



Reducing Vulnerabilities of Climate Change in Bangladesh: From the view point of Governance

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ABSTRACT

Discourses about climate change have been en vogue for quite some time. While some aspects of current climatic changes have been attributed to "natural" changes, others need to be attributed to human activities, such as deforestation and to atmospheric emissions. Bangladesh, hosting a population of approximately 150-160 million is well known for its vulnerability to climate change. In Bangladesh, "Natural" phenomena such as floods, droughts, salinity ingress, and cyclonic storm surges often take disastrous proportions.

To describe the current scenario, this study is based on five hot spots: Faridpur (flood Vulnerable), Naoga (drought prone), Kurigram (river erosion), Sathkhira (salinity prone) & Cox's-Bazar (cyclonic storm surge). Based on primary and secondary source of information; this study focuses on community-based adaptation strategies.

Climate change is a variable. We hardly can slow down the process but can't stop it. So, awareness building is equally important. Worldwide camping on issues like Carbon Capture, Alternative Sources of energy, International Agreement & setting up environmental laws is also necessary.

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Introduction

Discourses about climate change have been en vogue for quite some time. While some aspects of current climatic changes have been attributed to "natural" changes, others need to be attributed to human activities, such as deforestation and to atmospheric emissions. For the latter, industrial developments and increasing transport activities have led to gases epitomized as "greenhouse gases" (GHGs). These gases blanket the earth and keep temperatures higher than without gases. Yet, one of the negative "side effects" is rapid climate change and the melt of the arctic ice. It is assumed that this brings about a more or less substantial rise in sea level, along with flooding in those countries that are close to the sea, and, as Bangladesh, characterized by an overall low elevation of much of the country. In addition, there are other hazards, such as erosion, increasing salinity, water logging, storm surges and rough sea. Already cyclones have become a regular phenomenon in this region. One of the consequences of all these risks is the potential loss of agricultural land, a phenomenon that is observable at a large, and possibly even increasing, scale. In their Third Assessment Report (2001) The Intergovernmental Panel on Climate Change (IPCC) noted that it was very likely that the 1990s were the warmest decade worldwide, and 1998 the warmest year since scientific recording had begun in 1861. Water-related hazards, induced by climate variability, are common in South Asian countries (Ahmad, Q.K., et. al., 1998). "Natural" phenomena such as floods, droughts, salinity ingress, and cyclonic storm surges often take disastrous proportions.

One of the sites where many of these disasters take place is the Indo-Gangetic Plains (IGP) of mainland South Asia, where both spatial and temporal distributions of water resources are acute (Ahmed, 2005). While the eastern Himalayan part of the IGP experiences 'too much water' during the monsoon season, leading to floods, the western IGP often devastated by 'too little water' leading to droughts and salinity intrusion during the dry season. In addition, many among the South Asian countries are characterized by comparatively high population densities and high incidences of poverty. While the latter is due to a plethora of reasons, increasing vulnerabilities due to water-related disasters have substantially contributed to worsen the situation (Alam et. Al.1998). Above all, it is the weak

mechanisms of governmental adaptation strategies that often leave farmers at the whim of disasters. A crucial argument in this line was already provided by Wisner and his colleagues back in the 1970s arguing for the need to "take the naturalness out of natural disasters" (O'Keefe et al.1976; see also Sainath 1996).

The seasonal occurrence of the monsoon rains highly influences the regional meteorology. When prolonged, the often-intense outbursts of monsoon along the eastern IGP cause floods in Bangladesh, parts of India and on Nepalese territory. Due to its location, Bangladesh's delta is highly prone to cyclonic storm surge (Ahmed, 2008). On the other hand, insufficient rainfall in the western IGP often causes acute moisture stress and droughts in north-western India and further west in Pakistan (Mirza and Ahmed 2003). Salinity intrusion occurs along coastal regions of Pakistan, India, and Bangladesh.

Many scientists argue that climate change will exacerbate these water-related extreme climate events throughout the IGP in South Asia (Muhammed 2003). Global warming and the resultant climate change could have profound effects on the water resources of Bangladesh (both surface and ground water). With scientific research and evidence, it may be predicted that the country will be highly susceptible to five major changes: (a) increased flooding, both in terms of extent and frequency; (b) increased moisture stress during longer dry periods leading to increased drought susceptibility, both in terms of intensity and frequency; and (c) increased salinity intrusion during phases of low water flows. These changes in the physical structure of the country will directly affect many major productive systems that include (a) crop agriculture, (b) livestock production, (c) aquaculture and fish commodity, (d) coastal shrimp production, and (e) forest and vegetation (see also Ahmed, 2004(a), Asaduzzaman et.al. 2005 and CEGIS 2006).

While considering these are equally important, the current paper will focus on the role of the major stakeholders and governance of the prevailing structure.

The first section of this paper provides an overview of expected risks due to global change and its consequences. The second section will concentrate on the author's hypotheses and will briefly elaborate on methodological issues. The third section will provide the national level initiatives so far taken as a crucial means of adaptation for reducing vulnerability of Climate Change. The fourth section will focus on institutions accountable for policy implementation and their performance. Fifth section will share stories about the regional scenario. Sixth section will show the International responses. Final section will highlight on the overall impact of global emission and provide a few recommendations.

Hypothesis

Bangladesh is highly vulnerable to climate change. National Climate Change Strategy and Action Plan have created the platform for respective institutes to work together under different policy frameworks in order to mitigate the adverse effects of climate change (GOB/MOEF, 2009). Moreover, vulnerable societies have some indigenous knowledge as a part of survival strategy (Ahmed, N. et. al., 2013.). However, climate change is a global level phenomenon which can't be fully mitigated from national level. If the global emission scenario doesn't change then all these initiatives will be worthless at the end of the day.

Whereas in western world and in Europe agriculture is considered as an industry, in Asia agriculture is an integral part of culture itself. In south Asia, most farmers until today rely on cropping patterns and copping techniques that follow their ancestors. For these reasons, in face of such adverse scenario their livelihoods are under great threat.

Climate change is a global phenomenon where we can only take part adaptation strategies. But if the global emission scenario doesn't change then adaptation will be a bottomless jar in our case.

Methodology

For this study, at first, I will focus on the national polices and strategies to mitigate the adverse effects of climate change. Later, I will also focus on a study done on 2010 by center for global change on five

hot spots: Faridpur (flood Vulnerable), Naoga (drought prone), Kurigram (river erosion), Sathkhira (salinity prone) & Cox's-Bazar (cyclonic storm surge). Using the Focus Group Discussion method information was collected from local people about their present observations on climatic events & problems they face and the alternatives they have already chosen to shift from risk towards resilience. Finally, the paper concludes with the respective global level responses and will identify specific needs for new/alternative policies denoting the current hazards staring from the national level towards global level. These should offer better services that also consider climate driven events and extremes with micro level food security.

National Policies for reducing vulnerability of Climate Change

When considering Bangladesh's high population density, the current food grain production can only provide 94% of overall needs. That shows a substantial gap in national self-sufficiency in food grains. At present, the country's overall cropping intensity is about 180 per cent. The total arable area is about 14.4 million hectares, i.e. 62% of the total land (MOA, 2006). Yet, due to river erosion, salinity and drought Bangladesh is continuously losing arable land.

Realizing these phenomenon's, the Government of Bangladesh launched The National Adaptation Programmed of Action (NAPA) in 2005. The NAPA team was built with the best researcher and scholars of the country to provide an urgent response to the immediate needs of adaptation by identify priorities. In November 2005, The NAPA team came out with the following finding which can be declared as one of the full phase research of Bangladesh on climate change issues.

Considering these factor in 2009 The Government of Bangladesh established a National Climate Change Fund with an initial capitalization of \$ 45 million and later rose on to \$100 million, which will focus mainly on adaptation (Bangladesh Climate Change Strategy and Action Plan 2009). With the new National Agricultural Policy 2010 now it is possible to interface all the existing programs in a common

platform. The policy documents e.g. Perspective Plan 2021 (Vision 2021), Country Investment Plan,

6th fifth year plan including the election manifesto of the present government shows eagerness to reduce poverty from 65 million to 45 million by 2013 and 22 million by 2021. We have also seen the eagerness to reduce unemployment 28 million to 24 million by 2013 and 15 million by 2021.

The new draft policies state the limitation of previous one and identify the upcoming challenges and threats of climate change.

The existing National Agricultural Policy was adopted in April 1999. With the passage of time some issues and concerns have emerged in agriculture, in some cases with new dimension. For instance, dwindling agricultural resources, declining biodiversity, climate change, increasing frequency & intensity of natural disasters, increasing input prices, soaring food prices etc. require transformation of agriculture in such a way that would address challenges to meet demands. This necessitates the revision and updating the earlier document to make it relevant to the present agro-economic context.

The new Draft Agricultural Policy 2010 along with the Bangladesh Climate Change Strategy and Action Plan 2009 is now ready to incorporate the vulnerabilities of climate change. The National Disaster Management Council (NDMC), headed by the prime minister has been formed so which has been the highest level of forum for the formulation and the review of disaster management policies. Already The Climate Change Action Plan (CCAP) has been taken. CCAP is a 10-year programme (2009-2018) to build capacity and resilience of the country to meet the challenges of climate change.

In the first five-year period (2009-2013) the programme will comprise six pillars.

1. Food Security, social protection and health
2. Comprehensive Disaster Management
3. Infrastructure
4. Research and knowledge Management
5. Mitigation and Low Carbon Development
6. Capacity Building and Institutional

Source: CCAP, 2009

With all above information, we can conclude that in policy level Bangladesh is ready to reduce the

vulnerabilities and upcoming threats of climate change in the policy level.

Institutional performance evaluation

According to Ahmed (2004a), there exist a good number of policy elements in the current policy regime which offer good adaptation potentials. Efforts need to be made to analyses these options further and through institutional coordination. Within the current institutions Bangladesh Agriculture Research Council (BARC), the Bangladesh Agriculture Research Institute (BARI), the Bangladesh Institute of Nuclear Agriculture (BINA) and Bangladesh Rice Research Institute (BRRI) are shown as highly interested to extent stress-tolerant varieties as a means of adaptation.

Along with the Seed Certification Agency (SCA) these seeds developed by the research wings are released into field extension. They research wings can also provide proper cultivation guidelines but they can't implement these strategies at the field level, as they are not the implementing body. For this reason, they are less powerful and can only moderately influential to the stakeholders. Overall, the Department of Agriculture (DAE) is a key player in the extension procedure. Yet, without proper information of physiological data, such as soil quality, it is difficult for them to go for action. This urgently asks for a better coordination and collaboration between DAE and Soil Research Institute (SRI). In case of SRI they have many limitations, such as the lack of necessary laboratory facilities at the district level. In addition, there is the lack of allocation of budget and manpower. This is a crucial limitation to operate field level sample collections of soil at different sites. The Soil Resources Development Institute (SRDI) is responsible to run soil testing programs based on Agro-Ecological Zones (AEZ).

When undertaking field work for this study, one typical comment from a local journalist was as follows: "In rural Bangladesh if you go near of a judiciary court or in a police station you will see a lot of crowd but if you go in front of Agriculture Information Service (AIS) and Department of Agricultural Marketing (DAM) office then you will find no people. The problem is farmers don't know the role of these institutions and these institutions also don't disseminate the information about services that they can provide", as mentioned by

Sharif Akand an aged journalist of a local newspaper in the northern part of the country. From this statement, we can understand the present role, are rather the malfunctioning, of these institutions. These can be solved by information dissemination. A huge number of stake holders such as NGO and CSO besides other Governmental wings can play an important role here in terms of information dissemination.

Overall, the distribution of agricultural inputs has been largely handed over, indirectly rather than directly, to the private sector. At present, only a small proportion of the required quantity of seeds is being produced by the Bangladesh Agricultural Development Corporation (BADC). A much larger section is produced, preserved, and used under private management especially at the farmer's level.

The role of NGOs is also quite important. At the current stage, they are engaged in the free distribution of seeds and information for cultivation. Compared with dealers their contribution to the extension process is quite influential, as was indicated during several interviews with farmers. As dealers are completely profit oriented the benefits for farmers are usually only secondary, if considered at all. The legacy of dealer-driven agricultural input distribution is another weakness of the entire extension procedure. Government needs to draw some institutional barrier to ensure the interest of small and marginal farmers. Only cooperative system could save the small farms in the competitive commercialized agricultural system.

Indigenous knowledge from local level as adaptive mechanism and micro level food security

To refine the understanding and observe the present condition a study was done on 2010 by Center for Global Change (CGC), Dhaka in five hot spots: Faridpur (flood vulnerable), Naoga (drought prone), Kurigram (river erosion), Sathkhira (salinity prone) & Cox's-Bazar (cyclonic storm surge). Using the Focus Group Discussion method information was collected from local people about their present observations on climatic events & problems they face.

Faridpur District: A Flood Vulnerable Region

From FGD we find out that the current observation of the local community states that the intensity and

frequency of flood has been increased in recent years. As a result, huge areas of crop damage and loss of livelihood has been reported. With easy access of irrigation and usual fertile land previously Faridpur practiced three cropping seasons but now a day in many areas it's been forcefully reduced in to two. Other than that, a huge number of out migration to nearby cities are also reported. Only a few farmers reported that now they are adopting some newly introduced stress tolerance sub-merge varieties of paddy. They are hopeful that the performance of these sub-merge varieties will increase day by day and that will again bring the golden days of cultivation. While the men emphasize mostly on availability their women argued on utilization as the most important aspect of food security.

Naoga District: A Drought Spread Region

From FGD we find out that the current observation of the local community states that it is impossible to grow anything during the dry season. Huge loss of livelihood is obvious here. Number of out migration to nearby cities is also very high. Still now there are peoples in this region who are struggling and fighting with this unfavorable condition. These people are engaged on co-operative farming. They use the common source of water to grow vegetables which requires less irrigation. Here both men and women argued on availability as the most important aspect of food security.

Kurigram District: A region losing land drastically due to river erosion

Once upon a time Chilmari sub-district was a very famous river-port in Bangladesh. In present, it is only a good memory. Chilmari had six unions. Out of six unions five is already vanished due to river erosion. Which establish the intensity of river erosion in this particular region. As a result of river erosion, a huge number of *chor land* were discovered in this region as a byproduct. Hence people live in this region are dependent of many Chor Livelihood Programme (CLP) designed by government and non-government organizations. Under these programs peoples are engaged with vegetable and livestock related productions. The inhabitants in *Char Land* have no property and don't have access to institutional financial services. Women are most vulnerable in this case as they neither have security, social recognition, or dignity.

Men often live *chor land* for alternative livelihood and goes to cities. They leave the family behind that makes women more vulnerable. In present chor people produces milk and cultivate grass for feeding the livestock. Other than *chor land* cultivation of sub-merge paddy varieties are also very popular in this region. Here both men and women reported that availability and access are equally important aspects of food security.

Sathkhira District: A salinity prone region with water logging area

Two massive cyclones twice divested this region. One is SIRD in 2007 and another one is AILA in 2009. Salinity, lack of fresh water and water logging are the common problem in this region. From FGD we find out that still now these peoples are fighting with the climate. They don't give up. They went for alternative livelihood. Cultivating vegetables on floating bowl is very popular in this region (for more see RVCC, 2003). Other than that crab fattening project are creating some livelihood. They also tried to grow salinity tolerance couple of time but the rate of success is very low. The problem is during planting time the salinity remains low but it increases slowly after that time. Just before harvesting the salinity reaches maximum and as a result the plant died. This continued more than two or three cycles but still now the people are trying their best to incorporate the practice. Here both men and women reported that availability, access and utilization all are equally important aspects of food security.

Cox's-Bazar Region: A region of cyclonic storm surge

The FGD was done on fishermen community on Jolodash Para in Chokoria, Cox's-Bazar. The fishermen reported that now the frequency of early warning increases rapidly as compared with the past. As a result, now it is risky to engage in this profession. Most of the time they need to abandon the mission of fishing on the mid-way and need to come back shore because of early warning. Most of the cases they failed to secure their initial investment, hence many of them are now flooded with credit. They complained that they don't know firm cultivation. Fishing is the only profession they carried from their ancestors. As a result, it is now troublesome for them to seek alternative livelihood. Though we find that some of them just diversify

their livelihood and engaged on cultivating a locally invented paddy named *hori dhan*. Here both men and women reported that availability is most important aspects of food security.

International Response

I think we already have some idea about the national and regional initiative so far taken to mitigate the adverse effect of climate change. Now it's time to focus on global responses. I guess everyone will agree with me that United Nations Framework Convention on Climate Change is the biggest platform to address this issue. So, let's have a brief outcome of Conference of the Parties:

1995: COP 1, The Berlin Mandate

The first UNFCCC Conference voiced concerns about the adequacy of countries' abilities to meet commitments under the Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI).

1996: COP 2, Geneva, Switzerland

COP 2 accepted the scientific findings on climate change proffered by the Intergovernmental Panel on Climate Change (IPCC) in its second assessment (1995).

1997: COP 3, the Kyoto Protocol on Climate Change

In COP 3 after intensive negotiations, it adopted the Kyoto Protocol, which outlined the greenhouse gas emissions reduction obligation for Annex I countries, along with what came to be known as Kyoto mechanisms such as emissions trading, clean development mechanism and joint implementation. Most industrialized countries and some central European economies in transition (all defined as Annex B countries) agreed to legally binding reductions in greenhouse gas emissions of an average of 6 to 8% below 1990 levels between the years 2008–2012, defined as the first emissions budget period. The United States would be required to reduce its total emissions an average of 7% below 1990 levels; however

Congress did not ratify the treaty after Clinton signed it. The Bush administration explicitly rejected the protocol in 2001.

1998: COP 4, Buenos Aires, Argentina

COP 4 expected that the remaining issues unresolved in Kyoto would be finalized at this meeting. However, the complexity and difficulty of finding agreement on these issues proved insurmountable, and instead the parties adopted a 2-year "Plan of Action" to advance efforts and to devise mechanisms for implementing the Kyoto Protocol, to be completed by 2000.

1999: COP 5, Bonn, Germany

COP 5 was primarily a technical meeting, and did not reach major conclusions.

2000: COP 6, The Hague, Netherlands

In COP 6 the discussions evolved rapidly into a high-level negotiation over the major political issues. In the final hours of COP 6, despite some compromises agreed between the United States and some EU countries, notably the United Kingdom, the EU countries, led by Denmark and Germany, rejected the compromise positions, and the talks in The Hague collapsed. Jan Pronk, the President of COP 6, suspended COP-6 without agreement, with the expectation that negotiations would later resume.

2001: COP 6, Bonn, Germany

COP 6 negotiations resumed in Bonn, Germany, with little progress having been made in resolving the differences that had produced an impasse in The Hague.

2001: COP 7, Marrakech, Morocco

At the COP 7 meeting negotiators wrapped up the work on the Buenos Aires Plan of Action, finalizing most of the operational details and setting the stage for nations to ratify the Kyoto Protocol. The completed package of decisions is known as the Marrakech Accords. The United States delegation maintained its observer role, declining to participate actively in the negotiations.

2002: COP 8, New Delhi, India

COP 8 adopted the Delhi Ministerial Declaration that, amongst others, called for efforts by developed countries to transfer technology and minimize the impact of climate change on developing countries. The COP8 was marked by Russia's hesitation, stating that it needed more time to think it over.

2003: COP 9, Milan, Italy

In COP 9 the parties agreed to use the Adaptation Fund established at COP7 in 2001 primarily in supporting developing countries better adapt to climate change. The fund would also be used for capacity-building through technology transfer.

2004: COP 10, Buenos Aires, Argentina

COP10 discussed the progress made since the first Conference of the Parties 10 years ago and its future challenges, with special emphasis on climate change mitigation and adaptation. To promote developing countries better adapt to climate change, the Buenos Aires Plan of Action was adopted. The parties also began discussing the post-Kyoto mechanism, on how to allocate emission reduction obligation following 2012, when the first commitment period ends.

2005: COP 11/CMP 1, Montreal, Canada

COP 11 was one of the largest intergovernmental conferences on climate change ever. The event marked the entry into force of the Kyoto Protocol. The Montreal Action Plan was an agreement to "extend the life of the Kyoto Protocol beyond its 2012 expiration date and negotiate deeper cuts in greenhouse-gas emissions".

2006: COP 12/CMP 2, Nairobi, Kenya

Certain strides were made at COP12, including in the areas of support for developing countries and clean development mechanism. The parties adopted a five-year plan of work to support climate change adaptation by developing countries, and agreed on the procedures and modalities for the Adaptation Fund.

2007: COP 13/CMP 3, Bali, Indonesia

In COP 13 an agreement on a timeline and structured negotiation on the post-2012 framework (the end of the first commitment period of the Kyoto Protocol) was achieved with the adoption of the Bali Action Plan (Decision 1/CP.13).

2008: COP 14/CMP 4, Poznań, Poland

In COP 14 delegates agreed on principles for the financing of a fund to help the poorest nations cope with the effects of climate change and they approved a mechanism to incorporate forest protection into the efforts of the international community to combat climate change.

2009: COP 15/CMP 5, Copenhagen, Denmark

In Cop 15, Ministers, and officials from 192 countries took part in the Copenhagen meeting and in addition there were participants from a large number of civil society organizations. As many Annex 1 industrialized countries are now reluctant to fulfill commitments under the Kyoto Protocol, a large part of the diplomatic work that lays the foundation for a post-Kyoto agreement was undertaken up to the COP15.

2010: COP 16/CMP 6, Cancún, Mexico

The outcome of COP 16 was an agreement adopted by the states' parties that called for the 100 billion USD per annum "Green Climate Fund", and a "Climate Technology Centre" and network. However the funding of the Green Climate Fund was not agreed upon. Nor was an commitment to a second period of the Kyoto Protocol agreed upon, but it was concluded that the base year shall be 1990 and the global warming potentials shall be those provided by the IPCC.

2011: COP 17/CMP 7, Durban, South Africa

COP 17 the conference agreed to a legally binding deal comprising all countries, which will be prepared by 2015, and to take effect in 2020. There was also progress regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted. The fund is to distribute US\$100 billion per year to help poor countries adapt to climate impacts.

2012: COP 18/CMP 8, Doha, Qatar

COP 18 made little progress towards the funding of the Green Climate Fund. Besides, Russia, Belarus and Ukraine objected at the end of the session, as they had a right to under the session's rules.

2013: COP 19/CMP 9, Warsaw, Poland

COP 19 led to an agreement that all states would start cutting emissions as soon as possible, but preferably by the first quarter of 2015.

It's almost twenty years with no concrete agreement. While our National and Regional level adapting best practices to mitigate the adverse effects of climate change there was no equal response from international bodies.

Conclusion

Climate change is variable. We hardly can slow down the process but can't stop it. So the most important issue is awareness building. We need to run worldwide campaigning on issues like Carbon Capture, Alternative Sources of energy, International Agreement & setting up environmental laws for all factories which will result in less emission. As I earlier mentioned that if global emitting situation doesn't change then it doesn't matter how much adaptation initiative we take we will eventually fail.

In national level, we are trying our best and so far we are on the right track and doing better compared with other LDC's. Nationally we have the challenge to make the respective governmental institutions fully functional. Since the climate is expected to change gradually, vulnerable societies practically have a few decades to prepare themselves for responding well. Many of these gradual changes will be observed in form of changes in extent and frequency of known extreme climate-related events (McCarthy et al., 2001; Smit et al., 2000). Vulnerable communities often have indigenous knowledge, accumulated over millennia, to cope with such known events (WCDR, 2005; Stigter et al., 2006). In many developing countries, especially in LDCs, it is recognized widely that lack of governance is often manifested in terms of excessive and unnecessary interference from political parties towards implementation of development programmes. Inappropriate use (and/or misuse) of funds, pilferage due to corruption, gross violation of policy directives in the processes of implementation of projects, political interference to make monitoring and evaluation processes ineffective – all these provide examples of politically-influenced malpractices that are rampant in the LDCs while implementing development programmes. In case of implementing any program, it is necessary to maintain some criteria such as Poverty reduction and sustainable income generation ability, skills and capabilities development of the vulnerable community, gender equality, enhancement of environmental sustainability and overall complementary and synergy with national and sectoral plans and programs with cost effectiveness of the program

Thus, political interference is likely to jeopardise the financing processes. Needs-based financing might not be possible. Maintaining full transparency in project designing and implementation phases, as

well as in monitoring and evaluation phases with providing adequate financing in all stages of the project phase could encourage adequate participation of local level people and administration might help remove political interference and enhance transparency towards implementation of projects at local levels. Continuous monitoring, evaluation and feedback are prerequisite routine activities which would immensely support governance processes. A monitoring framework should be developed which will evaluate and provide feedback at the same time. Media should be brought in to conduct joint monitoring and dissemination of monitoring results in public. There should be advocacy groups who should take up the responsibility to act as pressure groups and engage in dialogues with relevant agencies and focal points on unresolved issues of high importance, and this crucial role could be supported by NGOs and other civil society organizations.

Overall, with the national level adaptation procedure global level also need to response by reducing the emission other than that providing adaptation funds to LDC's will not change the current situation.

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