TRIBHUWAN UNIVERSITY

INSTITUTE OF ENGINEERING

DEPARTMENT OF ARCHITECTURE

PULCHOWK CAMPUS

PULCHOWK, LALITPUR

A MASTER'S THESIS REPORT ON

Public Participation for Urban Infrastructure Development: A case of Birgunj Metropolitan City

OCTOBER 2022

SUBMITTED BY:

Prajwol Sedhai
076/MSURP/009

Supervisor: Asst. Professor Ajay Chandra Lal

SUBMITTED TO:

M.Sc. Urban Planning

Department of Architecture
Pulchowk Campus
Pulchowk, Lalitpur, Nepal

CERTIFICATE OF THESIS APPROVAL

This is to certify that we have read, and recommended to the Institute of Engineering for acceptance, the thesis titled **"Public Participation for Urban Infrastructure Development: A case of Birgunj Metropolitan City"** submitted by **Mr. Prajwol Sedhai (076-MSUrP-009)** in the partial fulfillment of the requirements for the degree of **Master of Science in Urban Planning**.

_____   _____

Supervisor / Program Coordinator   External Examiner

Dr. Ajay Chandra Lal   **Er. Kishore K. Jha**

Department of Architecture   Senior Urban Planner

IOE, Pulchowk Campus

_____

External Examiner

Ar. Yek Raj Adhikari

Joint Secretary (MOUD)

Date: 16th October 2022

DECLARATION

I declare that this thesis has not been previously accepted in substance for any degree and is not being concurrently submitted in candidature for any degree. I state that this dissertation is the result of my own independent work/ investigation, except where otherwise stated. I, hereby, give consent for my dissertation, if accepted, to be available for photocopying and understand that any reference to or quotation from my thesis will receive an acknowledgement.

_____

Prajwol Sedhai

076/MSUrP/009

September 2022

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my thesis supervisor Prof. Dr. Ajay Chandra Lal for his guidance in carrying out necessary studies and research work in preparation of this thesis report.

I am highly obliged to external jurors Kishor Kumar Jha, and Yek Raj Adhikari for constantly guiding my work throughout different phases of presentations and helping me to be where I am.

I am also grateful to my wife Asmita Poudel for the continuous support and guidance throughout the thesis. I would also like to thank Mr. Ashish Adhikari and Mr. Sugam Gautam for continuous motivational support.

Finally, I would like to thank my family and colleagues for directly or indirectly helping in the preparation of this thesis report.

ABSTRACT

Public participation is the involvement and collaboration with public to get their ideas and opinions, for decision making to bring a positive and sustainable development in the community. This research focuses on government initiatives to bring together the citizens of the community for discussions on the necessary consideration for the sewerage and drainage and road infrastructure development as per the STIUEIP project. The working mechanism of the government to complete the project in a community rapidly without fully understanding the community through the public perspective led to the project being withheld temporarily as it misses the necessities of the local citizens and the surroundings. The research explores the citizens of the community, their activities, behaviour, and willingness to support the government. Mixed methods for case study are used to understand the different initiatives carried out by the Birgunj Metropolitan City for increment in participation during the planning and policy making stages. Along with literature study, paper survey was distributed among 80 residents, semi-structured interviews were conducted with 7 officials affiliated with the project. The activities and action of the government or the public explored and found during the research help us to determine the gap between the public and the local government for working collaborating with each other. The willingness for participation and contribution in infrastructural development among Adarshnagar residents is very high. However, this is contrasted by low sense of ownership among the residents which is contributed by less effective participatory approaches by the local government leading to ineffective information relay and top accumulation of decision-making power.

Keywords

Public Participation, STIUEP, Government Initiatives, Public, Willingness

Abbreviations

ADB	Asian Development Bank
BMC	Birgunj Metropolitan City
CSO	Civil Society Organization
FDGs	Focused Group Discussion
GESI	Gender Equality and Social Inclusion
IAP2	International Association of Public Participation
INGO	International Non-Government Organizations
MPMC	Municipality Project Management Committee
NGO	Non-Government Organization
PDWs	Panchayat Development Workers
PIU	Project Implementation Unit
SMEC	Snowy Mountains Engineering Corporation
STIUEIP	Secondary Towns Integrated Urban Environmental Improvement Project
TDF	Town Development Fund

List of Figures

List of Tables

Table of Contents

1   Introduction

1.1   Background

Nepal, as a developing country, has seen a lot of rapid urbanization in the last century. This, along with development of transportation infrastructure, has led to the growth of numerous urban cores and cities along the highways in the country. In the areas nearer to highways, because of easier movement of raw materials, be it for shops, restaurants, buildings constructions, etc. it led to rapid growth of places with high economic activities. In any city, one of the major focus points for development is the physical infrastructure i.e., the road network, the buildings, etc. For example, a city develops in an area with higher potential for development – like alongside the highway – as economic activities subsequently increase other infrastructures. Various commercial and residential zones develop consequently, along with the physical infrastructure. However, cities are not only represented by physical infrastructures of convenience, building structures, and communal spaces. These physical infrastructures of a city are easily visible whereas the social infrastructures (culture, norms, and values) of the people within the city are difficult to visualize by the naked eyes, because of the subtleties involved.

It has been established from various research in the past as well, that the social infrastructures need involvement and interaction with the people in the community along with observation determining the participatory approach. If the social values are not well-thought-out, the residing individual feels restricted in the daily activities and fails to express their feeling and thinking and/or remains dormant in some ways. As Nations describes it, a group of individuals and families from divergent origins having different cultures, interests and desires constitutes a city (Nations, 2018a, 2018b). And the expressions are very important to sustain those cultures, and interests, and desires, that make up the city. The divergent communities need to express their social values and collaborate to improve the qualities of soft and hard infrastructure for continuous functioning of the city (Dyer et al., 2017). Soft infrastructure refers to public administrative, organizational, and social structures of the city, the hard infrastructures describe the physical elements of a city that allow soft infrastructure to function (Dyer et al., 2019). Thus, the urban practitioners and the government must scrutinize the needs of the people considering the social norms and values of the community to sustain harmonious society.

This research focuses on soft aspects of hard infrastructure

Sustainable infrastructure development

Sense of Ownership + Participatory Planning
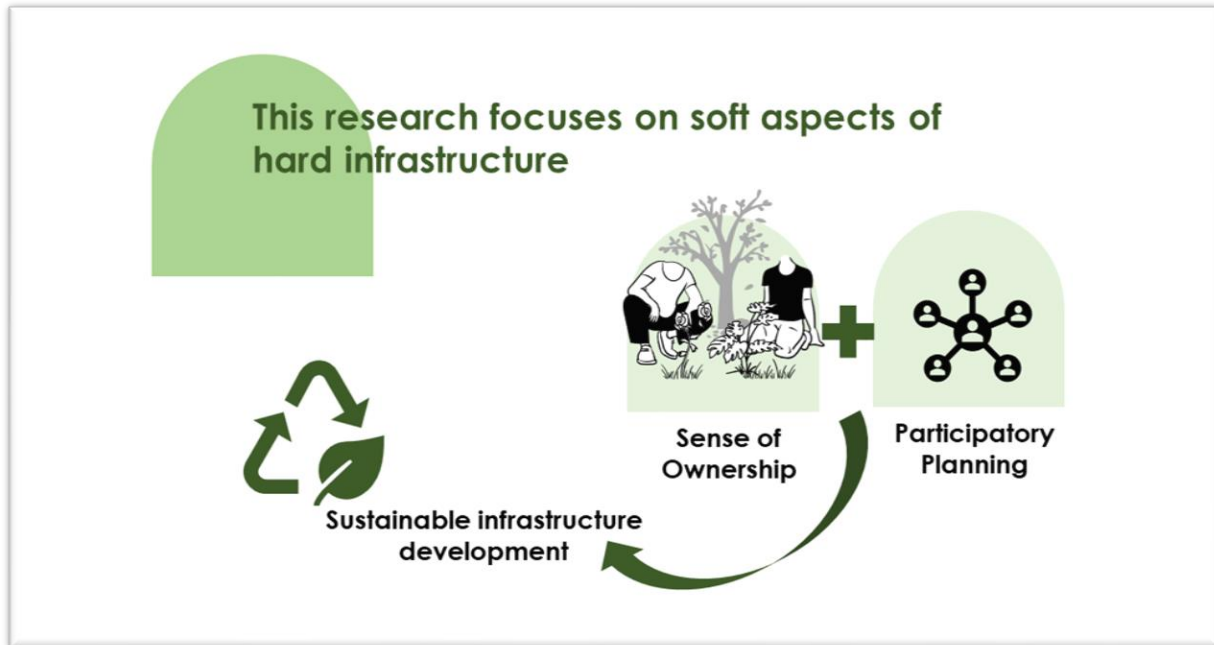
1.1.1 Public Participation

Although the idea of public involvement in the realm of urban infrastructure development seems common, the phrase and its meaning are still relatively new. Public participation is a systematic procedure to understand the many government initiatives together with various awareness campaigns and training programs of the people at various significant stages of infrastructural development within the community. The public's social ethics and ideology, which reflect their social responsibility for community infrastructure development, heavily influence participation(Damer & Hague, 1971). The physical framework in various forms of participation for a better and more sustainable life has been expressed and evinced over time until the present. Participation in planning appears to be unmistakably supranational; planning within a city or community is carried out via survey analysis, which offers direction for creating programs and strategies to address the issues brought on by the community's rapid organization. Early planners had a clear vision to operate as omniscient leaders with long-term visions to construct a fixed urban infrastructure plan working with the private sectors to develop it as a mixed economic zone without the public's interference and without the people being questioned(Hall, 2019).

The blueprint planning, one of the earlier planning methods, disregards available resources, essentials, and the vision for developing urban infrastructure in response to public demand and the need for community space. This method requires that these development visions be implemented with a high degree of control, making it difficult to manage the decentralized political system(Hall, 1983).

The synoptic model of planning assumes that a community's citizens share a common interest. A specific resource use or infrastructural development is required for the society due to the corresponding necessity of resources, human thinking, and aspirations regarding the community and its urban infrastructures. With this strategy, the public is given a small but valuable opportunity to contribute their opinions and ideas to the formal policy-making process while working under the planners' direction. The document mentions that British planning officials held a consultation (following legislative change in 1968) that became a part of a structured procedure while being directed by an expert planner working towards creation of the planning's goals and objectives(Hall, 1983).

Following this, participation of actors/citizens from communities for policy making increased in Britain as they were provided limiting role to express their views in planning for urban infrastructure development. Overtime, different theoretical explanations were carried out about the important of participation in planning. Earlier models suggested that the thinking of the public of the society follows holistic approach, while the recent contemporary model followed suggests society to be atomistic, resulting in variation of the interest of the individuals resulting in competition and contradiction, further considering all the participants as necessary elements for the infrastructural development during planning and decision making process(Lane, 2005).

The cities where people live in can be planned considering numerous challenges within the surrounding and focusing the vision on peace, sustainability, and prosperity. In a democratic society of the modern, post - industrial age, to solve these challenges, heterogeneous and participative design collaboration appears to be the best alternative for problem solving(Brabham, 2006). The Top-down Model followed by most of the central and local level government

3

worldwide with minimal enthusiastic interaction with the citizen creates a division of interest. In any urban area, participation process is considered as a passive element where all levels of community are not incorporated and it is always a challenge to inspire the silent and the marginalized group to get involved in participatory activities as they lack awareness(Thomas Ng et al., 2012). It has been seen that the involvement of individual participation in non-profit organizations within a community produces both collective and individual goods. Neighborhood organizations, professional associations, self-help groups, political parties, advocacy organizations, and unions are examples of these organizations. It explores different key elements which plays a major role to inspire an individual from the community for voluntary participation in a neighborhood organization.
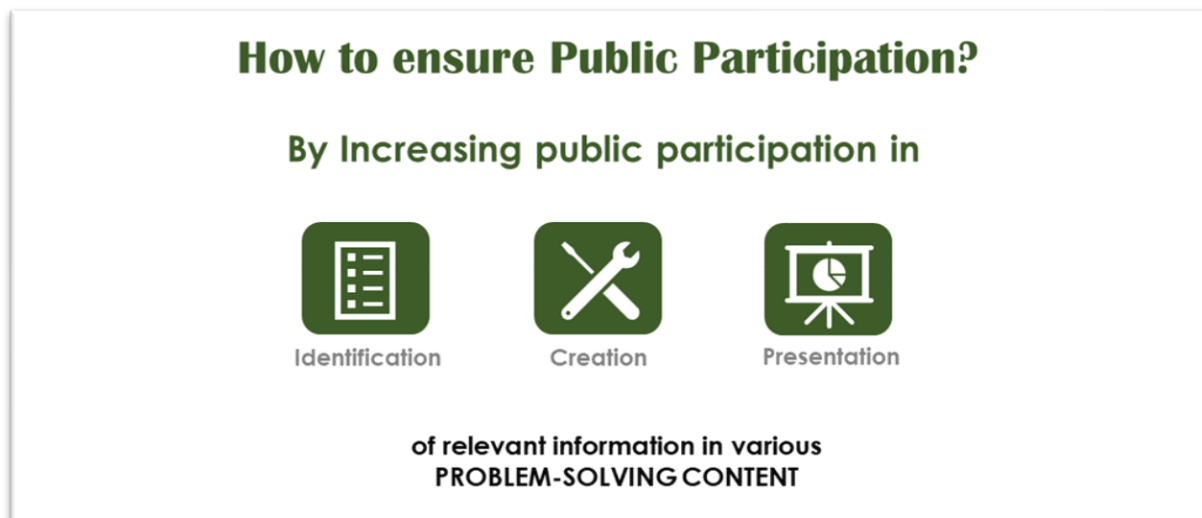
However, a major issue with participatory mechanism is the construction of a perceptive process which allows a representative group of participants to critically characterize and resolve a problem, whether by forming a new public policy or in the planning of a new proposal for the community (Gleeson & Dyer, 2017). Nonetheless though, as the benefits of public participation have now become increasingly recognized by administrations, professionals, policymakers, and scholars around the worldwide, there has been an international trend toward enhanced public participation in decision-making.

1.2 Rationale of the Study

In any community, the sustainable development of infrastructure begins from the community level. The residents are far more familiar about their socioeconomic background, development challenges, infrastructure, and requirements than outsiders. Hence, the citizens should have greater opportunities to participate from the root level for planning or policy making with the local government(Shittu & Musbaudeen, 2015). The increment of public participation develops sense of ownership, equity, sustainable development of the infrastructures, mutual understanding within the local level authorities for the improvement, and delivery of different polices feasible for the infrastructural development(Zanna, 2015).

The involvement of all the citizens who are positively or negatively affected by any proposed project makes the chances of the project to be successful to increase exponentially, as they can share their perspectives and exchange information and data in order to create acceptable and effective project choices and outcomes before the finalization of the plan(Enserink et al., 2006). The residents of a community are aware of the requirements and growth issues, and also the socio-economic condition(Zanna, 2015). Hence, for the beginning of the real development of the city, government and the residents must be interactive with each other. This study further explores how public participation can positively impact infrastructural development in a community.

1.3 Problem Statement

The proliferation of population in Adarsh Nagar area of Birgunj Metropolitan City has amplified the demands and and behavior of residents following the approaches. Inadequate infrastructural development in Adarsh Nagar area of Birgunj metropolitan city has arisen by difference in level of public participation while carrying development programs. Along with this, a negative behavior patterns among residents while utilization and upkeeping shared infrastructure can be noticed.

The behavior for change of an individual can account for their willingness to work as a resident for positive change. This can lead to positive collaborations with other residents living in the same community, while building positive relation with different support organizations. The study of the different government initiatives with a motive to involve the residents and to uplift the willingness

of an individual to get oneself involved in the different planning and development phases will be a major criterion to comprehend the development of urban infrastructure (Road-Networks, Land use patterns) in Adarsh Nagar within this report and study.

necessities of the basic needs from the limited infrastructure available in the area. Limited participation of the residents or limited involvement of the representatives with community members while carrying out any planning approach and/or setting up policy, questions the approaches implemented by the government. This also leads to association of negative thinking

Scope and limitation of Research

This research focuses to direct the participation of the residents and their collaborative approaches with the institutions of the city for the infrastructural development in present context. Further, the study also explores ways to enhance the current scenario of public participation while considering different planning techniques and participatory approaches that have been utilized in recent years in the area. This study also attempts to highlight differences that have occurred in infrastructural development in two diverse areas of Birgunj Metropolitan City, one of which is the Adarsh Nagar area. This will be carried while analyzing different techniques and ideas that were utilized by the local level institutional organization for the development of the infrastructure in the past years.

This study also tries to develop an example of sustainable development of the urban infrastructures through different interventions of public participation which can be an exemplary model which can passed to the future generation. However, this research is limited to the urban infrastructure i.e., the physical infrastructure (Road network, Residential land use pattern) of the areas within study. This research will relate these urban infrastructures with the participation approaches along with its limitations, and remedies to solve existing issues while attempting to enhance the existing context.

1.4　Research Question

1.4.1　Primary Research Question

❖ What are the different dimensions of public participation for Urban Infrastructure Development?

1.4.2　Secondary Research Question

❖ How do the government initiatives influence of willingness of people for Public Participation?
❖ In what ways does sense of ownership (willingness of participation) influence willingness of participation in a community?
❖ What are the different participatory strategies that lead to sustainable urban infrastructural development?

1.5　Research Objective

1.5.1　Principal Research objective

❖ To understand different dimension of public participation for urban infrastructure development.

1.5.2　Ancillary Research Objective

❖ To analyze the different government initiatives influencing willingness of people for participatory approaches.
❖ To understand how sense of ownership affects participation in a community.
❖ To explore different participatory strategies which lead to sustainable urban infrastructural development.

1.6   Validity of Research

In an economic hub like Birgunj, residents and the institutional organizations need to adopt a new planning mechanism to pace up the development of urban infrastructure of the city as there is rapid population increase. As Smith has pointed out, rapid population increase can result in a limited development of infrastructure considering the needs of the residents (Smith, 1973). Citizens of a city appear as prominent players in an urban space and the cooperation of the residents in planning and policy making procedure is one of the major considerations done by a planner for proper execution of proposed planning activities within a city(Smith, 1973). Residents of a particular committee should be more active and effective from the initial to the final stages of planning. Only then the resulting participation proposes diversity of interest and mutual modesty among the stakeholder demand and requirements, which plays an important factor for better qualitative research and outcomes(Neshkova & Guo, 2012). Participatory approach forwards a resident's interest and expectations to the public officials to discard unnecessary programs and to improve the quality and efficiency.

The collective knowledge on public participation in developing countries is expanding rapidly. The successful statistical evidence obtained in many developing nations demonstrates that the scope of participatory initiatives has been extending, both in their neighbouring countries and even in developed countries(Devika, 2016; Waheduzzaman et al., 2018). Likewise, citizens' active and significant participation in planning, management, and discussion is also emerging in Nepal. The 1990 constitution of Nepal prioritized citizen participation in local governance through federalism and established a legal framework for inclusive and participatory democracy for citizens' participation in the development of local public policies and small-scale development programs lead by elected leaders(Bhusal, 2018). However, when the government was unable to conduct local elections for more than a decade, the existing law of participatory planning could not be implemented as anticipated(Bhusal, 2018).

Nonetheless, public participation was adopted for the local level focusing on infrastructural development project and for formulating local public policies in the community (Bhusal, 2018) . Although there is no quantitative evidence that cultural influence, education, etc. also effects the outcomes of public participations, it has an effect. Majority of participatory planning studies haven't analysed the dimensions of public participation for urban infrastructural development even

in current scenario. So, there clearly exists a gap in understanding the importance of different dimensions of public participation in the community level and further assessment considering the gap for infrastructural development and the social cohesions of the residents is required.

2 Literature Review

2.1 Participatory Planning Process in Nepal
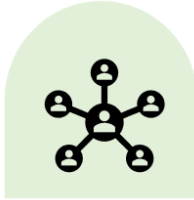
Participatory Planning process in Nepal

Participatory planning is described as a yearly procedure used by local governments to create short- and medium-term plans for development of the people and the surroundings. Residents from diverse background (regular citizens, activists, individuals from different civil societies, public officials, employees of service delivery organizations like neighborhood schools, hospitals, members of NGOs, etc.) and their designated representatives cooperate with local authorities throughout a series of discussion boards conducted at the neighborhood, ward, and municipal levels in this participatory decision-making process. The Local Self Governance Act (1999) and different common law jurisdictions, rules, and guidelines serve as the foundation for this study's institutions and procedures. The law was passed in 1999 and remained in formulation till September 2017.

Public actively participating in sewage maintenance and farming - Nepal

Figure 1: Public Participation for sewer management

As part of rural development initiatives, planning at the community scale started from the outset of the Panchayat regime in early 1960s (i.e., Messerschmidt et al. 1983). Planning's original intent was to use local Panchayats—rural villages, urban municipalities, and a blend of village and urban areas known as districts—to gather local needs (Paudyal 1994). Several Panchayat Development Workers (PDWs) were stationed in various areas to assist locals in identifying and expressing their needs in relation to public decision. The PDWs were professionally qualified experts with a variety of specialties, including engineering, agriculture, and education. These PDWs, however, were recruited with certain covert political objectives to advance the idea of the party-free Panchayat and to undermine multiparty democracy at the local level (Shrestha, 1980).

A policy and programmatic guidebook outlining the income sources and spending items to be implemented within the boundaries of involved districts was distributed by government to all district Panchayats in 1975. According to the guidelines, districts were required to interact with the citizens for preparing their own annual development plans. But there seems to be no clear definition of what was meant by public engagement. The planning of larger development initiatives that would assist either one city area or community well within territory of the relevant region was the main objective of the annual manual of district-level plans and programs. PDWs were intended to simplify the process of involving the public in the construction of a local or community-level development plan, but it now appears that they also served to inform and make the citizens residing in the community fully aware about the resources available and educate them.

The 1980s decentralization reforms made some headway in including locals for carrying out the decision making for the society, but the process was in initial phase and the results were fell short as per the expectations (Paudyal 1994). The Decentralization Act envisioned several community-level consultations (1982), the majority of which were held at locations that were convenient for residents. even though their absence of a mechanism for democratic local government elections based on political rivalry. Previously, candidates for municipal office were chosen based on their social or professional organizations. Consultative sessions were organized by the elected officials in their supporters. However, it's unclear how much the consultations that were organized by elected officials encouraged regular citizens to engage, allowing their opinions to be heard by the decision-makers (Bienen et al).

Decentralization was once again emphasized during the democratic reforms of the early 1990s as one of the guiding concepts for giving residents opportunity to participate in local governance (Administrative Reform Commission 1992; Government of Nepal 1990b). Consequently, several local governance reforms were put into place to transform the landscape of local governing bodies from the mostly traditional bureaucratic structures towards the more participatory, open, and democratic institutions (Ministry of Local Development 2003). The Local Self Governance Act of 1999, which unified prior reform initiatives to bring participatory democratic governance to the certain area or relating to the government of a city level, is one example of shift prioritizing participatory importance. One of the reform measures designed to promote bottom-up planning, demand-driven governance, and tying together central-local governance systems gave rise to the current style of participatory planning.

IAP2 SPECTRUM	INFORM	CONSULT	INVOLVE	COLLAB-ORATE	EMPOWER
	Inform (Before 1960)	Consult (1980s-1990s)	Involve (1990s-2000s)	Collaboration with people using different empowerment strategies (From 2000 onwards)	
GOALS	Inform citizens about local development works for exploiting their free labor.	Ask stakeholders about their needs and preferences.	Involve people directly and democratically in the decision making mechanisms.	Develop public policies in collaboration with local people, to ensure their involvement in the implementation of public policies	

Figure 2 Participatory Planning of Nepal as per the IAP2 spectrum
Source: *International Association for Public Participation (2014) and Nabatchi (2012a).*

Consequently, Nepal's local governance has evolved its planning process through the implementation of various methods for community collaboration and involvement (Table 4.1). Before 1980s, the process of planning was intended to educate the public about projects being carried out in the city or community, along with their involvement in the implementation phase. Citizens were requested to congregate in an accessible location to learn about the different initiatives by the government that would be a transition factor of their area, but the process for

involving them in decision-making was not completely defined at this point. The planning procedure was revised throughout the 1980s and 1990s to include community input. Once more, the level of meaningful participation by regular people in the implementation of several small-scale development programs was used to define citizen participation.

Several hopeful steps were taken in the early 1990s, along with the (re)establishment of parliamentary democracy in 1990. To give people opportunities to participate in local decision-making, several decentralization efforts were implemented since citizen engagement in local authorities was seen to be a constitutionally justifiable goal (Government of Nepal 1990b). Several participatory processes, such as the planning process, were greatly improved in terms of their democratic institutional form and process to directly involve residents in the annual policymaking process in towns, villages, and districts. Uncertainty exists on whether the planning procedure included residents' thoughts in local public policies or if it merely served as an example of citizen participation in policymaking.

However, as the new millennium began, the strategic planning was revived as a native government decision - making framework to not only include ordinary citizens as its key actors but also aim to work collaboratively with locals in the execution of small independent local infrastructure development. (Government of Nepal 1999b, 2000). To empower residents in the development and implementation of infrastructure and local public policy, the project plan has been operationalized. This was achieved by several imbedded and obligatory clauses, such as the requirement to allocate a specific percentage of the budget to minorities, women, and children. (Ministry of Federal Affairs and Local Development 2013).

2.2   Government Sponsored Participatory Process – Government Initiatives

Government Initiatives

Governments typically adhere to two distinct normative characteristics of the different entities designed by the government:

a. Organizational Structures: In this structure different participatory mechanism is determined and thus public are involved for the valuable participation.

b. Operational Procedures: In this structure, participants are selected from the community and thus given resources and opportunities for making decisions favourable for the community and its citizens.

Likewise, some of the institutional methods that can be followed by governments for better participatory processes are:

a. Inclination towards more equal distribution of political power
b. Fair distribution of resources
c. Decentralization of decision-making processes
d. Development of wide and transparent exchange of knowledge and information
e. Establishment of collaborative partnerships

2.2.1 Participatory Planning

In this process, government conducts different meetings, bhelas, etc. and engages the citizens to prepare annual, mid-term and short-term local level policies by conducting thorough analysis of the different problems, identifying the nature of the problem prevailing in different infrastructure of the community, and shortlisting the problems and develop proper solutions and alternatives for the problems in collaboration with the public residing in the community.

In case of Kerala, the government discussed the prevailing problem of the community with the public and determined the ideas and opinions of the public through gram sabha in early 2000s. The local level authorities along with public representatives conduct seminars to categories the ideas, opinions and solutions given by the public and finalize a certain policy for the problem. Thus, the policy finalize in the seminar is approved by the government bodies.

2.2.1.1   Planning as per Kerala, India

The government forms different ward committees in regions with population bigger than 1 lakh. The formed ward committees are formed through combination of elected officials from each ward, representatives from civil society organizations, political party officials, academic institution representatives, and stakeholder groups. There is mandatory reservation for women and other

minorities groups to assure their representations. If the population of any area is lesser than 1 lakh, ward sabhas are formed in such places where every elector in the ward is a member.

Additionally, a state-level commissioner is appointed to oversee the committees' and sabhas' operations and to adjudicate any conflicts or irregularities. The working group are comprised of experts at different level of local bodies to assist in performing audits and the decision-making process within the jurisdiction. The government provides more power to the public and the elected officials more authoritative power than the bureaucrats of the community. Performance audits are performed often(Natarajan, 2019).

The unique model of kerala has shortcomings which must be eradicated through knowledge gained by the experience. The lack of participation from the wealthy groups of the community, improper training and capacity buildings to the experts working for the local level, poor record keeping and lesser representation of the marginalized group in the practice.

According to the municipal power system, the mayor's office acts as the executive while the chamber of Deputies acts as the legislature unit. Two entities i.e., the planning office (GAPLAN)

Figure 3 The Kerala model for public participation

Source: What can Chennai learn from Kerala and Bengaluru on citizen participation in urban governance? (citizenmatters.in)

and Coordination of Relations with the Communities (CRC), are assigned to discuss and determine the different budget issues with the residents. GAPLAN focuses on balancing public requests with the technical and financial sustainability, while the CRC collaborates with local leaders through its regional coordinators and organizes debate assemblies and compile the different visions, opinions, and ideas of the community.

2.2.2   Participatory Budgeting

In this process, the government conducts informal meetings with the public of a certain community and discuss the major problem of the community and select a major problem and allocate budget for solving a particular problem.

In Porto Alegre, Brazil during 1989-1996, the citizens majorly focused on the problem of sanitation in the community to improve the access of basic sanitation to the public which resulted in collection of budgets which nearly doubled and also the revenue collection increased by 48%.

2.2.2.1   Planning in Porto Alegre, Brazil

In Porto Alegre, Brazil, the city is split into sixteen regions, and the following five themes are used to group debate topics: Transportation, education, recreation, and culture, health and social welfare, economic growth and taxation, and city administration and urban development. Every year, there are two phases of plenaries on each topic, one in each region. Before the first round of formal meetings, the residents assemble in March to collect demands from individual citizens and to mobilize the neighborhood to choose regional delegates. These intercommunity dialogues do not include the municipality. In April, in the presence of the mayor, the first round of meetings between the people and the executive takes place to evaluate investment plans from the previous year, talk about ideas for the coming year, and elect people for decision-making and for further discussion. Informal pre-round meetings are held between the first and second rounds (March to June) to consider investment requests made by the various community associations (unions, cooperatives, social organizations, etc.). The participants rate these demands on a scale of 1 to 5 in increasing order. The executives then aggregate the point based on two different criteria: A region's need is determined by how much access it has had to a specific service, and its population size is determined by its size. Thus, the maximum number of points that can be earned is fifteen: five points for regions that have had less than 20% of a service's access, five points for regions with more than 120,000 residents, and five points for regions where the service is deemed to be most important by users(de Sousa Santos, 1998).

The Council of Participatory Budgeting (COP), which is essentially the main participatory institution, is made up of 44 members after the second round of voting takes place in July. Two councilors (and two substitutes) are elected from each of the 16 regions (32 delegates), from each of the 5 themes (10 delegates), and from the civil servants' trade union (2 delegates). Following their familiarization with the situation of municipal funding, these Councilors clarify the needs of their constituents, discuss the criteria for resource distribution, and make changes to the budget plan created by GAPLAN and the mayor's cabinet. The COP meets once a week for two hours to complete these tasks until a final budget proposal is delivered to the legislature on September 30. Between September and December, the COP closely monitors the discussions in the Chamber, engages in strong lobbying, and develops a comprehensive investment plan that specifies all relevant public works and the accompanying funding to be distributed to each region. The executive controls the COP process by organizing the meetings, establishing the agenda, and requiring that its departments submit data before allowing Councilor interventions to request clarifications. In the end, a weighting system that incorporates the subjective preferences determines how resources are distributed.

2.2.3 Policy Specific Participatory Decision making

It is one of the most matured participatory approaches in developing countries. Its major role is to empower the public for a robust and practical solution for the problems of a certain community.

2.3 Ladder of Public Participation

The illustration of the Ladder of Public participation as shown in figure 2 was developed by Sherry R. Arnstein in 1969. The major intention of ladder of public participation is that if the policymakers and planners want public participation, it is self-evident that power dispersal is inevitable. Power is the central variable in public involvement and decision making, and the impartiality of a given process will be influenced by its power distribution(Amy, 1983; Arnstein, 2019). Participation is primarily concerned with 'therapy' and 'manipulation' of participants unless individuals have a legitimate opportunity to transform consequences (Arnstein, 2007). According to Arnstein, authority in public participation is a ladder or a spectrum that ranges from "nonparticipation" to "degree of citizen power".

Figure 4 Eight rungs on a ladder of citizen participation
Source: (Arnstein, 2019)

Further explanation describing the eight rungs of ladder can be found below.

Manipulation and Therapy both are non-participatory approach with the major objective to provide societal guidance to the participants. The participants provide public support focusing on a proposed plan.

Tokenism: This level of engagement is a significant means of achieving comprehensive public participation. One of its engagement procedures might involve one or two community members being on a higher level of decision making than the rest of the community. However, individual actions cannot substitute for genuine communal involvement.

- **Informing** is a crucial first step towards legitimate engagement. Information is provided at a very late stage in development when adjustments are no longer feasible. Public queries are discouraged, and the information is superficial, irrelevant, or incomplete. However, the focus is on a one-way information flow. There's no way to give input.
- **Consultation** is best described as enticing people's opinions and thereby consulting citizens in decision-making or planning phases. Survey, public hearings, and communal meetings are the most common type of participation. Consultation doesn't assure that citizen issues and proposal will be taken into consideration carefully.
- **Placation:** One or two eligible community members will be recruited by the planning committees and boards to advise and plan for the community. It is ultimately up to the board members in authority to determine whether to consider these recommendations. The community lacks most of the authority.

Citizen Power: In this phase effective control of the process is retained at least to some extent by community members. Citizens and community must be well organized at these levels of authority, with neighbourhood associations or similar structures in place where individuals are engaged and immersed in the community's everyday life.

- **Partnership:** The power is dispersed through negotiation between citizens and stakeholders. Planning and decision-making functions are carried out by entities such as joint policy boards, planning committees, and other procedures that could encourage such collaboration.
- **Delegated Power:** The residents of a community have been handed greater decision-making authority than those in positions of power. This provides citizens a sense of ownership over the state of their region. There is an involvement of majority from the early stages of the project and in the decision-making committees during the different stages of the project. Generally, this type of power should be handed to the public while performing projects related to urban infrastructure development and management.
- **Citizen control:** We must acknowledge that none of us have an absolute authority neither do the citizens. However, this is the pinnacle of citizen responsibility, and it

implies that they have absolute ownership over a policy or plan and can negotiate the terms under which 'outsiders' can change it(CatComm, 2014; Kreiken, 2021).

2.3.1 Pretty (1995)- Typology of participation

Pretty (1995) created a different typology of community engagement for planning and carrying out in a rural setting. The various ways that development organizations perceive and apply the term participation can be categorized into seven (7) distinct forms, according to Pretty (1995, p. 1253). From manipulative interaction, which is at the lowest level, to self-organization, which is at the top level, there seem to be different versions.

The manipulative forms offer the level where stakeholders are appointed as representatives on legitimate boards but are unable to exercise any influence; typically, these are non-elected representatives. People contribute at the passive level by learning what the government has already decided. According to Pretty (1995, p. 1253), "others propose that the manipulation that is fundamental to kinds one to four indicate they should be understood as types of non-participation." Therefore, some degree of effective participation starts to emerge from the fifth type. The greatest stage is self-mobilization, in which stakeholders take action to alter systems without outside assistance. According to Arnstein's ladder, this level corresponds to the concept of citizen control. However, Pretty's typology does not seriously question how power is distributed.

2.3.1.1 Criticism of Pretty's Typology of participation

It is noted that Pretty's typology still has several drawbacks despite appearing to include significant sorts of engagement. In other words, she assigns partial responsibility for lower levels of engagement to outside forces. Structured limitations and other factors, such as participant knowledge and competence, may influence passive participation.

In addition, the typology does not specify a level at which there is zero participation; Arnstien's approach, however, does. Additionally, Cornwall (2008) compares the two typologies and notes the following:

- Unlike Arnstein, who examines participation from the perspective of individuals who participate, Pretty focuses on those who use participatory methodologies, whether they are project managers or the government.

- The dual descriptions are normative because they both view participation as a continuum from negative to positive.

- Unlike Arnstien, who examines participation from the perspective of individuals who participate, Pretty focuses on those who utilize participatory methods, whether they are project managers or the government.

- When it comes to truly effective involvement, Arnstien emphasizes the power and influence that citizens have over their lives, while Pretty focuses on self-mobilization, which may or may not pose a threat to established power structures.

- Additionally, both typologies take a change in control from the government to the populace or citizens into consideration to some extent.

2.3.2   IAP2 Spectrum of Public Participation

The International Association of Public Participation (IAP2) created the Spectrum of Public Participation to assist define the role of the public (or community) in planning and decision-making, as well as how much influence the community has over these processes. It outlines five stages of public involvement (or community engagement). Depending on the project's aims, time constraints, available resources, and level of importance or priority, the framework makes distinctions between the various levels of participation. Five stages of public engagement are included in the IAP2 spectrum: inform, consult, involve, collaborate, and empower.

It is always a to-and-for process, thus the more to the right on the Spectrum it was, the better. The Spectrum is organized from left to right, therefore it does not like Arnstein's Ladder of Citizen Participation in terms of hierarchy. Through the training, IAP2 has tried to impart the idea that it relies. It involves determining the ideal level. It would be a waste of time to try to collaborate on something simple, devoid of emotion or complexity. If you attempt to handle something extremely complex with a simple Consult level process, you'll probably have to start over after doing some harm.

2.3.2.1 Inform

The quality of the description and outside references is covered at the inform level. The inform level of public participation merely gives the public with the knowledge they require to comprehend the agency decision-making process, not the possibility for any meaningful public participation. This level is included on the Spectrum to serve as a reminder to agencies that in some cases, there isn't a way for the public to participate in the decision-making process, so the best course of action is to just educate them. It is crucial to understand that you are not attempting to influence or manipulate the public in any manner when you conduct the "inform" level of public engagement. The infographic serves as a reminder that knowledge is a crucial building block for civic engagement. Several experts and authors contend that the Inform level need to be distributed across the Spectrum.

2.3.2.2 Consult

The consult is "the bare minimal chance for public input to a decision," which is a very low level of community engagement. In essence, it is gathering input on strategies, concepts, choices, or problems with minimal engagement. The pledge is to "listen and acknowledge" the difficulties brought up, but not always to act. At this level, it is especially crucial to be crystal clear about the consultation's objective and what is non-negotiable. Consultations can be more interactive or less engaging (e.g., surveys or written contributions) (e.g., focus groups, public meetings). Although there is still some two-way communication because of the promise to "give feedback on how public input influenced the decision," consultation primarily includes one-way communication feedback from the community.

2.3.2.3 Involve

The **involve** level includes engagement from elected leaders to ensure that "public concerns are understood and considered". At the Involve level, the community is invited into the process to a greater extent than with Consult. As can be seen, the goal is to work with the public **throughout the process**: it is not a one-off. While the promise implies that issues raised should be considered, decisions at this level are generally made by the organization or department rather than the public.

2.3.2.4 Collaborate

At the cooperate level, cooperation and power sharing are key concepts. It suggests a two-way, participatory process with an emphasis on communication. Although the organization or department still has the last say, community input is considerably more significant. It can be expensive and time-consuming to build the necessary trust and make sure there is true involvement.

2.3.2.5 Empower

The public is given final decision-making authority at the empower level. The level of community engagement may not necessarily be the highest. While empower may not necessarily require the same level of community engagement as cooperate, it does require a high level of community engagement. Empower suggests that this procedure is related to important issues. allowing individuals to make choices regarding unimportant matters.

2.4 Sense of Ownership

Sense of
Ownership

For public participation, people of a community must develop a feeling of ownership with the social infrastructure. "Sense of Ownership" describes how an individual perceives their connection with the surrounding social structure and its elements like having a sense for statuses, roles, social networks, groups and organizations, social institutions, culture, etc.

Sense of ownership in process (who has voice and whose voice is heard) describes the procedure that analyses how many people had a chance to speak and whose voices are considered while performing infrastructure development research in a communal space. The situation or problem of a space is determined by the people whose voices (myriad or suppressed minority group voices) are heard. The identification of such problems leads to the determination of its fundamental assumptions, techniques and development of an acceptable plan. Then, the determination of the strategies depends upon how the problem is perceived by the individuals residing in the community(Chavis & Speer, 1990).

Sense of ownership in outcome delineates who has the authority for decision making and executions over the outcome. The citizens may want to influence or authorize decisions, but they may not have the resources to do so as decision making is complex and is driven by the legal structures involving local, regional, federal jurisdictions etc. As a result, a sense of ownership is founded on power and empowerment, two concepts that have gotten a lot of attention in theoretical and applied community development research(Harley et al., 2000).

Sense of ownership distribution entails examining people who are impacted by a decision, as well as how the decision's consequences are dispersed, accepted, and "owned" both spatially and chronologically. This concept of ownership shifts the focus from present to future generations, with heirs reaping the costs or advantages of any decisions made in the present context, such as if development initiatives have ecological consequences that must be addressed by future residents of a town.

2.5 Institutions of Public Participation in Developing Countries – Participatory Governance

Participatory Governance

In many developing nations, the prevalence of participatory approaches in decision-making is growing. The similar set of institutions and procedures emerge, which, as the literature implies are evidently copies of or inspirations from some of the successful experiences of nearby countries(Baiocchi & Ganuza, 2014). Generally, the elected representatives are the major organizers but sometimes distinct decision-making committees of the relevant development projects, or policy institutions, have also been seen as organizers or sponsors of the participatory procedures(Stoker, 1991). The scope of policymaking is increasingly broadened to include citizens in the formulation of local public policies, the operationalization of such processes in representative settings has created uncertainty regarding the extent to which participatory processes actually supplement the current public policy mechanisms(Pateman, 2012).

While almost all political and economic contexts in developing countries are aware of the benefits of citizen participation programs, the international aid community, civil society

organizations(CSOs) and different local social groups in particular are seen as leading the charge for greater and more extensive citizen involvement in decision-making(Heller & Rao, 2015). In the hopes of generating significant policy and programmatic choices for the welfare of local communities, CSOs and NGOs autonomously organize participatory processes including mini publics, citizens juries, and community mobilizations. In order to hold participatory discussions across many dimensions of the community, CSOs and NGOs implement task and resources which are not directly organized by the government or the formal sector. These types of efforts are analysed during the democratic governance.

Numerous participatory methods have been created to include a range of local citizens in multilayer configurations of participatory decision-making. There does not appear to be a compelling argument for institutionalized decision-making mechanisms in any of the developing countries, despite endeavours to establish participatory procedures expanding as mainstream decision-making functions in numerous policy and political situations in recent years. Evidence suggests that participatory processes have instead only been used to exchange information between the government and society, gather feedback from citizens on the formulation of local public policies, allow stakeholders to participate in the implementation of small-scale projects, and ultimately increase the authority of decision - making.(Yang & Pandey, 2011). The most significant common trait of participatory procedures in developing nations is the intention to involve ordinary people in decision-making. This is significant in that it prioritizes the participation of regular people, something that many conventional institutions of decision-making would not do, as Smith (2009) argues when defining democratic innovations as "...institutions that are specifically designed to increase and deepen citizen participation in the political decision-making process."

The appointment of a facilitator in the participatory process, the use of random selection techniques to choose participants, the provision of equal speaking opportunities in meetings, prearranged sets of project selection criteria, and the establishment of an upfront budgetary ceiling for a specific policy are just a few examples of the measures that many developing nations have put in place to lessen the interference of elites(Fung & Wright, 2001).

3   CONCEPTUAL FRAMEWORK AND METHODOLOGY

3.1   Conceptual Framework

Ontology is the study of materials around us. The physical elements of a community represent the hard or physical infrastructure and the people living within the community reflect the social structure. The perception of the residents living in an urban infrastructure settlement is a socially constructed reality. Their behaviour of treating each other within the settlement reflects the social phenomenon of the community. This research's ontological premise is that government initiatives and residents' behaviour in a community fluctuates according to variable indicators pertaining to multiple dimensions of community such as institutional aspects (education, opportunity, etc.), socio-cultural aspects, and empowering elements.

Epistemology is the process of acquiring understanding of things available around us. The valid source of knowledge for the above-mentioned claim is the analysis of social process and the study of meaningful interface with the local government and residents of respective areas adopting multiple methods and strategies for generation of knowledge from the interactions carried out through communal interaction. This study aims to look at the citizens' and local government's level of interaction and government initiatives to comfort the local citizens with the enforcement of participation legislation, as well as the citizens' willingness to participate in participatory practices in two separate areas within the city.

Local government initiatives to increase residents' willingness to participate in planning and policy making phases is influenced by several factors and characteristics related to the socio-cultural, physical, and economic dimensions of society. As a result, within the post positivist paradigm, the correlational strategy is advocated for accessing the relationship between various components that cause a phenomenon to reach a logical conclusion.

The individuals who are research subjects in a study are represented in numbers in correlational research, and this numeric data is evaluated and processed to construct the research conclusions. In the post positivist paradigm, the concept of truth or reality cannot be universal, implying that the same phenomenon under research may provide different results depending on the study area,

which is the appropriate paradigm to compare the two different places and inhabitants' engagement.

Citizens' contentment lies with local government bodies' public involvement policies, as well as the disparity between residents of areas when it comes to public participation practices. The interpretivist paradigm is used to interpret the current practice considering participation policies and the gap in participation practices among residents. According to the interpretive paradigm, reality is socially constituted, rather starting with a theory (as post-positivists do), interpretive researchers generate or inductively construct a theory or pattern of meanings throughout the research process(Creswell, 2003). The subjective aspect of satisfaction, which is reflected by the results of numeric data analysis in correlation, should be validated by understanding the interaction with representatives of the specific focus group. As a result, the interpretivist paradigm will be used in this study to evaluate inhabitant satisfaction as well as the gap between practice and policies.

Hence, for further development in this research I will be using pragmatic paradigm.

3.2   Methods:

The major aim of this section is to determine the research methods to fulfil the objectives of the research and give rationale for the techniques used to gather data for this research.

3.2.1   Semi-structured Interviews:

This interview technique has received widespread recognition as a qualitative approach to data collection and analysis(Creswell, 2014). An interview is a face-to-face discussion between two or more persons with the goal of facilitating the exchange of views on a particular topic. The interviewer, whose job it is to manage the conversation, and the interviewee, who presents his or her thoughts, experiences, beliefs, and responses regarding the subject the interviewer seeks to understand, are the two persons involved in the conversation.

The three stages of using interviewing techniques to produce qualitative data are shown in the table below:

Phase	Main Activity	Questions
I	Planning and designing interviews	• Why need I use interviews in my study? • What kind of interview is ideal? • How do I choose which inquiries to make? • What long should the interview hours be? How frequently should I conduct the interviews? • How should I pick and recruit interview candidates?
II	Conducting interviews with the public	• How can I be sure that the people I interview grasp my questions? • How can I start a conversation? • How can I properly engage the interviewee in the interview process?
III	Technique to interview	• Where do I begin with the data analysis? • Which method of data analysis is most effective? • How should I present the interview data in the section on my findings?

Table 1: Activities for Interview
(Source: Rowley, 2012)

The semi-structured interview technique has received a lot of praise in qualitative research across numerous disciplines since it is appropriate for social and political science themes that are both ethically sensitive and relatively understudied(Corbin & Morse, 2003).

3.2.2 Observation:

Overt and covert observation are the two distinct types of observation(Iacono et al., 2009). In this research overt observation is used where the participants are aware of the observer and his or her intention to take part in the event. As a result, the observer can participate in the events with other participants while remaining neutral throughout. In other words, someone who is clearly seeing something can actively record it. In qualitative case study research, observation has been regarded as the most pertinent and epistemologically sound technique for gathering data from any formal procedure, social event, or other social situations.

Observation is one of the major processes to acknowledge different initiatives and activities done by the government to influence the willingness of people for following different participatory approaches. It also helps us to visualize and understand the interest and willing of the public living in a community effects the development of the infrastructure within the community(Berg, 2001).

3.2.3 Focus group discussions:

For research, focus group discussions (FGDs) are advised as a technique to triangulate thoughts and opinions presented in individual interviews(Wilkinson, 1998). The opinions gathered through individual interviews as well as through other methods like observation are validated by focus groups(Lune & Berg, 2017).

To determine what members of a certain group, believe about a particular subject, the questions posed during individual interviews are brought up in group conversations. To compare the group members' perceptions, it is occasionally possible to ask them to speak for various gatherings. Focus group discussions and individual interviews differ primarily in that group discussion participants are free to converse, debate, and share ideas with one another, and the researcher's function is to facilitate and manage the discussion of the study topic.

Unstructured and semi-structured research methods are recommended in focus group discussion(Stewart et al., 1999). Focus groups that are semi-structured are explanatory in character, whereas unstructured focus groups are exploratory in nature. Semi-structured focus

groups serve as an interpretive tool to look at previous findings, whilst unstructured focus groups are useful in introducing the subject of research with relevant individuals to produce background information(Oates & Alevizou, 2018).

3.2.4   Document Analysis:

Document analysis is one of the techniques used in qualitative research to get the data required for the study. This approach was chosen because it has a history of being utilized as a triangulation technique, which enhances trustworthiness(Krause, 1989).

There are numerous tasks make up document analysis. It is relatively normal for the researcher to initially identify the pertinent papers that can aid in establishing "context" for the inquiry. The next stage is to gradually pick the most important documents from the piles of the document. The researcher at this point must be cautious, critical, and intellectual enough to go deep into the resources.

Document analysis is more of a "deskwork" process that lasts during the duration of the study project. However, the methodology to document analysis differs significantly depending on whether other techniques, including qualitative field interviews, are used. A researcher might be prepared to read as many texts as necessary to get to the essence of the subject before engaging in fieldwork. While conducting fieldwork, the researcher may come across some readings that are less valuable than others. The real benefit of document analysis becomes clear after reading and practical practice.

3.2.5   Fieldwork

The fieldwork began during the July 2022 in Birgunj. The fieldwork started with some pilot interviews with the project engineers of the SMEC project and with the two ward presidents of the Adarsh Nagar area. The research began with the observation of site area and the public of the community. During the study phases in the fieldwork, semi structured interviews were conducted with the public of the Adarsh Nagar area to get a clear understanding of the present condition of the road and drainage infrastructure and about the thinking of the public about the participatory

approach and their willingness for involvement for the development of their community and surroundings.
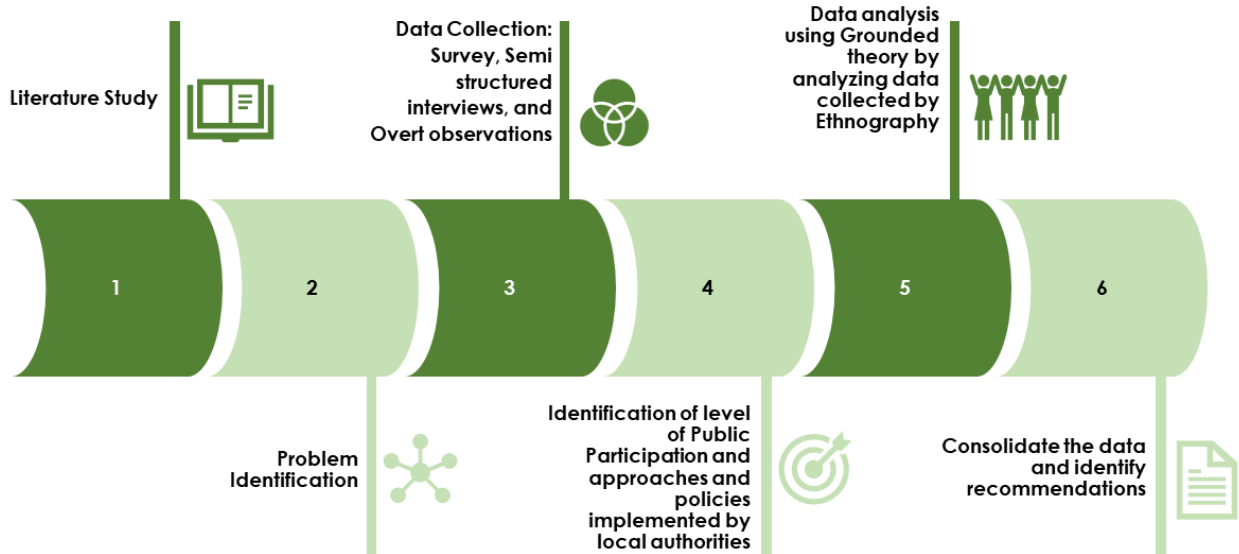
Figure 5: Research Process

3.3 Research Activities

3.3.1 Government Initiatives

This research includes study of different government initiatives and its effectiveness to influence the willingness of people for engaging themselves to develop road and drainage infrastructure through public participation in Adarshnagar area. The different participatory planning approaches like training, ward meetings etc. have its major objective to engage the people of the community and increase their willingness to identify, deliberate and shortlist the different natures of problems related to road and drainage infrastructure along with proper solution and alternatives for the betterment of the society.

Interviews with the different relevant government employees were conducted followed by the focused group discussion about the Road and Drainage improvement project conducted by ADB.

Semi structured interviews with the public were conducted to understand the government activities and approaches towards the public and the community.

3.3.2 Participatory Budgeting

This study will have us understand if the citizens of community in collaboration with the elected representatives or the local level government are given an opportunity to explore different issues related to road and drainage infrastructure. The most pressing issues related to it within the community is determined and a proposal and feasible solution of the problem through budgetary interventions is developed.

Interviews with the different relevant government employees were conducted with primary focus on involvement of the public during budget allocation for the development of road and drainage infrastructure development within the community. The focused group discussion was conducted to fetch information about the involvement of the people for budget allocation for the development of Road and Drainage improvement project conducted by ADB. Semi structured interviews with the public were conducted to understand the government activities and approaches towards the public and the community.

3.3.3 Policy Specific Participatory Decision Making

The research focuses on the involvement of the public with local representatives for development of policies related to infrastructure development. It also focuses on how people typically react after receiving power to modify the policy for the development of the infrastructure within the community. The research also focuses on the flow of information by the government along with the different programs and approaches conducted to involve the public in policy and decision making for the road and drainage infrastructure within the community.

Interviews were conducted with the elected representatives of the local government to know about any flow of information or approaches made by the government to the public during the project for preparing or modifying the different policies made for the development of road and drainage infrastructure during the initial phases of the project. The public responses about any collaborative

approaches launched by the local bodies for the development of policies in the community or among the peoples living in the community were also conducted.

3.3.4   Sense of Ownership:

The major focus is on the public living within the community in this study. The research tries to study the behavioral pattern of the public towards the development of the infrastructure. It also tries to determine whether the public are willing to contribute their assets i.e., volunteer involvement, money, time, knowledge, skills etc. and help the government for the successful implementation of any related project. This research focuses why people show interest and willingness for participation in development of the infrastructure and for what reason people are not interested.

The research tries to determine the dispersion of power and resources between the people, who has a voice and whose voice is heard within the community. It also studies the current information relay process and platforms by the elected representatives to the community. Interviews with the public is major source of data collection about the behavior that majority follow in the community.

3.3.5   Urban Infrastructure Development

The major focus of the infrastructure is on the road and drainage infrastructure. The changes that took place during the project period is thoroughly studied. The condition and quality of the road and drainage infrastructure is prioritized, the study also tries to understand and determine the involvement of the public in such infrastructural development. The social cohesion and sense of belonginess between the people of the community is also be considered.

4 Study Area: An Overview

Birgunj metropolitan city is the leading trade hub in the central terai region of Nepal which consists of major economic and industrial zones of Nepal. The Structure Plan (1987) determined that 70% of built-up area of the city was formed by residential and residential-cum-commercial area, and almost 8% of the industrial areas are in the northern part. The Integrated Action Plan 1998 of Birgunj metropolitan city aims to enhance the municipality in all aspects, including physical, economical, and institutional development. Physical (Roads, Drains, Sanitations) Development Plan and Multisectoral Investment plan were listed as the top priority project which seems to be exactly major recommendations in present context(SMEC, 2013).

Figure 6: Adarsh Nagar, Birgunj
Source: Google Map; Recreated by Author

The trade hub and metropolitan city, the scale of infrastructure development is found to be lagging considering the proliferation of the population in Adarsh Nagar. It represents itself as a mixture of planned residential and commercial area.

The inadequate infrastructure for the proliferated population of Adarsh Nagar reflects the inefficiency of the government to act and understand the infrastructural needs of the citizens living in the community. This research analyses the behavior and acts of the citizens for the development of the existing and necessary infrastructure and tries to analyze the infrastructural development gap that exists there. The study also focuses on the residents of the area and their degree of willingness of voluntary participation or collaboration with the local level government and the different development committee present in the locality. The research additionally explores possibilities of different participatory approaches for a project followed by the local institutional organization for better coordination with the public, to understand their queries and for the

development and betterment of the livelihood of the citizen and the community. This study assists in determining a feasible planning technique for developing the participation approach and develop the opportunity to change decisions and feel sense of ownership over the community plan, in an economic hub like Birgunj metropolitan city.

The drainage network i.e., the main drain (MD) running from the East- West direction is located between the two rows of the buildings in Adarshnagar area. Main Drain is blocked due to the accumulation of garbage, plastics, silts, other wastes and due to encroachment by the buildings surrounding the drain. The MD during the heavy rainfall is not sufficient to drain the storm water resulting in clogging of water in the streets of Adarshnagar area. So, to overcome this situation, a secondary drain(9L1) is constructed with its connection to the MD, this 9L1 consist of two branches 9L1K and 9L1R which helps to divert half of the storm water from the MD to the nearest Sirsiya river. This construction of the Secondary drain has divided the flow of the sewer wastages and seems to somewhat successful to solve the problem of water clogging in the community.

4.1 Project Detail

In 2010, Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) was proposed for Birgunj City by Nepal Government and Asian Development Bank. The agreement was made between the Birgunj Metropolitan city, Town Development Fund, Nepal Government and Asiana Development Bank. For the project 8% of the total budget must be invested by the Birgunj metropolitan city, 11% to be taken as loan by the Birgunj Metropolitan City from Town Development Fund (TDF) and rest of the Budget to be granted by Nepal Government in collaboration with Asian Development Bank.

For the STIUEP project, an office was established in 2010 and SMEC, an Australian company was hired as a consultant. SMEC conducted survey in Birgunj for determining the outfall of the sewage and drainage and development of landfill site for wastages disposal. SMEC determined total 10 outfall in Sirsiya river in the west and Singa river in the east. The total estimated cost of the project was around 12 Arba. The major challenge for the Birgunj metropolitan city was land acquisition for wastages disposal and management of birgunj which should not be far from the city area as
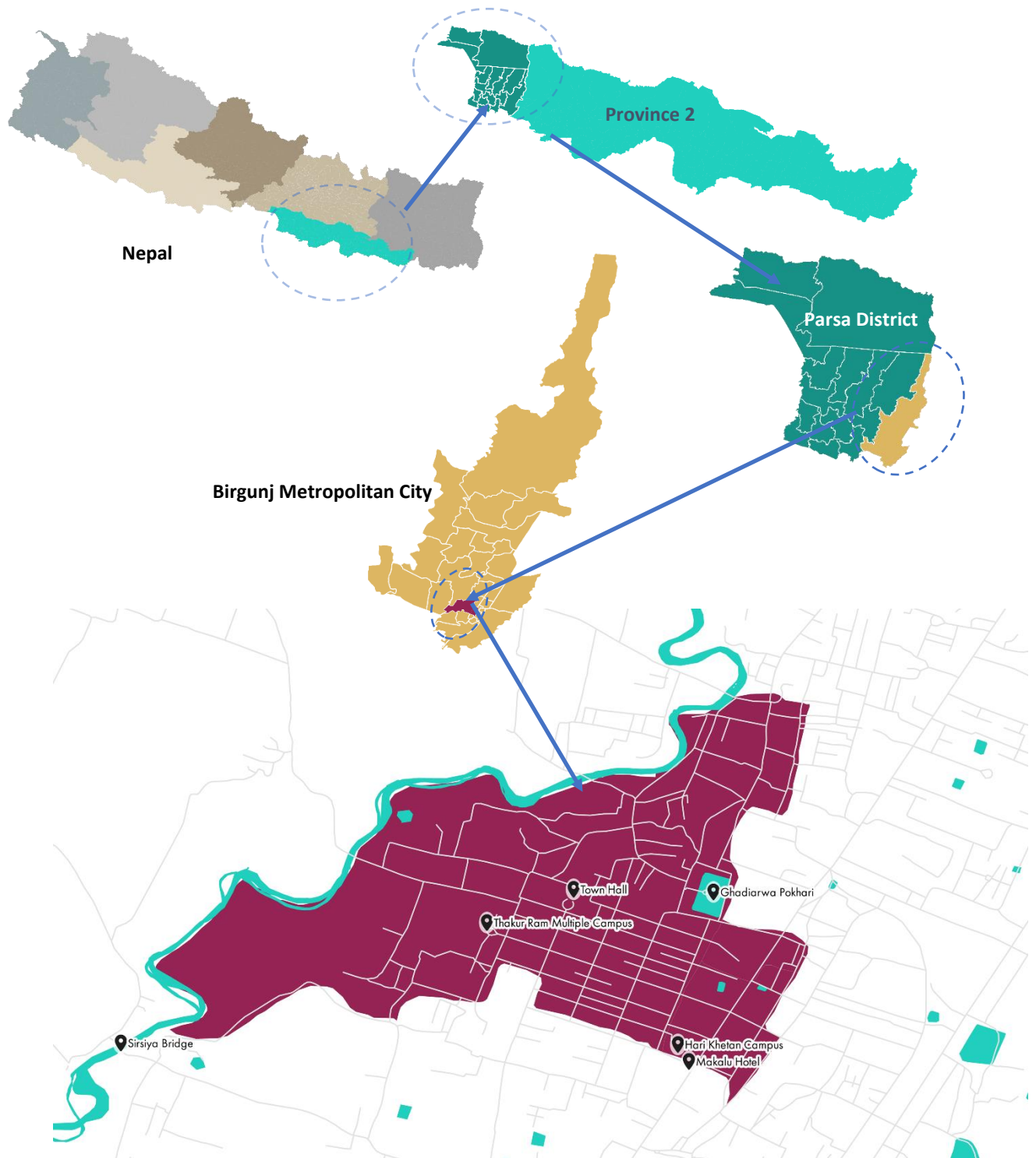
Nepal

Province 2

Parsa District

Birgunj Metropolitan City

Town Hall

Ghadiarwa Pokhari

Thakur Ram Multiple Campus

Sirsiya Bridge

Hari Khetan Campus

Makalu Hotel

Figure 7: Map showing Site Area

36

stated by ADB. The metropolitan city was able to allocate 15 Bigha and 17 katha in Bisrampur and Etiha bara to be used as landfill site and 10 Bigha was allocated for water treatment plant in chapkaiya, birgunj. Asian Development bank than allocated 3 billion for BMC to start the project and was handed to CTCE kalika. The project was hampered by madhesh andolan and different other external factors like April 2015 Barpak earthquake.

The wastages of the Birgunj city were disposed in the landfill site, segregation of degradable and non-degradable waste was started in the site along with the management of hospital management in hazard waste management unit within the landfill site. Organic fertilizers are being collected in small amount from the landfill sites. The non-disposable wastes are collected in a cell with different layers like geo membrane, geo textile, aggregate, sand etc., and are rolled resulting in production of black leachates which are oxidized in another cell and is flowed back to the nearest Singa river in the east.

The 11% loan taken by the Birgunj Metropolitan is one of the major challenges which is to be paid back to the town development fund. The government studied was focused to connect each household to connect the sewer line to the drainage and collect money from each household as a charge and pay the loan back to the Town development Fund. The people form each household are not interested to connect the sewer line to the drainage neither the local government has been able to make the people understand or influence its merits and demerits, many people lack proper idea about the necessity, importance and economic for the development of sewer line for themselves and for the community.

The STIUEP project consists of major three components i.e., treatment plant for wastewater management, landfill site for waste collection and management and development of sewer and drainage. The first package consists of allocation of land for landfill site and second phase for development of sewer and drainage management and development of wastewater treatment plant. There proposed outfall for sewer and drainage was 10 outfalls out of which six outfalls are functioning. The sewage water is treated than is rerouted to the river. Out of the total construction carried out only 30% is the coverage line of the drainage and sewer. The life of the project is 20

years as proposed for now but in future the life span of the project will increase as different new technologies will be introduced for better functioning.

The project has a total coverage of 30 % of Birgunj Metropolitan City Including Adarshnagar area. The people living in the community are blaming the government have not shown any relevant progress in activities related to this project and the drainage is not functioning in its full capacity. The local government has developed a plan and working out in different phases to connect the drainage line within the city. The people are dissatisfied with the activities by the local bodies and the representatives. The project to be completed is not possible only through the budget of the metropolitan but need fund from the Nepal Government and its line agency should provide the proper finding.

Figure 9: Singha River outfall 7 and 8
Source: A situation analysis report on flood at Birgunj, STIUEIP

Figure 8: Singha River outfall 9 and 10
Source: A situation analysis report on flood at Birgunj, STIUEIP

4.1.1 Minute of the project

In **2074 Bhadra 7**, MPMC (Municipality project management committee) conducted the meeting with major consideration and discussions on the physical condition of the Sewerage and drainage network along with its present conditions and the various problems.

Metropolitan Planning Management Committee Meeting

Participants – 29

Gender:

1. Male - 29
2. Female - 0

Institutional affiliations:

1. Birgunj Metropolitan City Office – 2
2. STIUEIP – 5
3. Elected Representatives – 0
4. Governmental Employees – 9
5. Private Consultancy – 13
6. Political Party – 0
7. Press – 0
8. Activist Clubs/Organizations – 1
9. Residents – 0

Ethnicity:

1. Hindu – 25
   a. Madhesi – 13
   b. Newar – 4
   c. Other – 8
2. Muslim – 1
3. Other – 3

In **2074 Bhadra 14**, A public hearing was organized in which the public were informed about the sewage and drainage network condition by the Project Implementation Unit (PIU), Contractor, project consultants, and the counselors present in the hearing.

Public Hearing Event

Participants – 71

Gender:

3. Male - 46
4. Female - 25

Institutional affiliations:

10. Birgunj Metropolitan City Office – 3
11. STIUEIP – 6
12. Elected Representatives – 2
13. Governmental Employees – 1
14. Private Consultancy – 11
15. Political Party – 3
16. Press – 1
17. Activist Clubs/Organizations – 17
18. Residents – 27

Ethnicity:

4. Hindu – 63
    a. Madhesi – 48
    b. Newar – 4
    c. Other – 11
5. Muslim – 5
6. Other – 3

In this public hearing, representatives were news reporters, activists, politicians, experts, and the public, each of the representatives expressed their opinions about the progress of the project along with its shortcomings and recommendations to make the project more efficient.

4.1.1.1 Shortcomings of the Project

- The progress of the project is much slower than expected.
- The public are not informed or made aware of the project, its necessity and its benefits to themselves and the community. The local government to avoid further delays to the project seems deliberately not being in collaboration with the public.
- The progress of the project is not disclosed, the citizens of the community should be involved and give proper information about the different phases of such huge projects that is being carried out in the community.
- Lack of maintenance of the existing open drainage.

It is must to carry out the maintenance and cleanliness of the existing open and closed drainage in the Adarashnagar area. The government should consider collaborating with the public and communicate listening to their ideas as they can clarify what is a must needed resources for proper sewerage and drainage flow, and for the maintenance of the road network to control the overflow and to make its sustainable to tackle the rapid urbanization. The contractors must be strictly informed to work collaborating with the locals and focusing on their needs and requirements.

In 2076 Ashad 29, Waste management program was conducted under the STIUEIP project in the community, where the Birgunj Metropolitan City Distributed two different dustbins to the people residing in the community to collect the degradable and non-degradable waste differently. But, after the distribution of the dustbins, the Metropolitan never approach to inspect the usages of the bins, neither came to collect the waste differently.

4.2   Road Infrastructure

Figure 10: Road Network of Site
Source: GIS Map of Birgunj

Road infrastructure in the Adarshnagar area was observed during site visit and via ArcGIS databases. The road networks in the site area that includes ward numbers 7, 8, and 13 of Birgunj Metropolitan City are laid out in grid patterns. They are clean and blacktopped with asphalt. However, some roads don't back footpath while some are very narrow and not usable which makes it inconvenient for residents in the area. There still exists drainage problem that keeps flooding the streets. Even then, most of the survey respondents (53%) find the road conditions in the area to be satisfactory.

Figure 11:Road Network of Adarshnagar
Source: Author

4.3   Community Development Programs

A key component of the STIUEIP Project is participation. Local NGOs working in Birgunj executed public awareness campaigns for sanitation, health and hygiene education, and 3R (reduce, reuse, and recycle) including organic composting at the home and/or community level, in addition to the actual investment activities. The NGOs informed the community about the project's objectives, activities, and approaches through ward-level social movement organizations, together with the rights and obligations of the municipalities, community groups, and users' committees as necessary. The GESI strategy guarantees that beneficiaries, particularly women, the underprivileged, and vulnerable groups, have had enough consultation and engagement. NGOs hosted interactive ward and tole level talks with the ward citizen groups to get the community ready for mobilization and to boost interest in project activities. Additionally, they tried to ensure and make it easier for women, the poor, and other marginalized groups to participate in the discussions. When necessary, NGOs formed separate focus groups with these at-risk populations and select the most effective means of learning their thoughts and acting on them. The NGO plans and executes the public awareness campaign for key solid waste management messages, such as reducing the use of plastics, segregating waste at the source, disposing of household waste in the designated locations rather than on streets or adjacent open spaces, utilizing in-home composting, keeping public areas clean and free of litter, banning open defecation, and banning urinating in public places. Additionally, it locates and works with private training institutions and pertinent

governmental and non-governmental organizations that can offer instruction in a variety of skills that are marketable and have employment prospects; makes the necessary arrangements for students to receive instruction both on-site and in training facilities; monitors the standard of instruction; and manages training activities.

4.4 Gender Equity and Social Inclusion:

- The project tried to ensure that women, the poor, and others with disadvantages are represented in community-based organizations and user committees in accordance with the project's established goals and monitoring indicators for the GESI Action Plan.
- It implemented the GESI Implementation Plan at the municipal level, created by the DSCs, to ensure social inclusion and gender mainstreaming in community mobilization processes.
- The authorities considered social inclusion and gender sensitivity in all Project-related activities.

5   Data Collection and Analysis

The data collection methods used for this study are both primary and secondary. The primary data collection techniques that were followed are:

- Key Informant Interviews
- One-on-one conversation
- Survey: Household
- Focused Group discussion
- On site observation

The questionnaire survey was carried out with Adarshnagar residents' households which helped to determine the situation of specific variables related to physical and socio-economic condition. The secondary data collection is in form of published data, records, reports etc. from sources like census data, STIUEIP, maps, different local level committee etc. The analysis focuses on different dimensions of public participation for the development of road and drainage infrastructure within the community.

5.1   Comparison of STIUEIP as per international practices

In Kerala and Porto Alegre cases as discussed in literature review section (pg. 24-27), different level of government initiatives to get the public interest and willingness to give their valuable time and effort for the overall development of the society can be seen. Public and the elected representatives, both are given decisive power as per the ladder of citizen participation which seems to be lacking during the STIUEIP project.

In STIUEIP project, a separate implementation unit like PIU was formed, and a NGO was hired to interact with the public and collect their views, ideas, and opinion on communal infrastructure issues. However, due to the inefficiency of the units, the NGO was laid off. Because of this occurrence the public interaction couldn't be held as efficiently and effectively as in the other two cases of Kerala and Porto Alegre.

5.2 Survey Respondents

Age group

- 15-25: 16%
- 26-45: 58%
- 46-65: 21%
- 65 and above: 5%
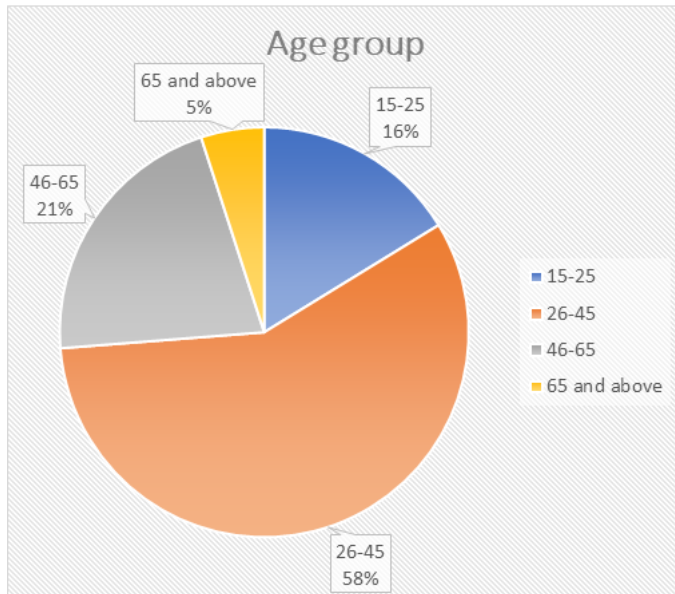
With a total of 80 respondents of diverse demographic, the responses received were in majority from male population. 96% of them were male, with 58% of them in 26-45 yrs. age group. Similarly, 50% of the responses were received from people who completed high school degree.

Education Level

- None: 4%
- Basic Alphabet: 12%
- Highschool: 50%
- Bachelor: 26%
- Masters: 8%
- PhD
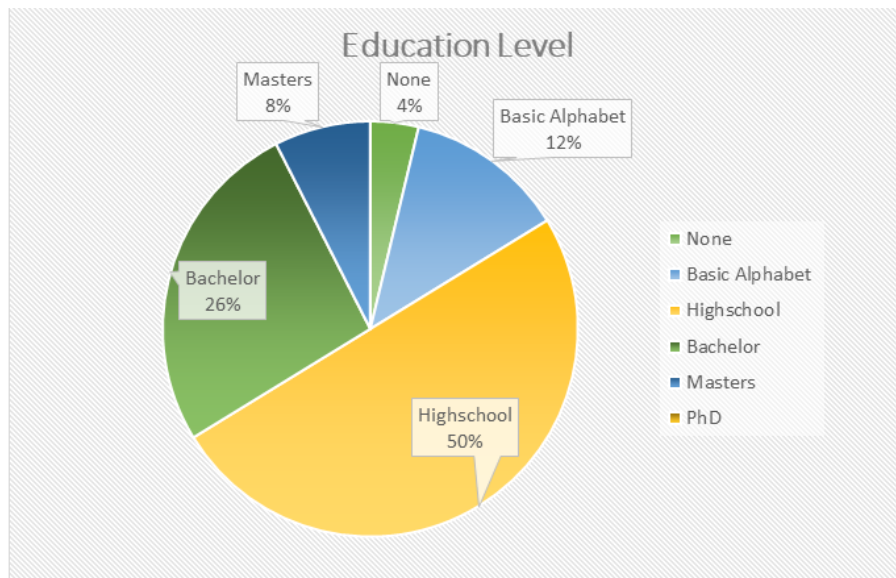
5.3 STIUEIP Government Initiatives

This section describes different activities initiated by the local bodies for the involvement and collaboration with the public for the development of the road, drainage and waste management within the community.

Interviews conducted with 4 Project Engineers, 1 Environmental Engineer and 2 Ward Presidents	People were approached through User Committee for public hearing about the STIUEP project progress
Information about the project was distributed through media (radio, newspaper), and posters	It is noted that public comments were received, but the comments are not explicitly mentioned in the minutes

As per the interviews with the government representatives, the government approached the public forming different user committee for the discussion and engagement. The government informed the public about upcoming infrastructural development project along with its perks to develop the social and financial condition of the community. The local bodies sometimes also gave allowance to influence and increase people's interest. However, the local government is lacking behind to adopt different techniques or awareness programs to make people understand the importance of working together and collaborate for the development of the road infrastructure. As seen from the survey data, majority of the residents were never approached by the government regarding sewer and road management.

The information relay process to the public was through medias, social medias, hanging hoarding boards, and organization of meetings like ward bhelas in the community to consult about the urban infrastructure development project which was about to start. Some government representatives say there are not any procedure followed by the government to relay information to the public and the public are not typically aware about any project during the phase of the construction.

Public Approach by government on road

Legend: ■ All the time ■ Most of the time ■ Sometime ■ Rarely ■ Never

- Sometime 16%
- Rarely 15%
- Never 66%

Public Approach by government on sewer

Legend: ■ All the times ■ Most of the times ■ Sometimes ■ Rarely ■ Never
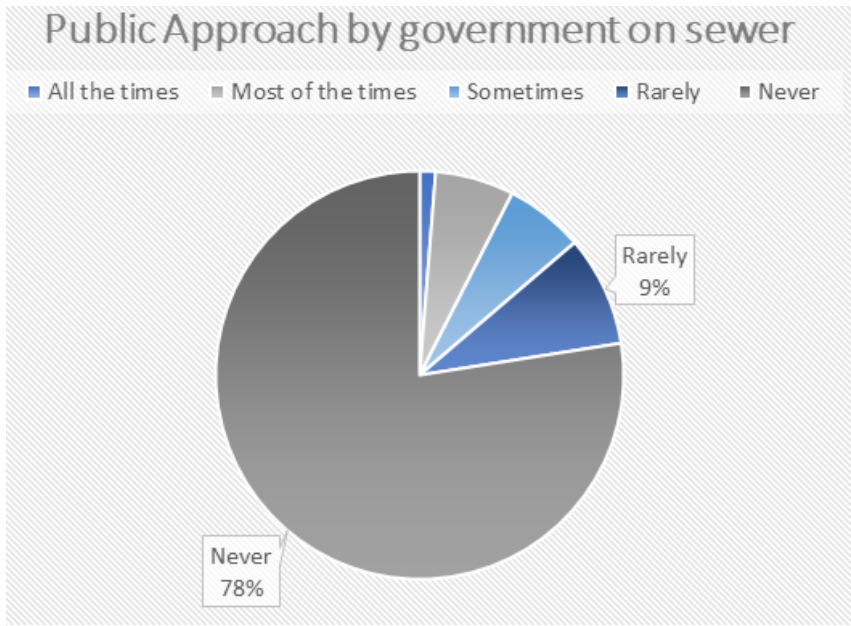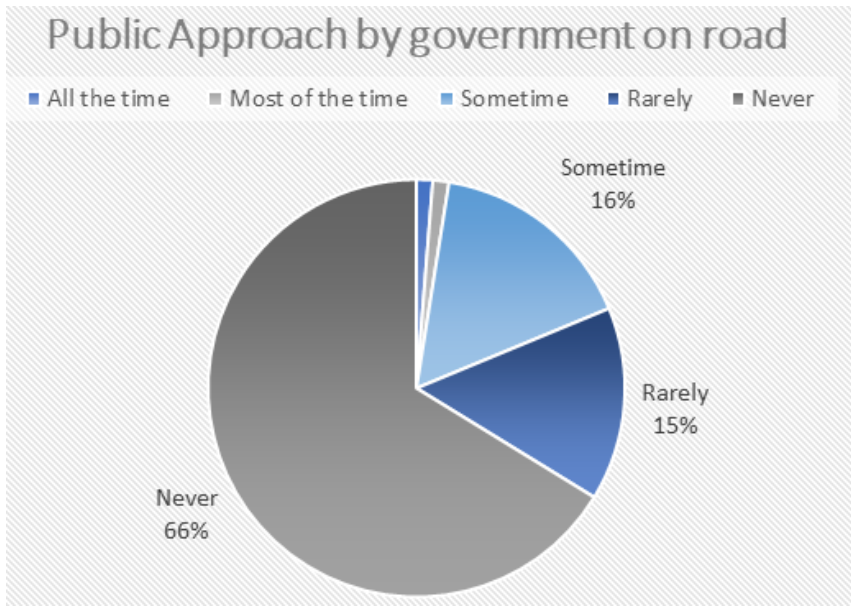
- Rarely 9%
- Never 78%

The government-initiated leadership and skills development programs are rarely organized for the citizens through different NGOS and INGOS, but they are not transparent as all the citizens are not informed. Generally, the local government involves the ward presidents, and they are provided with the leadership skills, or any trainings related to infrastructural development.

Government tried to make people aware and conscious to expand the increment of the public for urban infrastructural development by announcing through notices, social medias, local FM, local clubs and through different committees of the political parties. However, since there is lack of proper mechanism followed by the government for making people aware about the importance of participation for infrastructural development, it deemed to be not as effective as hoped for.

The involvement of the public during the discussion phase of any infrastructure project is less and its generally the public who are already engaged in social service or are active for the betterment of the society, who are involved in these discussions. Further, the involvement is neither gender sensitive nor the minority of the community are considered.

The voices of the public are mostly considered during the construction of any infrastructure within the community on pressure by the public. Majority of women are not much engaged in approaching the construction workers within the community neither the minority living in the community dare to speak about the construction work. The heard voices of the communities are generally of the people linked with the local government or social activists.
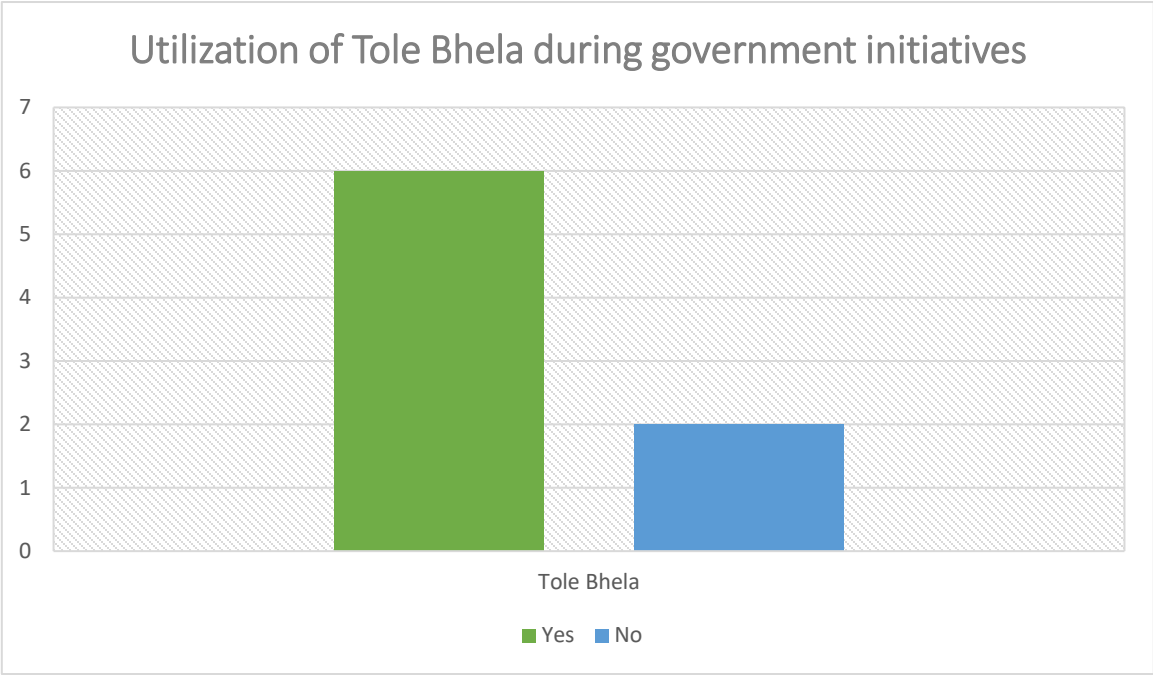
The local government initiatives do utilize the organization of tole bhelas in the community, but the people are not interested or are not informed about the activities, time and place where the tole bhela is going to be organized. There is also lack of information flow and equal opportunities provided to the public due to which these people ignore the different programs and participation.

The involvement of public for infrastructural development is must as the development works in the community will be carried out as per the necessities of the community which ultimately benefits themselves. It is one of the important factors to solve the different existing low sense of ownership in the community. Likewise, transparency, providing equal rights and equal opportunities, conducting regular ward meetings involving all the people along with the minorities to increase awareness among the people is also a must to improve the participatory approaches and increase willingness of the people to do something for the community.

5.4   Public Involvement and Sense of Ownership

The involvement of the public with the government and vice versa is very important for sustainable betterment of the community and quality of life within. The activities performed by the people, their contribution to each other and society, and their understanding about the society and collaboration with other people and the government are important to be considered during participatory approaches to create a sense of ownership among residents.
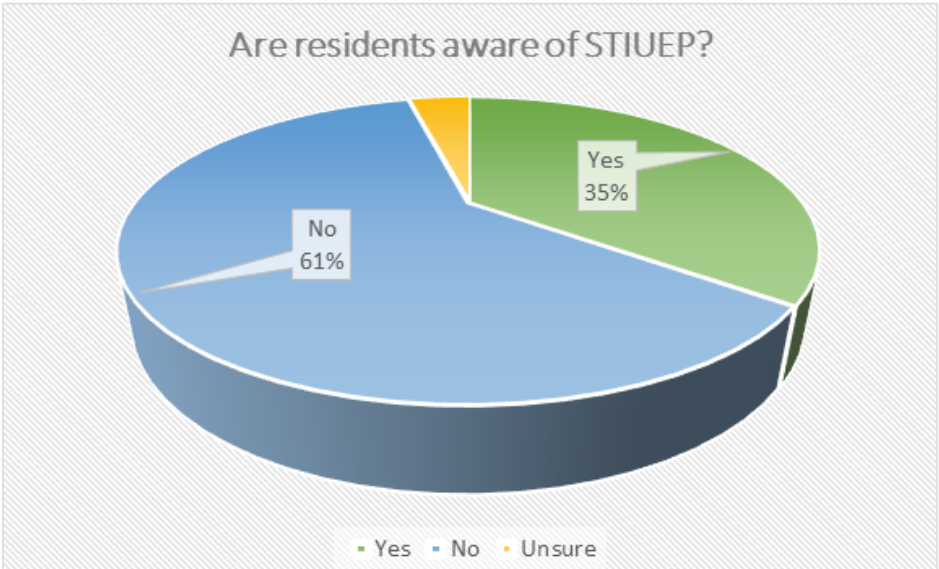
Are residents familiar with the term "Public Participation"?
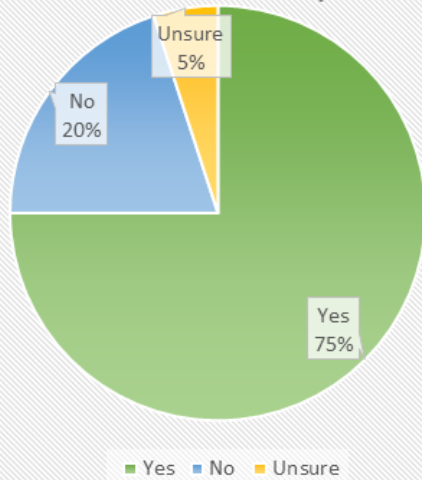
As seen from the survey, majority (61%) of the Adarshnagar residents are not aware of the STIUEIP project although 75% of them are aware of the term "public participation". There are about 20% of the people in the community who are not familiar as they lack proper knowledge and are not aware about the relationship between themselves in the community and with the government. Some people i.e., 5.1% are unsure about what is public participation showing the development of confusion in them shows the lack of interest within them and the negligence of the local government bodies to make people aware about the public and the importance of participation for themselves and the community.

Information on road received by public

Information on Sewer received by public
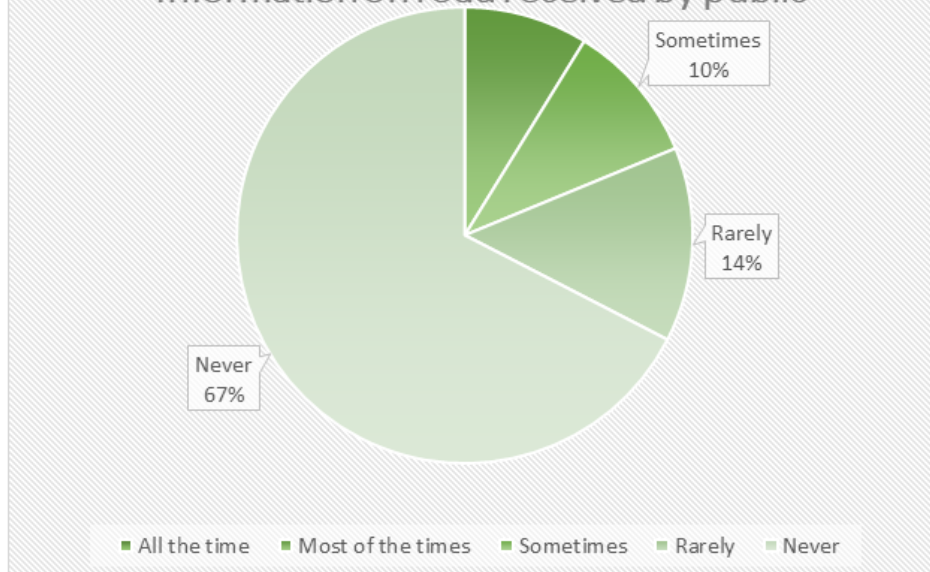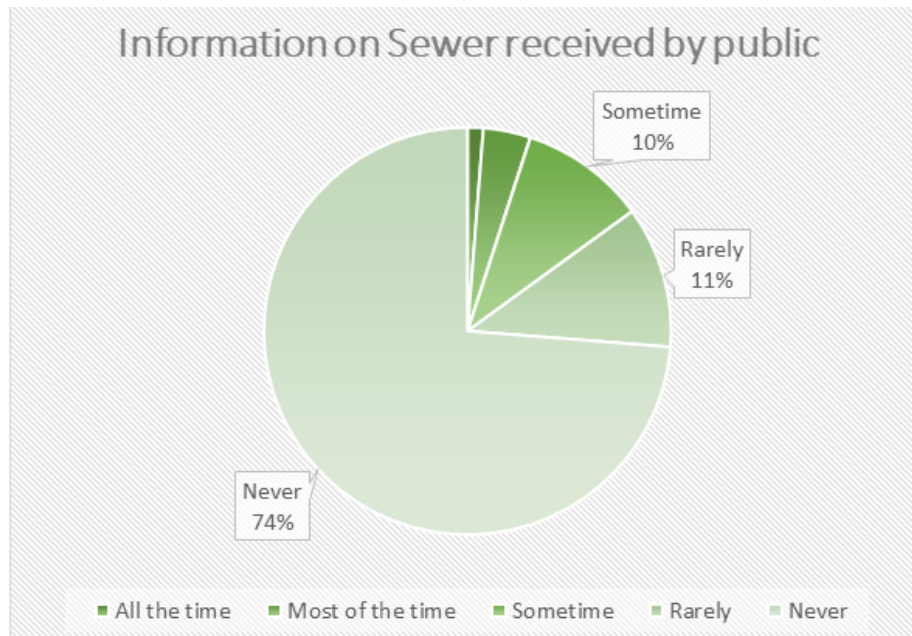
The chart above shows that majority of the residents have never received any information on sewer and waste management or road infrastructure development projects, be it during construction/post-construction/repair phase. The respondents mentioned that if any information was relayed, it would be during construction for both road and sewer infrastructure, and never pre-construction. Additionally, it would be word of mouth among the residents themselves rather than information by the government or respective authority majority of the times.

People are much more willing to participate to engage themselves for the development of urban infrastructure than what local bodies presume. If people are given proper direction or informed earlier through different trainings, ward meetings etc., people become aware and are eager to give for working to provide value and contribute for the betterment of the society and its people. Among the respondents, a high majority (85%) of people are willing to be active for maintenance of physical infrastructure i.e., road and its cleanliness and repair. Public willingness is also high for program participations for road (84%) and sewer (85%) projects. From the bard diagram below, it is also seen that around 60% of the residents are willing to contribute their time, and around 50% their technical skills for infrastructural development in the community.
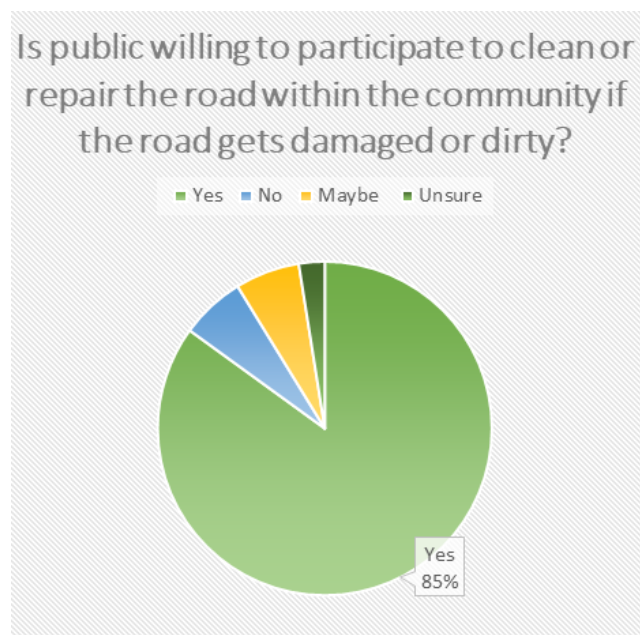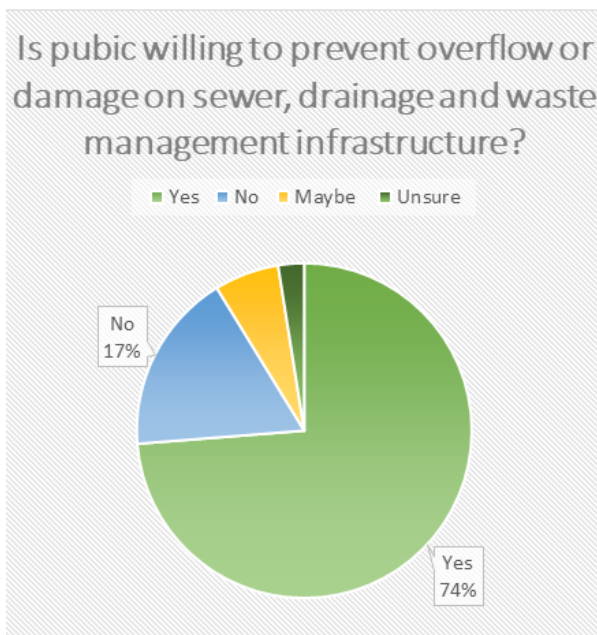
What kind of assets are you willing to provide for road infrastructure development in the community?

80 responses

What kind of assets are you willing to provide for the construction of sewer, drainage and waste management infrastructure development in the community?

80 responses

Category	Value
None	2 (2.5%)
Time	54 (67.5%)
Monetary	12 (15%)
Physical skill	12 (15%)
Technical skill	43 (53.8%)
Word of mouth	7 (8.8%)
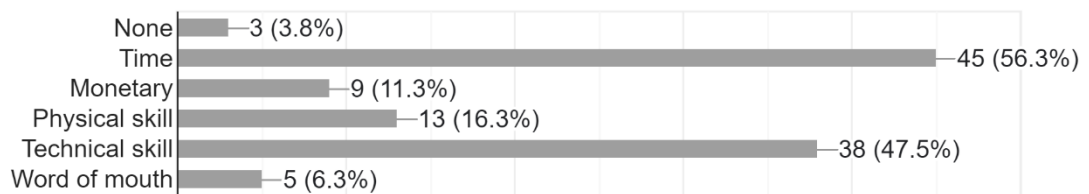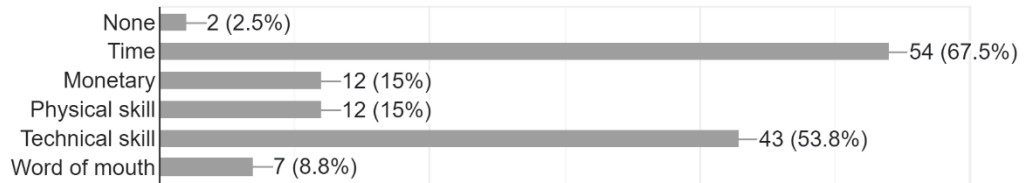
The local government is much less effective when it comes to public engagement in different training activities. The rare approaches made by the government to execute training programs are not much effective and knowledgeable considering the number of active participants.

Public Perception of Sewer and Drainage Infrastructure

- Very Poor: 14%
- Poor: 40%
- Satisfactory: 28%
- Good: 17%
- Very Good: 1%

Public Perception of Road Infrastructure

- Very Poor: 6%
- Poor: 21%
- Satisfactory: 53%
- Good: 14%
- Very Good: 6%
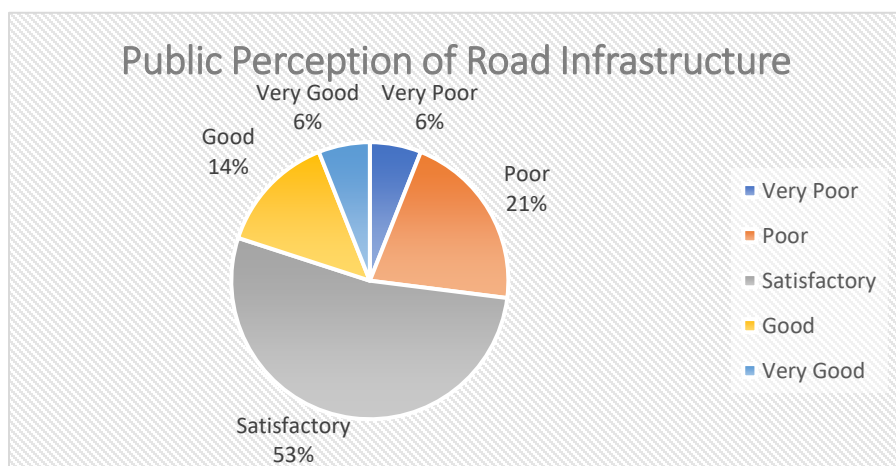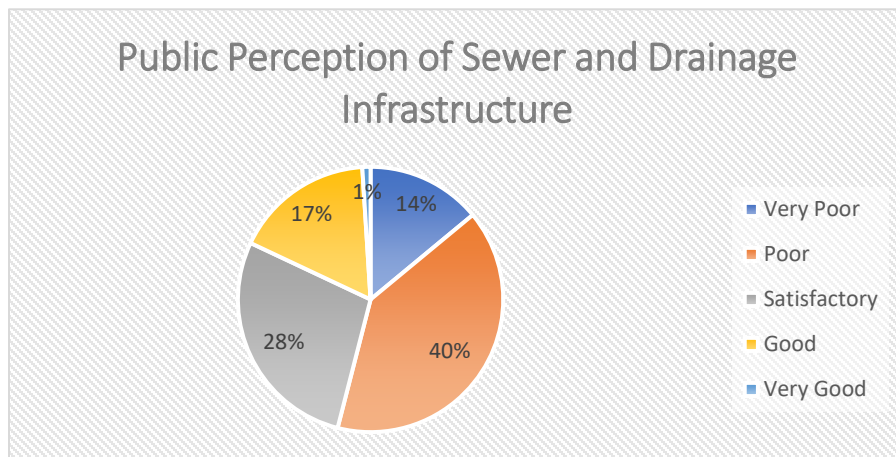
The graph above shows that majority of the public are more satisfied with the development of road infrastructure than the development of the Sewer and Drainage network carried out under the STIUEIP project by the government. The local government and the concerned consultant have neglected the collaboration and interaction with the public during the consultation and decision-making phases since the problem of clogging persists. So, majority of the people consider the activities done by the government is bounded to themselves and the development carried out by them are just satisfactory among the different educated peoples of the community.

How often do residents approach government to talk about sewer and drainage management?

Never 51%
Rarely 20%

- All the times
- Most of the Times
- Sometimes
- Rarely
- Never
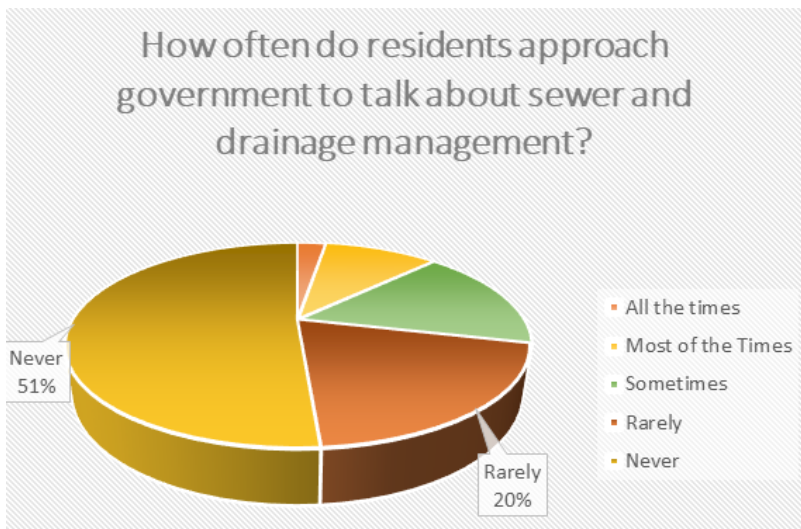
Majority of public never or rarely approach the government regarding infrastructural projects as seen from the graph to the left. This means that either people are highly hesitant or can't identify ways to approach the local bodies and/or authorities.
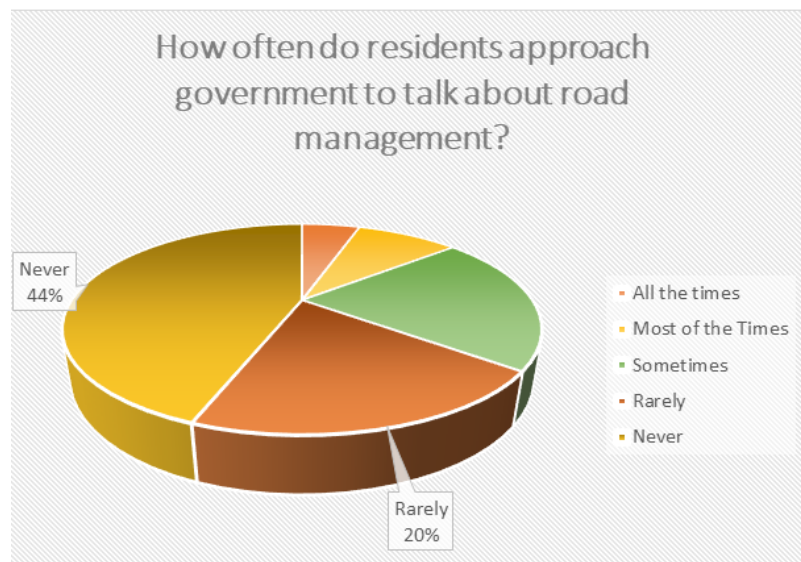
Similarly, majority of people don't feel like their ideas are heard/considered regarding road (66%) nor sewer (64%) projects. Hight majority (85%) of people feel powerless with infrastructural development projects in the community. This leads to low sense of ownership and under-utilization of the high willingness of the residents in participating in development projects.

How often do residents approach government to talk about road management?

Never 44%
Rarely 20%

- All the times
- Most of the Times
- Sometimes
- Rarely
- Never

55

Do residents feel they have power to overwrite government decision?

Yes   No   Maybe   Unsure

0%
5%   10%
85%
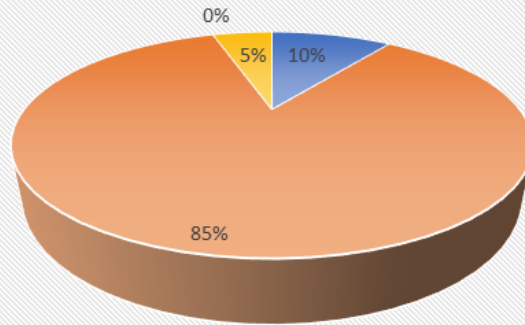
6 Findings

6.1 Government Initiatives and Public Willingness

A. Government initiatives to involve citizens is very low, willingness of the citizens to get involved is very high

- Curiosity is increasing in residents of Adarshnagar because of non-existent information relay process or platform
- Curiosity and desire for sense of ownership is increasing the willingness

B. Willingness is severely underutilized

- People are overwhelmingly willing to contribute their time

C. Current initiatives only tokenism

- Information on project never mostly never relayed
- Transparency of the project is not disclosed to the public
- Location in IAP2 Spectrum - INFORM

The public living in the Adarshnagar area is familiar to the term public participation but it seems that they don't have proper understanding or information on any stage of infrastructural development projects. The citizen's willingness is higher to get themselves engaged in different events/ training program while collaborating with the local government by giving their technical or physical skills for the development of the infrastructure. The willingness is most probably the outcome of curiosity that developed among residents on such projects because of non-existent information relay platforms. As the study focuses on the government approaches to execute awareness campaign for the increment of citizens participation seems to not be affective as stated in the minutes of the STIUEP project. The government failed to deliver information about the STIUEP project to the citizens of the community. The government showed less enthusiasm to approach the citizens to develop sense of willingness for active participation on the Community development project with major focus on the completion of the project.

6.2   Sense of Ownership and Public Participation

D. Sense of ownership is very low among people leading to higher hesitancy to approach the government

- Not being heard and feeling powerless lowers sense of ownership

E. Sense of ownership and Public Participation opportunity both influence each other

- Limited awareness leads to low public participation leads to lower sense of ownership

F. Active participation leads to power dispersion and increased sense of ownership

- Government initiatives can follow different principles of institutional designs leading to achieve a particular goals like engaging citizens with the government for infrastructural development

The study also shows that the Adarshnagar residents think and feel that their voices, ideas, and opinions are not considered by the local government. So, the public are either not willing to contact the local government for sharing or giving information about different problems in the society because they are from the minority group or there is a small certain group of public handing over such information to the government. The study also shows that there is interest among certain citizens to have power to make decision and alter the decision in collaborating with the local bodies. If this is considered, this can lead to sustainable infrastructural development project for the present and the future in the area.

It is also seen from the survey data that majority of the residents disregard many programs and participation since there is a lack of equitable access to information and opportunity for all. Less people participate in public discussion during the planning stage of infrastructure development project, and those who are involved represents dedicated personnel towards volunteer work or are activists and socialists who are already trying to solve the problems within the community with the help of the public. This greatly affects public participation, and ultimately sense of ownership withing the community residents.

As public participation is majorly influenced by the types of different initiatives carried out by the government, and whether it is concerned in increasing awareness and involvement of citizens. The flow of information between the government and the citizens from the beginning to the end is must for making the citizens aware and boost up their awareness and willingness to contribute on their will, give opinions and ideas, and collaborate for an equitable and sustainable project development and completion.

6.3   Different Participatory Approaches

G. Current information relay process not highly effective

- Some ward representatives still unaware of the events
- Non-transparency on fund utilization during project development
- Utilized platforms not popular among public

H. Dispersal of decision-making power need to be increased

- To develop a sense of ownership

I. There are already some examples of effective participatory approaches that can be utilized

- Tole Bhela, Gram Sabha, User Committee, Conferences, and one-on-one/large-group Consultations

The government approached the Adarshnagar residents during the construction phase of the project while some of the representatives and activists were involved during the policy making and budget allocation phase. The transparency between the government and the public regarding project fund utilization can be increased more to increase the mutual understanding and accessibility to the public to dedicate their ideas and decision on the different projects within the society.

The government held some tole bhelas in the neighborhood, but the residents are either uninterested or unaware of the events, times, and locations of the tole bhelas. Although the

government conducted different campaign for leadership and skill building, meetings related to infrastructure and resources available were not as effective. It appears, that either many people are unaware, or the location is not feasible for the residents resulting in failure of initiation of public input.

7 Recommendations

Considering the findings of the research and focusing on the objectives following recommendation should be beneficial for Adarsh Nagar area and its residents for active participatory approaches:

7.1 Government Initiatives

During the Panchayat regime, the government assigned Panchayat Development Workers (PDWs) with major motto to be applicable in different communities and help people explore and put forward their ideas, opinions and needs. Trained workers were assigned to collect their demands and to use the demands for local decision making. In present context, a group of expert and trained individuals should be deployed in the community to understand the ideas, values and necessity of the public for the infrastructure development of the community. This method falls under consultation as per ladder of citizen participation. However, it should be aimed that the spectrum location of participatory approaches be at the highest level i.e., "empower".

The use of Synoptic model of planning during 1960s gave valuable opportunity to the public to contribute their ideas and opinions during the policy making process in collaboration with planners. British planning officials introduced participation in planning as a structured course of action through change of the legislation in 1968 for the development of goals and objectives in planning under guidance of a planner. Similarly, such participation practice can be followed focusing on the thoughts and ideas of the public in collaboration with the planners for the development of suitable objectives and goals for the community.

Government should launch different strategies to conduct different informal programs between the ward members and the public to explore, discuss and identify the necessary infrastructure in the community. In the second phase, semi formal meetings between ward members, local government, and consultants, along with experts and activist from the public should be held to understand the ideas of the public along with the resources available. Finally, the government should finalize the

decision and approve the plan with all the consideration of public input events. These interactive programs conducted by the local government focus on genuine engagement of the public to draw

out the input about the community, leading towards a trustworthiness between the two parties. Examples of some effective participatory events are leadership and training programs, focus group discussions, one off consultations, conferences, and public input events.

Installation of banners, flex etc. with information about the project and necessity of the public should be placed around spaces where people visit mostly like tea stalls, vegetable markets, and popular social media platforms. Different awareness campaigns should be conducted on such areas to attract and involve the public. Reach of information relays also needs to be expanded as much as possible in areas with major public flow. Targeted approach to youth can also be beneficial in increasing public awareness. Additionally, mindfulness should be practiced during such outreach activities to be inclusive of all genders and ages during participatory events.

Different social service organizations like the Green City of Adarsh Nagar can conduct meetings in the community and portray the information about the necessity of the public. The government can act as a facilitator to understand different interests and concerns of individuals and derive an appropriate decision by managing the conflicts. Local bodies and authorities can conduct different training and development related programs to provide knowledge and guide the public to work in collaboration with the local bodies.

7.2   Sense of Ownership

Transparency on the decision-making process by the government should be the topic of major focus considering development of sense of trust and ownership with the public. The cause- effect of the decision of any plan for the community should be clear which will be a major factor which increases the willingness of the public to participate.

Local government should effectively co-ordinate and connect with the public to boost up the willingness in public to participate. The approach should be Bottom-Up i.e., to actively engage and consult with the public about the necessity and the problems in the community. The government should collect, analyze the public views, prepare a report, and forward it for discussion with the higher-level authority. The public will visualize their partial involvement and importance in decision-making for community. Sense of ownership helps the residents in not just actively

communicating with government, but also in maintaining cleanliness and efficiency of publicly shared infrastructures. This sense can be increased among public by making them feel heard by translating public input into policies and procedural outcomes.

The voices of the public should be considered, and use of easy and convenient platform must be used by the government. The participation in long running and inefficient public meetings would make the public frustrated and demotivated to engage in decision making activities. There should be such a platform that would be much more effective, problem solving and less time consuming which have no negative effect on the outcome. The high willingness among Adarshnagar residents needs to be utilized with more efficient public participatory events/platforms. As in case of road construction, the government has a policy of spending 60% of the budget and 40% of the budget by the public living in the community. The public is then allowed to carry out the work as per their requirements. Majority of the people had no idea about the policy, but they were interested to participate by providing economic support for the betterment of the community.

The public should have interactions with each other through proper collaboration in different communal activities, borrowing or lending equipment's, through informal meetings, and supporting and helping each other in emergencies. These activities develop emotional/personal and informational support among the citizens. The people can understand the opinions of their neighbors, community members and determine a viable conclusion which is feasible, legitimate, acceptable and beneficial to all, Thus the willing of the people to participate, collaborate and get involved begins from their own society and caters all the people as a strength of the community.

Increase spectrum location of participatory approaches i.e., aim to be at EMPOWER

Conduct effective participatory events such as Leadership and Training programs, Focus Group discussions, one off Consultations, Conferences, public input events, etc.

Information relay reach needs to be expanded for e.g.: areas with major public flow like tea stalls, vegetable markets, popular social media platform, etc.

Have targeted approach to youth to increase public awareness while being mindful of gender and age inclusiveness during participatory events

Increase sense of ownership among public by making them feel heard by translating public input into policies and procedural outcomes

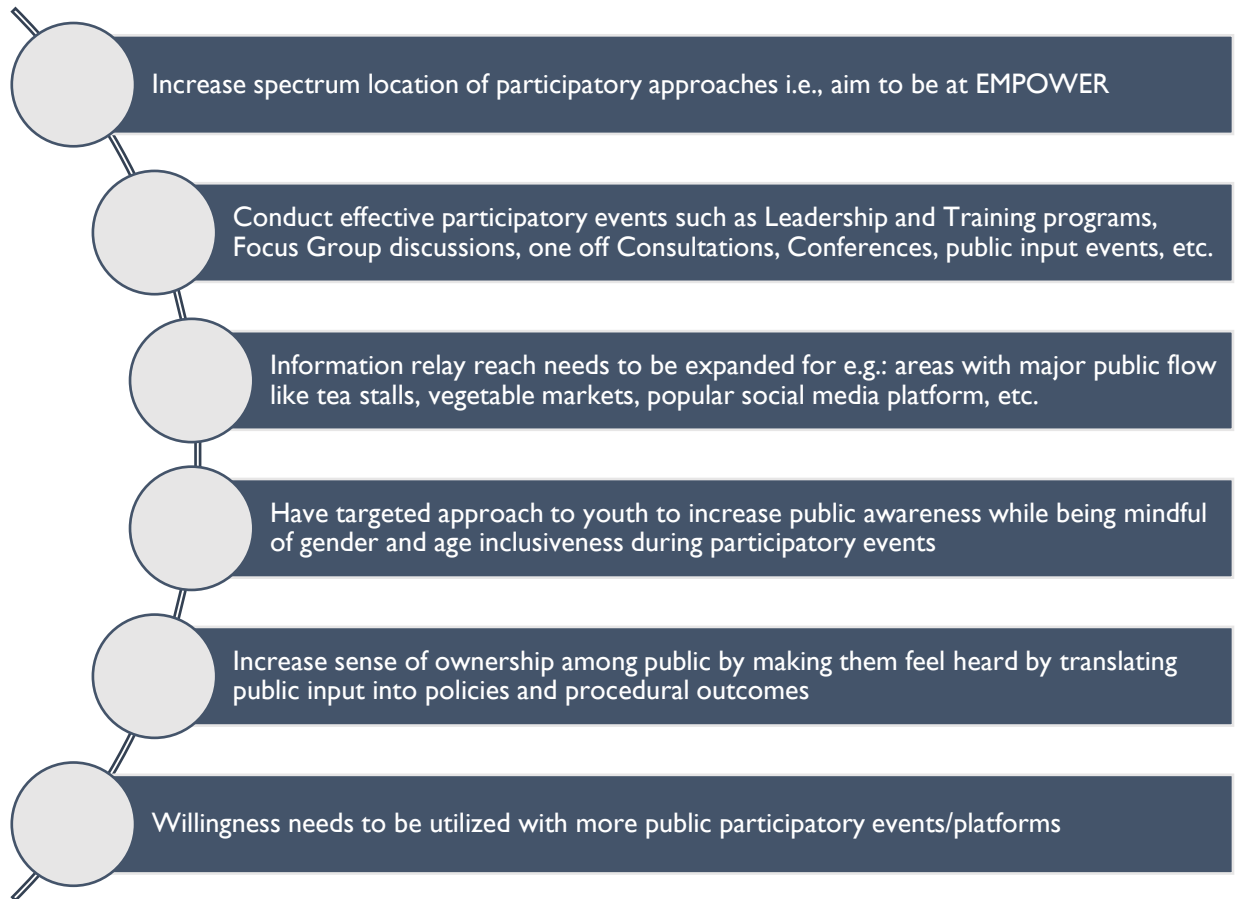Willingness needs to be utilized with more public participatory events/platforms

Figure 12: Recommendations for future public participation approaches in urban infrastructure development of Adarshnagar, Birgunj

8 Conclusion

Public Participation in any community is a necessity for sustainable development of its physical and social amenities. In Nepal, participatory approaches are emerging, and the formation of three tiers of government gave opportunity to the citizens to express problems within such participatory approaches, discuss and analyze the problems, and collaborate with each other to come up with a feasible solution. However, it is not sufficient in case of Adarsh Nagar and the information relay process from the government is ineffective considering the low citizen involvement and awareness on infrastructural development stages.

Public is generally highly willing to be involved in developmental procedures, at any stage of work. In Adarshnagar's case, it was seen that even the tokenism in the local government initiatives didn't budge the public desire to contribute their assets to the infrastructural development works. This is a typical case that citizens living in a community are eager to collaborate for the development projects in the community but due to lack of flow of information people are unaware of the project and its activities. The other facade is that the citizens think that it's the duty of the government to implement the project. This however relates more to the sense of ownership on urban infrastructure that the community carries within. Lack of power to make decision or to overtake the decision and make changes with collaboration with the government seems to impact the participatory approach on the community. The governmental approach would be more effective if the high willingness of the citizen is taken into consideration and utilized. Similarly, dispersal of power is one of the most of important considerations if local bodies are looking to increase sense of ownership in their communities. Local government bodies should initiate different campaign, awareness programs to increase the involvement of the public and conduct interaction to understand ideas, opinions, and necessity of the community on the different projects. Further, information relay process that is equally effective when citizens are trying to convey information to the authorities should be in place for people to be felt heard.

Most of the public are aware about public participation and its importance for the successfulness of the project. However, a step further needs to be taken if a true power dispersal is desired. It has been found that the type of participatory approach, its level in ladder of participation, and its

location in IAP2 spectrum affects the public perception and holding of power, which ultimately affects the sense of ownership. Effective participatory approach strategies such as project transparency, popular social media communication, and public input events instead of public hearing events can aid in increasing sense of ownership among public. Although the willingness and sense of ownership among communities while participating in infrastructural development works can contrast each other, local bodies should seek to increase both for the most effective participatory approaches.

9 REFERENCES

Amy, D. J. (1983). The politics of environmental mediation. *Ecology Law Quarterly*, *11*(1), 1–20. https://doi.org/10.2307/2069633

Arnstein, S. R. (2007). *A Ladder Of Citizen Participation*. *November 2012*, 37–41.

Arnstein, S. R. (2019). A Ladder of Citizen Participation. *Journal of the American Planning Association*, *85*(1), 24–34. https://doi.org/10.1080/01944363.2018.1559388

Baiocchi, G., & Ganuza, E. (2014). Participatory Budgeting as if Emancipation Mattered*. *Politics and Society*, *42*(1), 29–50. https://doi.org/10.1177/0032329213512978

Berg, B. L. (2001). Berg. In *Berg*. https://doi.org/10.1093/oso/9780190931445.001.0001

Bhusal, T. (2018). *Examining Citizen Participation in Local Policymaking: An Analysis of Nepal's Participatory Planning Process*. *August*.

Brabham, D. C. (2006). Noticing design/recognizing failure in the wake of Hurricane Katrina. *Space and Culture*, *9*(1), 28–30. https://doi.org/10.1177/1206331205283675

CatComm. (2014, May). *The Ladder of Citizen Participation | Catalytic Communities | CatComm*. https://catcomm.org/ladder-participation/

Chavis, D., & Speer, P. (1990). Sense of community in the urban environment: A catalyst for participation and community development Cite this paper Related papers Communit y Psychology Perspect ives on Social Capit al T heory and Communit y Development …. *American Journal of Community Psychology*.

Corbin, J., & Morse, J. M. (2003). Qualitative Inquiry The Unstructured Interactive Interview : *Qualitative Inquiry*, *9*(3), 335–354. https://doi.org/10.1177/1077800403251757

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed method approaches. *Intercultural Education*, *20*(2), 127–133. https://doi.org/10.1080/14675980902922143

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Method Approach. In *Sage* (4th ed.).

Damer, S., & Hague, C. (1971). Public Participation in Planning: A Review. *Town Planning Review*, *42*(3), 217. https://doi.org/10.3828/tpr.42.3.b274nj807658j756

de Sousa Santos, B. (1998). Participatory budgeting in Porto Alegre: Toward a redistributive democracy. In *Politics and Society* (Vol. 26, Issue 4, pp. 461–510). SAGE Publications Inc. https://doi.org/10.1177/0032329298026004003

Devika, J. (2016). Participatory Democracy or 'Transformative Appropriation'? The People's Planning Campaign in Kerala. *History and Sociology of South Asia*, *10*(2), 115–137. https://doi.org/10.1177/2230807516633590

Dyer, M., Dyer, R., Weng, M. H., Wu, S., Grey, T., Gleeson, R., & Ferrari, T. G. (2019). Framework for soft and hard city infrastructures. *Proceedings of the Institution of Civil Engineers: Urban Design and Planning*, *172*(6), 219–227. https://doi.org/10.1680/jurdp.19.00021

Dyer, M., Gleeson, D., & Grey, T. (2017). Framework for collaborative urbanism. *Springer Tracts in Civil Engineering*, 19–30. https://doi.org/10.1007/978-3-319-47904-0_2

Enserink, B., Connor, D., & Croal, P. (2006). Public participation: International best practice principles. *Special Publications Series*, *34*(4), 3.

Fung, A., & Wright, E. O. (2001). Deepening democracy: Innovations in empowered participatory governance. In *Politics and Society* (Vol. 29, Issue 1, pp. 5–41). https://doi.org/10.1177/0032329201029001002

Gleeson, D., & Dyer, M. (2017). *Manifesto for Collaborative Urbanism*. 3–18. https://doi.org/10.1007/978-3-319-47904-0

Hall, P. (1983). The Anglo-American connection: rival rationalities in planning theory and practice, 1955-1980. *Environment & Planning B*, *10*(1), 41–46. https://doi.org/10.1068/b100041

Hall, P. (2019). Urban and regional planning. In *Urban and Regional Planning*. https://doi.org/10.4324/9781351261883

Harley, D. A., Stebnicki, M., & Rollins, C. W. (2000). Applying Empowerment Evaluation as a Tool for Self-Improvement and Community Development with CULTURALLY Diverse Populations. *Community Development Society. Journal*, *31*(2), 348–364. https://doi.org/10.1080/15575330009489711

Heller, P., & Rao, V. (2015). Deliberation and Development: Rethinking the Role of Voice and Collective Action in Unequal Societies. In *Syria Studies* (Vol. 7, Issue 1).

Iacono, J., Brown, A., & Holtham, C. (2009). Research methods - a case example of participant observation. *Electronic Journal of Business Research Methods*, *7*(1), 39–46.

Krause, D. (1989). Review Author (s): Dan Krause Review by : Dan Krause Source : Teaching Sociology , Vol . 17 , No . 4 (Oct ., 1989), pp . 500-501 Published by : American Sociological Association Stable URL : http://www.jstor.org/stable/1318434 Accessed : 31-05-2016 19. *Sage Publication*, *17*(4), 500–501.

Kreiken, W. (2021). *Eight levels of public participation - Coastal Wiki*. http://www.coastalwiki.org/wiki/Eight_levels_of_public_participation

Lane, M. B. (2005). Public participation in planning: An intellectual history. *Australian Geographer*, *36*(3), 283–299. https://doi.org/10.1080/00049180500325694

Lune, H., & Berg, B. L. (2017). *Methods for the Social Sciences Global Edition*.

Natarajan, A. (2019, June 6). *What can Chennai learn from Kerala and Bengaluru on citizen participation in urban governance?* https://chennai.citizenmatters.in/chennai-citizen-participation-ward-committees-kerala-bengaluru-10075

Nations, U. (2018, May 16). *68% of the world population proje... preview & related info | Mendeley*. https://www.mendeley.com/catalogue/8cf03993-53a0-36da-ac03-fbfa6f9968ff/?utm_source=desktop&utm_medium=1.19.8&utm_campaign=open_catalog&userDocumentId=%7B764daa3f-7ba4-3f67-be29-6f7b0ff2f6d7%7D

Neshkova, M. I., & Guo, H. D. (2012). Public participation and organizational performance: Evidence from state agencies. *Journal of Public Administration Research and Theory*, *22*(2), 267–288. https://doi.org/10.1093/jopart/mur038

Oates, C., & Alevizou, P. (2018). *Conducting Focus Groups for Business and Management Students*. https://doi.org/10.4135/9781529716610

Pateman, C. (2012). Participatory democracy revisited. *Perspectives on Politics*, *10*(1), 7–19. https://doi.org/10.1017/S1537592711004877

Shittu, A. I., & Musbaudeen, A. M. (2015). Public Participation in Local Government Planning and Development: Evidence from Lagos State, Nigeria. *Covenant University Journal of Politics and International Affairs (CUJPIA)*, *3*(2), 20–42. http://journals.covenantuniversity.edu.ng/index.php/cujpia/article/download/135/130

SMEC. (2005). Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) Birgunj. In *The National Audit of Violence (2003 - 2005)* (Issue May).

Smith, R. W. (1973). A theoretical basis for participatory planning. *Policy Sciences*, *4*(3), 275–295. https://doi.org/10.1007/BF01435125

Stewart, D. W., Shamdasani, P. N., & Groups, F. (1999). Book Review. *Sage Publication*, *16*(July), 369–372.

Stoker, G. (1991). The Politics of Local Government Gerry Stoker. In *Angewandte Chemie International Edition, 6(11), 959–988.*

Thomas Ng, S., Li, T. H. Y., & Wong, J. M. W. (2012). Rethinking public participation in infrastructure projects. *Proceedings of the Institution of Civil Engineers: Municipal Engineer*, *165*(2), 101–113. https://doi.org/10.1680/muen.11.00027

Waheduzzaman, W., van Gramberg, B., & Ferrer, J. (2018). Bureaucratic Readiness in Managing Local Level Participatory Governance: A Developing Country Context. *Australian Journal of Public Administration*, *77*(2), 309–330. https://doi.org/10.1111/1467-8500.12256

Wilkinson, S. (1998). Focus group methodology: A review. *International Journal of Social Research Methodology*, *1*(3), 181–203. https://doi.org/10.1080/13645579.1998.10846874

Yang, K., & Pandey, S. K. (2011). Further Dissecting the Black Box of Citizen Participation: When Does Citizen Involvement Lead to Good Outcomes? *Public Administration Review*, *71*(6), 880–892. https://doi.org/10.1111/j.1540-6210.2011.02417.x

Zanna, A. S. (2015). Citizen Participation in Local Governance and Sustainability of Programmes. *Global Journals Inc. (USA)*, *15*(3), 6.

Amy, D. J. (1983). The politics of environmental mediation. *Ecology Law Quarterly*, *11*(1), 1–20. https://doi.org/10.2307/2069633

Arnstein, S. R. (2007). *A Ladder Of Citizen Participation*. *November 2012*, 37–41.

Arnstein, S. R. (2019). A Ladder of Citizen Participation. *Journal of the American Planning Association*, *85*(1), 24–34. https://doi.org/10.1080/01944363.2018.1559388

Baiocchi, G., & Ganuza, E. (2014). Participatory Budgeting as if Emancipation Mattered*. *Politics and Society*, *42*(1), 29–50. https://doi.org/10.1177/0032329213512978

Berg, B. L. (2001). Berg. In *Berg*. https://doi.org/10.1093/oso/9780190931445.001.0001

Bhusal, T. (2018). *Examining Citizen Participation in Local Policymaking: An Analysis of Nepal's Participatory Planning Process*. *August*.

Brabham, D. C. (2006). Noticing design/recognizing failure in the wake of Hurricane Katrina. *Space and Culture*, *9*(1), 28–30. https://doi.org/10.1177/1206331205283675

CatComm. (2014, May). *The Ladder of Citizen Participation | Catalytic Communities | CatComm*. https://catcomm.org/ladder-participation/

Chavis, D., & Speer, P. (1990). Sense of community in the urban environment: A catalyst for participation and community development Cite this paper Related papers Communit y Psychology Perspect ives

on Social Capit al T heory and Communit y Development …. *American Journal of Community Psychology*.

Corbin, J., & Morse, J. M. (2003). Qualitative Inquiry The Unstructured Interactive Interview : *Qualitative Inquiry*, *9*(3), 335–354. https://doi.org/10.1177/1077800403251757

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed method approaches. *Intercultural Education*, *20*(2), 127–133. https://doi.org/10.1080/14675980902922143

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Method Approach. In *Sage* (4th ed.).

Damer, S., & Hague, C. (1971). Public Participation in Planning: A Review. *Town Planning Review*, *42*(3), 217. https://doi.org/10.3828/tpr.42.3.b274nj807658j756

de Sousa Santos, B. (1998). Participatory budgeting in Porto Alegre: Toward a redistributive democracy. In *Politics and Society* (Vol. 26, Issue 4, pp. 461–510). SAGE Publications Inc. https://doi.org/10.1177/0032329298026004003

Devika, J. (2016). Participatory Democracy or 'Transformative Appropriation'? The People's Planning Campaign in Kerala. *History and Sociology of South Asia*, *10*(2), 115–137. https://doi.org/10.1177/2230807516633590

Dyer, M., Dyer, R., Weng, M. H., Wu, S., Grey, T., Gleeson, R., & Ferrari, T. G. (2019). Framework for soft and hard city infrastructures. *Proceedings of the Institution of Civil Engineers: Urban Design and Planning*, *172*(6), 219–227. https://doi.org/10.1680/jurdp.19.00021

Dyer, M., Gleeson, D., & Grey, T. (2017). Framework for collaborative urbanism. *Springer Tracts in Civil Engineering*, 19–30. https://doi.org/10.1007/978-3-319-47904-0_2

Enserink, B., Connor, D., & Croal, P. (2006). Public participation: International best practice principles. *Special Publications Series*, *34*(4), 3.

Fung, A., & Wright, E. O. (2001). Deepening democracy: Innovations in empowered participatory governance. In *Politics and Society* (Vol. 29, Issue 1, pp. 5–41). https://doi.org/10.1177/0032329201029001002

Gleeson, D., & Dyer, M. (2017). *Manifesto for Collaborative Urbanism*. 3–18. https://doi.org/10.1007/978-3-319-47904-0

Hall, P. (1983). The Anglo-American connection: rival rationalities in planning theory and practice, 1955-1980. *Environment & Planning B*, *10*(1), 41–46. https://doi.org/10.1068/b100041

Hall, P. (2019). Urban and regional planning. In *Urban and Regional Planning*. https://doi.org/10.4324/9781351261883

Harley, D. A., Stebnicki, M., & Rollins, C. W. (2000). Applying Empowerment Evaluation as a Tool for Self-Improvement and Community Development with CULTURALLY Diverse Populations. *Community Development Society. Journal*, *31*(2), 348–364. https://doi.org/10.1080/15575330009489711

Heller, P., & Rao, V. (2015). Deliberation and Development: Rethinking the Role of Voice and Collective Action in Unequal Societies. In *Syria Studies* (Vol. 7, Issue 1).

Iacono, J., Brown, A., & Holtham, C. (2009). Research methods - a case example of participant observation. *Electronic Journal of Business Research Methods*, *7*(1), 39–46.

Krause, D. (1989). Review Author (s): Dan Krause Review by : Dan Krause Source : Teaching Sociology , Vol . 17 , No . 4 (Oct ., 1989), pp . 500-501 Published by : American Sociological Association Stable URL : http://www.jstor.org/stable/1318434 Accessed : 31-05-2016 19. *Sage Publication*, *17*(4), 500–501.

Kreiken, W. (2021). *Eight levels of public participation - Coastal Wiki*. http://www.coastalwiki.org/wiki/Eight_levels_of_public_participation

Lane, M. B. (2005). Public participation in planning: An intellectual history. *Australian Geographer*, *36*(3), 283–299. https://doi.org/10.1080/00049180500325694

Lune, H., & Berg, B. L. (2017). *Methods for the Social Sciences Global Edition*.

Natarajan, A. (2019, June 6). *What can Chennai learn from Kerala and Bengaluru on citizen participation in urban governance?* https://chennai.citizenmatters.in/chennai-citizen-participation-ward-committees-kerala-bengaluru-10075

Nations, U. (2018, May 16). *68% of the world population proje... preview & related info | Mendeley*. https://www.mendeley.com/catalogue/8cf03993-53a0-36da-ac03-fbfa6f9968ff/?utm_source=desktop&utm_medium=1.19.8&utm_campaign=open_catalog&userDocumentId=%7B764daa3f-7ba4-3f67-be29-6f7b0ff2f6d7%7D

Neshkova, M. I., & Guo, H. D. (2012). Public participation and organizational performance: Evidence from state agencies. *Journal of Public Administration Research and Theory*, *22*(2), 267–288. https://doi.org/10.1093/jopart/mur038

Oates, C., & Alevizou, P. (2018). *Conducting Focus Groups for Business and Management Students*. https://doi.org/10.4135/9781529716610

Pateman, C. (2012). Participatory democracy revisited. *Perspectives on Politics*, *10*(1), 7–19. https://doi.org/10.1017/S1537592711004877

Shittu, A. I., & Musbaudeen, A. M. (2015). Public Participation in Local Government Planning and Development: Evidence from Lagos State, Nigeria. *Covenant University Journal of Politics and International Affairs (CUJPIA)*, *3*(2), 20–42. http://journals.covenantuniversity.edu.ng/index.php/cujpia/article/download/135/130

SMEC. (2005). Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) Birgunj. In *The National Audit of Violence (2003 - 2005)* (Issue May).

Smith, R. W. (1973). A theoretical basis for participatory planning. *Policy Sciences*, *4*(3), 275–295. https://doi.org/10.1007/BF01435125

Stewart, D. W., Shamdasani, P. N., & Groups, F. (1999). Book Review. *Sage Publication*, *16*(July), 369–372.

Stoker, G. (1991). The Politics of Local Government Gerry Stoker. In *Angewandte Chemie International Edition, 6(11), 959–988.*

Thomas Ng, S., Li, T. H. Y., & Wong, J. M. W. (2012). Rethinking public participation in infrastructure projects. *Proceedings of the Institution of Civil Engineers: Municipal Engineer*, *165*(2), 101–113. https://doi.org/10.1680/muen.11.00027

Waheduzzaman, W., van Gramberg, B., & Ferrer, J. (2018). Bureaucratic Readiness in Managing Local Level Participatory Governance: A Developing Country Context. *Australian Journal of Public Administration*, *77*(2), 309–330. https://doi.org/10.1111/1467-8500.12256

Wilkinson, S. (1998). Focus group methodology: A review. *International Journal of Social Research Methodology*, *1*(3), 181–203. https://doi.org/10.1080/13645579.1998.10846874

Yang, K., & Pandey, S. K. (2011). Further Dissecting the Black Box of Citizen Participation: When Does Citizen Involvement Lead to Good Outcomes? *Public Administration Review*, *71*(6), 880–892. https://doi.org/10.1111/j.1540-6210.2011.02417.x

Zanna, A. S. (2015). Citizen Participation in Local Governance and Sustainability of Programmes. *Global Journals Inc. (USA)*, *15*(3), 6.

Annex 1: Comment Addressed

S. N	Phase	External Jury	Major Comments	Page No.
1	Final	Yek Raj Adhikari and Kishore Kumar Jha	Minute Details Present data on people involved along with their gender, institutional affiliation along with their ethnicity.	39, 40
			Provide discussion on difference Planning in Kerela and Porte Alegre comparing with STIUEIP	14, 15, 16, 17
			Comparative Analysis	45

Annex 2

Survey Questionnaire

Public Participation for Urban Infrastructure Development - a community survey

This survey is meant to facilitate a research for a masters thesis project. Your participation in this survey is voluntary, and all the answers provided will remain anonymous throughout the collection, and compilation of the results.

1. Please indicate the highest level of education that you have completed: *

   Mark only one oval.

   ( ) None

   ( ) Basic alphabet literacy

   ( ) High School

   ( ) Diploma

   ( ) University

   ( ) Masters

   ( ) PhD

2. Please describe your profession. *

   _____

3. Please indicate the gender that you identify with: *

   Mark only one oval.

   ( ) Male

   ( ) Female

   ( ) LGBTIQ+

   ( ) Other: _____

4. Please indicate the religion(s) that you identify with: *

Check all that apply.

☐ None
☐ Hinduism
☐ Islam
☐ Christianity
☐ Other: _____

5. Please describe your nationality if not Nepali:

_____

6. Please select the age group that you currently fall in:

Mark only one oval.

◯ 15-25 yrs
◯ 26-45 yrs
◯ 46-65 yrs
◯ Above 65 yrs

7. Please indicate your current household size:

_____

8. How long have you been living in the Adarshnagar area?

Mark only one oval.

◯ Less than a year
◯ 1-5 years
◯ 5-10 years
◯ More than 10 years

9. Are you aware about the term "public participation"(Jana/Nagarik Sahabhagita)? *

Mark only one oval.

◯ Yes

◯ No

◯ Unsure

Road Infrastructure

10. How would you rate the current road conditions in the neighborhood? Please select one:

Mark only one oval.

◯ 1 - very poor

◯ 2 - poor

◯ 3 - satisfactory

◯ 4 - good

◯ 5 - very good

11. How would you rate the development of road infrastructure during the past decade in the neighborhood? Please select one:

Mark only one oval.

◯ 1 - very poor

◯ 2 - poor

◯ 3 - satisfactory

◯ 4 - good

◯ 5 - very good

12. Did you know about the Secondary Towns Integrated Urban Environmental Improvement Project and Regional Urban Development project which is happening in your locality?

Mark only one oval.

( ) Yes

( ) No

( ) Unsure

13. Are you informed of budget allocation for any road infrastructure development in the neighborhood by local government authorities?

Mark only one oval.

( ) Yes

( ) No

( ) Unsure

14. How often do you get informed about construction/repairment projects related to road infrastructure in your locality?

Mark only one oval.

( ) All the time

( ) Most of the times

( ) Sometimes

( ) Rarely

( ) Never

15. What type of feeling do you get when you get to know that a road is constructed or repaired within the community?

Mark only one oval.

◯ Positive

◯ Neutral

◯ Negative

◯ Other: _____

16. Please elaborate.

_____

_____

_____

_____

_____

17. What type of feeling do you get when a road gets dirty or damaged within the community?

Mark only one oval.

◯ Positive

◯ Neutral

◯ Negative

◯ Other: _____

18. Please elaborate.

_____

_____

_____

_____

_____

19. Are you willing to participate to clean or repair the road within the community if the road gets damaged or dirty?

Mark only one oval.

◯ Yes

◯ No

◯ Maybe

◯ Unsure

20. Please elaborate.

_____

_____

_____

_____

_____

21. Have you ever been approached by the local government and/or different agencies for training programs related to infrastructure development?

Mark only one oval.

◯ Yes

◯ No

◯ Maybe

◯ Unsure

22. Would you be willing to participate in programs/events organized for the development of urban road infrastructure within the community?

Mark only one oval.

◯ Yes

◯ No

◯ Maybe

◯ Unsure

23. What kind of assets are you willing to provide for road infrastructure development in the community? *

Check all that apply.

☐ None

☐ Time

☐ Monetary

☐ Physical skill

☐ Technical skill

☐ Word of mouth

☐ Other: _____

24. How often do you approach local governments and/or different agencies to talk about road infrastructure?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

25. How often do you get approached by the local government and different agencies to hear/discuss/engage/get trained about road infrastructure development? *

Mark only one oval.

( ) All the time   *Skip to question 26*

( ) Most of the times   *Skip to question 26*

( ) Sometimes   *Skip to question 26*

( ) Rarely   *Skip to question 26*

( ) Never   *Skip to question 28*

Government Authorities approaches

26. At which stage of road infrastructure development were you approached by government authorities? *

Check all that apply.

[ ] Conceptual
[ ] Budget Allocation
[ ] Procurement
[ ] Construction
[ ] Post-Construction

27. Please describe the information relay process/event in detail.

_____

_____

_____

_____

_____

Road Infrastructure Continued

28. How often are there meetings between the elected representatives and the citizens held for discussions on road infrastructure?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

29. How often do you feel like your ideas and opinions regarding road infrastructure development are considered by the government?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

Sewer, Drainage and Waste Management Infrastructure

30. How would you rate the current sewer drainage and waste management conditions in the neighborhood? Please select one:

Mark only one oval.

◯ 1 - very poor

◯ 2 - poor

◯ 3 - satisfactory

◯ 4 - good

◯ 5 - very good

31. How would you rate the development of sewer, drainage and waste management infrastructure during the past decade in the neighborhood? Please select one:

Mark only one oval.

( ) 1 - very poor

( ) 2 - poor

( ) 3 - satisfactory

( ) 4 - good

( ) 5 - very good

32. Did you know about the solid waste management training conducted by Birgunj Metropolitan City?

Mark only one oval.

( ) Yes

( ) No

( ) Unsure

33. Are you informed of budget allocation for any sewer, drainage and waste management infrastructure development in the neighborhood by local government authorities?

Mark only one oval.

( ) Yes

( ) No

( ) Unsure

34. How often would you know ahead of time if a sewer, drainage and waste management pipeline was getting constructed/renovated?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

35. What type of feeling do you get when you get to know that a sewer, drainage and waste management is constructed or repaired within the community? Please elaborate

Mark only one oval.

◯ Positive

◯ Neutral

◯ Negative

◯ Other: _____

36. Please elaborate.

_____

_____

_____

_____

_____

37. What type of feeling do you get when a sewer/drainage pipeline or manhole gets overflowed/damaged within the community? Please elaborate

    Mark only one oval.

    ( ) Positive

    ( ) Neutral

    ( ) Negative

    ( ) Other: _____

38. Please elaborate.

    _____

    _____

    _____

    _____

    _____

39. Would you be willing to prevent overflow or damage on sewer, drainage and waste management infrastructure? Please elaborate___

    Mark only one oval.

    ( ) Yes

    ( ) No

    ( ) Maybe

    ( ) Unsure

40. Please elaborate.

    _____

    _____

    _____

    _____

    _____

41. Have you ever been approached by the local government and/or different agencies for training programs related to development of sewer, drainage and waste management infrastructure ?

Mark only one oval.

◯ Yes

◯ No

◯ Maybe

◯ Unsure

42. Would you be willing to participate in programs/events organized by the local government and/or different agencies for the development of sewer, drainage and waste management infrastructure for the neighborhood?

Mark only one oval.

◯ Yes

◯ No

◯ Maybe

◯ Unsure

43. What kind of assets are you willing to provide for the construction of sewer,   * drainage and waste management infrastructure development in the community?

Check all that apply.

☐ None

☐ Time

☐ Monetary

☐ Physical skill

☐ Technical skill

☐ Word of mouth

☐ Other: _____

44. How often do you approach government and different agencies to talk about sewer, drainage and waste management infrastructure?

Mark only one oval.

- ( ) All the time
- ( ) Most of the times
- ( ) Sometimes
- ( ) Rarely
- ( ) Never

45. How often do you get approached by the local government and different agencies to hear/discuss/engage/get trained about sewer, drainage and waste management infrastructure development? *

Mark only one oval.

- ( ) All the time   *Skip to question 46*
- ( ) Most of the times   *Skip to question 46*
- ( ) Sometimes   *Skip to question 46*
- ( ) Rarely   *Skip to question 46*
- ( ) Never   *Skip to question 48*

> **Government Authorities approaches for Sewer, drainage and waste management**

46. At what stage of sewer, drainage and waste management infrastructure development were you approached by government authorities? *

Check all that apply.

- [ ] Conceptual
- [ ] Budget Allocation
- [ ] Procurement
- [ ] Construction
- [ ] Post-Construction

47. Please describe the information relay process/event in detail.

_____

_____

_____

_____

_____

Sewer, drainage and waste management Continued

48. How often are there meetings between the elected representatives and the citizens held for discussions on sewer, drainage and waste management infrastructure?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

49. How often do you feel like your ideas and opinions regarding sewer, drainage and waste management infrastructure development are considered by the government?

Mark only one oval.

◯ All the time

◯ Most of the times

◯ Sometimes

◯ Rarely

◯ Never

Other Questions

50. Do you feel like you have power and resources to overwrite Government decisions?

Mark only one oval.

( ) Yes

( ) No

( ) Maybe

( ) Unsure

51. Do you think having such power would benefit the community? Please elaborate.

_____

_____

_____

_____

_____

52. Lastly, are there any other thoughts I didn't cover today?

_____

_____

_____

_____

_____

Thank you very much for your time and support!

There is a discussion session at my place on Saturday, from 12.45 pm could you come please? Juice and Cookies will be available! It's just for an hour! Please provide your contact info here, if interested