

## Policy Implications and Implementation of Environmental ICTPs in Developing States: Examples from Bangladesh

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A number of International Conventions, Treaties, and Protocols (ICTPs) have been produced around the world for years and decades, and Bangladesh has signed a number of ICTPs after independence in 1971. Although all those are inevitable, often the importance is not of the same magnitude. Like many other developing countries Bangladesh is also not in a position to fully implement the convention provisions. But the policy, legal instruments, and programs so far being implemented reflect participation in those initiatives. The principal constraint remains in the shortage of financial resources that need to be allocated for the implementation of projects.

The earth support system, regardless of political boundary, is rapidly changing principally due to overexploitation of its resources and the hostile use of technology to the environment. Developing nations of the South are confronted with poverty and deterioration of environment and ecosystems goes side by side. The only way to face the situation is to integrate the environment with development concerns. But no nation alone can be able without global initiative and platform to address the problems of today and to prepare the world for the future challenges. International agreements in the names of Conventions, Treaties, and Protocols (ICTPs) evolved in such a context.

Under the arena of global ICTPs, the Government of Bangladesh (GOB) signed a number of international treaties, conventions, and protocols each having a number of commitments and consequent implications. They vary in their importance, effectiveness, level of commitment and urgency to act on. These days, people around the world are more conscious about the environment and its conservation and protection. The environmental situation in Bangladesh made the urgency to take part in the global initiatives. The

present study aims to have a focus on the policy instruments, their implications with the ICTPs and the status of implementation.

### Bangladesh: Country Overview and Selected Environmental Issues

Bangladesh, with an area of 147,570 sq. km, lies between 20°34' - 26°38' N and 88°01' - 92°41' E. It is bounded by India to the west, the north and the north-east, by Myanmar to the south-east and by the Bay of Bengal to the south. The country enjoys a sub-tropical monsoon climate with a distinct dry season. In the winter (November-February) the temperature varies from 5° - 23°C, in the summer (March-June) the maximum temperature shoots up to 40°C while the monsoon starts in July and persists until October (FAO, 1988). The average annual rainfall varies from 1229 to 4338 mm (WARPO, 2000).

Forests cover about 14% of the country and per capita forest cover is 0.016 ha. In the 1980s, the rate of forest destruction was 8,000 hectares per annum and the annual deforestation rate is estimated to be 3.3%. Consequently, per capita forest land has declined from 0.035 ha in 1969 to 0.02 ha in 1990 (BBS, 1999). Table 1 shows the status of forest resources in Bangladesh (GOB, 1992).

Table 1. The status of forest resources in Bangladesh

Forest type	Location	Area in million ha (% of the country's total forest)	Growing stock in million cu.m (Tree cover density cu.m/ha)	Remarks
(i) Mangrove evergreen				
a) Sunderbans	South-west			Includes 0.17 million ha water area
b) Coastline	Coastline	0.57 (4.0)	13.19 (23.1)	
		0.11 (0.76)	5.05 (45.9)	
(ii) Hill forest (Tropical moist evergreen)				
a) Managed forest				
b) Unclassed state forest (scrub forest)	Eastern part	0.67 (4.65)	28.32 (42.3)	Denuded due to shifting cultivation
	Hill tract districts	0.72 (5.00)	Negligible (Denuded)	

(iii) Plainland forest (Tropical moist deciduous)	Central and north-west region	0.12 (0.83)	1.13 (0.94)	Most encroached forest
(iv) Village groves	Spread over the country on homestead land	0.27 (1.87)	54.68 (202.5)	Have socio- economic value

Source: GOB (1992)

125 species of mammals, 124 species of reptiles, 579 species of birds and 19 species of amphibians are recorded in the country. But the total number of species is decreasing everyday. At present, 40 species of mammals, 24 reptiles, and two amphibian species are listed as endangered. The number of extinct and threatened animals of Bangladesh is given in Table 2 (BBS, 2004).

Table 2. Number of extinct and threatened animals of Bangladesh

Class	Total number	Number extinct	Number threatened
Mammals	125	12	40
Birds	579	4	70
Reptiles	124	1	24
Amphibians	19	0	2
Total	847	17	136

Source: BBS (2004)

Man-made air pollution is a major problem in the urban areas of the country. Air pollution in major cities like Dhaka and Chittagong has become a serious health concern. In Dhaka city, a huge fleet of motorized vehicles such as bus, minibus, truck, car, jeep, microbus, three wheelers and motorcycles emit toxic substances such as carbon monoxide (CO), oxides of nitrogen (NOx), oxides of sulphur (SOx), hydrocarbons and their derivatives, lead and particulate matter. As a result, blackening of the city air and reduced visibility can be observed in some areas at times even with naked eyes. Episodes of choking smells and irritating eyes are common.

The consequences of climate change and global warming are many and these depend on the extent of temperature rise. Most notably, the mean sea level is expected to rise and local climate is expected to become more severe in nature. Like many other small island countries, Bangladesh will also be highly affected. The people and the ecosystem of the south, particularly southern and coastal areas of Bangladesh are extremely vulnerable to adverse climate change and sea-level rise, threatening the survival of the very poor of this region. A summary of the expected changes of climate parameters with respect to the base year of 1990 for Bangladesh is given in Table 3. These changes are going to have a profound impact on population, environment and economy of Bangladesh.

Table 3. Changes in climate parameters with respect to base year 1990

Parameters	2030		2075	
	Winter	Monsoon	Winter	Monsoon
Temperature (°C )	2	0.65	3	1.5
Evaporation (%)	10	20	16	5
Precipitation (%)	-3	11	-37	28
Discharge (%)	-5	20	-67	51
Sea level rise (cm)	30	30	70	70

Source: Department of Environment

### ICTPs: The Historical Perspectives

Prior to the 1972 Stockholm Conference the majority of environmental conventions related to the conservation of wildlife. A pioneering convention in conservation terms was the 1968 African Convention on Conservation of Nature and Natural Resources, Algiers. Also notable and considerably more successful is the 1971 Ramsar Convention on Wetlands of International Importance, especially as Waterfowl Habitat, which establishes a network of protected wetland areas in the territories of member states.

The years between 1972 and 1992 witnessed an astonishing increase in the number and variety of international environmental law instruments. Much of this activity is directly attributable to the Stockholm Conference. The United Nations Environment Programme (UNEP) was directly responsible for the sponsoring of a number of key global environmental treaties. This period saw the conclusion of a number of nature conservation treaties both at a global and regional level. At the global level, particularly noteworthy are the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, the 1973 Washington Convention on International Trade in Endangered Species (CITES), the 1979 Bonn Convention on the Animals and the 1985 Vienna Convention for the Protection of the Ozone Layer. At the regional level a large number of treaties also came into force. The UN Conference on Environment and Development (UNCED), which took place in Rio de Janeiro in June 1992, gave priority to some global environmental issues such as global warming and the loss of biological diversity. In fact, in the previously mentioned twenty years there has been not only a major increase in awareness of the threats to the environment from human activities on both a local and global scale, but also a massive increase in the number of international legal instruments governing environmental issues. In the meantime, there has been a universal recognition that economic development and environmental protection must go together. This principle of thinking gave rise to Agenda 21 which aims at preparing the world for the challenges of the next century. The Rio UNCED prompted, or coincided with, a large number of new global and regional environment conventions, as well as a major declaration of principles for the future in the Rio Declaration. The outcome of the earth summit at Rio is three very important conventions that include the Climate Change Convention (UNFCCC), the Biodiversity Convention (CBD) and the Convention to Combat Desertification (UNCCD). Later in 1997, the Climate Change Convention was supplemented by the Kyoto Protocol. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity came into force in 2000.

### Policy Implications of ICTPs: Asian Context

Asia is characterized mostly by a high population explosion, low per capita income, high rate of deforestation, polluted environmental situation, and many more similar characteristics. To face these

critical environmental conditions most countries have formulated separate strategies and action plans at the highest policy levels. They are committed to the objectives of most environmental ICTPs including UNFCCC, UNCCD, CITES, CBD and Ramsar. Lack of funds, skilled manpower, information, coordination among, and integration of institutions to work the total outcome of implementation towards the objectives of international conventions is often weak. Even so, international conventions have a significant effect on the planning process in most Asian countries including India, Bhutan, Nepal, Sri Lanka, Indonesia, Malaysia, and Thailand. Developed countries like Japan have played a key role in the global debate on climate change and have developed significant negotiating capability. Other developing nations are increasing their scientific and analytical capacity. NGOs and independent research organizations in different countries are increasing public awareness through training schemes, workshops, and newsletters and reports.

### **Policy Implication of ICTPs in Bangladesh**

As a member of the international community and as one of the most environmentally vulnerable countries Bangladesh has become party to many international conventions and treaties related to forests, environment, and biodiversity (Appendix 1). Bangladesh signed the Convention on Biological Diversity (CBD) at Rio in 1992, and ratified it in 1994, and accordingly the focus on biodiversity has been emphasized in the Forest Policy and Environment Policy. However, a separate policy on biodiversity is yet to be formulated, and until then various departments of the government are responsible for conservation of biodiversity. The Bangladesh National Biodiversity Strategy and Action Plan (NBSAP) is being prepared as an obligation to the Convention on Biological Diversity. It includes strategies and action plans to cope with the founding principles of the CBD i.e., Conservation of Biological Diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilization of the use of genetic resources.

Bangladesh has become party to the Ramsar convention on 21 May 1992 after the Sundarbans was declared a Ramsar site. Presently, two Ramsar sites have been declared in Bangladesh, the other being *Tanguar Haor*. Bangladesh has taken a number of policy steps in accordance with the convention provisions and obligations. A national wetlands policy has been drafted by the IUCN on behalf of the environment ministry. The draft policy relates to other national environmental and conservation planning initiatives.

Bangladesh recognized the problems of soil erosion and fertility decline in many vulnerable areas. For the implementation of the United Nations Convention to Combat Desertification (UNCCD), the policy focus is on proper land use, rehabilitation of degraded areas. Policies are also formulated to maintain a link and network related sectors such as forestry, agriculture, fisheries, water, and land resources to combat the problems of land degradation and to increase agricultural production.

Bangladesh has given a high priority within national policy and legal framework to follow the provisions of the United Nations Framework Convention for Climate Change (UNFCCC). Bangladesh is a low lying country which will be badly affected by climate change and the consequent sea level rise. A very recent (November 16, 2007) example of such climate change impact is a devastating tropical cyclone CIDR that crashed ashore in Bangladesh, killed about 4000 people, and affected another 10 million people of the southern region.

### **Status of ICTPs implementation in Bangladesh**

With respect to conservation activities, government agencies in Bangladesh are undertaking various types of activities including the designation of protected habitats, regulation of hunting, habitat

improvement, and increasing education and awareness. The protected areas declared throughout the country play a fundamental role in the conservation of species and ecosystem diversity in Bangladesh. There has also been work done under the “Montreal Protocol on Ozone Depleting Substances”. Bangladesh has already prepared an Inventory of Ozone Depleting Substances (ODS). Further it has completed the country phase-out plan under the Montreal Protocol in 1994.

Efforts have been made in the country to have wetlands considered in integrated land/water and coastal zone planning and management processes at both the national and local level. The involvement of local government institutions for management of wetlands, and the coastal zone is recognized. Wetland restoration and rehabilitation is considered a priority in Bangladesh. The actions have been taken to identify wetlands in need of these actions and to mobilize resources for restoration or rehabilitation. A number of wetland restoration projects are being implemented.

Bangladesh is a drought-prone country and there is significant trend of desertification in the northwestern region. So, as a signatory of desertification convention, Bangladesh is implementing many programs. Barind Multipurpose Development Authority (BMDA), a government agency, is devoted to carrying out huge programs to combat aridity and desertification in the northwestern part of Bangladesh. The government is supporting a number of programs and projects to address environmental degradation and natural resource management, particularly through stakeholders’ participation. The Ministry of Environment and Forest has implemented the Sustainable Environment Management Programme (SEMP), the largest environmental program of UNDP at a global scale with a grant of US\$26 million.

Bangladesh is already suffering from major extreme natural events and is relatively equipped institutionally to face an increase in the incidence of extreme events. The country has a long experience in disaster management and is in a continuous process to improve its capacity to mitigate the impacts of disasters like cyclones and floods. Moreover, some international standard research institutions are playing significant role in the implementation of UNFCCC.

Besides those stated above, many projects and programs are being implemented and many others are in the pipeline to fulfill the commitments made by Bangladesh as a signatory of many international environmental CTPs. Some of the most important projects related to conservation of environment and forest are:

- National Environmental Management Action Plan (NEMAP) Implementation
- Sustainable Environment Management Programme (SEMP)
- Bangladesh Environment Management Project (BEMP)
- Air Quality Management Project
- National Conservation Strategy (NCS) Implementation Project
- Dhaka Urban Transport Project (DUT)
- Sunderbans Biodiversity Conservation Project
- Integrated Coastal Zone Management Project

### **Constraints to Implementation**

The principal constraints in implementation of commitments made for different conventions are not very difficult to point out. Like many other developing countries Bangladesh is also not in a position to fully implement the convention provisions. The principal constraint remains in the shortage of financial

resources that need to be allocated for the implementation of projects when the government is busy meeting the basic needs of nearly 115 million people. Moreover, poor inflows of financial and technical assistance against commitments made under different conventions also exist. Although Bangladesh is one of the most vulnerable countries in the case of climate change, ozone layer depletion, and desertification, preparation for adaptation is not sufficient. The presence of resource personnel and scientists is lacking. Appropriate technology has not been adopted or developed yet. The coordination among and integration of institutions, government, NGOs, academics and donor partners to work towards the objectives of international conventions is often weak. The institutional strength needed to fulfill the commitments of the conventions is also poor. The respective departments of the government are not strong policy units. Lack of appropriate laws also exists. The implementation of laws that have been promulgated in these regards is not in a satisfactory situation.

### **Conclusion and Future Priorities**

Great tasks are ahead from the developing country point of view both in the policy and implementation levels of the environmental ICTPs. In Bangladesh, in general, local communities have not been sufficiently represented at the national or international levels and their interests have not yet been adequately addressed. Although some NGOs have helped to link civil society to the implementation process, they cannot speak on behalf of local communities and therefore only partially represent them. Furthermore, NGOs have at times tended to be opportunistic in their participation rather than truly representing community knowledge and interests.

As a signatory to the ICTPs the government needs to implement them at the national level—in its sectorial plans, policies and laws. Action Plans are to be developed for implementing all those conventions. Municipal laws are to be drafted in the light of these documents. Human resource development and capacity building is a prerequisite for proper understanding and subsequent implementation of any ICTP. Significant donor support and attention is required for preparation of the Implementation Program and the Monitoring Program. Enhanced collaboration between government, NGOs, academics, and donor partners to work very closely is required. This is needed for developing some key persons who can be anchored to undertake more conceptualized activities and give leadership in developing concepts. Finally, separate implementation authorities for the separate conventions can be constituted. The authorities will be responsible for the implementation of programs according to the commitments of respective conventions.

### **References**

- BBS (1999). *Statistical year book of Bangladesh*. Dhaka, Bangladesh: Bangladesh Bureau of Statistics.
- BBS (2004). *Compendium of environmental statistics of Bangladesh 2004*. Dhaka, Bangladesh: Bangladesh Bureau of Statistics.
- FAO (1988). *Land form resources. Technical Report 5(1)*. United Nations Development Programme/Food and Agriculture Organization BGD/81/035.
- GOB (1992). *Forestry master plan*. Dhaka, Bangladesh: Ministry of Forest and Environment, Government of Bangladesh.
- WARPO (2000). *National water management plan project: Draft development strategy: Vol. 4*. Dhaka, Bangladesh: Water Resources Planning Organization.

Appendix 1: International Conventions, Treaties and Protocols (ICTPs) and place and year of signing

No	Convention, Treaty and Protocol and place and year of signing	Year	Signed/Accessed/ Ratified
1	International Convention for Protection of Birds, Paris	1950	Signed
2	International Plant Protection Convention, Rome	1951	01.09.78
3	International Convention for the Prevention of Pollution of the Sea by Oil, London.	1954	28.12.81 (entry into force)
4	Plant Protection Agreement for the South East Asia and Pacific Region (as amended), Rome.	1956	04.12.74 (AC) (entry into force)
5	Convention on the continental Shelf, Geneva	1958	Signed
6	Convention Concerning the Protection of Workers against Ionizing Radiation, Geneva.	1960	Signed
7	Convention on Civil Liability for Nuclear Damage, Vienna.	1963	Signed
8	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in outer Space and under Water, Moscow.	1963	13.03.85
9	Treaty on Principles governing the Activities of States in the Exploration and use of outer Space Including the Moon and other Celestial Bodies, London, Moscow, Washington.	1967	14.01.86 (AC)
10	International Convention on Civil Liability on Pollution Damage (as amended) Brussels.	1969	Signed
11	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels.	1969	04.02.82 (entry into force)
12	Convention on Wetlands of International Importance especially as Waterfowl Habitat ("Ramsar Convention"), Ramsar.	1971	20.04.92 (ratified)
13	Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction non the Sea Bed and the Ocean	1971	Signed

	Floor and in the Subsoil Thereof, London-Moscow-Washington.		
14	International Convention on the Establishment of an International Fund for Compensation for Pollution Damage (as amended), Brussels.	1971	Signed
15	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (as amended), London-Mexico city-Washington	1972	Signed
16	Convention Concerning the Protection of the World Cultural and natural Heritage, Paris.	1972	03.11.83 (ratified)
17	Convention on International Trade in Endangered Species of Wild Fauna and flora (CITIES), Washington.	1973	18.02.82
18	Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil, London.	1973	Signed
19	International Convention Prevention of Pollution from Ships, London.	1973	Signed
20	Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, London.	1973	Signed
21	Convention Concerning the Prevention and Control of Occupational Hazards caused by Carcinogenic Substances and Agents, Geneva.	1974	Signed
22	Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, Geneva.	1976	03.10.79 (entry into force)
23	Convention Concerning the Protection of Workers Against Occupational Hazards in the Working Environment due to Air Pollution, Noise and Vibration, Geneva.	1977	Signed
24	Convention on the Conservation of Migratory Species of Wild Animals, Bonn.	1979	Signed
25	Convention Concerning Occupational Safety and Health and the Working Environment, Geneva.	1981	Signed
26	United Nations Convention on the Law of the Sea, Montego bay.	1982	10.12.82
27	Vienna Convention for the Protection of the Ozone Layer, Vienna	1985	02.08.90 (AC)
28	Convention Concerning Occupational Health Services, Geneva.	1985	Signed
29	International Convention on Conditions for the Registration of Ships, Geneva	1986	Signed

30	Convention on Early Notification of a Nuclear Accident, Vienna.	1986	07.01.88 (ratified)
31	Convention on Assistance in the Case of a Nuclear Accident of Radiological Emergency, Vienna.	1986	07.01.88 (ratified)
32	Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal.	1987	31.10.90 (entry into force)
33	Agreement on the Network of Aquaculture Centres in Asia and the Pacific, Bangkok.	1988	15.05.90 (ratified)
34	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel.	1989	01.04.93 (AC)
35	International Convention of Salvage, London.	1989	Signed
36	Convention on Civil liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, Geneva	1989	Signed
37	Convention Concerning Safety in the Use of Chemicals at Work, Geneva.	1990	Signed
38	London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London.	1990	16.06.94 (entry into force)
39	International Convention on Oil Pollution Preparedness, Response and Cooperation (London, 1990.)	1990	30.11.90
40	United Nations Framework Convention on Climate Change, New York.	1992	16.02.94
41	Convention on Biological Diversity, Rio De Janeiro	1992	20.03.94
42	International Convention to Combat Desertification, Paris.	1992	21.06.94
43	Agenda 21, UNCED, Rio de Janeiro	1992	Signed
44	Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen,	1992	
45	Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, Paris.	1993	14.01.93

46	United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, Paris.	1994	26.01.96
47	Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, Stocks, New York.	1994	28.07.96
48	Convention on Nuclear Safety, Vienna.	1994	21.09.95 (AT)
49	Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Relating to the Conservation and Management of Stradling Fish Stocks and Highly Migratory Fish Stocks, New York.	1995	Accessed
50	Montreal Amendment of the Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal	1997	Accessed
51	Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto	1997	Signed
52	Cartagena Protocol on Biosafety to the Convention on Biological Diversity	2000	Signed

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