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Role of Public Private Partnership in Infrastructure Financing:

A Case of Bharatpur Metropolitan City

by

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Abstract

A public–private partnership (PPP) is a cooperative arrangement between two or more public and private sectors, typically of a long-term nature. Public-private partnerships between a government agency and private-sector company can be used to finance, build and operate projects, such as public transportation networks, parks and convention centers. Financing a project through a public-private partnership can allow a project to be completed sooner or make it a possibility in the first place.

Bharatpur Municipality in the last 4 years have been promoted to Sub- Metropolitan and then to Metropolitan City. After being metropolitan city, Bharatpur needs to invest huge amount of budget in infrastructure and development programs. As the source of revenue is limited in the municipality, Public Private Partnership (PPP) can be a tool to mobilize the resources, skills and technologies available in private sector. It is necessary to attract private sector for development activities to be effective.

This research will try to find out the ways to incorporate private sector along with the public party in financing the infrastructure of Bharatpur Metropolitan City. It will review and study about the gaps in the existing policies and implementation in PPP in the context of Nepal, especially in Bharatpur. The research will look upon the ideas among different stakeholders like government authorities, municipality, private companies, local people etc. and try to find out a way forward in this case. Similarly, it will also study about the changing financial mechanism of Bharatpur Metropolitan City and try to find out the solution of the problems they are facing in this case.

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List of Selected Acronyms

PPP	Public Private Partnership
CCIC	Chamber of Commerce and Industry Chitwan
TLO	Tole Lane Organization
CBO	Community Based Organization
OSR	Own Source Revenue
IGFT	Inter- Governmental Fiscal Transfer
MoFALD	Ministry of Federal Affairs and Local Development
HH	Household
NUDS	National Urban Development Strategy
PPPUE	Public Private Partnership for Urban Environment
BOOT	Build- Own- Operate- Transfer
UEIP	Urban Environment Improvement Project
UNDP	United Nations Development Programme
LSGA	Local Self Governance Act
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
PP	Periodic Plan
NPC	National Planning Commission
MoUD	Ministry of Urban Development

Glossary

Bigha	Traditional Unit of Measuring Land Area 1 Bigha = 13.31 Ropani= 6772.63 sq. m. = 0.68 ha.
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1. Introduction

1.1 Background

A public–private partnership (PPP) is a cooperative arrangement between two or more public and private sectors, typically of a long-term nature. The PPP Knowledge Lab defines a PPP as "a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance". PPP is a broad term that can be applied to anything from a simple, short term management contract (with or without investment requirements) to a long-term contract that includes funding, planning, building, operation, maintenance and divestiture. PPP arrangements are useful for large projects that require highly-skilled workers and a significant cash outlay to get started. (Tech Target)

Public-private partnerships between a government agency and private-sector company can be used to finance, build and operate projects, such as public transportation networks, parks and convention centers. Financing a project through a public-private partnership can allow a project to be completed sooner or make it a possibility in the first place. Public-private partnerships have contract periods of 25 to 30 years or longer. Financing comes partly from the private sector but requires payments from the public sector and/or users over the project's lifetime. The private partner participates in designing, completing, implementing and funding the project, while the public partner focuses on defining and monitoring compliance with the objectives. Risks are distributed between the public and private partners according to the ability of each to assess, control and cope with them. (Investopedia)

Nepal is one of the least developed countries, and its own resources and funds are not sufficient to accelerate the pace of economic development. Nepal is now preparing to transform into a middle- income country as per ‘Vision 2030’ prepared by the National Planning Commission. The plan is to graduate from the status of Least Developed Country (LDC) by 2022, and join the rank of middle- income country by 2030. ‘Vision

2030' has laid down strategies and action plans to raise Nepal's per capita income by more than three folds to \$2,500 by 2030, eradicate poverty and give a boost to other major socio-economic indicators. (Sharma R. , 2016) However, lack of basic infrastructure has forced Nepal to witness an average of below 4 percent economic growth over the past decade. Thus, Nepal needs to invest heavily on infrastructure, if the country wants to come out of the vicious cycle of low economic growth, poverty and unemployment. (Sharma H. B., 2017) This demands rapid development of infrastructure. As the development is not possible with the investment of the government, it should be driven largely by a private sector - local and foreign - that has the technical, managerial and financial clout to deliver efficient, high-quality and cost-effective results on the ground. Similarly, the government has to create the investment-enabling environment for the private sector. As Nepal has to do a lot in infrastructure development - from increasing accessibility to facilitating service delivery and enhancing cost effectiveness, the government has no other option than to create conducive investment environment and invite private sector, both domestic and foreign, to invest in the infrastructure sector. (Sharma R. , 2016)

Bharatpur Municipality was established in 1979 A.D. It was declared Sub- Metropolitan City in 2014 and Metropolitan City in December 2016. (Bharatpur Metropolitan City) Bharatpur is the district headquarter of Chitwan District, as well as a separate Metropolitan authority, and is the fifth largest city of Nepal with the population of 199,867 (Census 2011). Bharatpur is one of the fast growing cities of Nepal. It lies on the left bank of Narayani River and serves as a commercial centre of Chitwan district and central region of Nepal. It is located at the center of Mahendra Highway and Kathmandu - Birganj (North-South) road corridor. It is developing as a vital nodal point at the conjunction of Mugling- Bharatpur and East- West highway and is the entry and exit point for hill towns.

After being metropolitan city, Bharatpur needs to invest huge amount of budget in infrastructure and development programs. As per the Annual Budget 2074/075 of Bharatpur Metropolitan City, Rs. 13 crore is allocated for physical infrastructure and

development programs, Rs. 4 crore for urban infrastructure projects and Rs. 6 crore for large infrastructure projects. Similarly, out of the total budget allocated (approx. Rs. 90 crore), almost 20% (Rs. 16 crore) of the budget has to be spent on administrative expense. The municipality gains only approx. Rs. 27 crore from its Own Source Revenue (OSR) and gains Rs. 11 crore as Central Government's Development Grant. These sources are not enough for the municipality. This can be compensated by involving private sector in development activities and mobilizing their financial, human and technical resources.

1.2. Need of the Research

Over the past years, there has been an increased focus on the provision of infrastructure in Nepal. The supply of power and water is insufficient. Transport is difficult, a problem compounded by the fact that Nepal is landlocked. Similarly, delivery of other infrastructure and services is also poor. The development of infrastructure as an asset for the development of the country as a whole has demanded a huge amount of investment in the sector. The government has limited resources and cannot invest alone to improve infrastructure. This calls for the participation of private sector. It is true that the engine of growth and development is the private sector in any country. In countries where the private sector is strong and vibrant, economic growth has been encouraging, and countries where the private sector's role has been curbed, the pace of economic growth has been slow and gloomy.

The National Urban Development Strategy (NUDS), 2015 has estimated required investment of Rs. 372 billion to fulfill the existing infrastructure deficit in 58 municipalities. In addition to this, the cost for the infrastructure development for 133 newly added municipalities is estimated to be Rs. 881 billion. (Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III);, 2016) There is a challenge for the central and local government to meet the need of huge investment for the infrastructure development. The challenge is not just with the financial resources, it is also concerned with the human and technical resources.

Bharatpur Metropolitan City needs to invest huge amount of budget in infrastructure and development programs. Only 12% of the total expense is provided by the Central

Government as development grant and 30% is generated from municipality's OSR. These sources are not enough for the development activities and infrastructure related programs, so, Public Private Partnership (PPP) is necessary for meeting the infrastructure demand of the city. It is a necessity for the municipality to mobilize alternative resources. Private sector has established financial, technical and human resources. PPP is the tool to help mobilize private sector resources for public benefit. This research will help understand the necessity and possibility of PPP in Bharatpur. PPP projects are being identified but they have not been able to implement it. There are successful projects inside Nepal as well as outside. It is very necessary to find out the problems and their solutions in executing PPP projects in Bharatpur Metropolitan City.

1.3. Importance of the Research

The budget allocated by the government and municipality for development works alone is not sufficient for the infrastructure activities. So, it is important to mobilize the resources of private sector. This study tries to find out the possibilities of including PPP in the development activities of Bharatpur Metropolitan City. Municipality has allocated Rs. 40 lakhs for PPP projects in this fiscal area. Similarly, projects that are to be done in PPP model have also been identified. But the municipality has not been able to implement them. This study tries to find out the ways to incorporate private sector and PPP modality in projects related to infrastructure. Similarly, this study tries to find out the issues that are creating a gap between the policy regarding PPP and successful implementation of such projects.

Bharatpur Municipality in the last 4 years have been promoted to Sub- Metropolitan and then to Metropolitan City. This study can be useful in understanding the financial mechanism after its conversion to metropolitan city. The budget allocated to municipality and metropolitan city has a huge difference. Bharatpur has been struggling in the preparation of its financial and development plan. Due to this, many development activities are delayed. This will have a negative impact on the city's overall development in the long run if this situation continues. This study will be a helpful resource for the municipality in understanding the changing financial mechanism of the municipality as a whole and also PPP projects specifically.

1.4. Problem Statement

World Bank study has concluded that Nepal needs to spend \$13 billion to \$18 billion from 2011 to 2020 to bridge the investment gap in infrastructure; of the total, \$3.7-\$5.5 billion is needed in transport infrastructure alone. (Chalise, 2017) The revenue base of municipality itself is also very weak. The sources of revenue of any municipality are Own Source Revenue (OSR) and Government's development grant provided by Ministry of Federal Affairs and Local Development. Similarly, there are broadly two types of expenditures: administrative expenditures and development expenditures (or capital investments). As per the Annual Budget 2074/075 of Bharatpur Metropolitan City, approx. Rs. 13 crore is allocated for physical infrastructure and development programs, Rs. 4 crore for urban infrastructure projects and Rs. 6 crore for large infrastructure projects. Similarly, out of the total budget allocated (approx. Rs. 90 crore), almost 20% (Rs. 16 crore) of the budget has to be spent on administrative expense. The municipality gains only approx. Rs. 27 crore from its Own Source Revenue (OSR) and gains Rs. 11 crore as Central Government's Development Grant. Due to low revenue base and large amount spent on administrative works, the capacity of the municipalities for development activities is limited.

Development of any urban area is not possible without the development of necessary infrastructure. As the source of revenue is limited in the municipality, Public Private Partnership (PPP) can be a tool to mobilize the resources, skills and technologies available in private sector. It is necessary to attract private sector for development activities to be effective. In Bharatpur, efforts have been made to incorporate PPP in the development activities. Bharatpur has been collecting business tax and Integrated Property Tax (IPT) with Chamber of Commerce and Industry Chitwan (CCIC) in PPP model. IPT is a major source of revenue in Bharatpur as well as other municipalities of Nepal. Municipality has allocated Rs. 40 lakhs for PPP Projects in this fiscal area. Other projects such as solid waste management, installation of solar lights, development of Narayani River as tourist center etc. are identified but they have not been able to implement PPP modality in these projects. It has been very important to understand the issues in using PPP model in Bharatpur so that the projects identified and other large scale projects can be completed successfully.

1.5. Research Purpose

The main objective of the research is:

- To find out how PPP can be used as an effective model for urban infrastructure development in Bharatpur Metropolitan City.

The specific objectives of the research are as follows:

- To review the existing nature of projects and their financial mechanism in Bharatpur Metropolitan City.
- To review the existing policies regarding PPP in Nepal and study about the problems and issues in their implementation.
- To recommend strategies regarding how to incorporate PPP in infrastructure financing in case of Bharatpur Metropolitan City.

1.6. Validity of the Research

Public Private Partnership (PPP) has been successful in delivery infrastructure and services to people all over the world. In USA, PPP or P3 has been used successfully for decades in the development of physical as well as social infrastructures. The US Forest Service in Arizona has handed over the responsibility of operation of privately run Red Rock Crossing Recreation Area to a private company Recreation Resource Management (RRM) under the P3 agreement. Similarly, private companies are operating a 157 mile stretch of Indiana's public roadways with a 75-year agreement in exchange for the revenue from the tolls. (Pearl, 2013) In India as well PPP projects are successfully run in the sector of road, water, health, insurance etc. In Gujarat, several projects of construction of bus terminal are ongoing in Design- Build- Finance- Operate- Transfer (DBFOT) type. Gujarat State Road Transport Corporation monitors the project and being operated by various private companies. (Department of Economic Affairs, 2017)

PPP projects have been initiated in the municipalities of Nepal as well. In Hetauda, public toilet, park management, business tax collection and community drinking water projects are being initiated in this model. Similarly, in Butwal the operation and management of Lumbini Bus Terminal is done in this model. Bharatpur Metropolitan City has also identified projects that can be done in PPP model. Projects such as solid waste management, installation of solar lights, development of Narayani River as tourist center

etc. are identified but they have not been able to implement PPP modality. It has been very important to understand the issues in using PPP model in Bharatpur so that the projects identified can be completed successfully. Similarly, other large scale projects such as construction of road, water supply scheme can also be done with this idea if the mechanism is understood properly.

1.7. Scope and Limitation

This study has tried to focus on the PPP projects possible in local level where civil society plays an important role. It does not look into large infrastructural projects. Similarly, the study relies on secondary data and published articles and papers, assuming them to be authentic and true, wherever required.

1.8. Conceptual Framework of Research and Methodology

Paradigm is a broad framework of perception, understanding, belief within which theories and practices operate. A paradigm is simply a belief system (or theory) that guides the way we do things, or more formally establishes a set of practices. This can range from thought patterns to action. (eResearch Methods) It is a framework of thought or beliefs through which one's world or reality is interpreted. It is an example used to define a phenomenon and is a commonly held belief among a group of people, such as scientists of a given discipline. There are a number of paradigms such as: positivist, post-positivist, constructivist, interpretivist, transformative, and pragmatism. (Mackenzie & Knipe, 2006)

Positivism is sometimes referred to as 'scientific method' or 'science research' (Mackenzie & Knipe, 2006). Positivism adheres to the view that only "factual" knowledge gained through observation (the senses), including measurement, is trustworthy. In positivism, the role of the researcher is limited to data collection and interpretation through objective approach and the research findings are usually observable and quantifiable (Research Methodology). Similarly, post-positivism admits reported experience (such as surveys), sociological or psychological experiments) and observed human behavior as data. Post-positivism is often used to describe an approach to research where large amounts of qualitative data are categorized to produce quantitative data to be analyzed using statistical methods. (Mackenzie & Knipe, 2006) Pragmatism is not committed to any one

system of philosophy or reality. It is seen as the paradigm that provides the underlying philosophical framework for mixed-methods research.

In the case of 'Role of Public Private Partnership in Infrastructure Financing', the study is based on interpretative paradigm. In interpretative paradigm, there is no single reality or truth and reality is created by individuals in group. Therefore, reality needs to be interpreted. It is used to discover the underlying meaning of events and activities. (Salma Patel) "Interpretivist approaches to research have the intention of understanding the world of human experience, suggesting that reality is socially constructed. The interpretivist researcher tends to rely upon the participants' views of the situation being studied and recognizes the impact on the research of their own background and experiences." (Mackenzie & Knipe, 2006) In my study, the main source of knowledge is the opinions from the local government, stakeholders and the policies that are present; which were interpreted to find out the result. The major sources of my knowledge are the interview and related published documents, articles, books etc. various plans and policies enacted by the Government of Nepal were also an important source of knowledge in my research.

The ontology of my study is based on social reality which differs according to the context. Ontology is the basis of existence concerned with being or reality. According to Norman Blaikie, ontological claims are claims and assumptions that are made about the nature of social reality, claims about what exists, what it looks like, what units make it up and how these units interact with each other. In short, ontological assumptions are concerned with what we believe constitutes social reality. The ontology of my research is based on relativism. In the case of this research, there is no single reality and the realities are shaped by the context. It evolves and changes depending on the experiences. In such case, the reality cannot be generalized; it can only be transferred to other similar context. Bharatpur has been recently promoted to Metropolitan City but the revenue of the municipality is not enough for necessary infrastructure and development activities. Without proper infrastructure, physical, social and economic development of any city is impossible. The development is not possible with the investment of the government, so, it should be driven largely by private sector to deliver efficient, high-quality and cost-

effective results on the ground. Although the idea of PPP has been initiated by the municipality, they are facing problems in implementing it. Policy constraint is also obstructing the concerned stakeholders (local authority, private sector, civil society) in implementing the ongoing ideas.

Epistemology is the approach to know the reality. According to Norman Blaikie, epistemology is one of the core branches of philosophy and is concerned with the theory of knowledge, especially in regard to its methods, validation and the possible ways of gaining knowledge of social reality, whatever it is understood to be. In short, it claims about how what is assumed to exist can be known. It is based on the ontological position of the researcher. My research will be based on emic approach where the reality will be approached in a subjective way. To find out the reality of the role of PPP in infrastructure financing in Bharatpur, it is very important to interact with the officials of Bharatpur Metropolitan City, organizations involved in such projects and local people of Bharatpur to find out what truth means to them. Interaction with them is necessary to gain an in-depth understanding of what is going on and to understand the context. In my research, subjective interpretation of interviews and documents were done.

Methodology refers to the philosophies that guide how the knowledge should be gathered. Methodology refers to general principles which underline how we investigate the social world and how we demonstrate that the knowledge generated is valid. Research Methodology follows from the epistemological position, which itself is defined by the ontological assumptions of a research. My research is based on abductive research strategy. It is the phenomenology to produce scientific accounts of social life by drawing on the concepts and meanings used by social actors and the activities in which they engage. Access to any social world is by the accounts given by the people who inhabit in it. These accounts contain the concepts that people use to structure their world - the meanings and interpretations, the motives and intentions which people use in their everyday lives and which direct their behavior. In my research, I have abducted knowledge from people's views and opinions. As the relationship between the researcher and the interviewee was subjective, the data were interpreted in subjective manner.

Method refers to the data gathering technique. Literatures were collected, reviewed, evaluated and analyzed. Group discussions, informal talks and lectures were considered as important source for making me understand system's reality. The secondary sources study included review of literature, websites, journal, article, annual and progress reports related with PPP. The guideline published by The European PPP Expertise Centre (EPEC) and Public Private Partnership for Urban Environment (PPPUE) were considered for understanding the procedures of PPP projects. Similarly, policies and acts enacted by Government of Nepal which included provisions related to PPP were studied and reviewed.

Apart from the secondary data collected, one of the most popular methods used was qualitative interview which provided interviewee floor to talk about their experiences, views and ought to be status. In this study, quantitative analysis or correlation method could not be done as it is more objective in nature. The result should be based on the interpretation of the opinions and the experience of the respondent, so, qualitative approach was adopted for this study. A semi- structured questionnaire was prepared for the interview which worked as a guide and helped me to stay within the boundary of my study. The key informants were identified and long interview with open- ended question was done with the officials of the municipality, concerned organizations, private companies involved. The data was interpreted to dig out the meaning from their opinions and experience.

Although the major method of my research is interpretive, opinion survey in quantitative method was done to find out the satisfaction and perception of the people regarding solid waste management in Bharatpur. The opinion survey supplements the major paradigm of my study i.e. interpretation but it was identified only in the later phase of the study. Closed- ended questions were prepared, sample size was defined and the survey was conducted. Similarly, unstructured interviews were also helpful in identifying the context of the system with relevant questions.

1.9. Expected Output

This research will try to find out the ways to incorporate private sector along with the public party in financing the infrastructure of Bharatpur Metropolitan City. It will review and study about the gaps in the existing policies and implementation in PPP in the context of Nepal, especially in Bharatpur. The research will look upon the ideas among different stakeholders like government authorities, municipality, private companies, local people etc. and try to find out a way forward in this case. Similarly, it will also study about the changing financial mechanism of Bharatpur Metropolitan City and try to find out the solution of the problems they are facing in this case.

1.10. Schedule

The research shall be completed within the stipulated time schedule provided by the Department of Architecture and Urban Planning, Institute of Engineering.

Table 1 Schedule of Thesis

S.N.	Proposed Activities						
		June	July	August	September	October	November
1	Thesis Proposal submission						
2	Thesis Proposal Presentation						
3	Revision of Proposal						
4	Preliminary Thesis Submission						
5	Preliminary Thesis Presentation						
6	Field Visit						
7	Analysis of data						
8	Mid -Term Thesis Submission						
9	Mid -Term Thesis Presentation						
10	Revision						
11	Draft Final Thesis Submission						
12	Final Thesis Presentation						
13	Final Thesis Submission						

2. Literature Review

2.1. Public Private Partnership: Introduction

Nepal is a landlocked country with difficult terrain and limited skilled human resources. With rapid urbanization i.e. increasing number of municipalities, the need of urban infrastructure has increased tremendously. Traditionally, the government of Nepal has been in charge of constructing, financing and maintaining infrastructure projects. The government alone is not capable of providing the necessary infrastructures and services. After 1990s, Nepal adopted free market economy. With this, the policies are now developed to involve private sector in the production and distribution of services. With the liberalization of economy, Public Private Partnership (PPP) concept has emerged as an alternative solution of infrastructure financing mechanism (Gaire, 2015).

Public Private Partnership (PPP) has become a popular tool to deliver infrastructure and public services around the world. There is a wide range of PPPs with diverse features and involved in different activities. PPP has over the years proven to be a good procurement method for infrastructure projects. The partnership combines the efficiency, expertise, and innovation etc. of the private sector as well as appropriate risk allocation between both public and private sectors. This method also provides an alternate avenue for capital needed for the projects. The financing options provided through PPP, make this method increasingly popular due to the current global financial crisis (Agyemang, 2011).

The World Bank defines PPPs as a long-term contract between a public entity or authority and a private party, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration, is linked to performance.

The Asian Development Bank defines PPPs as a range of possible relationships among public and private entities in the context of infrastructure and other services. A strong PPP allocates the tasks, obligations, and risks among the public and private partners in an optimal way.

In 2004, European Commission defined PPP as the forms of cooperation between public authorities and the world of business which aim to ensure the funding, construction, renovation, management and maintenance of an infrastructure of the provision of a service.

In 2005, Standard and Poor's PPP Credit Survey defined PPP as any medium- to- long term relationship between the public and private sectors, involving the sharing of risks and rewards of multisector skills, expertise and finance to deliver desired policy outcomes.

According to German Public Private Partnership Task Force, PPPs are aimed at increasing the efficiency of infrastructure projects by means of long- term collaboration between the public sector and private business.

Canadian Council of PPP defines PPP as a cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public need through the appropriate allocation of resources, risks and rewards.

National Council of Public Private Partnerships (US) defines Public Private Partnership (P3) as a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills, and assets of each sector (public and private) are shared in delivering a service or facility for the use of general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/ or facility.

Partnerships British Columbia defines PPP as a legally- binding contract between government and business for the provision of assets and the delivery of services that allocated responsibilities and business risks among the various partners.

In 2010, Federal Highway Administration of United States Department of Transportation defined PPP as a contractual arrangement between public and private sector entities pursuant to which the private sector is involved in multiple elements of public infrastructure projects.

According to a manual prepared by UNDP's Public Private Partnership for Urban Environment (PPPUE), PPP is a co-operative arrangement between government or local bodies and private sector in the presence of civil society in a statutory and transparent manner. Civil society means a person or an organization motivated with non-profit intention and aims to benefit a social group or to conduct any specific work. In small PPP projects, society itself can also be private partner.

Municipality implementing Integrated Action Plan or other plans prepared by public or with public participation and endorsement could be one important partnership arrangement though municipality does the implementation. Here, private parties, civil societies and other not-for-profit non-governmental organizations contribute with advices, consultation, and permission or mandate whereas municipality does the implementation. Similarly, in another arrangement, government does not involve directly in infrastructure and service provisions but provide funding in the form of loans; grants or guarantees and all provisions are provided by private sector. For example, municipality provide grant to community to provide with water supply. Though government may finance all cost, generally in Nepal, government is financing partially asking beneficiaries to bear a part so that their ownership and sense of pride is enhanced.

Some definitions make it seem as though most of the risks are transferred to the private sector. In reality, there is a relatively equal amount of risk transfer in a properly modeled PPP. However, both the public and private sector shares the risks and rewards potential in the delivery of the service and/or facility develop the necessary skill base to procure infrastructure by way of PPP, including the capacity to create and maintain a regulatory framework (Garg & Grag, 2016). Across the numerous definitions, there is a universal emphasis that PPPs involve both public and private parties, they involve delivery of a service or asset that is has some public goods characteristics, they involve a transfer of a significant amount of project risk to the private parties and private parties seek some performance based returns from them.

Similarly, PPPs play an important role in bringing private sector competition to public monopolies in infrastructure development and service provision and in merging the resources of both public and private sectors to better serve the public needs that otherwise would not be met. Many infrastructure projects around the world have been successfully developed through PPPs with significantly increased value and substantial cost savings. For example, it is reported that U.S. state and local governments have routinely experienced 10–40% cost savings and improvements in service quality and asset management through PPPs (Zhang & Chen, 2012). However, in worldwide practices, there are mixed results, substantial controversy, criticism and conflict over PPPs. Many privatized projects suffered disastrous consequences because of construction cost/duration overruns, changing market demand, depreciation of local currencies and/or reduction in tolls/tariffs by utilities. Some of them had been postponed or abandoned by the sponsors, and others had to be bailed out by host governments (Zhang & Chen, 2012).

PPP is often described in terms of the bundling of the project activities that they involve and the transfer of risks associated with this bundle to the private sector. Bundling makes the PPP grow in size to such a level that they become virtual monopolies and with the inherent transfer of risks to private agencies involved in PPPs, these monopolies get transferred to the private domain. Theoretically, arguments for bundling of activities lie at two levels. Firstly, the contracting costs for infrastructure construction and for service delivery are very different, but it is often difficult (or extremely costly) to specify contracts separately for infrastructure delivery and for service delivery as they affect each other significantly. It is often cheaper to bundle the two together and contract them out as a single project. Secondly, it is by bundling that a cost intensive project can be made investment neutral for the government. The initial project costs are compensated a revenue stream running into the future, to make the project commercially feasible (Garg & Garg, 2016). The risk reverse nature of public servants and the complexity of government procurement also motivate the procuring government agent to bundle as many project components as possible and get the same completed in one procurement cycle. However, this leads to added complexity of the project, making the project a near monopoly in the hands of the private agent.

PPPs are specified to be legally bound and with rigid contractual agreements, as for the government formally signed understandings (legal contracts) are necessary. These also become essential as the public agent has to stick to the needs of maintaining transparency, accountability, equity, and consistency. Signed and legally enforceable contracts are also essential to protect the public and private interests in the projects. Similarly, such contracts also restrict the flexibility in the project which adversely affect the project outcome and limit its deliverability.

The large scale bundling of activities and the long term, rigid contracting converts PPP into a complex project for delivery of public services where the monopoly lies in the hand of private sector. The long term nature of the contract, without any time spaced modularization, or even its possibility, leads to complex contracts where the possibility of walking out of the contract is high. This results in minimal delivery levels of what was promised and maintained. In such situation, both the private and public agencies lose confidence in the concept, and the concept itself has to struggle to remain.

It has been very important to understand whether this complexity is a fundamental nature of PPP projects or can be managed adequately. Management scholars like Baldwin, have argued that complexity needs to be managed by modularization. This involves dividing a complex set of activities into distinct modules, with modules being self-contained and the module interfaces paid due attention. In the context of infrastructure projects taken up by the PPP route, this implies breaking up a large project into smaller bits and pieces of manageable size, with the bits and pieces capable of coming together to deliver the whole (Garg & Garg, 2016). These thoughts are shared by numerous PPP experts, who have started to bring evidence that PPP projects can even be conceived of and taken up without making them huge and monolithic. Unbundling would result in a modular PPP, conceived for short term, less complex, and flexible in nature, and existing in an environment where PPPs can be bought and sold in a market. Notably, this can be achieved without tampering with the core features of PPPs.

2.2. Background

The basic physical and organizational structures and facilities (e.g. buildings, roads, and power supplies) needed for the operation of a society or enterprise is called infrastructure. Infrastructure and basic services are the foundation and delivery vehicle of a functional and resilient urban environment. Equitable basic services such as water, sanitation, drainage, energy, and transport are key ingredients for the economic and social development of urban areas. They also sustain and improve the health, livelihood, and general living environment of urban residents. Every day, almost 180,000 new urban dwellers need access to energy, water, sanitation, waste management services, healthcare, education, transport, and need to earn a living in cities in the developing world. To meet this growing demand, at least \$70 trillion of global infrastructure investment is needed between 2016 and 2030 (Habitat III, 2016).

Infrastructure is a fundamental sector that every country needs to develop in order to achieve overall development, but governments in developing countries have limited resources for it. There is a huge demand on public infrastructure and services worldwide whereas the government budget of any country is always limited. In addition, the public sector often lacks the technologies, skills and expertise required for efficient infrastructure development. Furthermore, civil servants often have less incentive to invest wisely than private project managers. Facing these problems, governments worldwide are exploring innovative means for improved infrastructure development, and consequently different types of public-private partnerships (PPPs) have been practiced (Zhang & Chen, 2012).

Public private partnerships (PPPs) are contractual arrangements between public sector organizations and private sector investors for joint, symbiotic and collaborative provision and financing of public projects and services. They arise out of the realization that although the public sector is responsible for the delivery of infrastructure projects, it often encounters financial, technical and institutional limitations in availing such projects. There are widespread evidence of a growing utilization of PPPs in the delivery of public infrastructure facilities and services to meet the numerous needs of modern economies (Garg & Grag, 2016).

According to a World Bank report published in 2012, Nepal is one of the fastest urbanizing countries in Asia, with the urban population growing at the rate of more than 5 percent annually since 1970s (The Kathmandu Post, 2016). In Nepal, municipalities are considered as urban areas. The declaration of municipality is largely guided by the size of the population residing in the area. The level of urbanization in Nepal remains low but the pace of urbanization has remained faster and is likely to remain so in the future. Only 17.1% of Nepal's population resided in 58 designated urban areas according to the 2011 census. However, with the addition of 159 municipalities in 2014/15, 40% of Nepal's population resided in 217 designated urban areas (National Urban Development Strategy, 2017). Now, there are 241 municipality, 12 sub-metropolitan cities and 4 metropolitan cities (Ghimire, 2017). The urban centers now accommodate 42% of the total population of Nepal, according to Economic Survey 2015- 16 (The Kathmandu Post, 2016).

Similarly, Nepal is now preparing to transform into a middle- income country as per 'Vision 2030' prepared by the National Planning Commission. The plan is to graduate from the status of Least Developed Country (LDC) by 2022, and join the rank of middle-income country by 2030. 'Vision 2030' has laid down strategies and action plans to raise Nepal's per capita income by more than three folds to \$2,500 by 2030, eradicate poverty and give a boost to other major socio-economic indicators. (Sharma R. , 2016) However, lack of basic infrastructure has forced Nepal to witness an average of below 4 percent economic growth over the past decade. Thus, Nepal needs to invest heavily on infrastructure, if the country wants to come out of the vicious cycle of low economic growth, poverty and unemployment. (Sharma H. B., 2017)

Despite growing urbanization, the government's investment in these areas is relatively low compared to actual requirement. The World Bank report had also said investment in the Kathmandu valley was inadequate, underscoring the need for rapid urban infrastructure development due to inclining migration rate (The Kathmandu Post, 2016). Many of the newly-announced municipalities do not have basic infrastructure and lack basic requisites like safe houses and drinking water. As the development is not possible with the investment of the government, it should be driven largely by a private sector - local and foreign - that has the technical, managerial and financial clout to deliver

efficient, high-quality and cost-effective results on the ground. Similarly, the government has to create the investment-enabling environment for the private sector. As Nepal has to do a lot in infrastructure development - from increasing accessibility to facilitating service delivery and enhancing cost effectiveness, the government has no other option than to create conducive investment environment and invite private sector, both domestic and foreign, to invest in the infrastructure sector. (Sharma R. , 2016)

Bharatpur Municipality in the last 4 years have been promoted to Sub- Metropolitan and then to Metropolitan City. After being metropolitan city, Bharatpur needs to invest huge amount of budget in infrastructure and development programs. As per the Annual Budget 2074/075 of Bharatpur Metropolitan City, Rs. 13 crore is allocated for physical infrastructure and development programs, Rs. 4 crore for urban infrastructure projects and Rs. 6 crore for large infrastructure projects.

Table 2 Budget of Bharatpur

Total Budget: Rs. 90 crore approx.	
Physical Infrastructure	Rs. 13 crore
Urban Infrastructure	Rs. 4 crore
Large Infrastructure	Rs. 6 crore

Similarly, out of the total budget allocated (approx. Rs. 90 crore); almost 20% (Rs. 16 crore) of the budget has to be spent on administrative expense. The municipality gains only approx. Rs. 27 crore from its Own Source Revenue (OSR) and gains Rs. 11 crore as Central Government's Development Grant.

Table 3 Expenditure of Bharatpur

Source of Revenue	
Own Source Revenue (OSR)	Rs. 27 crore
Central Government's Development Grant	Rs. 11 crore

These sources are not enough for the municipality. This can be compensated by involving private sector in development activities and mobilizing their financial, human and technical resources.

2.3. The Origin of Public Private Partnership

PPPs have come a long way since they were first conceived. However, their first conception is a highly debatable aspect. Some trace its origin back to 1438 when a concession was awarded to a French nobleman Luis de Bernam to charge the fees for goods transported on the Rhine, or to early 1600s, when the British crown allowed the East Indian company, a private enterprise, to explore the east and exploit what it finds there in return for a fixed share. Similarly, the origin of the term “BOT concession” is acknowledge by Grimsey, to have been come from the concession granted to Perrier in France in 1782 for water distribution. Similarly, the term Public Finance Initiative (PFI) evolved out of the John Major's conservative government in the UK in 1991 (Garg & Grag, 2016).

2.3.1. Origin of Public Private Partnership in Europe

The PPP sources might be found in the concession contracts. The history researchers show that as early as 1438, the French nobleman Luis de Bernam was granted a river concession to charge the fees for goods transported on the Rhine. Another well-known example of the concession of this type was the one that had been granted in 1792 in France to the brothers Perrier for water distribution in Paris. Soon the French legal practice formed the so-called public works concession (*concession de travaux publics*). The broad participation of private capital in public investments has found widespread use in the period since the turn of the seventeenth and eighteenth centuries to the end of the nineteenth century, when construction of infrastructure facilities (water channels, roads, railways) in Europe and later in America, China and Japan was funded by private sources under concession contracts. (PPP Krakow)

After the period of expanded government intervention in the infrastructure sector during the period from the late nineteenth century to the 1970s of the twentieth century the transformation of the infrastructure into market oriented economy became very popular in the 1980's and 1990's. In 1992 the UK began to implement Private Finance Initiative (PFI) a comprehensive program of the government, which was to cover the state-owned enterprises. Under PFI, the public sector became a purchaser of services provided by an entrepreneur, while the latter provided the necessary fixed assets for their implementation. Concessions and PPP integrated gradually into the legal systems of other

European Union countries. The most of the duplicated ones were the British and the French models. The contracts of this type for construction and infrastructure management in countries such as Germany, Italy, Spain, Portugal, the Netherlands, Scandinavian countries, Ireland, Greece, Czech Republic, Bulgaria, Romania, Hungary reached hundreds of millions of Euros, but often also concern small, local projects. (PPP Krakow)

2.3.2. Origin of Public Private Partnership in America

Private sector involvement in the delivery of public services i.e. PPP have been used since 1970s. PPPs are used in housing, health, corrective facilities, energy, water, and waste treatment projects. Roadways were first developed in the eighteenth century by the private sector in the form of toll ways and turnpikes. The private sector was also involved in the nineteenth century in the development of canals and railroads. In the twentieth century, with the growing economy and the need for new infrastructure, the state governments and the federal government assumed the responsibility for providing infrastructure (Agyemang, 2011).

In the early 1980s private participation in public sector projects emerged, specifically in the increasingly developing southern and western states. The United States Congress, in 1987, approved a pilot program authorizing 35% of federal funding to be channeled into government-sponsored toll road projects in nine states. Australia and most countries in Europe had previously effectively applied public private partnership (PPP) in most projects. The States of California and Virginia were among the leading states to introduce the PPP method of financing in their state projects. The Dulles Greenway in Virginia was the first project executed in the United States with the PPP model. The Virginia Department of Transportation later implemented legislation permitting private participation in state projects. There are currently 23 states in the United States as well as Puerto Rico which have passed legislation to allow PPP application in transportation projects (Agyemang, 2011).

2.3.3. Origin of Public Private Partnership in India

PPP in India began with private sterling investments in Indian railroads in the latter half of the 1800s. By 1875, about £95 million was invested by British companies in Indian “guaranteed” railways. In the early 1900s, PPP was seen when private producers and

distributors of power emerged in Kolkata (Calcutta Electric Supply Corporation) and Mumbai, with the Tatas playing a prominent role in starting the Tata Hydroelectric Power Supply Company in 1911 (Chatterjee, 2012).

A clear historic shift was realized on January 30, 1997, when the Infrastructure Development Finance Company was incorporated in Chennai under the initiative of the then Finance Minister P Chidambaram. The firm, promoted by the government of India, was set up on the recommendations of the “Expert Group on Commercialization of Infrastructure Projects”. The idea was that this would signal the government’s seriousness in channeling private sector capital, expertise and management in the nation’s infra development (Chatterjee, 2012).

The legislations also helped in the growth of PPP in India. The Electricity Act, 2003; the amended National Highways Authority of India Act, 1995; the Special Economic Zone Act, 2005; and the Land Acquisition Bill and the creation of new institutions like regulatory authorities in telecom, power and airports, implementing authorities like the National Highways Authority of India, and financial institutions like the Infrastructure Development Finance Company, the India Infrastructure Finance Company helped PP grow in India.

2.3.4. Origin of Public Private Partnership in Nepal

In Nepal, joint ventures like Salt Trading Corporation between the private sector and government, founded in 1963, is supposed to be an early Nepali example of PPP. This joint venture suits our stated definition and rationale quite well. The only reason why it was not quite a PPP is that it was an absolute public-private national monopoly completely devoid of competition and the full rigors of the market mechanism. (Rana)

The Build, Own, Operate and Transfer (BOOT) model for infrastructure development was incorporated into Nepal's planning documents as early as 1992, though the actual progress in project and legislative development was slow and took over a decade. (PPP Knowledge Lab) Some would underscore that moving towards an open, liberal economy in 1990 resulted in very prominent Nepali innovations towards PPP in the infrastructure sector, as for example, the promulgation of the Hydropower Act 1999; Electricity Act

1999; BOT Policy 1999 etc. While all of the above historical developments are significant it must be stressed that it was only since 2000 that the concept got well underway in full steam with the initiative of the UNDP to bring about mass awareness and to formulate and promote projects for implementation at the level of the municipalities. (Rana)

The success of the UNDP's policy initiative is to be witnessed in how quickly the concept got macro-economic space. Thus it was first incorporated as a part of the national budget for 2003-04 under the theme 'People-Public-Private Partnership' (P4) by Finance Minister, Dr. P.C. Lohani. The 4th P was added to include a sense of 'people's participation' in development at the grass roots by mobilizing cooperatives and user groups in the agro-forestry, irrigation and energy sectors.

The formulation of the Ministry of Agriculture and Cooperatives Guidelines for PPP 2061 is a direct result of that intervention. It set the tone for PPP as an instrument for rural development- rather than being limited in scope to only urban development. Nepal's PPP legislation first came into operation in the form of an Ordinance in August 2003 and was ratified as an Act in December 2006.

FNCCI with its call for a One-Village-One-Product (OVOP) approach to rural development took PPP in Nepal to new heights. The above concept was given a new lease of life in the Budget of 2005-06. Here PPP was given a more central theme for all round development engrained on the market economy; with the private sector been given the lead role for generating faster economic growth and employment based on aggressive economic, financial and labor reforms that underscored privatization of public sector enterprises. Similarly, the 2005-06 Budget welcomed PPP in social sectors like school education and public health. Significantly, however, the Budget of 2008-09 presented by the Finance Minister, Dr. Babu Ram Bhattarai, accepted PPP as the basis of new economic policy for the new Nepal (Rana).

In July 2016, the government of Nepal announced it would establish a PPP Center to make investment arrangements for infrastructure and service-based projects. The PPP cell formed at the National Planning Commission (NPC) will perform three main jobs: it will

facilitate the design, development and operation of PPP projects; support the implementation of legal provisions for PPP; and build the capacity of government bodies to work on PPP (PPP Knowledge Lab)

In 2015, the government introduced the PPP Policy to assist project developers and expedite the implementation of PPP projects. Projects to be built under PPP will be identified by the government, but the Policy incorporates a provision covering ‘unsolicited proposals’, which paves the way for private developers to directly approach the government for the development of various projects. As of 2016, PPP activity has been focused on the provision of the most essential urban services, such as water supply and distribution, energy focused on development of the hydropower sector, sanitation, solid waste management, and, to a lesser extent, on road and urban transportation management. (PPP Knowledge Lab)

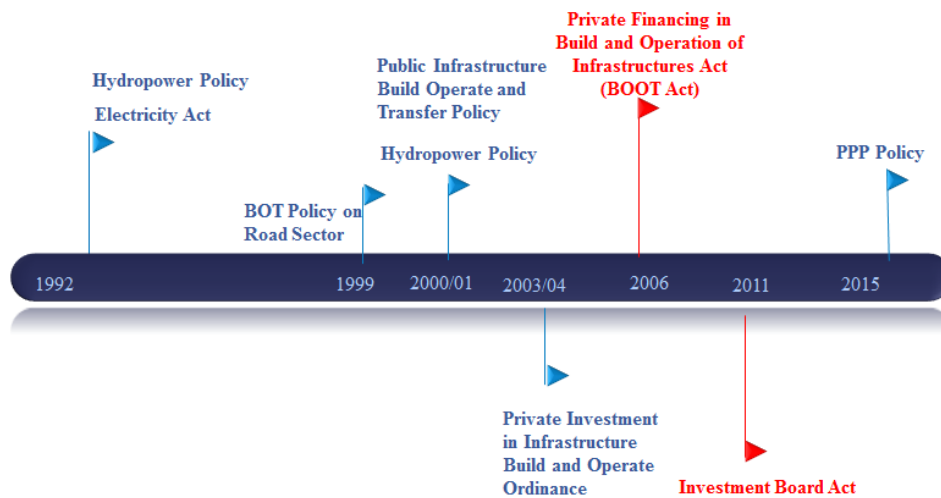


Figure 1 Timeline of PPP Activities in Nepal

Source:(Bhetuwal, 2017)

2.4. Partners and their Roles in Public Private Partnerships

In the White Paper on Public Private Partnership (PPP), prepared by National Planning Commission in 2011, the public and private partners that are eligible to enter into PPP arrangements are defined. This defines the public bodies of the Government of Nepal which may procure PPP projects under this policy, as well as what are considered eligible private partners to enter into PPP contracts. The important role of citizens and civil society is also defined.

2.4.1. Public Partners

PPP arrangements under this White Paper are to be applied at the central and local levels in Nepal. As such, the public partners that are eligible to enter into PPP arrangements are:

- Central or National level ministerial and government departments individually or in inter-ministerial arrangements
- Public bodies, namely entities having majority shareholding of the government, e.g. Civil Aviation Authority, Electricity Authority etc.
- Federal/Regional level offices of the Government of Nepal
- Local level public bodies, specifically district, municipal and VDC level government entities

2.4.2. Private Partners

PPP projects require private partners to cover the multiple aspects of a project, potentially including design, construction, project management, financing, operation and maintenance. The Government of Nepal recognizes the few domestic private parties in Nepal have experience in covering all project related activities, and that experience with fully-integrated life cycle PPP projects is limited. It is also recognized that PPP projects are often undertaken by consortiums of private partners who collectively mobilize the capacity required for the project.

As contemplated in this White Paper, private partners who are eligible for PPP projects must have appropriate experience, capacity and financial resources to undertake a PPP project of the nature required in a responsible fashion for the duration of the PPP project lifetime. Such private partners may be domestic or international, although the

Government encourages the involvement of Nepali businesses wherever possible. Private parties should be appropriately registered legal entities complying with all relevant requirements of Nepal and legally entitled to enter into such arrangements. Private partners eligible to enter into PPP arrangements include:

- Private enterprises: domestic or foreign
- NGO/INGOs
- Community based organizations
- Cooperative organizations

A private enterprise will normally be a company or a firm registered under the prevailing rules and regulations of Nepal. However, the specific eligibility criteria defined for a project will take into account the nature and size of the projects and will encourage wherever possible small entrepreneurs or community organizations to take part in smaller local PPP projects (White paper on Public Private Partnership, 2011).

2.4.3. Citizens and Civil Society

Civil society refers to the arena of collective action around shared interests, purposes and values. The role of civil society in PPP therefore is very crucial as they are primarily concerned with the project. They are the ones who share the benefits and losses from the project or the ones who lose their exclusive rights over natural resources.

Civil society or different sections of it have various roles at different stages of PPP. During the phase of project identification, their role is to ensure that their demand for a particular service is met. It is essential to ensure that the specific project components and strategies for their implementation are acceptable to all stakeholders and follow participatory processes during the phase of project structuring and formulating. This also provides the opportunity to know about the level of willingness to pay and the actual demand for services. During the post implementation phase as well, civil society monitors and supervises the quality and level of service provided by the private operator of the service.

Most significantly, as all stakeholders are involved in the decision making process, this improves the sense of ownership of the project and can minimize any conflicts that may arise among the affected parties.

Another important aspect of PPP is to provide maximum benefit to the civil society especially in projects where natural resources are utilized. The benefit could be provided in various forms, for example, in terms of shares in the equity, in terms of development support activity, direct revenue sharing, and subsidized rates for service delivery, etc. (White paper on Public Private Partnership, 2011)

2.5. Types of Public Private Partnerships

PPPs can take different forms depending on the nature of the procurement, desired allocation of risk, and investment requirements. The figure below shows the comparative contract duration and private sector's responsibility and risk associated with them.

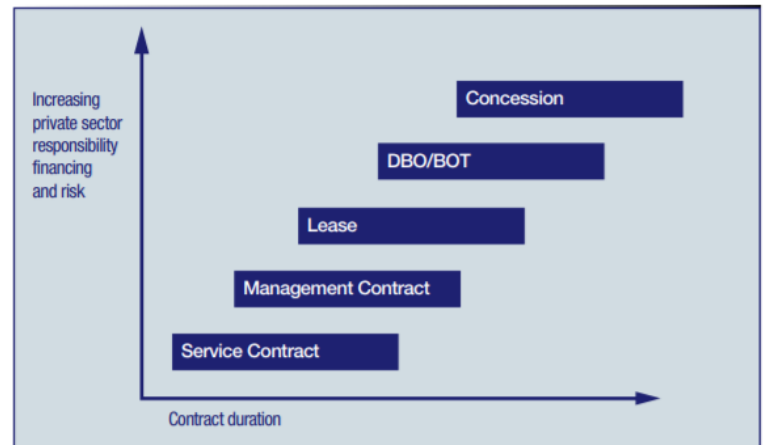


Figure 2 Responsibilities and Risk in PPP Projects

Source: (Public Private Partnership, 2008)

In a broader view, PPP can be divided into three types:

i. User PPP

In user PPP, the public sector transfers either the ownership or the use of its assets and the private sector contributes its voluntary labor to run the services. User PPP occurs when local authorities withdraw from delivering services and local citizens take over the responsibility for it. In order to reduce expenses, the services not considered essential such as public libraries etc. are given up. For user PPP to take place, it requires the existence of an active community or group of active citizens who think it is worth continuing their services and offers to dedicate their time and effort for it.

ii. Strategic PPP

Strategic PPPs are created when country faces a very difficult problem such as economic or a political crisis, which needs special attention of all sides to overcome. Strategic PPP is not formalized and more open in nature. Strategic PPP brings the representatives of the public and private sectors together to address the issue of economic and political development jointly.

iii. PPP for Service Delivery

PPP for service delivery are common in many fields where local administrations offer service to the citizens such as, drinking water supply, waste collection, waste water treatment, solid waste management, operation of transport services, utilities, maintenance of public places and gardens and real estate development and management. PPP for service delivery is the most formalized in nature. They are based on the formal contracts between both the public and private sides. In some cases, partners even create new companies where both enter as stakeholders with different degree of participation.

Other types are Public Private Partnerships are as follows:

2.5.1. Service Contract

Service contracts are the simplest form of PPP. The private partner does not operate any public assets, but simply contracts with the public sector to provide a specified level of service (Public Private Partnership, 2008). The public authority remains the primary provider of the infrastructure service and contracts out only portions of its operation to the private partner. The private partner must perform the service at the agreed cost and must typically meet performance standards set by the public sector (Types of Public Private Partnership, 2013). Operation and maintenance concessions enable the public sector in developing countries to transfer commercial risk to the private sector and to create incentives for the private sector to ensure efficient revenue collection and to undertake regular maintenance to increase the reliability of facilities and postpone their renewal (Toolkit for Public- Private Partnership in Roads and Highways, 2009). These contracts are typically 1–3 years in duration, and are common in the road maintenance and health sectors (Public Private Partnership, 2008).

2.5.2. Management Contract

Management contracts typically involve the operation of public assets by a private partner (Public Private Partnership, 2008). A management contract expands the services to be contracted out to include some or all of the management and operation of the public service (i.e., utility, hospital, port authority, etc.). Although ultimate obligation for service provision remains in the public sector, daily management control and authority is assigned to the private partner or contractor. In most cases, the private partner provides working capital but no financing for investment. The private contractor is paid a predetermined rate for labor and other anticipated operating costs. Management contract variants include supply and service contract, maintenance management and operational management (Types of Public Private Partnership, 2013). Contract periods are usually limited to 3–5 years.

2.5.3. Lease

Leases are similar to management contracts, but involve a greater transfer of operational risk as the private partner pays a lease fee and generates income solely from the use of the assets (Public Private Partnership, 2008). Except for new and replacement investments, which remain the responsibility of the public authority, the operator provides the service at his expense and risk. The duration of the leasing contract is typically for 10 years and may be renewed for up to 20 years. Responsibility for service provision is transferred from the public sector to the private sector and the financial risk for operation and maintenance is borne entirely by the private sector operator. In particular, the operator is responsible for losses and for unpaid consumers' debts. Leases do not involve any sale of assets to the private sector (Types of Public Private Partnership, 2013).

2.5.4. Build Operate Transfer (BOT):

BOT and similar arrangements are a kind of specialized concession in which a private firm develops a new infrastructure project or a major component according to performance standards set by the government. Under BOTs, the private partner provides the capital required to Build the new facility, Operate & Maintain (O&M) for the contract period and then return the facility to Government as per agreed terms. Importantly, the private operator now owns the assets for a period set by contract—sufficient to allow the

developer time to recover investment costs through user charges. While the demand risk can be shared by the public and private partners, the operating and finance risks remain squarely with the private partner. Contract periods are often 20–30 years, allowing for return on investment. (Types of Public Private Partnership, 2013)

BOTs generally require complicated financing packages to achieve the large financing amounts and long repayment periods required. At the end of the contract, the public sector assumes ownership but can opt to assume operating responsibility, contract the operation responsibility to the developer, or award a new contract to a new partner (Types of Public Private Partnership, 2013). BOT-type of concessions offer further advantages of increased value for money through efficiencies in construction costs as well as plant and labor management and to escape public budget constraints and to mobilize investment funds rapidly through project finance non-recourse funding. However, tendering and contracting may initially be lengthy procedures if there is little previous experience in the country (Toolkit for Public- Private Partnership in Roads and Highways, 2009).

Many variations on this type of contract have been implemented with a consequently growing number of acronyms used to label them (DBFO, BOOT, BTO etc.). This PPP type is also referred to as “greenfield” in the PPI database. The main characteristic of BOT and similar arrangements are given below:-

- i. **Design Build (DB):** Design and Build is a project delivery method that combines two, usually separate services into a single contract. With design-build procurements, owners execute a single, fixed fee contract for both architectural/engineering services and construction. The design build entity may be a single firm, a consortium, joint venture or other organization assembled for a particular project. With design-build delivery, the design-builder assumes responsibility for the majority of the design work and all construction activities, together with the risks associated with providing these services for a fixed fee. When using design-build delivery, owners usually retain responsibility for

financing, operating and maintaining the project. After the construction, the facility is transferred (Toolkit for Public- Private Partnership in Roads and Highways, 2009).

- ii. **Design- Bid- Build:** It is the traditional project delivery approach used to procure public works. The design-bid-build model segregates design and construction responsibilities by awarding them to an independent private engineer and a separate private contractor. By doing so, design-bid-build separates the delivery process into three linear phases: Design, Bid and Construction. This also includes quantity-based maintenance contracts. Remuneration of the contractor is based on unit prices defined in the construction or maintenance contract and quantities measured on site. Design works are previously defined by a consultant and a supervision consultant typically assists the Contracting Authority in controlling the quality and quantity of work done. (Toolkit for Public- Private Partnership in Roads and Highways, 2009)
- iii. **Build Transfer Operate (BTO):** Where Private sector designs and builds the facility. The transfer to the public owner takes place at the conclusion of construction. Concessionaire is given the right to operate and get the return on investment.
- iv. **Build-Own-Operate (BOO):** A contractual arrangement whereby a developer is authorized to finance, construct, own, operate and maintain an infrastructure or development facility from which the developer is allowed to recover his total investment by collecting user levies from facility users. Under this Project, the developer owns the assets of the facility and may choose to assign its operation and maintenance to a facility operator. The transfer of the facility to the Government, Government Agency or the Local Authority is not envisaged in this structure (Types of Public Private Partnership, 2013). However, at the end of the project, the original agreement may be renegotiated, a new agreement may be

negotiated, or the facility may be purchased by the government (Grimsey & Lewis, 2004).

- v. Build- Own- Operate- Transfer (BOOT): An arrangement whereby a facility is designed, financed, operated and maintained by the private company. Ownership rests with the company until the end of the contract period, at which point ownership and operating rights are transferred to the government, normally without charge (Grimsey & Lewis, 2004).
- vi. Build- Operate- Transfer (BOT): it is an agreement where a facility is designed, financed, operated and maintained by the concessionaire for the period of the concession. The legal ownership of the facility may or may not rest with the private company (Grimsey & Lewis, 2004). In this BOT Arrangement, private partner does not collect any charges from the users. His return on total investment is paid to him by public authority through annual payments (annuity) for which he bids. Other option is that the private developer gets paid based on the usage of the created facility.
- vii. Design-Build Operate (DBO): A form of PPP, in which the public sector provides finance for a capital investment project but the ownership, is involved in private hands. A single contract is let out for design construction and operation of the infrastructure project.
- viii. Design- Build- Finance (DBF): A form of PPP that involves the procurement of an asset using private finance, without private sector operation and provision of the associated services.
- ix. Design Build Finance Operate (DBFO): With the design–build–finance–operate (DBFO) approach, the responsibilities for designing, building, financing, and operating & maintaining, are bundled together and transferred to private sector partners. DBFO arrangements vary greatly in terms of the degree of financial responsibility that is transferred to the private partner.

Table 4 Types of Public Private Partnership

Type	Own	Finance	Design	Build	O&M
Service Contract	Public	Public	Private	Private	Private/ Public
Management Contract	Public	Public	-	-	Private
Performance- based Maintenance Contracts	Public	Public	-	-	Private
Lease	Public	Private	-	-	Private
Design- Build	Public	Public	Private	Private	Public
Design- Bid- Build	Public	Public	Private	Private	Public
Build- Transfer- Operate	Private	Private	Private	Private	Private
Build- Own- Operate	Private	Private	Private	Private	Private
Build- Own- Operate- Transfer	Private/ Public	Private	Private	Private	Private
Build- Operate- Transfer	Public/ Private	Private	Private	Private	Private
Design- Build- Operate	Private	Public	Private	Private	Private
Design- Build- Finance	Public	Private	Private	Private	Public
Design- Build- Finance- Operate	Public	Private	Private	Private	Private

2.5.5. Concession

Concessions transfer a maximum amount of risk (e.g., demand, operating, investment/finance, etc.) to a private operator in exchange for some form of exclusive operating license. A concession makes the private sector operator (concessionaire) responsible for the full delivery of services in a specified area, including operation, maintenance, collection, management, and construction and rehabilitation of the system. Importantly, the operator is now responsible for all capital investment. Although the private sector operator is responsible for providing the assets, such assets are owned by the public even during the concession period. The public sector is responsible for establishing performance standards and ensuring that the concessionaire meets them. In essence, the public sector's role shifts from being the service provider to regulating the price and quality of service. The concessionaire collects the tariff directly from the system users. The tariff is typically established by the concession contract, which also includes provisions on how it may be changed over time. In some cases, the government may choose to provide financing support to help the concessionaire fund its capital expenditures. The concessionaire is responsible for any capital investments required to build, upgrade, or expand the system, and for financing those investments out of its resources and from the tariffs paid by the system users. A concession contract is typically

valid for 25–30 years so that the operator has sufficient time to recover the capital invested and earn an appropriate return over the life of the concession. Government may contribute to the capital investment cost by way of subsidy (Viability Gap Funding - VGF) to enhance commercial viability of the concession. The concessions are effective contracts to provide investment for creation of new facilities or rehabilitation facilities. (Types of Public Private Partnership, 2013)

2.5.6. Performance- based Maintenance Contracts

These contracts are derived from the previous type of arrangement by shifting the focus from administration (maintenance activities and resources) to certain performance conditions valued by the users. They typically leave contractors with more autonomy in the design and organization of the works. Remuneration is based on a monthly fee determined up-front stated in the contract and linked to performance indicators. In PBC the client does not specify any method or material requirements. Instead he specifies performance indicators that the contractor is required to meet when delivering maintenance services. For example, the contractor is not paid for the number of potholes he has patched, but for the output of his work: no pothole remaining open (or 100% patched). Failure to comply with the performance indicators or to promptly rectify revealed deficiencies adversely affects the contractor's payment through a series of clearly defined penalties. In case of compliance the payment is regularly made, usually in equal monthly installments (Toolkit for Public- Private Partnership in Roads and Highways, 2009).

2.5.7. Joint Venture

Joint ventures are alternatives to full privatization in which the infrastructure is co-owned and operated by the public sector and private operators. Under a joint venture, the public and private sector partners can either form a new company (SPV) or assume joint ownership of an existing company through a sale of shares to one or several private investors. A key requirement of this structure is good corporate governance, in particular the ability of the company to maintain independence from the government, because the government is both part owner and regulator. From its position as shareholder, however, the government has an interest in the profitability and sustainability of the company and can work to smooth political hurdles (Types of Public Private Partnership, 2013).

2.6. Procedure of Public Private Partnership Projects

The demand of infrastructure and services is huge and the government budget is always limited to fulfill the needs. So, the concept of Public Private Partnership (PPP) has been practiced all over the world. In PPP, the public sector will be able to utilize the technologies, skills, expertise and finance of the private sector for infrastructure development. Successful infrastructure development through PPPs necessitates the adoption of a public–private win–win solution that adequately addresses the concerns of both sectors and guarantees the interests of each of them (Zhang & Chen, 2012). This win–win solution means that the PPP project agreement should be designed in a way that it allows the private partner to make adequate returns to its capital investments and also allows the public partner to achieve social objectives, and productive and allocative efficiency.

A public-private partnership (“PPP”) arrangement differs from conventional public procurement in several respects. The rationale for using a PPP arrangement instead of conventional public procurement rests on the proposition that optimal risk sharing with the private partner delivers better “value for money” for the public sector and ultimately the user. PPP arrangements are more complex than conventional public procurement. They require detailed project preparation and planning, proper management of the procurement phase to incentivize competition among bidders. They also require careful contract design to set service standards, allocate risks and reach an acceptable balance between commercial risks and returns (The Guide to Guidance: How to Prepare, Procure and Deliver PPP Projects, 2011).

According to ‘The Guide to Guidance: How to Prepare, Procure and Deliver PPP Projects’ prepared by The European PPP Expertise Centre (EPEC), the PPP project cycle consists of four key phases:

- i. Project Identification
- ii. Detailed Preparation
- iii. Procurement
- iv. Project Implementation

2.6.1. Project Identification

The project identification phase is important because it determines whether the selected project can be delivered as a PPP instead of using conventional public procurement. Project identification takes place before the preparation and procurement phases. During the selection of the project, it must ensure that the investment offers value for money. Value for money refers to the best available outcome for society, account being taken of all benefits, costs and risks over the whole life of the project (The Guide to Guidance: How to Prepare, Procure and Deliver PPP Projects, 2011).

In order to consider the PPP procurement option, the Authority and its advisers need to look into the following aspects:

i. **Affordability**

Affordability relates to the capacity to pay for building, operating and maintaining the project, be it the capacity to pay of the users of the services or that of the Authority that has identified the need for the asset to be built. At the pre-feasibility stage, the financial model is developed at a fairly high level. It is later on, at the feasibility stage and when the PPP arrangement is designed in detail, that the financial model is further developed and refined. Affordability relates not only to the financial balance of the PPP arrangement, but also to public expenditure items in general.

ii. **Risk Allocation**

Successful PPP projects also depend on the ability to identify, analyze and allocate project risks adequately. Failure to do so will have financial implications. Risk management is an ongoing process which continues throughout the life of a PPP project. It takes place in five stages: risk identification, risk assessment, risk allocation, risk mitigation and risk monitoring and review. PPP project risks can be divided broadly into commercial risks and legal and political risks.

iii. **Bankability**

A PPP project is considered bankable if lenders are willing to finance it, generally on a project finance basis.

iv. Value for money analysis

A PPP project yields value for money if it results in a net positive gain to society which is greater than that which could be achieved through any alternative procurement route. It is good practice to carry out a value for money analysis/ cost-benefit analysis as part of the initial preparation of a project. The project identification phase therefore involves an early assessment of what payment structure is feasible, what the Authority or the users can afford to pay (and when).

2.6.2. Detailed Preparation

The project procurement phase of the PPP cycle begins after the project has received approval from the relevant public authorities. Approval of the main project features is important as a prerequisite for the start of the procurement phase since detailed project preparation is a resource-intensive undertaking.

i. Set up the project team and governance structure

The complexity and scale of most PPP projects will usually justify a team-based management approach to ensure that all the required skills are effectively applied. A common way of implementing effective project governance for PPP project development is by a system of boards or committees (steering committee and project management team).

ii. Engage a team of advisors

The engagement of PPP advisers requires sufficient resources to be budgeted for early in the project cycle. The project management team will require different types of advisers for different phases of the PPP project preparation process. The core team of advisers for the procurement phase will usually consist of a financial adviser, a technical adviser and a legal adviser and other consultants will be required for specific inputs.

iii. Develop a plan and timetable for project preparation and procurement

A key initial task for the project management team or its advisers is to develop a detailed project plan, including a timetable for project preparation and procurement. The plan needs to take into account all the key steps in the process, including:

- Document development
 - Stakeholder consultation
 - The bidding process and private sector interface
 - The government approval process.
- iv. Carry out further studies
- Even though the core technical, financial and economic studies will have been carried out during the feasibility phase, there may be a need for further, updated and more focused studies during the procurement phase.
- v. Prepare the detailed design of the PPP arrangement
- All aspects of the PPP arrangement (e.g. responsibilities, risk allocation, payment mechanism) need to be developed in greater detail, with the ultimate goal of producing the draft PPP contract. It is advisable to deal with this in sub-steps rather than try to draft a full PPP contract right away. This simplifies the internal review process. It is better to focus the initial internal discussion and approval on the broad commercial aspects of project design rather than on detailed legal terms.
- vi. Select the procurement method
- Before engaging in the formal bidding process, the Authority's team will need to select a competitive procurement procedure.
- vii. Define bid evaluation criteria
- The broad aim of defining bid evaluation criteria is to select the "most economically advantageous tender". The choice of criteria for scoring and ranking alternative competing bids is a key decision in procuring a PPP. The objective is to tailor the PPP contract award criteria to the particular project and contract terms to achieve the best possible results (value for money).
- viii. Prepare the draft PPP contract
- A full draft PPP contract should be attached to the invitation to tender. In the past, practice was often limited to including a summary of the main commercial terms of the PPP contract with the invitation to tender. Nowadays, it is considered better practice to prepare and issue a full draft PPP contract with the invitation to tender. Legal advisers should be involved in preparing the full draft PPP contract.

2.6.3. Procurement

The procurement phase commences with the publication of the procurement notice and ends with financial close, the point at which project activities (beginning with detailed design and construction) can start. It has been broken down for convenience into two stages:

- Bidding process
- PPP contract and financial close

Bidding process

The goal of the bidding process is to maximize value for money by creating appropriate incentives through a competitive process for the award of the long-term PPP contract. During the bidding process, sufficient attention should be placed on “transparency” and “equal treatment”.

i. Procurement notice, prequalification and shortlisting

Publication of the public procurement notice marks the start of the formal procurement process.

Prequalification is done to include only those bidders that appear to be capable of carrying out the PPP project in an adequate manner. Typically, interested parties that respond to an initial notice are sent a short statement of information about the project and instructions or a questionnaire. These form the basis of a qualification submission that such parties must make to demonstrate their ability to implement the project.

Bidding for a PPP project, especially a complex one, is a costly undertaking for a bidder. Similarly, evaluating bids is also a time-consuming exercise for the Authority and its advisers. So, shortlisting is done to reduce the number of bidders to generally three to five.

ii. Invitation to tender

The invitation to tender documentation should contain all the information that bidders will need to bid. It is important that advisers devote sufficient time and effort to develop the documentation in enough detail to ensure comparability of

the bids and reduce the need for debate and clarification before the PPP contract is signed.

iii. Interaction with the bidders

In order to maximize the benefits of PPPs and obtain maximum value for money, it is critical to manage the bid process well. The complexity of large PPP projects will normally require a high degree of interaction between the Authority's project management team and the bidders.

iv. Evaluation of tenders and selection of the preferred bidder

Once the tenders are submitted, they must be evaluated to arrive at the selection of the preferred bidder.

PPP contract and financial close

i. Finalize the PPP contract

The different procurement procedures imply varying forms/ intensity of discussions once the preferred bidder has been selected. Once the final tenders have been received and a preferred bidder has been selected, the final adjustments to the PPP contract should be limited to clarifications and confirmation of commitments.

ii. Conclude the financing agreements

PPPs are normally financed in whole or part through project finance arrangements. Insofar as possible, the Authority should require bidders to secure fully committed financing packages along with their bids. This will ensure that the finalization of the financing agreements can take place simultaneously with or shortly after the signing of the PPP contract.

iii. Reach the financial close

Financial close occurs when all the project and financing agreements have been signed and all the required conditions contained in them have been met. It enables funds to start flowing so that project implementation can actually start.

2.6.4. Project Implementation

Project implementation phase deals with the period during which the PPP project is being implemented. It has been broken down into two stages:

- Contract management
- Ex post evaluation

Contract management

Although good preparation and procurement of a PPP project are important, the manner in which the PPP contract is overseen and managed during implementation is critical to its success or failure and to its actual ability to deliver the value for money expected at the procurement stage.

i. Allocate management responsibilities

After the PPP contract has been signed, responsibility for contract management will normally be transferred to a contract management team established by the Authority. A contract management team, reporting to a contract director, will carry out many day-to-day contract management activities.

ii. Monitor and manage project delivery and service outputs

The PPP contract should have clearly stated the obligations of the PPP Company and defined the expected service characteristics, outputs and quality standards. Effective contract management will help to identify and monitor the PPP Company's construction and operational performance. It will enable the Authority to manage the project risks over the life of the PPP contract.

iii. Managing changes permitted in the PPP contract

The PPP contract will set out the triggers and methodologies for agreeing and implementing changes to the PPP contract. However, it may not specify all the logistical or administrative steps that need to be taken in order to agree or implement permitted changes. Changes permitted under the PPP contract are often complex and need to be decided at senior level.

iv. Managing changes not provided in the PPP contract

Given the long life of PPP contracts, unforeseen changes in contractual specifications (during construction or operation) are not unusual. Contract renegotiations require careful analysis and a dialogue between the parties before contract changes are agreed and implemented. The use of an experienced, trusted and neutral facilitator may be beneficial. While some renegotiations are efficient, many are opportunistic and should be discouraged.

v. Dispute resolution

Contractual disputes are common in PPPs for a number of reasons. It is therefore fundamental that an appropriate dispute resolution process is set out in the PPP contract. This should be done with the support of experienced legal advisers.

vi. When the contract ends

A PPP contract should include detailed provisions dealing with its termination. The contract should describe in detail the circumstances that allow a party to terminate the contract, in particular where the other party has defaulted on its obligations.

Ex Post Evaluation

i. Define the institutional framework

Ex post evaluation of PPP projects enables lessons to be learned from projects that have already been implemented and covers both successes and failures. These lessons can improve future decisions on whether to take the PPP route, how to design PPP contracts and ultimately how best to prepare and implement PPP projects.

ii. Develop an analytical framework

Once responsibilities have been assigned and the aim of the ex post evaluation study has been defined, it will be necessary to decide which analytical framework will be most appropriate for achieving the aims of the study.

2.7. Benefits and Risks of Public Private Partnership

A Public-Private Partnership is a contractual agreement between a public agency and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to sharing the resources, each party shares the potential risks and rewards in the delivery of the public service and/ or facility. PPP projects enable the risk to be optimally spread, and each subject of the partnership to take the risks they are able to manage best. The basic implementation condition of a PPP project is its ability to achieve, from the point of view of the public sector, a greater benefit in relation to the expenditures, compared with the situation when the public sector implements the given project by itself, using its own forces and from its own sources, i.e. respecting the principle of value for money (Parvu & Olteanu, 2009).

2.7.1. Benefits of Public Private Partnership

i. Acceleration of infrastructure provision

PPP allows the public sector to utilize the private investments which enables the projects constrained due to unavailability of public capital to proceed. The availability of needed investment without public sectors significant upfront capital accelerates the provision of infrastructure and services.

ii. Faster implementation

The allocation of design and construction responsibility to the private sector, combined with payments linked to the availability of a service, provides significant incentives for the private sector to deliver capital projects within shorter construction timeframes (Guidelines for Successful Public- Private Partnership, 2003).

iii. Improved efficiency and cost savings

Private sector efficiency, coupled with an optimal risk allocation, can create significant cost savings in the delivery of public infrastructure and services. Cost savings from PPP typically materialize in the form of lower construction costs, reduced life-cycle costs, improved efficiency, and lower costs of associated risks.

iv. Better risk allocation

A core principle of any PPP is the allocation of risk to the party best able to manage it at least cost. The aim is to optimize rather than maximize risk transfer, to ensure that the best value is achieved (Guidelines for Successful Public-Private Partnership, 2003). PPP shift specific life-cycle risks to the private partner, thereby creating incentives for better and more cost-effective service delivery. For instance, by shifting construction, operation, and maintenance risk to the private partner, powerful incentives are created for delivering a high quality facility which are ideally suited for operations and not prone to break downs.

v. Improved quality of service

International experience suggests that the quality of service achieved under a PPP is often better than that achieved by traditional procurement (Guidelines for Successful Public- Private Partnership, 2003). This may reflect the better integration of services with supporting assets, the introduction of innovation in service delivery, or the performance incentives and penalties typically included within a PPP contract.

vi. Generation of additional revenues

Innovation and the private sector profit motive can create incentives for the private partner to develop new and creative sources of revenue from public infrastructure. This removes the requirement of any public sector subsidy. These new sources of income can be shared with the public, creating additional sources of revenue for other social priorities.

vii. Enhanced public management

By transferring responsibility for providing public services government officials will act as regulators and will focus upon service planning and performance monitoring instead of the management of the day to day delivery of public services. In addition, by exposing public services to competition, PPPs enable the cost of public services to be benchmarked against market standards to ensure that the very best value for money is being achieved (Guidelines for Successful Public- Private Partnership, 2003).

2.7.2. Risks in Public Private Partnership Projects

- i. PPP procurement and implementation can be lengthy and costly, making it unsuitable for some projects. So, the government should therefore determine whether the greater costs involved are justified or not.
- ii. Private sector can make it easier to get finance but finance will only be available where the operating cash flows of the project company are expected to provide a return on investment (i.e., the cost has to be borne either by the customers or the government through subsidies etc.).
- iii. There is no unlimited risk bearing. Private firms will be cautious about accepting major risks beyond their control. If they bear these risks, then their price for the service will reflect it. Private sector will also expect a significant level of control over operations if it is to accept significant risks.
- iv. Private sector will do what it is paid to do and no more than that. Therefore incentives and performance requirements need to be clearly set out in the contract.
- v. Citizens will continue to hold government accountable for quality of utility services. Government need to retain sufficient expertise to be able to understand the PPP arrangements, to carry out its own obligations under the PPP agreement and to monitor performance of the private sector and enforce its obligations (PPPIRC, 2016).
- vi. The private sector is likely to have more expertise and after a short time private sector can take advantage of it. It is important to ensure that there are clear and detailed reporting requirements imposed on the private operator to reduce this potential imbalance.
- vii. A clear legal and regulatory framework is crucial to achieving a sustainable solution.
- viii. Given the long-term nature of these projects and the complexity associated, it is difficult to identify all possible contingencies during project development. Events and issues may arise that were not anticipated in the documents or by the parties at the time of the contract. It is more likely than not that the parties will need to renegotiate the contract to accommodate these contingencies (PPPIRC, 2016).

2.8. Review of Regulation related to Public Private Partnership in Nepal

Nepal has been rapidly adopting open competitive market economy from 1990 AD. Different efforts are being made with various policies and laws toward free market and privatization. Although the existing acts do not create an unfavorable environment for PPP projects, a single guideline or regulation do not provide the complete provision for the design and implementation of such projects. Various acts and regulations have to be referred for this purpose.

2.8.1. Local Self Governance Act, 2055 and Regulation, 2056

The primary act of relevance to municipal services is the Local Self Governance Act of 1999 (accompanied by the Local Self Governance Rules and Local Government Financial Rules, 2000). The Act is intended to develop municipalities as self-governing autonomous urban local bodies enabling them to play an effective role in the context of overall urban development in general and the improvement of environmental conditions for urban dwellers. While there remain regulatory gaps to be filled in order to fully implement the intent, it provides a statutory framework on local governance and decentralization with considerable scope to improve its effectiveness. Under the Local Self Governance Act, the development of effective local governance system is provided through the devolution of responsibilities, authority and resources required for effective local governance; the installation of institutional mechanisms and working procedures; the devolution of authority for resource mobilization; the encouragement of transparency and accountability; and the encouragement of civil society to participate in the activities of providing basic services. Not only does the Act specify that municipalities must ensure the delivery of urban services, it has clearly set out the importance of “encouraging the private sector to participate in local self-governance in the task of providing basic services for sustainable development” as one of the six basic principles and policies of local self-governance.

Similarly, Section 96 of Part 3 of the Act provides for local government “to encourage or cause to be encouraged to carry out cooperative, industrial and commercial activities generating income to the municipality with the investment of private sector as well”. Section 96 highlights the role of consumer groups: “Consumer groups and other non-

government organizations shall have to be encouraged for the development and construction works to be done in the municipality area and such works shall have to be done through such groups or organizations as far as possible”. Furthermore, Section 121 says “the municipality shall have to encourage the non- government organizations/ private sector for the acts of identification, formulation, operation, evaluation, repair and maintenance of the town development programs within the area of each municipality”. Similarly, Section 116 clearly mentions that the projects involving financing by NGO shall be implemented as per agreement between the municipality and the NGO. But the Local Body Financial Rules, 2056 does not have any provision regarding the contract or agreement with the private sector or NGO regarding PPP projects.

The procurement and construction arrangements under the Local Self- Governance Regulations empower municipalities to procure goods but do not say anything on the procurement of services, development of infrastructure and the operation and management of them by private sector. There are no restrictions on municipalities with regard to tariff rates or procedures for tariff setting although tariffs must be adopted by a special resolution of the Municipal Board.

The main features of Local Self- Governance Act, 2055 are as follows:

- A unified act which encompasses the principles of decentralization
- Devolution of wider sectoral authority to local bodies
- A Decentralized Implementation and Monitoring Committee (DIMC) was established to monitor objectives, policies and provisions; a working committee was also established to execute the directives of DIMC
- Creation of a Local Bodies Finance Commission (LBFC) to rationalize fiscal equalization
- Provisions for revenue sharing between local bodies and central government, and among local bodies are made
- Local bodies are made more responsive and accountable to the public through their council and various committees
- Provisions of auditing is made at the local level

- Tax and revenue base has been expanded for effective resource mobilization
- Encouraged grassroots upwards planning systems for popular people participation
- More organizational and management power given to DDC for staff hiring and internal working system
- Recognized the importance of local body associations

2.8.2. Local Institutions (Financial Administration) Regulation, 2056

Though this regulation has described the procedures of involving private sector in purchasing construction materials and works, it is silent on the operation and management of infrastructures. It does not have any provision regarding the contract or agreement with the private sector or NGO regarding PPP projects.

2.8.3. Contract Act, 2056

This describes provisions of directing, regulating and managing the contracts and agreements between two or more parties. It describes about investment and other liabilities and its benefits, risks, conditions, methods of dispute resolution and compensation etc. arrangements between the parties of partnership. As this Act states that parties can together freely decide the mode of partnership arrangement, benefit sharing, setting conditions of contracts, decide ways to solve disputes if it arises or if any party breaks provisions set in the contract. So, this Act could be very useful in designing and implementing PPP. On its basis, municipality and private parties with mutual agreement can provide urban environmental infrastructures and services in partnership.

2.8.4. Company Act, 2052

This Act makes provision of liquidation or closure of bankrupt company. It also makes provision of indefinite closure of company if it faces serious financial crisis. This may cause trouble to the consumers, where as it protects the service providers in some way.

2.8.5. Mediation Act, 2055

This Act provides legal provision on mediation to settle dispute through a speedy and simple manner, to make the process of dispute settlement less costly, to enhance the access of general public to justice and to maintain the interest and convenience of general public.

2.8.6. Foreign Investment and Technology Transfer Act, 2049

This Act deals with attracting foreign investment and ensuring benefit on investment in industrial sector and does not talk particularly on infrastructures and services. But as the Industrial Enterprises Act defines roads, bridges, tunnel way, trolley bus, tram, airport, solid waste processing works as industrial work, this Act could not be used in PPP in such infrastructures and services.

2.8.7. Industrial Enterprises Act, 2049

This has various types of tax rebates for various industries. It includes roads, bridge, tunnel way, trolley bus, tram, airport, pollution reducing activities and solid waste management etc. as the industrial enterprises. Such enterprises get 50% rebates on its income tax for seven to ten years, so, this act could be useful in development of above mentioned infrastructures and services through Public Private Partnership.

2.8.8. Labor Act of 2048, Trade Union Act of 2049 and Labor Regulations of 2050

The Labor Act of 2048 is applicable to private operators because it sets out mandatory requirements for the terms and conditions for the staff recruitment and employment. The main areas of concern include provisions that state any change in ownership shall not affect the terms and conditions of service of workers and the procedures for termination of employment. Alongside this, there are minimum wage provisions, termination procedures and requirements on health, safety and welfare, provident and medical fund contributions. The legislative review for the water and sanitation sector drew attention to the potential problems with this act. These provisions could offer the opportunity for a considerable amount of disruptions of the operators business. There is also provision for the Department of Labor to impose a fine for unauthorized acts to be quashed by the government. There is a complicated situation of tribunals, power apparently to examine documents, deal with disputes and impose welfare provisions.

The Labor Regulations of 2050 further stipulates the working hours for minors (14- 16 years of age) and women, procedures for maintaining an employee's register, employee leave and health and welfare arrangements. The Trade Union Act of 2049 allows for at least 10- 25% of workers of an enterprise to form an establishment level trade union.

2.8.9. Land Acquisition Act, 2034

The Act empowers the government to acquire any land, on the payment of compensation, for the public purposes or for the operation of any development project by “Eminent Domain” initiated by the government institutions. But, other works of the welfare of public in general must either purchase necessary land or acquire the land through the government using the Land Acquisition Act.

2.8.10. Solid Waste (Management and Resource Mobilization) Act, 2044

This Act focuses on the management of solid waste and resource mobilization to ensure the health convenience of the common people by controlling the adverse impact on pollution from solid waste. Solid Waste Management and Resource Mobilization Act, 2044 has the main objectives of regulating the collection, recycling and disposal of solid wastes generated within Kathmandu Valley. For other areas, the Act has mentioned to come into force on such date as may be prescribed by Government of Nepal. This Act empowers the Solid Waste Management and Resource Mobilization Center to formulate plans and programs but lacks the participatory approach/ involvement of the people at local level. Solid wastes are generated by people themselves, so, beside fine/penalties; Act should also focus on people’s participation. Similarly, in the Act, very less is mentioned about the mobilization of resources.

2.8.11. Water Resources Act, 2049

This Act has the provision that water resource projects could be handed over with necessary conditions to the user’s community. Therefore, this act could be useful in partnership on water resources projects. However, the description limits the partnership with user’s community only.

2.8.12. Education (Eighth Amendment) Act, 2073

This Act has provisions of ‘community’ schools, ‘institutional’ schools and education cooperatives. So, this act could be useful in the development and extension of partnership among the municipality and the private sector in the field of education.

2.8.13. Town Development Act, 2045

This Act has the provision of developing land in partnership with the local landowners. It also has the provision of working through the users (owners) community with

participation through investment. Municipalities using the delegated authority of Town Development Committee and partnering with the local landowners have even implemented some projects successfully.

2.8.14. Environment Protection Act, 2053

The primary legislation concerned with the environment is the Environment Protection Act. This provides provisions for preliminary environmental tests and environmental impact assessments to be carried out where a proposal for changing land use is likely to lead to a change in the existing environmental conditions. It applies, for instance, to any proposals for landfill and recycling of solid waste requires the approval of Ministry of Population and Environment.

2.8.15. Privatization Act, 2050

While privatization is defined to include the full or partial participation of the private sector, the Privatization Act of 2050 would appear to have been applied only to those 'establishments' classified by the Government and approved by a Privatization Board (also provided for in the Act). It can be argued that this Act deals only with divestiture of state enterprises and not PSP/ PPP transactions. This is supported in practice in recent experience in the water sector where the PSPC has not been established under the Privatization Act and the water and sanitation agencies are not classified as establishments under this Act. However, a number of provisions in the Act may prove to be a concern to an operator if the current mode of enforcement changed. More importantly, the Act technically provides for privatization or PSP activities, and the Privatization Board has significant powers. There is a need for legislation to be introduced, which removes the ambiguity and lack of clarity on the application of this Act as it currently provides as a course of action for challenges agrees PSP initiatives.

2.8.16. Private Financing in Build and Operation of Infrastructures Rules, 2063

It was enacted to make it convenient on making the services and facilities available to the general public in a reliable, cost-effective and easily available manner by getting the private sector involved in the build, operation and transfer of the infrastructures (Private Financing in Build and Operate of Infrastructures Rules, 2007). However, it possess serious loophole to address partnership. The regulatory framework failed to adequately

address project preparation and involvement of potential private service providers from the planning phase of PPP project development. Thus, affordability, value for money and risk factors are always at stake resulting into the vicious circle of poor service quality, low willingness to pay and inadequate fund for improvements.

2.8.17. The Investment Board Act and Investment Board Rules 2068

Investment Board Act, 2068 was promulgated to establish legal investment board to carter investment friendly environment through management and mobilization of Public-Private-Partnership (PPP) at national and international level and initiate the process of industrialization for the economic development of the country. A key objective of the board is to identify priority sectors for investment and formulate policy for investment. It also selects projects for development and invites probable investors and grant them license after a procedure of evaluation, negotiation, and other criterion. The Board must monitor the project activities as per the agreement with project proponent. It must also play the role of catalyst to promote investment by arranging resources such as land for the project, and coordinate with various ministries, government and local agencies. The Board broadly focuses on nine sectors such as transportation (road, tunnel, railway, ropeway, airports, and bridges), chemical fertilizer production factory, petroleum refinery plant, medical colleges, hydropower projects, establishment of special economic zone etc.

2.8.18. Public Private Partnership Policy, 2072

The vision of the policy is to make public- private partnership a sustainable approach in providing infrastructure and services to the general public. It defines the regulatory, institutional, legal, financial and other frameworks of PPP. The objective of the policy is to spell out the principles of partnership with private sector for undertaking projects related to infrastructure and public services, including the provision of PPP enabling environment and recommend appropriate financing policies and mechanisms for PPP financing in Nepal. There are three main models of PPP i.e. revenue based, availability based and hybrid types as described in the policy.

The objective is also to establish a clear cut regulatory framework and mechanism/guideline for PPP contracts procurement. As per the policy, the Government of Nepal will set up independent framework/institutions for dispute resolution that

provides comfort to local as well as foreign contractors/investors. The priority sectors are physical infrastructure, energy sector, information and communication sector, environment sector and basic services sector like health and education. PPP projects will be procured through a clear, transparent and competitive procurement process (Amirullah, 2014).

To encourage the private sector to build projects under PPP modality, preparation of PPP Act, with provision laid in PPP Policy, is under progress. The Act will incorporate mechanism to provide viability gap funding to project developers. Viability gap is the difference between revenue required to make a project commercially viable and revenue that is expected to be generated upon project's completion. In simple words, if the cost of building a toll road stands at Rs.5 billion and toll collection after a certain period is expected to hover around Rs.3.5 billion, the viability gap is Rs.1.5 billion.

Also, the Act will include a provision on creation of a revolving fund for land acquisition to facilitate project developers. As per the PPP Policy, the government cannot sign an agreement with the project developer unless 80 per cent of the land required for the project has been acquired. The developer later has to recompense the government, fully or partially, or pay royalty or rent for the land based on the nature of the project.

To further increase participation of the private sector in PPP projects, the Act is also expected to extend tax relief to developers and create a mechanism to enable the private sector to obtain long-term financial resources. Similarly, the Act is also expected to incorporate provision on sharing of risks and benefits proportionately between the government and the private developer during and after the construction of projects.

The objective of the policy is also to ensure a balance between risk and reward for both government and private sector, with an appropriate risk sharing mechanism. Risk sharing framework shall be based on the risk profile created during the options analysis and feasibility study. Project related foreseeable risks, specific risks etc. shall be compiled together and be addressed in the concession / PPP agreement.

While these policies and legislation provide a basic framework for urban planning and management as well as environmental safeguards, there are difficulties at the implementation level. First, these acts need to be streamlined, made coherent, and ambiguities should be removed. Provision of urban infrastructure in Nepal has been largely driven by central institutions such as the Nepal Water Supply Cooperation; Department of Roads; Solid Waste Management and Resource Mobilization Center; Nepal Telecommunications Corporation; and Nepal Electricity Authority. As responsibilities are scattered and many agencies are involved in the planning, provision, and management of urban infrastructure and services, coordination is extremely difficult. Institutional confusion arising from provisions in various legislations regarding the responsibilities, authorities, and handling of resources is a prominent issue.

Since PPP is defined as the contractual agreement between the public entity and private service providers for the delivery of infrastructure or services in the public interest. Naturally, long-term contracts are commonly used mechanism to govern the relationship the private and public partners. Exploration of the contracts of few PPP projects in Nepal illustrates that uncertainties created by long span of time had practically ruined PPPs and demands for alternative governance mechanism.

However, much like contracts, the said regulatory framework possess serious loophole to address partnership. The regulatory is inadequate to address project preparation and involvement of potential private service providers from the planning phase of PPP project development. Thus, affordability, value for money and risk factors are always at stake resulting into the vicious circle of poor service quality, low willingness to pay and inadequate fund for improvements.

3. Public Private Partnership: Case of Bharatpur

3.1. Introduction of Bharatpur Metropolitan City

Bharatpur Metropolitan City, residing on the bank of River Narayani emerged as an important township after the construction of Mahendra Highway. Later, construction of road to Gorkha from Bharatpur crossing Prithvi Highway at Mugling, this city became one of the most important cities linking east, west and the north including capital Kathmandu.

The population in Bharatpur increased tremendously after the launching of the malaria eradication program and with establishment of market settlement of government offices, schools, colleges, hospitals, and residential quarters. The migration trend significantly increased after the declaration of Bharatpur as municipality with larger proportions of migrant population from within the same district, significantly from the surrounding VDCs. Migration from surrounding districts, VDCs of same district and foreign countries such as India and Burma is also seen.

Bharatpur was established as municipality in 2048 BS. It was declared Sub- Metropolitan City in 2071 and Metropolitan City in 2073. Encompassing 419.76 square kilometers of area, the municipality is divided into 29 wards. Narayangarh, the main market center of the municipality includes ward no. 2, 3, and part of 1. Most of the government institutions are resided in Bharatpur (ward no. 10). The population of Bharatpur is 280,457 with 66,494 total households. Table 1 presents the population distribution in different wards of the municipality.

Table 5 Population Distribution in Bharatpur Metropolitan City

Ward No	Area (sq. km.)	No. of HH	Population	Male	Female
1	35.11	2502	10,556	5451	5105
2	1.34	4164	16,218	8035	8183
3	4.19	3529	14,461	7760	6701
4	8.22	3634	14,482	6910	7572
5	9.91	1683	7,856	3710	4146
6	12.21	2609	10,801	5079	5722
7	4.14	2690	10,505	5087	5418

8	66.66	1566	6,845	3287	3558
9	5.3	2343	9,016	4240	4776
10	3.94	6477	21,844	11042	10802
11	5.11	5314	20,997	10172	10825
12	12.53	2837	10,939	5364	5575
13	5.7	1483	5,973	2799	3174
14	12.07	2094	8,521	3885	4636
15	20.5	1845	11,773	5478	6295
16	17.06	1894	13,694	6401	7293
17	7.87	1514	6,710	3018	3692
18	10.33	1675	7,018	3150	3868
19	6.29	1473	6,175	2791	3384
20	11.83	1576	6,748	3057	3691
21	10.02	1614	6,505	2937	3569
22	5.22	1294	5,269	2375	2894
23	12.85	1654	6,878	3148	3730
24	5.22	981	4,317	2069	2248
25	14.16	1863	8,057	3693	4364
26	18.63	1936	8,334	3787	4547
27	17.73	1763	7,780	3466	4314
28	12.7	1323	6,369	2875	3494
29	62.92	1164	5,815	2818	2997
Total	419.76	66,494	280,457	133,884	146,573

Source: (Bharatpur Metropolitan City, 2017)

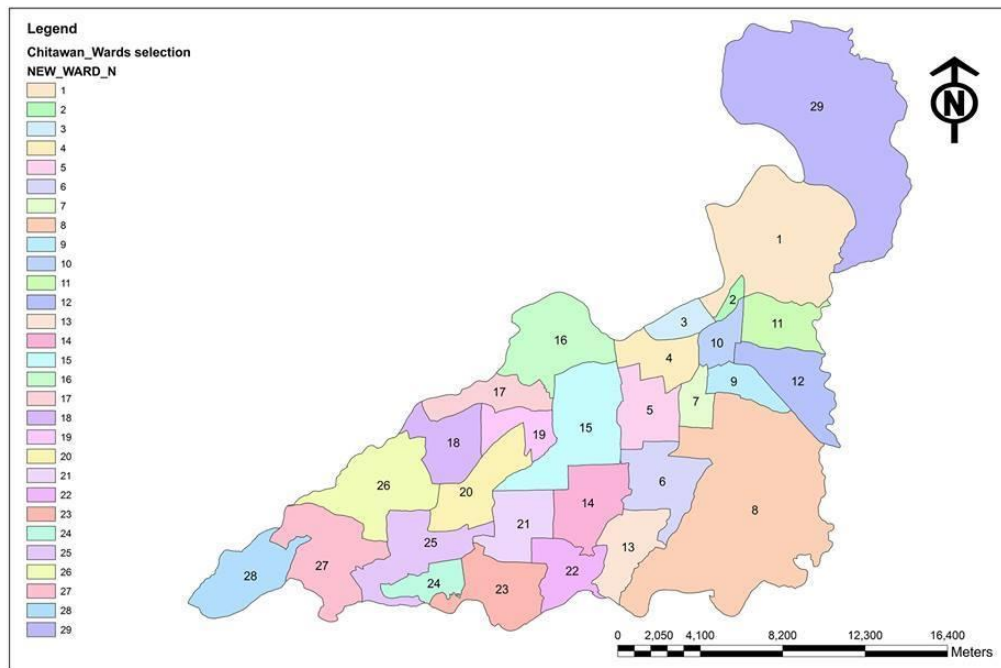


Figure 3 Ward Distribution of Bharatpur Metropolitan City

3.2. Past Planning Practices of Bharatpur Metropolitan City

Various planning documents for Bharatpur have been published in the past years and it is also considered to be well- facilitated compared to other municipalities. But, it has not been able to implement the past planning projects as per expectation due to limited financial and technical resources. Different governmental, private and social organizations working within the municipalities have been preparing plans and programs for Bharatpur on their own. This has resulted on repetition or missing out of plans and involvement of more than one organization for activities of similar nature. Due to this reason, Bharatpur has not been able to develop in a planned way in the expected pace.

3.2.1. Periodic Plan of Bharatpur (2068- 2073)

Periodic Plan (PP) of Bharatpur is a five- year plan prepared with a long- term vision of overall development of the municipality. The plan has tried to institutionalize participatory planning process in the city level. It has also tried to create a co- ordination between national- level plan, local- level plan and periodic plan. The objective of the plan is to create a partnership between the stakeholders involved in city's development in terms of responsibilities and accountability. PP plans on providing the services to the group that actual need them with limited resources. Based on discussion with the members of the municipality and related stakeholders, the long term vision of the municipality can be towards developing the city as Tourism City, Medical City, Agricultural City, Commercial City, Educational City, Industrial City and Transit City.

With the aid of Asian Development bank (ADB), urban infrastructure such as drinking water, sewerage, bus park, vegetable market etc. were developed in Bharatpur with the investment of Rs.60 crore. There is very less possibility of introduction of such project in the near future. It is a challenge for the municipality to operate and maintain the existing structures and invest in the new infrastructures. So, the PP has mentioned that Bharatpur should strengthen the internal sources of the municipality, attract private sector and reinforce Community Based Organizations (CBOs).

3.3. Infrastructure Deficiency in Bharatpur

As cities continue to grow rapidly, the need to meet the increasing demand for urban infrastructure and services has become very important. Various studies show that 1 percent increase in the stock of infrastructure is associated with a 1 percent increase in GDP (Chalise, 2017). One of the key avenues through which infrastructure contributes to economic growth is by improving competitiveness and facilitating international and domestic trade by reducing the cost, according to World Development Report. However, lack of basic infrastructure has forced Nepal to witness an average of below 4 percent economic growth over the past decade. Similarly, Bharatpur has been successful in implementing various infrastructure related projects and is considered to be well-facilitated compared to other municipalities, but it still needs to invest heavily on infrastructure; also due to upgradation to metropolitan city.

3.3.1. Physical Infrastructure

Bharatpur is well connected with other parts of the country by the East- West Highway and Prithvi Highway. The municipality has well developed network of roads with total length of 550 km. It covers only 5% of total area of the municipality whereas for easy movement in the city the road should cover at least 10% of the total area. So, by 2088 B.S., Bharatpur needs additional 253 km. of road (Periodic Plan of Bharatpur Municipality, 2068).

Similarly, the municipality has only 38.13 km. of surface water drainage system which is very less compared to the road network it has (Profile of Bharatpur, 2016).

Urban Environment Improvement Project (UEIP) has covered most of the municipal area with drinking water facility. The existing system can fulfill the water demand of the municipality up to 2076 B.S. only. To serve the additional population within the service area as well as outside of it, additional 170 lakh liters of water per day will be required by 2088 B.S. (Periodic Plan of Bharatpur Municipality, 2068)

With the increase in population, the municipality has to manage two times more waste per day i.e. 60 ton; at the rate of 200 gram waste per person and it will be a big challenge for the municipality.

3.3.2. Social Infrastructure

By 2088 B.S., the number of school- going children (age 5- 15) will be around 60,000. For this, the number of schools necessary will be increased by three fold. Similarly, the population of senior citizen i.e. above age 59 will be around 25,000. Necessary infrastructures and facilities for them are also equally important. Along with the increase in population, other urban problems such as traffic management, market management, security, parks and open spaces should also be addressed.

According to a survey done in 2008, there was less involvement of people in community development activities organized by the municipality. Of the total, family members of only 7% households were affiliated in various community based organizations. This percentage should be increased by involving more people in such activities. The periodic plan also mentions about strengthening the CBOs to operate and maintain the existing structures and start up new projects.

3.4. Administrative Capacity of Municipality

The Constitution of Nepal, Local self-Governance Act (LSGA) and other sectoral Acts and regulations have provisioned various institutions at central, regional/provincial and local levels. National Planning Commission (NPC) and Ministry of Finance (MoF) are the national level institutions involved to finalize program and budget for local bodies and other sectoral Ministries and departments. These two agencies are also responsible for mobilization of foreign grants and loans for national developments and that are executed through respective Line Ministries/departments and local bodies.

Ministry of Federal Affairs and Local Development (MoFALD) is the link ministry for local bodies and responsible for facilitating local bodies including municipalities on their systematic, institutional and individual capacity development and coordination with other central level agencies including the NGOs, civil society, Development Partners and private sector. Ministry of Urban Development (MoUD) provides technical services/financial resources to the Municipalities as conditional budgets, helps to develop small towns and market centers, does urban land use planning, and prepares master plans for the municipalities.

As per Ms. Asmita Khanal, Urban Planner of the municipality, with the municipality being a metropolitan city, the increases in number of staffs as well as administrative divisions are required for effective operation of the office as well as projects. For example, in Design Approval Sub- Section, there are four engineers but the number of sub- engineers is not enough. The ratio of number of engineer to sub- engineer should be 1:2 but only two sub- engineers are there. This has caused delay in most of the work of the municipality. Similarly, according to Mr. Krishna Malla, the focal person for PPP of the municipality, the municipality has not been able to pay enough attention to the PPP projects as other works should also done by the same person. He added that a separate unit i.e. PPP Unit should be established to mainstream PPP. The unit should accommodate experts from various fields required for successful PPP project implementation such as engineer, economist, sociologist, urban planner etc. Analysis should be done beforehand regarding the team members required.

3.5. Financial Analysis of Bharatpur Metropolitan City

Nepal is passing through the stage of state restructuring towards federal set up of three layers of government – federal, provincial, and local - with the promulgation of new constitution of the country by the Constituent Assembly in September 2015. The constitution has provided mandates of development activities and resource mobilization for the provincial and local governments including the municipalities. As such, the municipal government is assigned a larger functional, semi judicial and fiscal authority (Khatiwada, Awasthi, Ghimire, Devkota, & Pradhan, 2015).

With the declaration of additional municipalities, the urban population of Nepal has reached about 42 percent of the total population. The existing municipalities suffer a lot from infrastructure deficit and most of them are financially weak to create such infrastructure on their own efforts. Urban infrastructure investments can be sustainably financed through a mix of local revenue, transfers from central and provincial levels of the government, borrowing from dedicated financial intermediaries for urban development, by forging partnership with private sector, NGOs and community organizations, and resorting to commercial borrowing for financially viable projects.

Similarly, Bharatpur Municipality in the last 4 years have been promoted to Sub-Metropolitan and then to Metropolitan City. After being metropolitan city, Bharatpur needs to invest huge amount of its budget in infrastructure and development programs.

3.5.1. Sources of Revenue

At present, revenue base of the municipalities is very weak and revenue potential has not been fully mobilized. OSR of the municipalities on average accounts only 27% of the total income (Khatiwada, Awasthi, Ghimire, Devkota, & Pradhan, 2015). So, a study of the sources of revenue of Bharatpur Metropolitan City was done.

Table 6 Annual Budget of Bharatpur Metropolitan City (Fiscal Year 2074/075)

S.N.	Revenue	Amount	%
1.	Own Source Revenue (OSR)	273,639,000	30.57
2.	Nepal Government's Capital Grant	112,459,000	12.56
3.	Nepal Government's Recurrent Grant	21,746,000	2.43
4.	Registration Fee	40,000,000	4.47
5.	Maintenance Fund	9,530,000	1.06
6.	Child Labor Reduction and Child Protection	9,000,000	1.01
7.	Urban Infrastructure Plan	28,640,000	3.2
8.	Local Governance and Cooperative Development Programs	10,759,000	1.2
9.	Social Security	260,100,000	29.06
10.	Large Infrastructure Projects	40,000,000	4.47
11.	Roads Board	11,000,000	1.23
12.	Users' Contribution	58,774,400	6.57
13.	Town Development Fund	19,460,000	2.17
Total		895,099,400	100

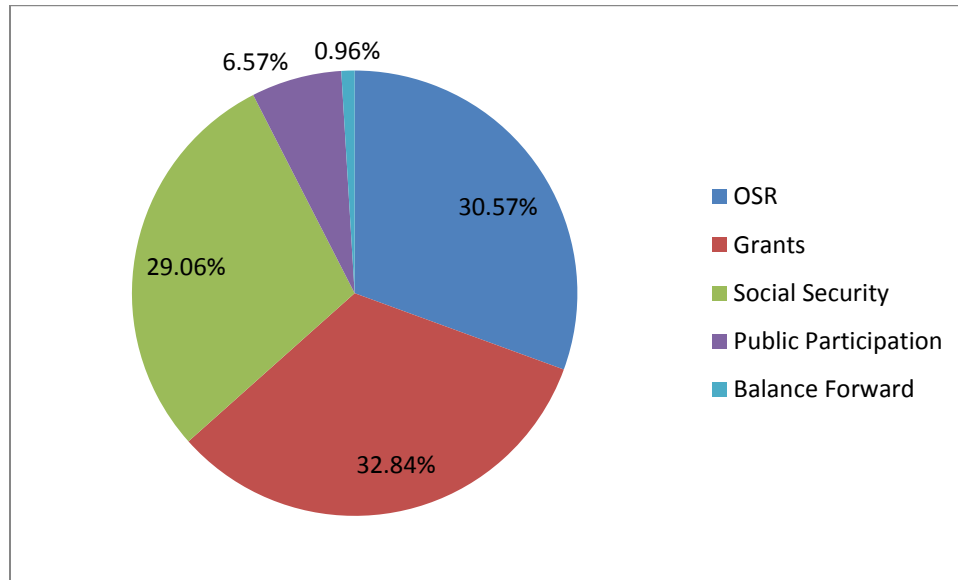
Source: (Bharatpur Metropolitan City, 2017)

Table 7 Sources of Revenue (Fiscal Year 2074/075)

S.N.	Sources of Revenue	Amount	%
1.	Own Source Revenue (OSR)	273,639,000	30.57
2.	Grants	293,956,000	32.84
3.	Social Security	260,100,000	29.06
4.	Users' Contribution	58,774,400	6.57
5.	Balance Forward	8,630,000	0.96
Total		895,099,400	100

Source: (Bharatpur Metropolitan City, 2017)

Figure 5 Sources of Revenue of Bharatpur (Fiscal Year 2074/075)



A. Own Source Revenue (OSR)

Own Source Revenue (OSR) is the revenue generated by the municipalities internally from their own efforts and is critical for the municipalities to exercise local autonomy and deliver basic facilities to the citizens. Main areas of OSR are taxes, service charges/fees, fines/penalties, rental income from municipal properties and other income.

The main sources of tax revenue of the municipalities are integrated property tax (IPT), land revenue tax, entertainment tax, advertisement tax, rent tax, business tax, vehicle tax commercial video tax. Similarly, the municipalities are empowered to raise various types of service charges for providing services to their citizens in areas like solid waste, public utilities, parking, public toilet, haat bazaar, slaughter house, street light, sewerage, road, swimming pool, park, building permit, recommendation, property valuation, etc.

In case of Bharatpur, in the fiscal year 2074/075, OSR occupies 30.57% of the total revenue as shown in Table 6. Similarly, the data of OSR of Bharatpur in the past five years have been shown in Table 8.

Table 8 Own Source Revenue of Bharatpur

Fiscal Year	Amount	Total Budget	OSR (%)
2070/071	93,461,000	263,331,721	35.5
2071/072	104,420,000	249,246,000	41.9
2072/073	171,968,469	608,689,994	28.3
2073/074	252,558,000	794,138,280	31.8
2074/075	273,639,000	895,099,400	30.6

Source: (Bharatpur Metropolitan City, 2017)

The data shows that in average, the OSR of Bharatpur in the past five years is 28% of the total budget of the respective years. The year 2071/072 shows a drastic increase in the percentage of OSR i.e. 41.9%. Bharatpur was upgraded to sub- metropolitan in the same year and the structure of tax collected was changed. After being sub- metropolitan city, the tax increases and so did the OSR of the municipality.

B. Inter- Governmental Fiscal Transfer

Intergovernmental Fiscal Transfer (IGFT) from the central governments to the municipalities is the principal source of fund for the municipalities. The need for intergovernmental fiscal transfers arises mainly due to fiscal imbalances between OSR of municipalities and its expenditure needs. As we know, the average of OSR in Bharatpur is just 28%; large part of its expenditure need is fulfilled by IGFT.

Current types of fund transferring practices from center to the municipality are stated below (Khatiwada, Awasthi, Ghimire, Devkota, & Pradhan, 2015):

- i. Recurrent grant
 - a. Salaries, allowances, daily travel allowance (TA/DA) of civil servants deputed at the local body by the Government of Nepal
 - b. Capacity development costs
 - c. Social mobilization costs.
- ii. Capital grant
 - a. Minimum capital grant
 - b. Formulae-based capital grant
 - c. Revenue sharing

- iii. Other grants
 - a. Thematic conditional grant
 - b. Program or project-wise conditional grant/budget
 - c. Grant/budget available at the local level by signing MOU with INGOs/NGOs and development partner organizations
 - d. Loans provided by financial institutions/trusts
 - e. Technical assistance
 - f. Commodity support
 - g. Local development fees disbursed by the Ministry of Federal Affairs and Local Development (MoFALD) to municipalities and grants for projects to be implemented on cost-sharing basis under the Reserve Fund
 - h. Other grants made available to the local body

In case of Bharatpur, capital grant occupies 12.56% and recurrent grant occupies 2.43% of the total budget of fiscal year 2074/075, as shown in Table 6. According to Table 7, the total percentage of revenue occupied by grants obtained by the municipality is 32.84%, which is a large share in the total revenue.

C. Users' Contribution

Users' contribution (UC) for the construction of infrastructures like road, water supply, school building, religious places, etc. is also a source of revenue of the municipalities. The community is ready to contribute for such costs, which enables the municipalities in spreading out its limited resources to a wider area of the municipality services. In the fiscal year 2074/075, the total revenue collected from users' contribution is 6.57%.

D. Public Private Partnership (PPP)

Various commercial infrastructures can be built in partnership with the private sector. Private sector is in a better position to build and operate the commercial type of municipal infrastructure like solid waste management, shopping mall, electricity system, water system, hospitals, transportation, etc. Such partnerships expedite construction and operation of the commercial infrastructures of the city. Fund necessary for such investment is managed by the private sector and the municipality can concentrate in other important activities in which it has to make investment.

3.5.2. Expenditure

Large part of the budget i.e. 46.9% is spent on recurrent expenditure of the municipality as shown in Table 9. Though it does not contribute in the development activities of the municipality, it cannot be avoided.

Table 9 Expenditure of Bharatpur

S.N.	Expenditure	Amount	%
1.	Recurrent Expenditure	420,000,000	46.9
2.	Capital Expenditure	475,099,400	53.1
	Total	895,099,400	100

Similarly, 15.24% of the budget is spent on physical infrastructure development program, 4.35% on urban infrastructure plan and 6.29% on large infrastructure projects. One of the striking aspects is the expenditure in social security i.e. 29.06%. Out of total current expenditure, staff salaries comprised of 17.86%. In Bharatpur, OSR has covered only 30.57% of the total expenditure which shows the requirement of large percentage of grant to cover the overall expenditure.

Table 10 Expenditure of Bharatpur Metropolitan City (Fiscal Year 2074/075)

S.N.	Expenditure	Amount	%
1.	Salaries and Allowances	159,900,000	17.86
2.	Furniture, Machinery Equipment, Capital Study	17,150,000	1.92
3.	Matching	49,557,000	5.54
4.	Targeted Group	50,000,000	5.59
5.	Physical Infrastructure Development Program	136,435,400	15.24
6.	Promotional Program	17,878,000	2
7.	Budget of Wards	20,420,000	2.28
8.	Solid Waste Management	32,450,000	3.63
9.	Social Security	260,100,000	29.06
10.	Maintenance Fund	10,400,000	1.16
11.	Child Labor Reduction and Child Protection	9,000,000	1.01
12.	Urban Infrastructure Plan	38,930,000	4.35
13.	Local Governance and Cooperative Development Programs	10,751,000	1.2
14.	Large Infrastructure Projects	56,288,000	6.29
15.	Roads Board	1,100,000	0.12
16.	Town Development Fund	21,740,000	2.43
17.	Child Fund and Programs	3,000,000	0.34
	Total	895,099,400	100

Source: (Bharatpur Metropolitan City, 2017)

3.5.3. Overall Assessment of Financial Performance

In the study of the budget of the past five years of Bharatpur Metropolitan City, grants stood as the major source of income, which contribute 36% of total revenue, on an average. OSR also occupies a major share i.e. 28%, on an average. Social security contributes 25% of the total revenue and users' contribution and balance forwarded 6% and 5% respectively.

Table 11 Source of Revenue

Rs. In '000

Source of Revenue	070/71		071/72		072/73		073/74		074/75		Average	
	Amt	%	Amt	%	Amt	%	Amt	%	Amt	%	Amt	%
Own Source Revenue (OSR)	93,761	35.6	104,420	41.9	171,968	28.25	252,558	31.8	273,639	30.57	179,269	28
Grants	142,094	53.9	137,510	55.2	248,002	40.75	319,101	40.18	293,956	32.84	228,132	36
Social Security	-	-	-	-	105,320	17.3	102,320	12.87	260,100	29.06	155,913	25
Users' Contribution	19,043	7.3	7,316	2.9	53,538	8.9	39,629	5	58,774	6.57	35,660	6
Balance Forward	8,432	3.2	-	-	29,860	4.9	80,530	10.15	8,630	0.96	31,863	5
Total	263,331	100	249,246	100	608,689	100	794,138	100	895,099	100	630,839	100

Source: (Bharatpur Metropolitan City, 2017)

Based on the expenditure structure, the municipality has given higher weightage in capital investment. The financial expenditure could be considered as the advantage of the municipality budgetary practice. It is because that capital investment would highly contribute in overall development of the municipality area. The second major expenditure is current expenditure, which cannot be avoided.

Table 12 Expenditure

Rs. In '000

Expenditure	070/71		071/72		072/73		073/74		074/75		Average	
	Amt	%	Amt	%	Amt	%	Amt	%	Amt	%	Amt	%
Current Expenditure	85,767	32.57	92,197	37	189,282	31	240,520	30.3	420,000	46.9	205,553	36.57
Capital Expenditure	177,564	67.43	157,049	63	419,407	69	553,618	69.7	475,099	53.1	356,547	63.43
Total	263,331	100	249,246	100	608,689	100	794,138	100	895,099	100	562,101	100

Source: (Bharatpur Metropolitan City, 2017)

The share of OSR to total expenditure of Bharatpur is 31.89% on average during the last five years i.e. OSR can cover only 31.89% of the total expenditure. This can be compensated by involving private sector in development activities and mobilizing their financial, human and technical resources.

Table 13 Revenue and Expenditure

Rs. In '000

Revenue and Expenditure	070/71	071/72	072/73	073/74	074/75	Average
Own Source Revenue (OSR)	93,761	104,420	171,968	252,558	273,639	179,269
Total Expenditure	263,331	249,246	608,689	794,138	895,099	562,101
OSR to Total Expenditure (%)	35.6	41.9	28.3	31.8	30.6	31.89

Based on the financial indicators benchmarked for strong and position developed jointly by GoN/GIZ (Study of Solid Waste Management in Bharatpur Municipality from the Perspective of PPP, 2003), overall ranking of the municipality is stated below:

Table 14 Assessment of Financial Performance

Indicators	Base	Bench mark		Scenario of Municipality	Rank
		Strong	Weak		
Own Source Revenue	(Own Source Revenue/ Total Revenue) X 100	Above 75%	Below 60%	31.89% in average ranging from 29.3% in 072/73 to 41.9% in 071/72	Weak
Current Expenditure	(Current Expenditure/ Total Expenditure) X 100	Below 40%	Below 43%	36.57% in average ranging from 30.3% in 073/74 to 46.9% in 074/75	Strong

The above assessment clearly shows that in Bharatpur Metropolitan City the total expenditure could not be recovered by its own revenue resources as shown in Table 14, which shows the need for support from external sources. However, the current expenditure does not exceed the benchmark. So, resource gap is mainly persisted on capital investment.

3.6. Necessity of Public Private Partnership in Bharatpur

The financial assessment of the municipality has itself revealed that there is a need for support from the external sources to cover the capital investment of the municipality. In Bharatpur, OSR has covered only 31.89% of the total expenditure which shows the requirement of large percentage of grant to cover the overall expenditure. This can be compensated by involving private sector in development activities and mobilizing their financial, human and technical resources.

Similarly, Bharatpur Municipality in the last 4 years have been promoted to Sub-Metropolitan and then to Metropolitan City. During this process, the area as well as the population of the municipality has increased tremendously. While upgrading to Sub-Metropolitan City, the increase in area was 114% and the increase in population was 131.84%. Similarly, during the declaration of Metropolitan City, the area increased by 137.28% and the population increased by 40.34%.

Table 15 Increase in Population and Area

Administrative Unit	No. of Wards	Total Area (sq. km.)	Increase in Area (%)	Total Population	Increase in Population (%)
Municipality	14	77.89	-	86208	-
Sub- Metropolitan City	29	166.73	114	199867	131.84
Metropolitan City	29	419.76	151.76	280457	40.32

Source: (Bharatpur Metropolitan City, 2017)

Large part of the added areas is peri- urban and still has rural characteristics in them. It is a challenge for the municipality to provide the entire infrastructure anytime soon. So, PPP can be considered as an alternative to providing all the services by the municipality itself. The motive of the municipality i.e. providing services will be fulfilled along with the private sectors' motive i.e. profit if the projects are designed properly.

3.7. Public Private Partnership Projects in Bharatpur

Bharatpur Metropolitan City has been running various types of PPP projects since a long time. Solid waste management is one of the most successful PPP projects in Bharatpur. Other projects such as management of major bus parks, collection of business tax and Integrated Property Tax (IPT), maintenance of sewerage system, Chitwan Mahotsav and One Village One Product (agriculture- based projects). Chamber of Commerce and Industry Chitwan (CCIC) plays an important role in the implementation of PPP projects in Bharatpur.

Similarly, from the fiscal year 2072-73, the municipality has started to identify other projects that can be done in PPP modality by consulting experts in the related field. Municipality has allocated Rs. 40 lakhs for PPP Projects in this fiscal area. Projects such as solid waste management, installation of solar lights, development of Narayani River as tourist center etc. have been identified but they have not been able to implement PPP modality in these projects. Likewise, Office of the Investment Board has proposed large projects such as monorail in Kathmandu, Pokhara and Bharatpur (15.59 km in Bharatpur), developing Bharatpur as smart city and education and sports city under the Ministry of Urban Development and construction of subway, parking and flyovers.

3.7.1. Collection of Business Tax and Integrated Property Tax (IPT)

While the municipality was struggling to collect the business tax in Bharatpur, a partnership with Narayangarh Chamber of Commerce and Industry (now, Chamber of Commerce and Industry Chitwan, CCIC) proved to be very helpful. The partnership started in 2058 B.S. as a five- year contract between the municipality and CCIC. The agreement included motivational activities for the business firms to register their firms in the municipality and pay their business taxes regularly. The collection of the tax was done by the municipality itself. According to Mr. Rasik Pradhan, Executive Director of CCIC, in return, 15% of the collected amount for up to Rs. 15 lakhs collection and 20% for more that Rs. 15 lakhs collection was given to CCIC by the municipality.

According to Pradhan, since the past three years, the contract has not been renewed. He also mentioned that the main dispute was in the ownership of the agreement. As the matter is completely money- related, the municipal staffs did not want to take the risk and

the contract was not renewed. According to Mr. Bharat Kumar Acharya, Head of Planning Section of the municipality, the partnership was not felt necessary to be renewed because now the people directly come to the municipality for registration without any effort of CCIC. He also added that rather than continuing the old contract, through discussion they can come up with new ideas about how CCIC can help the municipality. But according to Mr. Prachanda Lal Pradhan, Past President of CCIC, the agreement was initiated for a long term basis and the municipality should renew it. Pradhan also mentioned that in the absence of elected bodies in the municipality, it was difficult to renew the contract. As the elected body is present in the municipality now, the renewal process is under progress. This kind of conflict between two important bodies can be very harmful for the overall development and should be resolved shortly.

Similarly, CCIC has been promoting and motivating people to pay the Integrated Property Tax (IPT) as well. According to Pradhan, when the municipality kept forward the proposal of collecting IPT in 2062 BS, CCIC supported the idea and has been encouraging the people to pay the tax regularly until today. This partnership has been proved to be very important for the municipality as IPT and business tax is the major sources of OSR in Bharatpur. IPT and business tax contributes 23.37% and 11.7% in the total OSR respectively.

3.7.2. Management of Bus Park

Two major bus parks of Bharatpur i.e. Central Bus Park and Pokhara Bus Park are contracted out to a private partner on a 3 years management contract. In this contract, no investment is done by the private party, only the management is looked upon. The major responsibility of the contractor is to collect the parking



Figure 6 Central Buspark, Bharatpur

fee from public vehicles, collect the rent from the shops inside the bus parks and overall management of the bus parks. According to the contract, a total of 6 crore 25 lakhs should be handed over to the municipality in a period of 3 years. All the other collection is taken as profit by the contractor himself.

3.7.3. Municipal Sewerage System

For the installation of municipal sewerage line in Bharatpur, a project Urban Environment Improvement Project (UEIP) funded it. The project handed over some amount as grant while some loan was also given. Municipality being the counterpart in the project had to invest at least 8- 10% of the total amount. For the collection of that amount, municipality decided to take connection charge and service charge from the users. Connection charge was successfully collected at the beginning of the project but they have not been able to collect the service charge regularly. According to Mr. Krishna Malla, Engineer of Planning Section of the municipality, the failure in collection of the service charge was due to lack of operation and maintenance once the project ended. However, the management of the sewerage system, at present, is done by a users' committee.

This project is an example of successful completion of a project using users' contribution; but it is also an example of how lack of operation and maintenance hampers the project in long term.

3.7.4. Drinking Water

Similar to sewerage system, drinking water in Bharatpur is also maintained by a users' committee. Initially, the project received some grant and some amount was collected as connection charge from the user. Now, service charge is collected every month by the users' committee. Unlike sewerage system, this committee has been successfully collecting service charge.

3.7.5. Chitwan Mahotsav

Chitwan Mahotsav is one of the best examples of PPP project in Bharatpur. Although it is not an infrastructure related program, the lesson of successful implementation can be taken from the project. Chitwan Mahotsav is a trade fair done once in every two years in the bank of River Narayani. It started in 2053 with partnership between CCIC, Bharatpur

Municipality and District Development Committee, Chitwan. Initially, the partners invested the seed money in fixed ratio and the collection at the end of the program was shared between them in that ratio. CCIC invested 50% of the amount, so,



Figure 7 Chitwan Mahotsav

the ownership lies in CCIC and the program is mostly looked upon by them. Later on, 40% of the collection was given to CCIC as administrative cost and rest of the profit was invested in development activities especially, in the development of Narayani riverside. Leadership plays an important role in the success of this event. As it is led by CCIC and major decisions are taken by CCIC itself, there is less chance of dispute among the partners. Similarly, they have been continuously investing in the development and management of the riverside, so, the local residents also support the idea.

3.7.6. Narayani River Bank Management

With the vision of developing the area in a planned manner, a committee was formed with the members of District Development Committee, Chitwan, Bharatpur Municipality and CCIC in 2069. After the formation of the committee, a masterplan of the



Figure 8 Food Stalls in Narayani River Bank

area was prepared and no one was allowed to do any construction activities or any other programs without the committee's permission, but they have not been able to stop those activities. According to Mr. Rasik Pradhan, Executive Director of CCIC, people are constructing in the area without taking permission. He also added that as CCIC did not have the full authority; such activities were difficult to be controlled. It is the responsibility of the municipality, but they do not have the resources to do so. So, they have handed over the responsibility of preparing guidelines for the management of the

Narayani riverside to CCIC. As per Pradhan, the work is under progress. As it is the venue for Chitwan Mahotsav, CCIC has a special interest in preserving and managing it.

Although all many institutions have partnered to preserve the area, the municipality and CCIC has assigned the task of managing the area is to TLO. The food stalls in the river side has to pay fee and the TLO cleans and manages the area regularly. The fees collected from those stalls are an important source of revenue for the TLO.

3.7.7. One Village One Product (OVOP)

One Village One Product is an agriculture-based project running in PPP modality in partnership between Ministry of Agricultural Development and Federation of Nepalese Chamber of Commerce and Industry (FNCCI) since 2063 BS. The ministry funds the project through FNCCI and respective CCI is implementing



Figure 9 Banana Exhibition in Chitwan Mahotsav

partner. In this project, one village is selected and one product of the village is promoted by Chamber of Commerce. In Chitwan, banana was selected and after promoted by CCIC in various events, bulletins and newsletters. Various orientations, training and seminar related to banana farming conducted for the farmers. The five year project completed its second phase successfully in this fiscal year. According to Mr. Rasik Pradhan, Executive Director of CCIC, banana farming was done only in 600 bigha during the start of the project and at the end, farming is done in 2500 bighas. Similarly, he also mentioned that transaction of each farmer is also appreciable after the project. CCIC has plans to continue the project but due to the state restructuring towards federal set up, it will be difficult to implement the project. Pradhan assured that once the federal system and its working mechanism is made clear, the project will continue. This project is an example of partnership with private sector for human resources even though the investment is done by the government.

3.7.8. Parking Management

As the city is growing, parking has been a major problem in Bharatpur. Municipality collected parking fee for its proper management. But according to Mr. Krishna Malla, Engineer of Planning Section of the municipality, local



Figure 10 Parking

people did not like the idea of municipality collecting the fee and protested it. Since then, TLOs have been managing parking in their respective *toles* by collecting fees from the residents. Rs. 100- 150 is collected per month by Tole Lane Organizations (TLOs) in the commercial areas where parking management is necessary. TLOs have hired staffs to manage the parking system. Since there is no space for parking in the core area, parking along one side of the road is done. The side is changed every day and any vehicle parked on the wrong side of the road is asked to pay fine. This has reduced traffic jam remarkably but the problem still exists. So, municipality is looking for a long term solution for the parking problem.

3.8. Project Identification

Project identification is a major aspect of any PPP project. It is very important to identify the type of projects that can be done in PPP modality. According to Mr. Bharat Kumar Acharya, Head of Planning Section of the municipality, for the selection of the project, the municipality first studies about the project and finds out if private sector is interested in it or not. Unless they can gain some profit and can give employment to few people, the project cannot be proposed. Initially, the members of the municipality discuss about the projects before selecting it. According to Mr. Birat Ghimire, Engineer of Environment Section of the municipality, CCIC has an important role in implementation of most of the projects, so, their support is very necessary. Similarly, civil society also has significant role and their role varies according to the pattern of the project. After the initial discussion, the project is discussed with other stakeholders such as CCIC, TLO etc.

According to Mr. Acharya, sometimes in case of failure of the municipality to provide basic services such as solid waste management, the municipality has to forcefully implement those projects in PPP modality. Bharatpur Metropolitan City identified ten projects to be done in PPP model; detailed study of two projects was done but only one project i.e. solid waste management was implemented. According to Mr. Acharya, without proper discussion with the local people, it is very difficult to implement any project successfully, so, they have to be included from the very initial phase of project identification. According to Mr. Krishna Malla, Engineer of Planning Section of the municipality, the projects are likely to fail because the civil society or the local people disagree on the project later on, so, their role is very important. He also added that it will be appropriate to select the project after the discussion with all the stakeholders and the municipality also planning on doing so.

Various kinds of projects are running in Bharatpur but all the successful projects have been able to involve civil society in it. Other kinds of projects that can come in the future are as follows:

3.8.1. Solar Street Lights

Among the two projects that were studied in detail, installation of solar street lights is one of them. The concept is to call for the private sector to install the solar street lamps and allow them go get their return from the advertisement in the lamp posts. According to Mr. Ghimire, the revenue and expenditure was studied and was decided to hand over the project to the private party for 15 years to get their return. According to Mr. Acharya, the project could not be implemented because small area i.e. only the main roads were included in the project and the private sector did not find it feasible to invest in such small area. He also added that after the revision of the project area, the project will come into action.

3.8.2. Management of Vegetable Market

Municipality has planned to relocate the existing vegetable market and hand over the task of its management to private sector. According to Mr. Bharat Kumar Acharya, Head of Planning Section of the municipality, for the proper management of vegetable market, municipality can provide well serviced land i.e. land with basic services such as road,

water, drainage etc. or do the agreement with the land owners if required. All the other construction work and management can be done by private sector. The private sector can function from the profit gained by collecting the rent from the vegetable shops.

3.8.3. Construction of Multi Complex

Municipality has plans to construct multi complex in the existing vegetable market in Ward no. 3. The existing vegetable market will be relocated as it is congested to cater all the consumers. The plan is to construct a five storey building with two storey basement parking in PPP modality. The private sector can gain profit by renting out the other stories for commercial activities. With the construction of this complex, parking problem will also be reduced largely.

3.8.4. City Bus

City bus is providing facility in Bharatpur but is not running successfully since the past six months. After introducing three- wheeler rickshaws, people using city bus has reduced. This is due to unreliable service of the bus. According to Mr. Acharya, people prefer rickshaws to bus because rickshaw will take you to the destination anytime and the timing of the bus is not fixed. If fixed time is specified and maintained, it may run successfully. Similarly, he also added that population study must be done to provide regular service adequately. Mr. Rasik Pradhan of CCIC also mentioned that City Bus can be proposed in PPP model if the municipality can facilitate the private party in running the bus.

3.8.5. Construction of Waiting Area

It is one of the ten PPP projects identified by the municipality. Waiting Area is a necessity but the municipality is not capable of constructing the required number of waiting areas. The concept is similar to the solar street lamps'. The private party will construct it and will get its return from the advertisements.

3.8.6. Construction of Overhead Pedestrian Bridges

As the number of vehicles is increasing, it has been very difficult for the pedestrian to cross the road. Overhead bridges can be constructed by the private sector allowing them to make profit from the advertisements done in the bridge for a fixed times.

3.8.7. Parking of Heavy Vehicles

Bharatpur lies along the two major highways i.e. East- West highway and Kathmandu-Butwal highway. Large number of heavy vehicles passes each day and many needs to park their vehicles as well. According to Mr. Rasik Pradhan, private sector can be assigned to manage the parking and they can make their profit from the parking fee collected.

3.8.8. Ropeway from Narayangarh to Maula Kalika

Maula Kalika is a very famous tourist destination located in Gaiindakot Municipality of Nawalparasi district, adjacent to Bharatpur. With the popularity of the temple increasing, feasibility study of cable car from Narayangarh- Maula Kalika-Devghat has been done (Ropeway Nepal, 2017). Similarly, Finance Minister of Nepal Ram Saran Mahat on his first visit to the temple in 2015 has advised the locals to initiate a cable car option (Chitwan Post, 2015). The project can be designed properly and can be done in PPP modality.

3.9. Administrative and Legal Aspects of Public Private Partnership

All the administrative and legal parts are mentioned in the agreement/ contract between the partners on a project basis. Most of the projects in our case are handed over to the private party in bidding system. According to Mr. Rasik Pradhan, those legal documents are prepared by the governmental authority i.e. the municipality (in this case) and other parties should agree on it. According to Mr. Birat Ghimire, contract is prepared based on the national PPP policy. As per the policy, for any PPP project, the project is selected, studied, role of stakeholders are defined and the contract is prepared. As most of the projects are done in bidding system, municipality does not have to take part in most of the financial part; the contractors themselves bear the profit or loss. According to Mr. Krishna Malla, no problem has been created due to the policy constraint as guidelines for each project are prepared separately.

All the risks to be shared are mentioned in the clauses in the contract itself. But if any loss is caused due to the fault of any party, they will be responsible for compensating the loss. Similarly, if any uncertainties such as war, natural calamities etc. occur and the private party cannot function properly, they will be compensated by the municipality in

most of the cases. According to Mr. Birat Ghimire, the projects running in PPP modality are small projects. In such projects, no large dispute is seen and can be solved easily if people's participation is ensured from the very beginning. But if any party breaches the contract or does not fulfill their roles and responsibilities mentioned in the contract, they are punished according to the law.

3.10. Project Design

As partnering with private sector reduces the burden of the public sector, the projects should be designed properly to function effectively. As per Mr. Birat Ghimire, there are various types of models for the projects but only in PPP model the investment is done by the contractor. This reduces the burden of the municipality tremendously.

Every PPP projects in Nepal are based on the PPP policy prepared by National PPP Policy. After the project is selected, detailed study is done and the revenue, expenditure, time frame for the return of the investment, role of the stakeholders, advantages and disadvantages are defined. The private party runs the project for certain time and then either handovers the project to the municipality or the contract is renewed. For example, the revenue and expenditure of solar street lights was studied and was decided to hand over the project to the private party for 15 years to get their return.

The role of civil society is also important but differs according to the nature of the projects. According to Mr. Ghimire, from the discussion with local people and civil society, actual need of the people can be found out. The projects running in PPP modality are small projects. In such projects, no large dispute is seen and can be solved easily if people's participation is ensured from the very beginning.

Likewise, Office of the Investment Board has proposed large projects such as monorail in Kathmandu, Pokhara and Bharatpur (15.59 km in Bharatpur), developing Bharatpur as smart city and education and sports city under the Ministry of Urban Development and construction of subway, parking and flyovers. For such large projects, the risk is very high and proper study should be done before starting the projects. According to Mr. Bharat Acharya, the population is not enough for even the city bus to running properly. In such case, the demand of monorail should be analyzed properly.

3.11. Selection of Appropriate Private Partner

PPP projects require private partners to cover the multiple aspects of a project, potentially including design, construction, project management, financing, operation and maintenance. As contemplated in this White Paper on PPP, private partners who are eligible for PPP projects must have appropriate experience, capacity and financial resources to undertake a PPP project of the nature required in a responsible fashion for the duration of the PPP project lifetime. Such private partners may be domestic or international, although the Government encourages the involvement of Nepali businesses wherever possible.

According to Mr. Birat Ghimire, the selection of private partner is done by calling for proposal in a competitive manner as mentioned in the Public Private Partnership Policy, 2072. The lowest bidder gets the contract but all the technical aspects must be sound. If only one private party has the capacity to complete the task, the municipality has the authority to hand over the project directly to the party. The private partner can be any private enterprises, NGO/INGOs, community based organizations and cooperative organizations.

3.12. Operation and Maintenance

Mr. Bharat Acharya said that the municipality is far behind in the case of operation and maintenance. According to him, municipality takes initiative and starts the project without proper study and discussion with civil society. But later on, the civil society interrupts the work by protesting. So, proper discussion and detailed project report should be prepared beforehand. Similarly, after the implementation of the project, maintenance is also not done.

3.13. Monitoring and Evaluation

According to Mr. Jaya Ram Shrestha, Ward Chairman of Ward No.1, monitoring is the most important aspect of successful project implementation. Unless monitoring is done, the work is not done properly. He also added that in the absence of elected bodies in the municipality, monitoring was not done properly. He mentioned that corruption can be a major issue during this phase, so, the employees should also be monitored. Mr. Bharat Acharya mentioned that municipality monitors the projects but it is not done regularly.

He also added that random monitoring is not considered to be a good practice, so, municipality is planning to prepare a schedule and monitor the projects according to it.

According to Mr. Birat Ghimire, evaluation of the project is done by the municipality at various stages: pre- evaluation, post- evaluation, financial evaluation etc. He mentioned that in the projects like solid waste management, monitoring and evaluation is done to find out if people are satisfied with the service or not. He also mentioned that after the completion of each project, the project is evaluated and a study is done regarding the changes to be made in the project design or in the contract in its next phase. For example, the contract of solid waste management has been amended as per the feedback and the evaluation done after the previous project.

3.14. Role of Citizens and Civil Society

Civil society has various roles at different stages of PPP. The role of civil society is also important but differs according to the nature of the projects. During the phase of project identification, their role is to ensure that their demand for a particular service is met. According to Mr. Birat Ghimire, from the discussion with local people and civil society, actual need of the people can be found out. It is essential to ensure that the specific project components and strategies for their implementation are acceptable to all stakeholders and follow participatory processes during the phase of project structuring and formulating.

In the core area, Tole Lane Organization (TLO) is one of the major civil societies involved in infrastructure and development activities. Similarly, Women's group, youth clubs etc. also works actively in such activities. People themselves established TLO as a volunteer organization aiming to manage relative lane area. The mission of this organization is to mobilize community for active participation, develop activities and planning at ward level as well as sensitize civic society (Study of Solid Waste Management in Bharatpur Municipality from the Perspective of PPP, 2003). According to Mr. Sanjay Gupta, Secretary of Mainroad TLO of Ward No. 1, TLO has its own source of revenue. TLO collects some fund from the residents annually. Similarly, 30% of the fee collected for solid waste management goes to TLO. Different TLOs have different

kinds of source of revenue. In case of Mainroad, the fee collected from food stalls in Narayani River Bank and the parking fee are also the major sources of revenue.

Civil society also provides the opportunity to know about the level of willingness to pay and the actual demand for services. For example, in case of solid waste management, TLO decides the frequency of collection of waste because the people have to pay for the service based on the frequency. Based on the necessity and the willingness of the people to pay, TLO decided the frequency.

Similarly, civil society monitors and supervises the quality and level of service provided by the private operator of the service. The role of TLO is also to supervise if the citizens are receiving proper services or not. It is the responsibility of TLO to inform the concerned authority such as municipality, electricity authority etc. to inform if any service needs maintenance.

According to Mr. Krishna Malla, the involvement of civil society is very important in each project but the municipality has not been able to ensure full participation in present day and is planning to do so. The projects running in PPP modality in Bharatpur are small projects. In such projects, no large dispute is seen and can be solved easily if people's participation is ensured from the very beginning.

3.15. Case Study: Solid Waste Management of Bharatpur

Manmade waste is becoming a global problem. The society is facing problem of environmental degradation with the urbanization in the process of evolution. In the absence of proper plan, policies, management and lack of awareness people dispose their waste carelessly in their convenience, thus leading to mishap of environmental pollution and its consequences. Deposits of garbage in land and water have not only polluted air, water and land but have also led to the spread of air and water borne diseases which in turn is having its impact not only in human development process but in balancing of environment as well.

The urban centers, in general, is growing in an unplanned and mismanaged fashion and subsequently generated pressure in existing infrastructure of road, sewage, drainage and solid waste management practice. Usually in urban Nepal, unmanaged waste disposal practice is the main cause of environmental problem followed by unmanaged sewage. Therefore, solid waste management is the growing issue in the context of urban environmental degradation (Study of Solid Waste Management in Bharatpur Municipality form the Perspective of PPP, 2003).

Since the Local Self Governance Act has provided legal mandate to the Municipality for overall environment management in its region, the Municipality should play the lead role in bringing all stakeholders into one umbrella to make clean, green and healthy city. Moreover, the Municipality has wide range experiences in solid waste management as this responsibility has been continuously borne by this institution since its establishment. However, it is not possible for a single institution to bear the overall liability and private sector and Non- Governmental Organizations (NGOs) are increasingly becoming successful in delivering the goods and services effectively. Thus, private sector and NGOs are taken as the supportive institutions to cope with environmental issues as well as delivering services to people in an effective manner.

In Bharatpur Metropolitan City, since the past 18 years, private operator is contracted to perform the waste collection and street sweeping work of the municipality in Public Private Partnership (PPP) model. The waste management is observed through Solid Waste Sub- section under Environment, Solid Waste and Heritage Section.

3.15.1. Existing Solid Waste Management Practices

At present, two private sectors are responsible for waste collection and street sweeping in Wards 1 to 12 of the municipality and in the rest of the areas it is done by the municipality itself. The private operator sweeps the streets and hauls the wastes in rickshaws to collection point. From collection points, the municipal staffs load the waste in tractor trolley and haul to disposal site. At present the municipality is dumping the waste in Nagarban. But the municipality is in search of permanent solution to ultimate disposal of the wastes. The private operator is given the authority to collect service fee from the service seeker.

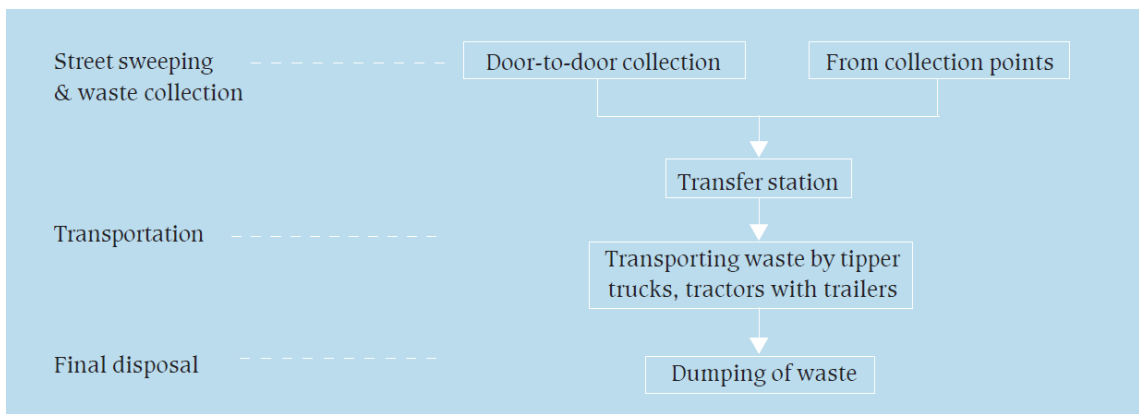


Figure 11 Solid Waste Management Practice in Bharatpur



Figure 13 Street Sweeping



Figure 12 Collection of Waste



Figure 15 Transfer Station



Figure 14 Collection for Final Disposal

3.15.2. Need of PPP in Solid Waste Management

Before introducing PPP in solid waste management, municipality was struggling to provide door-to-door collection, especially in the core areas of Bharatpur city, and to dispose of the waste in a sanitary way. Mixed waste was dumped on the bank of Narayani River. Without a proper plan and vision for waste management, the municipality was not capable of handling the waste generated in the city area. Since 1999, Bharatpur municipality has initiated a Public Private Partnership (PPP) in order to manage the solid waste. Private sector participation in solid waste management has improved efficiency and reduced the need for municipal investment.

3.15.3. Area of Study

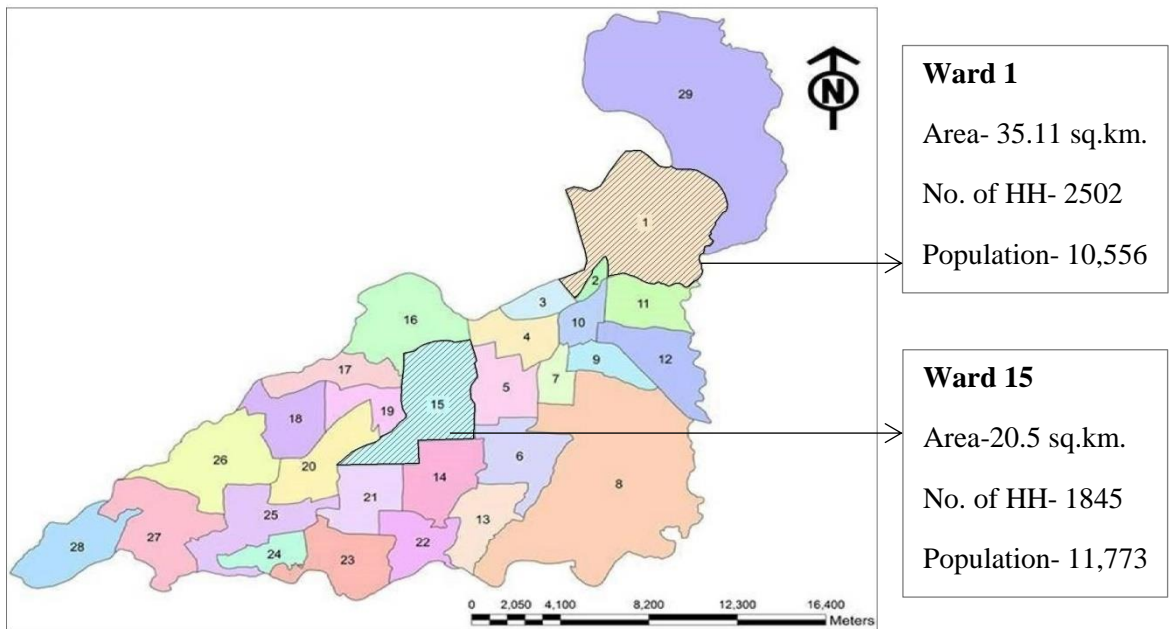


Figure 16 Study Area

As the study was done in a limited time, all of the municipality cannot be covered in the study. The main focus was on the areas covered by the private sector for solid waste management, specifically ward no. 1 of Bharatpur Metropolitan City. Ward No. 1 was selected because it covers large part of the core area of the municipality with residential and commercial areas. For the comparative study in the service delivery of private and public sector, Ward no. 15 was selected for perception survey. Solid waste management in Ward no. 15 is done by the municipality.

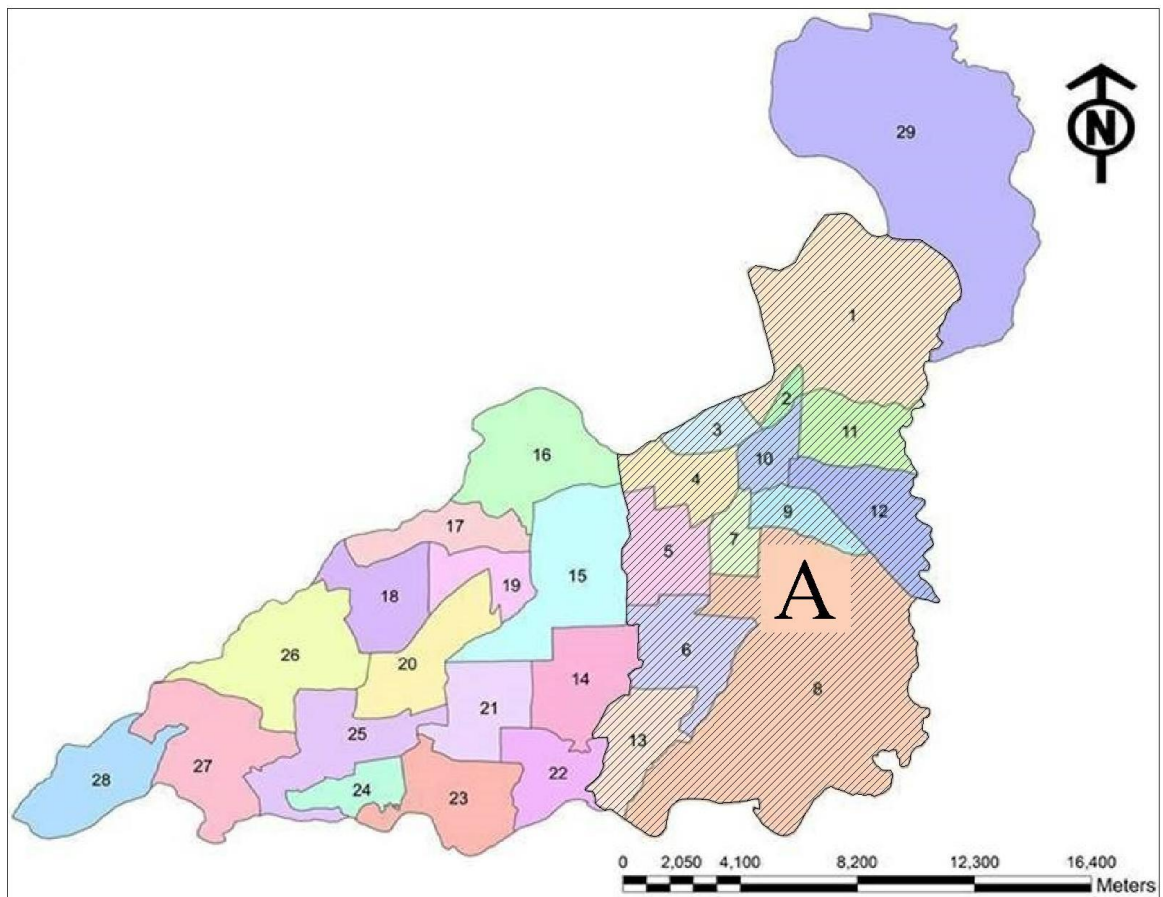


Figure 17 Map Showing Core Area of Bharatpur

The old municipal area i.e. the area of Bharatpur Municipality is the core area of existing metropolitan area. The map above shows the core area i.e. A, as marked in the map.

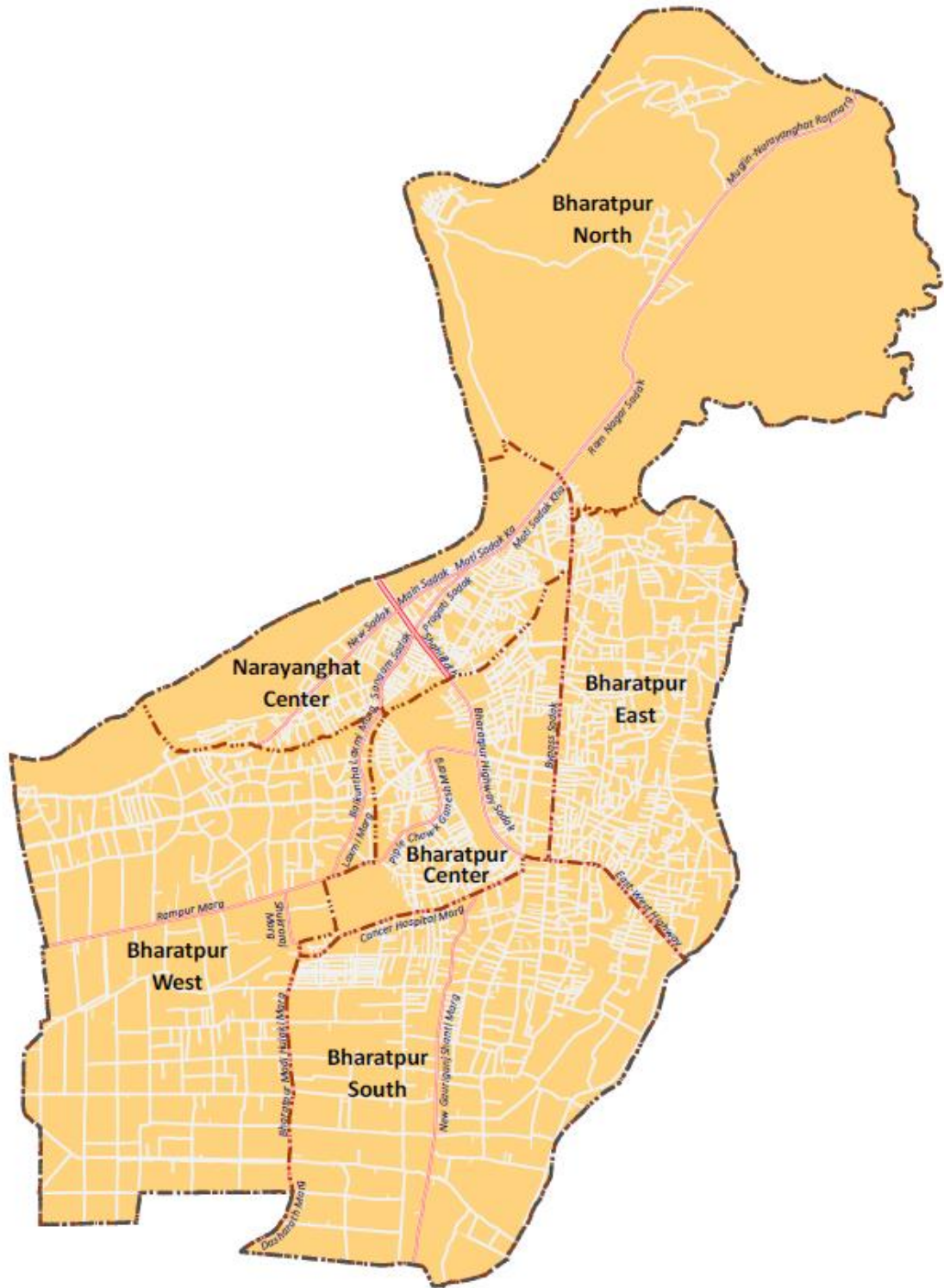


Figure 18 Core Area of Bharatpur Metropolitan City



Figure 19 Map of Ward 1 of Bharatpur Metropolitan City

3.15.4. Selection of Private Partner

As per the Public Private Partnership Policy, 2072, competitive bidding is a must for the selection of private partner in case of PPP projects. Bharatpur has also followed the same policy and proposals were called with separate technical and financial packages. As mentioned in the contract, the technical proposals were evaluated in the beginning. The financial proposals of bidders whose technical part were selected were later evaluated. Ultimately, the technically sound proposals with lowest bidding price were selected as the private partners for the project. The selection process by two separate packages was done to make sure that no compromises were made in case of technical specification.

Two private partners were selected for the management of solid waste in Ward No. 1 to 6 and Ward No. 7 to 12. As our study is Ward No. 1, the study will include private party of Ward No. 1 i.e. Green Nepal City Waste Management. Green Nepal was first started by a single person and has been working as the private party of the municipality in solid waste management since the very beginning. Until 2073 B.S, Green Nepal was the only partner to look after the solid waste management of Bharatpur Sub- Metropolitan City. After upgrading to Metropolitan City, two partners were appointed. The new contract is a four year contract starting from 2073.

3.15.5. Financial Aspect

The financial aspect is monitored by tax unit of the municipality. The entire service fee collected should be deposited in the bank account of the municipality within one week of collection. The receipt used by the private sector to collect the fee is also the receipt of the municipality. The tax unit checks if the collected fee deposited by the municipality is proportionate to the receipt they used to collect or not.

After that, the tax unit recommends the account section to handover their share to the respective parties. The municipality hands over 70% of the fee to the private sector and 30% to the respective Tole Lane Organizations (TLOs). As it is the responsibility of private sector to collect the fees, Rs. 3 lakhs must be deposited every month even if they fail to collect the fee.

3.15.6. Role of Private Sector in Solid Waste Management

As per the contract, the responsibility of the private sector is to complete the assigned work, deliver the services to the general public in time and to look after all the activities related to solid waste management. The private sector is expected to provide service unless the municipality directs to discontinue the service in a written form. In case of any emergency such as natural disaster, fire, strike etc., the private party should immediately inform the municipality in written form. In case of failure in delivery of service, the municipality has the authority to terminate the contract.

The responsibilities of the private sector are: household collection and management of solid waste, street cleaning and management of its waste, cleaning of public spaces and

management of its waste, segregation of waste and their reuse, collection of service fee and co-ordination and collaboration.

1) Street and Public Spaces Cleaning, Household Collection and Management of Solid Waste

In case of solid waste management, the municipality may be divided into three major areas; viz. the market areas, the residential areas and the peri-urban areas. Followings are the methods adopted to manage the wastes from these areas.

i. Main Commercial and Institutional Areas

The commercial and institutional areas mostly lie in Ward No. 1, 2, 3 and 10. The service provider collects the wastes from curbside corners where the residents gather their wastes after sweeping their premises. Sweepers from the private service providers sweep the street and haul the wastes in rickshaws to the collection point. From the collection points, the wastes are taken to the dumping yards in tractor trolleys. Vegetable market and Haat Bazaar are also served every day by collecting wastes.

ii. Residential Areas

In relatively densely populated residential areas, the private service provider sweep the streets and collects the wastes from curbside pavements thrice a week, twice a week or once a week depending upon the frequency set by the TLOs of the areas. The residents throw their wastes on curbside for the private service provider to collect. The waste swept is hauled to collection points in rickshaws. From the collection points, the wastes are taken to the dumping yards in tractor trolleys.

iii. Peri- Urban Areas

The peri- urban areas of Bharatpur i.e. Ward no. 13 to 29 is comparatively less populated and does not require regular collection of waste. Most of the people are engaged in agriculture, their solid wastes are managed along with agricultural wastes, and so, the inorganic waste such as plastic and glass is very less. The private sector is not assigned to collect wastes from these areas. So, the

municipality itself collects the waste after the respective TLOs calls for the collection vehicles. The collection is generally done once a month but in case of more waste, collection is also done twice a month.

Frequency of Collection

Door- to- door collection is done in the areas daily, in alternate days, twice a week and once a week as per necessity. In core areas, daily collection is a must whereas in peri-urban areas where people are engaged in agriculture and make compost manure from organic wastes, collection once a week is also enough. The frequency of collection is decided after the discussion with the local community. The cleaning of public spaces once a fortnight also comes under this provision.

Ultimate Disposal

The responsibility of private sector is up to the disposal of solid waste to the landfill site; the management of the landfill site is the responsibility of the municipality. Currently, there is no permanent sanitary landfill site for the collected waste. At present, the area around Nagar Ban/Forest, Ward No. 3, is being used as temporary landfill site. According to Mr. Hari Pariyar, Waste Collector of Ward No. 1, the waste is dumped and gravel and soil is laid over the waste and compacted. According to Mr. Jayaram Shrestha, the site used for disposal will only sustain for few more years, and then the municipality should look for other options. Small disputes regarding landfill site (if near settlement area), sometimes interrupts the waste collection for 2- 3 days. But no major dispute has been seen until now.

Landfill Site

There is no sanitary landfill site in Bharatpur, only dumping sites. According to Mr. Birat Ghimire, Ministry of Forest handed over around 9.9 ha. (14.5 bigha) of land to the municipality to be used as landfill site, as per the decision of Government of Nepal. The process started six years ago but the work of landfill site has not been started until today. The land is a part of community forest in Ward No.1, so, to use it, the municipality must compensate the forest with equal area of land. As the governmental process is slow and because of the conflict in price, it took three years to buy the land. It will be handed over to the forest after planting trees in the land. Now, the municipality is doing

Environmental Impact Assessment (EIA) for the landfill site but it is still unsure of how much time it will take to start the work.

According to Mr. Jayaram Shrestha, private sector is interested in recycling the waste and producing LPG from the waste. According to him, Bharatpur produces 30 tons of waste per day, from those 20 LPG cylinders and 2 tons of manure can be produced. The private party can recover by selling LPG cylinders. Similarly, the waste will be reduced tremendously and small landfill site can be used for longer period. For this, 5 bigha of land and Rs. 25 crore is required. As per the proposal presented by the private party, they will invest Rs. 10 crore and Rs. 15 crore is to be invested by the municipality. This can be very beneficial for both the parties.

2) Segregation of Waste and their Reuse

The role of the private sector is also to encourage the community to minimize the waste by segregating the waste in the household itself. The community should also be encouraged to reuse any reusable waste and dispose the organic waste in the household (if possible) to contribute in minimizing the waste in the source i.e. household. The collection should be done at different time for different types of wastes. The waste should be further segregated in the transfer station or in the segregation plant and the reusable wastes should be sold. But such activity has not been done. Very less people in the segregate waste and the segregation is not done in the transfer station as well. Although segregation of waste is one of the clauses in the contract, it has not been practiced and the private party is planning to do so in the near future.

Similarly, as per the contract, interaction programs regarding segregation and reuse of waste should be conducted every four months. Such program should be conducted in each ward at least once. Until now only one such program has been conducted in Ward No. 2. A women's group of 125 women were included in the interaction program regarding the segregation of organic and inorganic waste. This group has started to segregate waste and Mr. Tarjan Shrestha, Proprietor of Green Nepal, felt that such program is very helpful.

3) Collection of Service Fee

The responsibility of collection of service fee also comes under the private sector. Service fee should be collected based on the minimum rate allocated by the municipality and 90% of the household, shops, offices etc. should be covered every month during the collection of the fee. The entire service fee collected should be deposited in the bank account of the municipality within one week of collection. The receipt used by the private sector to collect the fee is also the receipt of the municipality. After the collection, the municipality handovers 70% of the fee to the private sector and 30% to the respective Tole Lane Organizations (TLOs).

The collection of service fee from household started since 2069 B.S. and it was very difficult to collect the fee in the beginning. According to Mr. Rishi Dhakal, Director of Green Nepal, the organization had to bear loss for the first six months. People protested and believed that the collection of waste had to be done free of cost by the municipality. Through proper awareness, they were successful in collecting the fee. In Bharatpur, mostly the shop owners do not pay the fees. They say that the waste produced from shops is less. But it is their duty to pay the fee. As per the contract, private party, municipality, TLO, CCIC, Ward Citizen Forum and CBOs must create suitable environment to pay the fees for those who disagree to pay.

According to Mr. Jayaram Shrestha, Ward Chairman of Ward No. 1, 20- 15 years back, when the elected body was present, the private sector was paid only after the recommendation from the Ward Chairman. This system ensured that the private party is doing their job properly and thinks that the same system should be introduced now as well. But Mr. Shyam Shrestha, Proprietor of Green Nepal, says that the system was completely corrupted. It was difficult for them to get the recommendation until they bribed the Ward Chairman. If the system was corruption free, it would be a very good practice as the monitoring would be done by the Ward Office as well.

Similarly, the municipality plans on creating software to maintain the database of collected solid waste and service charge to formulate necessary plans as per the data. The municipality has distributed solid waste management card to each household where the

payment of service fee will be recorded. Further, the plan is to link the data with tax system as well.

4) Co- ordination and Collaboration

For conducting all the activities assigned to the private sector, they should co- ordinate and collaborate with Tole Lane Organization (TLO), Ward Citizen Forum, Chamber of Commerce, Metropolitan City Office and other concerned agencies. As per the contract, various interaction programs must be conducted between the private party and the TLOs, CCIC, CBOs etc. According to Mr. Tarjan Shrestha, co- ordination with TLOs is very necessary and is done at least once a week. He also added that TLOs and CBOs have a very important role to convince the people on paying the fee and keeping the area clean, so, they should be actively working on it. Similarly, without the support from CCIC, it was very difficult to collect the fee in the beginning. According to Mr. Tarjan Shrestha, CCIC's effort in the collection of fee is remarkable. So, the co-ordination and collaboration with such organizations is very important.

3.15.7. Human Resource and Vehicles of Private Sector

As per the contract, the following human resources are required for the service delivery:

Table 16 Human Resource

Human Resource	Number	Education	Experience
Manager	1	10+2	2 years
Supervisors	2	SLC	2 years
Waste collector	33	Literate	
Accountant	1	10+2	1 year
Service fee collector	6	SLC	1 year
Office helper	1	Literate	
Driver	7	Literate	1 year

As per contract, following types and number of vehicles are required for service delivery:

Table 17 Number of Vehicles

Vehicle	Number
Compactor	1
Large Tractor	6
Small Tractor	1
Rickshaw	20

According to Mr. Shyam Shrestha, Proprietor of Green Nepal City Waste Management, the human resource and the number of vehicles mentioned in the contract are mandatory for the system to operator, so, the contractor must own these anyhow.

3.15.8. Employees' Welfare Fund

Green Nepal has been taking care of the workers' safety and rights as well. According to Mr. Nirmal Sigdel, Green Nepal is encouraging their employees to save some amount from their salaries (Rs. 100 to 500) and equal amount is added by the organization as per of employees' welfare fund. The organization hands over the fund to the employee when they leave their work. But According to Mr. Hari Pariyar, Waste Collector, although savings were done by every employee in the beginning, now, no one saves their salary. He also added that the employees have stopped doing so because of the lesser amount of salary. It is a good practice and would be an example if could be continued.

3.15.9. Role of Municipality

The role of municipality was seen from the very beginning of the project identification to the evaluation of service delivery. The municipality regularly monitors if the waste is collected regularly or not. The municipality has three supervisors to monitor the service delivery. Although the monitoring is done by the TLOs, the supervisors from the municipality further monitor the service.

According to Mr. Birat Ghimire, evaluation of the project is done at different phases and the contract or the model of the project is amended every time based on the feedback and the evaluation done. Similarly, the municipality is also responsible to monitor if the people are satisfied with the service delivery or not. Recently, a survey with the local people was done by the municipality to check if the people are satisfied or not.

The financial aspect is monitored by tax unit of the municipality. The tax unit checks if the collected fee deposited by the municipality is proportionate to the receipt they used to collect or not. As per the contract, the responsibility of the municipality is also to facilitate the private sector in obtaining the required permit, acceptance and licenses.

3.15.10. Role of Chamber of Commerce and Industry, Chitwan (CCIC)

CCIC played a very important role in the beginning of the collection of service fee. According to Mr. Tarjan Shrestha, without the support from CCIC, it was very difficult to collect the fee. The role of CCIC is also in creating awareness among the people regarding good solid waste management practices, segregation of waste, regular payment of service fee etc. the private sector has approached CCIC to create awareness among the people. Similarly, in case of any conflict, CCIC has always stepped ahead to resolve them.

3.15.11. Role of Civil Societies

1) Tole Lane Organization (TLO)

As 30% of the collected amount goes to TLOs, they have a very important role in case of solid waste management. The main role of TLO is to create awareness among the people regarding good solid waste management practices, segregation of waste, regular payment of service fee etc. the private sector seeks for profit in everything they do, so, it is the role of TLO to create public awareness. Similarly, TLO also monitors if the waste is collected regularly as per the schedule or not. According to Mr. Tarjan Shrestha, co-ordination with TLOs is very necessary and is done at least once a week.

Similarly, there were several initiatives to collect the wastes door to door by Tole Lane Organizations (TLOs) in the past. They normally charged nominal fee for the service but none of these initiatives showed permanency. It was reported by the municipality that none of such initiation is continuing at present.

2) Community Based Organizations (CBOs)

The role of CBOs is similar to that of TLOs. Their main role is to create awareness among the people. Without their involvement, community mobilization is not possible. CBOs were active mostly in the peri-urban areas of Bharatpur. In some areas, the role of TLO was also fulfilled by CBOs. As CBOs have a very important role to convince the people on paying the fee and keeping the area clean, they should be actively working on it.

3.15.12. Municipal Solid Waste Management in Ward No. 15

The collection and management of solid waste in Ward No. 13 to 29 in Bharatpur is done by the municipality itself. For the comparative study in the service delivery of private and public sector, Ward no. 15 was selected for perception survey. Most of the people are engaged in agriculture, their solid wastes are managed along with agricultural wastes, and so, the inorganic waste is very less. According to Mr. Shambhu Bahadur Bhandari, Ward Chairman of Ward No. 15, the collection is required only for the inorganic waste such as plastics and glass.

The municipality itself collects the waste after the respective TLOs calls for the collection vehicles. The collection is generally done once a month but in case of more waste, collection is also done twice a month as well. According to Mr. Birat Ghimire, the municipality takes Rs. 2500 from the respective TLOs for the collection of waste once a month. The TLOs divides the charge among the total number of households and collects the fee from them. They are also allowed to collect additional amount for other purposes as well. The collection was seen to be effective only in those areas where TLOs or CBOs like Women's Group were active.

3.15.13. Perception Survey

Perception surveys are most often used when one is trying to find out how people understand or feel about their situations or environments. They are used to assess needs, answer questions, solve problems, establish baselines, analyze trends, and select goals. Surveys reveal what exists, in what amount, and in what context (Predictive Solutions, 2017). A perception survey was done to find out the satisfaction level of people in solid waste management.

1) Sample Size

Sample size determination is the act of choosing the number of observations or replicates to include in a statistical sample. Two wards were taken as study area for the perception survey: Ward No.1 served by private sector and Ward No. 15 served by municipality itself. The total household served by private sector in Ward No. 1 is 2000 and the total household served by municipality in Ward No. 15 is 1200. 5% of the

household was taken as the sample size and proportionate distribution of the sample size was done.

Solid waste was collected in total of 3200 households; 2000 in Ward No. 1 and 1200 in Ward No. 15. The calculation of sample is shown below:

Total Household Served = 3200

Total Household in Ward No. 1 = 2000

Percentage of Household in Ward No. 1 = 62.5%

Total Household in Ward No. 15 = 1200

Percentage of Household in Ward No. 15 = 37.5%

Sample Size = 5% of Total Household = 5% of 3200 = 160

Sample Surveyed in Ward No. 1 = 62.5% of 160 = 100

Sample Surveyed in Ward No. 15 = 37.5% of 160 = 60

Table 18 Sample Size

Ward No	Actual No. of HH	No. of HH Served	Sample HH
1	2502	2000	100
15	1845	1200	60
Total	4347	3200	160

2) Analysis of Data

a. Respondents Data

Among the 160 respondent, 44.4% is male population and 55.6% is female.

Table 19 Gender of Respondent

Gender	Frequency	Percentage
Male	71	44.4
Female	89	55.6
Total	160	100

Almost 24% of the respondents is of age group (41- 50) and 18% of (31- 40).

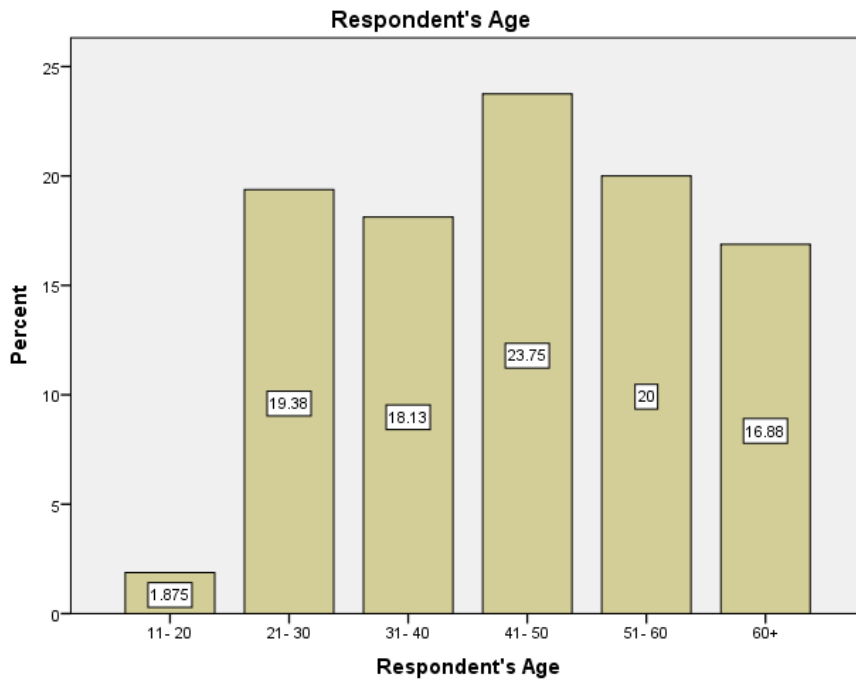


Figure 20 Age of the Respondents

Similarly, the education level of 20.63% is up to secondary level, 23.13% up to higher secondary and 24.38% up to bachelor level. 15% of them were illiterate.

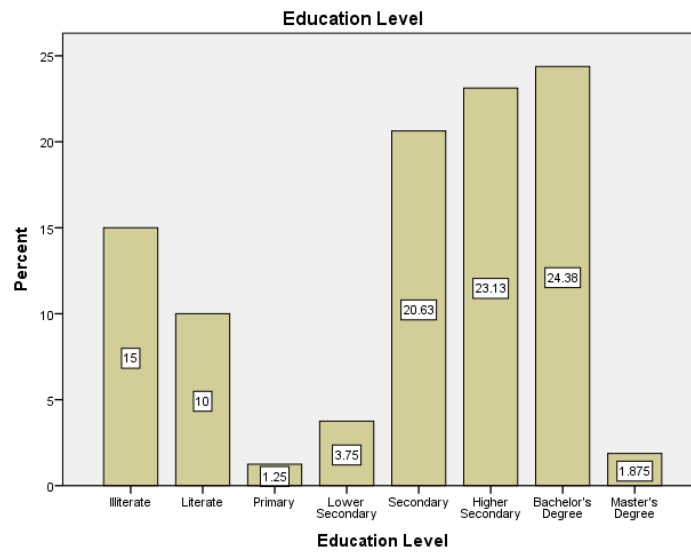


Figure 21 Education Level of the Respondents

The occupation of 74% of the respondents of Ward No. 1 is business and 46.66% of Ward No. 15 is agriculture.

Table 20 Occupation Status of Respondents

Gender	Ward 1		Ward 15	
	Frequency	Percent	Frequency	Percent
Business	74	74	18	30
Government Service	-	-	2	3.33
Private Service	6	6	4	6.66
Agriculture	-	-	28	46.66
Housewife	12	12	4	6.66
Student	3	3	-	-
Retired	5	5	2	3.33
Unemployed	-	-	2	3.33
Total	100	100	60	100

b. Disposal of Solid Waste

100% of the respondents from Ward No. 1 responded that the solid waste is collected from their house and they store the waste within their premises until the waste is collected. But only 61.67% of respondents from Ward 15 said that that the solid waste is collected from their house. 25% of the respondents burn their waste in Ward 15 as shown in Figure 23. This clearly shows the effectiveness of private sector over the municipality. Similarly, 30% of respondents of Ward 15 said that they do not store the waste within their premises until the waste is collected.

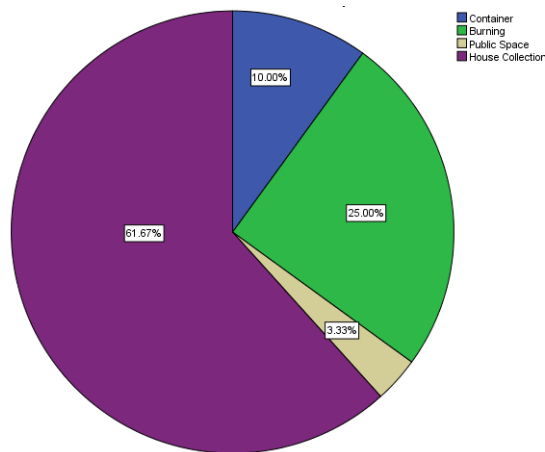


Figure 22 Disposal of Solid Waste of Ward 15

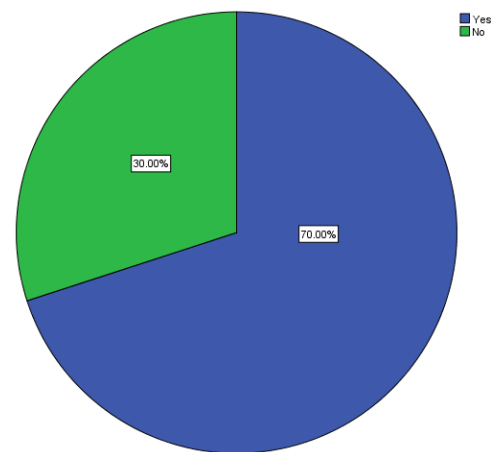


Figure 23 Store Waste within the Premises in Ward 15

c. Frequency of Collection

100% of the respondents from Ward No. 1 responded that the solid waste is collected once a day as it core area of Bharatpur where daily collection is required. Whereas, 43.33% of the respondent from Ward 15 said the collection was done once a month while 38.33% did not know the frequency of collection.

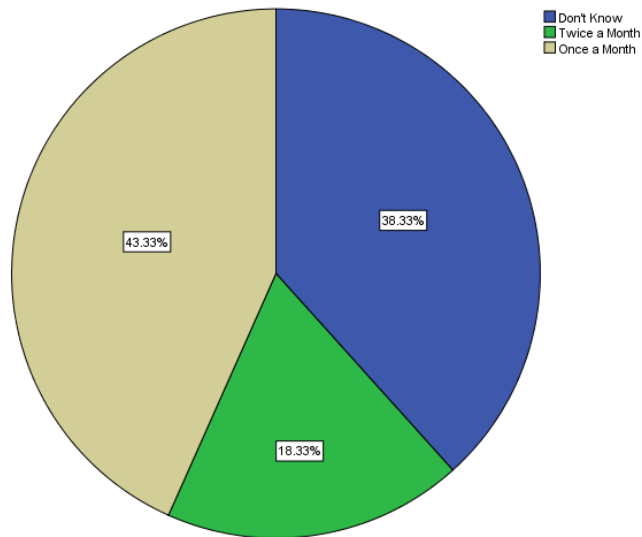


Figure 24 Frequency of Collection of Ward No. 15

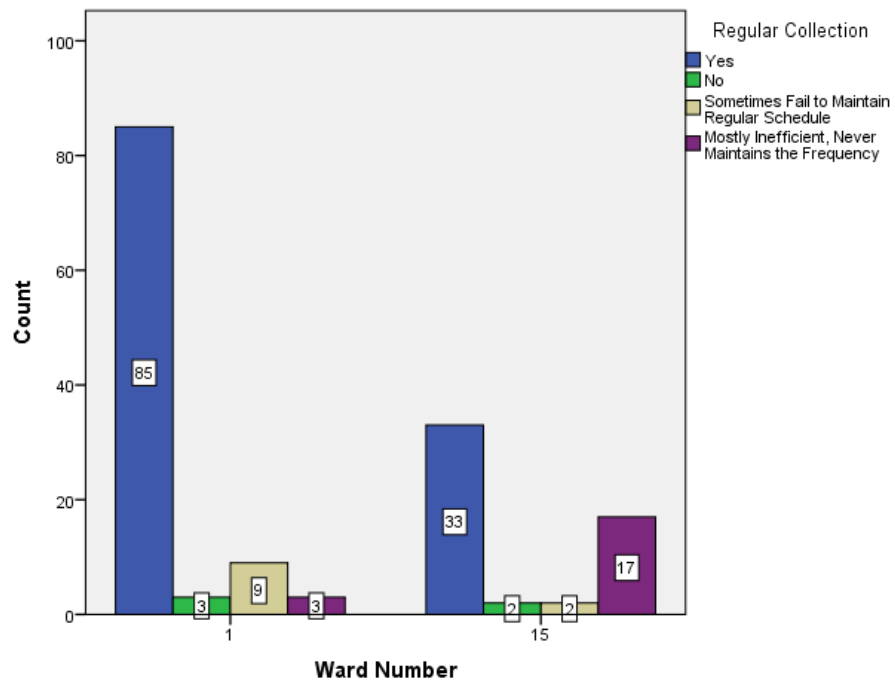


Figure 25 Regularity in Collection of Waste

Table 21 Regularity in Collection of Waste

Regularity	Ward 1		Ward 15	
	Frequency	Percent	Frequency	Percent
Yes	85	85	33	55
No	3	3	2	3.33
Sometimes Fail	9	9	2	3.33
Mostly Inefficient	3	3	17	28.33
Total	100	100	60	100

Similarly, 85% of the respondent from Ward No.1 said that the waste is collected regularly as per the schedule while only 33% of Ward 15 said so. Also, 17% of respondent from Ward 15 said that the municipality is mostly inefficient in regular collection of waste as shown in Table 21.

d. Segregation of Waste

As Ward 1 is the commercial area, only 25% of the household segregates waste. Similarly, 76.7% of household of Ward 15 segregates waste as the occupation of most of the people in this ward is agriculture.

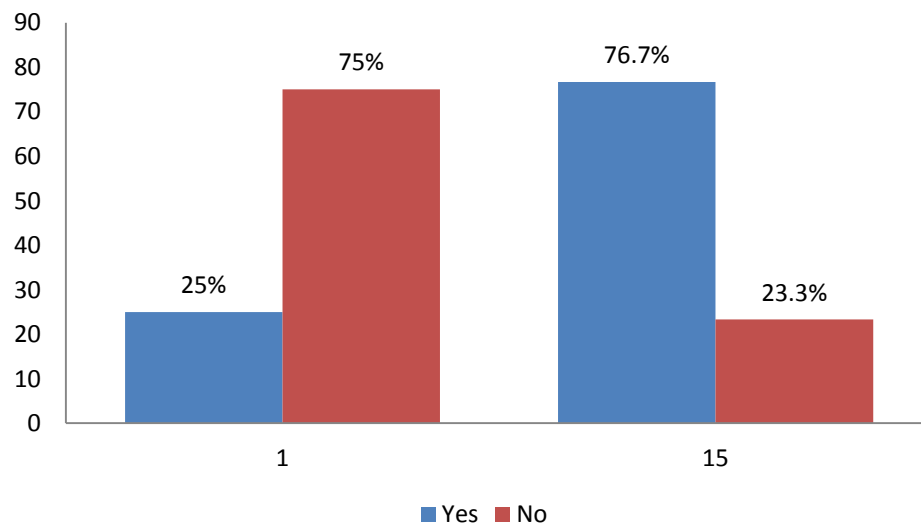


Figure 26 Segregation of Waste

e. Service Charge

97% of people in Ward 1 regularly pay for the service while only 61.7% in Ward 15 pay regularly. Similarly, only 35% of respondents in Ward 1 and 31.67% in Ward 15 think that the service charge they are paying is expensive based on the service provided. Whereas, 25% of the people in Ward 15 do not pay for the service and they do not consider the service to be reliable. Although most of the people in Ward 1 pay regularly, 15% of them think that the general tax should cover the cost of the service.

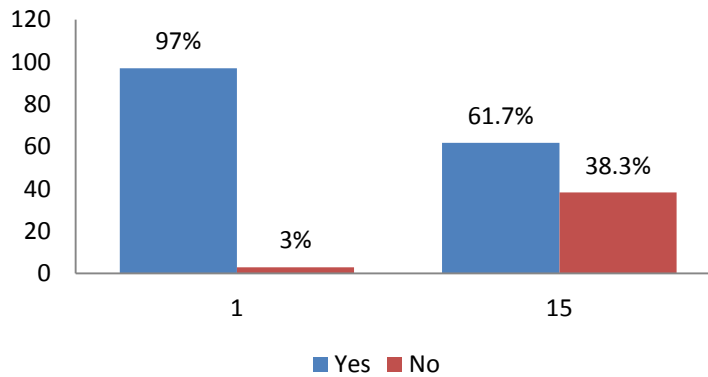


Figure 27 Regularity in Paying the Service Charge

Table 22 Is the Service Charge Expensive

Expensive	Ward 1		Ward 15	
	Frequency	Percent	Frequency	Percent
Yes	35	35	19	31.67
No	65	65	26	43.33
Do Not Pay	0	0	15	25
Total	100	100	60	100

f. Satisfaction with Service Delivery

67% of people in Ward 1 are satisfied with the service delivery and only 25% in is not satisfied, while 41.7% of Ward 15 is not satisfied with the service delivery. This clearly shows that the satisfaction level of service provided by private sector is much more than that of the municipality.

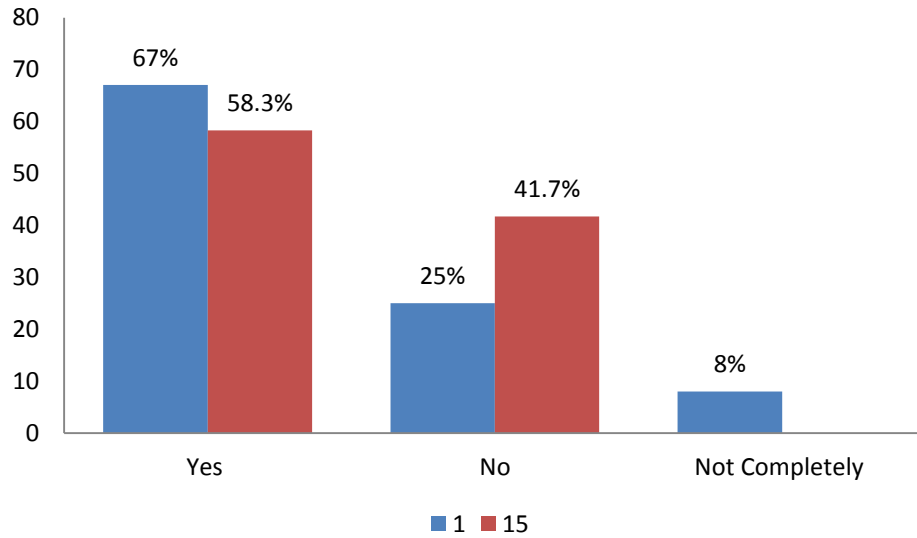


Figure 28 Satisfaction with Service Delivery

g. Quality Service Provider

Although the satisfaction level of the people where the service is provided by the private sector is much higher, 47.5% of the respondent thinks that the service delivery by the municipality will be better. They think that it is the responsibility of the municipality and the service provided by governmental body will be more reliable as well as accountable.

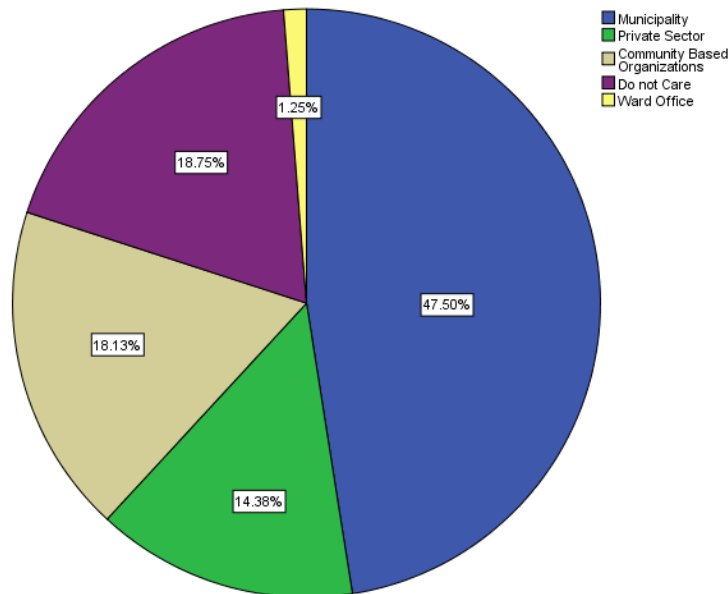


Figure 29 Better Service Provider

Table 23 Better Service Provider

Service Provider	Ward 1		Ward 15	
	Frequency	Percent	Frequency	Percent
Municipality	38	38	38	63.33
Private Sector	21	21	2	3.33
CBOs	17	17	12	20
Ward Office	24	24	6	10
Do Not Care	0	0	2	3.33
Total	100	100	60	100

Similarly, in Ward 15 63.33% of people think that municipality is the one who can provide good service whereas in Ward 1 also 38% of the people think so. Only 21% in Ward 1 and 3.33% in Ward 15 thinks that the private sector can provide better service. The reason is similar to the one explained above. In addition to that, in Ward 15, people think that private sector will only look into profit and will not be accountable. The private sector must provide trustworthy service for the people to think that they are as reliable and accountable as the municipality.

h. Knowledge among the People

Only 6.88% of the people knows about the ultimate disposal i.e. landfill site of the municipality and most of them do not care about it.

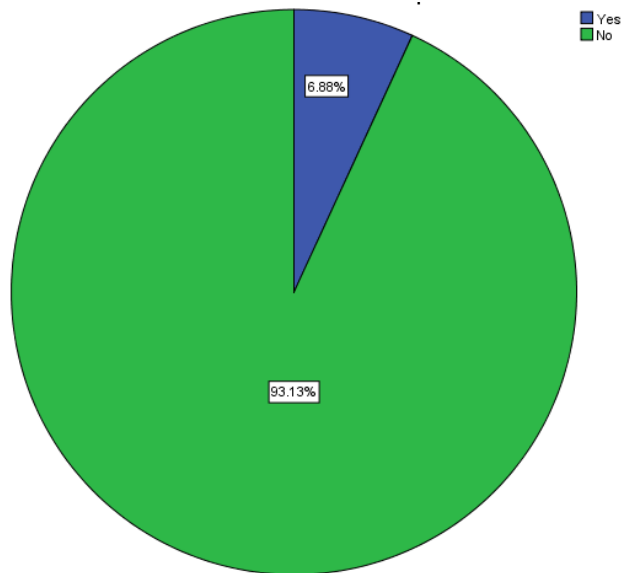


Figure 30 Knowledge Regarding Landfill Site

In Ward 1, only 56% of the people know about the actual service provider and 29% thinks that the municipality is collecting the waste. Similarly, in Ward 15, 96.67% of the people know about the actual service provider.

Table 24 Knowledge Regarding Service Provider

Service Provider	Ward 1		Ward 15	
	Frequency	Percent	Frequency	Percent
Municipality	29	29	58	96.67
TLO	3	3	0	0
Private Sector	56	56	0	0
Don't Know	12	12	2	3.33
Total	100	100	60	100

Similarly, 63.75% of people knows about the provision of complaint, 23.75% said that there is no such provision and 12.5% respondent said that they do not know if such provision is available or not. This data shows that many people are not aware about where to complaint if the service is not regular or satisfactory.

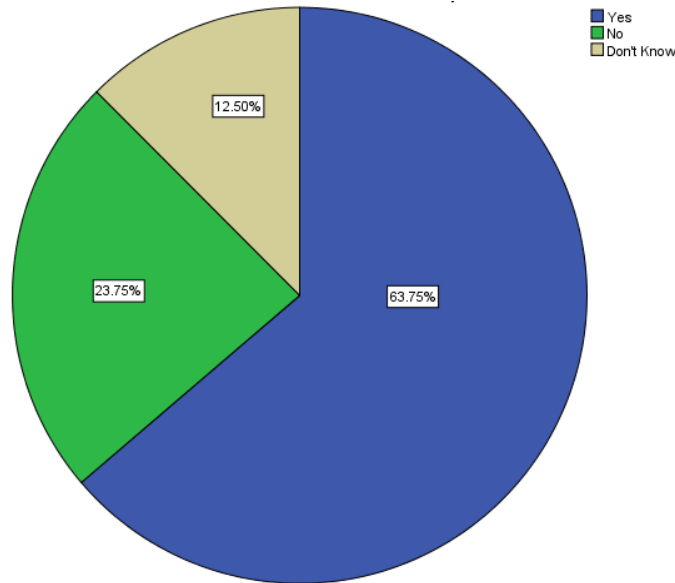


Figure 31 Knowledge Regarding Provision of Complaint

4. Findings

4.1. Policy and Guidelines

PPP demands for policies on how the government should cooperate and interact with the private sector, users and other stakeholders as the major determinants of success of PPP projects are the governance principles associated with it. Different efforts are being made with various policies and laws toward free market and privatization. Although the existing acts do not create an unfavorable environment for PPP projects, a single guideline or regulation do not provide the complete provision for the design and implementation of such projects. Various acts and regulations have to be referred for this purpose. It would be very convenient if all the guidelines regarding PPP would be included in a single policy or act.

While these policies and legislation provide a basic framework, there are difficulties at the implementation level. First, these acts need to be streamlined, made coherent, and ambiguities should be removed. A good and strong PPP regulatory framework is necessary for fostering competition and helping to minimize the risk of conflicts of interest, regulatory capture, corruption, and unethical behavior. The existing regulatory framework possess serious loophole to address partnership. The regulatory is inadequate to address project preparation and involvement of potential private service providers from the planning phase of PPP project development. Thus, affordability, value for money and risk factors are always at stake resulting into the vicious circle of poor service quality, low willingness to pay and inadequate fund for improvements.

PPP contractual agreements are long term contracts between private and public partners. The uncertainties created by long span of time can practically ruin PPPs. So, clear guidelines and instructions are requires for any project to be successful. Each project is different in nature and the tools and techniques to be used are to be opted accordingly. Municipality needs to develop its own guidelines for design and implementation of PPP projects as per its own context.

4.2. Roles and Responsibilities

Provision of urban infrastructure in Nepal has been largely driven by central institutions. As responsibilities are scattered and many agencies are involved in the planning, provision, and management of urban infrastructure and services, coordination is extremely difficult. Different governmental, private and social organizations working within the municipalities have been preparing plans and programs for Bharatpur on their own. This has resulted on repetition or missing out of plans and involvement of more than one organization for activities of similar nature. Institutional confusion arising from provisions in various legislations regarding the responsibilities, authorities, and handling of resources is a prominent issue.

All the stakeholders are assigned certain responsibilities. Unless they do their work sincerely and fulfill the responsibilities, the project can't be designed, implemented or completed successfully. For example, if the private sector only seeks profit from a project and do not consider about the satisfaction of the people, the project will fail. Similarly, the private sector is given much responsibility and the few responsibilities which are to be borne by the public sector are not seen to be fulfilled. For example, the municipality does not care about their responsibility of controlling construction activities in Narayani riverbank and taking action against the users who do not agree on paying the fee in case of solid waste management. Sharing of risks, responsibilities and benefits, thus, has to be done according to the capacity of the partners. All the partners should be mutually benefitted from the projects.

Team management is also very important. The team leader should be able to manage and lead the team properly. We can take the example of Chitwan Mahotsav. As the whole event is led by CCIC and the team leader is good, all the events have been successfully conducted.

4.3. Municipality's Capacity

Bharatpur Municipality in the last 4 years have been promoted to Sub- Metropolitan and then to Metropolitan City. During this process, the area as well as the population of the municipality has increased tremendously. While upgrading to Sub- Metropolitan City, the increase in area was 114% and the increase in population was 131.84%. Similarly, during

the declaration of Metropolitan City, the area increased by 137.28% and the population increased by 40.34%. Most of the added areas are peri-urban and the need of additional infrastructure and services is huge. Large chunk of land in those areas, previously used for agricultural purposes, has now been changed to residential and commercial uses but without basic services.

The municipality has not been able to introduce projects that are necessary for all the areas. The financial, technical and managerial capacity of the municipality is not enough to meet the increasing demand. The projects are mostly concentrated in the core area or the previous municipality's area only.

4.4. Source of Revenue

At present, revenue base of the municipalities is very weak and revenue potential has not been fully mobilized. In the study of the budget of the past five years of Bharatpur Metropolitan City, grants stood as the major source of income, which contribute 36% of total revenue, on an average. The share of OSR to total expenditure of Bharatpur is 31.89% on average during the last five years i.e. OSR can cover only 31.89% of the total expenditure. In Bharatpur Metropolitan City the total expenditure could not be recovered by its own revenue resources, which shows the need for support from external sources.

4.5. Database

Taxes are the major sources of OSR in Bharatpur Metropolitan City and the number of tax payers is increasing every year. But the municipality has not been able to keep the data of the tax payers. People have the tendency of paying tax only when they require the document for any work. If proper database was maintained, then the data of people not paying regularly could be easily found out and could be persuaded to pay the tax.

Similarly, database of other services such as solid waste management should also be maintained so that the plan that is actually needed can be formulated by the municipality based on the record. Although the municipality is planning to do so, they have not been able to implement it.

4.6. Project Design

For any project to be successful, proper study should be done beforehand and the site selection should also be done properly. It is not done in our case. As mentioned above,

installation of solar street lights was planned by the municipality and the revenue and expenditure was studied and was decided to hand over the project to the private party for 15 years to get their return. But later on, private party did not show any interest because area allocated for the project was small and it was not feasible to invest in such small area. Municipality is far behind in the case of operation, maintenance, monitoring and evaluation as well. Unless monitoring is done, the work is not done properly. Similarly, corruption is also an issue, so, the government employees should also be monitored every now and then.

4.7. Stakeholders Engagement and Dispute

Within the context of PPP at municipal level, the key stakeholders include, MoFALD, civil societies, municipal employees, relevant line agencies and private sector operators. The process of effective engagement of stakeholders is missing in our case. The project identification and design has been done by the municipality itself without proper public participation. So, the municipality has not been able to successfully complete many projects. The objection by the local people themselves has hindered many projects in the area. Political interference is also one of the major causes for the interruption in the projects. For example, parking done in PPP model in Bharatpur could not be continued because of the objection from local people and additional political interference.

4.8. Unfavorable Environment for Private Sector

Bharatpur has not been able to use PPP model in large projects. In case of large projects, the risk to private sector is more and they do not find the environment favorable to invest in such projects. The risk should be addressed properly and government's support is very necessary to attract private investors in infrastructure sector. Municipality should allow the private sector to fulfill their motive i.e. to make profit. With projects like installation of solar lights where the profit for private sector is from advertisement revenue, PPP cannot be successful.

Similarly, municipality puts tax on everything and this approach may not be working for PPP projects. Tax relief system should be developed to create a mechanism to enable the private sector to obtain long-term financial resources. Likewise, government's support in designing the project, policy formulation, risk allocation etc. could be very helpful. But

the governmental bodies have not been able to create such environment for them. Similarly, the conflict related to renewing the contract of IPT between the municipality and CCIC can also be very risky if not resolved properly.

4.9. Risk Management

Successful PPP projects also depend on the ability to identify, analyze and allocate project risks adequately. Failure to do so will have financial implications. While transferring risks, the best approach is to manage risks, not avoid them. Thus, a risk should be allocated to the party that is best able to handle it. There is no clear provision with regard to the need of risk sharing between the private and public sector. As most of the PPP project in our case is done in bidding system, the financial risks are limited to the private sector. An appropriate risk sharing mechanism should be developed where the governments and public authorities cannot transfer the risks associated with statutory responsibilities to maintain services to the private sector as private sectors by nature are profit driven entity.

4.10. Lack of Awareness

People think that the services such as solid waste management and parking should be provided to them free of cost. But according to the Municipal Finance Framework prepared by Town Development Fund (TDF), the municipalities are empowered to raise various types of service charges for providing services to their citizens in areas like solid waste, public utilities, parking, public toilet, haat bazaar, slaughter house, street light, sewerage, road, swimming pool, park, building permit, recommendation, property valuation, etc. The citizens lack awareness regarding this provision. Similarly, people always expect more from any service. Although the municipality finds the service provided satisfactory, the people expects more and this is a major issue.

4.11. Forecast Uncertainties

During any project, many uncertainties such as delay in materials delivery, insufficient human resource, delay in delivery of equipment, insufficient fund, protest, war etc. have occur. We do not forecast the uncertainties before starting the project. City bus in Bharatpur is one such example. After introducing three- wheeler rickshaws, people using city bus decreased as timing of the bus was not fixed but the rickshaw can take you to the

destination anytime. The plan of introducing rickshaw was already floating among the people but the city bus did not take into that into account. This affected the number of passengers of the bus drastically. Although all of the uncertainties cannot be predicted in the beginning, those which can be predicted should be forecasted beforehand and the project should be designed in a way that those uncertainties can be accommodated easily.

4.12. Affordability

Affordability relates to the capacity to pay for building, operating and maintaining the project, be it the capacity to pay of the users of the services or that of the Authority that has identified the need for the asset to be built. PPP projects, by nature, require long-term borrowing for investment. Affordability of the end user matters in such projects. In such projects, affordability assessments are more important when the project is being prepared. In case of solid waste management, one of the reasons for people preferring municipality over private sector is affordability as well.

4.13. Accountability and Quality Standard

The parties to the partnership should be held accountable and answerable for the consequences of their acts due to partnership arrangement. Therefore, clear accountability framework should be provisioned in the partnership contract. From the case study, we came to know that accountability is an important aspect. People gave priority to the service delivery by municipality than private sector, although the service delivery by private sector is better, due to accountability.

5. Recommendations and Conclusion

5.1. Recommendations

5.1.1. Policy and Guidelines

A single guideline or regulation does not provide the complete provision for the design and implementation of PPP projects. A proper guideline for PPP should be prepared with all the necessary aspects included in it. The existing acts need to be streamlined, made coherent, and ambiguities should be removed. A good and strong PPP regulatory framework should be prepared to minimize the risk of conflicts of interest, regulatory capture, corruption, and unethical behavior. Institutional confusion arising from provisions in various legislations regarding the responsibilities, authorities, and handling of resources should be removed. The roles and responsibilities of each stakeholder should be clearly defined in the framework. Similarly, municipality needs to develop its own guidelines for design and implementation of PPP projects as per its own context.

5.1.2. Leadership

The leadership for each project should be very strong. With the absence of good leader, the people do not trust on the project and the project is likely to fail. So, good team leader should be present to manage and lead the team properly. We can take the example of Chitwan Mahotsav. As the whole event is led by CCIC and the team leader is good, all the events have been successfully conducted.

5.1.3. Establishment of PPP Unit

Municipalities have to fulfill various types of responsibilities and have diverse duties. Their personnel is over- stretched and do not have required resources. Their capacity is rarely adequate to fulfill all the duties. So, they usually have a little time to deal with new experiments. Though PPP is not a new idea for Bharatpur, its successful implementation is still to be explored. So, a dedicated PPP Unit should be established in the municipality with experts from various fields as per necessity.

5.1.4. Source of Revenue

According to the budget of Bharatpur, IPT and business tax contributes 23.37% and 11.7% in the total OSR respectively. The revenue base of the municipality is weak. In order to increase the OSR the source of revenue should be based more on business taxes

rather than IPT as the businesses are more likely to increase in the future. Similarly, proper database of tax and service fee can be maintained to keep track of the regular payment by the citizens. This can not only help in increasing the revenue of the municipality but the plan that is actually needed can be formulated by the municipality based on the record.

5.1.5. Project Preparation and Management

Since PPP is different from other prevailing projects, a suitable framework for good feasibility study should be prepared. The feasibility study for any PPP project should contain technical aspects, financial aspects, guarantee of payback, profit etc. Uncertainties which can be predicted should be forecasted beforehand and the project should be designed in a way that those uncertainties can be accommodated easily. Similarly, suitable modality must be developed so that even if the private party withdraws, the public sector can continue with the work.

Strict monitoring should be done by preparing a monitoring schedule and also following it. Not just the private sector, the government officials should also be monitored to make sure that corruption does not take place. Legal action like rewards and punishments to defaulters by the public sector is a must for successful implementation of urban infrastructure development. Public sector must have strong enforcement mechanisms to protect the interest of people.

5.1.6. Creating Favorable Environment for Private Sector

Private partner is a significant part of PPP project. Without them, the project is not possible. So, it is the responsibility of the municipality to create a favorable environment so that more private parties can be attracted. Private sector is profit- oriented by nature and they should be allowed to make their profit. Provisions such as viability gap funding and creating a revolving fund for land acquisition should be introduced to increase participation of private sector in PPP project.

Taxes and charges influence the private partner and the public partner concerning costing and pricing. To further increase participation of the private sector in PPP projects, the public sector can extend tax relief to developers and create a mechanism to enable the private sector to obtain long-term financial resources.

It is necessary to incorporate provision on sharing of risks and benefits proportionately between the government and the private partner during the projects. There should be a balance between risk and reward for both government and private sector, with an appropriate risk sharing mechanism. Risk sharing framework based on the risk profile created during the options analysis and feasibility study should be prepared. The risks associated with statutory responsibilities to maintain services to the private sector should be limited to the government and public authorities only because private sector by nature is a profit driven entity.

5.1.7. Stakeholders Engagement and Conflict Resolution

All the stakeholders should be engaged in the project from the very beginning. Outputs of the project needs to be defined through active consultation and involvement of potential service providers, end-users and stakeholders to create transparency about problematic issues that might otherwise be overlooked. From the participation of the stakeholders, actual need and affordability of end users can be found out. Similarly, if the stakeholders are involved in the project, it is less likely to have dispute regarding the project and if seen, can be easily resolved. Appropriate dispute resolution process should be set out in the PPP contract. This should be done with the support of experienced legal advisers.

5.1.8. Communication

Communication between service providers and users has to be mandatory. The public usually trusts the government sector than the private sector, so, the responsibility for developing and promoting communications has to be borne by the municipality. So, a comprehensive multi- audience awareness strategy should be provisioned in the partnership contract. A feedback mechanism can be established to solicit the views of citizens and stakeholder. This will increase the interaction between the users, private party and the municipality. The private sector will then gain trust from the users. Through this, mass dissemination of information such as responsibilities of all three parties can be done and the users will realize their role in any project. Similarly, communication and accountability between the private and public parties is also equally important. Therefore, clear accountability framework for the management of the partnership, monitoring and reporting of the results and assigning responsibility for corrective actions should be provisioned in the partnership contract.

5.2. Conclusion

Bharatpur Municipality in the last 4 years have been promoted to Sub- Metropolitan and then to Metropolitan City. Most of the added areas are peri- urban and the need of additional infrastructure and services is huge. But the financial, technical and managerial capacity of the municipality is not enough to meet the increasing demand and needs support from external sources. PPP can be an alternative to provide these services to the people. Although PPP projects are running in Bharatpur, they have not been able to successfully implement them. Problems such as less engagement of civil society, political interference, lack of proper design, operation, maintenance, monitoring and evaluation can be seen. In our case, risks are also not defined properly; more risks are assigned to the private sector. Although the service delivery by private sector in project like solid waste management is good, people want service directly from the municipality rather than private sector. This is because they think that the municipality will be more accountable to them.

Similarly, the existing regulatory framework has serious loophole to address the partnership. Although the existing the policies do not create any unfavorable environment for PPP projects, there is no clear provision regarding most of the aspects of PPP such as risk sharing, minimization of conflict, project preparation, involvement of potential private partner etc.

For the implementation of successful PPP projects, the existing acts need to be streamlined, made coherent, and ambiguities should be removed. Provisions such as tax relief to contractors, viability gap funding and creating a revolving fund for land acquisition should be introduced to increase participation of private sector in PPP project. The municipality needs to establish a dedicated PPP Unit and develop its own guidelines for design and implementation of PPP projects as per its own context. Appropriate framework for feasibility study, risk sharing mechanism, dispute resolution process, feedback mechanism and accountability framework should be prepared to avoid conflict and delay in the work after the project starts.

5.3. Further Research

- Local Governance and Infrastructure Financing in the Administrative Restructuring of Nepal
- Role of Governance in Successful Implementation of PPP in Nepal
- Comparative Study between Traditional Procurement Method and Public Private Partnership

6. Appendix

5.1. Questionnaire for Long Interview

Questionnaire for Municipality

1. How many projects are running in PPP modality? What are they?
2. Has any infrastructure need assessment been done by the municipality?
3. How do you identify if certain project is necessary or not?
4. How do you identify which projects can be done in PPP modality?
5. What are the types of projects that can come in the future?
6. What are the types of projects public sector is interested in?
7. How do you select the appropriate private partner for the project?
8. Is civil society (women's group, youth group, social organizations etc.) involved in such projects?
9. What are their roles and extent of involvement?
10. What is the current state of ongoing or completed PPP projects?
11. How is the project designed?
12. What are the policies involved/ any policies or guidelines developed by municipality itself?
13. Is there any problem in policies as seen during the implementation?
14. If any project has failed, what are the reasons behind the failure?
15. How are the problems negotiated in such projects?
16. How is the risk defined: which risk is limited to public sector and which can be shared with both parties?
17. Is there any problem with the long term and complex contract with the private party?
18. What are the actions taken by the municipality if the private party breaches the contract?
19. Are large infrastructure projects possible in PPP modality in Bharatpur?
20. What are the steps after the implementation of the project?

25. Are the local people satisfied with the projects/ level of service provided by PPP projects? Any survey or study done?
26. Has any project been handed over to the community? Does it run as smooth as it did before?
27. What is the most important aspect for a successful PPP project?
28. Lesson learnt from past PPP projects
29. Have the lessons been transferred to new projects?
30. Is the current source of revenue enough to meet the infrastructure demand of the municipality? If not, what can be done to fulfill the gap?
31. Are the human resources of the municipality adequately sound?

Questionnaire for Municipality (Case Study)

1. When did the project start?
2. How much area does it cover?
3. Is all the area of the municipality covered? If not, what are the plans for other areas?
4. How was the project identified?
5. Why was it done in PPP modality rather than any other model?
6. Could any other modality prove to be better?
7. How was the project designed?
8. Was any team formed for the project identification, design and implementation of the project?
9. Was there equal participation of the partners in forming the terms and conditions of the contract?
10. How were the proposals evaluated? What are the key points?
11. How long did it take for the agreement or project inception after the conception of the project?
12. What are the responsibilities of public party or municipality in the project?
13. What are the responsibilities of private sector in the project?
14. Is civil society involved in the project in any way? What are its responsibilities?
15. What is the financial mechanism of the project?

16. What is the fee collected from the users?
17. How is the fee determined?
18. How much is handed over to the municipality?
19. How often is the waste collect?
20. Where is the landfill site? Has there been any dispute regarding the landfill site?
21. Is the human resource (technical, sweeper etc.) and logistics adequately sound?
22. What are the benefits achieved?
23. What are the problems that have been seen during the implementation of the project?
24. How are the problems negotiated?
25. What is the time frame of the project?
26. What are the policies involved/ any policies or guidelines developed by municipality itself?
27. Is there any problem in policies as seen during the implementation?
28. How is the risk defined: which risk is limited to public sector and which can be shared with both parties?
29. Is there any problem with the long term and complex contract with the private party?
30. What are the actions taken by the municipality if the private party breaches the contract?
31. Has it been necessary to make any changes in the contract? If so, why and how is it done?
32. Does municipality monitor the project to check if the service delivery by the private sector is satisfactory or not?
33. Is evaluation of the project done? If yes, how is it done?
34. Are the local people satisfied with the projects/ level of service provided by PPP projects? Any survey or study done?
35. Is the project a successful one? Why do you think so?
36. What is the most important aspect for a successful PPP project?
37. Any improvement to be made in the agreement/ policies/ implementation of the project?

Questionnaire for Private Sector (Case Study)

1. When did the project start?
2. How much area does it cover?
3. Can the company cover more area with similar efficiency?
4. Are there projects running outside Bharatpur?
5. Why was the company interested in the project?
6. Why was it done in PPP modality rather than any other model?
7. Could any other modality prove to be better?
8. How was the project designed?
9. Was there equal participation of the partners in forming the terms and conditions of the contract?
10. What are the responsibilities of public party or municipality in the project?
11. What are the responsibilities of private sector in the project?
12. Is civil society involved in the project in any way? What are its responsibilities?
13. What is the financial mechanism of the project?
14. What is the fee collected from the users?
15. How is the fee determined?
16. How much is handed over to the municipality?
17. What are the benefits achieved?
18. Is the project in profit?
19. What are the problems that have been seen during the implementation of the project?
20. How are the problems negotiated?
21. What is the time frame of the project?
22. How often is the waste collected?
23. How much waste is collected on a daily basis?
24. Where is the landfill site? Has there been any dispute regarding the landfill site?
25. Are the wastes recycled?
26. What are the policies involved/ any policies or guidelines developed by municipality itself?
27. Is there any problem in policies as seen during the implementation?

28. How is the risk defined: which risk is limited to private sector and which can be shared with both parties?
29. Is there any problem with the long term and complex contract with the public party?
30. What are the actions taken by the municipality if the private party breaches the contract?
31. Has it been necessary to make any changes in the contract? If so, why and how is it done?
32. Does municipality monitor the project to check if the service delivery by the private sector is satisfactory or not?
33. Is evaluation of the project done? If yes, how is it done?
34. Is the human resource (technical, sweeper etc.) and logistics adequately sound?
35. Are the local people satisfied with the projects/ level of service provided by PPP projects? Any survey or study done?
36. Is the project a successful one? Why do you think so?
37. What is the most important aspect for a successful PPP project?
38. Any improvement to be made in the agreement/ policies/ implementation of the project?

Questionnaire for CCIC

1. What are the projects running in PPP modality? Their date, reports and details.
2. What is the current state of ongoing or completed PPP projects?
3. How do you identify which projects can be done in PPP modality?
4. What are the types of projects that can come in the future?
5. What are the types of projects private sector is interested in?
6. How is the project designed?
7. What kinds of problems may arise during the project design and implementation?
8. How are the problems negotiated in such projects?
9. What are the policies or guidelines used in the implementation of such projects?
10. Is there any problem in policies as seen during the implementation?
11. If any project has failed, what are the reasons behind the failure?

12. Lesson learnt from past PPP projects
13. Have the lessons been transferred to new projects?
14. How is the risk defined: which risk is limited to public sector and which can be shared with both parties?
15. Is there any problem with the long term and complex contract with the government authority?
16. Are large infrastructure projects possible in PPP modality in Bharatpur?
17. What are the steps after the implementation of the project?
18. Is civil society (women's group, youth group, social organizations etc.) involved in such projects?
19. What are their roles and extent of involvement?
20. Are the local people satisfied with the projects/ level of service provided by PPP projects? Any survey or study done?
21. Any infrastructures need assessment done for Bharatpur?

5.2. Interviews

5.2.1. Mr. Birat Ghimire, Section Chief, Environment Section, Bharatpur Metropolitan City

In Bharatpur Metropolitan City, the role of the civil society is determined according to the pattern of the projects. Working with public concerns is very important for the success of projects. Their ideas are informative to know about the public needs, otherwise problems may arise later as a protest. Also outer environment which affects the project during implementation should be given equal importance.

There was an award winning project with IPT partnership with CCIC during Mayor's tenure. Also, the parking management project in the Milan road was a success. The management planned a one - sided vehicle parking on the road with some parking charges for further maintenance. There has not been any large project in the municipality, only small projects are implemented. The project contract clearly mentions about the roles and responsibilities, so there are no large disputes and public participation has increased. However, if any work isn't being carried out in accordance with the contract, punishment is given according to the law. Complete evaluation is

done by the municipality including financial, pre as well as post study. They also hold regular monitoring and analyze the data collected from the people. In respect to their feedback, further changes are made like in the project of solid waste management.

Public private participation (PPP) is a successful approach considering the internal and external environment and their stakeholders. The team should be managed, with stakeholders doing their work and manager leading properly so that the targeted money, manpower and machinery equipment and materials are delivered on time. Along with this, the uncertainties and problems (may not be 100%) should be forecasted beforehand for the project to be successful. Still people have many expectations and they desire quality service in nominal cost which isn't possible in most of the cases. Public is getting the service and are also paying the service charge but contractors complain that the service charge is less and public expect more service with the same amount they are paying. But in municipality's eyes, the service charge taken is very nominal compared to other municipalities and the service they are delivering is fine with respect to the service charge they are collecting.

Solid waste management in PPP modality is done only in the core area where frequency of collection is decided by respective TLOs. The fee should be paid based on the frequency of the collection. In Ward No. 15, TLOs and CBOs asks for collection vehicles whenever necessary and the municipality charge some fee. TLO divided the total amount into the total number of household and sometimes can collect extra amount for their savings or for some other use as well. Currently, there is no sanitary landfill site; it is just a dumping site. The land for landfill site has been handed over to the municipality by Ministry of Forest. Around 9.9 ha. or 14.5 bigha of land has been given. But to use the land of any forest, the municipality has to compensate the forest with equal area of land. The land has been bought, now the trees should be planted and should be handed over to the forest. At present, the work of EIA has started but it is still unsure about the time it will take to start the work.

The responsibility of supervision of regulation collection of waste is of the TLOs. Municipality also has supervisors but they are assigned to monitor the supervisors of TLO. Municipality's supervisors only check of the TLO's supervisor is doing their work properly or not.

5.2.2. Mr. Bharat Kumar Acharya, Section Chief, Planning and Urban Development Section, Bharatpur Metropolitan City

First step is to identify the public private partnership (PPP) projects, if the private bodies are interested and are benefitted. However, sometimes PPP should be a part of government's responsibilities forcefully. Solid waste management (SWM) is one of such project under municipality; moreover the profit is given to the private sector. There is also a possibility that sometimes the municipality doesn't give the infrastructure but sit as a guarantee for a project. Certain PPP projects in the city are SWM, solar lights and removing vegetable market from existing streets.

The revenue of the municipality is not enough to meet the infrastructure need. IPT is a major source of revenue but the municipality has not been able to encourage the tax payers to pay the tax regularly. The tax collected is increasing each year but the record is not maintained. The people have the tendency to pay the tax only when they require it. If data was kept, the people not paying regularly could be persuaded.

The possibility of large projects depends upon the modality. Investment board has proposed monorail for Bharatpur but even the city bus is not running successfully since the past six years. In case of large projects, the risk to private sector is higher, so, they do not take the project unless proper study is done. In case of monorail, it is just a proposal and the population study has not been done.

For project to be successful, DPR should be made after proper discussion, site selection should be done carefully and study regarding how well and in time can it be implemented. Municipality takes initiative and starts the project and thinks that other things can be taken care of later on but the civil society interrupts the work. Site selection is also not done with proper study and no discussion with the civil society. The municipality is far behind in the case of operation and maintenance. Monitoring of service delivery is done but not regular. No schedule is prepared, only random monitoring is done which is not good.

The project, Solid Waste Management, cannot be considered successful if taken into account all of the aspect. The work of landfill site has not been started yet. Now, the waste is thrown away near the river bank which pollutes the river. It is just a dumping site and not a sanitary landfill site.

5.3. Questionnaire for Case Study

Tribhuvan University

Institute of Engineering

M. Sc. Urban Planning

Thesis: Role of Public Private Partnership in Infrastructure Financing: A Case of

Bharatpur Metropolitan City

Form No: Date:

1. Name:

2. Ward No

3. Tole

4. Gender: 1. Male 2. Female 3. Others

5. Age:

1. 0- 10 2. 11- 20 3. 21 – 30 4. 31-40
5. 41- 50 6. 51- 60 7. 60+

6. Family Type: Nuclear 2. Joint

7. Number of Family Members:

8. Education Level:

1. Illiterate 2. Literate 3. Primary 4. Lower Secondary 5. Secondary
6. Higher Secondary 7. Bachelor’s Degree 8. Master’s Degree 9. Doctorate (Ph.D)

9. Occupation Status:

1. Business 2. Government Service 3. Private Service 4. Agriculture
5. House Wife 6. Student 7. Retired 8. Unemployed

10. Where do you dispose solid waste?

1. Own Compound 2. Container 3. Burning 4. Public Space
5. House Collection 6. Others, please specify

- 11. How often is the solid waste collected?**
1. Once a day 2. Alternate days 3. Twice a week 4. Once a week 5. Don't know
- 12. When do you throw away the waste?**
1. When the siren rings 2. Morning 3. Evening 4. Anytime
- 13. Is the waste collected regularly (as per the schedule)?**
1. Yes 2. No 3. Sometimes fail to maintain regular schedule
4. Mostly inefficient, never maintains the frequency
- 14. How long does it take to empty your container?**
1. In front of the house 2. Up to 5 minutes' walk 3. More than 5 minutes' walk
- 15. How do you throw away your waste?**
1. Place container in front of the house for collection
2. Empty into communal container in the neighborhood
3. Empty onto an open pile of waste in the neighborhood
- 16. Do you segregate waste by nature?**
1. Yes 2. No
- 17. Do you make compost manure?**
1. Yes 2. No
- 18. Do you store waste within the premises until the waste is collected?**
1. Yes 2. No
- 19. Do you dispose waste in public area when the collector does not come as per schedule?**
1. Yes 2. No
- 20. What is the type of vehicle used to collect the waste in your area?**
1. Cart 2. Rickshaw 3. Van 4. Tractor
- 21. Do you know where the collected waste is taken?**
1. Yes 2. No
- 22. Do you think that the amount you are paying is expensive?**
1. Yes 2. No
- 23. Do you regularly pay for the service?**
1. Yes 2. No
- 24. If you are not willing to pay for waste collection service, what is your reason?**
1. Cannot afford to pay

2. Do not consider service important enough to pay
3. Believe the general tax should cover the cost of the service
4. Do not trust the service to be reliable
5. Others, please specify

25. Who is managing the solid waste in your area?

1. Municipality
2. Ward
3. Tole Lane Organization (TLO)
4. Private Sector
5. NGO
6. Others, please specify

26. Are you satisfied with the service delivery?

1. Yes 2. No

27. Is there a provision of complaint if the service delivery is not satisfactory?

1. Yes 2. No

28. If yes, where do you complaint?

1. TLO
2. Ward
3. Municipality
4. Waste Collector/ Private Sector
4. Others, please specify

29. In your opinion, who can provide you better service?

1. Municipality
2. Private Sector
3. Community Based Organizations (TLO, Clubs etc.)
4. Do not care

5.4. Service Fee of Solid Waste Management

क्र.सं.	फोहर उत्पादकको प्रकार	प्रस्तावित दर			
		हप्तामा ६ दिन	हप्तामा ३ दिन	हप्तामा २ दिन	हप्तामा १ दिन
१	घरधुरी (प्रतिचुल्हो)	100	80	50	30
२	सामान्य फोहर उत्पादन गर्ने पसलहरू (फेन्सी,कपडा,हार्डवेयर,मेशिनरी,श्रृङ्गार,जुता— चप्पल,एग्रोभेट,घडी,रेडियो टि.भि., मोबाईल, औषधि,स्टेसनरी,पुस्तक, भांडा—बर्तन,गल्ला पसल ,फोटो स्टुडियो, एवं सोही प्रकृतिका अन्य पसलहरू), विद्यालःकलेज, बैंक, सहकारी, सरकारीः गैरसरकारी संघ संस्था तथा अन्य कार्यालयहरू	100	80	50	30
३	किराना पसल				
	३.१ होलसेल किराना पसल	250	200	120	
	३.२ खुद्रा किराना पसल	200	120	80	
४	माछामासु पसल				
	४.१ माछामासु पसल ठुलो	1,800	1,100	700	

४.२	माछामासु पसल मध्यम	1,100	700	400
४.३	माछामासु पसल सानो	350	200	150
५	डिपार्टमेण्टल स्टोर			
५.१	डिपार्टमेण्टल स्टोर ठूलो	5,000		
५.२	डिपार्टमेण्टल स्टोर मध्यम	600		
५.३	डिपार्टमेण्टल स्टोर सानो	400		
६	तरकारी तथा फलफुल पसल	600	400	
७	सब्जी मण्डी तथा हाट बजार (प्रति ट्रयाक्टर)	2,500		
८	सैलुन, व्युटीपार्लर	350	250	120
९	होटल, रेष्टुरेण्ट			
९.१	स्तरीय होटल, ठूला	3,200		
९.२	स्तरीय होटल, मझौला	2,500		
१०	सामान्य होटल तथा लज, छात्राबास			
१०.१	१० कोठा सम्म	400	250	
१०.२	१० देखि २० कोठा	500	350	
१०.३	२० कोठा भन्दा माथी	600	500	
११	रेष्टुरेण्ट, बार तथा चिया नास्ता पसल			
११.१	१ देखि १० सिट सम्म	250	200	
११.२	११ देखि २० सिट सम्म	350	250	
११.३	२० सिट भन्दा माथी	500	350	
१२	पार्टी प्यालेस	1,000	600	
१३	वर्क सप			
१३.१	हेवि गाडी	1,800	1,200	
१३.२	साना गाडी, एसिड केमिकल	1,000	700	
१३.३	मोटरसाईकल, साईकल, टायर	600	350	
१४	घरेलु उद्योगहरू			
१४.१	फर्निचर, प्लाष्टिक, फुड प्याकेजिड, गार्मेण्ट, जुता, ब्याग, होजियारी, प्रेस, स्टेसनरी, धानः चामलः तेल मिल, मेटल फेब्रिकेसन	350	250	
१४.२	बेकरी	1,800	1,200	
१४.३	हयाचरी	1,200	1,000	
१५	सिनेमा हल	2,000		
१६	हाटबजार (प्रति ट्रयाक्टर)	2,500		
१७	मैला महोत्सव (प्रति ट्रयाक्टर)	3,000		
१८	चाडपर्व (प्रति स्टल/पसल प्रतिहप्ता)	200		
१९	सब्जी मण्डी वडा नं. ४ (उपमहानगरपालिकाले तोके बमोजिम हुने)			
२०	अन्य (उपमहानगरपालिकाले तोके बमोजिम हुने)			

5.5. List of Interviewees

1.	Er. Bharat Kumar Acharya	Section Chief, Planning and Urban Development Section, Bharatpur Metropolitan City
2.	Er. Birat Ghimire	Section Chief, Environment Section, Bharatpur Metropolitan City
3.	Er. Krishna Bahadur Malla	Engineer, Planning and Urban Development Section, Bharatpur Metropolitan City/ Focal Person for PPP
4.	Ar. Asmita Khanal	Urban Planner, Planning and Urban Development Section, Bharatpur Metropolitan City
5.	Mr. Jayaram Shrestha	Ward Chairman, Ward No. 1, Bharatpur Metropolitan City
6.	Mr. Shambhu Bd. Bhandari	Ward Chairman, Ward No. 15, Bharatpur Metropolitan City
7.	Mr. Sanjay Gupta	Secretary, Mainroad Tole Lane Organization, Ward No. 1, Bharatpur Metropolitan City
8.	Mr. Govinda Adhikari	Chairman, Jay Buddha Tole Lane Organization, Ward No. 15, Bharatpur Metropolitan City
9.	Mr. Lila Raj Adhikari	Tax Officer , Bharatpur Metropolitan City
10.	Ms. Sita Adhikari	Section Chief, Account Section,, Bharatpur Metropolitan City
11.	Mr. Prachanda Lal Pradhan	Past President, Chamber of Commerce and Industry Chitwan (CCIC)
12.	Mr. Rasik Pradhan	Executive Director, Chamber of Commerce and Industry Chitwan (CCIC)
13.	Mr. Shyam Shrestha	Proprietor, Green Nepal City Waste Management
14.	Mr. Tarjan Shrestha	Proprietor, Green Nepal City Waste Management
15.	Mr. Nirmal Sigdel	Technical Advisor, Green Nepal City Waste Management
16.	Mr. Rishi Dhakal	Director, Green Nepal City Waste Management
17.	Mr. Hari Pariyar	Waste Collector, Ward No. 1
18.	Mr. Ramesh Rawat	Sweeper, Ward No. 1

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