

Research Article

Effectiveness of Participatory Planning for Community Development: A Case Study on Ward No-6 in Pabna Municipality

Mazed Parvez^{1*}

¹ Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

*Corresponding Author: parvezpust30@gmail.com

(Received 16 August 2020; Accepted 24 August 2020)

ABSTRACT

In modern-day global, network participation is taken into consideration as the prerequisite of sustainable urban improvement. Its levels from just informing people approximately the plan or improvement projects utilizing the humans. However, public participation in neighborhood authorizes led applications is nonetheless confined in Bangladesh. Increasingly, community participation is considered important in ensuring the sustainability of community utility services. In return, better access to all service facilities such as water supply, gas supply, transportation, health care, recreational area, electricity supply, etc. are important in the development of the living standard of the communities of an area. As the rate of community participation, this paper reconnoiters the extent of public participation in spatial planning performs in the Pabna municipality built totally on the citizen's responses. Data were collected from community service facilities of ward no-06 in Pabna Municipality, Pabna District. Community Effect Index (CEI) and User Satisfaction Index (USI) were used to assess the performance of the community level utility services. The results indicate whether community-level utility services were effective or not. There is a general need to improve the quality and quantity of other services facilities like recreation facility, market facility, health facility, solid waste management system and transportation facility, and a need to improve authorized sections i.e. Municipality authority as well as NGOs to provide better services in this area.

Key Words: Community Participation, Service Facility, Community Effect Index (CEI), User Satisfaction Index (USI)

1. INTRODUCTION

Community participation is maybe one of the greatest overworked ideas in the planning of today's world. For the earlier few eras, it has contained as the essence of development creativities in nearly every country and has become a projecting concept in determining sustainable growth on space (Botes and Rensburg, 2000; Marfo, 2007). The self-organized network of human beings with a commonplace time table, motive, or interest, who collaborate by sharing thoughts, data, and different resources. The network emerged as a group of people with diverse traits who're linked employing social ties, proportion common perspectives, and interact in joint motion in geographical locations or settings. The United Nations defines network improvement as "a manner where community participants come collectively to take collective motion and generate answers to not unusual problems (Mahendra, and Mahesh 2015). The idea of participation has been focusing on extensive debates about its historical origin, theoretic grounding, and practical applicability (Mikkelsen, 2005). Despite comparable rhetoric and said rules, there are predominant variations discovered in the planning and management of cities in developed and growing countries. These differences are maximum glaring in the degree of involvement of residents in making plans and urban governance processes (Swapan, 2013). In the modern era where good governance is the principal factor of sustainable improvement, the concept of participatory planning and control has received good-sized popularity and is getting enormous significance in developing countries (Murdia, 2005). Public participation techniques in the planning process have been recorded and delivered to the developing quantity of literature of planning and come up with a new vision of making plans manner in response to the sustainable outcome of making plans and development projects. In the past due to the nineteen sixties, when interest in peoples' involvement was skyrocketing (Arnstein 1969).

Participation is one of the maximum critical ideas in planning and development because it is doubtlessly a car for special stakeholders to impact improvement techniques and interventions, which can be by and large ruled by using professional specialists in the government and personal area. Participation combines the experiences, expertise, and knowledge of numerous organizations and citizens (Mitchell, 1997). The participatory method can enhance the high-quality of local governance via growing approaches which might be greater democratic and equitable. The terrible regularly have little, if any, a voice in authorities' decisions. Session and communication among nearby government and interest agencies representing the negative can provide the latter greater voice and affect over choices. The participatory technique can

inspire the negative to be more accountable for, worried in, and aware of their function in nearby governance. It can assist reduce potential warfare and construct a local human feeling of possession within the government's plan. It could result in packages that might be better and greater efficient (So,1979). Pabna is a secondary town with huge potential. The rate of Urbanization and population is increasing day by day. For a fruitful plan and a sustainable development of secondary township alike Pabna, it is very important to access the efficacy of Participatory Planning. That's why This study can be used in identifying needs, planning, monitoring, or evaluating projects and programs. This is a powerful consultation tool, it offers the opportunity to go beyond mere consultation and promote the active participation of communities. The participatory planning approach is essential for at least two reasons, one is it strengths civil society and the economy by empowering groups, communities, and organizations to negotiate with institutions. By that, an effective and sustainable plan can be made and the governance of the city can be run efficiently.

2. LITERATURE REVIEW

Community participation has been encouraged for its unreserved benefits for planning and development of the society. Prominent Scholars i.e. Santrock (1998), Forester (1989), Healey (1992), and others have emphasized the need for participatory, need-based totally and socially satisfactory making plans in the neighborhood of the traditional pinnacle-down expert-driven method (khan and Swapan, 2010). To achieve these targets, sustained and on-going planning reforms have been inevitable. Making plans reforms throughout the 1980s and nineties in developed nations have led to a shift faraway from conventional urban making plans and control toward approaches that combine technological innovation in making plans management with the studies, understanding, and understanding of numerous groups and residents (Mitchell, 1997; Wandersman and florin, 2000). There is an extensive consensus on requirements of community participation in progressing towards sustainable urban improvement (Rahman, 2008). Genuine involvement of citizens in decision-making methods leads to better selections that allow wise making plans and management of long-term initiatives. Participation, in exercise, ranges from without a doubt informing people about the plan to making sure that the plan is made by way of the human beings (Arnstein 1969). (Glass 1979) identifies faculties of thought regarding the purpose of citizen participation, "one adopting the citizen attitude and the different advocating the administrative perspective". The former concept perceives residents as a dependable instrument to acquire the executive goal while the latter one gives citizens a valid position indecision-making. The critics of making plans agree that despite theoretical development and reforms in practice, making plans isn't democratic enough to ensure incorporated illustration from various sectors of the society (Forester, 1989; Healey, 1992; Sandercock, 1998). To foster democratic urban surroundings, network participation is identified as a maximum powerful tool for sustainable city policy and physical developments towards collective hobby (Alfasi, 2003). Network participation is considered fundamental to fair and representative decision making in cutting-edge urban planning exercise (Mahjabeen et al, 2009).

3. MATERIAL AND METHOD

3.1 Study area Profile

Pabna municipality is one of the first-born municipalities in Bangladesh and it turned into established in 1876. It is located at 161 km north-west of Dhaka metropolis and one hundred ten km east of Rajshahi town. The region of the Municipality is ready 16sq km and its populace is 1,33, 403. The Pabna Municipality is between 23°53" n and 24°05" n range and 89°09" e and 89° 25" e longitudes. General region about 16 sq. Km is inclusive of 15 wards and the number of 23 mouza. The boundary of the municipality (Parvez and Islam, 2020). The study area is ward no-6. The study area is one of the dominant wards of the Pabna Municipality. The area is about 256.117 acres with population 8949. Ward no. 6 is called the religiously dominated zone. Pabna central Eidgah is included under ward no.6 (MIDP, 2008).

Table 1. Ward No. 6 Projected Population (2001-2027)

Ward No	Area in acres	Household	Population					
			2001	2007	2012	2017	2022	2027
6	256.117	1441	6792	7435	8157	8949	9818	10772

Source: (MIDP, 2018).

3.2 Research Method

Random Sampling was used to determine the samples. Primary data was collected from the Household Interview Survey (HIS) and via Focus Group Discussion (FGD). Then the total study area was divided into three blocks. Based on the designated impartial open-ended and close-ended questionnaire was prepared to classify the insight of the local inhabitants regarding the optimistic or adverse changes. For making Mobility Map, a Social map, Resource Map Key Informal Interview (KII) was done. The secondary data was collected from the Municipality office, Non-Government Office (NGO) of the study area, previous research, and journals. From the collected data, criteria map such as social map which included road network map, educational institution map, administrative centers; resource map which included water body, industrial, vegetation, forest, reserved area, etc.; service facility map included drainage map, road network, water supply, etc.; mobility map included different types of dominant mode movement, maximum dominant mode between the study area and surrounding wards, etc. The road network map was then utilized for preparing different infrastructure maps of the Municipality. The maps include a drainage map, street lighting map, water supply pipeline map, gas line map, telephone line map, ongoing project map, etc. Those maps were prepared via the Geographic Information System (Arc.GIS-10.5), and

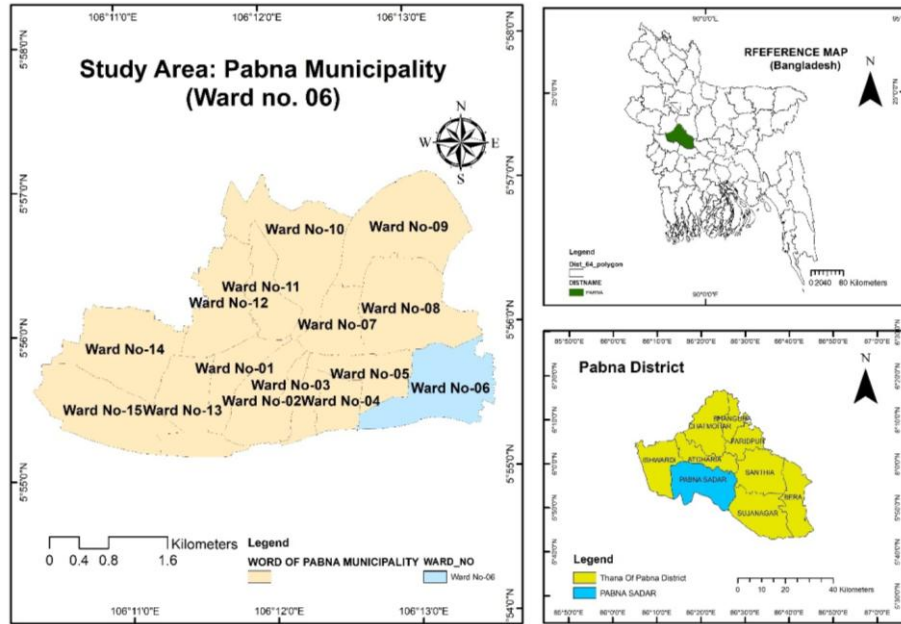
data were processed by SPSS 21.0.

The effects of various Utility services like water supply, gas supply, better transportation facilities, service opportunities to the community is a primary concern whether these services serve effectively or not. For the CSI, it was assumed that satisfaction level from 0 to 33 = 3 (excellent), from 34 to 66 = 2 (moderate) and from 67 to 100 = 1 (bad). The calculation is-

$$CSI = 100 - \frac{100(\sum Si - 1)}{3b} \quad (\text{Prihatmojo and Anindita, 2017}).$$

The consumer satisfaction index (USI) measures the provider satisfaction of a facility-based totally on the perceptions of the customers approximately that specific facility. The USI wide variety is calculated through the delight quotes expressed through the users, weighted based totally at the prices as (eboli and mazzulla 2009).

$$USI = \sum_{k=1}^n Sk . Wk$$



Source: (Author, 2020)
Figure 1. Study Area Location Map

4. RESULTS AND DISCUSSION

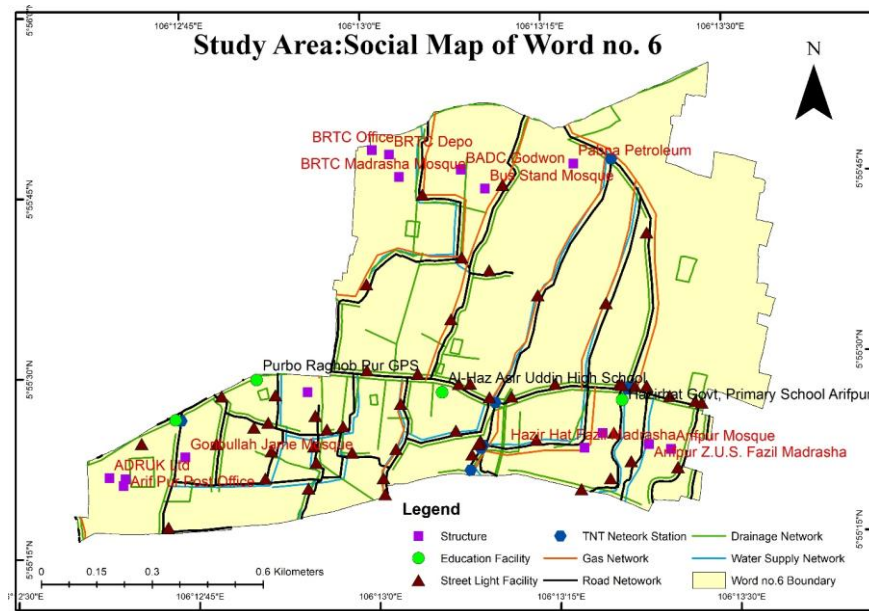
4.1 Participatory Approaches for Community Planning

Based on the current condition evaluation and the survey result, the overall performance evaluation of different municipal offerings had been recognized and some pointers had been furnished to reduce the related problems consistent with stakeholder’s attitude.

4.1.1 Social Map

First decide what type of area the map will show or any limitations such as a village, an indigenous ancestral domain, a watershed, and so on. Social maps begin as physical maps of the residential area of a community. The principles followed in setting up the exercise and getting going for the social map are similar to those used with a community resource map. As a CBD area of the municipality, the overall social condition is better compared to the other wards. The majority number of public and private offices, administrative centers especially the municipality located in the study area. The two-govt. health center fulfilled the demand of the community people. Due to a better road network, the communication system is flexible with other areas.

Based on the Social Map (Figure-2) of the study area, it is noticed that there three Schools in the study area named Al-Haz Asir Uddin High School, Hazirhat Govt, Primary School Arifpur, and Purbo Raghob Pur primary School. Two Religious educational institutions named as Hazir Hat Fazil Madrasha and Arifpur Z.U.S. Fazil Madrasha are also situated at the study area. Five Muslim religious facilities: the mosque is situated in the study area. One bus depo: BRTC bus depo is also there. Moreover, one petroleum Station known as Pabna Petroleum is also there. One market is situated at word no.6 which is popularly known as Hazir Hat. An important institution is situated here. The food storage of the Pabna Municipality is situated here known as BADC Godaun. A well-known industry: ADRUK Ltd is situated at word no.6. Two TNT network station is situated in the study area. Finally, the road network, gas network, water supply network, drainage network, and street light points are also shown at the Social Map.



Source: (Author, 2020)
Figure 2. Social Map of the Study Area

4.1.2 Resource Map

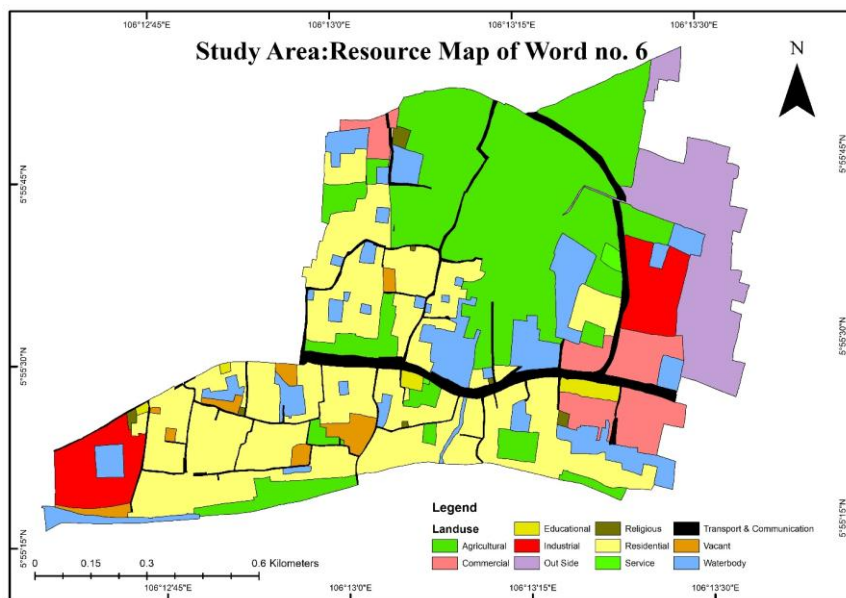
Ward no.6 is the most dominated land use as per residential and educational institutions. It can be said that Ward no.6 is a peri-urban area which is recently added to Pabna Municipality and it also called the residential zone. The resource is the assets of the institution and includes financial, physical (equipment, buildings, raw materials, or their tangible assets), human (experiences, skills, knowledge), intangible (reputation, registered design, database, etc.) and cultural (history, culture, work system). The land use pattern is shown at the resource map from where the current condition of the study area about the resource pattern will find out.

4.1.3 SWOT Analysis

SWOT stances for Strengths, Weaknesses, Opportunities, and Threats, and so a SWOT Analysis is a method for evaluating these four aspects for performance evaluation. SWOT analysis aims to recognize the main interior and exterior issues seen as significant to accomplishing an objective.

SWOT analysis groups key pieces of information into two main categories:

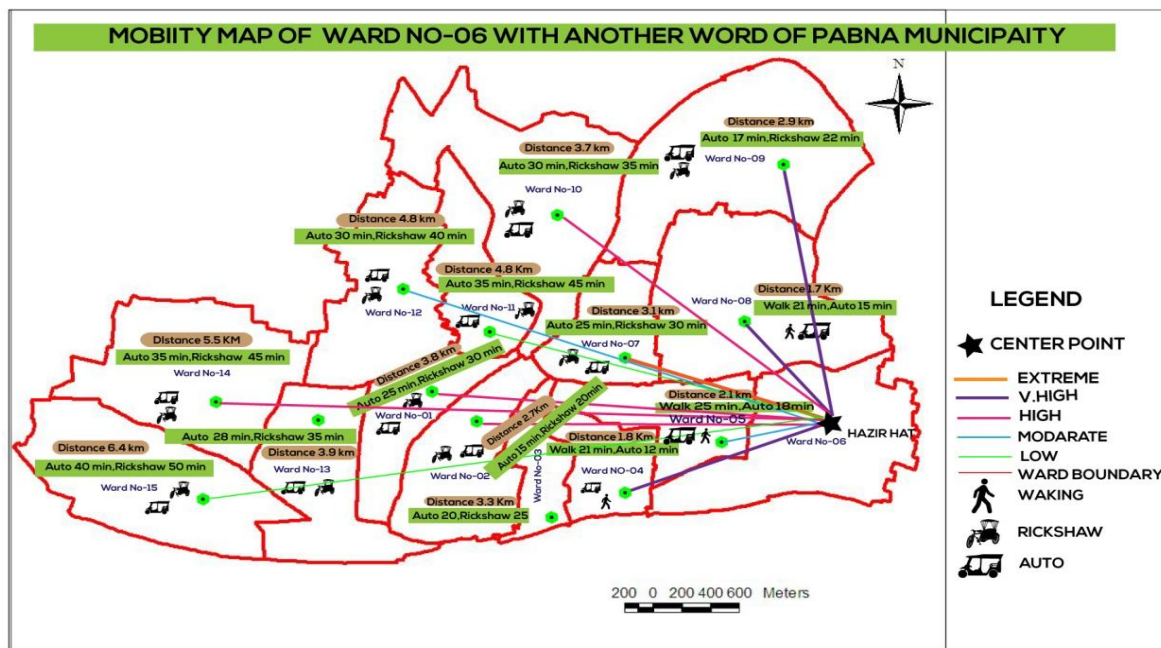
1. Internal factors – the strengths and weaknesses internal to the organization
2. External factors – the opportunities and threats obtainable by the environment exterior to the society



Source: (Author, 2020)
Figure 3. Resource Map

4.1.4 Mobility Map

Mobility can be defined as the ease with which people and goods move throughout their community, state, and the world. Transportation's most essential function is to provide safe mobility for people and goods. This map does all the calculations for the transportation mobility map. It exists as a placeholder, in case there is a need to split automobile-based and transit-based transportation analysis. Use this map to assess transportation and mobility in the region. This map creates a composite opportunity score by combining fourteen maps showing different aspects of the transportation system and mobility options in the region. Areas with good transportation opportunities are easy to get to or travel from. This makes getting to work, school, shopping, and recreation are easier and less expensive. Areas with high transportation and mobility opportunities will provide many transportation options. This map is calculated using weighted scores from a set of transportation and mobility-related maps.



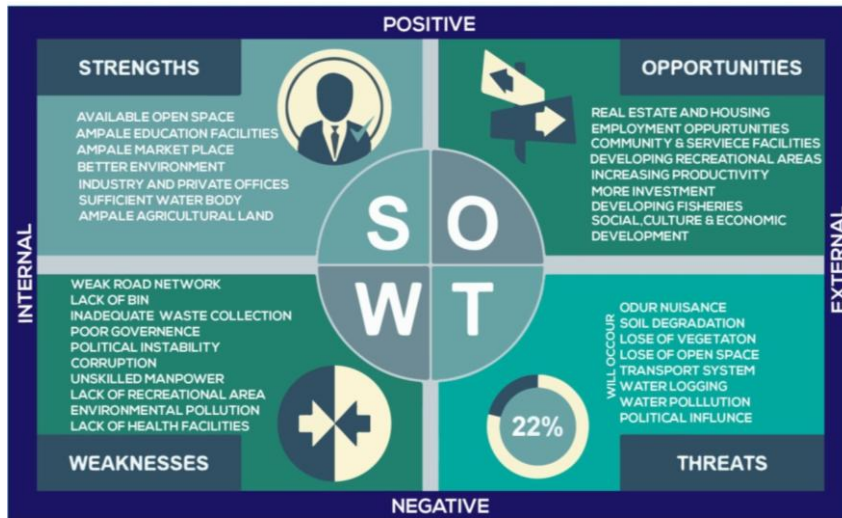
Source: (Author, 2020)
Figure 4. SWOT Analysis

Table 2. Mode of Transportation And Cost in Ward No.6

Ward no 06	Distance(km)	Mode of Transportation & Time	Frequency of Trip
Ward No 01	3.8	Auto-25 min, Rickshaw-30 min	High
Ward No 02	3.3	Auto-20 min, Rickshaw-25 min	High
Ward No 03	2.7	Auto-15 min, Rickshaw-20 min	Low
Ward No 04	1.8	Walk-21 min, Auto-12 min	Very High
Ward No 05	2.1	Auto-18 min, Walk- 25 min	Moderate
Ward No 07	3.1	Auto-25 min, Rickshaw-30 min	Extreme
Ward No 08	1.7	Auto-15 min, Walk-21 min	Very High
Ward No 09	2.9	Auto-17 min, Rickshaw-22 min	Very High
Ward No 10	3.7	Auto-30 min, Rickshaw-35 min	High
Ward No 11	4.8	Auto-35 min, Rickshaw-45 min	Low
Ward No 12	4.8	Auto-30 min, Rickshaw-40 min	Moderate
Ward No 13	3.9	Auto-28 min, Rickshaw-35 min	Low
Ward No 14	5.5	Auto-35 min, Rickshaw-45 min	High
Ward No 15	6.4	Auto-40min, Rickshaw-50 min	Low

Source: (Field Survey, 2020).

Assume that, Hazir hat is the center point ward no: 06. This map shows the different types of dominant mode movements. Highly moderate –very low straight line shows, maximum dominant mode between study areas with the surrounding ward. The most dominant vehicle found that Auto Rickshaw. Due to a lack of better traffic management that vehicle takes vast time.



Source: (Author, 2020)

Figure 5. Mobility Map of Ward No. 06

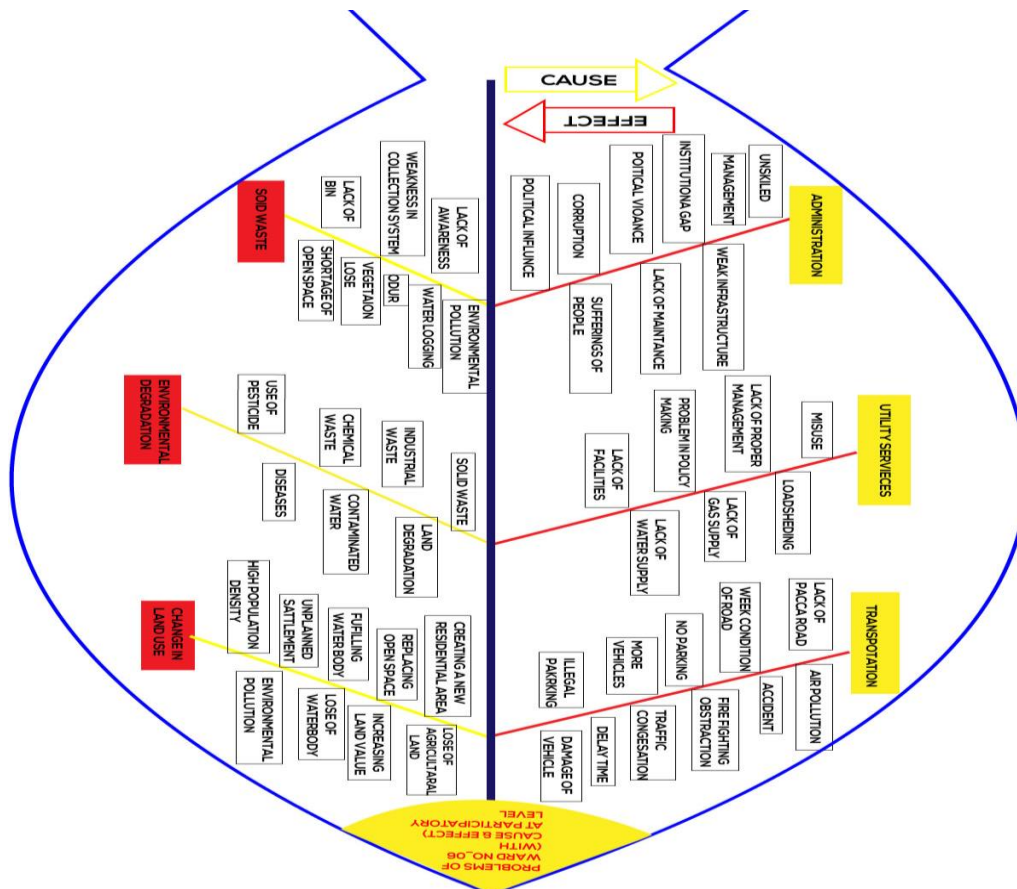
4.1.5 Cause Effect Diagram

A cause and effect diagram examines why something happened or might happen by organizing potential causes into smaller categories. It can also be useful for showing relationships between contributing factors. A fishbone diagram can help identify possible causes for a problem that might not otherwise be considered by directing the team to look at the categories and think of alternative causes. In this study, the fishbone diagram includes.

Problems: It includes problems in ward no. 6 such as transportation and solid waste management environmental degradation problem.

Causes: Causes include the factors which are responsible for the problems, which are shown on the left side of the diagram.

Effects: Because of the causes which effects are faced by the local people, shown on the right side of the diagram.



Source: (Author, 2020)

Figure 6. Fishbone Diagram

4.2 Performance Evaluation of Community Service Facilities

4.2.1 USI (User Satisfaction Index) for Ward No. 06

Satisfaction in utility services like water supply, gas supply, better transportation facilities, service opportunities is basic to the maintenance of an appropriate standard of living for the community. A wide range of community facilities is also necessary and assess the facility requirements for community uses. For the USI, it was assumed that satisfaction level from 0 to 33 = 3 (bad), from 34 to 66 = 2 (moderate) and from 67 to 100 = 1 (excellent). The ward no 06 was categorized into three blocks as Block – A, Block-B, and Block –C. the user satisfactions of each block for the community satisfactions are given as follow table 3.

Table 3. Block wise USI of each service facilities

Name of The Services	Block - A		Block - B		Block – C	
	USI (User Satisfaction Index)	Rank	USI (User Satisfaction Index)	Rank	USI (User Satisfaction Index)	Rank
Water Supply	73.33	1	71.25	1	73.33	1
Electricity Supply	55	2	62.5	2	47.5	2
Solid Waste Management	74.17	1	55	2	49.17	2
Educational Facility	63.33	2	59.38	2	81.67	1
Market Facility	75.83	1	60	2	74.17	1
Health Facility	46.67	2	38.13	2	43.33	2
Transportation Facility	90	1	96.25	1	39.17	2
Recreational Facility	0	3	0	3	0	3

Source: Author, 2020

Table 4. Average USI of Utility Services

Name of the Services	Average USI	Service Condition
1. Water Supply	72.64	Excellent
2. Electricity Supply	55	Moderate
3. Solid Waste Management	59.45	Moderate
4. Educational Facility	68.13	Excellent
5. Market Facility	70	Excellent
6. Health Facility	42.71	Moderate
7. Transportation Facility	75.14	Excellent
8. Recreational Facility	0	Bad

Source: (Author, 2020).

4.2.2 Community Effect Index (CEI)

The effects of various Utility services like water supply, gas supply, better transportation facilities, service opportunities to the community is a primary concern whether these services serve effectively or not. A wide range of community facilities is also necessary and assess the facility requirements for community uses.

Table 5(a). Block wise CEI of each service facilities

Name of The Services	Average CEI	Rank	Block A	Block B	Block C	Σ Si
1. Water Supply	28.50	3	3	3	3	9
2. Electricity Supply	54.38	2	2	2	2	6
3. Solid Waste Management	52.42	2	2	2	2	6
4. Educational Facility	43.42	2	2	2	3	7
5. Market Facility	28.46	3	3	3	3	9
6. Health Facility	47.45	2	2	2	2	6
7. Transportation Facility	24.89	3	3	3	2	8
8. Recreational Facility	100	1	1	1	1	3

Source: (Author, 2020).

Table 5(b). Average CEI of Utility Services

Name of the Services	CEI	Service condition
1. Water Supply	11.11	Excellent
2. Electricity Supply	44.44	Moderate
3. Solid Waste Management	44.44	Moderate

4. Educational Facility	33.33	Moderate
5. Market Facility	11.11	Excellent
6. Health Facility	44.44	Moderate
7. Transportation Facility	22.22	Excellent
8. Recreational Facility	77.77	Bad

Source: (Field Survey, 2020).

5. CONCLUSION

The performance evaluation of various service facilities in this study area was measured by the community participation in their satisfaction level and by the community effects. Community perceptions regarding service quality are central to evaluating different utility performance and can reveal performance gaps and identify areas of concern. Besides, trends over time can be used by regulators and policy-makers to evaluate utility performance. In principle, expenditure decisions made by distribution utilities should be largely driven by the quality of service requirements imposed by corresponding. The study tried to find out the participatory planning involvement in the development of the community. It is seen that the USI value is excellent at the study area on water supply, education, transportation, and in-market facility. But at the recreational facility, the municipality authority should focus more to satisfy the users. Some attention needs to be addressed towards the electricity facility, solid waste management, and health facilities according to USI value. According to CSI value, special attention needs to be given towards the recreational facility along with moderate attention need to be given towards electricity supply, education, solid waste health facility, and transportation facility. From the whole study, it concludes that participatory planning tools are one of the most appropriate and suitable methods for finding the actual position of community services, which service is effective more and which are less effective to the community. Through these analyses, the socio-economic and infrastructural aspects of the community can be expressed. The main focus of the project was on mobility, resources, cause-effect, and services opportunity. The community peoples are very happy and satisfied with the PRA role because they will ensure maximum participation through Community Based Organization for community development.

REFERENCES

- Alfasi, N. (2003). "Is public participation in making urban planning more democratic? The Israeli experience." *Planning Theory & Practice* 4(2): 185-202.
- Arnstein, S. R. (1969). A Ladder of Citizen Participation, *Journal of American Institute of Planners (JAIP)*, vol. 35(4), pp. 216-224.
- Botes, L. and D. Van Rensburg (2000). "Community participation in development: nine plagues and twelve commandments." *Community Development Journal* 35(1): 41-58
- Forester, J. (1989). *Planning in the Face of Power*. Los Angeles, Berkeley, University of California Press.
- Glass, J. J. (1979). "Citizen participation in planning: the relationship between objectives and techniques." *Journal of the American Planning Association* 45(2): 180-189.
- Healey, P. (1992). "A planner's day: knowledge and action in communicative planning practice." *Journal of the American Planning Association* 58(1): 9- 20.
- Khan, S., and M. S. H. Swapan (2010). Citizen Involvement in Cities with Politicized Power and Social Inequality: A Historical Profile of Urban Development in Bangladesh. 4th International Conference on Built Environment in Developing Countries, Penang, University Science Malaysia (USM).
- Marfo, E., (2007). "Institutionalizing citizen participation and community representation in natural resource management: Lessons from the Social Responsibility Agreement negotiation in Ghana." *Community Development Journal* 43(4): 398-412.
- Mahendra, S., and Mahesh, T., (2015). Sustainable Community Development Discourse: A Critical Review. *Nepalese Journal of Development and Rural Studies*. 12. 66-78.
- Mitchell, B. 1997. *Resource and Environmental Management*, London: Longman.
- Mahjabeen, Z., K. K. Shrestha, et al. (2009). "Rethinking community participation in urban planning: The role of disadvantaged groups in the Sydney Metropolitan Strategy." *Australasian Journal of Regional Studies* 15(1): 45-63.
- Mikkelsen, B., (2005). *Methods for Development Work and Research – A New Guide for Practitioners*. London: Sage Publication.
- MIDP [Municipality Infrastructure Development Plan], 2008. Municipality Infrastructure Development Plan, Pabna.
- Mitchell, B. (1997). *Resource and environmental management*, Addison Wesley Longman Ltd
- Parvez, M., & Islam, S. (2020). Sites Suitability Analysis of Potential Urban Growth in Pabna Municipality Area in Bangladesh: AHP and Geospatial Approaches. *Journal of Geographical Studies*, 3(2), 82–92. <https://doi.org/10.21523/gcj5.19030204>
- Prihatmojo, B., and Anindita, R., (2017). Analysis of Strawberry Farmer's Satisfaction for Utilization of "X" Fungicide in Pandanrejo Village, Batu City. *HABITAT*, 28(3), 106–113. <https://doi.org/10.21776/ub.habitat.2017.028.3.15>

- Swapan, M. S. H., (2013). The Realities of Participation in Planning in Bangladesh: The Role of Institutional and Socio-political Factors in Shaping Participatory Planning in Developing Countries (Ph.D. Thesis; pp. 1–2). Retrieved from <https://pdfs.semanticscholar.org/4c43/78f5342c3c605936835980d571f39f40b33e.pdf>
- Sandercock, L. (1998). *Towards cosmopolis: Planning for multicultural cities*, Academy Press.
- So, F. S., (1979). *The Practice of local government planning*. Washington: Published in Cooperation with The American Planning Association by The International City Management Association.
- Rahman, G. (2008). *Planning and Political Culture of Planning in Bangladesh*. Dhaka, A H Development Publishing House
- Wandersman, A. and P. Florin (2000). Citizen participation and community organizations. *Handbook of community psychology*. J. Rappaport and E. Seidman. New York, Kluwer Academic Publishers: 247-272.