

**WEST BENGAL WETLANDS AND WATER  
BODIES CONSERVATION POLICY**

Submitted to

**DEPARTMENT OF ENVIRONMENT  
GOVERNMENT OF WEST BENGAL  
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## I. MISSION STATEMENT

Conservation of natural resources is one of the most significant indicators of a country's development. There is not any compulsion of equity, poverty alleviation programmes, education for the child or health care for the poor that thwarts conservation of natural resources. Just as one or two rich countries are not signing the Kyoto Protocol so also some of the members of our society are not recognizing their obligations towards natural resource conservation. And wetlands everywhere, everyday, are being silently filled up.

In India, the government initiatives and scholarship on two major conservation issues – forest and water resources – are fairly well known all over the world. Yet there is no immediate sign of decrease in conflicts related to forest and water and of rise in good practices of conservation of water. Matters related to wetlands are somewhat different. Wetlands unlike forest and water have hardly any constituency. Even good research in the field of wetlands is scarce.

Between 1994 and 2001, not a single question on the disappearance of urban and peri-urban wetlands and water bodies has been tabled in the Lok Sabha. During that time only 4 starred and 16 un-starred questions were asked on wetland conservation. The disappearance of large areas of wetlands in general was accepted by the Environment and Forest Ministry and the absence of corroborative data on the loss was conceded.

With this understanding of the context, the wetland conservation activities to be initiated by the State of West Bengal should include:

- Prohibition of further filling up of any wetland, water body or paddy field irrespective of its size, on any grounds including so called public interest projects. This will have to be made mandatory by the government throughout the State.
- Disapproval of all construction plans proposed by any authority on a land that is described in the State Land Records as wetlands or water bodies (or any such description like *jala, khal, bil, doba* etc.) or are paddy fields (where at least one crop of paddy grows in one calendar year) on the basis of the last Cadastral Survey.
- Restoration of all degraded and filled up wetlands and water bodies (including paddy fields and borrow pits) within the fold of District Development Plans.

- Undertaking extensive awareness programmes among the people as well as the development functionaries for a sustained period (minimum 10 years). This can be compared with the kind of effort made for population control or polio eradication at the national level.

Unless the above tasks are undertaken without any further delay, there will be little chance of any success in the Governments' effort for conservation of wetlands and water bodies in West Bengal. Finally, conservation of natural resources in general and wetlands in particular, will require an unfaltering political support and spontaneous participation of the citizenry. Without these the implementation of this policy will be largely ineffective.

## **II. BACKGROUND**

Wetlands are defined as "*areas of marsh, fen, peatland or water whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt including areas of marine water the depth of which at low tides does not exceed six metres*" (This definition is included in the text of Ramsar Convention, Article 1.1).

Wetlands have been identified as one of the key life support systems on this planet in concert with agricultural lands and forests. The importance of our wetlands goes beyond their status as the habitat of many endangered plant and animal species. They are a vital element of national and global ecosystems and economies.

Wetlands are highly productive ecosystems being only second to the tropical rainforests. They perform many functions that maintain the ecological integrity and also provide many goods and services. (Groundwater recharge, shoreline stabilisation and flood storage are particularly important). The functions and benefits provided by wetlands are especially important for the general public as they support agriculture, tourism, industry, biodiversity conservation, social, economic and cultural activities.

West Bengal has a variety of wetlands ranging from coastal and marine wetlands to inland freshwater lakes, rivers, dams and swamps as well as the constructed wetlands in irrigation schemes and sewerage treatment systems and also the mountain wetlands. Some of these wetlands are recognized as important conservation areas like national parks, national reserves, Ramsar sites (East Kolkata Wetlands, West Bengal), important bird sanctuaries

(Kulik Bird Sanctuary, West Bengal) and World Heritage Site/Biosphere Reserve like Sundarbans National Park.

Apart from being biodiversity hotspots, the wetland resources are equally crucial for income generation, livelihood and wellbeing of the communities. However, due to lack of effective management mechanisms and proper appreciation of their true worth, wetlands have continued to be degraded through unsustainable activities, conversion and overexploitation of their resources. The pressures on wetlands have been exacerbated by catchment degradation and pollution leading to proliferation of invasive species.

In the State of West Bengal the only Ramsar site is the East Kolkata Wetlands. The Ahiron Bil in Murshidabad and the Rasik Bil in Koch Bihar have been identified as Wetlands of National Importance and are under the **National Wetland Conservation Programme**. The Sundarbans National Park is a World Heritage Site and a Biosphere Reserve. A wide variety of wetlands are found in the State including the freshwater inland wetlands like mountain wetlands, rivers and lakes, marshes and swamps and also coastal wetlands like mangroves, tidal flats, swamps etc. Numerous human-made wetlands in the State include fish and shrimp ponds, farm ponds, irrigated agricultural land, reservoirs, borrow pits, sewage farms, and canals. Innumerable small water bodies dot the landscape of the State, most of which are manmade.

Drawing lessons from Ramsar guidelines in general and experiences in wetland conservation in India and other countries in context, a policy document should support a set of immediate programmes comprising:

- identification, inventorisation and classification of all wetlands and water bodies
- delineation of catchment areas as the basis of analysis and activities for large wetlands
- reduction in non-point source (agro-chemical) pollution
- establishment of water quality standards of wetlands and water bodies
- development of policy and legal framework
- setting up of proper institutions for easier implementation of the wetland conservation programmes
- dissemination of information and awareness generation

- seeking funds for natural resource conservation as a part of development agenda. Fund for wetland conservation will have to be sought from various development allocations, State or otherwise, in addition to the allocation of the Environment Department.

Apart from embarking upon conventional classificatory norms, for wetlands of India, it is imperative to primarily divide them into two groups or classes.

1. The **first group (Class A)** will include all wetlands within protected area under Indian Forest Act, 1927, where the services of Forest Department functionaries as wetland managers and supervisors are constitutionally available.
2. The **second group (Class B)** comprises wetlands or water bodies which are outside such protected area. These wetlands do not have any designated custodians, save and except for small water bodies which are privately owned and occasionally fraught with succession battles among multiple owners where none has any obligation to conserve the wetland.

### **III. EXISTING POLICIES AND LEGISLATION**

In the early years of independence there was no precise policy on environment protection in India. Even the Indian Constitution, when originally adopted, had no specific provision on environment protection or even a direct reference to the expression “*environment*”. The Indian Forest Act of 1927 was the most comprehensive, effective and oldest piece of legislation enacted at the time when environmental problems had not assumed threatening dimensions as they have today. Later, it was the Constitution (42<sup>nd</sup> Amendment) Act, 1976, which marked the beginning of an inclination towards environment protection. The Article 48A requires that “The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country”. Art. 51-A (g) provides that, “it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.” These two Articles enjoin on the State and the citizens the duty not only to adopt protective measures, but also take steps to improve the already polluted environment and to preserve and safeguard the forests, flora and fauna.

The three lists - Union, State and Concurrent Lists do not clearly mention as to who will legislate for matters relating to the environment. Although the State List consists of a number of items like public health and sanitation, agriculture, water-supply, irrigation and drainage

and fisheries, the Union List is apparently without a mention of the environment. Yet, the Article 253 empowers the Parliament to legislate for any residual matter and to implement international obligations and decisions taken at the international conference, association etc. Forestry as a subject finds mention specifically in the Concurrent List.

The Parliament has passed the following legislations:

- Wildlife (Protection) Act - 1972
- Water (Prevention and Control of Pollution) Act – 1974.
- Water (Prevention and Control of Pollution) Rules 1975.
- Territorial Water, Continental Shelf, Exclusive Economic Zone and other Marine Zones Act - 1976
- Forest (Conservation Act) – 1980
- Maritime Zone of India (Regulation and fishing by foreign vessels) Act - 1980
- Air (Prevention and Control of Pollution) Act - 1981
- Environmental (Protection) Act – 1986
- *Water (Prevention and Control of Pollution) Cess (Amendment) Act, 1991*
- Biological Diversity Act, 2002
- *Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003.*
- Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

In addition to these there are:

- National Conservation Strategy and Policy Statement on Environment and Development (1992)
- The National Water Policy (2002)
- National Environment Policy (2006A)
- Wetlands (Conservation and Management) Rules 2010.

Apart from the abovementioned Acts, policies and rules Public Liability Insurance Act of 1991, National Environment Tribunal Act of 1995 and National Environment Appellate Authority Act of 1997 have also been enacted. Of late the Union Government has reviewed the National Water Policy 2002 and put in the public domain the revised draft Water Policy 2012 in which the importance of judicious use of water resources, dangers of over-

withdrawal of groundwater, the advantages of in-situ conservation of rainwater, control of runoff and importance of pressure irrigation systems in water conservation have been emphasised. It is important to note that West Bengal has no water policy till date.

In West Bengal it was with the enactment of the West Bengal Inland Fisheries Act, 1984 that environmental concerns regarding water bodies became a part of policy. Some other relevant statues are:

- The West Bengal Panchayat Act, 1973.
- The West Bengal Town And Country (Planning And Development) Act, 1979 (As amended by West Bengal Act 18 of 2001).
- West Bengal Inland Fisheries (Amendment) Act, 1993 & 2008.
- West Bengal Ground Water Resources (Management, Control and Regulation) Act, 2005
- The West Bengal Land Reforms (Amendment) Act, 2005
- West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006
- The East Kolkata Wetlands (Conservation and Management) Act, 2006.

#### **IV. POLICY RECOMMENDATIONS**

The West Bengal government has recognized the importance of wetlands and the present policy framework is in cognizance of the importance of wetlands nationally and the obligation under the Ramsar Convention. However, there is no specific enactment within the State of West Bengal to address the problems of wetlands as a whole. The East Kolkata (Conservation and Management) (Amendment) Act, 2006 is applicable only to the stretch of 12,500 ha of land in the East Kolkata Wetlands Ramsar site. The West Bengal Inland Fisheries (Amendment) Act, 1993 under [(Sec 17A) (a)] prohibits conversion of water area and states that “no person shall (a) put any water area including embankment measuring 5 cottahs or 0.035 hectare or more, which is capable of being used as fishery, or any naturally or artificially depressed land holding measuring 5 cottahs or 0.035 hectare or more, which retains water for a minimum period of six months in a year, to such use, other than fishery, as may result in abolition of fishery” [(Sec 17A) (a)] or “(b) fill up any water area including embankment or naturally or artificially depressed land holding as aforesaid, with a view to converting it into solid land for the purpose of construction of any building thereon or for any other purpose” or “(c) divide any water area including embankment or naturally or artificially depressed land holding as aforesaid into parts to make any such part measure less than 5 cottahs or 0.035 hectare for any purpose other than pisciculture or transfer any part or any

such water area including embankment or naturally or artificially depressed land holding as so divided to any other person.” Subsequently, the amendment of Fisheries Act 2008 does not allow filling up of wetlands even below 0.035 ha in the Municipal areas. It would be pertinent to mention that in the State wetlands, apart from acting as fisheries also provide vital ecological services and contribute directly in terms of irrigation and water supply for man and cattle in a very significant manner.

It is seen that a sectoral approach of the government to conservation and development, which has not addressed the cross cutting environmental and conservation issues has led to inter-sectoral inconsistencies leading to further loss of the State's wetlands. The integrity of wetland ecosystems is very much dependent on the conservation of catchment areas which have suffered immensely as a result of encroachment, land filling and massive deforestation.

In the light of the above, it is imperative that a specific and comprehensive policy be framed in order to ensure long- and short-term planning and implementation for conservation and restoration of wetlands in the State. The success of the endeavour will depend on the role of the government in involving the primary wetland stakeholders into the process of planning and implementation. The policy will also provide a framework for institutional and organisational arrangements for planning and execution of plans.

## **Recommendations**

### **1. Wetland inventory, assessment and monitoring on the basis of District land records.**

Collection and/or collation of core information for wetland conservation, protection and management will provide an information base for preparing site specific management action plan followed by specific assessment and monitoring activities in wetlands. The mapping procedures, especially for large wetlands, should be participatory in nature so that the mapping process itself will be a work of awareness and better understanding of wetland as a crucial resource. Detailed records of various categories of land including wetlands, together with their extent, character and ownership are available. Wetland locations can be identified on the basis of these records on cadastral maps (Scale 16 inches to 1 mile or 1: 3960). The locations can further be verified by coordinates to be obtained through GPS survey. However, in case of any controversy or a difference of opinion a stakeholder can appeal to the Department of Environment to get the specific parcel of land examined and assessed on the basis of accepted scientific criteria to determine whether the parcel of land in question is a

wetland or has recently been filled up. In such cases, the description of the land in question as laid out by the scientific enquiry instituted by the Department of Environment will remain valid irrespective of whatever is stated and described in the existing land records of the state.

The entire inventory of wetlands and water bodies should be in the public domain. The core information should include:

- a. Wetland delineation for identifying wetland regions, complexes and individual sites or habitats
- b. Catchment identification and characteristics
- c. Wetland description – physical, chemical and biological
  - i. Location, altitude, area and boundary
  - ii. Geology, geomorphology, climate, soil, bio-geographical location, linkages with other habitats
  - iii. Hydrology including surface and groundwater regime, water quality
  - iv. Wetland functions
  - v. Biota
  - vi. Any other special biophysical feature
- d. Wetland information – cultural
  - i. Demography
  - ii. Land and water use
  - iii. Ownership and administrative jurisdiction
  - iv. Traditional practices
  - v. Socio-economic status of the users
  - vi. Resource recovery
  - vii. Ecosystem stresses onsite and in the catchment
  - viii. Management issues
  - ix. Conservation status
  - x. Legislative support and customary law
  - xi. Socio-cultural reserves

- xii. Users' right
  - xiii. Conflict situations
  - xiv. People's choice and political decision
  - xv. Level of participation of local people and women in decision making and planning
  - xvi. Ongoing programmes of the government and others
  - xvii. Status of monitoring
  - xviii. Awareness among users and government personnel about ecosystem approach
  - xix. Capability assessment, training need and facilities
  - xx. Existing role of NGO, people's groups, other institutions and individuals
  - xxi. Access of public to information about government programmes relating to the wetland and the catchment
- e. Maps and digital data for obtaining and monitoring spatial and temporal information

A major problem in West Bengal is that tracts of wetlands are declared as *shali* or agricultural land as a first step and thereafter converted to industrial or residential land. This entire process is not always transparent. Unless the dubious cases are thwarted immediately a major portion of the remaining wetlands of the state will be quickly lost, no matter how suitable an act for wetland conservation is put in place.

## **2. Wetland classification**

The Wetlands Conservation and Management Rules 2010 under the Environment (Protection) Act 1986 have categorized selected wetlands for conservation and management. However, for the purpose of conservation of wetlands and water bodies in West Bengal a primary classification of wetlands for the State will be:

a. **Class A Wetlands** - Forested wetlands (wetlands within protected areas declared by the Forest Department)

b. **Class B Wetlands** - Non-forested wetlands (wetlands outside forested areas as described above) will comprise

i. Public wetlands – natural and man-made.

ii. Private wetlands – natural and man-made.

### **3. Identification and evaluation of benefits of wetlands**

Assessment of wetlands will involve identification of the status of, and threats to, wetlands which are more specific information on these ecosystems. Water quality assessment by measuring selected physico-chemical parameters, identification and evaluation of biodiversity values using biological parameters and determining socio-cultural and economic values in relation to wetland use and ecological services (groundwater recharge, flood mitigation, shoreline stabilization etc.) will help monitoring activities. Mapping using GIS is an effective tool in understanding the spatial distribution of wetland resources. Evaluation and identification of benefits of wetlands are specialized tasks. It will require appropriate institutional arrangements with the State-level coordination mechanism at the top.

### **4. Planning, assessment, evaluation and monitoring for wetland sites and defining conservation and management priorities for selected sites.**

a. Management action plans for selected sites such as wetlands of international and national importance.

b. Some wetlands perform vital ecological functions like flood mitigation, groundwater recharge, urban sewage treatment etc. for which specific conservation projects should be envisaged. The groundwater in 81 blocks of the State is contaminated with arsenic and that in 49 blocks with fluoride. The wetlands and water bodies are alternative source of fresh water in those vulnerable blocks where about 20 million people live.

c. Immediate restoration of degraded wetland sites.

## **5. Site management compatible with maintenance of ecological character of wetlands.**

- a. Maintenance of hydraulic regime and hydropulses.
- b. Compatible use for revenue and livelihood generation.
- c. Prohibition on change in character i.e. erecting embankments for partitioning, excavation detrimental to the wetland, filling up, discharge of pollutants, introduction of alien species.

## **6. Institutional development**

Establishment of hierarchical institutional arrangement comprising wetland experts, scientists, administrative personnel, wetland users, active NGOs for achieving wetland conservation and protection, identifying priority actions in wetlands, integrating wetland priorities in the planning process and integrating multidisciplinary approach in planning and executing wise use projects. Such facilities will have to be made available for each District.

## **7. Financial support**

- Natural resource conservation is a developmental issue. Therefore fund for natural resource conservation, in this case wetland conservation, should be made available from various development sectors (water resource management, irrigation, poverty alleviation should be the three major sectors wherein natural resource conservation should be compulsorily introduced).
- Conservation efforts can be supported by allowing incentives to wetland owners/operators for conservation initiatives in the form of new and better economic opportunities (conservation incentives).
- Encouraging fund-raising activities by the corporate sector (particularly under corporate social responsibility) may facilitate conservation activities. However, objectives of such initiatives should adhere to the policy on wetland conservation of the State.

## **8. Acquisition for conservation and better wetland management**

Acquisition of degraded wetlands particularly those which are important as potential resource base may be necessary to prevent further deterioration and for better management.

## **9. Increase in knowledge and awareness of wetlands and their values and capacity building**

a. Interchange of experience and information on wetland policy, conservation and wise use between States/drainage basins.

b. Increasing awareness and understanding of decision makers and the public of the benefits, values and wise use, of wetlands including:

- sediment and erosion control,
- flood control,
- maintenance of water quality and abatement of pollution,
- maintenance of surface and underground water supply,
- support for fisheries, grazing and agriculture,
- outdoor recreation and education for human society,
- provision of habitat for wildlife, especially waterbirds, and
- contribution to climatic stability;

c. Demonstration of traditional wise use techniques and elaboration in projects.

d. Training of appropriate staff in the disciplines which will assist in implementation of wetland conservation action and policies.

e. Stewardship generation for wetland conservation and management targeted to owners/operators and responsible NGOs.

f. Establishing state-wide awareness campaigns and programmes involving students in particular.

g. Inclusion of wetland awareness themes in school curriculum including adoption of local wetlands for education.

## **10. Wetland data management**

a. It is necessary to establish a comprehensive database and management information system for defining standardized modus operandi for conservation of functions and values and of the biodiversity of wetland ecosystems.

b. Regular cycles of surveys and reviewing status of wetlands will be necessary. A monitoring network should be established.

## **11. Promotion of wetland science and research**

- Establish priorities for wetland scientific research with regular review.
  
- Establish communication network between science agencies, researchers and managers to fulfill conservation, management and policy objectives.
  
- Sponsor regular national and regional wetland science and management symposia and workshops.
  
- Establish exclusive centres of expertise and wetland research.
  
- Establish national wetland scholarships to promote innovative scientific, socio-economic and technological research on wetland issues of importance to the people of the country.
  
- Support effective wetland research according to regional priorities and initiatives for conservation of biodiversity and wise use.

## **12. Wetland legislation and related policies**

- Review and amendments incorporating the experiences in implementing existing legislation and policies.

- Enactment of new wetland legislation.

### **13. Cross-sectoral linkages and international cooperation**

- Creating common objectives linking sectoral initiatives will facilitate the implementation of wetland conservation programmes and will substantially reduce sectoral conflicts in conservation and management efforts.

- Fostering international cooperation for management and conservation of all shared wetlands.

### **14. Developing implementation guidelines**

The guideline for implementation of a policy should indicate the roles of the Government, owner/operator, NGOs etc. Specific guidelines for implementing authorities should be available. Resource mobilization plans should be in place to undertake conservation/management actions.

## **V. CONCLUSION**

India is facing a crisis due to loss of wetlands and water bodies and deterioration in the water quality of these life sustaining systems. Apart from depletion of biodiversity and silent assault on human health due to non-point source (agro-chemical) pollution other resultant environmental risk factors include the reduction in rainwater retention capacity and the loss of livelihood support for the wetland dependent communities who are among the poorest. Welfare of the people of the State of West Bengal depends largely upon the proper functioning of the natural resource systems wherein wetlands are among the foremost which draw attention.

The challenge here is to overcome the lack of understanding among the implementers of different development sectors and service providers about the significance of wetland ecosystems in maintaining and supporting human health and welfare. The challenge becomes daunting as the section of the community suffering most from the loss of wetland resources

are occasionally the poorest and their demands are not easily visible or audible. The proposed policy direction therefore will be to adopt a participatory and community-based approach to ensure conservation and wise use of wetlands and water bodies.

A participatory approach looks into the interconnectedness and interrelations between society and nature contextually. Differences in local conditions which can be occasionally striking (both social and ecological) should be carefully factored in. It also attempts to remain focused on defined landscapes or geographic units, so that it becomes easy for everyone to recognize the conservation activities. Particular care is taken to avoid exclusion of the poorer communities who tend to avoid or sometimes are purposively left out of the conservation exercises.

The crucial message that any policy document on the conservation of wetlands and water bodies must primarily carry is that no wetlands and water bodies can be filled up, degraded, drained, converted or subjected to any kind of activity which is incompatible with ecological integrity of the wetlands.

In addition to compulsory prohibition of further filling up of any wetland or water body irrespective of its size, the present wetland conservation policy has come up with two new directions. This essentially is in the context of the conditions and constraints specific to the State as well as the country. Firstly, as wetlands are the primary receptacles for agricultural discharge containing agro-chemicals, it has brought the crisis of non-point source pollution into the forefront. Unregulated use of fertilizers and pesticides is already having telling effects on human health (especially the children and the farmers), food security and biodiversity stock. Secondly, for the purpose of conserving larger wetlands and water bodies, the concept of catchment area is considered, specifically to delineate the primary boundary for conservation activities specific to the wetlands. This is necessary because most of the larger wetlands in this sub-continent lie outside any protected area under the Forest Act.

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