclusion, it may be stated that there are several obstacles that prevent formation of PPP. The major obstacle is the inability of the public sector to conceptualise and experiment with innovative approaches. In this case, facilitating agencies can indeed offer opportunity of forming PPP by injecting new ideas and demonstration. However, it was indicated in the study that the facilitating agencies themselves need enough competence and commitment for launching successful PPPs. Evidence was found for demand of private service delivery among citizens. Therefore, PPPs in SWM hold potential for flourishing in Bangladesh. There is an opportunity for policy-makers and donor agencies to promote PPPs through creating an enabling environment of which facilitating agencies are an important element.
Chapter 6

6 Sustainability of partnership

6.1 Introduction

Sustainability has received much attention in the world development agenda. Although sustainability has a simple literal meaning of 'keeping in existence' or 'maintaining', defining the term in development parlance is not straightforward. The most commonly used definition of sustainability is from the World Commission on Environment and Development: "progress that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition points to the present needs as well as the future. Recently sustainability has been mostly defined in terms of three aspects: economic, environmental and social (World Bank, 2002). As part of the environmental aspect, urban environmental services have drawn importance. In particular, the United Nations has specifically highlighted solid waste management and the potential role of small-scale private waste management sector (UNESCO, 2001).

This research also investigates the role of the private sector in the context of public-private partnership and the effect of facilitating agencies. Sustainability in this research means a stage in which a PPP that can keep its existence without the external support from the facilitating agencies. Sustainability in this case, therefore, may be measured by what happens to the PPP arrangement when the facilitating agency supporting it withdraws.

This chapter presents the findings of the research in addressing the sustainability of partnership aspect. This aspect was investigated through a single secondary research question: what happens when the facilitating agency withdraws? Two indicator parameters were evaluated in finding the answers to the research question. The first indicator is "dependence on facilitating agency". The variable associated with this indicator is "status of partnership". The premise was that if the partnership shows signs of independence from assistance of any facilitating agency, then the partnership might become sustainable. The second indicator is "satisfaction with partnership". The associated variables are perceptions of citizens, public agencies, and private agencies (Fig 6.1). Here the argument was that if the
actors are satisfied with the partnership, then the partnership has a good chance of being sustainable.

Data were collected by interviews with public and private agency officials including the facilitating agency officials. Questionnaire surveys on households and field workers of public and private agencies, and observations were also conducted to corroborate the findings. The data collection processes are described in the Methodology chapter (section 3.11). The findings are presented in the following sections. A summary of the key findings is included in the end.

6.2 Dependence on facilitating agency

The guiding research question regarding sustainability of partnership was “what happens when the facilitating agency withdraws?” The purpose of this question is to investigate whether the partnership arrangement continues, expands or deteriorates once the facilitating agency reduces or ceases its intervention. Continuation or expansion of the partnership may indicate sustainability.
Hypothesis
The role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh.

Why the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh?

Necessity of a facilitating agency
Sustainability of Partnership

Why the two sectors cannot form partnership without a facilitating agency? What happens when the facilitating agency withdraws?

Support needed
Capacity of Public Sector
Capacity of Private Sector

What support do public agencies, private agencies, communities and NGOs need for partnership arrangements?

Contribution of facilitating agency

How does a facilitating agency contribute to partnership?

Benefits of facilitation

What are the benefits of facilitation?

Sufficiency or other co-factors necessary?

Contribution of co-factors

Is the role of a facilitating agency sufficient or require other co-factors necessary?

Dependence on facilitating agency
Status of partnership

Satisfaction with partnership

Perception of citizens

Perception of public staff

Perception of private staff

Effectiveness of partnership

What was the form of partnership?

Mutual recognition

Type of recognition

Process of recognition

Function of platform

Collaboration

Work plan adjustment

Initiation and continuation process

Perception of mutual benefit in public staff

Perception of mutual benefit in private staff

Neighborhood cleanliness
Neighborhood improvement

Perception of public staff

Perception of private staff
The questions asked to find out the dependence on facilitating agency were: (a) “what happened after the withdrawal of the facilitating agency or what may happen if the facilitating agency withdraws?” and (b) “in what way do you feel the need for facilitation?” The research questions are described in detail in the Methodology chapter (section 3.4). The responses to these questions are presented below.

6.2.1 Status of partnership

Effect of withdrawal of facilitating agency in Khulna: The initial facilitating agencies were Prodipan and WSP. They started the first public-private partnership pilot in six wards of Khulna city. This project ended after three years. At the end of this project, Prodipan and WSP withdrew their direct support. However, the initiative for PPP continued to grow, and the area under PPP service delivery increased from the initial six wards to 26 wards. The growth took place under another facilitating agency named PRISM that took over immediately after the departure of WSP/Prodipan. But the facilitation and supervision were not as strong as before. KCC officials reported that the quality of service suffered due to lack of monitoring, as evidenced by increased number of complaints from the citizens.

Only one out of the 12 ward commissioners interviewed reported that primary garbage collection under NGO/CBO continued unaffected with the withdrawal of support from the facilitating agencies. All others reported facing some problems. The problems included not being able to support sufficient number of staff to maintain good quality service delivery. In absence of sufficient number of supervisors, both the service level and service charge collection falls. This puts the NGO/CBO into further financial crisis. On the other hand, the operation remains financially vulnerable unless it covers a sizable area, preferably one whole ward. But increasing service coverage area requires fresh investment in collection vans, staff recruitment and public motivation. The ward commissioners reported that it is difficult for most NGOs/CBOs to save enough money from the existing operation to afford expansion.

The staff of original facilitating agency Prodipan mentioned that they did not disappear suddenly. There was a properly defined withdrawal strategy. Under this strategy, the communities were informed of the short-term nature of Prodipan’s assistance from the very beginning. It was agreed with the community that the ward committee would assume responsibility of running the primary collection service when the facilitating agencies leave.
Accordingly, the facilitating agencies built up the capacity of the ward committee members by involving them in planning and implementation of the primary collection system. A bridge between the ward committee and the municipality was also built through consultative meetings. The ward committee members were also familiarized with other operational essentials like account keeping, staff management, and maintenance of vehicles. In this way the capacity of the communities was built up for assuming the responsibility of running the primary collection system. Accordingly, when Prodipan finally withdrew, the ward committee, on behalf of the community, took over the responsibility of operating the primary collection service. The transition was smooth. In some wards the ward committee itself started to run the primary collection system. In other wards they decided to hand over the task to an NGO or CBO, and the ward committee assumed a monitoring role. In addition, the facilitation process in Khulna did not stop with the departure of Prodipan/WSP. Another NGO called PRISM took the charge of external facilitating agency to promote PPP under UNDP funding. This second stage of facilitation was less intensive than the first one by Prodipan/WSP. As the model of PPP was already built by Prodipan/WSP, PRISM concentrated on increasing the service coverage area by advising interested NGOs/CBOs and communities. There was much less effort in “hand holding” primary collection operations or organizing ward committees. Public awareness was already high through the efforts of the initial facilitating agencies, and the demonstration effect of the initial six wards created a demand for service delivery through the PPP system. This allowed the second facilitating agency increase the coverage area from the initial six ward to twenty-six wards through mainly advisory support to prospective NGOs/CBOs and communities. It should be noted, however, that the process of facilitation in Khulna continued for over five years through the first and second stages of facilitation.

Eight other NGOs who are operating the primary collection service in many wards along with CBOs were also interviewed. Out of these eight, three reported that they would have to curtail their service area or suspend operation, at least temporarily, if all support from the facilitating agency stops. The rest stated that they would be able to continue albeit with difficulty. Therefore, the majority of the private agencies were confident that they could continue to provide service without any support from the facilitating agency. This is an
indication of sustainability not only of the particular private agencies, but the PPP system as a whole because the private sector agencies cannot provide full service without the assistance of the public sector in secondary waste collection and final disposal.

Out of the six wards where ProdipanWSP started the pilot, five CBOs who are operating the primary collection now reported that the service area either expanded or remained the same following the departure of ProdipanWSP. In another six ward where PRISM acted as the facilitating agency, only two CBOs feared that the service area would contract when PRISM's role would end. The rest four were confident that the primary collection program would continue even if there were no assistance available.

**Facilitation needs for sustainability in Khulna:** KCC officials mentioned that they require the role of a facilitating agency for knowledge support as their access to new advancement in SWM technology and management is very limited. Many new technologies are now surfacing. KCC officials are not familiar with the latest advancement in technology, and have no exposure to modern management and efficiency improvement techniques. They felt a need for technical and management advice to improve their efficiency. The other area where they wanted assistance from a facilitating agency was institutional reform. They stated that it is difficult to initiate reform from within the municipality. An external agency may help KCC in streamlining the operations by giving advice on the right institutional model and imparting the required skills to the staff.

All twelve elected public representatives interviewed expressed the need for further support from a facilitating agency. The requirement of support, however, varied. Some wanted financial and logistic support to expand the existing public-private partnership. Others wanted support to open public-private partnership in new fields such as sanitation. The mentionable distinction here is that the support requested was not to ask the facilitating agency to do everything for them. Rather the requests were a call for assistance to establish or expand current operations.

The staff from Prodipan admitted that there is a need for continued facilitation. There is definitely a need for organizing an informal forum. The public-private partnership arrangement is still not mature. It has not been institutionalised by KCC. An informal forum may act as an advocacy and support group for nurturing the incipient public-private partnership.
All other NGOs also expressed the need for a facilitating agency for at least three to five years for nurturing the system. Their demand from a facilitating agency was for management and technical assistance (training, compost marketing, public awareness, monitoring), linkage with KCC for better coordination, financial assistance for expansion of service area, and some material support (household bins).

All six CBOs of the old Prodipan/WSP wards voiced the need for a facilitating agency. They requested assistance for fund to expand service area, support in building public awareness and support in supervision. Similarly all six CBOs from the new PRISM wards also requested support from a facilitating agency in terms of motivational activities, fund for expansion, technical advice and monitoring support.

Effect of withdrawal of facilitating agency and facilitation needs for sustainability in Patuakhali: In Patuakhali, Danida is still providing some assistance as a facilitating agency. Therefore, the question posed to the respondents was what may happen when Danida leaves.

The municipal conservancy inspector mentioned that about 75% households in the intervention wards are now subscribing to the door-to-door garbage collection service by private agency. However, he cautioned that the number of participating households is decreasing. Therefore, there is a possibility of further setback if Danida withdraws completely.

The elected public representatives were more optimistic. Only one out of six ward commissioners expressed fear that the public-private partnership system would stop with the departure of Danida assistance. All others were hopeful that the system would continue even without support from any facilitating agency, because the operation is only partly dependent on Danida. They thought that continuing the public-private partnership without Danida assistance would put added financial burden on the municipality, but it would somehow manage. As neither ward commissioners nor the municipality have the capacity to conduct motivational work, the municipality may have to contract in an NGO for this support.

All three ward committee members thought that the public-private partnership would continue even without help from the facilitating agency. One member doubted that the service area might shrink without external support.
Danida officials were also hopeful that the public-private partnership would continue even after Danida leaves. Danida had not provided substantial support for nearly two years, yet they system is running. However, there is some problem with service charge collection. The rich people are especially reluctant to pay. Danida motivated people through regular meetings with the citizens. This kind of effort must continue.

The implementing NGO feared that the primary collection service might suffer contraction if Danida withdraws all support. However, if the municipality chairman assumes a leadership role, the problem can be overcome.

**Effect of withdrawal of facilitating agency and facilitation needs for sustainability in Sylhet:**

Sylhet Partnership plays the role of a facilitating agency in Sylhet. However, they also provide service themselves. It is not a true facilitating agency in the sense that they do not have any fixed plan or time horizon for ending their operations. However, they do provide assistance to SCC and CBOs like a facilitating agency.

The conservancy officer of Sylhet partnership stated that the public-private partnership system has not taken root in Sylhet yet, as citywide expansion of the PPP system has not been planned by the facilitating agency or the municipality. This is in part due to resource constraint faced by the facilitating agency as the donor agencies supporting the initiative lost interest. This is an indication of the risks of short-term project approach. As a result, there are only pockets of areas where the SCC and private agencies are working together. So there has not been any widespread change in SWM service delivery. In his opinion the public-private partnership system would not be sustainable at this nascent stage without support from a facilitating agency. This also means that the facilitating agency needs assurance of financial support for a sufficient time to make the PPP approach sustainable.

Five out of the seven ward commissioners who were interviewed were equally pessimistic. Only one ward commissioner stated that the operation in his ward has become quite independent, as it is one of the oldest programs in Sylhet. He was confident that the primary collection operation would continue without any external support. Another ward commissioner also expressed hope that they would be able to continue the door-to-door garbage collection service without external support, but it would be somewhat difficult. The rest of the ward commissioners thought the public-private partnership in their wards would either reduce or
disappear if no external support is available. This is because neither the citizens nor the public representatives are ready to support such service as yet. They are still lacking in awareness and sense of responsibility.

Sylhet Partnership, the facilitating agency, itself thought there is little chance of the door-to-door garbage collection service to continue without support. Volunteers cannot run this service because it requires a lot of attention and professional management. Without this, the service quality would ultimately fall. Consequently citizens would face a lot of dissatisfaction and conflict among themselves causing the eventual demise of the system.

Two seasoned NGOs, who have been offering door-to-door garbage collection service for some time, were more confident. One of the NGOs admitted that they might have to give up to 30% of their current service area, but they could continue to serve the rest even without external support. More substantial loss would be in management and technical advice. The other NGO mentioned about two years of facilitation support would reach them to independence.

Three CBO involved in door-to-door garbage collection were also interviewed. One CBO mentioned that such service should be handled by NGOs only because the work requires daily supervision and management. This is not possible by a voluntary community body. It requires professional input. Therefore, citizens or CBOs would not be able to sustain the service if NGOs or the facilitating agency withdraws support. Two other CBOs differed to this viewpoint. They mentioned that withdrawal of support would either have no effect or just a temporary effect only on service delivery by CBOs.

Facilitation needs for sustainability in Dhaka: No facilitating agency is operating in Dhaka. Therefore, a question on the facilitation needs for achieving and sustaining public-private partnership in Dhaka was posed.

DCC officials mentioned that it is necessary to form ward committee as in Khulna. This would bring together elected ward commissioners, DCC staff and general citizens. This is a powerful platform for expressing accountability and demand. Direct interaction between service providers and beneficiaries might give enough impetus to both DCC and private agencies to build their capacity and work together for better service delivery. This may need
the support from a facilitating agency initially, but ultimately it would reduce dependency on a facilitating agency.

Two ward commissioners were interviewed. One of them mentioned that the public-private partnership system is quite dependent on facilitating agencies in the formative period. Most NGOs are dependent on external funding. They are not capable of launching any initiative without funding. Therefore, the initiative for public-private partnership will not take off without external support. The other ward commissioner stated that the facilitating agency should not just conduct fruitless research. What is needed is practical advice and action. A facilitating agency would be useful if through them DCC and private agencies gain knowledge on modern management style and equipment. They need capacity building support for preparing good plans for solid waste management.

Three NGOs/CBOs were also interviewed. One of the NGOs voiced a strong demand for a facilitating agency. This is because there is general lack of capacity within the NGOs. They need fund and logistic support. More importantly, they need institutional support to build relationship with DCC. This NGO tried hard to operate a primary collection scheme, but all their effort ended in vain as they failed to attract cooperation from DCC. They claimed that a facilitating agency is needed to Sensitise DCC and build linkage between DCC and NGOs.

Another private commercial agency contracted by DCC for solid waste management reported the same sentiment. They are contracted by DCC, but do not receive necessary support from DCC. Therefore, a facilitating agency may provide monitoring support and advice on service quality improvement. However, unlike DCC, the facilitating agency must be responsive to the needs of the private sector.

Another CBO mentioned they are operating the door-to-door garbage collection service without any support from a facilitating agency. However, they thought such support is necessary for the public-private partnership to flourish. There is need for some seed fund and logistic support initially. After the system matures, no more support is needed. They mentioned another field in which a facilitating agency may play a positive role. The NGOs/CBOs are now operating without any formal recognition or legal right. So they are operating in a legal vacuum. If DCC gives a formal status and legal right to operate, it would strengthen their service charge collection and sustainability potential. In addition there should
be regulation to encourage all households to subscribe to door-to-door garbage collection service. That way the area would be much cleaner and our revenue collection and service quality would be improved. The facilitating agency could address these institutional issues to assist the public-private partnership system in Dhaka.

6.3 Satisfaction with partnership

Satisfaction with public-private partnership was considered an indicator of sustainability potential. The premise was that if the actors are satisfied with the idea and experience of public-private partnership, the system has a good potential to become sustainable. Conversely, elements of dissatisfaction would be detrimental to the sustainability of the PPP system. Therefore, the respondents were queried on both satisfaction and dissatisfaction with the public-private partnership system. The findings are presented below.

6.3.1 Perception of citizens

Citizens were greatly satisfied with SWM services through partnership. Nearly all citizen respondents from Khulna (98%) and Patuakhali (97%) stated that they were generally satisfied with the garbage collection services. The figure was slightly lower in Sylhet where 74% citizens expressed satisfaction. In Dhaka, with no facilitation and no partnership, the response was very different. Only 40% citizens in Dhaka were satisfied with their garbage collection service.

Citizens also queried about their dissatisfaction, even if those were occasional. In Khulna, the citizens mentioned the rare events when garbage collection service is interrupted as the main reason for dissatisfaction. The occasional irregularity in service was a source of dissatisfaction in Patuakhali and Sylhet also. In Dhaka, the citizens mentioned two sources of dissatisfaction: unavailability of private sector garbage collection service, and poor quality service by the private sector where available.

Citizens in Khulna, Patuakhali and Dhaka paid on the average about Taka 10 (USD 0.17) per month. In Sylhet, the mean monthly payment was slightly higher at Taka 28 (USD 0.47) per month. The maximum monthly payment was Taka 20 (USD 0.33) in Khulna and Patuakhali, and Taka 30 (USD 0.50) in Dhaka. The maximum rate was the highest in Sylhet at Taka 50 (USD 0.83). The most frequently charged amount (mode) was Taka 10 in Khulna and Patuakhali, Taka 20 in Dhaka and Taka 30 in Sylhet. The relatively higher charge in
Sylhet may be due to several facts. The main private sector service agency in Sylhet is a company (although declared not-for-profit) as opposed to NGO/CBO. Their marketing strategy could have been more sophisticated than NGOs/CBOs. Secondly, many households in Sylhet can afford higher rates as relatives living in the United Kingdom support them. This might have allowed the private sector to charge more for their service.

Most citizens thought the rates charged by the private sector were reasonable. In Khulna 70% of the households stated that the charge was reasonable. The figure was 63% for Patuakhali. Despite the higher charge, the 83% respondents in Sylhet thought that the charge was reasonable. It was interesting to note that 17% households in Patuakhali thought that the charge should be increased. In Khulna also 10% households felt that the charge should be increased. This indicates citizens' satisfaction with the service quality in Khulna and Patuakhali.

6.3.2 Perception of the public sector

6.3.2.1 Municipal officials

Khulna: The municipal officials of Khulna expressed satisfaction with the public-private partnership arrangement. They stated that solid waste management service has greatly improved due to public and private agencies working together. The city has become much cleaner. However, the Conservancy Officer mentioned that full coordination between the two sectors has not been achieved yet.

Patuakhali: The Patuakhali Municipality officials found the public-private partnership as an excellent system to deliver service to the citizens. The chairman of the municipality stated that most of the responsibilities of the conservancy section of the municipality should be handed over to the private sector. The quality of service will improve if the private sector delivers service. People will have to pay for the service. Citizens have a tendency to expect everything free from the municipality imposing an unnecessary burden on the municipality. Patuakhali Municipality may, instead, support the private sector by bearing a portion of the cost, as they help the municipality by raising public awareness and motivation as well as delivering service.

Although the concept of public-private partnership was appealing to the officials, they pointed out several problems in its implementation. The public-private partnership between Patuakhali municipality and NGOs is not very successful because there is no landfill. Garbage
collectors dump their waste by the side of roads. People get angry when they see the dumping of garbage in public places. People have even beaten the tricycle garbage van drivers.

Not addressing this problem from the beginning was a failure on the part of the facilitating agency. The other complaint against the facilitating agency was about the selection of areas for piloting the public-private partnership. The facilitating agency should have selected relatively affluent areas first to demonstrate the effectiveness of the public-private partnership system, as the people there would be more willing to pay the service charge. Then they should have moved into other less affluent areas with necessary modification and adaptation in service to suit the local conditions.

**Sylhet:** The Chief Executive Officer and the Conservancy Officer of SCC were interviewed. They mentioned that public-private partnership system works well only when there is proper planning and coordination between municipality and NGOs. A number of NGOs/CBOs started primary collection whimsically. They were not successful.

They thought public-private partnership is a very good system, but it requires cooperation of both public and private sector. Some NGOs are implementing this approach successfully. They are providing a much needed service to the citizens. The citizens are enjoying a clean environment due the door-to-door garbage collection service. This system has also generated some employment for garbage collectors and van drivers.

They raised two concerns that may lead to unsatisfactory service delivery. First, there must be accountability of NGOs and CBOs to ensure good quality service to the citizens. Haphazard attempts by some NGOs resulted in poor service that earned dissatisfaction of the citizens. Secondly, SCC is now facing a greater challenge because the waste collection has increased significantly. SCC has not been able to increase their equipment or manpower to handle this added volume.

### 6.3.2.2 Elected public representatives

**Khulna:** In Khulna, 12 ward commissioners were interviewed. Out of these, one commissioner did not respond to the question of satisfaction. Of the 11 respondents, nine (82%) expressed full satisfaction with the public-private partnership system. One commissioner complained that there was initial improvement in his ward when the facilitating
agency introduced public-private partnership based door-to-door garbage collection service. But the system was not working well after the withdrawal of the facilitating agency, as the CBO is finding it difficult to maintain quality service. The other complain came from a woman ward commissioner. She mentioned that the NGOs/CBOs do not pay much attention to woman ward commissioners. They are requested to grace the meetings, but not included in planning and coordination. Four (36%) commissioners said that their wards are partially covered under the public-private partnership system. They could not expand the primary collection service to the entire ward due to lack of external support.

Patuakhali: Six ward commissioners were interviewed in Patuakhali Municipality. Three were from the wards with public-private partnership in operation. The other three were from ordinary wards.

All commissioners from the intervention areas were satisfied with the service delivery under public-private partnership system. They appreciated the public awareness building through workshops, meetings and networking. However, they raised concern over lack of support from the municipality and lack of fund to expand the system. They were convinced of the benefits of this system. One commissioner mentioned that this approach should be broadened to other areas such as clinics for the poor and urban sanitation.

The commissioners from non-intervention wards also found the concept of public-private partnership appealing. They observed that the wards with this system are considerably cleaner. Encouraged by observing this success, one of the commissioners attempted to start similar service in his ward. This attempt was not successful due to lack of support from the municipality. One of the commissioners stated that the municipality should also think about drain cleaning under similar arrangement, as the present drain cleaning by the municipality is not responsive to public demand.

Sylhet: Seven ward commissioners were interviewed in Sylhet. Out of these, three were from public-private partnership areas, and four were from wards without public-private partnership.

All three ward commissioner of public-private partnership areas expressed satisfaction with the service. They, however, raised a few points of concern. One ward commissioner mentioned that the facilitating agency spent too much money during the initial period. Foreign
consultants drew huge salary, which caused fund crisis later. As a result, the initiative failed to meet people’s expectation. The service became irregular causing frustration among the citizens. The second concern was about the poor skill of private agency workers. They are not even polite. They skip service on Sundays. They take long leave during Eid festival, which creates a significant disruption in garbage collection.

Two of the ward commissioners of the areas without public-private partnership service expressed enthusiasm for initiating such service in their wards. They both thought that this system would finally rid their wards of garbage piles. People would not throw garbage everywhere, as they would become more aware. Professional management by NGOs/CBOs would mean less trouble with service disruption. They expressed some concern about convincing people to pay their service charge. The remaining two commissioners raised other concerns. One mentioned that people are demanding primary collection by private agencies for long. But no NGO/CBO has been able to respond to this demand. SCC provides no support to prospective NGO/CBO. The other commissioner observed that many programs start with a lot of fervour, but the zeal peters out, and people go back to old practices. Therefore, it is essential that public-private partnerships begin with proper planning and consultation with a long-term commitment for quality service delivery.

6.3.3 Perception of the private sector

Khulna: Officials from nine NGOs were interviewed in Khulna. All expressed satisfaction with the idea of public-private partnership. They mentioned the city has become considerably cleaner due to this approach. People have become aware. They also found the citizen-NGO-KCC nexus an important achievement. Some NGOs mentioned the training and support received from the facilitating agencies as highly significant.

The NGOs also mentioned a number of problems causing dissatisfaction. Regarding the role of the facilitating agency, the most common complaint was that the withdrawal was much too early, before the public-private partnership could take a firm root. The NGOs felt that the premature departure of the facilitating agency left the NGOs in a precarious situation. It is interesting to note that the NGOs did not want support indefinitely. Rather they wanted support from the facilitating agencies until their financial and management situation was stable. The second complaint about the facilitating agency was their dominating attitude.

A
number of NGOs were dissatisfied by the imposition of decisions without consultation. One NGO complained about the top-heavy management of a facilitating agency causing excessive expenditure.

Patuakhali: An officer of a local NGO providing door-to-door garbage collection service was interviewed. In addition, three ward committee representatives were also interviewed.

The NGO officer was satisfied with the service delivery under the public-private partnership arrangement. Regular primary collection of garbage markedly improved the environment of the area. However, there was a slight dissatisfaction with interference from the Chairman of the municipality. The chairman allegedly tried to influence the staff recruitment process of the NGO.

All three ward committee members were satisfied with the service delivery under the public-private partnership system. However, one member stated that the ward committee was quite active in the beginning of the pilot project, but later it became inactive with no regular meetings. Another member expressed concern about the low coverage under the public-private partnership. Only a small portion of the city enjoys this improved service, while the rest of the city remains filthy with garbage piles. No real impact could be felt unless the whole city was brought under the PPP system.

Sylhet: The respondents included three NGOs and three CBOs. There was a general consensus that primary collection by the private agencies has greatly improved the environment of the areas where it is in operation.

The NGO officials raised a few issues. The first concern was about lack of cooperation from SCC. For example, SCC agreed to send their truck to the secondary points at definite times. But it was observed that their trucks are never on time. As a result, the secondary point remains full of garbage for a long time. The NGOs expressed dismay at the lack of adequate equipment and staff at SCC. Strong commitment and action from SCC are needed for public-private partnership to flourish.

One NGO raised some important points. Firstly, it complained that Sylhet Partnership started as a facilitating agency to work together with local NGOs/CBOs. But later they started service delivery themselves. Secondly, it attributed the lack of coordination between NGOs and SCC to petty rivalry of politicians. SCC also seems to favour certain high profile NGOs
over hardworking but less prominent local NGOs. Thirdly, there is lack of standard in service delivery. Some NGOs operate garbage collection vans without cover, while others employ children as workers exposing them to hazardous work.

Another CBO complained about poor operational practices by some NGOs. The number of collection vans these NGOs engage is grossly inadequate for the amount of work. Sometimes their vans remain stationary on a road for a long time causing disturbance to traffic movement. The van drivers are not polite to the citizens, perhaps indicating a lack of training. Their secondary point selection is not proper either. The secondary storage point should be away from neighbourhoods, but they are located right in the neighbourhood; this causes trouble especially when secondary collection is not done timely.

6.4 Discussion and summary

The research question addressing the sustainability of partnership aspect was “what happens when the facilitating agency withdraws? “ In general, there was optimism about sustainability. It appears that the cities with longer facilitation are more confident about PPP. It was interesting to note that most respondents wanted support from a facilitating agency, but they did not want the support to continue indefinitely. They wanted support only until the PPP becomes mature.

There was difference in withdrawal strategy among the facilitating agencies. In Khulna, facilitation occurred in two stages. The first facilitating agencies were Prodipan and WSP. They had a clear strategy of withdrawal. Their intention was to enable the communities by building capacity of the ward committees, and let them take over the responsibility of continuing the PPP system. The ward committees could either run the operations themselves by recruiting staff or let an NGO/CBO run the system under their monitoring. The second facilitating agency PRISM became an advisory body to assist prospective NGO/CBO and communities to implement PPP service delivery. They only advised on how to start and maintain operations, raise public awareness, and also provided troubleshooting advice when necessary. There was no need for a withdrawal strategy because it was assumed that NGOs/CBOs would operate this service as their own program. In this case, the NGO/CBO became the main service provider with monitoring from communities. Some respondents thought it was better to leave the actual operations to professional organizations like NGOs.
rather than voluntary bodies like ward committees. At any rate, the strategy of sustaining the PPP was much clear in Khulna.

In comparison, the strategy of withdrawal was less clear in Patuakhali. In this case, the facilitating agency assumed that the municipality would take over the responsibility of promoting PPP. But the capacity of the municipality was not boosted to achieve this goal. The facilitating agency did not seem to have a clear idea about how to enable the municipality to sustain and expand the PPP service delivery initiative. The facilitating agency thought that the municipality should "learn" from the pilot initiative and take it as their responsibility to replicate the system throughout the city. In addition, as there is no landfill site in Patuakhali it is hardly possible to expand collection of solid waste. This is a primary requirement for SWM and the facilitating agency should have addressed this issue. Instead it was left as an issue for the municipality to handle alone. This was another sign of weak facilitation. As a result, there was no expansion of PPP in Patuakhali as in Khulna.

In Sylhet, the facilitating agency did not have any clear strategy about sustaining and expanding the PPP system. In fact the facilitating agency's role as an advisor rather than a service provider was not very clear. The facilitating agency seemed to be interested in providing primary collection service for the foreseeable future. Their support for other NGOs/CBOs to enter the service was weak. This perhaps was a sign of a clouded notion within the facilitating agency about their goal—whether they want to be a facilitator or a service provider. Some of the NGOs viewed them as a rival rather than a facilitator. This unclear position hampered the expansion of PPP in Sylhet, which is detrimental to proliferation and sustainability of the PPP system.

From the above example, it is clear that the capacity and mission of the facilitating agencies affect the expansion and sustainability of PPPs. There was, however, widespread support for the system because it offers a better service quality. The key findings from the perceptions of various actors in the four cities reflect optimism for PPP as presented in the following table.
Table 6.1: Key findings on sustainability of PPP

<table>
<thead>
<tr>
<th>Cities</th>
<th>Effect of withdrawal of facilitating agency</th>
<th>Facilitation needs for sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khulna</td>
<td>• Withdrawal of FA affected partnership, but most NGOs/CBOs continued to serve, even expanded service area.</td>
<td>• FA support needed for about five years for consolidation and scaling up operations.</td>
</tr>
<tr>
<td>Patuakhali</td>
<td>• Most actors were hopeful of continuing service even after FA withdraws support</td>
<td>• FA support needed for about five years for consolidation and scaling up operations.</td>
</tr>
<tr>
<td>Sylhet</td>
<td>• The perception was mixed. Public officials were pessimistic, while NGOs/CBOs were optimistic about continuing to serve without help from FA.</td>
<td>• FA support needed for motivation and awareness work.</td>
</tr>
<tr>
<td>Dhaka</td>
<td></td>
<td>• FA support needed for seed fund, knowledge support and coordination between DCC and NGOs/CBOs.</td>
</tr>
</tbody>
</table>

There was a general satisfaction with service delivery under PPP, which is taken as a potential for sustainability in this study. Most of the respondents mentioned remarkable improvement in their city's environment due to primary collection of garbage under PPP. The public sector in Patuakhali and Sylhet voiced some concerns about the capacity of the facilitating agencies. Public representatives, on the other hand, were concerned about inability to scale up the PPP model to allow all citizens to enjoy its benefits. The private agencies demanded more nurturing by facilitating agencies in demonstrating and strengthening PPP. The key findings are presented below.
### Parameter: satisfaction with partnership

#### Variable: Perceptions of the public sector and private sector

<table>
<thead>
<tr>
<th>Cities</th>
<th>Municipal officials</th>
<th>Public representatives</th>
<th>Private agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khulna</td>
<td>• Fully satisfied.</td>
<td>• Satisfied, but noted problem with quality of service and inability to scale up following the withdrawal of FA.</td>
<td>• Satisfied, but FA withdrawal was too early.</td>
</tr>
<tr>
<td>Patuakhali</td>
<td>• Satisfied, but pointed out weakness of FA in lack of proper planning.</td>
<td>• Satisfied, but mentioned lack of support from the municipality and inability to scale up.</td>
<td>• Satisfied, demand for more demonstration.</td>
</tr>
<tr>
<td>Sylhet</td>
<td>• Satisfied, but pointed out need for proper planning.</td>
<td>• Satisfied, but mentioned inability to scale up.</td>
<td>• Satisfied, but lack of cooperation from SCC and FA noted.</td>
</tr>
</tbody>
</table>
Chapter 7

7 Effectiveness of partnership

7.1 Introduction

The primary question of this research (why the role of a facilitating agency is necessary for sustainable partnership of private and public sector in delivering solid waste management services in Bangladesh?) was broken down into three aspects for investigation. The third aspect is the facilitating agency's role in the effectiveness of PPP (Fig 3.2 in Methodology chapter). The rationale for investigating this aspect is to measure the success of a facilitating agency by the effectiveness of the PPPs it assisted to form.

This chapter presents the findings of the research in addressing the effectiveness of partnership aspect. This aspect was investigated through a single secondary research question: "what was the form of partnership?" The purpose of this question was to understand the context of the partnership, to know how it evolved, and what were the nodal points of partnership. Four indicator parameters were evaluated in finding the answers to the research question. The first indicator was "mutual recognition". The variables associated with this indicator were "type of recognition" and "process of recognition". The premise was that there would be mutual recognition between the public and the private sector in the case of an effective partnership. The second indicator was "platform for discussion". The associated variables were presence of platform, process of attainment, and function of platform. Here the argument was that if the partnership were effective then there would be platform for discussion and exchange of views between the public and private sector. The third indicator was "collaboration". Four variables were associated with this indicator. These were work plan adjustment, initiation and continuation process, perception of mutual benefit by the public sector, and perception of mutual benefit by the private sector. It was assumed that collaboration between the two sectors is a strong indicator of an effective and functioning public-private partnership. The fourth and final indicator was "service improvement". The variables associated with this indicator were neighbourhood cleanliness, perception of citizens, perception of public sector staff, and perception of private sector staff. It was thought
that an effective public-private partnership would result in service delivery improvement. A framework of the indicators and variables is given in Fig 7.1.

Data were collected by interviews with public and private agency officials including the facilitating agency officials. Questionnaire surveys on households and field workers of public and private agencies, and observations were also conducted to corroborate the findings (Section 3.11 in Methodology chapter).

The findings are presented in the following sections. A summary of the key findings is included in the end.

7.2 Mutual recognition by the public and private sector

Mutual recognition between the public and private sector is a requirement for partnership. Recognition for each other’s contributions, either formal or informal, is an important indicator of effective partnership. The objectives of investigating this indicator parameter are to understand the type of recognition (perceived or formal), to understand what led to mutual recognition, and to compare areas with and without presence of facilitating agencies.

Key public sector staff, private sector staff, elected representatives, community leaders and facilitating agencies were queried through interviews. The probing questions were: (a) "is there any formal instrument of recognition such as memorandum of understanding?"; (b) "do you feel that the public/private sector is making a positive contribution?"; and (c) "is there any means of formal or informal acknowledgement?". The responses to these questions are presented below.
Fig 7.1: Research questions, indicators and variables on sustainability of partnership

Hypothesis
The role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh

Primary Q
Why the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh?

Aspect 1
Necessity of a facilitating agency

Secondary Q1
Why the two sectors cannot form partnership without a facilitating agency?

Indicator Parameter 1
Barriers against partnership

Variable 1
Perception of Public Sector Staff

Variable 2
Perception of Private Sector Staff

Secondary Q2
What support do public agencies, private agencies, communities and politicians need to adapt to partnership arrangements?

Indicator Parameter 2
Supports needed

Variable 3
Capacity of Public Sector

Variable 4
Capacity of Private Sector

Secondary Q3
How does a facilitating agency contribute to partnership?

Indicator Parameter 3
Contribution of facilitating agency

Variable 5
Perception of Public Sector Staff

Variable 6
Perception of Private Sector Staff

Secondary Q4
What are the benefits of facilitation?

Indicator Parameter 4
Benefits of facilitation

Variable 7
Quality of service

Variable 8
Scope of service

Secondary Q5
Is the role of a facilitating agency sufficient or are other co-factors necessary?

Indicator Parameter 5
Contribution of Co-factors

Variable 9
Perception of Public Sector Staff

Variable 10
Perception of Private Sector Staff

Aspect 2
Sustainability of partnership

Secondary Q6
What happens when the facilitating agency withdraws?

Indicator Parameter 6
Dependence on facilitating agency

Variable 11
Status of partnership

Variable 12
Perception of citizens

Variable 13
Perception of public staff

Secondary Q7
What was the form of partnership?

Indicator Parameter 7
Mutual recognition

Variable 14
Type of recognition

Variable 15
Process of recognition

Indicator Parameter 8
Platform for discussion

Variable 16
Presence of platform

Variable 17
Process of attainment

Variable 18
Function of platform

Secondary Q8
Who are the beneficiaries of facilitation?

Indicator Parameter 9
Collaboration

Variable 19
Work plan adjustment

Variable 20
Intension and continuation process

Variable 21
Perception of mutual benefit in public staff

Variable 22
Perception of mutual benefit in private staff

Secondary Q9
Is the role of a facilitating agency sufficient or other co-factors necessary?

Indicator Parameter 10
Service improvement

Variable 23
Neighborhood cleanliness

Variable 24
Perception of citizens

Variable 25
Perception of public staff
7.2.1 Type and process of recognition in Khulna

Experience with memorandum of understanding in Khulna: A formal memorandum of understanding (MoU) was signed between the Khulna City Corporation (KCC) and Prodipan, the facilitating agency. It was one of the first initiatives in Bangladesh to formalize the relationship between the public and private sector for solid waste management. The initiative for the MoU came from the facilitating agencies (WSP/Prodipan). According to KCC officials, the MoU was an important element in promoting public-private partnership in Khulna. KCC attached great importance to this document, but they were cautious in signing such formal paper with an NGO. They even had the draft reviewed by the Law Ministry to ensure full legitimacy of the arrangement. KCC officials stated that the MoU preserved the rights of both public and private sector. This instrument gave the public-private partnership a stamp of official endorsement from KCC. KCC officials felt that the signing ceremony and subsequent meetings raised awareness among citizens and officials about the objectives and needs for participation. An advisory committee was formed as per provisions of the MoU. This committee comprised of eminent citizens of the city. Support through this committee further assisted the partnership. The endorsement from KCC in the form of the MoU announced the official support for public-private partnership and eased the way for subsequent engagement with the citizens and public representatives.

Although the MoU was signed between the facilitating agency and KCC, it opened an opportunity for communities, private sectors agencies and KCC to work together. From the viewpoint of the facilitating agency also the MoU was important because it gave an official endorsement to promote PPP for SWM.

Officials of the facilitating agencies stated that the MoU was a proxy instrument of recognition. This tool was not very useful in practical day-to-day operation, but it provided an institutional basis for the public and private sector to work together. Without partnership, agencies of the two sector work separately. They neither coordinate existing activities nor plan together for future activities. They also do not recognize each other's contribution. Partnership brings a change to this norm. The signing of the MoU was particularly important because it provided an institutional basis for the two sectors to work together. For example, it allowed collection of service charge from the citizens by the private agencies. Sometimes the
private sector is reluctant to enter into public service delivery through charging the citizens because it raises question on the legality of such charges. This problem was resolved through the MoU. Besides, this official endorsement was very helpful in raising public awareness and convincing the community members to subscribe to the door-to-door garbage collection service.

The pioneer NGOs providing door-to-door garbage collection service found the MoU a very useful tool. It provided an official basis for seeking cooperation from KCC. Some of the first NGOs stated that KCC was more responsive to the NGOs after this document was signed. In this regard, the MoU was valuable since the NGOs could not operate without support from KCC, especially in the formative stages. They mentioned that this formal instrument helped them in establishing better relationship with KCC, but it had little impact in day-to-day operations. However, only a few of the NGOs that entered in the SWM service later, after the initial phase of intensive facilitation, were aware of the MoU. These NGOs who were unaware of the MoU still found the idea appealing. They stated that this type of formal recognition could help in coordination and conflict resolution between the public and private agencies. For example, such document may clearly state that KCC should not construct new neighbourhood level dustbins because these discourage people from participating in the door-to-door garbage collection service and encourage littering. Therefore, whether they were aware or not, the idea of an official endorsement was perceived as important by the NGOs.

KCC, the initial NGOs and the facilitating agency attached great importance to the MoU. In contrast, the elected representatives were largely unaware of the existence of the MoU that allowed the private sector to provide SWM services under PPP. Only one out of the 12 ward commissioners interviewed had heard of the MoU. This lone ward commissioner mentioned that the MoU helped in assuring accountability of both public and private agencies, as this was a formal document. It was surprising to note that the elected representatives were not aware of such important agreement signed by KCC. After all, they represent the citizens at KCC. One possible explanation is that many of the earlier commissioners were replaced by new ones after an election. The new commissioners inherited a running public-private partnership system. They were unaware of the initial hurdles and the role of the formal MoU in
mitigating those barriers, for example collection of service charges by private agencies for SWM.

The response from community leaders were similar to ward commissioners. Only one out of the 12 ward committee members interviewed was aware of the MoU. This individual stated that the MoU had no effect on service delivery because KCC remained as non-responsive to citizens as ever.

The above evidence showed that the MoU was perceived as important tool by the public sector and the private sector. But this official endorsement did not have much impact at the operational level. The issue of the MoU was not critical to the elected representatives and community leaders who are more interested in service delivery to the people.

Perception of contribution by public and private agencies in Khulna:

The KCC officials interviewed spoke highly of the CBOs and NGOs (Box 7.1). They thought that these private agencies are making a positive contribution towards keeping the city clean by their door-to-door garbage collection services.

The facilitating agencies stated that overall the private sector agencies (CBOs and NGOs) are making a positive contribution. However, they also expressed caution about selecting NGOs and CBOs. If an NGO is weak or outright dishonest, it may cause a lot of harm by shaking people’s confidence in public-private partnership by their poor performance. Therefore, there should be some regulation to ensure quality of service. For example, private agencies might be penalized with fines for poor performance. The facilitating agencies also mentioned the difficulty at KCC in realizing coordination with the private sector. They gave the example of KCC workers not working in coordination with their private agency counterparts in cleaning drains. They leave sludge from the drain on streets for drying for long periods. This prevents people from enjoying the full benefit of the garbage collection system because the roads remain dirty with the drying piles of sludge. Another problem with KCC was frequent change of officials. Old officials, who were made familiar with the public-private partnership system, left and new officials joined. So the facilitating agencies had to again familiarize the new staff about the system. Such phenomenon has been observed in other countries as well. For example, Plummer (2000) mentioned about constant transfer of officials in India as a
problem. Overall, the facilitating agency's assessment was that both public and private sector were contributing positively, but each sector exhibited some weaknesses.

The NGOs providing solid waste service were unanimous in declaring that the private sector had immense impact in improving the cleanliness of Khulna city. Their perception, however, was dubious about KCC's performance. They mentioned reluctance of KCC workers to extend full cooperation. KCC workers leave dirt from street sweeping and sludge from drain cleaning on the roads for a long time, for example. They also stated that KCC's supervision of its workers is quite poor. This causes its workers to be negligent about their duties. KCC also has not given formal permission to individual NGOs/CBOs to operate door-to-door garbage collection service. So they are still working in an institutional vacuum.
Box 7.1: Excerpts from an interview with Mr. A. Satter, Conservancy Officer, KCC

What are the barriers against spontaneous integration of activities of public and private agencies?

NGOs were not involved in waste management activities before. We simply did not know that opportunities to build partnership with NGOs in this area existed. When Prodipan came forward and introduced this opportunity to us, we accepted it. It is not that we faced institutional, legal or financial constraints. It is the injection of a new idea and demonstration that helped us in accepting this approach. For example, before Prodipan introduced this Partnership approach, we did not have much contact with CBOs/NGOs.

How did WSP and Prodipan help in overcoming the barriers?

Prodipan began their work by engaging with KCC. They gave letters to the Mayor explaining the partnership approach and asking his support. The Mayor then took up the task of mobilizing support for partnership. He started calling meetings with communities, NGOs and ward commissioners. His presence in the meetings and rallies sparked a lot of interest and support from the stakeholders. Prodipan assisted KCC in forming an advisory committee. The elites of the society were sensitized and made a part of the campaign through this committee. The same approach was taken in initiating the clinical waste management program. Here also Prodipan requested help from the Mayor. He convened meetings and motivated the clinics to participate in the program and pay the service charges. The ward commissioners became motivated through these events. Besides, Prodipan also gave some orientation and training to KCC supervisors.

What were the inputs from WSP and Prodipan?

The greatest input from Prodipan was simply the introduction of public-private partnership. Before this project we had no idea that KCC and NGOs could work together to solve the city’s solid waste problem.

They conducted a lot of consultative meetings to raise awareness and motivate various stakeholders. They also carried out surveys that gave us a clear picture of the needs present in the project area. And overall, their interpersonal contacts with KCC, communities and NGOs were very effective inputs.

An MoU was signed between KCC and Prodipan. In which way has this helped?

The MoU has certainly helped. This was a formal document. This instrument gave the partnership project a stamp of official endorsement from KCC. The signing ceremony and subsequent meetings raised awareness among citizens and officials about the objectives and need for participation. The advisory committee was formed as per provisions of the MoU. This committee comprised of the leading figures of the city. Their support through this committee further assisted the partnership.

Has the Partnership improved the scope of service?

The volume of garbage that we handle has immensely increased after the introduction of the partnership arrangement. In my estimate, we now handle as much as three times the garbage we used to handle before. This is because NGOs are collecting garbage from house to house and depositing the same into KCC community bins. So most of the garbage is entering into the waste management system. Before a large part of the garbage was thrown on streets, drains or open areas. This created nuisance. Now most garbage is properly collected. This has greatly improved our city’s environment.

What, other than WSP or Prodipan, contributed to the success?

Other than Prodipan’s input, the role of the Mayor was a major contribution to the partnership. The Mayor took a personal interest in this effort to clean up the city. He participated in meetings and rallies. His active participation raised public awareness and motivated citizens and ward commissioners to participate also.

Besides KCC provided some rickshaw vans. KCC also provided overall administrative support. KCC’s moral support created an enabling and conducive environment for the partnership to flourish.

Is the private sector making a positive contribution?

I have mentioned earlier that that private sector i.e. CBOs and NGOs are making a significant contribution in keeping the city clean.
Ten out of the 12 elected representatives interviewed were of the opinion that the private sector is providing a positive input in keeping the city clean. Two did not give direct reply to this query. Therefore, it is safe to assume that most of the elected representatives recognized that the private sector's performance in delivering service was good.

The ward committee members of the initial six wards, who assumed the responsibility of running the door-to-door garbage collection service after the facilitating agency left, were rather critical of KCC. Only one member from the six wards said that they received good support from KCC. The rest five thought that KCC was non-responsive to their demands and KCC workers were negligent of their duties. The ward committee members of another set of six wards were interviewed also. In these wards NGOs provide door-to-door garbage collection service and ward committees provide support only. These respondents had more positive views about KCC. Two mentioned receiving good support from KCC, while one stated that KCC is non-responsive occasionally. The rest three ward members were of the opinion that KCC's performance was poor. It appeared that the ward committees who run the primary collection service are frustrated with non-cooperation from KCC. In the wards where NGOs run the primary collection service, the ward committee members were less critical of KCC. It is probably because these ward committee members do not have to deal with KCC directly to troubleshoot service delivery problems. In these wards the NGOs handle such problems, not the ward committees.

Fig 7.2 shows the relationship between the facilitating agencies and the partners of PPP. The facilitating agencies communicate (arrows) with the public sector, private sector and communities to bring a partnership (circle).

Incentive or recognition to the private sector in Khulna: The Khulna City Corporation officials claimed that they give incentives to the private sector to encourage them in delivering solid waste management services. They gave out a number of tricycle vans for garbage collection and land for composting in response to requests by the private sector. They also mentioned that they are planning to give an award to the best performing NGO in improving urban sanitation. Moreover, KCC has always acknowledged the good works done by NGOs. The Mayor, conservancy officials and ward commissioners have supported the NGOs and
CBOs in their effort to keep the city clean. Some city officials regretted that certain NGOs exhibit a disregard for the good gestures by KCC and abrogate their commitment.

The facilitating agencies mentioned that the NGOs and CBOs are not formally registered with KCC. There is no regulation or monitoring of these private agencies. Therefore, KCC does not have any idea about their performance. In this situation it is not possible for KCC to evaluate the performance of these agencies to give award or recognition to better performing agencies. The facilitating agencies stated that such recognition by KCC would be a big boost in motivating the NGOs/CBOs to perform better as a healthy competition would ensue.

Fig 7.2: Relationship among the facilitating agencies (WSP/Prodipan), public sector, private sector and community.

All the NGOs interviewed mentioned that there is no provision for giving formal recognition by KCC. Many of these agencies stated that such recognition does not require monetary incentive; a simple letter of commendation would inspire the agencies to work harder to deliver better service.

Only one of the 12 ward commissioners interviewed mentioned that he gave verbal commendation to the relevant NGO. No other ward commissioner gave any recognition, either formal or informal, to the NGOs or CBOs. However, all of the responding ward commissioners thought that giving recognition was a good idea, and it would encourage the NGOs and CBOs.
Only one of the 12 ward committees reported receiving recognition from KCC. This lone recipient mentioned that they received informal acknowledgement from KCC. KCC now invites them to take part in various promotional activities. However, all of the ward committees demanded some form of formal recognition from KCC. The case of the ward committees is similar to the NGOs because they are neither registered nor monitored by KCC. The ward committee members stated that these civic bodies are an important link between the citizens and KCC, and these should be recognized by KCC.

It may be concluded that the formal MoU signed between the facilitating agency and KCC was mainly done at the behest of the facilitating agency. This served as a legal basis for the formation of the public-private partnership, but it had little relevance at the day-to-day operation level. A general lack of incentive for the private sector was observed in Khulna. KCC does not monitor or evaluate the work of NGOs/CBOs. It does not recognize the ward committees as formal civic bodies. Even the ward commissioners, who are much closer to the community, do not give encouragement to the NGOs/CBOs for their good work. Although KCC mentioned that they provided some tricycle vans to some NGOs and land for building compost plant, it does not provide a supportive environment through recognition and incentives. As made clear by the NGOs, the incentive does not necessarily have to be material largess—a simple letter of commendation and acknowledgement inspires the NGOs/CBOs to work harder.

7.2.2 Type and process of recognition in Patuakhali

**Experience with bi-lateral agreement in Patuakhali:**

Patuakhali municipality and Danida signed a bi-lateral assistance agreement. This instrument was necessary to give the two parties a legal framework to work together, and coordinate their activities. Danida provided staff and financial assistance under this agreement. It was decided that the public-private partnership would be initiated in Patuakhali for house-to-house garbage collection. People would have to pay service charge. Out of this collection of service charge, 70% would go for paying the tricycle van driver, 20% collection labourers, and the remaining 10% would be kept as reserve for covering administrative cost (furniture, stationery) and equipment maintenance cost. According to the Municipality officials
this agreement was an important official instrument, but it was not very useful in carrying out operational work.

The facilitating agency (Danida) officials mentioned that the agreement was signed to ensure accountability of all parties. It clearly demarcated the responsibility of the municipality, NGOs and Danida. It was binding on the parties to carry out respective responsibilities. The agreement was also a legal basis for collecting service charge from citizens. Thus the agreement provided a framework for the public and private agencies to work together.

The NGO representatives were aware of the agreement. They claimed that as a legal document it protected their rights. They believe that they did not face any opposition from the municipality workers because of this agreement. Therefore, the agreement was perceived as a useful instrument that gave the authority to the NGOs to operate a service that was traditionally the exclusive domain of the public sector.

Some of the ward commissioners were not aware of the existence of the agreement. However, some knew about this agreement. They perceived this as an official tool for receiving assistance. They stated that all assistance from Danida is received according to the conditions of this agreement. Others mentioned that the agreement helped in clarifying roles and responsibilities of all concerned; thus it also helped the ward commissioners in monitoring and supervision. Thus the ward commissioners viewed the agreement as a means of receiving foreign assistance and as a role-defining tool.

Perception of contribution by public and private agencies in Patuakhali

The respondents expressed excellent perception about mutual contribution. The public sector municipality staff acknowledged the good work done by the NGOs in providing door-to-door garbage collection service. The elected representatives were of the same opinion. They further added that the NGOs have proven their skill and ability up to the satisfaction of the citizens. Otherwise, the citizens would not pay the service charge.

The facilitating agency Danida acknowledged both municipality and NGOs for their cooperation. The municipality was quite forthcoming in implementing the public-private partnership. They exhibited courage in adopting a new system of service delivery in collaboration with the private sector. They showed commitment and support for the public-
private partnership. Similarly the NGOs also proved their skill in providing door-to-door garbage collection service with good quality.

On the other hand, the NGO representatives mentioned that they were satisfied with the cooperation from the municipality staff. However, they expressed some doubt about the continuity of this cooperation from the municipality. They urged the Chairman of the municipality to institutionalise a collaborative environment under which the municipality staffs would be encouraged to cooperate with the private sector.

The ward committee members also stated that the municipality staffs were giving good support to the private sector. But some of the committee members seemed to have lost the good contact they had with the municipality staff in the beginning of the public-private partnership initiative. They did not know the present role of the municipality staff.

Incentive or recognition to the private sector in Patuakhali

The municipality officials admitted that there is no provision for recognizing the good performance of the private sector. However, the progressive-minded chairman of the municipality mentioned that he is planning to introduce an award to encourage the private sector.

The facilitating agency did not initiate any system of recognition or reward. They tried to encourage the private sector by participating in the public meetings and motivational activities. It appeared that facilitating agency did not pay much attention to incentives and recognition. Otherwise it could have been quite easily built into the pilot project.

The NGO representatives said the municipality has no precedence of recognizing the private sector. However, the District Administrator (Deputy Commissioner) sometimes acknowledges the good works by the private sector in the form of award or commendation. The NGO representatives suggested that the municipality may emulate this good gesture by the district administration.

The responses from the elected representatives were encouraging. One ward commissioner mentioned that he has formally issued acknowledgement letters to NGOs and awarded token prizes to encourage the private sector. Another mentioned that he has verbally acknowledged the local NGOs. One woman ward commissioner said she provides moral support by participating in motivational events to assist the NGOs. She mentioned that a
performance-based award system could be easily introduced, as there is such precedence of award-giving by the ward commissioners.

The ward committee members said that the municipality does not formally recognize them. However, their comments were recorded in the minutes of the ward committee meetings. As the ward commissioner chairs these meetings, these are semi-formal events of the municipality. It was one kind of recognition from the municipality, albeit an indirect one.

Similar to the situation in Khulna, the agreement signed between Danida and Patuakhali Municipality was viewed mainly as a document for setting the framework for public-private partnership. It allowed NGOs to a new venture of providing solid waste management service in partnership with the public sector. The perception of positive contribution by the public and private sector was mutual, as both sectors acknowledge each other's contribution. In terms of incentives, the elected representatives were proactive in giving recognition to the private sector. The chairman of the Patuakhali Municipality mentioned that the municipality was planning to introduce an award scheme for the private sector to recognize their good performance. It appeared that the facilitating agency did not pay much attention to the incentive aspect, but the elected representatives and the chairman have taken the steps on their own initiative.

7.2.3 Type and process of recognition in Sylhet

Experience with formal instrument of partnership in Sylhet:

A formal agreement was signed between Sylhet City Corporation (SCC) and Sylhet Partnership Company (SPC). The relationship between the two organizations was formal from the beginning. Sylhet City Corporation, London Borough of Tower Hamlets (UK), and Municipality of Horsens (Denmark) formed Sylhet Partnership Company as a joint effort. One of the key aims of this partnership was to provide capacity building support to Sylhet City Corporation to deliver better urban environmental management services.

According to the Chief Executive Officer of SCC, the agreement signed between SCC and SPC was a useful instrument. It established a formal relationship between the two organizations. After signing of the agreement, the public and private sector started working together. This allowed opportunity to review the problem jointly. For example, when the private sector requested for an additional secondary bin, representatives of SCC and the
private agency jointly selected the location. They also often visited the area together identified each other’s problems. For example, the private agency complained about tardy secondary removal of waste from secondary bins by SCC. That problem was solved by engaging an extra truck for secondary collection by SCC. SCC also monitored complaints from citizens about the house-to-house primary collection by the private agency, and fed back the complaints to the private agency. This allowed mutual monitoring and supervision of each other’s activities. However, it was interesting to note that the conservancy officer were not even aware of the Agreement. It appeared that the Agreement was more relevant at the top management level and in the beginning of the partnership. The implications of the instrument were less apparent at the field level, especially so as the work culture of the two organizations became familiar and routine to the staff.

The SPC officials mentioned that the agreement signed with SCC gave them a legal basis to work. It also provided an institutional linkage with SCC. SCC provides office space with electricity and telephone connection to SPC. SPC, in turn, assists SCC in maintaining linkage with international agencies, developing proposals for attracting investment, and providing door-to-door garbage collection service in a few wards.

The formal agreement particularly helped SPC in securing SCC’s support in secondary collection for which the private sector depends on SCC trucks. The planning for this purpose is done jointly with SCC. As SCC has a limited number of trucks, it prefers to provide one for a large area where a considerable quantity of waste is generated. SCC cannot engage a truck to collect a small amount of waste; such practice would be highly inefficient. This becomes a problem for any private sector agency that works in a small area and who does not have a strong linkage with SCC. SPC so far has been able to avoid major disruption to its service by unavailability of SCC trucks. This is mainly due to the formal agreement with SCC that allows detail discussion, planning and troubleshooting.

Officials of two other major service NGOs were interviewed. They both provide door-to-door garbage collection service in different wards of Sylhet city. But none of them signed any agreement with SCC. They reported that there is a serious lack of coordination between them and SCC. SCC is not providing adequate support to these NGOs. SCC trucks do not quickly remove garbage from the secondary points, as SCC has shortage of manpower and
equipment. As a result the garbage at secondary point accumulates, emits stench and creates nuisance. The number of secondary points is not sufficient either. The NGOs cannot extend their service area if there are no secondary dustbins. The secondary dustbins cannot be constructed without support and service commitment from SCC. The NGO officials agreed that formal agreement with SCC could result in a stronger institutional linkage with SCC. SCC might provide better support in addressing the above problems if the NGOs were their legitimate partners.

The elected ward commissioners of the wards where SPC is working were aware of the Agreement between SPC and SCC. They mentioned that it was a useful tool. The whole project started on the basis of this agreement. SPC provides door-to-door garbage collection service and SCC provides secondary collection and final disposal service under this agreement. They mentioned that SCC was trying their best to handle the increased volume of waste due to the door-to-door garbage collection service. The ward commissioners of non-SPC wards were, quite understandably, unaware of any agreement between SCC and SPC or any other NGO. They mentioned that coordination between SCC and NGOs remain a problem for solid waste management. It appeared from the opinions of the ward commissioners that they hold the view that a formal agreement between the public and private agency is important in ensuring coordination between the two.

A point from the NGO representatives is worth mentioning here. They expectation from a facilitating agency is that it would engage with SCC to encourage creation of a better coordination mechanism between the public and the private sector. They underscored the need for a formal framework under which NGOs/CBOs and SCC may work together. It appeared that the smaller NGOs/CBOs preferred to have a formal public-private partnership framework, but they wanted a facilitating agency to take the lead in materializing such conducive framework. This perhaps indicates the limited access and capacity of the smaller organizations to discuss and negotiate with the public sector.

Perception of contribution by the public and private agencies in Sylhet:

The SCC officials recognized the contribution of the private sector by accepting that a joint effort by the NGOs and SCC is needed for delivering effective solid waste management service. However, they cautioned that the joint effort results in better service only when there
is good coordination between the two sectors. A number of NGOs/CBOs started door-to-door garbage collection service without proper planning and coordination with SCC. Many of these initiatives did not last long because NGOs/CBOs cannot run the program without coordination and support from SCC. There are a few NGOs that have fared well. They are more committed and are better at planning. The operations of these NGOs have become sustainable and satisfactory as evidenced by the small number of complaints that SCC receives from the areas where these organizations work. The overall impression of the SCC officials was that NGOs are contributing positively, but there is much need for coordination between the public and the private sector.

The facilitating agency representative mentioned that the NGOs and CBOs are contributing positively in their effort to deliver good service. But they have certain limitations that result in poor service delivery. They employ workers as long as they have fund. If the fund is depleted, they lay off the workers. Their practice in this case is to hand over the door-to-door garbage collection to the tricycle van drivers. The van driver then becomes a small entrepreneur and service provider. The NGOs/CBOs often ask the van drivers to pay them about BDT 600 (USD 10) per month from the service charge they collect from the households and keep the rest as their remuneration. The NGOs/CBOs all but cease their involvement although they continue to take a portion of the service charge. With no assistance from the NGOs, the service level ultimately falls. This shows a lack of commitment on the part of these NGOs/CBOs. It raises the question about monitoring and regulation of the NGOs/CBOs to protect the citizens’ right for satisfactory service.

The facilitating agency officer mentioned another important point. Scale of operation is also a significant factor. If a private agency works in a small area, it cannot make optimum use of staff and equipment. So the business becomes difficult to continue. Each private agency should handle a sufficiently large area of operation to be in business. An operator handling five wards can easily handle 10 wards. Larger operations have more room for flexibility. They can quickly reassign replacement staff if a van driver fails to show up, for example. The overall recommendation from the facilitating agency officer was that there should be some regulation of the operations of NGOs/CBOs. They must have certain minimum capacity and they must maintain a satisfactory level of quality in delivering service.
The NGOs/CBOs representatives claimed that they are contributing significantly to the city's solid waste management system by their door-to-door garbage collection service. The positive impact of their service is quite visible. The roads are cleaner. The drains are flowing freely as no garbage is thrown inside. Foul smell has disappeared. The citizens are now much more aware about environment in general and solid waste in particular. However, their impression about SCC workers was discouraging. They found that attitude and activities of most SCC staff are not positive or supportive. SCC sometimes employs only two garbage collectors for an entire ward to load garbage from the secondary bins to the SCC trucks. SCC should increase the number of workers per ward. According to the NGOs and CBOs, the existing workers do not cooperate with the private sector or perform from their duties satisfactorily. Their comments showed that the NGOs/CBOs are willing to work hard to deliver satisfactory service. They were able to bring improvement in the areas where they work. However, they are not satisfied with the support they receive from SCC, perhaps indicating a lack of partnership between the NGOs/CBOs and SCC.

Three out of four ward commissioners of wards with public-private partnership in operation mentioned that they think the private sector is making a positive contribution. The appreciated the door-to-door garbage collection service that has brought service level to a new height. They were also pleased with the public awareness building spearheaded by the private sector. They acknowledged that citizens are participating more as a result of the awareness campaign and good service quality. However, one of the ward commissioners mentioned that not all NGOs are providing good service. Some are not able to provide satisfactory service due to capacity problem. Three ward commissioners from areas not served by the public-private partnership system mentioned that they would welcome service by the NGOs. Thjs is a testimony to the confidence that the private sector has earned by their good service delivery. These responses reflect that the private sector enjoys a high level of trust by the elected public representatives regarding their ability to deliver service.

7.2.4 Type and process of recognition in Dhaka

Experience with formal instrument of partnership in Dhaka

Views of the public sector: Dhaka city was birthplace of private sector participation in solid waste management. An activist frustrated with the deplorable environment in his
neighbourhood in Kalabagan, Dhaka started the very first door-to-door garbage collection service in 1986. Since then many organizations have copied his example. There is hardly any neighbourhood in Dhaka where such service is not offered by some private agency. Unfortunately, no formal public-private partnership ensued between Dhaka City Corporation (DCC) and NGOs/CBOs for a long time even with this proliferation of private sector initiatives. In recent times, there have been some attempts in contracting out services to the private sector.

The DCC management officials acknowledged a general lack of formal agreement between DCC and private agencies. Some NGOs/CBOs take verbal permission for door-to-door garbage collection service from the local ward commissioner. One DCC officer claimed that even the mayor of Dhaka city inaugurated certain NGO-run primary collection programs in some areas, giving a deceptive impression of official endorsement. The absence of formal relationship between the NGOs/CBOs and DCC was attributed to a general lack of felt need among DCC officials rather than any real barrier. However, there are signs that the indifferent attitude prevailing at DCC might be changing. It was noted that the present chief conservancy officer is a dynamic person. Under his leadership, more attention is being paid to the need for coordination with the private sector. DCC reportedly has issued permission for primary collection to a few private agencies. Through these permissions, DCC has imposed conditions to ensure quality of service and guard against complaint about extortion. Although belated, this development signals a growing relationship between DCC and the private sector, which has the potential to turn into genuine public-private partnership in due time.

**Views of the private sector:** The private sector respondents expressed mixed experience regarding formal relationship with DCC. Two NGOs mentioned that they received formal contract with DCC in providing primary collection service to the citizens. A third organization, a CBO, mentioned they work without any formal contract.

The NGOs having formal contract stated that the contract did not provide much privilege. One of the NGOs was among the early initiators of primary collection by the private sector. They started operation after detail discussion at the DCC headquarters level. However, they had to stop their operation within months in the face of opposition from the local ward commissioner. His supporters threatened the clients of the NGO to quit the primary collection
program. The ward commissioner allegedly incited the DCC workers by stating that the private sector was conspiring to rob them of their livelihood. Facing such stiff opposition, the NGO had to stop their operation. Another NGO received a contract for primary and secondary collection under a special scheme of DCC to test privatisation. Although the contract clearly specifies their responsibilities, they found the real work much more difficult. They are not officially responsible for removing construction debris, but they are forced to do so. They reportedly faced some influence from the ward commissioner while subcontracting two smaller organizations to provide door-to-door garbage collection service. The contract did not mention anything about public awareness, but this is a serious problem. People do not have much civic sense even in the posh residential areas where they work. Especially servants and transient people throw garbage indiscriminately. Under the terms of the contract, DCC has completely withdrawn their support from the area. But the private firm officer felt that there are many issues such as removing illegal shops, enforcing building material removal by the owners and police protection against extortionists that cannot be accomplished by the private sector alone. Therefore, partnership and collaboration between the public and private agencies have distinct advantages over complete withdrawal of the public sector under privatisation.

The CBO that is operating a door-to-door garbage collection service without any contract mentioned that they are working in a legal vacuum. They face a lot of opposition against collection of service charge because they do not have any official authority to do so. The NGOs need support from DCC in this regard. DCC's inclination to simply transferring the responsibility to private agencies or being indifferent to the works of CBOs does not solve the problem. Public-private partnership may offer a better solution with both public and private agencies having roles to play.

**Views of the ward commissioners:** Ward commissioners from three wards with varying characteristics were interviewed. One of the wards (ward 59) was located in the old city with mostly middle and low-income households. The second one was a middle- to high-income ward (ward 51), and the third one was a predominantly high-income ward with a few slums. NGOs/CBOs provide primary collection in the first and second wards. DCC introduced a privatisation experiment in the third ward (ward 19).
The commissioner of ward 19 narrated his experience with the formal contract between DCC and a private company. All solid waste management services were previously handled by DCC in his ward like other wards of the city. But recently DCC contracted out the service to a private company through a competitive bidding process. Now the work is handled in two steps: (1) the private company handles road sweeping, drain cleaning, secondary collection and transport, and (2) voluntary organizations provide house-to-house garbage collection. The voluntary organizations collect service charge from the households. This pays for the salary of tricycle van drivers and helpers, plus maintenance cost of the vans. The ward commissioner influenced the split between the private company and the voluntary organizations. Under the contract agreement DCC gave the total responsibility to the private company only. But the ward commissioner thought that house-to-house collection is better done by voluntary organizations because they are under his control. If there is any problem with house-to-house collection he can easily rectify. The private firm's contract is directly with DCC and the ward commissioner has much less influence on them. Besides he was able to offer employment to many slum dwellers through the voluntary organizations increasing his popularity among his constituents.

The ward commissioner resented the decision to privatise the solid waste management service because the decision was totally bureaucratic. There was no consultation with the ward commissioner or the citizens. The firm that won the contract did not have adequate experience, equipment or manpower. The result was disastrous in the beginning. Garbage piled up everywhere, as the company failed to provide enough trucks to haul away the garbage. People started to complain about the stinking pile of garbage near their households. Then the ward commissioner intervened. He removed all dumping points from the neighbourhoods, and designated a place beside a nearby highway for secondary dumping. The tricycle vans operated by the voluntary organizations now take their load to this dumping point away from the neighbourhoods. This solved the immediate problem. However, other problems still linger on. The private company staffs do not report to the ward commissioner; they are accountable to DCC officials. In the ward commissioner's view this is not a good system, because the ward commissioner is ultimately accountable to the citizens for cleanliness of the ward. But the ward commissioner has no influence over the private
company under this system. On the other hand, the bureaucrats who are supposed to supervise the private company are not accountable to the citizens. This mismatch of accountability has the potential to lower the service quality.

The other ward commissioners mentioned that there is no formal contract between the NGOs/CBOs in their area and DCC. There is neither monitoring nor coordination of these organizations. As a result, DCC and the private agencies are working haphazardly.

It is seen here that both outright privatisation and non-partnership resulted in undesirable problems. In the privatised area, the inexperience and capacity of the private agency caused a serious trouble, which was later mitigated by a number of steps taken by the ward commissioner. However, as the private company does not report to him, he has limited influence over joint planning. In areas without privatisation, the public and private agencies work separately and haphazardly. In contrast, the facilitating agencies in other cities were able to bring the public and private sectors together for joint planning and coordination resulting in benefit to both and the citizens.

**Perception of contribution by public and private agencies in Dhaka**

The DCC management-level officials mentioned that the officers of DCC appreciate the good works done by the private sector. But the workers and supervisors have different views. They feel that the private sector is intruding into their turf, and reducing their influence. Therefore, they are critical of the private sector. However, the field supervisors interviewed express quite positive views on the private sector. They mentioned that roads and drains have become cleaner because of the primary collection work of the private sector.

The private sector agencies complained that they do not receive support from DCC. One of the NGOs had to stop their work after agitation by the DCC workers. A second private agency mentioned that they have to pay a considerable amount of money to DCC officials to get their bill cleared. Otherwise, the corrupt officials threaten to downgrade their performance report. The contract conditions on performance actually become a tool for extortion at the hands of these corrupt officials. The CBO officials mentioned that DCC never bothers to monitor their work or give them a permit to operate with legal basis. These responses demonstrate a general lack of trust and cooperation between the public and private sector operators in Dhaka.
One of the ward commissioners complained that solid waste management in the best and the most affluent wards were contracted out to the private companies. After some initial difficulty the private company is delivering satisfactory service, but one must remember that these areas are planned model towns where working is relatively easy. In his opinion, more difficult areas should have been handed over to the private sector, as they are supposedly more efficient. Other commissioners found the work of most of the NGOs/CBOs commendable. The commissioners appreciated their sincere work in timely collection of garbage from households and disposal in designated places. Overall, the elected representatives were appreciative of the private sector. Their main contention was regarding coordination between the public and private sector.

_Incentive or recognition to the private sector in Dhaka_

DCC officers admitted that there is no precedence at DCC to formally acknowledge the good service provided by the private sector. Actually there is no registration of the private agencies, therefore, no monitoring or regulation. Only recently some agencies have been issued permit. These agencies have to demonstrate certain qualifications such as a valid trade license, registration, etc. In one way the practice of issuing permit is the beginning of monitoring and recognizing the private sector. The field supervisors of DCC confirmed that DCC never acknowledged the good performance of the NGOs/CBOs in providing excellent service to the citizens. But they welcomed the idea of formal recognition for good performance as it might inspire other organizations to improve their performance and come forward with new innovations to benefit the citizens.

The NGOs and CBOs complained that there is no system of recognition by DCC for their good performance. On the contrary, they often suffer non-cooperation from DCC officials and staffs. They have to pay bribe to get a good rating without having any bearing on the actual level of performance. DCC does not bother to monitor the performance of the NGOs and CBOs. The responses show that there is a lack of enabling environment and incentives for the NGOs/CBOs and DCC to work together as partners in Dhaka.

All the ward commissioners confessed that there is no provision at DCC to recognize the good performance of the private sector. One commissioner mentioned that such lack of recognition is not particular to the private sector. DCC does not even recognize the good
performance of its own ward commissioners. Going along with this tradition, the ward commissioners have not given recognition to the NGOs/CBOs in their respective wards. They demanded that a system of recognition should begin from the top level of DCC. They admitted that this would be a tremendous boost to the NGOs/CBOs as well as the ward commissioners.

7.3 Platform for discussion between the public and private sector

Existence of a platform for discussion between the public and private sector agencies was thought of an indicator of effective partnership. Such channel for flow of ideas and resolution of conflict could strengthen the partnership by building mutual trust and confidence. The objectives of investigating this indicator parameter were to understand the process of forming and functioning of platforms, and to compare areas with and without presence of facilitating agencies. The associated variables were the presence of a platform, process of attainment, and the functions of the platform (Fig 7.1).

Key public sector staff, private sector staff, elected representatives, community leaders and facilitating agencies were queried through interviews. The probing questions were: (a) "Is there a common platform for public and private agencies for discussion, exchange of ideas, jointly solving problems, and deciding future activities?"; (b) "If yes, how has that helped? (e.g. examples of joint troubleshooting or planning)?"; and (c) "how often do you meet and are the meetings useful?". The responses to these questions are presented below.

7.3.1 Experience with platforms for discussion in Khulna

In Khulna, there was a lot of effort in linking the Khulna City Corporation with the private sector and citizens. Still KCC officials regretted that there was no formal platform for discussion with the CBOs/NGOs at KCC central level. When the facilitating agencies WSP and Prodipan were active, they used to convene meetings between the private sector and KCC on many occasions. But with their departure, KCC is finding no way of continuing with this tradition. The conservancy department does not have any budgetary provision of covering the cost of such meetings. In absence of such provision, the only way to cover such cost is to channel funds from other expense items. However, this sort of manipulative accounting is hard to justify. KCC staff mentioned that the problem is absent at the ward level. The ward
commissioners interact with citizens and NGOs/CBOs through calling ward committee meetings.

The facilitating agencies also echoed similar sentiments as KCC. They mentioned that during WSP/Prodipan project there was a Project Advisory Committee. The honourable Mayor of the city was its president. This committee used to meet quarterly. This was an excellent platform for exchanging views between KCC and private sector agencies. Many problems were solved in the meetings of this committee. For instance, there was some resistance against service charge by citizens. Many citizens questioned the validity of service charge in addition to municipal taxes. This issue was raised in the Project Advisory Committee meeting. As a result the Mayor and the Conservancy Officer came forward. They took part in motivational events and explained the need for service charge. This way the citizens were motivated easily. It was a big boost for the private operators. The Project Advisory Committee became defunct with the end of the project. This platform should have continued. On a more positive note, the ward committees that the facilitating agencies formed are still continuing. These are local level platforms for discussion. They are holding meetings more or less regularly. Many problems, such as non-payment of service charge by some residents, are being solved through these meetings.

The NGOs/CBOs mentioned the attempts by the facilitating agencies to create a platform for discussion at the management level between KCC and the private agencies. For example, there was an informal body called waste management forum. The facilitating agency used to keep it active, but it became totally inactive after they withdrew. Later on the NGOs and CBOs tried to set up a regular dialogue with KCC for jointly solving problems. But KCC did not respond with encouragement. The private agencies felt that there should be a formal mechanism for discussion with the central KCC officials. This is needed to improve coordination between KCC and the private agencies. This would help both sectors to deliver better quality service by jointly resolving operational problems. Even holding the management level meetings only once a year would be productive. Many NGOs/CBOs commended the ward committee meetings as the local level platforms for discussion. Local problems do indeed get addressed as a result of these meetings. However, these platforms are not meant for discussing city level problems. There is occasional meeting with KCC supervisors and
private agencies. But such irregular, informal meetings are not very effective. There is a felt need among the private agencies to discuss city level problems formally with KCC. Some private agencies blamed the lack of leadership at KCC, especially following the withdrawal of the primary facilitating agencies (WSP/Prodipan), as the reason behind not being able to continue an effective platform for discussion with KCC at the management level.

The ward commissioners responded about the ward committees as platforms for discussion. Six out of 12 commissioners thought that the ward committee meetings were effective platforms for discussion and solving problems. The rest were doubtful about their effectiveness. Three were unaware of ward committees or never attended any meetings. Those who responded positively about the ward committees mentioned a number of actions that resulted from the meetings. The ward committee took initiative to mount cleanliness drives, increase area of service coverage, troubleshoot logistic and supervision problems, and motivated people to pay service charge regularly.

In contrast to the responses of the ward commissioners, the ward committee members from the community showed markedly positive attitude toward ward committee meetings as effective platforms for discussion. Only one out of the 12 members interviewed mentioned that the meetings were not fruitful. Two mentioned that the meetings partly successful, because of occasional postponement of meetings and inability to implement the decisions taken. However, nine members were emphatic about the meetings as very fruitful. They mentioned regular holding of meetings. Many decisions and actions are taken to solve local problems through these meetings. These include expanding service coverage area (even adding slum areas), opening complain books and responding to complaints, improving accountability and service quality, troubleshooting logistic problems, and motivating people.

7.3.2 Experience with platforms for discussion in Patuakhali

Patuakhali municipality officials mentioned that they hold monthly meetings in the wards where public-private partnership system is operating. The ward committee meetings used to be held once in three months initially. But now the frequency has increased. These meetings address issues such as non-payment of service charge by certain households. The ward committee members mediate in such cases.
The facilitating agency stated that there was a recognized committee formed by a government instruction. It was called the 'municipality watsan (water and sanitation) committee'. This committee used to meet once a month to discuss issues related to water supply and sanitation. It continued for some time, but later became dysfunctional. However, the informal ward committees in the public-private partnership wards are functioning well. The ward committees discuss issues such as removal of garbage pile, disruption of door-to-door collection, reluctance of some households to pay the service charge, etc. These problems are resolved through the intervention of the ward commissioner, social leaders, NGOs and the municipality as per the solution suggested in the ward committee meetings.

The NGO representatives confirmed that Danida, Department of Public Health Engineering, local NGOs and the municipality used to hold regular monthly meetings when Danida (facilitating agency) was active in promoting public-private partnership. The meetings were discontinued after Danida reduced their involvement. However, it is heartening to note that the meetings have started again. Many environmental problems are discussed in these meetings. Some of the problems were solved following the decisions taken in the meetings. For example, many latrine connections to drains were removed as per decision of the meeting. Other problems could not be successfully addressed. Drain cleaning remains such an unsolved problem. It was discussed in the meetings, but no satisfactory solution has been reached yet.

The ward commissioners of intervention wards under public-private partnership initiative appreciated the ward committees. Usually meetings are held monthly. They stated that meetings are generally fruitful. They regarded the ward committees as an essential part of the public-private partnership system. Monitoring and supervision becomes easy through the ward committees. Only a lady ward commissioner mentioned that she was not aware of the ward committee meetings despite being the chairperson of the committee.

No ward committees were found in the regular wards without public-private partnership. Some of the ward commissioners from these wards found the idea of ward committees very appealing. They thought service responsiveness and accountability would improve with the formation of ward committees. The ward committee would provide a good platform to exchange views with citizens. Supervision of work or service should become easy when
citizens are part of the team. One ward expressed doubt if the ward committee without any formal authority could actually implement the decisions it recommends. Without official endorsement the ward committees could become useless. Overall, the ward commissioners were supportive of the idea of a consultative platform.

The ward committee members painted a dismal picture of the meetings of their committees. They recalled that meetings were held once in two to three months initially. However, this practice has been discontinued and the activities of the ward committee have all but stopped. The ward committee exists only in paper now, they mentioned.

The ward committee members mentioned that the ward committee meetings used to be fruitful previously when the facilitating agency was more active. The problems of the locality used to be highlighted in the ward committee meetings. Ward committee played a strong role in the public-private partnership system. The ward committee members actively participated in the distribution of buckets to households for in-house garbage storage. They also assisted in selection of handpump installation site, installation of public latrines and sanitation promotion campaign. The responses from the ward committee members indicate the need for a continued support to keep the ward committees active. Without official endorsement and support the civic body withers into a non-functional dormant state.

7.3.3 Experience with platforms for discussion in Sylhet

There was only moderate effort in linking Sylhet City Corporation (SCC) with NGOs, CBOs and citizens. Only Sylhet Partnership Company (SPC) maintained a close relationship with SCC. The SCC officials confirmed this situation. They mentioned that SCC staffs are present in the meetings called by SPC. The SCC staff stated that they found these meeting useful for exchanging views and information. They learned about the ways NGOs operate and manage to deliver intensive household level service. These meetings also offer opportunity to discuss how to coordinate the works of SPC and SCC. For example, they discussed where and when SPC workers deposit the garbage they collect from households. Accordingly, they fixed the best timing for secondary collection by SCC staff.

The specialized service agency (SPC) mentioned that they operate through a steering committee. The committee members include representatives from SCC, ward commissioners, NGOs, businessmen, and local entrepreneurs. The steering committee meetings are the
platforms for exchanging views and discussing various issues. For example, the steering committee members debate about the selection of an area where SPC may offer its services. The area is selected based on the detail deliberations. The decisions reached through this process of consultation and consensus allows SPC to enjoy support from all quarters. This is especially important for ensuring support from SCC because their support in secondary collection of garbage is essential for delivering quality service to citizens. This process also helps SPC to expand their spatial scope of operation. It is worth noting that the platform mentioned here is specific to one agency; it is not a common forum for all private sector agencies to interact with the public sector.

One of the NGOs interviewed mentioned that a number of environmental and health projects attempted to form committees for attaining better understanding between the public and the private sector. They counted 11 such committees to address issues as varied as traffic system, primary healthcare, anti-tobacco campaign and waste management. However, these initiatives were mostly futile because the selection of members was limited to friends and acquaintances of the decision-makers. Another NGO simply mentioned that they do not have any mechanism for exchanging views with SCC.

The CBOs mentioned that they hold local level meetings. These meetings allow interaction between the CBOs and the community members. They mostly address local level issues. All CBOs mentioned that they do not have any "ward committee" where they could interact with concerned SCC officials. The CBO meetings are not always held at fixed frequency. Only one CBO claimed to hold meetings at regular intervals. All other CBOs stated that they hold meetings on need basis. If any problem arises, they get together the elders and social leaders of the area to discuss the issue and identify solutions. Usually the discussions are fruitful, but sometimes they are not. Examples of the outcome from such meetings are arranging drain cleaning drive, installing streetlights, and addressing various social problems.

The elected ward commissioners confirmed the absence of any formal ward committee in Sylhet. However, the ward commissioners hold informal meetings with their constituents from time to time as part of their public relations exercise. Social leaders and CBOs are invited to these meetings. Local problems are usually the topic of discussion. Garbage collection and disposal often come up during discussions. Sometimes CBOs seek assistance from the ward
commissioners in these meetings. In one such meeting it was decided to destroy all the
neighbourhood level small dustbins to discourage littering and encourage people to subscribe
to the door-to-door garbage collection service. Problems with service quality such as garbage
collection van not showing up or some residents resisting service charge payment are also
discussed.

The ward commissioners spoke highly of the importance of the ward level meetings as an
important platform for maintaining linkage with the citizens. Some ward commissioners
thought a formal ward committee with regular scheduled meeting might serve the purpose
even better. The local level consultations are great at bringing out sensitive issues. There are
problems that a citizen, as an individual, may not want to bring out alone. The forum as a
whole presents an opportunity to speak in a collective voice and press for demands. The ward
commissioner then can take up the issue at the city corporation level if necessary.

7.3.4 Experience with platforms for discussion in Dhaka

The DCC officials confirmed that there is no common platform for discussion between
DCC and the private sector. Sometimes activists such as the Bangladesh Environmental
Movement (BAPA) arrange meetings where citizens, private agencies and DCC sit together to
find solution to a problem. But these are irregular, informal and depend on the whims of the
activists.

One of the NGOs shared a bitter experience of trying to create a platform for discussion.
According to them, the DCC officials and ward commissioner are reluctant to sit with NGOs
and citizens. Perhaps they are afraid to face scrutiny by the civil society and hear demands
from the citizenry in an open and transparent manner. This NGO attempted to form a larger
pressure group by bringing like-minded NGOs under one umbrella. They organized a
workshop with this purpose. However, they were not successful in this attempt.

Another CBO mentioned that there is simply no mechanism to discuss and share views
with DCC. They found the idea of a ward committee very appealing. This kind of semi-formal
forums would be good to get access to the DCC officials and ward commissioners, and jointly
solve the local problems.

The only private organization that claimed regular discussion was the private company
contracted by DCC. They mentioned that they hold weekly meeting with the ward
commissioner. They submit their plan of action during these meetings. They also stated that they have an excellent relationship with the ward commissioner who, in their opinion, is an honest and just person. Moreover, this private company also meets other civil bodies such as the local market association. Markets generate a lot of waste. So they meet with the market association members whenever there is any problem in disposing the great volume of waste. However, these meetings remain local level platforms for discussion.

All the ward commissioners interviewed admitted that there is no regular platform for discussion between the citizens and DCC officials in their respective wards. However, one ward commissioner mentioned that he keeps close relationship with the citizens associations. He participates in their meetings. He considers such meetings good for exchanging views and learning about the problems of the citizens. He claimed to have addressed a number of problems after learning those in these meetings. In addition, this ward commissioner meets with the private firm contracted by DCC to manage solid waste and the CBOs who provide door-to-door garbage collection service. In these meetings they jointly try to coordinate their activities and address any special problems that tend to emerge from time to time. Overall, the ward commissioners found the idea of regular meetings with the citizens an important part in improving service delivery.

7.4 Collaboration between the public and private sector

The partnership process assists the public and private sector to share their workload. Each sector selects the tasks in which it has comparative advantage and leaves those in which the other offers so. The collaborative division of work is, therefore, an indicator of effective partnership. The objectives of investigating this indicator parameter were to understand the collaboration between the public and private sector, and to understand the role played by the facilitating agency towards collaboration. The associated variables were adjustment in work plan, process of initiation and continuation of collaboration, and perception of mutual benefit (Fig 7.1).

Key public sector staff, private sector staff, elected representatives, community leaders and facilitating agencies were queried through interviews. The probing questions were: (a) "which responsibilities should be left with the public sector and why?"; (b) "which responsibilities should be given to the private sector and why?"; (c) "what effect the
partnership arrangement had on work load and how adjustments were done?"; (d) "how the work load was divided and coordinated between the two sectors and what role did any facilitating agency play in this process?"; and (e) "what is the perception of satisfaction/dissatisfaction about mutual benefit through partnership?". The responses to these questions are presented below.

7.4.1 Collaboration in Khulna

Response from the public sector: The officials of Khulna City Corporation (KCC) made clear distinction between the responsibilities that should be given to the public and private sectors. It was mentioned that secondary transport of solid waste (from secondary bins to the final landfill site) should be left with KCC. Secondary transport requires a large fleet of trucks. Staffing, fuelling and maintaining such large number of vehicles are beyond the capacity of NGOs. The final disposal should be KCC's responsibility also. Acquiring land for disposal is not possible for NGOs because it is very complicated and requires government authority. Drain cleaning should be left with KCC as well. This operation requires a lot of personnel. Besides people will not pay service charge for cleaning drains as they do for house-to-house garbage collection. This is because drains are public property and there is no sense of exclusive benefit to a specific household. So individual households will not pay for this service. This is best be done by KCC as a public service benefiting everybody at large. On the other hand, NGOs and CBOs are successful in rendering house-to-house primary collection service. People are paying for this service. KCC cannot provide such intensive service. The private sector is efficient and more suitable for this service.

KCC officials acknowledged the role of the facilitating agencies in realizing coordination between the private sector and KCC. Their assistance was vital in raising awareness among people and staff of KCC. The facilitating agencies held many meetings in the formative stages. The consultative meetings, orientation to KCC staff, and public awareness campaigns bonded the NGOs and KCC in a collaborative frame of mind. The staff of the facilitating agency became personal friends of KCC officials that they could trust. They shared the concerns openly and frankly. With the build up of this trust and friendship, coordination was easily achieved. Accordingly, NGOs and CBOs were given the responsibility of primary
door-to-door garbage collection, and Khulna City Corporation retained the responsibility of secondary collection and final disposal.

The volume of garbage increased immensely after the introduction of the partnership arrangement. KCC officials estimated that KCC now handles three times more garbage compared to before. This is because NGOs are collecting garbage from house-to-house and depositing the same into KCC community bins. So most of the garbage is entering into the waste management system. KCC has responded to this increased demand by adjusting their secondary collection by increasing secondary collection capacity and synchronizing with NGO/CBO operations. KCC, with assistance from the facilitating agencies, also constructed ramps near the secondary bins. The ramps allow tricycle vans to move up and unload directly into the secondary bins. Previously waste was first unloaded onto ground from the vans, and then manually thrown into the secondary bins. The ramps stopped this multiple handling. KCC is also going ahead with a plan to increase the area of the final dumping ground and improve the existing ground.

As the public-private partnership has matured over time, the KCC officials thought that street sweeping might be combined with primary collection in future. NGOs/CBOs might conduct both tasks under the same supervision. They would be more efficient in this task, because there would be no ghost workers. They could do the job with less number of workers than KCC. There would be higher accountability to citizens as well. It was encouraging to note such forward thinking by KCC officials.

Response from the facilitating agencies: The facilitating agencies mentioned that the overall responsibility of an effective and efficient solid waste management system for Khulna city should be on KCC. The citizens and NGOs/CBOs can only act as partners with KCC. In this sense, all responsibilities belong to KCC, but they can delegate some to CBOs/NGOs. The responsibilities to be delegated to the private sector should be determined through consultation between KCC and the private agencies. There should not be any fixed formula. However, in view of the present conditions and capacities, secondary collection and final disposal should be left with KCC. Private agencies do not have any comparative advantage in this, but KCC clearly has. These require a lot of capital for procuring trucks or acquiring land for final disposal. This is beyond the capacity of NGOs and CBOs. On the other hand, NGOs
and CBOs have advantage in intensive work in collection of garbage from households. Therefore, door-to-door garbage collection service should be left with the private sector. The third partner in the public-private partnership should be the community. Ward committees, as community representatives, could be given a monitoring role.

The facilitating agencies helped in setting the principles of coordination and cooperation through discussions at management level between KCC and the private sector partners. Many discussion meetings were also held at field level among supervisors of KCC and private agencies. Achieving collaboration was attempted at both management and field level. In effect, the facilitating agencies acted as an interface between KCC and NGOs to forge a collaborative working environment.

Response from the private sector: The private agencies mentioned that the overall responsibility of solid waste management belongs to KCC. They should handle the secondary collection and final disposal of solid waste. KCC should totally abandon collecting garbage from neighbourhood dustbins, and stop constructing any more neighbourhood level dustbins. This would encourage people to join in the door-to-door garbage collection service by the private sector. Some private agencies stated that KCC should continue to clean drains. Many private agencies advised that KCC should improve their supervision and monitoring. There were suggestions that KCC could supervise the NGOs/CBOs as their partners, or there could be joint monitoring of both public and private sector staff by KCC and private agencies together. Another important suggestion was that KCC should formulate policy and master plan for solving the city's solid waste problem. There was also demand that KCC should become more transparent with the partner organizations.

Most private agencies stated that they should continue to carry out the door-to-door garbage collection service. There was a suggestion that private agencies could also collect waste from markets as well. Some agencies demanded that in addition to the primary collection service the private sector could also handle drain cleaning, street sweeping, promotion of sanitation, mosquito control, and community security service. They claimed that the private sector could render these intensive services more efficiently with better quality and more accountability.
Some private agencies acknowledged that the facilitating agencies helped in coordinating their activities with KCC. They organized meetings to coordinate and divide work between KCC and the private agencies. This help was very much appreciated because the small local NGOs/CBOs had little access to the top echelon of KCC. However, there were some dissenting voices also. A few agencies regretted the fact that the facilitating agencies could not work with KCC to set a clear policy on public-private partnership. This could have a major impact in clearing all the obstacles against large-scale public-private partnership.

Response from the elected representatives: The elected representatives suggested that secondary collection, final disposal, operation of landfill sites, drain cleaning and street sweeping should be the responsibility of KCC, as the private sector does not have capacity to offer these services. In addition, some advised that KCC should assume a monitoring and regulatory role to oversee the activities of the private sector. One of the ward commissioners stated that KCC might even try to emulate the private sector in providing door-to-door garbage collection service, especially for areas still without such service. Overall, KCC must deliver better service to justify the collection of tax from the citizens. In this regard, they should actively support public-private partnership so that it flourishes throughout the city and all citizens enjoy better service.

The elected representatives thought that the door-to-door garbage collection service should be provided by the private agencies. The NGOs/CBOs should also take lead in public awareness and motivation campaign. They should also consider expanding their scope of service by offering street sweeping and drain cleaning service. It is expected that such service would be better delivered by the private sector because their management style is more efficient for this type of intensive activity. But the elected representatives cautioned that the private sector should coordinate their activities through the ward commissioners. In their opinion, the private agencies should be accountable to the ward commissioners who are custodians of public interest.

The elected representatives acknowledged the role of the facilitating agencies in demonstrating a collaborative model with participation of both public and private agencies. They facilitated the division of work and coordination. The facilitating agencies placed due importance to the ward commissioners, consulted them for addressing the coordination
issues. The model has built relationship between the NGOs, KCC and ward commissioners, who all benefited from this relationship. The NGOs seek support from the ward commissioners if they face any problem. Practical examples of coordination include dismantling of neighbourhood level dustbins to encourage citizens to join in the door-to-door garbage collection program. However, in consultation with the ward commissioners, a few dustbins were left so that they may be used during holidays or service interruption by the NGOs.

Response from the ward committee members: Ward committee members had similar expressions about the public sector responsibilities. They stated that secondary collection and final disposal of solid waste, drain cleaning, and street sweeping should be conducted by Khulna City Corporation. These tasks require big investment in labour and equipment that is beyond the capacity of the private sector. They cautioned that KCC should also be prepared for emergency garbage collection as a backup in case some NGO/CBO fails to deliver its service. One particular problem that was mentioned is handling sludge from drain cleaning. The present practice is to leave the sludge on the roads for drying. It is supposed to be picked up by KCC workers as soon as it is sufficiently dry. However, the collection is often delayed and heaps of sludge remain on the streets for long. This causes suffering to the citizens. The ward committee members suggested that KCC should improve its monitoring so that such lapse does not occur. KCC should also be more responsive to the demands and complains from the citizens as they pay tax for the services. Other demands from the ward committee on KCC include proper street lighting, water supply, removal of dead animals, clearing hyacinth from water bodies, and rehabilitation of silted up water bodies.

The ward committee members stated that the tasks that have direct accountability to the citizens should be done by the private sector such as primary collection of solid waste management. Primary collection is an intensive task that should be done by the private sector because they are more responsive and accountable to the people. A few members were optimistic about assigning drain cleaning, street sweeping, promoting sanitation, and mosquito control to the private sector as well. They argued that KCC is negligent in performing these tasks. Some members suggested that even minor construction (e.g. small drains) might be delegated to the private sector. There could be an upper ceiling of
construction value, perhaps BDT 500,000 (USD 8,333), above which the works should be handled by KCC.

In improving collaboration between the public and private sectors, some ward committee members suggested that ward committee members and citizens should have role in monitoring both public and private sector workers. KCC could make satisfaction verification by ward committee a condition for receiving salary by its workers. This would ensure accountability. Similarly, the private sector must ensure regular, timely service. Private sector workers should be courteous and responsive to their clients—the citizens. They should engage supervisors to monitor and maintain service quality, and respond immediately to any dissatisfaction expressed by the ward committee or general citizens.

The ward committee members acknowledged the role of the facilitating agencies in promoting collaboration between the public sector, private sector and citizens. The facilitating agencies brought together KCC staff, private sector staff, ward commissioner and local citizens in meetings. They all took joint decision about waste management in their locality. Besides the facilitating agencies organized motivational activities such as public meetings and rallies in which all of them took part. The facilitating agencies came up with the idea of ward committee as a platform for discussion between citizens, KCC, private agencies and elected representatives. Thus they tried to build a bridge between all the actors involved in the waste management activities. They also helped in demonstrating the model through pilots in a few wards. They provided fund and technical advice in the pilot wards. The model later expanded to other wards.

Three ward committee members out of the 12 interviewed, however, mentioned that collaboration between KCC and the private sector remains poor. These respondents were also unaware of any effort along this line by the facilitating agencies.

7.4.2 Collaboration in Patuakhali

Patuakhali municipal officials appreciated the public-private partnership system of solid waste management. NGOs are providing door-to-door garbage collection service under this arrangement. They are also raising public awareness. The people are now much more aware due to the motivational campaign. The municipality is doing their share of the work. Municipality workers are taking care of secondary collection and final disposal. The workers of
the two sectors are working in collaboration. However, there is a serious deficiency. There is no dumping ground or landfill site in Patuakhali. The municipality workers are forced to dump the collected waste in any place they can find—sometimes in vacant lands, sometimes along riverbanks. So there is no real reduction in public health hazard.

The chairman of Patuakhali municipality was very much impressed with the result of public-private partnership. He mentioned that he would try to delegate more responsibility of the conservancy section to the private sector. He would also attempt public-private partnership in water supply. He believes that the private sector is capable of delivering quality service. The direct payment by the citizens also ensures more responsiveness and accountability. The municipality may assume a more regulatory and facilitating role. He thought that the municipality should financially support the public-private partnership system in future.

The conservancy officials mentioned that house-to-house garbage collection might be left with the private sector. But street sweeping, drain cleaning and secondary collection should municipality's responsibility because only municipality has sufficient capacity in terms of staff, equipment and fund for this task. The private sector does not have the capacity to handle this part.

The municipality and the facilitating agency jointly selected the wards for piloting public-private partnership. It was intended to also cover slum households under the door-to-door garbage collection service. However, the slum households could not join the program because they could not afford the service charge. According to the municipal officials, it is better to start the public-private partnership system in relatively affluent section of a city and then gradually reach out to the poor areas.

The facilitating agency officials recommended that all responsibilities for solid waste management should belong to the municipality except social mobilization. However, the municipality can work together with NGOs and delegate some portion of the work. Social mobilization should be exclusively carried out by the NGOs. Secondary collection of waste from dustbin, street sweeping, and drain cleaning leasing would not be profitable for the private sector. These require a lot of staff and equipment, thus a high capital investment and operational cost. On the other hand, collection of waste from households and operating public
latrines (by leasing) are profitable for the private sector, as these require smaller investment and operating cost. Likewise developing and operating landfill site require huge investment. This is beyond the capacity of the private sector. Therefore, the municipality should carry out secondary collection and final disposal. The private sector should carry out door-to-door garbage collection service. Seven percent (7%) of the tax collected by the municipality is earmarked for conservancy services. This amount should go to the conservancy section’s account. Then they could support secondary collection by their own staff and assist primary collection by the NGO/CBO staff.

The NGO representatives were of the opinion that the municipality seems to suffer from a chronic shortage of fund. They cannot engage sufficient number of staff or purchase land for final disposal of solid waste. It appears that they would need financial assistance and advice on enhancing their income. If the fund crisis is solved, then the public-private partnership between the municipality and the NGOs can operate satisfactorily. The NGOs may run the door-to-door garbage collection service and the municipality may run the secondary collection and final disposal, street sweeping and drain cleaning.

The elected representatives stated that the municipality has the mandate to provide all civic services to the citizens. This includes the entire gamut of the solid waste management service. However, as the municipality has limited capacity, they may retain the secondary collection and final disposal, street sweeping, and drain cleaning responsibility to themselves, and delegate the primary collection service to the private sector. In particular, the municipality should pay special attention to developing and operating a proper landfill, as there is none at present.

There were a few suggestions on improving the municipality’s capacity. At present, the municipality does not have adequate number of staff and equipment. So they should recruit new staff and give them training to build a strong crew. They should procure necessary equipment also. The municipality should provide overall supervision to the solid waste management activity. This includes supervision of their own staff as well as the NGO activities. Therefore, they need to enhance their monitoring capacity with enough supervisors and vehicles.
The elected ward commissioners further mentioned that the private sector should build public awareness through organizing motivational campaigns such as public meetings and rallies. Already a good example of primary collection by the private sector has been demonstrated. The NGOs/CBOs should continue with this service. Their scope of involvement may be expanded to include drain cleaning as well. Some ward commissioners even suggested that minor public works such as drain construction should be handed over to the private sector. There were a few suggestions on raising fund for improving solid waste management and other civic services. As the NGOs have expertise in preparing projects and seeking fund from funding agencies, they may lend a hand to the municipality in attracting funding for development of solid waste management and other activities.

The ward commissioners acknowledged the assistance from the facilitating agency. According to them the facilitating agency was responsive and sincere. They mentioned that the facilitating agency helped in activity planning and organizing motivational campaign to raise public awareness. They also provided seed fund and advice. However, they failed to assist in expanding the public-private partnership throughout the city although the ward commissioners strongly wished for such expansion.

The ward committee members confirmed other responses on the responsibilities of municipality. They stated that the municipality should handle tasks that require large number of workers such as street sweeping, drain cleaning and secondary collection. The private sector should continue the door-to-door garbage collection service. They may also take additional responsibility of drain cleaning, promotion of sanitation and minor construction. The municipality should supervise and regulate the activities of NGOs/CBOs. They were generally happy with the distribution of the workload and collaboration between the public and the private sector.

7.4.3 Collaboration in Sylhet

Response from the public sector: The Sylhet City Corporation (SCC) officials expressed satisfaction with the public-private partnership. They were hopeful about expanding the system throughout the city. They mentioned that the private sector might promote public awareness and provide door-to-door garbage collection service. The private sector has already demonstrated their comparative advantage in this area; SCC has little capacity to
carry out such intensive service. On the other hand, SCC management thought that drain cleaning, road sweeping and construction of drains should be the responsibility of SCC. These tasks require large investment in terms of funds and manpower. At this stage, the private sector would not be able to shoulder such investment.

SCC officials pointed out that only Sylhet Partnership Company started their work with proper consultation with SCC. Many other NGOs/CBOs started door-to-door garbage collection service spontaneously without consultation or collaborative arrangement with SCC. Most of these initiatives encountered serious trouble and were not sustainable. A few survived, but they admit that there has to be partnership between the public and the private sector to properly deliver service to the citizens. Partnership requires sharing, planning and implementing together.

Nevertheless, the SCC officials were hopeful about expanding the public-private partnership system throughout the city. They, however, pointed out several obstacles that are impeding full collaboration between the public and the private sector. Firstly, SCC's own capacity to collaborate with the private sector is limited by its lack of vehicles for hauling solid waste. If the primary collection system continues to improve by the work of NGOs/CBOs, a lot more garbage will enter the waste stream. SCC must be prepared to provide the secondary collection and final disposal of the additional waste. For this SCC would require adequate number of appropriate vehicles and other equipment. SCC also would require additional workforce. The public-private partnership system will only work when both public and private sector have adequate capacity. Secondly, there is a need to continue further with building public awareness. Citizens want good service, but many of them want all the service free of charge. Nobody wants to give land for constructing roads and drains or tax for development works. So it is necessary to raise people's awareness about the environmental hazards and needs of the city. They must be encouraged to pay their service charge and taxes. The public sector needs a strong financial base with taxation and grant from the central government to procure necessary equipment and recruit adequate number of staff. Then the public sector would be able to provide the required support to the private sector. The public and private sector in partnership can serve the citizens with satisfactory level of service.
Response from the facilitating agencies: Sylhet Partnership Company (SPC), which is a facilitating agency as well as a service agency, mentioned that initially there was some confusion about public-private partnership. The public-private partnership system was unknown to Sylhet City Corporation (SCC). Both SCC and SPC were inexperienced in dealing with public-private partnership. Over the years, the relationship and role of each sector have become clear.

In the light of the experience gained so far, SPC thinks that the private sector has gained the capacity to provide door-to-door garbage collection service and street sweeping service. SCC has no mandate to collect garbage from households, so it is easy to allow the private sector to move into this niche. SCC is responsible for street sweeping, but they fail to perform this satisfactorily. Therefore, this task can also be delegated to the private sector. There is demand from the citizens that door-to-door garbage collection service and street sweeping be handed over to the private sector for better quality. SCC may retain the responsibility for drain cleaning, secondary collection of garbage and final disposal. They have the manpower and financial capacity to perform these large-scale operations.

SPC thought it is possible to expand the public-private partnership throughout the city. New services may be gradually added to broaden the scope of public-private partnership. Although there is a good potential for expanding public-private partnership, SPC mentioned some caveats. Firstly, the present experience clearly indicates that the public sector (city corporation or municipality) must be assisted by a competent facilitating agency. The public sector lacks the capacity to initiate public-private partnership by themselves. It requires close guidance especially in the incipient period by a facilitating agency. Secondly, the economies of scale must be kept in mind. Operations by a lot of NGOs/CBOs each working in a small geographical area should be avoided. Instead, the city should be divided into sizable zones. One qualified private agency should be given the service contract for a zone. The private agency should carry out the door-to-door garbage collection service, public awareness and all other necessary activities in collaboration with the municipality, elected representatives and community members. Monitoring a few larger private agencies would be much easier than monitoring many small ones. This would also require a long-term plan and commitment from all concerned parties.
Response from the private sector: The private sector NGOs and CBOs were generally satisfied with the improvement in service delivery brought about by the public-private partnership. They mentioned that the work should be divided between the public and private sector according to each sector’s advantage and capacity. Large operations such as drain cleaning, mosquito control, street lighting, and street sweeping should be the responsibility of SCC. They have the mandate and capacity to do these activities. However, their staffs are not working efficiently. So a joint supervision by NGO and SCC, and salary based on performance certification by NGO and SCC may improve the situation. Some private sector representatives demanded that SCC should become a regulatory, monitoring and supervisory body instead of a service provider. They insisted that SCC should become a manager and supervisor of the private sector service providers.

NGOs can handle door-to-door garbage collection service, health service and public awareness program on health and environment. Actually the private agencies could expand their service into street sweeping and drain cleaning also provided they receive funding support. Some private sector agencies even demanded that all activities related to keeping the city clean should be gradually delegated to the private sector.

Response from the elected representatives: Some of the elected representatives interviewed suggested that the entire range of solid waste management activities should be gradually handed over to the private sector. SCC should become a management and regulatory organization only supervising the private sector. Others stated that activities requiring large investment and workforce should be retained by the public sector. This includes installation and maintenance of community dustbins, secondary collection, and final disposal of solid waste. One ward commissioner mentioned that SCC should encourage composting of organic waste as a means of recycling and reducing the volume of waste.

Some ward commissioners demanded that all field operations should be done by the private sector. For example, primary and secondary garbage collection by covered van, and drain cleaning with safe disposal of silt should be carried out by the private sector. In particular, street sweeping and drain cleaning could be handed over to the private sector shortly, they claimed. Some ward commissioners expressed doubt if the private agencies have gained capacity for providing drain cleaning and street sweeping services. The
responses prove that the elected representatives were divided in their opinion about the capacity of the private sector and the responsibility that they may assume.

The ward commissioners stated that SPC, in their role as a facilitating agency, held discussions with all concerned prior to implementing their activities. They maintained good relationship with both SCC and local CBOs. However, their activities slightly deteriorated as compared to the initial enthusiasm to meet the satisfaction and expectation of citizens. Some ward commissioners mentioned that SPC does not directly assist the NGOs. Rather they raise public awareness. NGOs do get indirect benefit from such motivational activity.

Some ward commissioners pointed out that SPC should not be seen as the agency that can do everything. Actually SPC should be seen as a facilitating agency, which is in collaboration with other CBOs, assisting SCC to solve the city's solid waste problem. All concerned should understand that both public and private agencies must work together under the partnership arrangement. Otherwise, there would not be any gain in service quality or efficiency. They cited the example of SPC's attempt to carry collected garbage to the final dumping site by tricycle vans. Secondary transport by tricycle vans over large distance is quite inefficient. There should be secondary dustbins into which the NGO/CBO workers should deposit their collected garbage. SCC trucks should provide the secondary transport to the final landfill site. This example shows that there is more room for enhancing collaboration between the public and the private sector.

A few additional comments made by the ward commissioners demand attention. One was about the ultimate responsibility of solid waste management. Some ward commissioners expressed opinion that the ultimate responsibility of solid waste management rests with the public agency, that is, SCC. It does not matter if the service is delivered through public-private partnership—it is SCC that is bound by mandate to provide civic service to the citizens. So if the public-private partnership fails for some reason they must be ready to resume service without interruption or harm to the citizens. SCC should also ensure adequate number of secondary dustbins and construct a proper landfill site. Relevant to this issue was a point about contract management and supervision of NGOs/CBOs by SCC. It was mentioned that the entire selection and operation of the public-private partnership should be under a transparent and formal arrangement. This would ensure accountability and supervisory
control. Solid waste management is an essential service that has serious implications for public health.

7.4.4 Collaboration in Dhaka

DCC officials made some important observations about possible collaboration between DCC and the private sector in Dhaka. It was pointed out that the private sector operates with a profit motive. At this point DCC cannot privatise operations like secondary collection and landfill, because it does not have the mechanism to channel fund to do so. Besides this will mean laying off thousands of workers. Politically this is impossible. Therefore, secondary collection and final disposal should be left with DCC for the foreseeable future. Primary collection and recycling (e.g. composting) may be left with private agencies.

The field-level officials of DCC also mentioned that the present responsibility, that is, secondary collection and final disposal should remain with DCC. They claimed that it is theoretically possible for DCC to provide door-to-door garbage collection service as well. But in reality there is no fund available with DCC to launch such service. Besides people would not pay service charge to DCC for this extra service because they already pay holding tax to DCC. Considering this fact, it is better to leave the door-to-door garbage collection service in the hands of the private sector. The NGOs/CBOs should continue with their present program of door-to-door garbage collection and disposal into secondary containers. But they should change their timing. They should start collecting waste at 4:00 p.m. and bring the garbage to secondary bins between 6:00 p.m. and 7:00 p.m. Thus the operation could be synchronized with DCC secondary collection time. The city would be much cleaner if there is this kind of collaboration. The other very important input from the NGOs and CBOs is the public awareness campaign. They should assist DCC in making the citizens aware about environmental problems and motivate them to practice civic responsibilities.

The NGO/CBO representatives explained that it is beyond DCC's capacity to collect garbage from door to door. The work that DCC is presently doing that is secondary collection and final disposal should require large number of staff, vehicles and fund. Two NGO/CBO agreed that DCC should continue to provide this service, but with more sincerity and quality. The official from a private firm expressed a different opinion. According to him, both primary and secondary collection could be handled by the private sector. This way one private
organization would be responsible and accountable for service delivery. This may improve service quality. This official was confident that the private sector has the capacity to serve the entire city of Dhaka if DCC provides necessary cooperation. The NGO/CBO officials, however, were of the opinion that the private sector should limit their activities to primary collection only, as secondary transport requires large staffing and investment outlay.

The private sector officials demanded that monitoring and supervision should be done jointly by DCC and the private sector or a third-party organization. All respondents agreed that there should be a system of registering complaints for quick response. They regretted that DCC at present is not responsive to the complaints from the general citizens. DCC seems to pay heed to complaints from the influential people only.

Overall, the smaller private organizations wanted to limit their activities to primary collection only. The larger private firms were more ambitious about their capacity to provide secondary transport to the entire city as well leaving only the final disposal for the public sector. However, both small and large private organization admitted that they need support and cooperation from the public sector.

The ward commissioner of the privatised ward commented that street sweeping, drain cleaning, primary collection and secondary transport may be delegated to the private sector. DCC and ward commissioners should monitor and supervise the private sector. The other ward commissioners differed from this view. They mentioned that secondary transport, drain cleaning, and street sweeping responsibility should be retained by DCC. Only primary collection may be delegated to the private sector, as the private sector does not have the necessary capacity for the other tasks. On the other hand, they mentioned that NGOs/CBOs should be responsible for building public awareness because they have this expertise that is lacking at DCC. All the ward commissioners, however, were unanimous about the final disposal. They mentioned that this responsibility should rest with DCC only.

7.4.5 Observation

Observations of public sector staff (trucks), private sector staff (tricycle vans) and secondary dumping points were made. The primary objective of the observations was to document collaboration between the workers of public and private sector.
In Khulna, Patuakhali and Sylhet, it was found that there is some degree of synchronization of deposit of garbage by private sector workers at the secondary dumping point and collection by the public sector workers. For example, it was noticed that in Khulna the KCC truck waited at the secondary bin for some time until all the private tricycle vans arrived to unload. Similar synchronization was also observed in Patuakhali and Sylhet. This indicates work plan adjustment and collaboration between the workers of the two sectors. In contrast, no synchronization was observed in Dhaka. The NGO/CBO workers deposited their waste in the early afternoon, but no DCC truck came to pick up the waste from the secondary bins. A lot of activities were observed at the secondary bin site in Dhaka. Despite the proliferation of NGO/CBO primary collection service, it was noticed that many people, mainly servants, bring their garbage to the secondary bin. This indicates that many households do not subscribe to the door-to-door garbage collection service. Many scavengers were also noticed to be actively picking items of value from the secondary bins.

In general, the private sector workers in Khulna, Patuakhali and Sylhet were found to be very hard working. A number of them were wearing uniform, boots and gloves. They seemed to have good relationship with their public sector counterpart as they were seen chatting and working together at the secondary point. The private workers actively segregate items of value as they collect waste from door to door. They later sell these items to earn some extra money. Sometimes a husband and wife work as a team in collecting garbage. They take good care of the vans and wash the vans after the end of their work.

7.5 Effects of partnership on service delivery improvement

One of the main reasons for public-private partnership is to improve service delivery. Successful partnerships should offer better service delivery. Improvement in service delivery indicates that the two sectors are working with cooperation and coordination. The objectives of investigating this indicator were to understand service level improvement due to partnership arrangement, and to compare areas with and without facilitating agency. The associated variables were cleanliness of neighbourhood, perception of citizens, perception of public sector staff and perception of private sector staff.

Citizens, key public sector staff, private sector staff, elected representatives, community leaders and facilitating agencies were queried through interviews. The probing questions to
citizens were: (a) "is your area cleaner than before as a result of PPP?"; (b) "where do you complain if there is a problem with service delivery?"; (c) "what is the response to your complaint?". The probing questions to the public sector were: "are you able to better serve your clients as a result of public-private partnership?"; (b) "what is the effect on your workload in these areas?; (c) "are you dissatisfied in any way regarding service delivery due to public-private partnership?" The responses to these questions are presented below.

7.5.1 Service delivery improvement in Khulna

Response from the citizens: The survey in Khulna covered 120 households. Information was collected through structured questionnaire interviews. The response on improvement in cleanliness of the neighbourhoods due to public-private partnership was overwhelming. About 95% of the households mentioned that their neighbourhood was cleaner than before because of public-private partnership.

Another sign of improvement in service delivery is the number of complaints made by the citizens and the response received. Most of the households (57%) never had to make any complaint about door-to-door garbage collection. About a quarter of the households (26%) made their complaint directly to the NGO/CBO providing the service. This shows the direct accountability of the service agency to the clients. Other households made their complaints to the ward committee (12%) or to the elected representative (2%). Only 4% of the households stated that they did not know where to lodge their complaints.

The responses to the complaints were overwhelmingly positive. About 88% of the households who complained mentioned that they received satisfactory response in addressing the problems by the NGO/CBO service agency. Only 12% households mentioned that the response was not up to their satisfaction.

Response from the public sector: The KCC management mentioned that it has benefited by working together with the private sector. The solid waste management service delivery improved markedly due to the public-private partnership arrangement. KCC is now able to better serve the citizens. By working together, KCC and the private sector agencies have made Khulna a much cleaner city.

The good planning in introducing PPP, thanks to the facilitating agencies, has helped in clearly defining the areas of work by the public and private sector. There has been no conflict
between the two sectors. However, there is still some lack in supervision by both KCC and the private sector. Although the city is much cleaner than before, still there are some complaints by the citizens. Stronger supervision and monitoring by both sectors would mean speedy response to issues raised by the citizens and thereby improve our quality of service delivery. The coordination between the two sectors also needs improvement, as the problems cannot be addressed by any of the sector alone.

The response from the field level workers of KCC was quite notable. Nine out of 11 field workers (82%) interviewed mentioned that their workload decreased due to public-private partnership. This is because they no longer need to collect waste from neighbourhood dustbins since the door-to-door garbage collection service by the private sector started. The drains are also much cleaner and require much less cleaning.

Six of the workers (60%) mentioned that their trade union supports the public-private partnership. Four workers (40%) did not know the view of their trade union on PPP. It was interesting to note that there was no outward opposition to private sector participation.

Eight workers (80%) mentioned that they found nothing to dislike about the private sector activities. Only one complained that sometimes the private sector worker do not do their job sincerely. Ten of the respondents (91%) said that they want more public-private partnership. Only one (9%) expressed cautions that PPP may be supported as long as public sector jobs remain secure.

Response from the facilitating agencies: The facilitating agencies claimed that the public-private partnership system made a major change in the cleanliness of the city. Ubiquitous garbage piles in the neighbourhoods of the city disappeared with the introduction of door-to-door garbage collection service. As a result, the roads are much cleaner now and there is no foul odour in the neighbourhoods. Drain clogging has been reduced also because the practice of throwing garbage into drains has stopped, as garbage is collected from every household. Overall, there has been a marked improvement in environment.

The citizens are now enjoying the better environment. Service delivery has greatly improved. Intensive door-to-door service could never be delivered by the public sector alone. Accountability has improved with the introduction of private sector service providers and direct service charge by citizens. Citizens are vigilant about service quality. They can complain to
the service agency, ward committee or the ward commissioner if the service is not satisfactory. They are more aware of their rights as well as their civic responsibility.

KCC's workload has been reduced as a result of the joint working by NGOs and CBOs. KCC workers no longer need to collect waste from the hundreds of neighbourhood level dustbins. They only need to collect waste from secondary bins. The KCC workers now have more time for other tasks such as drain cleaning.

The facilitating agencies mentioned that there is one remaining service problem at the secondary collection bins. Tricycle vans cannot directly empty into the secondary bins because they have very high walls. So they first deposit their wastes on the street then with a shovel manually throw them over the high walls. This creates nuisance around the bins. There was an attempt to solve this problem by constructing ramps. But it was found that ramps take up precious space on roads and creates obstacle for traffic movement. One ramp had to be dismantled due to traffic congestion. So handling of waste multiple times at the secondary point and ensuing nuisance remains a problem.

Response from the private sector: The private sector agencies stated that service delivery improved due to participation of private sector operators in offering door-to-door garbage collection service. All the agencies interviewed claimed that the general environment of the neighbourhoods improved due to the partnership arrangement. People are enjoying the better environment and willingly paying the service charges. Some pointed out that the people were so pleased with the service that the private agencies were able to enhance their service charge. The area of coverage is also increasing as more households, including poor households, are joining the door-to-door garbage collection program. The continued support and participation of the people is a testimony to the quality of service.

Service quality has improved in two ways. Firstly, citizens are now enjoying doorstep level service through the public-private partnership arrangement. Secondly, the service agencies are now directly accountable to the citizens. The private sector agencies must maintain high quality up to the satisfaction of their clients; otherwise, they would be out of business because people would not pay the service charge.

The ward committees headed by the ward commissioners have emerged as the voice of the people and custodians of public interest. They monitor the service level. About 82% of the
field level staff of NGOs/CBOs mentioned that their contact with the community is through the ward committees. Only 18% of the workers said that they have no contact or communication with the clients. The collective monitoring by the ward committee and individual monitoring by the households have made the service delivery accountable and competitive.

Response from the elected representatives: The ward commissioners agreed that their ward became cleaner due to the introduction of door-to-door garbage collection service under public-private partnership. They mentioned that a lot of garbage used to be lying on roads before. The piles of garbage disappeared since collection service began operation. The environmental condition in general was improved due the garbage collection service. The commissioners were pleased to work with the private agencies and KCC to offer the better level of service through public-private partnership. Raising public awareness along with private agencies and KCC improved the relationship with their constituents. Many of the commissioners expressed satisfaction about the raised level of public awareness and civic sense. They agreed that the public-private partnership system allowed them to serve their constituents with better service and opened up a channel of communication through the ward committee meetings. A direct accountability of service agencies and ward commissioners has set a good example.

There was generally no dissatisfaction about public-private partnership. However, a number of commissioners raised concern that the collection service is not available everywhere in their ward. Some areas remain unserved. One commissioner complained about deterioration of service level since the withdrawal of the facilitating agencies.

A number of commissioners expressed interest to expand the scope of the public-private partnership to include new areas and new services such as sanitation. Many of them thought that some assistance from facilitating agencies in the form of seed fund and technical advice for a limited time would enable them to expand the service to the entire city. Some of the ward commissioners expressed dismay about the premature departure of the facilitating agencies. They thought the facilitating agencies should continue their support for a longer period to allow all areas of a ward to be covered by the service, and the system attains a strong financial and institutional footing. The other demand was for giving a formal recognition to the ward committee and fund for organizing meetings from KCC. KCC was seen as not
forthcoming with leadership. It was demanded that KCC should invite more participation of the private sector and assume a coordinating and regulatory role.

Response from the ward committee members: Like other respondents the ward committee members also admitted that their neighbourhoods became cleaner due to the public-private partnership system of waste management. As the representatives of the citizens, they mentioned that people appreciate the good service delivery by the private agencies. People's participation is an important distinction in this system. Direct payment of service charge has given people a voice in the service delivery. There was hardly any chance for people to influence service delivery KCC. But in the public-private partnership system people can express their preference or complain through the ward committee. This system has raised accountability and public awareness. Some members noted that even KCC workers are now more aware of their responsibility. They also try to work more sincerely. KCC is contributing significantly by removing garbage from secondary bins.

No respondents expressed dissatisfaction with the public-private partnership except two. The two complains were about irregular service by the concerned NGO and lack of supervision. There were a number of constructive suggestions. Some members exhorted about continual striving for improving service quality. Some members raised the point about reaching all households with quality service as opposed to partial coverage only. They demanded that the service should reach the poor people as well as the rich. There was a suggestion about increasing the scope of public-private partnership to include water supply.

Most of the ward committee members were hopeful about expanding delivering service through the public-private partnership mechanism to the entire city. They suggested the following steps for the expansion:

(1) Waste management requires day-to-day monitoring and troubleshooting. Even one day's disruption can cause vehement reaction from the citizens. Therefore, high quality and regular service is mandatory. This requires professional management. Many ward committee members stated that full-time salaried professionals should do the work—not voluntary organizations like ward committees. Ward committees cannot match the management skill and resources of an NGO. The ward committees, however, can assist in public motivation and overall supervision.
(2) Creating a favourable political environment. This requires consensus-building exercise with political leaders. Broad political support would open up opportunity for social workers and members of the general citizenry to actively participate in urban service delivery efforts.

(3) There needs to be a clear policy on public-private partnership. This will clearly delineate the rules of business, and the roles of the public and private sector. This will allow KCC to channel fund to support public-private partnership, and assume a more regulatory role. The private sector can do more than just primary collection of garbage. They can also contribute to maintain drainage system, street sweeping, sanitation promotion, and mosquito control.

(4) The ward committees should be made more active. These are purely voluntary community bodies. However, a small financial resource is required to hold campaigns and meetings. KCC should assist the ward committees in this regard, because the committees assist in better service delivery.

(5) Although public awareness was raised considerably through the motivational campaigns, the campaigns should be strengthened and continued. More interaction with citizens is required for motivation and participation.

In response to a query about advice to other cities in improving service delivery, the ward committee members underscored the need for facilitating agencies. They found the Khulna model of public-private partnership with the municipality as the public sector, NGOs/CBOs as the private sector, the ward committees as the citizen’s forum, and facilitating agencies assisting the whole process quite effective. They viewed the formation of ward committees and the bridging among KCC, NGOs/CBOs and citizens as the most significant contribution of the facilitating agencies. They felt that a facilitating agency is required to initiate the process of partnership building and nurturing it to maturity through motivational campaign and consensus building.

7.5.2 Service delivery improvement in Patuakhali

Response from the citizens: The survey in Patuakhali covered 30 households from areas under public-private partnership service and 30 households from areas without public-private partnership service. Information was collected through structured questionnaire interviews. The response on improvement in cleanliness due to the public-private partnership service
was outstanding. About 97% of the households confirmed that their neighbourhood became cleaner because of the public-private partnership service.

The number of complaints lodged and the response received also indicated an improvement in service delivery. About 43% of the households in the areas under public-private partnership service never had to make any complaint. The majority (43%) of the households made the complaint directly to the service agency. The next location of lodging complaint was the ward commissioner’s office (7%) followed by the ward committee (4%). Only 3% of the households complained to the municipality. The response to the complaints were mixed. About 56% of the households who lodged complaint were satisfied with the response they received. The rest 44% were not satisfied with the response.

In contrast, about 53% of the households in the areas without public-private partnership never bothered to lodge any complaint. The highest number of households (30%) complained at the ward commissioner’s office. Only 13% complained to the municipality. A few (3%) complained to their landlord. The response to the complaints from the areas without public-private partnership service was very much disappointing. Nearly 77% households mentioned that they were not satisfied with the response received. Only 23% households were satisfied with the response they received.

**Response from the public sector:** The management of Patuakhali municipality expressed hope that public-private partnership system of solid waste management may be expanded throughout the city. The chairman of the municipality mentioned that NGOs and the municipality must work together to improve service. Municipal staffs do not have the social mobilization skill. They are not able to motivate people. Therefore, the NGOs should carry out public awareness and motivation campaigns.

The chairman stressed that service improvement requires intervention from facilitating agencies. Proper study and planning is required for implementing any program successfully. The municipalities lack this capacity. Therefore, most of the programs are taken based on scanty data or simply intuitively. This often contributes to failure of the programs. Therefore, if a facilitating agency assists the municipality with planning and good data, then all the required logistics can be arranged prior to implementation of the program. The facilitating agency may
also help in advocating for a national target and strategy of solving the solid waste problem. This would contribute much to improve service quality.

The conservancy officer thought that the households in the wards under the public-private partnership service are enjoying a better quality of service. These areas are now much cleaner. The drains in the area are also free from clogging, as no garbage is thrown into the drains. However, there is still need for awareness and motivation campaign, as many households are reluctant to pay the service charge.

The conservancy officer mentioned that his workload increased because of the public-private partnership system. He has to supervise the NGO activities as well as municipal activities. The situation was further complicated by the sudden withdrawal of support by the facilitating agency (Danida). Now the conservancy section has to maintain the tricycle vans operated by the NGOs. Besides they have to keep account of the service charge collection and expenditure also. These were previously done by the facilitating agency. Their sudden withdrawal has put a lot of additional burden on the conservancy section. A planned withdrawal of facilitating agency is needed to keep up the service delivery quality.

A majority of the field level staff of the municipality also mentioned that their workload increased due to the public-private partnership service. Five out of the six workers interviewed responded that their workload increased. Despite the increase in workload, five out of six workers claimed that they would like to see more public-private partnership.

When asked about the change in the type of work, two workers mentioned there was no change. However, the volume of waste to be handled at the secondary point increased. The other responses included more accountability, increased scope of work, and application of new skill. Only one worker mentioned that his workload decreased because the number of garbage collection bins decreased, as garbage is collected from each household and brought to a secondary point.

All six fieldworkers interviewed said that they have contact with the citizens. Three workers mentioned that their main contact occurs when people make complaints to them. The rest mentioned that they come in contact with people during supervision of the areas.

*Response from the facilitating agency:* According to the facilitating agency (Danida) the public-private partnership improved service delivery. The areas have become markedly clean.
Awareness of citizens has been greatly enhanced. They do not throw garbage into drains or by the roadside. The difference between areas with public-private partnership service and without this service is quite clear. However, there is one serious drawback in Patuakhali. It is the lack of a landfill site. Solid waste management is not complete without a final disposal site. The citizens are deprived of service improvement due to this deficiency.

Response from the private sector: The NGO officials mentioned that the public-private partnership has really improved the environment of the neighbourhoods. This has been possible because of participation and support from the people and the municipality. People have become much more aware about civic responsibilities as a result of the public awareness and motivation campaign.

The municipality is also giving good support to the NGOs. However, achieving good partnership is not easy. For example, some disagreement with the municipality emerged during selection of a local NGO for providing primary collection service. The dispute was resolved through discussion.

Another unexpected problem cropped up when another donor agency suddenly started solid waste management activity. It appeared that a duplication of effort was about to occur. Again the matter was discussed with the municipality. The responsibility of coordination was later handed over to the municipality to avoid duplication. Therefore, maintaining service quality involves close relationship with the municipality.

The primary NGO closely monitored the pilot public-private partnership to improve service quality. Complaints from the households were carefully listened then necessary steps were taken to redress the problems. The team of local NGO staff was trained adequately to uphold service quality.

The main challenge against service quality remains motivating people to participate in the door-to-door garbage collection program and pay the service charge. Many people did not want to pay the service charge in the beginning. Later they were convinced by motivation. But motivation must continue because many tenants move out and new tenants come in. They must be made aware and motivated to join the program. So it is a continual effort. This is a part of good service delivery.
All field level NGO/CBO workers interviewed responded that they have regular contact with the community. They stated that they have developed a cordial relationship with the citizens. This close contact between the provider and receiver of service promotes improvement in service delivery, as citizens can easily make complaint against poor performance. The NGO/CBO workers mentioned that they more often commended by the citizens for their good performance.

The field workers mentioned that for further improvement in service delivery, they need more input from the municipality. Street sweeping has to be improved to give the neighbourhoods a cleaner look. Municipality workers are responsible for street sweeping. Their performance and monitoring should be improved. There is a general need for more investment. Scaling up the public-private partnership throughout the city would require more investment in equipment (primary and secondary collection vehicles), materials (buckets for in-house waste storage) and staff.

Response from the elected representatives: The elected ward commissioners confirmed that service quality improved due to the introduction of the public-private partnership system. They felt that they were better able to serve their constituents through this new arrangement. They mentioned that their workload increased as they carry out a number of additional tasks such as monitoring the activities of the private sector, responding to complaints by the citizens and coordinating the work with the municipality. However, they were happy to carry the extra load because the citizens are enjoying better service. The areas have become cleaner than before and there is less clogging of drains. The better service also improves their popularity with the citizens. The ward commissioners of areas not presently under the public-private partnership service coverage also welcomed the service as early as possible. The people of these areas feel that they are deprived of the better quality service, and the ward commissioners are very much aware of this demand from their constituents.

Response from the ward committee members: The ward committee members also acknowledged the improvement in service due to the public-private partnership system. They recalled that before people used to throw their garbage into ditches or on the roads near their households. Now they are storing the garbage at home in the buckets, and handing over to the garbage collection van. Even the domestic servants are now aware of this practice. As a
result the areas have become much cleaner. There is no more foul smell or ghastly sights of garbage strewn on the roads. But people in the areas where there is no public-private partnership system are still throwing garbage into drains and roads.

The ward committee members thought that the service could be further improved by constructing more secondary bins at strategic points in the city. The secondary bins are required to expand the system citywide. The public awareness and motivation activities should continue, especially in the new areas as the public-private partnership system is gradually being introduced there. In addition, buckets should be distributed to households in the new areas. All these require increased funding in the solid waste management sector.

7.5.3 Service delivery improvement in Sylhet

Response from the citizens: The citizen survey in Sylhet covered 30 randomly selected households from three wards with public-private partnership service as intervention households. An additional randomly selected 30 households from three wards without the public-private partnership service were surveyed as control households.

Twenty-three households (77%) of the intervention area responded that they subscribe to the door-to-door garbage collection service. Five out of the seven remaining households (23%) mentioned that they have a dustbin near their house, so they do not need to participate in the door-to-door garbage collection; two households said that at present the door-to-door garbage collection service is not available in their area, so they could not participate. The responses make it clear that the majority of the households do value the improvement in service brought by the public-private partnership system.

The above fact is more evident from the perception of the households on cleanliness improvement. Of those households who subscribe to the door-to-door garbage collection service, about 92% mentioned that they think the area became cleaner due to this service. There was only one household that claimed not to see any visible improvement in cleanliness. The overwhelming positive perception of the outcome of public-private partnership indicates people’s satisfaction with service improvement.

Only nine households from the intervention areas mentioned that they lodged complaint. Out of these, eight households complained directly to the service agency or the facilitating agency. Only one household complained to the elected ward commissioner. Six households
said they were satisfied with the service agency's attempt to address their problems, while three households were not quite happy with the way the service agency responded.

In contrast, the households of the control areas (with no public-private partnership service) made more complaints. Of the 30 households surveyed, 17 households (57%) mentioned that they had made complaints because of poor civic service, particularly about cleanliness. The highest number of households (10) made the complaint not to SCC, but to the elected representative. Only half of this number (5 households) made their complaint to SCC. All these households stated that they not satisfied with the response they received from SCC or the ward commissioner.

It is clear that citizens have a more direct relationship with the service agency where public-private partnership is in operation. They are able to lodge their complaint directly to the service agency. The service agency is also more responsive because they receive direct service charge from the citizens. Therefore, an open, short route of people to service provider relationship is present in the case of public-private partnership system. In public agency service delivery system, people resort to making their complaints to the elected representative because the public agency is not directly accountable to the citizens. Even then the people's voice is not heard by the public agency.

Response from the public sector: The SCC management officials were happy with their experience of public-private partnership for solid waste management. They were convinced about gaining improvement in service delivery by working in partnership with the private sector. They believe that the citizens are enjoying a better level of service through the public-private partnership system. Consequently, SCC is now more open to the public-private partnership arrangement, and wishes to broaden its scope by assisting potential partners. For example, they have provided a small fund to an NGO to start a hospital waste management program under a public-private partnership arrangement. They are also committed to provide administrative support to the private sector for such endeavours.

The SCC officials mentioned that their workload actually increased due the public-private partnership system. This is because a lot more waste is now being collected and brought to the secondary dustbins. SCC is responsible for the secondary transport and final disposal of this waste. The number of trips to the dumping ground by SCC trucks has increased due to
the additional volume of waste. The increase in work volume has also resulted in increase of labour cost for SCC. It was remarkable to note that SCC officials were very supportive of the public-private partnership arrangement despite such increase in workload and cost for SCC.

The field-level staff echoed the remarks made by the SCC management officials. All three workers who work in the wards under the public-private partnership system mentioned that their workload increased. This is because of the increase in the volume of waste at the secondary points where the private operators deposit the waste they collect from households.

It was interesting to note that the public-private partnership seems to have improved the relationship between the SCC workers and citizens. The workers mentioned they now have regular contact with the citizens. They take part in the public awareness building exercises, discuss problems with the citizens, and participate in meetings with local businesspeople. The citizens and ward commissioners bring forward their problems to the SCC and private sector agencies. Overall, the SCC field staff indicated more interaction with the citizens through the public-private partnership, which an important step towards accountability and responsiveness in service delivery.

**Response from the facilitating agencies:** The facilitating agency Sylhet Partnership Company (SPC) mentioned that service level improved greatly through the public-private partnership system. The citizens are enjoying cleaner environment without garbage piles on roads. The drains are flowing freely in absence of clogging by garbage. This is due to the introduction of door-to-door garbage collection service by public-private partnership. People are now so confident about this service quality that in some areas they have destroyed all the neighbourhood level dustbins. In these areas all the households have subscribed to the door-to-door garbage collection service.

However, there are still some elements that are preventing service quality improvement. Lack of accountability and transparency at SCC is a challenge. SCC workers are not properly supervised or held accountable for their poor performance. Since the private sector is working in partnership with SCC, this deficiency of SCC hampers the entire work. For example, if SCC workers do not timely remove garbage from the secondary points, the place remains full of garbage. The blame goes partly to the private sector. Therefore, there is room for improving service through more coordination between the public and private agencies.
Response from the private sector: The private sector officials argued that the service quality improved due to public-private partnership. The roads are cleaner. The drains are flowing freely as no garbage is thrown inside. Foul smell has disappeared. People are now much more aware. All these were accomplished as a result of the public and private sector working together.

The field-level workers mentioned that they have regular contact with their clients—the citizens. The field supervisors sometimes visit the households and ask if they are satisfied with the service. If there is any complaint they try to address those. Besides the garbage collectors meet the households daily during collection time. They mentioned that they have built up a good rapport with the households. The private sector staffs also get a chance to meet and discuss problems with the households during the monthly service charge collection rounds. The close contact means that there is ample opportunity for the citizens to raise complaints to the service providers. This forces the private sector to be more responsive to the demands to be sustainable.

The NGO officials mentioned a few problems that hamper service quality. Finding a suitable place for secondary dumping is difficult, but a door-to-door garbage collection service cannot be initiated without adequate number of secondary dustbin locations. Secondly, there is a coordination problem at the secondary dumping place. SCC trucks do not timely remove the garbage from the secondary dustbins. As a result garbage accumulates at the secondary point, and begins to stink and create nuisance. The private sector officials suggested that SCC should increase its vehicle fleet and recruit more staff to address the growing amount of solid waste. They also recommended more consultation among SCC, private agencies and ward commissioner to iron out the coordination problems and boost the public awareness campaign. For further improving participation of the private sector, they recommended capacity building assistance to the private sector through access to funds, technical advice and management knowledge.

Response from the elected representatives: The elected representatives of the wards with public-private partnership system expressed their satisfaction with the service improvement. They mentioned that their constituents are receiving a better level of service through the joint effort of the public and the private sector. They stated that solid waste management has
become an easier task with the participation of the private sector. The areas have witnessed a marked improvement in cleanliness.

The response about the effect of public-private partnership on the workload of ward commissioners was mixed. Some ward commissioners claimed that the work of the ward commissioners has increased with introduction of the public-private partnership service. Now they have to maintain linkage with and monitor a number of NGOs/CBOs. In addition, they have to maintain contact with the conservancy section of SCC. The ward commissioner’s assistance is sought for arranging adequate number of secondary dumping points. All these add to the workload of a ward commissioner. However, they mentioned that for the sake of maintaining service quality to the citizens the ward commissioners should earnestly bear this added responsibility. Other commissioners mentioned that their workload was reduced due to the public-private partnership. This is because the private agencies are directly accountable to the citizens, and they are careful not to earn dissatisfaction of the citizens to protect their sustainability.

The ward commissioners of the wards without public-private partnership service mentioned that solid waste disposal is a great problem in their areas. Awareness among people is low. In some wards there are no dustbins. So the people throw garbage everywhere. Even some ravines are choking with garbage.

One of the ward commissioners from these wards lamented that SCC assigned only two workers to his ward. This is absolutely inadequate. This indicates that SCC’s capacity in terms of manpower and fund is seriously lacking. SCC does not have enough trucks to properly collect all the waste. Faced with these limitations, SCC remains unresponsive to the pleading of the ward commissioners for better service. Another ward commissioner mentioned that there is no solid waste management service in his ward at all. SCC trucks cannot come to his ward because of a narrow bridge. So the citizens do not get any kind of service and resort to throwing garbage anywhere they can.

It is evident from the responses of the ward commissioners that the public-private partnership system brought great improvement in service delivery. SCC’s capacity in delivering service is so low that many parts of the city receive little or no solid waste management service. Against this situation, the private sector brought in door-to-door service.
The difference in service level between the public-private partnership wards and regular wards is striking. There has been a considerable improvement in service delivery through public-private partnership.

7.5.4 Service delivery improvement in Dhaka

Response from the citizens:

The household survey in Dhaka surveyed 32 households comprising of rich, middle and low-income groups. It was found that 24 households (75%) subscribe to the door-to-door garbage collection service offered by the NGOs/CBOs. The remaining one-fourth (25%) of the households mentioned that their household members take the garbage to the nearest dustbin. This practice cuts across the socio-economic class. The self-service households included rich, middle and poor income groups.

Those who subscribe to the door-to-door garbage collection service identified various motivation agents who inspired them to join. The highest number (67%) said that neighbours or other community members motivated them. A significant number (21%) were self-motivated. A small portion (12%) of the households mentioned that they were motivated by the NGOs or CBOs. This may indicate a general lack of relationship between NGOs/CBOs and the citizens in Dhaka.

The households that do not take the door-to-door garbage collection service a number of reasons for their reluctance. About 38% households mentioned that they once subscribed to NGO/CBO programs for primary collection, but later discontinued because the service quality was poor. An equal number of households 38% mentioned that their area is not served by any NGO/CBO. The other reasons were unwillingness to pay service charge (12%) and presence of dustbin nearby (12%). This shows that poor quality of service or unavailability of service accounts for 76% of households that did not join the door-to-door garbage collection service. Service charge or presence of dustbins near houses is not the main reason. Service quality and service availability, therefore, are necessary to scale up and sustain private sector participation in solid waste management.

More than half of the households (55%) mentioned that they faced problems with solid waste management, but never made any complaints. This is probably due to a combination of not having strong linkage with DCC or NGO staff, not having any platform for discussion, and
being frustrated by non-responsive behaviour of the service providers. About a third (32%) of
the households made complaints to the NGOs/CBOs. Only 7% approached the ward
commissioner with their problem, and 6% resorted to turn to the social leaders. The response
to the complaints were very much dismal. Three-quarters (75%) of the households mentioned
that received either no response or poor response in redressing their problems.
Understandably, about 60% of the households mentioned that they are not satisfied with the
general service quality of the solid waste management.

Response from the public sector: DCC management mentioned that the public-private
partnership system holds good potential for Dhaka city. It may improve quality and scope of
service by bringing positive changes in both public and private agencies. There is a certain
degree of rigidity at DCC as it is a formal government organization. There is not much room
for learning or experimenting at DCC. The private sector can inspire DCC with a new
management style and new ideas. This would build up DCC’s capacity and change its
mindset regarding innovative approaches. On the other hand, DCC could also positively
influence the private sector in the arena of protecting public rights and interests. The private
sector is often seen to be more interested in serving the affluent areas, and avoiding low-
income areas and slums. DCC may exert influence on the private sector to extend their
service to slums. DCC has a slum development section and has gained good experience in
providing services there. DCC could assist the private sector in providing service to the slum
dwellers and setting a cost sharing mechanism.

The transition towards public-private partnership should be handled carefully. There is
some fear among the field level staff that the private sector is encroaching into their service
area and scheming to rob them of livelihood. Suddenly handing over responsibility to the
private sector and laying off thousands of DCC workers would be politically impossible.
Therefore, a careful balance needs to be struck where both DCC and private agencies benefit
and the citizens enjoy better service. DCC or municipalities in Bangladesh do not maintain
accounts in a manner that can show the inefficiencies of the organizations. It is important to
demonstrate what efficiency gains would public-private partnership bring by analysing
financial. This would convince the public sector why public-private partnership is an attractive
proposition.
The field level staff gave more practical advice. They were quite convinced that a public-private partnership system might be gradually expanded to cover the whole city of Dhaka. However, they cautioned that the public-private partnership should be through formal agreement between DCC and the private sector with clearly defined conditions. Secondly, coordination between DCC and the private sector should start at the grass roots level. At present the coordination efforts are top-down. All the planning is done at the top management level at DCC without consulting the field staff and without realizing the problems at the ground level. This needs to change.

The response from the field level staff of DCC was not conclusive regarding whether the private sector participation in providing door-to-door garbage collection. Half of the respondents replied that their work decreased, as the areas are now cleaner. The other half thought that their work increased, as the amount of waste for secondary collection increased due to private sector participation. However, all the respondents agreed that the private sector participation has streamlined their work. Before they were sometimes required to collect waste from households, and there were garbage all over roads. Now the garbage is collected and brought to one place by the private sector. In that sense the responsibility of DCC workers is lighter now. There was not any vehement opposition to increased public-private partnership either. Only one field level worker mentioned some apprehension about job security. The field level staffs seemed to be conscious about the particular niche of work by the public and private sector, and were not overly concerned about their job security. They also seemed to notice the benefits of participation.

Response from the private sector: Representatives of NGOs, CBOs and private firms were interviewed. The officials of the private sector agencies mentioned that public-private partnership may greatly improve environmental condition of the city. According to them, there are many areas where DCC and the private sector may cooperate. The private sector agencies could continue to offer their door-to-door garbage collection service. DCC and the private sector should jointly supervise and monitor to make the entire range of solid waste management effective. In addition, there should be clearly defined roles and responsibilities for each sector. The main challenge may remain in motivating DCC to support public-private partnership. The private firm contracted by DCC to provide solid waste management service
mentioned that DCC does not give required support to them. As a private organization they do not have authority to enforce legal measure against littering. DCC has authority to take steps against illegal practices, but they never assist the private agencies in this regard. A formal arrangement of public-private partnership would hopefully end this kind of non-cooperation. In essence, the private sector expressed the need for administrative, logistic and financial assistance from the public sector through public-private partnership.

The field-level workers of private agencies mentioned that they would like to see more collaboration between DCC workers and themselves. Five out of the six workers interviewed stated that they have either no contact or little contact with their DCC counterparts. This is partly due to difference in work timing. NGO workers work in daytime, but DCC workers work at night time. So there is very little contact or opportunity to collaborate or jointly solve any problem. On the other hand, all of the private sector workers mentioned that they have frequent contact with the households. DCC workers may lack such close contact with the citizens. However, in absence of any platform for discussion, DCC and private sector workers have no opportunity to meet and discuss any issues to improve their service quality.

Response from the elected representatives: The ward commissioners agreed that participation of the private sector has improved the solid waste management service. The areas where the private agencies provide primary collection are much cleaner. However, the ward commissioners cautioned that the private sector agencies should be carefully selected based on their capacity and experience. There present laissez faire arrangement should be changed into a proper partnership between DCC and the private sector. In that case there would be accountability and performance monitoring. This would improve service quality.

The ward commissioners expressed wary comments about DCC's experimentation with privatisation of solid waste management. They were against full privatisation throughout the city. They were doubtful if the private sector would be interested to take full responsibility of solid waste management in difficult areas such as the old town. Their private sector's performance in the existing privatised wards should be evaluated properly. At any rate, it would not be wise for DCC to completely withdraw their services. This is necessary because if the private agency fails to provide service for some reason, then the DCC workers may be summoned to handle the situation. DCC should always have a backup. Secondly, the co-
existence of DCC and the private sector may set in a healthy competition for improving performance. It is also politically not feasible to layoff all the DCC workers.

In conclusion the ward commissioners mentioned that a partnership approach is much more acceptable politically and institutionally. There would be no problem in expanding the primary collection by the private sector and secondary transport and final disposal by DCC. This arrangement may be made more formal for service improvement. DCC or any facilitating agency should assist with logistic and financial assistance to achieve wider partnership between DCC and the private sector.

7.6 Discussion and Summary

This chapter explored the aspect of effectiveness of partnership. The research question queried about the “form of partnership” present in four cities to measure their effectiveness. The four cities were Khulna, Patuakhali, Sylhet and Dhaka with decreasing degrees of facilitation for public-private partnership. Four parameters were used to measure the effectiveness of partnership: (1) mutual recognition by the public and private sector, (2) existence of platform for discussion between the public and private sector, (3) the extent of collaboration between the public and private sector, and (4) the level of service improvement due to public-private partnership. A summary of the findings is presented below.

Mutual recognition: This indicator parameter was evaluated by two variables ‘type of recognition’ and ‘process of recognition’. Data were collected on the views regarding formal instrument of recognition, sense of mutual contribution, and existence of incentives.

In Khulna, Patuakhali and Sylhet there was formal instrument of partnership between the public and the private sector in the form of memorandum of understanding or agreement. These instruments were initiated by the facilitating agencies and were signed between the facilitating agencies and the public sector. Nevertheless, these documents introduced the public-private partnership concept formally to the public sector. In all three cities, the public sector agency (city corporation or municipality) officials, especially the top management, placed a great importance on the formal instrument. They regarded this as a significant step in building relationship with the private sector. Similarly the facilitating agencies were also ardent in expressing the instruments as important in providing an institutional framework for public-private partnership. However, the operational level respondents (public and private
fieldworkers, elected representatives, and community members) mostly termed the instruments as ceremonial documents having little relevance to actual work.

In Dhaka there is a general lack of formal agreement between DCC and private agencies. DCC officials claimed that sometimes NGOs/CBOs take verbal permission from ward commissioners or even the mayor, but there is no formal document to fortify the relationship between the public and private agencies. The absence of such document was attributed to apathy among DCC officials rather than any real barrier. However, recently DCC has contracted out solid waste management of two areas of Dhaka city to private firms.

The private sector's experience with formal relationship with DCC was mixed. The NGO having contract with DCC mentioned that the document provided no special privilege. They faced stiff opposition from the DCC fieldworkers and the ward commissioner in spite of having a formal understanding with the top management of DCC. The private firm that won the contract from DCC to provide solid waste management service also mentioned that they have to work beyond the conditions of the contract. They receive no cooperation from DCC as they have completely withdrawn their involvement from these areas. There is no provision of building public awareness in the contract. There are many issues that the private firm is unable to address such as enforcing DCC rules. Therefore, partnership and collaboration between the public and private agencies have distinct advantages over complete withdrawal of the public sector under privatisation. The NGOs/CBOs working without any formal contract felt that they are in a legal vacuum. They are under a constant threat because they do not have any legal authority to collect service charge from citizens for their primary collection service. The ward commissioners expressed dislike about the conditions of the privatisation contract. It left the ward commissioners out of the loop for monitoring and ensuring accountability as the private firms report directly to DCC headquarters.

In conclusion, it may be stated that that the cities with active involvement of facilitating agencies signed formal documents to promote public-private partnership. Actually the facilitating agencies promoted these tools, partly to formalize their roles, but more importantly to pave the way for wider public-private partnership. Although these instruments had little effect in field level work, they set an institutional environment of partnership between the public and private sector. Dhaka city without any facilitating agency did not have any formal
linkage with the private sector for a long time. They finally started experimenting with privatisation with complete withdrawal of solid waste management activities by DCC in selected areas. In relating this with international experience, it is found that only a few developing countries have successfully moved toward privatisation because the public sector is inexperienced in contract management (Cointreau-Levine, 2000). The contracts are often inadequate in technical specifications, performance monitoring, and penalties for poor performance. In many instances the public sector monopolies were replaced by private sector monopolies with no gain in efficiency. This underscored the need for guidance by specialized agencies in realizing effective public-private partnership. Plummer (2002) confirmed this by citing examples of private sector participation in Africa. In Lesotho and Swaziland it was found that technical assistance to the public sector was essential to enable them to move towards public-private partnership, as abruptly contracting out responsibilities to the private sector was not found suitable. Harper (2000) also mentioned that although problems of inadequate public service presents an opportunity for the public and private sector to work together, they often do not on their own form partnership agreements. This is mainly because the public and the private sector are habituated to work separately and the concept of partnership is quite foreign to them. Therefore, a third party is often responsible to bring the two sectors together to form public-private partnership. This study confirms the above findings. It was found that facilitating agencies urged the establishment of public-private partnership in Khulna, Patuakhali and Sylhet. In Dhaka, without assistance from any facilitating agency, DCC belatedly started a limited privatisation scheme, but with gaps in adequate performance monitoring and accountability.

Platform for discussion: This indicator parameter was evaluated by three variables: (1) presence of platform, (2) process of attainment, and (3) function of platform. Data were collected on the existence, function and usefulness of platforms for discussion.

The strongest effort to create platforms of discussion was in Khulna. The facilitating agencies exerted great effort to convene platforms at both central and local level. The objective was to improve relationship among the public sector, private sector, elected representatives and citizens. The central level platform could not continue after the cessation of the support from facilitating agencies. However, the ward level discussions platforms
continued addressing local problems. In Patuakhali also the facilitating agency helped in the formation of ward based platforms for discussion. The platforms are in existence in the intervention wards only. These platforms address local level problems. A declining trend in functioning of these forums was reported. In Sylhet no broad based platform for discussion was found. The facilitating agency cum service agency formed a steering committee. The meeting of this committee is the only such platform. In Dhaka, there is no platform for discussion at either central or local level. A few agencies attempted to create such platforms but the effort was futile.

In conclusion it may be said that creation and functioning of the platforms of discussion were dependent on the input of the facilitating agencies. The platforms were strongest where the facilitation was strongest. It appeared from the interviews that such platform is appealing to public sector, private sector, elected representatives and citizens. But the formation and nurturing requires external help from facilitating agencies.

The above is confirmed by two examples from India. In Cochin, the municipality attempted to build partnership with the community. But the reputation of the municipality was that of a dysfunctional organization which frequently made empty promises. This poor image of municipality was an obstacle in building relationship with the community. Finally the municipality took assistance from a facilitating agency, an NGO. The facilitating agency organized platforms for discussion between the municipality and the community. With time, trust and familiarity the facilitating agency created a bridge between the community and the municipality that enabled further discussion. In Visakhapatnam, neighbourhood committees were set up as the interface between the citizens and the municipality for a slum improvement project. But a review later found the large sections of the population had no connection with their committee and were unaware of its activities (Plummer, 2000). It shows that simply forming citizens committees does not guarantee effective connection between the public sector and citizens, which is important for public-private partnership for solid waste management in developing countries. Keita (2003) also supported this view in his article on the experience of "municipal platform" in Bamako, Mali. The municipal platform was established for consultation between public, private and community representatives. But the author recommended that a facilitating agency could be very helpful in this process. These
examples from South Asia and Africa show that the public sector may require assistance from a facilitating agency in both setting up the platforms of discussion and nurturing those to maturity.

**Collaboration:** This indicator parameter was evaluated by four variables: (1) work plan adjustment, (2) initiation and continuation process, (3) perception of mutual benefit by the public sector, and (4) perception of mutual benefit by the private sector. Probing queries included views on the best distribution of responsibilities between the public and private sector, the effect of partnership on workload, and satisfaction or dissatisfaction about partnership.

In Khulna, KCC adjusted their work plan to accommodate effective participation of the private sector. They increased their secondary collection capacity (procured more trucks) and synchronized secondary collection time to match with NGO/CBO operations. In Patuakhali, the respondents were generally happy with the work distribution and collaboration between the public and the private sector. The main obstacle there is a serious deficiency of the public sector in not having any landfill site. In Sylhet, there is limited attempt in work plan adjustment by SCC. The main obstacle is lack of secondary collection vehicles. Increasing collaboration with the private sector may not be possible without increasing the SCC collection fleet. In Dhaka, the impediment is not lack of vehicles, but a lack of planning. The primary and secondary collection is not synchronized. This mismatch continues, as there is no platform for effective dialogue between the public and the private sector. In all the above cities the public and private sector expressed a yearning for better collaboration, especially the private sector demanded joint supervision and monitoring of both primary and secondary collection.

In general, there was an appreciation of mutual benefit by both public and private sector respondents. There were only a few complaints by the two sectors against each other, but the complaints were not against partnership, rather they were about lack of capacity for full utilization of partnership benefits.

The facilitating agencies were viewed as the main driving force behind forging partnership between the public and the private sector in Khulna and Patuakhali, and to a lesser degree in Sylhet. There was some criticism against the facilitating agencies. These were related to premature departure of the facilitating agencies before the partnership could fully mature, lack
of capacity of the facilitating agencies to create enabling policy to flourish partnership, and lack of capacity to scale up partnership from pilot level to citywide practice.

International experience supports the above findings. Post and Baud (2004) explained that the public sector often do not perceive the private sector as potential partners and vice versa. They cited the example from Kenya where a lack of legal framework makes the public and private reluctant to engage in partnership. In this case the trust necessary for collaboration across the public-private divide was missing. Respondents of this study, particularly in Dhaka, expressed similar feelings. Building mutual respect has been underscored by leading partnership advocates. For example, BPD (2002) mentions “for partners that have not worked in partnership or with each other previously, the building of mutual respect will be a necessary first step.” BPD (2002) recommends that a third party facilitating agency may guide the building of mutual respect and benefit. This has been accomplished to a large degree in Khulna, and to some extent in Patuakhali and Sylhet.

Improvement in service delivery: This indicator parameter was evaluated by four variables: (1) neighbourhood cleanliness, (2) perception of citizens, (3) perception of public staff, and (4) perception of private staff. Direct observation was used in judging neighbourhood cleanliness. Household survey was used to record perception of citizens. Interviews were used to record perceptions of public and private sector staff.

The neighbourhoods became markedly cleaner due to public-private partnership. This was confirmed both by direct observation and response from citizens and other respondents. Over 90% of the households surveyed confirmed that their neighbourhoods were cleaner due to the private sector’s participation in primary collection. Another measure of service improvement was the response to complaints made by households. In Khulna, nearly 90% of the complaints were addressed satisfactorily. This was followed by Sylhet and Patuakhali where the figures were 66% and 56% respectively. In contrast, in 75% of the cases no response was received in Dhaka.

The perception of the public sector staff about public-private partnership was positive in all four cities. It was remarkable to note that there was not much opposition against private sector participation either at the management or at the fieldworker level in any of the cities. This indicates receptiveness by the public sector and a good potential for promoting public-
private partnership. The private sector expressed confidence in Khulna and Patuakhali – the cities with better facilitation. In Sylhet and Dhaka, the two cities without adequate facilitation, the private sector agencies suffered from lack of access to the public sector and a general lack of coordination with between the public and the private sector.

The service level improvement is linked with accountability. The World Development Report 2004 presented this in detail. According to this model there are two routes of accountability. In the traditional arrangement, the public sector provides service, but it is not directly accountable to the citizens. The citizens complain against poor service through their elected representatives or policymakers. This is the long route of accountability that is often not very effective. On the other hand, the citizens also buy goods and service from the private sector. In this case the service provider is directly accountable to the citizens through the 'short route of accountability,' because poor service immediately results in loss of business. The public-private partnership model provides a marriage of the two accountability routes. When the public and private sector work together for a common cause such as solid waste management, both long and short route of accountability are in force. Therefore, the citizens enjoy better response from the dual service providers. This is schematically shown in figure 7.1. This study confirms the accountability model in terms of responsiveness. It was found that the responsiveness (or accountability) was much better in cities under PPP than in Dhaka where effective partnership is lacking.

Fig 7.1: PPP and routes of accountability
Plummer (2002) in discussing partnerships emphasized that the objective of reform for partnership should always be to improve service delivery. She also mentioned that many municipalities fail to deliver services efficiently. The causes are a lack of competition, bureaucratic process, a lack of capacity and political interference. These elements lead to chronic inefficiency in service delivery by the public sector. Public-private partnership offers a remedy for these elements by bringing in the private sector. However, partnerships must be executed with care and skill. World Development Report 2004 warns that attempt in handing over water supply responsibility to the private sector in Argentina led riots in the streets and finally the decision had to be reversed. Cointreau-Levine (2000) advised promotion of contestability to enhance competition in the developing countries in the area of solid waste management. She recommended that both public and private sector should be active in delivering service, and that the public sector should not completely privatise operations. By having some collection vehicles and labour available, the public sector's contestability is ensured by its ability to step to take over operations from the private sector if there are failures. This encourages the private sector to perform optimally. On the other hand, public sector workers also realize that private sector participation could be expanded. So they are motivated to work harder. Contestability creates a competitive tension that leads both the private and public sector to improve efficiency. This study documented that in Khulna, Patuakhali and Sylhet both public and private sector are working along side. Contestability is very much in force in these cities. Dhaka, in contrast, has attempted full privatisation of primary and secondary solid waste collection in two zones of the city on experimental basis. It was interesting to note that the elected representative of one such zone specifically mentioned the necessity for 'contestability'. Post and Baud (2004) mentioned a serious limitation in private sector participation in solid waste management. Many such initiatives are one-time or small-scale activities. A major force preventing up scaling of the initiatives is the lack of coordination and partnership with the public sector. This study has shown, at least for Khulna, that scaling up is possible to some degree if competent facilitating agencies provide input for a sufficient period.

In concluding this chapter, the major findings are presented in table 7.1.
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<td>Moderate facilitation</td>
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<td>Low facilitation</td>
<td>Formal instrument initiated by facilitating agency</td>
<td>Formal instrument initiated by facilitating agency</td>
<td>Formal instrument initiated by facilitating agency</td>
<td>Formal instrument initiated by the public sector.</td>
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<tr>
<td>No facilitation</td>
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<td>Formally initiated by the private sector. (PPP)</td>
<td>Formally initiated by the private sector. (PPP)</td>
<td>Formally initiated by the private sector. (PPP)</td>
<td>Formally initiated by the private sector. (PPP)</td>
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<td>Presence of platform</td>
<td>Present</td>
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<td>Absent</td>
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<tr>
<td>Process of recognition</td>
<td>Facilitating agency assisted</td>
<td>Facilitating agency assisted</td>
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<td>Platform for discussion</td>
<td>Local level problems are addressed</td>
<td>Local level problems are addressed</td>
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<tr>
<td>Work plan adjustment</td>
<td>KCC adjusted secondary collection time and capacity</td>
<td>Municipality staff are assisting the NGO operations</td>
<td>Limited work plan adjustment by SCC, as many NGOs do not have linkage.</td>
<td>Work plan not synchronized.</td>
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<tr>
<td>Initiation &amp; continuation</td>
<td>Facilitating agency assisted the collaborative process</td>
<td>Facilitating agency assisted the collaborative process</td>
<td>One service agency cum facilitating agency assisted the collaborative process.</td>
<td>Limited effort by DCC to introduce collaboration with NGOs/CBOs. DCC also attempting to introduce full privatisation of primary and secondary collection without any public sector participation.</td>
</tr>
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<td></td>
<td>Wide coverage attained.</td>
<td>Limited coverage attained.</td>
<td>Limited coverage attained.</td>
<td>Limited coverage attained.</td>
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<tr>
<td>Collaboration</td>
<td>Private sector viewed as valuable partner</td>
<td>Private sector viewed as valuable partner</td>
<td>Private sector viewed as valuable partner</td>
<td>Private sector viewed as contributing positively. Assistance sought in primary collection and public awareness building.</td>
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<td>Perception of public sector</td>
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Table 7.1. Key findings on effectiveness of partnership
<table>
<thead>
<tr>
<th>Perception of private sector</th>
<th>Khulna</th>
<th>Patuakhali</th>
<th>Sylhet</th>
<th>Dhaka</th>
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<tbody>
<tr>
<td></td>
<td>High facilitation</td>
<td>Moderate facilitation</td>
<td>Low facilitation</td>
<td>No facilitation</td>
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<td></td>
<td>KCC viewed as the leading agency and partner. More support from KCC sought.</td>
<td>Municipality viewed as a partner, but with limited capacity to support the private sector.</td>
<td>SCC viewed as a partner. More collaboration in monitoring in broadening private sector participation sought.</td>
<td>DCC viewed as detached from the demands of citizens and the private sector. Closer relationship with DCC sought.</td>
</tr>
</tbody>
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<tr>
<th>Improvement in service delivery</th>
<th>Cleanliness</th>
<th>Perception of citizens</th>
<th>Perception of public sector</th>
<th>Perception of private sector</th>
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<td>Improved</td>
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<td>Service</td>
<td>Supportive of PPP</td>
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<td>partly</td>
<td>Improved</td>
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<td>improved</td>
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<tr>
<td></td>
<td>Confident</td>
<td>Confident</td>
<td>Lack of coordination with SCC.</td>
<td>Little or no contact with DCC.</td>
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<td>about PPP.</td>
<td>about PPP.</td>
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Chapter 8

8 Conclusion and Recommendations

8.1 Introduction

This study examined the delivery of SWM services through PPP and the role of facilitating agencies in building the public-private partnerships. SWM services in many developing countries have become a vexing problem due to rapid urbanization and resource constraints of the public sector to respond to the rising demand for service. Partnership between the public and the private sector is a promising mechanism under these conditions. But achieving PPP, particularly in view of the institutional capacity limitations in developing countries, presents its own set of challenges. This study investigated the experience of facilitating agencies in Bangladesh in overcoming the challenges of forging PPPs for SWM services.

The role of facilitating agencies was a key area of this research. Organisations that assist the public and private sector agencies to form alliance were considered facilitating agencies. Facilitating agencies are independent bodies having no direct interest in providing services themselves. They provide intervention for a limited period and for demonstration purpose only with the main goal of enabling the public and private sector agencies to work together in delivering service. This study found international organisations, donor agencies, NGOs and even a specialised not-for-profit company in the role of facilitating agencies promoting PPP for better SWM service delivery.

The hypothesis of the study was "the role of a facilitating agency is necessary for sustainable partnership of public and private sector in providing solid waste management services in Bangladesh." The primary research question based on this hypothesis was "why the role of a facilitating agency is necessary for sustainable partnership of private and public sector in delivering solid waste management services in Bangladesh?" The primary research question was probed through a set of secondary research questions that were grouped into three relevant categories: (1) necessity of a facilitating agency in promoting PPP, (2) the role of a facilitating agency in sustainability of PPP, and (3) the role of a facilitating agency in the effectiveness of PPP. In essence, the study explored what were the contributions of the facilitating agencies that enabled the public and private agencies to achieve partnership. The
study also examined what influence the facilitating agencies had on the sustainability of the partnership arrangements. In addition, the study attempted to find whether the facilitating agencies were sufficient to promote PPP or whether there were other contributing factors.

The research was conducted from an interdisciplinary viewpoint with an institutional and practitioners' perspective. Accordingly, data were collected through interviews, questionnaire survey and observation from public sector agencies, private sector agencies, facilitating agencies, elected representatives and citizens. Thus all key actors and beneficiaries were included to form a comprehensive understanding of the role of facilitating agencies in building PPP. The key findings of the study are presented below.

### 8.2 Specific conclusions on SWM through PPP

#### Necessity of a facilitating agency in forming PPP

The aspect of necessity of a facilitating agency in forming PPP is described in detail in Chapter 5. The major finding was that facilitating agencies are indeed necessary. The key reasons behind this are:

- The most significant contribution by the facilitating agencies was demonstration of a workable PPP model and bridging the gap between the public sector, private sector and citizens. The facilitating bridged the gap through consultative meetings and creation of platform for discussion.

- The public sector lacks capacity to conceptualise and implement innovative approaches. The public sector does not have fund for experimentation with alternative approaches. They also have limited access to the latest advancement in management and technology.

- The private sector agencies, especially the small-scale agencies involved in SWM, lack access to and acceptance by the public sector. As a result, it is not possible for them to conduct advocacy for PPP.

#### The role of a facilitating agency in sustainability of PPP

The sustainability of PPP and the role of the facilitating agency is described in detail in Chapter 6. It was found that sustainability is influenced by the facilitating agency's capacity, strategy, and length of support. In Khulna, with the strongest and longest facilitation, PPP for SWM flourished. In Patuakhali and Sylhet the facilitating agencies had less capacity and
weaker strategy. PPPs in these cities were stagnant. The pilots survived because of demand for the better service. But new PPPs for expanded coverage of service did not realize as successfully as Khulna. In Dhaka, attempts were taken several times by private agencies to form PPP, but most failed to achieve. Inability to gain support from the municipality was often blamed for the failures. Therefore, in Dhaka, without any facilitating agency, the public and the private sector largely are working in isolation with each other.

**The role of a facilitating agency in effectiveness of PPP**

The effectiveness of PPP and the role of the facilitating agencies is described in detail in Chapter 7. A strong association was found between facilitation and the relationship between the public and private sector. In Khulna, with the strongest facilitation, the relationship was strongest. Here the public and private officials enjoyed mutual trust and access. In Dhaka, with no facilitation, there is practically no effective dialogue between the public and the private sector. Secondly, in terms of addressing complaints, Khulna scored the highest satisfaction from the citizens, followed by Patuakhali and Sylhet. Dhaka, with no facilitation and no PPP, had the worst record of addressing complaints from the citizens.

In conclusion, it may be said in answer to the primary research question that facilitating agencies are necessary to form sustainable PPP for SWM in Bangladesh because there is a lack of capacity in both public and private sector to independently achieve PPP. Evidence shows that role of the facilitating agencies had a positive impact on sustainability and effectiveness of PPPs. These evidences indicate that the hypothesis is true. Figure 8.1 shows the model in schematic. The facilitating agency builds up the partnership among the public sector, private sector and community indicated by arrows. With effective facilitation, this partnership takes permanent form indicated by the circle, which remain even after the withdrawal of the facilitating agency.

This study confirmed the earlier studies by Plummer (2000) and Plummer and Slater (2002) that there exists a need for external facilitation to build PPPs. Plummer mentioned about facilitation opportunity for NGOs. This study, however, found that the skills for facilitation is often lacking in NGOs, particularly small ones. However, they can effectively deliver facilitation service if their capacity is boosted by specialized agencies as was the case where WSP advised Prodipan to build PPP in Khulna. This study also confirmed that
extension of PPP into public-private-community partnership is beneficial for urban service delivery (Mumtaz and Wegelin, 2001).

Fig 8.1: The facilitation for PPP model in schematic

8.3 Application of the specific conclusions

The findings of this research may be useful in the urban service delivery sector. Practitioners, investors and policymakers of the sector may draw lessons from the study findings. The major implications for the potential users of the findings are given below.

Practitioners: The important lesson for existing and prospective facilitating agencies is that without sufficient capacity in terms of skills, financial resources and long-term commitment, the desired outcome of sustainable PPP cannot be achieved. The facilitating agencies must build their own capacity to analyse, strategize and engage with the public agencies, private agencies and communities for building sustainable PPPs.

For the public agencies and private agencies the study lesson is that significant barriers exist between them that prevent PPP. More accessibility and appreciation of each other's role, along with willingness to work together are needed. Delivery of urban service needs close partnership between the public sector, private sector and communities.

Investors: For investors in urban service delivery the key lesson is that PPP significantly improves service quality. Investing in facilitating agencies makes good sense because their
role was found effective in promoting PPP and thereby improving service to the urban citizens. Supporting facilitating agencies to develop their own capacity is another area where investment and development agencies may contribute.

Policymakers: The study indicated a lack of policy framework for PPP in Bangladesh. Most other developing countries may have similar deficiency. Policymakers may support urban service delivery by formulating conducive policy to support PPP. Resource allocation and clarity in the role of each player in PPP, i.e., public agencies, private agencies, elected representatives, and citizens would assist in building PPP.

8.4 General conclusions on SWM through PPP

A few general conclusions on SWM service delivery can be drawn from the above specific observations on SWM service through PPP. These are described below.

Firstly, this study found that it is possible to improve SWM service delivery through public-private partnership despite institutional and financial constraints present in developing countries. This observation is significant because total reform of the urban service agencies, particularly the public agencies, may be challenging and time-consuming. The findings of this study showed that service delivery may be improved markedly within a short period by developing partnership between the public and the private sector.

Secondly, the study indicated that achieving such partnerships may not require any radical institutional overhaul. Facilitating agencies with adequate capacity may enable the public and private sector to forge partnership within their existing institutional purview.

Thirdly, the study documented that the financial constraints present in the urban service sector may be partially offset by untapped resources. It was found that citizens are willing to pay service charge in addition to regular municipal taxes provided that the services are of acceptable quality. Financial limitation should not be considered as an impediment for improving service level, as citizens may be quite willing to pay enhanced fees for improved service.

Fourthly, it became evident through the study that it is possible to achieve behaviour and attitude change in people and service agencies. It was possible, with assistance from facilitating agencies, to achieve behaviour change among citizens. People accustomed to throw garbage on the street or into drains stopped this practice and started to bring their
garbage to collection vans. Similarly, municipal officials started to view NGOs and CBOs as their allies and not troublemakers. Likewise, the private sector also changed their view of municipal staff as inaccessible and obstinate.

Fourthly, it was shown that accountability and transparency in urban service delivery may be improved even without introducing any major institutional reform. It was documented that accountability and responsiveness improve significantly when people, politicians and service providers face one another in discussion platforms. It is possible to achieve such functioning platforms with assistance by facilitating agencies. The platforms provided an opportunity for free exchange of views between the service receivers, service providers and public representatives. This direct interaction transformed the traditional distant and unresponsive service agencies into more responsive and accountable agencies. It also improved people's exercise of their voice to demand acceptable service and politician's responsibility to ensure delivery of such services by the service agencies. In essence, a 'democratisation' of service delivery improved accountability.

8.5 Implications for other service sectors

The above conclusions on SWM service through PPP may be further generalized to apply in other infrastructure services and other contexts. It may be argued that SWM service is particularly suitable for PPP because it is possible to break down the service components. Private agencies have advantage in providing primary collection, while public agencies have better capacity for secondary collection and final disposal. This parceling of service components makes it easy to form partnership between the two sectors in delivering SWM services. Such breakdown of service components may not be feasible for other infrastructure services. Nevertheless, the findings of this study may indicate applications in a broader range of services and contexts. A few sectors are discussed below in relation to the findings of this study.

Like SWM service, the power distribution sector traditionally has been the sole realm of the public agency in Bangladesh. Faced with huge system loss, pilferage and non-collection of bills, the government first created a fully-public separate agency for Dhaka. Then a large private company was allowed to take over power distribution in certain parts of the city, while the public agency still serves the major part of city. The process of privatisation is slow and its
impact is yet to be determined. Meanwhile, many slum dwellers, who form a substantial part of the city's population, remain outside the service reach of either the public or the large private agency. However, an innovative initiative has been taken by a small private entity to provide legal connection to slum dwellers. This company has entered into an agreement with the public distribution agency to buy electricity in bulk and retail the same to slum dwellers at reasonable rate. Here the slum dwellers are benefiting from this initiative because they are billed at a reasonable rate according to usage. Earlier they had to get illegal connection and pay at an exorbitant price to corrupt officials for an unreliable service. The public agency received no bill. But the public agency receives regular bill from the private company. The whole process was facilitated by an NGO that assisted in the formation of the private company and convinced the public agency to enter into an agreement with the private company (Quader, 2003).

Similar experience exists in the water supply sector also. The public water utility company in Dhaka is unwilling to provide water connection to the illegal settlements including slums. This leaves the slum dwellers at the mercy of musclemen who manage to provide illegal connections to the slums and extort a hugely inflated rate from the slum dwellers. The service is erratic and unreliable. The porous rubber hose pipe remains empty most of the daytime allowing polluted water to seep in. When water finally comes at night it is mixed with the polluted water. The water quality is extremely alarming. As a result, the slum dwellers frequently suffer from diarrhoeal diseases. To address this problem, a local NGO (DSK), started to act as an intermediary between the slum dwellers and the public utility. They stood as a guarantor for bill payment. They persuaded the water utility to provide legal connection against the guarantee. Finally the slum dwellers received legal water connection with billing at normal domestic rate. They were found to be very good consumers who make timely payment of their bills. Encouraged by this experience, the water utility has now relaxed their rules to allow more private agencies to offer this service to slum dwellers.

Newell et al. (2004) cited an example of healthcare service delivery through PPP in Nepal. In this arrangement private physicians conduct diagnosis, NGOs provide treatment to patients, and the public sector provides training and drugs. This scheme was developed by a
working group acting as a facilitating agency. This model proved to be successful in delivering service.

Some recent literature, however, cautions against over enthusiasm for PPPs. For example, Haque (2004) cited that government-NGO partnership for rural and human development in Bangladesh has largely failed to reach its target. The author pointed out that some NGOs have turned into profit-seeking ventures in the name of partnerships. Moreover, NGOs have created a parallel service to government in education, healthcare, and banking. On one hand, this undermines the government’s responsibility for the basic services. On the other hand, the elitist NGOs try to be beyond the regulation of local or central government. In essence, they are creating parallel streams of service delivery – not public-private partnerships. This stands out from the models investigated in this study in which the public and private agencies jointly serve the citizens to provide SWM service. Bhattacharya (2002) also expressed concern about the selection of private partners emphasizing the need for a transparent process that encourages competition.

Reaching the poor through PPP is also challenging. Franceys and Weitz (2003) mentioned that only a limited number of PPPs were seen to improve service delivery to the poor. Even these initiatives are vulnerable to long-term uncertainty and lack of contractual stability. Grimsey and Lewis (2002) also voiced that PPPs are viable only if there is a robust long-term revenue stream. Differing and conflicting needs of the partners need to be satisfied for sustainable partnerships. This requires careful planning and assistance, indicating a need for facilitation. Sarangi (2002) confirmed this through his narration of an attempt by the Indian government agencies to attract private participation. The public sector designed the whole infrastructure development scheme and then invited the private sector to participate. Understandably, the response from the private sector was not satisfactory as they were not involved in the project formulation. This indicates the typical lack of capacity in the public agency to handle PPP that requires special skills.

Such lack of capacity is not limited in developing countries only. Diamond (2004) cited the recent example of promoting local strategic partnership in the UK. He mentioned that although the approach calls for building partnerships with local communities, the officials often view the communities as dependent and not capable. This attitude is an obstacle against the
formation of PPPs. This author suggested engaging external agencies to facilitate the smooth cooperation among public agencies, private agencies and communities. Other researchers also recommended the need for policy and legal framework for PPP to encourage competition, accountability and transparency and the creation of facilitating units to assist the process (Massoud et al., 2003; UN/ECE, 2000).

A number of issues are emerging in service delivery through PPPs in recent times. NGOs were the main private sector agencies in many PPP arrangements for service delivery. But now profit-seeking private firms are also entering in the field. NGOs may face stiff competition from these firms in future. At the same time, safeguarding public interest in the PPPs will become more important as for-profit agencies take part more vigorously. The early impetus for promoting PPPs was gain in efficiency and effectiveness. But it may become necessary to evaluate PPPs not only in terms of efficiency they bring but also in terms of good governance. New sets of appropriate evaluation criteria should be set up for the new generation PPPs (Bovaird, 2004; Hofmeister and Borchert, 2004).

8.6 Proposition of a general theory

This study generated a large body of rich data. This presented an opportunity to propose a theory on PPP following the Grounded Theory approach. Grounded Theory approach seeks 'the discovery of theory from data' (Egan, 2002). Recent literature on the approach was consulted to proceed in proposing a theory (Borgatti, 2004; Scott, 2004; Douglas, 2003).

Responses from public officials, private sector officials, politicians and citizens were categorised and coded for analysis and building a theory on service delivery improvement. Memos on ideas and explanations were prepared from the codes to discover elements of theory concealed in the data. These are not the informants' direct perceptions only, but include careful reflection by this author. A summary is presented below.

Is it possible to improve urban service delivery under the institutional and financial limitations in developing countries? Data shows that it is possible to greatly improve service delivery in spite of institutional and financial limitations present in developing countries. This was achieved by unbundling service delivery into components and distributing the responsibility to public and private agencies according to their comparative advantage. Radical reform of the sector was not needed to achieve the partnerships; they could be
accommodated within the existing institutional and financial conditions. It may be possible to find niches in any service sector where such public-private partnership can be used.

What does it take to achieve sustainable and effective partnership that improves service delivery? It is difficult to form PPP because: the public sector lacks capacity to innovate alternative service delivery mechanism, the private sector lacks capacity to access the public sector and conduct advocacy, the citizens lack voice and choice in demanding satisfactory service, and local governments lack role in improving service delivery. Within the institutional and financial barriers, it is not possible for these actors to overcome the barriers endogenously. External assistance from facilitating agencies in the form of demonstration galvanized the actors to form partnership and jointly improve service delivery. The facilitating agencies achieved this by initiating dialogue gap between the actors, providing seed fund for demonstration models, and by raising awareness. The partnership improved service delivery and accountability. There were indications that the partnerships may continue without external assistance once they are nurtured to maturity by facilitating agencies.

Several elements of theory emerge from the data. Firstly, it is clear that a number of obstacles prevent the natural formation of partnership. It is not possible for the public sector, private sector, politicians or the citizens to overcome these barriers on their own due to institutional, financial, or capacity limitations. Secondly, the data showed that facilitating agencies are able to assist the actors to overcome the barriers by initiating dialogue, demonstrating of a working partnership model and raising awareness. Thirdly, it was documented that public-private-community partnership results in improvement of service delivery. The qualifier here is that it is possible to improve service delivery through partnership, even within the prevalent limitations, if appropriate niches for each actor are provided. However, adequate support from competent facilitating agencies is essential for this.

The emergent theory grounded in data may be stated as “service delivery can be improved through public-private-community partnership in developing countries with institutional and financial limitations, without major reforms, if adequately supported by facilitating agencies.”
8.7 Suggestions for further research

For further research, it could be recommended to conduct investigation into the following areas.

- This study mainly looked into the outcome of facilitation, and not the cost of facilitation. The cost of facilitation in comparison with other competing models such as purely public or purely private service delivery should be investigated.

- This study indicated a lack of monitoring in service quality, particularly by the public agency. Further research in needed to develop monitoring indicators of urban service delivery for developing countries that may be used to benchmark the public sector, private sector, and PPP.

- Reaching research findings to the relevant users for bringing change in practice is an area that deserves more attention. Research is needed to develop an effective way to feed back study findings to policymakers and practitioners of urban service delivery sector in developing countries.
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Annex 1: Data collection Tools

Interview with the Chief Conservancy Officer of a City Corporation

Checklist

Introduction: salutation and personal introduction

Purpose of the discussion:

This is an academic exercise; the purpose is to learn about integration of public and private sectors for better solid waste management. His advice is vital for this study. Candid opinions are appreciated. Confidentiality is assured. The findings will be shared.

Primer:

1. Request brief description of operations of the conservancy department (collection, transportation, disposal).
2. What are the main challenges?

A. Necessity of facilitating agency

Barrier:

3. What are the barriers against spontaneous integration of activities of public and private agencies? (institutional, legal, financial, others...)
4. How did the facilitating agency help in overcoming the barriers?
5. Are there still some barriers left? Are public and private sectors working in full collaboration now?

Support needed by the city corporation:

6. What kind of support do you need to sustain the present arrangement?
7. What kind of support do you need to initiate new public-private partnership?

Contribution by Facilitating Agency:

8. What were the inputs from The facilitating agencies?
9. How do you evaluate these inputs? (eg successes and failures)

Benefits of facilitation:

10. Has the Partnership improved the quality of service [compared to previous system, and compared to areas without Partnership]? In what way?
11. Has the Partnership improved the scope of service [compared to previous system, and compared to areas without Partnership]? (eg more area covered, more waste collected, more efficiency)

Contribution of co-factors:

12. What, other than the facilitating agencies, contributed to the success?
13. Was there something that hampered the partnership?
14. What is required for sustaining and expanding the Partnership?

B. Sustainability of Partnership

Dependence on Facilitating Agency:

The facilitating agencies are no longer providing facilitation.

15. What happened to the Partnership after the withdrawal from the facilitating agencies? (eg expanded, remained the same, contracted)
16. Do you still feel a need for facilitation? In what way?

Satisfaction with Partnership:

17. Are you satisfied with the Partnership? Describe.

C. Effective Partnership

Mutual recognition:

19. An MoU was signed between the city corporation and the facilitating agency. In which way has this helped?

20. Is the private sector making a positive contribution?

21. Are there other forms of recognition, formal or informal, with CBOs/NGOs (eg letter, award, meeting records, etc.)?

Platform for discussion:

22. Is there a common platform for the city corporation and private agencies for discussion, exchange of ideas, jointy solving problems, deciding future activities?

23. If yes, how has that helped? (eg examples of joint troubleshooting or planning)

Collaboration between the city corporation and private agencies:

24. Which responsibilities are best be left with THE CITY CORPORATION? Why?

25. Which responsibilities are best be vested in private agencies? Why?

26. Has WSP or Prodipan helped you in dividing and coordination your work with CBO/NGO?

Improvement in service delivery:

27. Are you able to better serve your clients (citizens) as a result of the city corporation and private agencies working together?

28. What is the effect on your work load in these areas?

29. Are you dissatisfied in any way with this arrangement?

Conclusions

30. Do you think the partnership arrangement between the city corporation and private sector may be scaled up to entire Khulna city or expanded in scope?

31. What are your suggestions for other cities and towns to integrate the public and private sector?

Acknowledgement

Thank you for your time. Your comments are very much appreciated, and are valuable input into the study. Your advice will be sought again if necessary. The findings will be shared with you.
Interview with the Chief Executive Officer of a City Corporation

Checklist

Introduction: salutation and personal introduction

Purpose of the discussion:
This is an academic exercise; the purpose is to learn about integration of public and private sectors for better solid waste management. His advice is vital for this study. Candid opinions are appreciated. Confidentiality is assured. The findings will be shared.

Primer:
1. Your general views on partnership between the city corporation and private sector.
2. Your views on integration of the activities of the city corporation and the private sector agencies for solid waste management.

A. Necessity of facilitating agency

Barrier:
3. What are the barriers against spontaneous integration of activities of public and private agencies? (institutional, legal, financial, others...)
4. How did The facilitating agencies help in overcoming the barriers?
5. Are there still some barriers left? How can the barriers be removed? Are public and private sectors working in full collaboration now?

Support needed by the city corporation:
6. What kind of support do you need to sustain the present arrangement?
7. What kind of support do you need to initiate new public-private partnership?

Contribution by Facilitating Agency:
8. What contributed most to materialize this arrangement?
9. What were the inputs from The facilitating agencies?
10. How do you evaluate these inputs? (eg successes and failures)

Benefits of facilitation:
11. Has the facilitation by the facilitating agency significantly contributed towards Partnership?

Contribution of co-factors:
12. What, other than facilitation by the facilitating agency, contributed to the success?
13. Was there something that hampered the partnership?
14. What is required for sustaining and expanding the Partnership?

B. Sustainability of Partnership

Dependence on Facilitating Agency:
The facilitating agencies are no longer providing facilitation.
15. Do you still feel a need for facilitation? In what way?

Satisfaction with Partnership:
17. Are you dissatisfied in any way? Describe.

C. Effective Partnership

Mutual recognition:
18. An MoU was signed between the city corporation and the facilitating agency. In which way has this helped?
19. Is the private sector making a positive contribution?
20. Are there other forms of recognition, formal or informal, with CBOs/NGOs (eg letter, award, meeting records, etc.)?

Collaboration between the city corporation and private agencies:

21. Has this experience with Partnership influenced the city corporation's views about working together with the private agencies?

Conclusions:

22. Do you think the partnership arrangement between the city corporation and private sector may be scaled up to the entire city or expanded in scope?

23. What are your suggestions for other cities and towns to integrate the public and private sector?

Acknowledgement

*Thank you for your time. Your comments are very much appreciated, and are valuable input into the study. Your advice will be sought again if necessary. The findings will be shared with you.*
Interview with the Ward Commissioners of Khulna City Corporation

Checklist

Purpose of the discussion:
This is an academic exercise; the purpose is to learn about integration of public and private sectors for better solid waste management. His advice is vital for this study. Candid opinions are appreciated. Confidentiality is assured. The findings will be shared. Request permission to use recorder.

Primer:
1. As an elected representative, what are the key issues that your constituents bring to you for your intervention or advice?
2. What are the main environmental challenges in your ward?

A. Necessity of facilitating agency

Barrier:
3. What are the barriers against spontaneous integration of activities of public and private agencies? (institutional, legal, financial, others...)
4. How did the Facilitating Agency help in overcoming the barriers?
5. Are there still some barriers left? Are public and private sectors working in full collaboration now?
6. As a ward commissioner, what problems have you faced to implement this integration? What problems are you facing now?

Support needed by KCC:
7. What kind of support do you need to sustain the present arrangement?
8. What kind of support do you need to initiate new public-private partnership?

Contribution by Facilitating Agency:
9. What were the inputs from Facilitating Agencies?
10. How do you evaluate these inputs? (eg successes and failures)

Benefits of facilitation:
11. Has the Partnership improved the quality of service [compared to previous situation]? In what way?
12. Has the Partnership improved the scope of service [compared to previous situation]? (eg more area covered, more waste collected, more efficiency)

Contribution of co-factors:
One of the most successful examples of public-private partnerships in Bangladesh is in Khulna.
13. What, other than the Facilitating Agency contributed to the success?
14. Was there something that hampered the partnership?
15. What modifications to current practice at the KCC are needed for sustaining and expanding the Partnership?
16. Is there any change needed in the authority or responsibility of a ward commissioner for smooth integration of KCC and private sector in a ward?

B. Sustainability of Partnership

Dependence on Facilitating Agency:
The facilitating agencies are no longer providing facilitation.
17. What happened to the Partnership after the withdrawal from (eg expanded, remained the same, contracted)
18. Do you still feel a need for facilitation? In what way?

Satisfaction with Partnership:
19. Are you satisfied with the Partnership? Describe.

C. Effective Partnership

Mutual recognition:
21. An MoU was signed between city corporation and facilitating agency. In which way has this helped?
22. Is the private sector making a positive contribution?
23. As the elected representative of the city corporation, do you recognize the contribution in any form (eg letter, meeting minutes, etc.)?

Platform for discussion:
24. How do you evaluate the ward committee? How often do you meet? Are the meetings useful?
25. Examples of troubleshooting or planning by the ward committee?

Collaboration between the KCC and private agencies:
26. Which responsibilities are best be left with city corporation? Why?
27. Which responsibilities are best be vested in private agencies? Why?
28. Has WSP or Prodipan helped you in dividing and coordination your work with CBO/NGO?

Improvement in service delivery:
29. Are you better able to serve your constituents as a result of this Partnership?
30. Are you dissatisfied in any way with this arrangement?

Conclusions
31. In what way the partnership may be further improved in your ward?
32. Do you think the partnership arrangement between the city corporation and private sector may be scaled up to entire city?
33. What are your suggestions for other wards to integrate the public and private sector?

Acknowledgement

Thank you for your time. Your comments are very much appreciated, and are valuable input into the study. Your advice will be sought again if necessary. The findings will be shared with you.
Interview with facilitating agency staff

Checklist

Introduction: salutation and personal introduction

Purpose of the discussion:
This is an academic exercise; the purpose is to learn about integration of public and private sectors for better solid waste management. His advice is vital for this study. Candid opinions are appreciated. Confidentiality is assured. The findings will be shared.

Primer:
1. Request brief description of operations of the facilitating agency.
2. What have been the main challenges?

A. Necessity of facilitating agency

Barrier:
3. What are the barriers against spontaneous integration of activities of public and private agencies? (institutional, legal, financial, others...)
4. How did the facilitating agency help in overcoming the barriers?
5. Are there still some barriers left? Are public and private sectors working in full collaboration now?

Support needed by the city corporation:
6. What kind of support is needed by the city corporation to sustain the Partnership arrangement?
7. What kind of support is needed by the city corporation to expand or initiate new Partnership?

Contribution by Facilitating Agency:
8. What were the inputs from the facilitating agency and Prodipan?
9. How do you evaluate these inputs? (eg successes and failures)

Benefits of facilitation:
10. Has the Partnership improved the quality of service? In what way?
11. Has the Partnership improved the scope of service? (eg more area covered, more waste collected, more efficiency)

Contribution of co-factors:
One of the most successful examples of public-private partnerships in Bangladesh is in Khulna.
12. What, other than the facilitating agency, contributed to the success?
13. Was there something that hampered the Partnership?
14. What is required, other than facilitation, for sustaining and expanding the Partnership?

B. Sustainability of Partnership

Dependence on Facilitating Agency:
The Facilitating Agencies are no longer providing facilitation.
15. What happened to the Partnership after the withdrawal from the facilitating agency? (eg expanded, remained the same, contracted)
16. Do you still feel a need for facilitation? In what way?

Satisfaction with Partnership:
17. Are you satisfied with the Partnership? Describe.

C. Effective Partnership
Mutual recognition:
19. An MoU was signed between the city corporation. In which way has this helped?
20. Is the private sector making a positive contribution?
21. Are there other forms of recognition, formal or informal, with CBOs/NGOs (eg letter, award, meeting records, etc.)?

Platform for discussion:
22. Is there a common platform for the city corporation and private agencies for discussion, exchange of ideas, jointly solving problems, deciding future activities?
23. If yes, how has that helped? (eg examples of joint troubleshooting or planning)

Collaboration between the city corporation and private agencies:
24. Which responsibilities are best be left with the city corporation? Why?
25. Which responsibilities are best be vested in private agencies? Why?
26. Has Prodipan helped in dividing and coordination your work with CBO/NGO?

Improvement in service delivery:
27. Do you think there is an improvement in service delivery in the areas where the city corporation and private agencies are working together? Describe
28. Has the service level fallen in any way with this arrangement?

Conclusions
29. Do you think the partnership arrangement between the city corporation and private sector may be scaled up to entire the city or expanded in scope?
30. What are your suggestions for other cities and towns to integrate the public and private sector?

Acknowledgement
Thank you for your time. Your comments are very much appreciated, and are valuable input into the study. Your advice will be sought again if necessary. The findings will be shared with you.
Interview with private sector staff

Checklist

Introduction: salutation and personal introduction

Purpose of the discussion:

This is an academic exercise; the purpose is to learn about integration of public and private sectors for better solid waste management. His advice is vital for this study. Candid opinions are appreciated. Confidentiality is assured. The findings will be shared.

Primer:
1. Request brief description of operations of NGO activities.
2. What have been the main challenges of providing SWM services?

A. Necessity of facilitating agency

Barrier:
3. What are the barriers against spontaneous integration of activities of public and private agencies? (institutional, legal, financial, others...)
4. How did the Facilitating Agency (eg The facilitating agency) help in overcoming the barriers?
5. Are there still some barriers left? Are public and private sectors working in full collaboration now?

Support needed by NGO:
6. What kind of support is needed by NGO to sustain the Partnership arrangement?
7. What kind of support is needed by NGO to expand or initiate new Partnership?

Contribution by Facilitating Agency:
8. What were the inputs from the Facilitating Agency?
9. How do you evaluate these inputs? (eg successes and failures)

Benefits of facilitation:
10. Has the Partnership improved the quality of service? In what way?
11. Has the Partnership improved the scope of service? (eg more area covered, more waste collected, more efficiency)

Contribution of co-factors:
12. What, other than Facilitating Agency, contributed to the success?
13. Was there something that hampered the Partnership?
14. What is required, other than facilitation, for sustaining and expanding the Partnership?

B. Sustainability of Partnership

Dependence on facilitating agency:
The facilitating agencies are no longer providing facilitation.
15. What happened to the Partnership after the withdrawal from the facilitating agency? (eg expanded, remained the same, contracted)
16. Do you still feel a need for facilitation? In what way?

Satisfaction with Partnership:
17. Are you satisfied with the Partnership? Describe.

C. Effective Partnership

Mutual recognition:
19. An MoU was signed between the city corporation and The facilitating agency. In which way has this helped?

20. Is the private sector making a positive contribution?

21. Are there other forms of recognition, formal or informal, with CBOs/NGOs (eg letter, award, meeting records, etc.)?

Platform for discussion:

22. Is there a common platform for the city corporation and private agencies for discussion, exchange of ideas, jointly solving problems, deciding future activities?

23. If yes, how has that helped? (eg examples of joint troubleshooting or planning)

Collaboration between the city corporation and private agencies:

24. Which responsibilities are best be left with the city corporation? Why?

25. Which responsibilities are best be vested in private agencies? Why?

26. Has The facilitating agency helped in dividing and coordination your work with CBO/NGO?

Improvement in service delivery:

27. Do you think there is an improvement in service delivery in the areas where the city corporation and private agencies are working together? Describe

28. Has the service level fallen in any way with this arrangement?

Conclusions

29. How can the partnership arrangement between the city corporation and private sector be scaled up to entire Khulna city or expanded in scope?

30. What are your suggestions for other cities and towns to integrate the public and private sector?

Acknowledgement

Thank you for your time. Your comments are very much appreciated, and are valuable input into the study. Your advice will be sought again if necessary. The findings will be shared with you.
Household Questionnaire Survey

1 Name of enumerator: 
2 Date: 

3 Name of head of household: 
4 Occupation 
5 Address: 
6 Ward: 
7 City: 
8 Do you participate in house-to-house garbage collection?: _____Yes _____No
9 If yes, what motivated you to participate?

10 If no, reason for not participating

11 If yes, how much do you pay for the service? Tk. __________ per month
12 Is it worth paying?

13 Are you satisfied with the service? In what way?

14 Is there something you do not like about the service?

15 Is your neighborhood cleaner than before the service? Explain

16 Do you find the ward committee useful?

17 If there is a problem with the service, where and how do you complain?

18 How is the response?

19 What are the major environmental problems in your area at present?
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1 Name of enumerator:</td>
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<td>2 Date:</td>
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<td>3 Name of Staff:</td>
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<td>4 Designation</td>
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<td>5 City:</td>
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<td>6 What is your responsibility?</td>
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<td>7 Have you received any training or orientation? Describe from who and what type.</td>
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<td>8 How has your work changed because of CBO/NGO activity?</td>
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<td>9 Has your work load become less or more? Explain</td>
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<td>10 Is the CBO/NGO system better or worse for you? Explain</td>
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<td>11 What do you like about CBO/NGO system?</td>
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<td>12 What do you dislike about CBO/NGO system?</td>
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<td>13 Does your union support or oppose the CBO/NGO system?</td>
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<td>14 How do you coordinate your work with CBO/NGO staff?</td>
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<td>15 What kind of interaction do you have with community members? (eg ward committee)</td>
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<td>16 Do you support more participation from the CBOs/NGOs?</td>
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<td>18 How can the SWM services in your city be further improved?</td>
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</table>
Private sector worker Questionnaire Survey

1 Name of enumerator:

2 Date:

3 Name of Staff:
4 Designation:
5 City:
6 What is your responsibility?

7 Have you received any training or orientation? Describe by who and what type.

8 What do you find satisfying about your work?

9 What do you find dissatisfying about your work?

10 What kind of interaction do you have with community members? (eg ward committee)

11 What kind of interaction do you have with Conservancy staff?

12 How do you coordinate your work with Conservancy staff?

13 Do you support more participation from the CBOs/NGOs?

14 How can the SWM services in your city be further improved?
Observation Form

Purpose of Observation:
The purpose of observation is to record the activities of the Public and private sector workers. The observer should not interact with the workers. S/he should stand away from the activities and simply record the activities objectively.

1 Name of Observer:
2 Date:
3 Location:
   3 Neighborhood __________  4 ward __________  5 city _______________

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<thead>
<tr>
<th>Time</th>
<th>Place</th>
<th>Activity</th>
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