

## NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN - INDIA

### NATURAL AQUATIC ECOSYSTEMS Thematic Concept Note<sup>1</sup>

Natural aquatic ecosystems include limnetic, brackish, marine and high saline ecosystems, each of them with their own biodiversity and patterns of utilization of its components. Among them, the marine domain is the largest, in terms of area spread, and in terms of species and ecosystem diversity (estuaries, coral reefs, mangroves, upwelling, deep-seas and so on). With millions of species already known, with 28 of the 33 animal phyla present in the sea, with about 87 million tons of capture fish production and about 10 million tons of cultured fish production, not to mention the ecological functions and other uses of coastal and marine biodiversity (novel genes and drugs for example), marine biodiversity issues are of tremendous concern to us. The other three natural water bodies, though substantially less in spread, are no less important. They harbour endemic biodiversity and sustain livelihoods of several million women and men, mainly by way of capture and culture fisheries. For example, fresh-water bodies produce about 23 million tons of fish from capture and culture practices; this is one fourth of total fish production from marine sources.

The Working Group should deal with the following aspects of natural waterbodies:

1. Current understanding of the diversity, spread, and quality of various kinds of waterbodies in India, including changes through recent history; and gaps in this understanding;
2. Human uses and values of waterbodies, including physical, socio-cultural, and other values with due attention to gender differences in roles, knowledge and priorities;
3. Major threats to the spread and quality of various kinds of waterbodies, including pollution, introduction of exotics, dams and diversions, withdrawal of water, and others;
4. Current management practices and their implications/impacts on waterbody diversity and quality;
5. Implications of recent/emerging technologies in aquaculture, capture fisheries, and others;
6. Current conservation attempts, including protected areas, heritage sites, legal measures such as CRZ notification, and so on; and gaps in these attempts;
7. Long-term benefits of investments by the corporate (private and public) sector in R&D and conservation/sustainable use related activities. This would include assessing alternatives to siting, effluent release, and other practices.
8. Measures (short and long-term) needed for gender & equity sensitive conservation and sustainable use of waterbodies, including integration of people's livelihoods and conservation, gender equal sensitive community participation, and integrated management with surrounding land-uses;
9. Prioritisation of these measures in terms of their importance and immediacy;
10. Resources (human, economic, institutional) needed for realisation of these measures.
11. Delineating steps to develop gender & equity sensitive collaborative biodiversity conservation strategies with neighbouring countries that share similar or cross-boundary ecoregions (in collaboration with the WGs on Wild Biodiversity, Terrestrial Ecosystems);
12. Exploring the establishment of cross-boundary emergency response mechanisms, where not already existing, to address emergency threats to biodiversity, such as oil spills.
13. Exploring possibilities of offering financial and resource support to neighbouring countries for biodiversity goals of common interest (e.g. for management of shared ecosystems and technical development).
14. Analysing biodiversity related initiatives in other countries that India could learn from.

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<sup>1</sup> This note was prepared by M.V.M Wafar, Member, TPCG, with inputs from other TPCG members

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Several other themes of the NBSAP may also feed into this. For example, economics and biodiversity, access, benefit-sharing and IPR, livelihood and lifestyles, education and training, technology, policies, law and planning (on the assumption that all these thematic working group include waterbodies in their deliberations).