

CONSOLIDATED REPLY

Climate and Disaster Resilient Cities through Sensitive
Urban Governance



Urban Poverty Reduction
Community

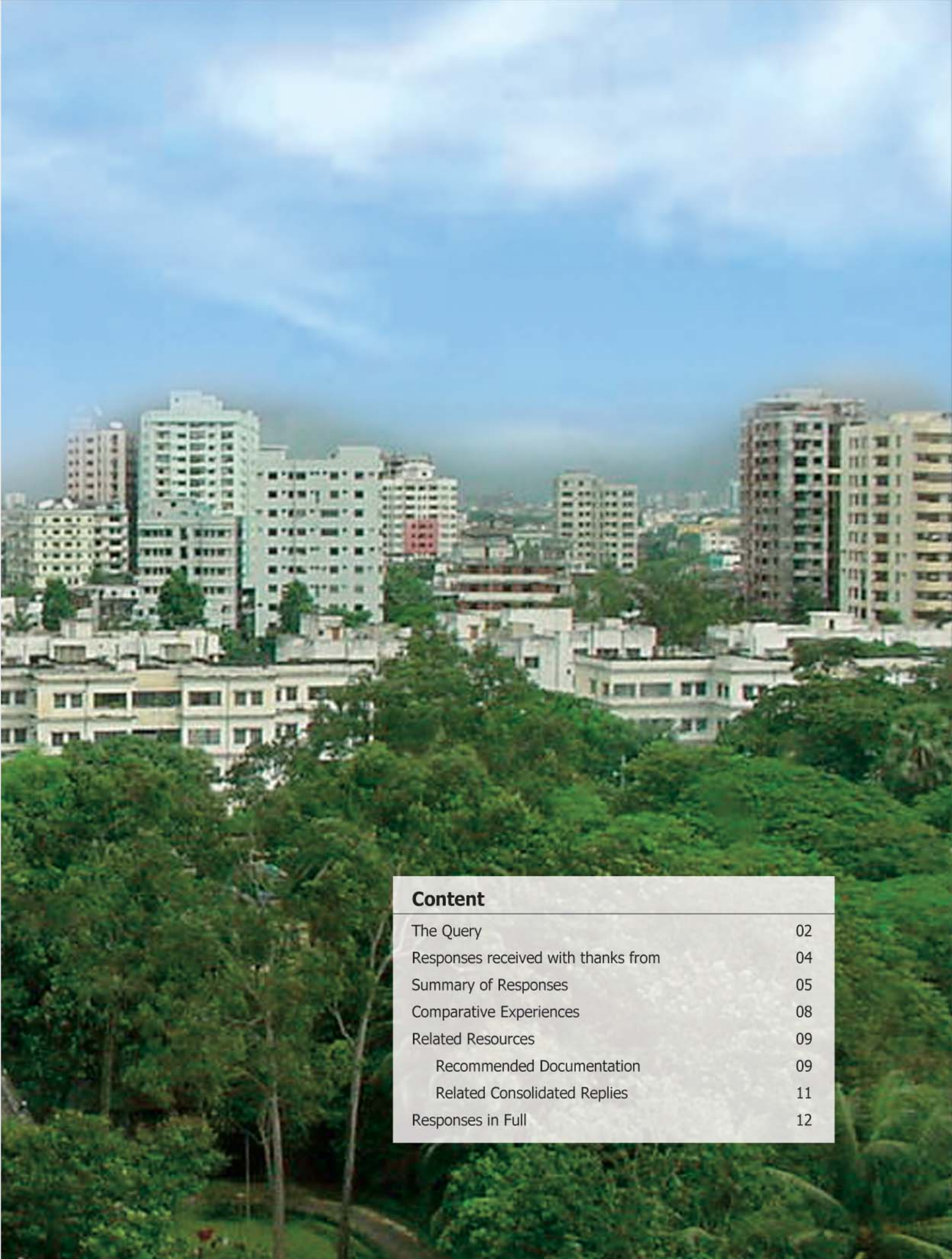


Climate and Disaster Risk
Reduction Community



Compiled by Dilruba Haider and Shahana Siddiqui, Community Facilitation Coordinator
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The Query

From: Aminul Islam
Climate Change, Environment and Disaster (CCED) Cluster
UNDP Bangladesh, Dhaka
Posted: 25 November 2011

Dear Members,

The Government of Bangladesh with a wide-range of stakeholders will hold the First Session of the Bangladesh Urban Forum (BUF) from 5 to 7 December 2011 at the Bangabandhu International Conference Centre, Dhaka. The process of promoting stakeholder engagement with the BUF, as an institution will continue with programmes and events held throughout 2012 and beyond, leading to subsequent BUF national events. The theme of the First Session is "Bangladesh's Urban Future: Making Cities and Towns Work for All". The event will bring together all the stakeholders in urban sector and highlight the importance of focusing development in the rapidly growing urban. The organizers are expecting a very large gathering of people from home and abroad.

This three day event will have several thematic sessions, one of which will be on 'Environment, Disasters and Climate Change'. That will be coordinated and facilitated by Climate Change, Environment, and Disaster (CCED) Cluster of UNDP. The effects of climate change, environmental degradation, and disaster threaten the lives, livelihoods, assets, environmental quality, and economic gains of city dwellers particularly the urban poor. This session therefore intends to foster a collective view through broad based consultation with the practitioners and communities engaged in urban affairs and in the climate change, environment and disaster (CCED) thematic areas.

I would like to request the members of the UPR and CDRR Communities to share their experiences and advice on the questions below:

- What should the policy and institutional reform priorities be to ensure that climate change, environment and disaster risk reduction considerations are adequately integrated into city governance?
- Do you have any experiences and/or advice on how to deal with the influx of people into urban areas, displaced by climatic extremes?
- Based in your experience what do you think should be the capacity building areas inside and outside government (including private sector) required, in order to enhance urban governance and address the challenges posed by disasters and climate change?

Your contributions in this discussion will be integrated into the session on 'Environment, Disasters and Climate Change' at the BUF and will be duly acknowledged.



Responses received with thanks from:

1. Md. Shahidul Islam
Bangladesh Association for Social Advancement, Dhaka
2. A. H. M. Rezaul Kabir
BRAC, Dhaka
3. Rezaur Rahman
Institute of Water and Flood Management,
Bangladesh University of Engineering and Technology, Dhaka
4. Mahbuba Nasrin
Centre for Disaster and Vulnerability Studies (CDVS)
Department of Sociology University of Dhaka, Dhaka
5. Shaila Shahid
Comprehensive Disaster Management Programme (CDMP II), Dhaka
6. Steven Goldfinch
UN International Strategy for Disaster Reduction, New York, USA
7. Dilruba Haider
United Nations Development Programme (UNDP) Bangladesh, Dhaka
8. Tofail Md. Alamgir Azad,
Dhustha Shastha Kendra (DSK), Dhaka
9. Khurshid Alam, ThinkA head Limited, Dhaka
10. Mark Ellery
Water and Sanitation Program, The World Bank, Dhaka



Summary of Responses

Globally there has been a phenomenal growth in urbanization over the past 50 years or so, and Bangladesh is no exception. It is posing newer challenges for not only the development but also disaster, environment and climate change practitioners alike. This explosive growth in urbanization is stretching Bangladesh's limited resources and infrastructure, and aggravated by the increase in extreme flooding, storms, tidal surges, and rising sea levels. Therefore, it is important to address climate change, disaster and environment related issues for sustainable urban development. Towards this, members of the CDRR and UPR Communities responded enthusiastically to a request by planners of the Bangladesh Urban Forum (BUF) to provide inputs on how to make cities more resilient to disasters and the effects of climate change and improve the responsiveness of urban government.

Policy/Institutional Reform Priorities

Looking at what the institutional reform priorities are needed to ensure climate change, environment and disaster risk reduction considerations are adequately integrated into city governance, respondents pointed out that having good policies in place would lead to better governance. They advised reviewing the Draft Urban Policy, Water Act, Disaster Management Act, and other environmental policies, and disaster management related policies being drafted to make sure they incorporate environmental, climate change, and disaster risk reduction concerns.

Members also recommended reviewing the existing Acts, policies, and strategies to make sure there is significant convergence on these areas. In addition, they suggested focusing on policy and institutional reform in specific sectors: water, human health, energy, transport, infrastructure, and settlements.

One of the members shared the success of Peru in streamlining its DRR efforts and incorporating it into its public investment plans. The initiative had proven to be great success and resulted in proper utilization of its development investment and funds.

Strategic Intervention for Making Resilient Cities and Handling Climate Refugees

The level of vulnerability, capacity, resources for service delivery, governance structures, as well as the priority areas vary between urban, peri-urban, and small towns. Urban planners, discussants stressed need to consider their area's unique characteristics when trying to integrate environmental, climate change, and disaster risk reduction concerns into plans.

The growing numbers of slum dwellers in Dhaka, many of whom are actually internally displaced population (IDPs), are contributing to the city's economic growth by providing the much needed labour to manufacturing, services, and other sectors. Planning for service provisions therefore needs to be inclusive of the urban poor and be made disaster-proof. Members felt, ensuring the urban poor have proper housing must be a priority area, especially for IDPs. The lack of proper housing makes women and girls more vulnerable and flimsy materials used to build houses are extremely likely during disasters to collapse, catch fire, or blow away. Development planned to include provisions for housing settlement/shelters for IDPs and steps to make existing slum houses more secure.

Along with housing, plans also need to look at improving sewerage systems, utility services, including water and sanitation and health facilities. Poor water and sanitation systems lead to outbreak of all sorts of water borne diseases during and after disasters. Planners could look at establishing better health services by setting up or supporting static and satellite clinics, which provide subsidized care to the urban poor and linked to larger facilities.

Members opined that employment is another critical area that needs attention, especially labour force management and human resource development. To address unemployment, the government, NGOs, and the private sector need to exert a concerted effort. One suggestion was to provide private sector companies an incentive to set up small industries/factories in medium sized satellite towns to create employment opportunities for the poor. Another idea was for the Climate Change 'Trust' and 'Resilience' Funds to provide funding to the Dhaka City Corporation, the Ministry of Women and Children Affairs, and some targeted financial institutions to channel funds to the climate migrants in the large cities including Dhaka for self-employment through micro finance initiatives. Additionally, members suggested linking existing safety net programs to strengthen the adaptation capabilities of the slum dwellers.

Emergency management is another important aspect in urban planning, respondents noted. Effective management is needed to adequately prepare for extreme events like floods, storm-surges, and earthquakes. Urban development plans need to include advance planning for post disaster search and rescue, and reconstruction. The governments and humanitarian community has learned a lot about the challenges of handling emergencies and ways to deal with them, planners should apply these lessons when preparing urban plans. For example, rebuilding houses and resettling people in new locations are a major challenge post-disaster, due the problems of land allocation, thus having a well thought out plan housing and resettlement plan in place would be extremely beneficial. One of the members shared experiences from Haiti and the January 2010 earthquake, which left thousands of urban poor homeless and the repercussions that resonated even in rural areas due to resettlement. This reaffirmed implications rural areas face even when disaster strikes in urban areas.

In addition, resources need to be available to planners to share good practices from inside and outside the country. It would be very useful to learn how other urban areas are planning for garbage disposal, facilitating environmentally friendly urban transportation, and managing greenery and water bodies (to keep water bodies free of encroaching) in urban areas. Planners could also look for ways to motivate and engage city dwellers to reduce their carbon footprint and gain through carbon trading.

Capacity Building Areas

To ensure an enabling policy environment, proper planning, and 'out of the box' thinking, discussants suggested developing the capacity of the officials from relevant government departments (i.e. Energy, Department of Forest, and Bangladesh Road Transport Corporation). Government officials need to have the required knowledge about environment, climate change, and disaster risk reduction to understand the importance of mitigation and adaptation and members suggested the Ministry of Finance, be the first candidate. The ministries and departments could earmark a certain budget for capacity development each year and even access the Climate Change Trust Fund to do this. Along with national level officials, personnel from city corporations also need to have their capacity strengthened. Respondents recommended dividing the capacity building task between different local level actors to avoid overlap and also conducting a baseline to better understand the situation to understand what capacities are needed in order to help cities reduce their risk to disaster and better adapt to climate change.



Photo Credit: UPPR

Members also felt local government authorities need to be empowered to implement urban development plans. The competency and capacity of city and municipal government to address a multi-layered environmental problem such as environmental degradation, disaster and climate change impacts are largely determined by the legal structures within which it is embedded, and also by factors such as critical momentum, past successes, lessons learned, business consensus, public opinion, market opportunities, policy dialogue and environmental advocacy.

Lastly, members strongly encouraged developing a plan to re-build governance after a large-scale disaster. Large-scale disasters do not affect only the immediate area; they often cause significant impact well beyond the initial site. Thus, there is a need learn from different Governments and humanitarian communities to formulate an advance DRR plan and build government capacity to handle disasters and climate change.



Photo Credit: UPPR

Comparative Experiences

Peru

Government Incorporated Disaster Risk Reduction (DRR) into Public Investment Plans (from Steven Goldfinch, UN International Strategy for Disaster Reduction, New York, USA)

Between 2004-07 the Government of Peru formally incorporated DRR into its National System for Public Investment. They developed risk concepts and assessment methods, convened a large number of actors from different levels of government and across departments, trained more than 900 professionals, implemented new standards and instruments, and developed a long-term investment vision. These efforts were critical to its success and achieving a cost-benefit ratio of 1:37 for development investments.

Haiti

Implications for Rural Areas after January 2010 Earthquake (from Khurshid Alam, Think Ahead Limited, Dhaka)

In Haiti, the urban areas remain the heart of the economy with strong linkages to rural areas in terms of trade and services. After the January 2010 earthquakes, Port au Prince was one of the hardest hit urban areas, which caused severe disruptions in trade and services with rural areas. This translated into major problems for the population living in rural areas in terms of lost income, livelihood, etc. along with increased migration of city dwellers made homeless by the earthquake to rural areas.



Photo Credit: UPPR

Related Resources

Recommended Documentation

Women's Encounter with Disaster (Series: Women on Frontpage), (from Mahbuba Nasrin, Centre for Disaster and Vulnerability Studies (CDVS), Department of Sociology University of Dhaka, Dhaka)
Book; Edited by Samir Dasgupta, Ismail Siriner and Partha Sarathi De; Front Page; 2010
Available at: <http://www.frontpagepublications.com/women-encounter-with-disaster.html>

Contains an article by Mahbuba Nasreen on Violence against Women during Floods in Bangladesh

Global Assessment Report on Disaster Risk Reduction 2011: Revealing Risk, Redefining Development, (from Steven Goldfinch, UN International Strategy for Disaster Reduction, New York, USA)
Presentation; Prevention Web, United Nations; 2011
Available at: http://67.23.224.218/sites/default/files/GARCaribbean_2.pdf (PDF, Size: 1.4 MB)

Highlights the opportunities and incentives for disaster risk reduction in public investment decisions and the need to adapt existing development instruments to support this

Unjust Waters: Climate Change, Flooding and the Urban Poor in Africa, (from Khurshid Alam, Think Ahead Limited, Dhaka)

Study; by Ian Douglas, Kurshid Alam, Maryanne Maghenda, Yasmin McDonnell, Louise Mclean and Jack Campbell; Environment and Urbanization, Sage Publications; April 2008

Available at: <http://eau.sagepub.com/content/20/1/187.full.pdf> (PDF, Size: 178 KB)

A 2007 study in 10 African capitals that looked at what local, national, and international governments and organizations need to do to adapt to the consequences of climate change

"Climate Refugees": Legal and Policy Responses to Environmentally Induced Migration, (from Dilruba Haider, United Nations Development Programme (UNDP) Bangladesh, Dhaka)

Study; by Albert Kraler, Tatiana Cernei and Marion Noack; European Parliament's Policy Department of Citizens' Rights and Constitutional Affairs; Brussels; December 2011

Available at: <http://www.europarl.europa.eu/committees/fr/studiesdownload.html?language=EN&file=60931> (PDF, Size: 1,258 KB)

Examines legal & policy aspects of climate & environmental related displacement, assessing how the current EU framework for immigration & asylum respond to climate induced displacement

Social Formation in Dhaka, 1985 - 2005: A Longitudinal Study of Society in a Third World Megacity, (from Tofail Md. Alalmgir Azad, Dhustha Shastha Kendra (DSK), Dhaka)

Book; by Kamal Siddiqui, Jamshed Ahmed, Kaniz Siddiqui, Sayeedul Huq, Abul Hossain, Shah Naimud Doula and Nahid Rezawana; Ashgate; November 2010

Available for purchase at: <http://www.amazon.co.uk/Social-Formation-Dhaka-19852005-Siddiqui/dp/1409411036>

A comprehensive sociological study of Dhaka city, which tries to establish the broad social, coordinates of Dhaka by analyzing various forms of social statistics

From Shaila Shahid, Comprehensive Disaster Management Programme (CDMP II), Dhaka

Draft Bangladesh Water Act

Policy Document; Institute of Water Resource Management; 2009

Available at: <http://www.ualberta.ca/~mdzahidu/wateractbd/Draft%20BWA.pdf> (PDF, Size: 169 KB)

Envisioned to provide an overarching support to Bangladesh water policies for integrated management, development, utilization and protection of the water resources

National Plan for Disaster Management 2007-2015

Policy document; Ministry of Food and Disaster Management; May 2007

Available at: http://www.cdmp.org.bd/cdmp_old/publications/Draft_National_Plan_for_Disaster_Management.pdf (PDF, Size: 5,524 KB)

Aimed at reducing the country's vulnerability to natural and human induced hazards, and to strengthening the country's capacity in response and recovery from various types of disasters

Bangladesh Environmental Conservation Act

Policy document; Ministry of Environment and Forest; 1995

Available at: http://www.moef.gov.bd/html/laws/env_law/153-166.pdf (PDF, Size: 48.2 KB)

Governs laws on conservation of the environment, improvement of environmental standards and control and mitigation of environmental pollution, amended in 2000 and 2002

Bangladesh Environmental Conservation Rules, 1997

Policy document; Ministry of Environment and Forest; August 1997

Available at: http://www.moef.gov.bd/html/laws/env_law/178-189.pdf (PDF, Size: 112 KB)

Set of rules to reflect directions given by Bangladesh Environmental conservation Act, 1995 to ensure protection of environment and environmental resources, amended in 2002



Photo Credit: UPPR

Related Consolidated Replies

Building Resilient Urban Communities for Reducing Disaster Risks, (from Sifayet Ullah, Climate Change, Environment and Disaster Cluster (CCED) Cluster, UNDP Bangladesh, Dhaka (Advice; Experiences)).
Climate and Disaster Risk Reduction and Urban Poverty Reduction Communities, Solution Exchange Bangladesh. Issued 12 January 2012

Available at: <http://www.solutionexchange-un.net/repository/bd/cdr/cr6-en-24102011-1.pdf> (PDF, Size: 367 KB)

Highlights experiences and advice in sensitizing and raising awareness in urban communities regarding DRR & CC issues and ways in which reduction and mitigations efforts could be led

Microfinance through Urban Local Bodies for Disaster Preparedness and Poverty Alleviation, (from Awadhesh Pathak, City Managers' Association Gujarat, Ahmedabad (Experiences, Advice)).

Disaster Management and Microfinance Communities, Solution Exchange India. Issued 26 August 2008

Available at: <ftp://ftp.solutionexchange.net.in/public/drm/cr/cr-se-mf-drm-18070801.pdf> (PDF, Size: 145 KB)

Shares experiences of microfinance for disaster preparedness and poverty alleviation through ULBs; also enumerates possibilities and challenges for linkages with financial institutions.

Handling Urban Disasters, (from V. R. Raghavan, Satyam Foundation, Hyderabad (Experiences)).

Disaster Management Community, Solution Exchange India. Issued 12 December 2007

Available at: <ftp://ftp.solutionexchange.net.in/public/drm/cr/cr-se-drm-18110701.pdf> (PDF, Size: 144 KB)

Shares examples of standard operating procedures, mechanisms, and processes that can be developed to enable disaster risk reduction in urban areas.



Responses in Full

Photo Credit: UPPP

Md. Shahidul Islam, Bangladesh Association for Social Advancement, Dhaka

Below please find some suggestions in response to your questions:

1. First of all, the governance of the City Corporations need to be strengthened by developing their capacity on climate change and disaster risk reduction. This capacity building is required for all personnel of City Corporation.
2. Stakeholders identification and consultation with them is very essential to strengthen the risk reduction initiatives in urban areas.
3. A baseline survey based on the targets and objectives of the urban risk reduction or climate adaptation projects is also required for better and proper implementation the projects.

A.H.M. Rezaul Kabir, BRAC, Dhaka

'Urbanizing Future' for the climate vulnerable poor, both in urban and rural areas in climate vulnerable nations like Bangladesh will be the challenge in the coming days. Any urban forum therefore should consider with due preference how to make 'Inclusive urbanization' to address climate change adverse impacts for making climate vulnerable poor better-off instead of being left as worse-off.

In this regard I believe least costly but effective new approach for urbanizing rural people's habitat should get priority in future design and planning in urban development.

For a healthy and sustainable urbanization move in the context of climate change, planned extension of urban facilities to the poor slum residents in cities and towns may not prove enough if an inclusive urbanization programme is not taken up by the vulnerable countries with required financing from developed nations to combat climate-poverty nexus through initiatives for cluster housing, particularly in climate vulnerable areas.

Rezaur Rahman, Institute of Water and Flood Management, Bangladesh University of Engineering and Technology, Dhaka

I am addressing the first bullet point. The first priority should be to formulate an urban policy, which adequately addresses the Environment, Disasters, and Climate Change. Recently a draft version of the National Urban Sector Policy was circulated in this forum for comments. The draft version appears to be lacking in this respect.

Hopefully during finalization of the policy, this aspect of the policy will get adequate attention. A good policy will lead to better governance.

Mahbuba Nasrin, Centre for Disaster and Vulnerability Studies (CDVS), Department of Sociology University of Dhaka, Dhaka

Thanks to Mr. Aminul Islam for posting the query. The urban governance is one of the neglected areas in the context of environment, disaster, and climate change. Our empirical studies on relevant areas (Buriganga River, water services to urban slums, gender and disaster management of vulnerable city dwellers, disasters in old Dhaka, etc.) indicate that the unplanned urbanization and industrialization did pose threats for the city dwellers, and displaced population, creating ecology and environmental disasters in the cities even before Independence of the country. Based on this background the following responses can be considered:

- Governance and institutional reform should focus on land use, habitat and growth of urban slums and sub-urban population, urban poverty, malnutrition, employment and labour force management, human resource development, ensuring quality of utility services for preventing environmental degradation, involve local government authorities (free of politics and gender bias) with devolution of power, proper urban plans for all the cities and towns.
- A study (by Nasreen, M. 'VAW during disasters and post disaster situations', 2007) indicates that violation of fundamental rights are grave for the people living in urban and sub-urban areas. Lack of shelters/housing is one of the major problems and insecurity of women and girls are common. Steps should be taken in this context. Medium sized economically attractive towns may refrain poor population from migrating to Dhaka or other big cities.
- Government, INGOs, NGOs, and the private sector's combined efforts are needed in creating employment in both urban and rural areas including sub-urban areas. Capacity building for the local government on climate change and disaster risk reduction (DRR) issues must be divided among the actors to avoid overlapping. Resources should be made available in sharing good practices within and outside country (e.g. garbage disposal), facilitating environment friendly urban transportation, utility services, making urban policy towards land use (refer to Master Plan of Dhaka city), equitable access, greenery and watery urban landscape (keeping water bodies free of encroaching). Maintaining ecological balance of a city must be given high priority based on functional creative thinking.

Shaila Shahid, Comprehensive Disaster Management Programme (CDMP II), Dhaka

These days' cities are increasingly recognized as significant carbon emitters and places where vulnerability to disasters and climate change is becoming acute as the city dwellers particularly the urban poor are continuously facing the impacts through physical, social, and financial stresses.

For the purpose of providing an overview of the first question we need to look at the following:

- The existing system of urban governance and planning for disaster risk reduction and climate change
- An analysis of the existing policy and/or laws having direct and indirect bearing to environment, disaster and climate change; whether these are compatible enough to address the current scenario or threats posed by climate change, disaster and environmental degradation
- Identify the challenges in terms of responses between adaptation and mitigation as well as environmental considerations focusing urban context
- Implications of rapid industrialization and growing infrastructure in the cities while considering the increased population and trend of migration from rural to urban
- The capacity level and financial resource implications as well as political interest of the regulatory authorities of the urban system

In Bangladesh, disaster and climate change already became an issue of increasing political and environmental significance. But how cities go about addressing these issues is yet to be well understood. Here we have to consider urban, peri-urban, small towns and different category of cities as well as municipal governance to address the issue as the vulnerability level also differs based on the capacity, resources for delivery of services, existing structure of governance and priority areas.

Therefore, we need to incorporate these concerns into Draft Urban Policy, Draft Water Act, as well as Environment, and Disaster Management related policies, which are on the cards now. We are lacking of any significant convergence in our existing Environment Conservation Act 1995, Environment Conservation Rules 1997 to address the emerging threat of climate change and disaster. We are yet to have the Disaster Management Act and hopefully we can assume only that the proposed Disaster Management Act (DMA) should have enough space to enforce disaster management rules, regulations, mechanisms, and standing orders, which will enable Bangladesh to better address these issues especially considering the urban context.

Urban planning needs to be better connected with emergency management to plan for extreme weather events. Further to that the competency and capacity of city and municipal government to address a multi-layered environmental problem such as environmental degradation, disaster and climate change is largely determined by the legal structures within which it is embedded, but also by factors such as critical momentum, past successes, lessons learned, business consensus, public opinion, market opportunities, policy dialogue and environmental advocacy. However, there is also limited coherence and convergence in institutions, organisations and policy frameworks at national level that need to be addressed. Technical and financial planning should have to be integral part of urban governance and therefore required to ensure that undisrupted services are provided.

For institutional reform areas, we need to look primarily at the overall governance focusing environment and disaster management and the following sector to address disaster, climate change and environmental degradation:

- **Water:** National water policies and integrated water resources management; water-related hazards management
- **Human Health:** Public health policies that recognize climate risk; strengthened health services focusing community level
- **Energy:** National energy policies, regulations, and fiscal and financial incentives to encourage use of alternative sources; incorporating disaster and climate change in design standards
- **Transport:** Integrating DRR & CCA considerations into national transport policy; investment in R&D for special situations
- **Infrastructure & settlement:** Standards and regulations that integrate climate change considerations into design; land use policies; building codes; insurance. (Sources: IPCC (2007) and World Bank (2008))

Steven Goldfinch, UN International Strategy for Disaster Reduction, New York, USA

While Bangladesh has excellent disaster management policies, these have not been translated into addressing the risks cities face from an urban development perspective. While there are the obvious pressures (growing populations, private sector vested interest, corruption and political agendas), not enough has been done to systematically address disaster risk reduction in public investment decisions, and this is fundamental given that this accounts for the majority of urban development.

The 'Global Assessment Report 2011: Revealing Risk, Redefining Development' (http://67.23.224.218/sites/default/files/GARCaribbean_2.pdf PDF, Size: 1.4 MB) extensively explores the opportunities and incentives for disaster risk reduction in public investment decisions and the need to adapt existing development instruments to support this. These include national public investment planning systems, social protection mechanisms, and infrastructure investments. Experience from other countries suggests these are best achieved through a decentralised, local-level approach. Of course, decentralisation is not enough unless it is supported by clear legislation and the necessary enablers (authority to act, human resources, budgets, etc.).

In terms of examples, Peru formally incorporated disaster risk reduction into its National System for Public Investment between 2004 and 2007. This was achieved by developing risk concepts and assessment methods, convening a large number of actors from different levels of government and across departments, training more than 900 professionals, implementing new standards and instruments, and developing a long-term vision of investment. These have all proved to be critical success factors and have led to a cost-benefit ratio of 1:37 for development investments in Peru. The experiences of Costa Rica, Guatemala, and Columbia also offer good lessons.

Given the immense challenges facing Bangladesh in addressing urban risk, seeking out best practices and lessons from other developing countries will be highly beneficial for policymakers.

Dilruba Haider, United Nations Development Programme (UNDP) Bangladesh, Dhaka

There has been a phenomenal growth in urbanisation globally over the past 50 years or so, and Bangladesh is no exception. According to the U.N. Department of Economic and Social Affairs report (2010), in 1950 only 730 million people lived in cities globally. That number has increased to nearly 3.5 billion, and in the next four decades, it will reach 6.3 billion.

Since development discourse and actions historically has been focused on rural arena, it's high time that the development folks now give due attention to the urban where the poor population is growing creating newer challenges not only for the development but disaster, environment and climate change practitioners alike. The explosive growth in urbanization is stretching it's limited resources and infrastructure, which is further aggravated with increase in extreme flooding, storms, surge, and rising sea levels.

However, like any crisis, it brings a positive possibility with it; there is a Potential for carbon off set. City dweller's, especially starting from the lower middle-class the energy requirement is far bigger than the rural people. If these urban people could be motivated and engaged, we could reduce carbon footprint and gain through carbon trading. Using electrical appliances with green technology (which are under production with UNDP support) or using solar energy like CFLs (GoB is distributing about 27 million CFLs), reducing carbon emissions from automobiles, greening of the rooftops, and so on can earn carbon credits for the country.

For these to happen we need enabling policy environment, proper planning, and 'out of the box' thinking. City dwellers would have to be motivated into Climate Change Adaptation measures. Government might introduce incentives and subsidies for using solar power, plantation, alternative transportation (bus instead or cars by putting in large number of good quality buses in the roads, bicycles to short distances by introducing bicycle lanes in the city streets, etc). Relevant government departments (Energy, Department of Forest, BRTC, and others) could earmark certain budget, access the CC Trust Fund for these works. The government officials need to have the required knowledge and motivation about climate change to appreciate the need of doing these. In this regards, the Ministry of finance have to be educated first.

Influx of people from rural to urban is a natural phenomenon, which has been exacerbated by the climatic extremes. Approximately one million people have been rendered homeless due to river erosion in the mainland river basins over the last three decades. Around 22 districts are at risk of climate-induced displacement. The poorest population living in the vulnerable locations in the coastal belt and the mainland river basins of Bangladesh will be the first to become climate refugees in upcoming years. Tidal floods in the coastal belt have already affected 56% people in the 48 vulnerable Upazilas; villages have been flooded by tidal saline water twice a day over the last 3 years. The Houses, Land, and Properties of 2.4 million people (32%) of the inhabitants there have been destroyed by repeated cyclones and rising tides. Of them, 1.56 million (64%) are languishing as in the remaining embankments or higher grounds in exposed zones; while 6.7 lakh (27%) have migrated to cities including Dhaka. The situation is worsening! (source: "Climate Refugees in Bangladesh - Answering the Basics: The Where, How, Who and How Many": <http://www.towardsrecognition.org>).

As these climate migrants are flocking into the cities, it is not just about the services getting stretched, but it has a huge implication for security and well-being of the entire city population. Lack of employment, housing, education and so on lead these people to resort to unlawful activities by falling into the traps of the gangsters. A study in '80s showed that a large number of sex workers in different brothels are victims of river erosion.

Therefore, the government (law enforcing agencies) needs to have some special measures guarding the entry points to the cities to ensure that vulnerable people don't fall prey to the criminals. Dhaka City Corporation, Ministry of Women and Children Affairs, and financial institutions could be given funding from the 'Trust' and 'Resilience' Funds to channel funds to the climate migrants in the large cities including Dhaka for self-employment through micro finance initiatives.

Developing satellite towns with incentives for private sectors to set up small industries/ factories creating employment for the poor people could be a good strategy. We see one example in Tongi, Ashulia, Dhamrai, where various industries have flourished with the labourers settling in those areas. Similarly, the readymade garment factories in Dhaka could be encouraged to shift in the peripheries of Dhaka, which would take with it a large chunk of slum dwellers from the city.

Tofail Md. Alamgir Azad, Dhustha Shastha Kendra (DSK), Dhaka

The potential impacts of climate change on human health, shelters, and employment consequently increase vulnerability and reduce opportunities of the livelihoods. The contributions of the people of urban slums to Dhaka's economic growth is significant as they provide the much needed labor to manufacturing, services and other sectors. So, it is important to address the climate change and disaster related issues along with the other interventions for ensuring the long term sustainability to get out of poverty, hunger and malnutrition.

All slums and squatters are made of bamboo, straw, low quality wood and tin sheets. Only half-percent slum houses are of good quality and 46% are of very poor quality (weak and temporary structures or kutcha units) (CUS, 2005). These houses become more vulnerable during rainy season. It is imperative to have effective new approach for urbanizing rural people's habitat should get priority in future design and planning in urban development.

Utility services are very inadequate in slums and squatters of Dhaka city. Water supply has improved a bit, but sanitation service is still very poor and does not meet the requirements of this huge population. Only 55% of the poor households currently receive supply water (Siddiqui and et al, 2004). On the other hand, water supplies become contaminated during floods, as pipes in slum areas are likely to be damaged or to leak and breed water-borne diseases, such as diarrhoea, typhoid and scabies. So, health supports through static and satellite clinic in subsidized cost and linkages with formal health services might have immediate result.

Availability of social safety net is crucial during disaster period to ensure food security, and income. Similarly, capacity building and linkages with safety nets will strengthen the adaptation capabilities of the slum dwellers. A comprehensive development plan including housing resettlement/ construction of shelters for slum dwellers, improvement of existing slum houses, building/ improvement of sewerage facilities in the slums, compensation due to loss of workdays during illness and pumping out flood water during water logging etc. initiatives may reduce adverse impacts on lives and livelihoods of the slum dwellers.

Above all, more integration is necessary between the GO and NGOs /INGOs climate and disaster programs for better supporting urban slum community of Bangladesh.

Thanking you all!

Khurshid Alam, Think Ahead Limited, Dhaka

I have two unorganized thoughts that you may include in the discussion in Urban Forum.

1. We need to revisit planning assumptions (e.g. demand for service) and principles (holding tax based) that broadly shaped our urban governance in the context of risk to climate change and earthquakes. With climate change and earthquake, we may see three scenarios: increase in migration to cities/towns, deterioration in service infrastructure/capacity and occasional increase in demand for services due to disasters. Thus our focus should not only be on reduction of emission in cities but also to make cities better host for in-migrants-and address demand for services. In sum, 'Illegality and informality (of occupants)' should not have any place in urban discussion in 'climate justice' regime. In planning, while making service provisions inclusive we also need to make them disaster-proof. We can learn from Kathmandu Valley-the way they made some water supply systems earthquake proof. These may be difficult challenge for existing big cities-but we can start from one that is going through big planning currently such as Rangpur.
2. We also need to have advance planning for post disaster reconstruction in addition to immediate search and rescue. The governments and humanitarian communities learnt a lot about the challenges and ways to deal them. Re-house and resettlement would be the most difficult one as disaster always expose the land problems. Disasters can also significantly impact on existing governance and capacity-we must have plan to re-build governance after large scale disasters. Important lesson I learnt personally is that the disasters taking place in city not necessarily remain urban disaster-they cause far greater impact in rural areas (than we anticipate). Haiti earthquake is an example where poor survivors moved from Port au Prince causing great impact on rural host families and communities. International response often overlook rural dimension of an urban disaster. As Steve Goldfinch said, we should brought in those lessons of Governments and humanitarian communities to formulate an advance plans and build our capacity.
3. Finally, I want to share an interesting study we did in 2007 in 10 African capital-to understand the preparedness that capitals need to adapt with climate change-might provide you some useful thoughts--<http://eau.sagepub.com/content/20/1/187.full.pdf>

Mark Ellery, Water and Sanitation Program, The World Bank, Dhaka

I completely agree with Stephen Goldfinch that it is essential to learn from good adaptation practices. In addition, I would argue that we need robust systems that enable local proponents to identify, replicate, refine good adaptation practices, and then hold policy makers to account for developing climate change policies that support these local practices.

Within an escalating risk environment, it is highly probable that the adaptation practices of people and communities will more and more tend to precede the adaptation policies and strategies of the government. In such a scenario, I believe that good policies and strategies will be those that support the adaptation practices that have been developed by the local governments, communities and their citizens.

Developing 'bottom up' systems to capture, replicate and learn from the emerging local adaptation practices is essential to enable good policies to be informed by good practices. In Bangladesh, the union parishad led and Local Government Division facilitated and partner supported Horizontal Learning Program (HLP) is one such platform that enables the local government replication of local practices to inform the development of policies and programs.

Could a similar kind of a program for City Corporations and Pourashavas enable Disaster Resilient City policies to be guided by the adaptation practices of urban local governments?



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Solution Exchange was first launched in India in 2005 as a UN initiative and currently there are over 25,000 members in 9 countries on 16 thematic Communities of Practice. Bangladesh has two Solution Exchange Communities– the Urban Poverty Reduction Community and the Climate and Disaster Risk Reduction (CDRR) Community.

CDRR provides knowledge service to harness Bangladesh's vast knowledge pool on climate change and disaster risk reduction for more effective and smarter ways of doing the business- policy, planning, or practical issues of implementation. The CDRR Community provides both online and offline services and tools in a non- hierarchical environment, bringing members from different sectors to form one 'Team' to make a positive dent in the field of climate change and disaster risk reduction in Bangladesh.

CDRR is supported by the Comprehensive Disaster Management Programme (CDMP II). CDMP II is a ground-breaking flagship initiative of the Ministry of Disaster Management and Relief (MoDMR), Government of Bangladesh; UKaid, EU, Norway, Sida, AusAID and UNDP. CDMP II is being implemented with the goal to further reduce Bangladesh's vulnerability to adverse natural and anthropogenic hazards and extreme events, including the impending devastating impacts of climate change.

Comprehensive Disaster Management Programme (CDMP II) Ministry of Disaster Management and Relief

