Briefing

Urban Climate Resilience

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Policy Pointers

Coordination action from the government is require for ensuring urban climate change resilience in Dhaka city.

Collaboration of Multiple Stakeholders might expedite the process of Urban Climate Resilience and reduce the chance of any overlapping of activities.

A national Urban policy and strategic action plan can guide stakeholders to undertake appropriate measure, which could then be aggregated for a global

Integrated Approaches including need assessment of the community, land tenure etc would enhance the process of being climate resilience

Urban Climate Change Resilience: Role of Multi-stakeholder Collaboration

An improved multi-stakeholder collaboration in the water and sanitation sector can contribute towards urban climate resilience in the Dhaka city. But how can the stakeholders come forward to improve the present situation or how the multi-stakeholder collaboration can work? At present, the slums of Dhaka are developing in haphazard manner with increasing number of rural migrants. A good number of NGOs and government organizations are working for the improvement of water and sanitation system but hardly considering resilience issue in their activities. Current stakeholder collaboration is facing some challenges and yet to develop to give a desired result of collaborative effort. The paper summarizes the impacts of climatic hazards on water and sanitation infrastructure and services, overview of stakeholder activities and collaboration and ways to improve multi-stakeholder collaboration for Urban Climate Resilience in water and sanitation sector in the low income settlements of Dhaka.

Climate Change Impacts in Dhaka City

Dhaka megacity is affected by climate change primarily in two ways: flooding/ drainage congestion caused by heavy rainfall and heat stress.[1] The impact of flooding has increased in recent years in combination of torrential rainfall, unplanned and haphazard infrastructure, destruction of natural water bodies.[2] the city has experienced nine major floods over last sixty years[3]. In 2004, the city experienced unprecedented rainfall of 341 mm in a period of 24 hours which inundated more than two thirds of the capital city.[4] Dhaka's utility services such as its sanitation system, drinking water supply and sewerage lines are victims of these kinds of extreme events.

Who are at risk?

More than 5 million slum-dwellers in Dhaka live among trash because there are very few effective waste disposal systems in slum areas are vulnerable to risk of climate change.[5] Lack of protective infrastructure facilities and quality services are the two major risks faced by these groups who live and work in overcrowded slums and squatter settlements in hazard prone areas.[6]

Water and Sanitation status in low income settlements of Dhaka

In the slum areas there are a lack of the most basic amenities associated with urban life,

such as running water, sewage systems, toilet facilities and waste disposal services.[7] The existing problems according to current research findings are as follows.[8]

Poor quality of services and inadequate supply of water due to problems in the collection point of DWASA e.g. leakage in pipe and no coverage in the slum areas.

Lack of access to improved sanitation. Contamination of pond ditches and lakes by hanging latrines

During the time of flooding or water logging the sufferings increased as the waste from unsanitary latrine or sewerage pipe overflows

The women and children are more vulnerable to those adverse situations as women are responsible for household activities and lack of toilet facilities also hampers the maintenance of menstrual hygiene

Challenges in Implementation of WATSAN Projects

There is no security of land tenure of the slum dwellers. The land owners either government or the individuals have the right to evict them for any developing activities. That is why fear of eviction forbade developing the infrastructure by their own financing.

High installation cost of water and sanitation infrastructure which is not affordable to slum dwellers

Interference by powerful people and local "mastaans" in water supply

Illegal water businesses, water is sold at a higher rate

Inadequate coordination among Government organizations and ministries

Present Status of Stakeholder Collaboration

Only project based collaboration existing among few of the stakeholders mostly NGOs. During implementing projects collaboratively they take support from Community Based organizations (CBOs), community people and government officials. Moreover, there is no long term approach considering the probable impact of climate change.

Positive sides of stakeholder collaboration

-It reduces the chance of overlapping of activities as the works are well distributed

-It enhances communication, knowledge base, networking and diversity in work

-It considers the opinion of different groups of people

-It strengthens NGOs to approach any mandate to government

Limitations of collaboration

-Sometimes it becomes time consuming because when working in collaboration there can be a wait for the consent of the partners affecting the working time.

-It is also found that differences in the financial year of the partner organizations have impacts on the work.

Policy Recommendations

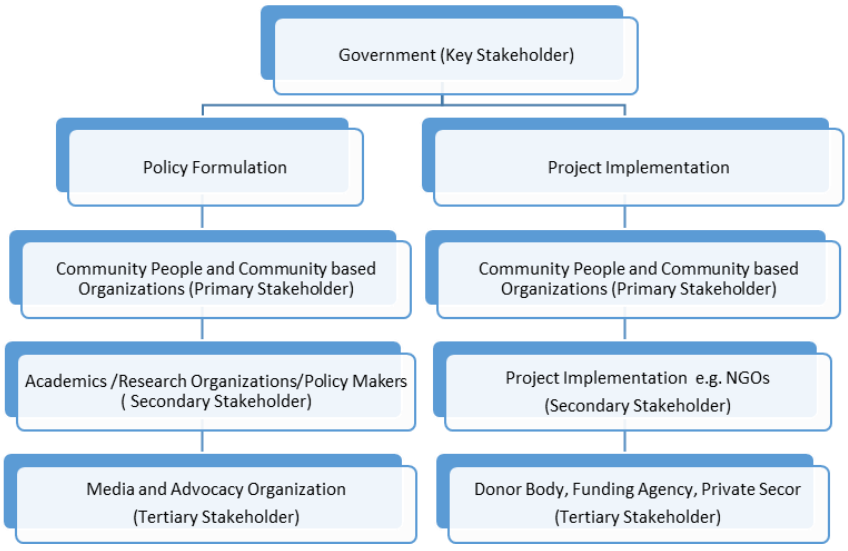
To improve resilience in the water sanitation sector it is necessary to have multilevel collaboration.

Since many different actors, including community members and government and non-government agencies, are responsible, a concerted effort among these actors interacting at different levels is required.[10] The following recommendations can be followed for designing policy for multi-stakeholder collaboration in urban climate resilience.

1. Government to play the key role

Since government organizations are responsible for maintaining the water and sanitation of the Dhaka city, it is the responsibility of the government to play a key role for implementing resilience. To make the city climate resilient and ensure development, it is necessary to have an all round effort from all the stakeholders ranging from community people, government, NGOs, policy, advocacy and research institution etc.

Figure 1: Stakeholders in urban water and sanitation



2. Develop an urban policy guideline

It is necessary to have platform of all those stakeholders who will approach to the government about the policy and land tenure ship of the urban poor. The first and foremost responsibility of this platform is to ensure the legal tenure ship of land for the urban poor. After that there should have been a strategic action plan that will define long, medium and short term goals. The NGOs in combination of other stakeholders can assist government organizations in ensuring policy and strategic action plan.

3. Prepare a strategy for effective collaboration

To ensure climate resilience in the urban water and sanitation sector, the following steps could be followed;

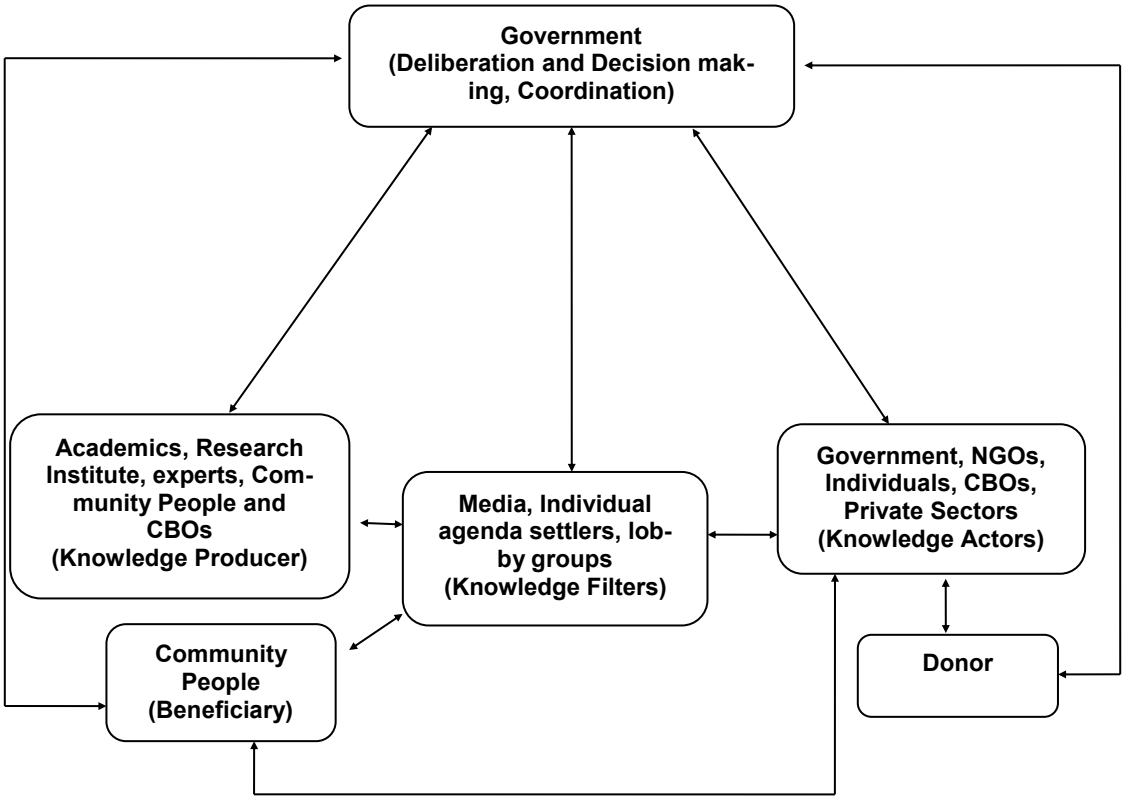
Firstly, **the National government** has to formulate a group for coordination of the work where responsibility of every actor should be mentioned, alternatively the platform of multi stakeholder can approach to government a coordination group where representative from all the sectors will be present. Representation from an urban policy dialogue can run the process very smoothly.

the government policy makers and other stakeholders should develop a policy with long and short term strategic action plan by consulting with the relevant stakeholders, expert, advisors etc.

Secondly, **research organizations and academics** will carry out their research. They will predict the future impact of climate change by considering historical and projected data and assessing the present infrastructure and coping capacity of the low income groups. **media and the lobby group** have to play the role by communicating the scientific findings to the local community. Hence community mobilization is also required as the community people have to play a key role.

Thirdly, , the **private sectors** are playing a key role for the development of Bangladesh. This could be included as a stakeholders as industrial wastes dispose into rivers which could be spread during flooding or water logging. Also the private sectors employs the people living in the informal settlements as labour, so important for them to be healthy. Furthermore, a good number of projects for improvement of water and sanitation have been completed but development has not made so far. Analysis of those implemented projects might provide quality information which will provide guide line to plan a successful project initiatives

Figure 2: Recommended process of multi-stakeholder collaboration in urban climate resilience



Fourth, To play a key role in urban climate resilience the **NGOs** have to have a long term strategic plan. By initiating a long term strategic plan they can form a platform with collaboration of other NGOs who are working in different sectors. This platform of NGOs will approach to government about different demand for improvement of the plan with time to ensure the flexibility of resilience plan. Representation from an urban policy dialogue can run the process very smoothly.

4. Follow up on regular basis

The project implementation agencies such as government or NGOs will follow the set guidelines. The knowledge of the project will be disbursed through the media. All the actions should be followed up the coordination body of the government, hence the chance of duplicity will be reduced.

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Notes

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[1]Alam, M., and M.D.G, Rabbani., 2007. Vulnerabilities and responses to climate change for Dhaka. *Environment and Urbanization* 19(1) 81-97 / [2]Yahya, S.M., S, Shams., A.K.M.S. Islam., K. Mahmud.2010. Climate change impact on flood vulnerability for Dhaka city. *Proc. of International Conference on Environmental Aspects of Bangladesh* (ICEAB10), Japan, Sept. 2010.PP 37-39 / [3]Jabeen, H., C, Johnson., and A, Allen. 2010. Built-in resilience: learning from grassroots coping strategies for climate variability. *Environment and Urbanization*, 22(2), 415-431. / [4]Ahasan, M. N., M. A. M, Chowdhury., and D. A, Quadir. 2011. Simulation of a heavy rainfall event on 14 September 2004 over Dhaka, Bangladesh using MM5 model. *Journal of Scientific Research* 3(2) 261-270. / [5]DSK. 2012. *Evidence towards Eradication of Extreme Poverty at the Slums in Dhaka City*. DushthaShasthya Kendra. / [6]Banks, N., M, Roy, and D, Hulme. 2011. Neglecting the urban poor in Bangladesh: research, policy and action in the context of climate change. *Environment and Urbanization* 23(2) 487-502; Hardoy, J.E.,D, Mitlin., and D, Satterthwaite. 2001. *Environmental problems in an urbanizing World*. London: Earthscan; Jabeen, H., C, Johnson., and A, Allen. 2010. Built-in resilience: learning from grassroots coping strategies for climate variability. *Environment and Urbanization*, 22(2), 415-431; Satterthwaite, D., S, Huq.,M, Pelling., H, Reid., and P.R, Lankao. 2007. Adapting to climate change in urban areas, the possibilities and constraints in low-and middle-income nations. Human settlement Discussion paper series, Theme: Climate change and cities-1. International Institute for Environment and Development (IIED); IFRC. 2010. World Disasters Report 2010: Focus on urban risk. Geneva: International Federation of Red Cross and Red Crescent Societies; UNISDR. 2009. Global assessment report on disaster risk reduction 2009 – Risk and poverty in a changing climate: Invest today for a safer tomorrow. Geneva: United Nations International Strategy for Disaster Reduction; UN-HABITAT. 2011. Cities and climate change: Global report on human settlements 2011. London: Earthscan; Baker, J. L. 2012. *Climate change, disaster risk and the urban poor: Cities building resilience for a changing world*. Urban Development Series. Washington: The World Bank. / [8]World Bank. 2007. Dhaka: Improving living conditions for the urban poor. Bangladesh Development Series, Paper No. 17; Hossain, H. 2008. Rapid Urban Growth and Poverty in Dhaka City. *Bangladesh e-Journal of Sociology* 5(1)1-24; UNICEF. 2010. Understanding Urban Inequalities in Bangladesh: A prerequisite for achieving Vision 2021. UNICEF, Bangladesh; Ahmed, S. 2013. *Sustainable Urban Development of Slum Prone Area of Dhaka City*. World Academy of Science, Engineering and Technology 75 2013, pp. 393-400. / [8]Hoque, S.,S, Tasmiah., T, Ferdous., U, Karim., and F. J, Khan. 2013. Condition of basic services water supply, sanitation and waste management in slums of Dhaka city: An assessment. Undergraduate thesis submitted to the Department of Civil Engineering, Ahsanullah University of Science and Technology, Dhaka, Bangladesh; Hossain, D., N, Jahan., M. I, Hossain.,K, Akhter.,I, Islam., andN, Sharmeen. 2013. PRA: A tool to address WatSan issues and achieve the Standard in low income settlements- An empirical study on a Dhaka slum. *Journal of Bangladesh Institute of Planners* 6, 73-85. / [9]Da Silva, C.W., and P, Magara. 2013. Interview. From project-based to institutionalized multi-stakeholder learning in the water sanitation and hygiene sector: experience from Uganda. *Knowledge Management for Development Journal* 9(3) 167-173.

Knowledge Products

The International Centre for Climate Change and Development (ICCCAD) facilitates and undertakes research on climate and development; it aims to create and lead a network of Southern-based partner institutes to build research capacity in South, facilitate South-South collaboration and disseminate knowledge Globally.

Habitat for Humanity Bangladesh, a branch of HFH International, was established in 1999 in Bangladesh. It currently operates in 7 locations across the country, aiming to break the cycle of poverty, that comes with poorly-constructed homes. Habitat takes this approach, as it has found that improved shelter conditions, especially using a participatory approach, have tangible community, environmental and health-related benefits.

The International Institute for Environment and Development (IIED) promotes sustainable development, linking local priorities to global challenges. IIED support some of the world's most vulnerable people to strengthen their voice in decision making.

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