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Integrating Environmental Governance into Sustainable Urban Development in Bangladesh

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ABSTRACT

Environmental governance refers to the process of making environmental decisions, who makes them and how they are carried out. It includes formal and informal institutional arrangements for resource and environmental decision-making and management. This study examined the degree to which Barishal City Corporation (BCC) and Sylhet City Corporation (SCC), two divisional cities of Bangladesh, integrated environmental governance into sustainable urbanization. This study has collected data through questionnaire survey from 600 stakeholders (300 from each city corporation) along with key informant interviews from the government officials of the selected City Corporations. The study's findings show that environmental governance can pave the way to creating a sustainable city a reality. The ineffective enforcement of environmental laws and regulations, the lack of organizational coordination, responsibility, and responsiveness, and the deficiencies in resource mobilization are also identified as some of the few issues in this regard. This study argues that cities may be made sustainable by raising environmental awareness and changing the way of thinking of citizens and local government officials so that they believe everyone of them has a role to play in building a sustainable city. Creating sustainable cities cannot be legislated or decided: it must become a part of the life of every resident and organization in the city. The main drawback of this paper is that it only examines two of Bangladesh's twelve city corporations.

1. INTRODUCTION

Sustainable development is economic development that preserves, protects and incorporates the environment and relevant ecosystems [1]. In Bangladesh, sustainable development is a constitutional obligation [2]. Article 18A of the Constitution of the Peoples' Republic of Bangladesh states that the state shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forest and wildlife for the present and future citizens [3]. More than 56.2 percent of the world's total population live in the cities [4]. According to United Nations data, this figure was 54 percent in 2014 [5]. Projections are that most humans will continue to live in cities and that the shift of population from rural to urban areas will be continued. By 2050 the percentage of humans who are urban dwellers is expected to reach 65 percent [6]. This will intensify the tendency to cement over every square hectare of land and build multi-story housing on it, destroying the natural environment. Thus, research, science and political debate over environmental policy and governance are lively and becoming ever-more active [7]. According to Mittal et al., in Bangladesh, "these have failed to translate into practice, due to weak policy enforcement and implementation on account of a number of systemic barriers and constraints [8]".

An increasing population, coupled with rapid economic growth, is exacting a large toll on the environment, ecology and natural resources in Bangladesh. To ensure the best opportunities for a healthy and productive life, creating and maintaining an equilibrium between nature and human settlement is the only path to sustainable development. This must be a conscious choice and goal: for development without actively preserving nature tends toward destroying nature. Development must be both "human-centered" [2] and nature-centered. Failing to make that choice and to plan to implement it tends toward a world which is only human-centered, in which nature, over time, withers away. Given the importance of planning for sustainable development in our cities, SDG11 (Sustainable City and Communities), from the Sustainable Development Goals enunciated by the United Nations General Assembly was included in the Bangladesh Government's 7th Five-Year Plan (2016-2021). In that plan, the Government sets goals of ensuring adequate, safe and affordable housing for all; providing accessibility to affordable, safe, and sustainable transportation systems and ensuring road safety; improving panoramic and sustainable urbanization; building capacity for participatory and combined planning as well as management of human settlements; reducing the losses caused by disasters; and reducing the adverse environmental impact of cities and providing entrance to safe, inclusive, accessible and green

public spaces [9].

City governance institutions must ensure the participation of a variety of stakeholders, including NGOs, civil society organizations, business professionals, development partners, racial and ethnic minorities, professional associations, labor unions, women's networks, and the media, in order to meet these SDG 11 targets. Additionally, the objectives of making sustainable city can be attained in part through the development of intelligent infrastructure, active governance, highly sophisticated environmental management, and resource-effective resource utilization. However, Bangladesh's municipal governance structures face numerous obstacles that make it difficult for cities to accomplish the government's objectives as outlined in the aforementioned national economic plan. On the basis of a thorough and in-depth examination, the paper makes an effort to highlight the significance of Bangladesh's city environmental governance institutions in providing safe, accessible, and affordable housing as well as basic services for city dwellers.

2. METHODOLOGY

The study is predominantly qualitative, supplemented by quantitative data. Therefore, a mixed- method approach has been chosen for this study. This research empirically investigated the present status of environmental governance in enhancing sustainable urbanization and human settlement in two City Corporations of Bangladesh, namely Barishal City Corporation (BCC) and Sylhet City Corporation (SCC).

These two city corporations were chosen randomly for this study from twelve city corporations of the country. The area of BCC is 24.91 sq km, located in between 22°38' and 22°45' North latitudes and in between 90°18' and 90°23' East longitudes. Total population of the city is 224,389 (male 123,402, female 100,987). The area of SCC is 27.36 sq km, located in between 24°51´ and 24°55´ North latitudes and in between 91°50´ and 91°54´ East longitudes. The total population of SCC is 270,606 (male 142,320, female 128,286).

A combination of primary and secondary sources have been used to get the data. By reading pertinent research articles and reports from the organizations tasked with implementing the SDG 11, secondary data have been gathered. Through questionnaire surveys and Key Informant Interviews (KII), primary data have been gathered. The stakeholders of the chosen City Corporations are the respondents to the questionnaire survey. We employed both closed- and open-ended questionnaires. The KIIs were conducted using a checklist.

Sample size was 600, 300 for each city corporation. Sampling was done based random sampling technique. Sample size was decided by Fisher's Formula [10]:

$$n = \frac{Z^2.p.q.N}{e^2(N-1)+Z^2.p.q} \quad (1)$$

[Note: n= sample size; N= total number of households; Z= confidence level (at 95 percent probability=1.96; p= estimated population proportion (0.5 this maximizes the sample size); q= 1-p and; e= error limit of 5.54 percent (0.054)]. Here, on the Eq. (1), population size *N* is unknown.

Data from the questionnaire survey were analyzed using the Statistical Package for the Social Sciences (SPSS), version 24. Descriptive statistics such as frequency distribution, percentage, mean, median, mode, standard deviation etc. were provided by SPSS. A five-point *LIKERT SCALE* has obtained data about the attitudes and experiences of the respondents.

3. CONCEPTUALIZATION

In Bangladesh, urbanization has recently become a very powerful political, economic, social and cultural fact. The population of some major city corporations and municipalities is very large and growing. Sometimes these cities have even a larger population than the districts in which they are located [11].

Such an enormous population unit needs a comprehensive governance structure. Previously, good urban governance used to be measured by a few core indicators: Participation, transparency, accountability, and responsiveness of authority, rule of law, decentralization, coordination, efficiency, and leadership [12].

However, the paradigm has shifted. The concept is now more comprehensive. Environmental issues are starting to gain more attention. Environmental issues are considered in planning and have been for the last few years. This has been driven by the world's acceptance of SDGs. Thus, environmental protection is one of the measures of good urban governance.

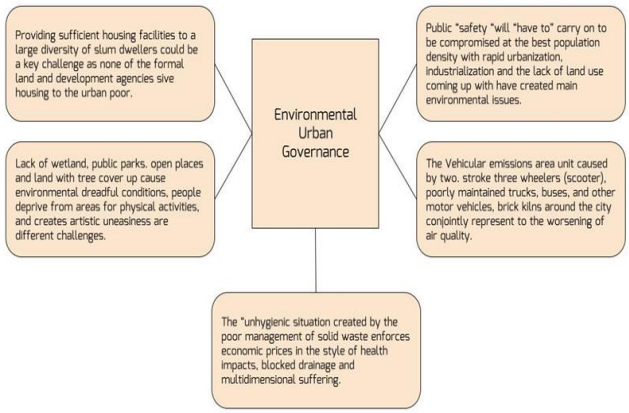

Figure 1. Environmental governance in the urban area

Among the fundamental tasks of urban governance, providing sufficient housing facilities to slum dwellers could be a key task (Figure 1). Providing wetland, public parks, open places and land with tree cover are the most important environmental tasks for cities. Thirdly, controlling air pollution is a key urban governance task: motor vehicles and brick kilns are major points of interest. Fourthly, management of solid waste is a major task of the modern city. Fifth and finally, public safety is a major task, complicated by rapid urbanization, industrialization and shortage of land [12].

Of these five major urban governance tasks, the last 3 are directly related to environmental governance. This is how environmental governance has become a precondition for sustainable development.

Bangladesh has already been identified as one of the most ecologically fragile and vulnerable countries due to unique geographic features, domination by floodplains, low elevation, and population density, poverty, and nature-dependency. The environment of Bangladesh is vibrant, and the mix of traditional and modern methods of land use helps to adapt to the changing environmental conditions [11].

Yet the dense and growing population, slow economic growth, weak and inadequate institutional infrastructure, extensive dependence on agriculture and rapid urbanization, lead to a low quality of life for many, both in cities and in rural areas [11]. These factors also constitute an endemic threat to the exhaustion of natural resources like land, soil and water, with associated forestry and fisheries, and some minerals like coal and undersea oil and gas, which underpin much of the current economy.

Specifically for cities, sustainable development is hampered by a lack of housing and other infrastructure, industrialization, a scarcity of land, antiquated water supply infrastructure, a scarcity of water, and an overwhelmed waste management system that cannot afford needed modernization [12]. The Government of Bangladesh has, to put it bluntly, not been very helpful to Bangladeshi cities in dealing with these problems. Government needs to environmentally educate the people and enforce the law, for a start [12]. Environmental conservation, on the other hand, is an acknowledged precondition for sustainable development for any country. Whether in a developing or developed country, environmental issues must get top priority. Like all countries, Bangladesh intends to ensure sustainable development with appropriate policies, structures and processes of environmental governance [13]. The challenges for the Government in doing so include the imbalance between economic growth and environmental conservation, the weak enforcement of rules and regulations, the lack of organizational coordination, responsiveness and responsibility, and the shortfalls in the mobilization of required resources [13]. This paper seeks to improve our understanding about the current, versus the optimal, situation of environmental governance in Bangladeshi cities, to better understand how to meet the sustainable development imperative.

4. RESULTS AND DISCUSSION

In terms of living conditions of the inhabitants of the selected cities, the study found that (Table 1) only 16.33 percent respondents of SCC were profoundly satisfied with their current living conditions. Yet 80 percent are satisfied and only 3 percent are dissatisfied with the present living condition. None of those who responded is extremely dissatisfied.

Yet the picture differs by city. In SCC 80 percent are satisfied with their living conditions but in BCC only 55.66 percent are satisfied. 13.66 percent of respondents in BCC are dissatisfied and 10.33 percent are very dissatisfied. The conclusion is that the cities' living conditions are not desperate but there is a scope for improving the present living conditions more so in BCC rather than in SCC.

More than half of the respondents (54.33 percent and 52 percent from SCC and BCC, respectively) consider that the city roads were wide enough, with only 33 and 35 percent respectively, disagreeing. On balance, the roads are wide enough. Table 2 shows that almost one-third of the respondents disagree with this perception. They need further investigation. For example, there might be certain areas of both cities where widening of the roads may be needed and these needs to be identified. However, city planners need to remember that wide roads tend to attract traffic, which is bad for air pollution and traffic jams, both of which are reducing the quality of life and lead a way from sustainable urban development.

The respondents of SCC are more satisfied with their urban drainage system than the respondents of BCC, by a margin of 64.66 percent to 45 percent. On the other part, 3 percent of SCC and 12 percent of BCC respondents told that their drainage system is very bad. Respondents of BCC apparently need a new drainage system but SCC's drainage system might be suitable for now.

Table 1. Satisfaction with living conditions

	Very satisfied		Satisfied		No opinion		Dissatisfied		Very dissatisfied	
Scale	***f***	***%***	***f***	***%***	***f***	***%***	***f***	***%***	***f***	***%***
SCC	49	16.33	240	80	2	0.66	9	3	0	0
BCC	17	5.66	167	55.66	44	14.66	41	13.66	31	10.33

[Source: Field Survey, 2021]

Table 2. Opinion on different issues of urban livelihood

		Respondents' Opinion									
		Vary bad		Bad		No opinion		Good		Very good	
Variables	**Study area**	***f***	***%***	***f***	***%***	***f***	***%***	***f***	***%***	***f***	***%***
Width of the road	SCC	13	4.33	88	29.33	7	2.33	163	54.33	29	9.66
	BCC	38	12.66	70	23.33	29	9.66	156	52	7	2.33
Drainage	SCC	8	2.66	39	13	4	1.33	194	64.66	55	18.33
	BCC	36	12	76	25.33	43	14.33	135	45	10	3.33
Waste management	SCC	1	0.33	58	19.33	4	1.33	179	59.66	58	19.33
	BCC	34	11.33	96	32	66	22	94	31.33	10	3.33
Planned urbanization	SCC	0	0	92	30.66	77	25.66	129	43	2	0.66
	BCC	28	9.33	50	16.66	143	47.66	63	21	16	5.33
Disaster management	SCC	1	0.33	23	7.66	165	55	111	37	0	0
	BCC	57	19	62	20.66	107	35.66	59	19.66	15	5
Electric supply	SCC	0	0	13	4.33	6	2	247	82.33	34	11.33
	BCC	1	0.33	41	13.66	72	24	136	45.33	50	16.66
Water supply	SCC	88	29.33	7	2.33	163	54.33	29	9.66	8	2.66
	BCC	70	23.33	29	9.66	156	52	7	2.33	36	12
Fuel supply	SCC	39	13	4	1.33	194	64.66	55	18.33	1	0.33
	BCC	76	25.33	43	14.33	135	45	10	3.33	34	11.33

[Source: Field Survey, 2021]

In a KII in SCC, the Chief Executive Officer (Joint Secretary) of SCC City Corporation confirmed:

The city has already initiated a road expansion project at a small scale. Some areas of the city face severe traffic jam due to lack of width of the road. This expansion project is going on smoothly. The land acquisition and other complicated parts are well taken care of [14].

The Chief Engineer of SCC explained why large-scale road widening is impossible:

It is not possible because it requires firstly a high level of cooperation; secondly it is a matter of big budget. The money required for buying the nearby lands is huge and currently unthinkable. However, the road is under construction to make 80 feet wide roads [14].

Similarly, waste management is better in SCC than in BCC, according to respondents. 59.66 percent respondents of SCC said that their waste management system is good. But only 31.33 percent respondents of BCC put same views about their city's waste management. Only 19.33 percent respondents of SCC think that their waste management system is bad but 32 percent from BCC think that their waste management is bad. Again, BCC seems to need a new waste management system but SCC does not need.

However, during field observation it was also found that both of the cities still follow a traditional waste management system. The integrated secondary waste disposal systems and units are not functional, only some test projects are going on. The officials of neither city corporation indicated that adoption of an environmentally-friendly waste management system will be included in their cities' near future plan. When asked about such an environmentally-friendly waste management system, the Chief Engineer of SCC said:

Wastes are not collected from households. However, there are social organizations that collect wastes from households and deliver these to the city corporation staff or to secondary collection points. The solid wastes finally end up in a garbage pit which is 8 km away from the city. About composting wastes we have an Memorandum of Understanding with Prism BD (currently dysfunctional) and we have our own system to dispose of clinical wastes working with the Urban Health Sector Development Project. Daily 270-280 tons of waste are generated [14].

City dewellers did not seem comfortable talking about disaster management. More than one-third simply have nothing to say in each city on the topic. About 40 percent of the respondents together from both city corporations think that the disaster management process is either bad or very bad. However, 37 percent of SCC respondents and 19.66 percent of BCC respondents responded that their citys' disaster management system is good. It appears that residents in neither city know much about their citys' disaster management scheme and thus have a little good idea to say about it. If they are unaware of it, they would tend to consider that the scheme is bad because they do not know that it does anything good for them. So, a large-scale public education about the city disaster management scheme is needed in each of the cities. Disaster management is greatly assisted when everyone knows what to do in a disaster and how to coordinate with the scheme.

The high officials of the fire service divisions in each city confirmed that they have improved their service recently. According to the Head of the Fire Service Division of the Sylhet City Corporation:

The tendency to occupy unused lands, environmental landmarks, hills, and water bodies without ownership or permission is a common practice in SCC. However, this tendency is decreasing day-by-day. The culprits often carry firearms with them. They are unstoppable. They remain active under the influence of the Ministry concerned. Flash flooding is a serious problem in SCC. Throughout the rainy season of 2020, the Fire Service had to rescue people in trouble every day. Extreme challenges were faced due to lack of personnel. Recruitment of employees is not being carried on for the fire service. Lightning strikes is another problem in SCC, due to human settlements' intimacy with the forest. This is caused by oxidation. Shortage of land has forced people to exhaust the forest for habitation. As a result, people are planting trees near their buildings. This afforestation in the residential area is increasing the casualties due to lighting strikes. By the way, the British removed RS/SA magnets to prevent lightning strikes in colonial times because thieves mistook them for gems, leaving the colonies vulnerable to lightning. On the other hand, fires are also increasing due to the use of cheap, easily-flammable materials to cut construction costs. People try to build houses on their own without enough money to complete them or to build them safely. Therefore, electrical fittings remain neglected. Usage of cheap electric fittings increases the risk of fire. It is necessary to inspect every building's electric line to prevent fire but we really do not have enough staff to do this [15].

93.66 percent of the respondents in SCC and 61.99 percent of those in BCC have no complaints about their power supply. Yet both of the cities supply electricity from burning fossil fuel. The customers are satisfied but the cities are contributing to global warming. Nor do they have any plan to shift to green and renewable energy sources. Public education and perhaps a nationwide ban on the import of fossil fuels are needed to make a mass movement against global warming.

29.33 percent respondents in SCC and 23.33 percent respondents of BCC are dissatisfied with the water supply. However, only 12.33 percent of respondents in SCC and 14.33 percent in BCC said that the water supply is good or very good. The majority - 54.33 percent of respondents in SCC and 52 percent in BCC gave no answer. The survey must be held to be inconclusive on this point.

Regarding water supply of these cities, the study found (Table 3) that 33.6 percent of these cities' population rely on government-supplied water, which explains why the majority have no opinion of it. Only 5 percent rely on tube well water, and only 0.4 percent utilize bottle water, according to the survey. As a result, submersible pumps in these communities are able to meet the populations' water needs. However, because the pumps are fueled by electricity generated from fossil fuels, they are not environmentally friendly.

Table 3. Sources of water

Sources of water	%
Supply (Govt.)	33.6
Tube well	5.0
Submersible	61.0
Bottled Water	0.4

[Source: Field Survey, 2021]

In SCC and BCC, 64.66 percent and 45 percent of respondents, respectively, had no view on the sources of fuel. Sixty percent of those who responded claimed they relied on city gas and 31.6 percent buy gas cylinders for home stoves, while 7 percent use wood and 1.4 percent use electricity (Table 4). The situation is nearly similar to that of water supply:

inhabitants are satisfied, but the gas supplied is methane, which emits significant amounts of carbon dioxide and is thus environmentally unsustainable because it contributes to global warming.

Table 4. Sources of fuel

Sources of Fuel	%
Cylinder gas (fossil)	31.6
Wood	7.0
Supply gas (fossil)	60.0
Electric	1.4

[Source: Field Survey, 2021]

A "land robber" in Bangladesh means an individual or a group who illegally occupies land. In the Philippines or America they are called "squatters". This is a problem that occurs in many developing countries, as rapid urbanization outstrips available developed land and prices and rents of land zoom beyond the ability of poor new arrivals from rural areas to pay. They just build whatever they can wherever they find empty spaces. In Turkey, their makeshift rock and tin houses are called descriptively "*gecekondu*", meaning "built overnight". They are legion, desperate, tough, organized and to survive they use violence, obtaining public sympathy through the mass media's news channels, delivering, soliciting or outright extorting votes for corrupt politicians and local officials in exchange of protection, etc.

However, the data show that this problem is not as bad in these mid-sized cities as it has become in other developing countries and, to some extent, in Dhaka and Chittagong. In SCC, 27.33 percent of respondents did not answer to this question, but 68 percent (35.67 and 32.33) think the effect is, respectively, mild or very mild. In BCC, total 89.33 percent (55.33 and 34) think that this problem is mild or very mild (Table 5). These residents feel secure in their homes. Over 60 percent do not worry that someone else will be living there or looting their belongings when they return home at night and do not believe that land development is being impeded (Table 6).

In both of the cities, the interference of land robbers is less in local development and upon personal property of the residents. Besides, though SCC respondents are not worried about road occupation but 29 (28+1) percent of BCC respondents considered it a serious problem and 29 percent were somewhat concerned (Table 6). Similarly, SCC respondents do not consider water body occupation a significant problem, though almost 29 percent are concerned about this. But 35 (34.33 and 1.33) percent of BCC respondents consider water body occupation a problem, though an additional 21 percent are concerned about this. Few of the SCC respondents and 34 (33.33 and 0.66) percent of BCC respondents consider that the land robbers are destroying nature and 24 percent are concerned. Many BCC respondents are concerned that land robbers are destroying nature and that they are damaging the city's heritage: to the latter, 77 percent of SCC respondents put same views. In terms of forest destruction, about 23% of BCC respondents and less than 1% of SCC respondents believe that land robbers are destroying natural forest. Furthermore, land robbers damage less forests in SCC, whereas 17 percent of BCC respondents believe land robbers are largely responsible for their heritage degradation.

In summary, these city residents are not worried about their personal security or of their property due to land robbers. Yet they have concern that the land robbers are damaging the environment, so action should be taken: perhaps education and awareness programs should be conducted among land robbers, as most are uneducated, about the impact they are having on nature, how they can avoid it and why it is important. If this is non-threatening ("We are not attacking your right to live here but we need you to do so responsibly") this could be sufficient to address the problem.

However, it is notable that the KII with the Director of SCC Fire Division discloses matters of far greater concern. The Director raised issues of land robbers. He said that they create obstacles for local development; illegal construction; occupying environmental landmarks; misusing environmental landmarks; raising legal complications; opposing governing activities locally; endangering environmental and local landmarks; and creating difficulties for the local government (Table 7).

Urban parks are very significant in keeping the sound environmental health of any city. In terms of SCC and BCC (Table 8), security in the park is not in question but keeping the park clean and hygienic and managing wastes inside the park is a great issue. Nearly 35 percent of the respondents in SCC see it as a major problem. Less than one-fourth of the respondents in BCC expressed concern about this issue. Crowding is also an issue for SCC and BCC. In SCC, 44 percent of the total respondents think that the parks are overcrowded, but only 19 percent of respondents in BCC have this concern. More than half of SCC respondents believe the city's parks are not open for long enough, but the situation is much better in BCC. In both cities, people are satisfied with park access. However, the parks in SCC are inferior than those in BCC. Nearly 80 percent of SCC respondents believe their services are the worst, but only 8 percent of BCC respondents agree this. Residents in SCC want more parks, better maintained. Their local park officials have expressed same views. BCC residents are more satisfied with what they have.

Table 5. Intensity of land robbers

Intensity of Land robbers				*F*	*%*
Residence	SCC	Intensity of land robber	Very intensive	0	0
			Intensive	14	4.66
			No opinion	82	27.33
			Mild	107	35.67
			Very Mild	97	32.33
	BCC	Intensity of land robber	Very intensive	1	0.33
			Intensive	9	3
			No opinion	22	7.33
			Mild	166	55.33
			Very Mild	102	34

[Source: Field Survey, 2021]

Table 6. Issues caused by the land robbers

Variables	Study area	Respondents' Opinion									
		Vary much		Much		Neither much nor less		Less		Very less	
		F	*%*	*F*	*%*	*F*	*%*	*F*	*%*	*F*	*%*
Local development	SCC	0	0	3	1	83	27.66	105	35	109	36.33
	BCC	7	2.33	31	10.33	42	14	185	61.66	35	11.66
Upon personal property	SCC	0	0	3	1	82	27.33	107	35.66	108	36
	BCC	3	1	22	7.33	58	19.33	174	58	43	14.33
Threat to security	SCC	0	0	0	0	90	30	76	25.33	134	44.66
	BCC	3	1	52	17.33	86	28.66	115	38.33	44	14.66
Occupying Road	SCC	1	0.33	7	2.33	92	30.66	165	55	35	11.66
	BCC	3	1	84	28	83	27.66	78	26	52	17.33
Occupying water body	SCC	0	0	14	4.66	85	28.33	128	42.66	73	24.33
	BCC	4	1.33	103	34.33	64	21.33	62	20.66	67	22.33
Destroy natural property	SCC	0	0	4	1.33	119	39.66	90	30	87	77
	BCC	2	0.66	100	33.33	72	24	49	16.33	77	25.66
Destroy forests	SCC	0	0	1	0.33	159	53	47	15.66	93	31
	BCC	2	0.66	66	22	108	36	60	20	64	21.33
Destroy heritage	SCC	0	0	0	0	230	76.66	13	4.33	57	19
	BCC	0	0	50	16.66	128	42.66	68	22.66	54	18

[Source: Field Survey, 2021]

Table 7. Issues regarding illegal land grabbers

Issues regarding illegal land grabbers	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Individuals create obstacle for local development		√			
Illegal construction	√				
Occupying environmental landmarks		√			
Misusing environmental landmarks	√				
Raising legal complication	√				
Opposing governing activities locally		√			
Endangering environmental and local landmarks	√				
Creating difficulties for local authority	√				

[Source: Fire Service and Civil Defense, SCC Division.]

Table 8. Existing condition of urban parks

Variables	Study area	Respondents' Opinion									
		Worst		Bad		No opinion		Good		Best	
		F	*%*	*F*	*%*	*F*	*%*	*F*	*%*	*F*	*%*
Security	SCC	1	0.33	23	7.67	24	8	237	79	15	5
	BCC	11	3.67	41	13.67	62	20.67	174	58	12	4
Waste management	SCC	16	5.33	90	30	8	2.67	180	60	6	2
	BCC	5	1.67	69	23	45	15	167	55.67	20	6.67
Crowd	SCC	10	3.33	123	41	35	11.67	129	43	3	1
	BCC	5	1.67	52	17.33	63	21	157	52.33	23	7.67
Sufficient time	SCC	47	15.67	107	35.67	29	9.67	109	36.33	8	2.67
	BCC	4	1.33	34	11.33	69	23	159	53	34	11.33
Access	SCC	1	0.33	4	1.33	10	3.33	137	45.67	148	49.33
	BCC	2	0.67	16	5.33	52	17.33	171	57	59	57.67
Facilities	SCC	72	24	167	55.67	21	7	40	13.33	0	0
	BCC	3	1	21	7	106	35.33	139	46.33	31	10.33
Regular maintenance	SCC	73	24.33	139	46.33	42	14	46	15.33	0	0
	BCC	6	2	72	23.67	86	28.67	114	38	22	7.33

[Source: Field Survey, 2021]

More than 50 percent respondents of SCC think that city's parks are not open for sufficient time, whereas this situation is comparatively better in BCC. Regarding access in the parks, in both cities, respondents are happy. But facilities in the parks in SCC are worse than that of BCC. In SCC, nearly 80 percent respondents believe that their services are worst whereas only 8 percent of BCC respondents think so.

Development is an ongoing process that requires planning and compliance with the planning. Table 9 shows that this appears to be happening in SCC. However, in BCC, there appears to be a problem. According to the study, 41.66 percent of BCC respondents and 76.33 percent of SCC respondents believe that builders respect planning regulations, whereas 33 percent of BCC and 10 percent of SCC respondents believe builders do not, with 25.33 percent of BCC and 14 percent of SCC respondents not responding. BCC local government needs to inspect and find out the extent of compliance with its by-laws and national building codes in city building.

Table 9. Abiding construction rules

Abiding construction rules			*F*	%
Residents	SCC	Very much	30	10
		Much	199	66.33
		No opinion	42	14
		Less	29	9.66
		Very less	1	0.33
	BCC	Very much	26	8.66
		Much	99	33
		No opinion	76	25.33
		Less	86	28.66
		Very less	13	4.33

[Source: Field Survey, 2021]

These city residents are optimistic about Bangladesh's ability to meet the standard of SDG 11 within the stipulated time. 87 percent of SCC respondents and 61 percent of BCC respondents the standard of SDG 11is achievable or absolutely achievable on the part of Bangladesh within the fixed time (Table 10).

Table 10. Likeliness of achieving SDG 11

Likeliness of achieving SDG 11	Residence			
	SCC		BCC	
	F	%	*F*	%
Impossible	2	0.66	18	6
Very difficult	14	4.66	43	14.33
Not sure	23	7.66	56	18.66
Achievable	173	57.66	146	48.66
Absolutely achievable	88	29.33	37	12.33

[Source: Field Survey, 2021]

In KII, the Divisional Forest Officer of BCC explained the basic co-relation between poverty and environmental protection in trying to meet SDG 11 in Bangladesh. In his words:

One of the biggest problem is that people are making houses in the reserved areas. In most cases, we are aware of what they are doing but the socio-political realities will not let us evict them. The socio-economic situation of Bangladesh forces people to do this. This is not merely an environmental or forestry problem. This is the land grabbers a very common and well known conflict. The Government is well aware of them. Most of the time, the land grabbers damage the environment by destroying protected areas but we still fulfill our requirement that we plant 3 times more trees than the grabbers destroy. Yet this does not really repair the damage. The destroyed ecosystem is never actually restored. Most of the time we remain powerless in these cases because our governance system allows the Deputy Commissioner (DC) to control land virtually as he/she pleases. According to our experience, DCs hardly ever prioritize environmental issues over socio-economic interests [16].

The Environment Officer of SCC describes the "one step forward, one step back" nature of his job. According to him:

We have multiple successes like driving the brick kilns far away from the city by force. We made them use a zig-zag burning system which reduces pollution. We have stopped stone depletion as well. Nevertheless, the Department of Environment (DoE) is still not included in most of the development projects of the Government as a key actor. They only use us to give permission and clearance. We can only push them to conduct environmental impact assessments and evaluate the environmental impact assessment reports. I think, the DoE is capable of doing more than that to protect the environment if DoE is empowered to do so. Our Department should be incorporated as an actor for executing development and conservation projects. Apart from that, we have a severe shortage of logistic support and we have become really exhausted to function in such a huge jurisdiction. We don't have enough Magistrates to enforce the environmental laws either [17].

The study identified some factors which are mainly responsible for critical problems in urban governance of the selected cities like BCC and SCC which are preventing free process of implementing SDG 11. These are as, over aged vehicles contributing to pollution, poor management of solid waste, continuous reliance on fossil fuels for electricity generation and vehicle fuel, continued reliance on groundwater extraction instead of city water supply, raising a probability of groundwater depletion and resulting land subsidence, lack of environmental awareness (e.g. seen in local officials and land robbers), failure to integrate environmental management into local governance, both as a priority, and involving those responsibles for environmental management in local governance.

5. CONCLUSION AND RECOMMENDATIONS

With varying definitions and interests, sustainable development has emerged as a vibrant issue in both the developed and developing worlds. Indeed, the issue is in danger of becoming a buzzword. Between the desire to protect the environment and slow global warming and the poverty of people in developing countries, there are inherent tensions that have been uncovered or at least emphasized. The "land robber" problem serves as a metaphor for the entire predicament. These confrontations are, in some ways, impasses that cannot be overcome. The best governance strives to mediate them with best efforts, which may involve fusing environmental preservation with urban government. However, Bangladesh has not yet implemented this.

Surprisingly, the citizens of the two mid-sized cities under study are optimistic about the likelihood of achieving SDG 11 and the quality of urban government in their communities. Many of these worries are actually shared by poor people living in rapidly urbanizing areas everywhere: lack of green space, environmental harm from homeless people, inadequate waste management systems, and the need for better roads. SCC, a wealthier city that relies on remittances and is home to the majority of Indian restaurant owners in Britain, has similar problems to a lesser extent whereas BCC, whose main export is a high-end fish, encounters them to a higher extent. The majority of the time, however, they are content out of blissful ignorance. For example, they are happy with their methane gas supply despite not being aware that it is worsening global warming, and they adore their deep groundwater pumping systems despite the fact that they may soon cause their homes to collapse into the ground. Residents might not be the greatest people to ask about environmental protection or urban planning. The Sylhet Fire Service Division would undoubtedly have a significant opinion on this.

Being one of the few countries to have achieved the MDGs within the first 15 years of this century is something Bangladesh is quite proud of. With the SDGs, the government is committed to not failing. However, as the major findings demonstrate, the data reveal that Bangladesh is not doing so

well in the depicted cities. To get the outcomes they want, the government's backing of urban governance needs to be greatly altered. The research makes some recommendations.

Every urban project and strategy should have an emphasis on environmental governance. Any service or product delivery must follow appropriate criteria that clearly define environmental responsibilities. Everyone participating in urban governance, whether in formulating policies or carrying them out, must feel that it is their personal obligation to address environmental challenges in everything else they do. It is important to respect, pay attention to, and act upon the advice and knowledge of city employees who operate "on the front lines," such as firefighters and building inspectors. The first step must be to shift the green revolution from a national to a personal level through a mental shift. Urban parks need to be constructed more thoroughly so that they can serve as the neighborhood's lungs, creating oxygen in a way that concrete can never do, as well as a place for residents to relax. Such actions can pave the way for the achievement of SDG 11 if they are combined with a commitment from the highest levels of the government of Bangladesh to inspire and guide the country and its people in that direction.

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REFERENCES

[1] Kates, W.R., Thomas, M.P., Anthony, A.L. (2005). What is sustainable development? Goals, indicators, values, and practice. Journal of Environment: Science and Policy for Sustainable Development, 47(3): 8-21. https://doi.org/10.1080/00139157.2005.10524444

[2] Bangladesh Ministry of Environment and Forests. (2012). Bangladesh: Rio + 20 National Report on Sustainable Development. Dhaka: Ministry of Environment and Forests. Government of the Peoples' Republic of Bangladesh, Article 18 A.

[3] Government of the Peoples' Republic of Bangladesh, (2016). The Constitution of the People's Republic of Bangladesh, Section 12, Article 18A. Dhaka: Law, Justice and Parliamentary Division.

[4] Katharina, B. (2020). How has the world's urban population changed from 1950 to today? World Economic Forum, 04 November 2020. https://www.weforum.org/agenda/2020/11/global-continent-urban-population-urbanisation- percent/.

[5] United Nations Department of Economic and Social Affairs. (2014). World Urbanization Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352).

[6] Seto, K.C., Fragkias, M., Güneralp, B., Reilly, M.K. (2011). A meta-analysis of global urban land expansion. PLoS ONE, 6(8): e23777. https://doi.org/10.1371/journal.pone.0023777

[7] Dilling, L., Lemos, M.C. (2011). Creating usable science: Opportunities and constraints for climate knowledge use and their implications for science policy. Global Environ. Change, 21(2): 680-689. http://dx.doi.org/10.1016/j.gloenvcha.2010.11.006

[8] Mittal, N., Petrarulo, L., Perera, N. (2015). Urban environmental governance: Bangladesh as a case in point. Climate Change in the Asia-Pacific Region, 119-142. http://dx.doi.org/10.1007/978-3-319-14938-7_8

[9] Government of the Peoples' Republic of Bangladesh. (2016). Mapping of ministries by targets in the implementation of SDGs aligning with 7th five year plan (2016-20). Sustainable and Inclusive Planning (SSIP) Project General Economics Division (GED) Planning Commission. http://www.plancomm.gov.bd/sites/default/files/files/plancomm.portal.gov.bd/files/.

[10] Kothari, C.R. (2005). Research Methodology Methods and Techniques, 2nd ed. New Delhi: New Age International Limited, 179.

[11] Islam, T. (2020). Environmental governance – perspective, Bangladesh nature study society of Bangladesh. http://www.naturestudysociety.org/environmental-governance-perspective-bangladesh/.

[12] Ruhullah, S. (2017). Urban environment and major challenges in sustainable development: Experience from Dhaka City in Bangladesh. South East Asia Journal of Public Health, 7(1): 12-16. https://doi.org/10.3329/seajph.v7i1.34673

[13] Bulbul, A. (2019). Environmental governance and sustainable development in Bangladesh: Millennium development goals and sustainable development goals, Asia Pacific Journal of Public Administration, 41(4): 237-245. https://doi.org/10.1080/23276665.2019.1698930

[14] Key Informant Interview (KII). (2020). With Bidhayak Roy Chowdhury, Chief Executive Officer; and Nur Ajijur Rahman, Chief Engineer. Sylhet City Corporation. Interview taken by A K M Mahmudul Haque at the City Corporation Office at, 11:30 AM, 23 November, 2020.

[15] Key Informant Interview (KII). (2020). With Md. Kabad Ali Sarkar, Deputy Director (Act.), Fire Service and Civil Defense Division, Sylhet City Corporation. Interview taken by A K M Mahmudul Haque at the City Corporation Office at, 11:30am, 23 November, 2020.

[16] Key Informant Interview (KII). (2020). With Md. Harunur Rashid, Forest conservation officer, Coastal Circle, Barisal City Corporation. Interview taken by A K M Mahmudul Haque at the City Corporation Office at, 230 PM, 18 January, 2021.

[17] Key Informant Interview (KII). (2020). With Md. Tota Mia, Assistant Director, Environmental Division, Barisal City Corporation. Interview taken by A K M Mahmudul Haque at the City Corporation Office at, 10.15 AM, 18 January, 2021.