

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN - INDIA

Micro-organism Diversity Thematic Concept Note¹

The ubiquitous presence of micro-organisms (bacteria, fungi, virus, actinomycetes and protozoans) in all environments and in all biological material, the tremendous impact they have in shaping human history (epidemics, useful drugs) and the critical role they play in biotechnological processes, confer on them an exceptional status in the context of the conservation and use of biodiversity. The thematic working group on this would ideally bring all these into focus, while covering the following areas:

1. Status of micro-organism diversity in natural and human-made ecosystems.
2. Identification of expertise, institutional structures, and resources available for micro-organism diversity.
3. Important gaps in understanding distribution and status of micro-organism diversity.
4. Current levels of economic gain arising from use of micro-organism diversity and the identity of beneficiaries; future prospects in this;
5. Status of current *in situ* conservation, including habitat protection, legal measures, and others, and gaps in coverage;
6. Status of current *ex situ* conservation, including culture collections with government agencies, research institutions, and corporations, and gaps in coverage;
7. Potential future uses of micro-organic diversity: in biotechnology, agriculture, health, and so on; and the dangers involved in this;
8. Assessment of the safety and other aspects of genetically modified organisms, including India's role in international transfers of GMOs (the Biosafety Protocol and related issues);
9. Identification of measures needed to fill gaps in *in situ* and *ex situ* conservation and sustainable use of micro-organisms;
10. Prioritisation of the above measures in terms of their importance and immediacy;
11. Identification of resources (economic, human, institutional) needed to carry out these measures;
12. Evaluation of the role of science, community, industry, and culture, independently and vis-a-vis each other, in conservation and sustainable use programmes.

Several other thematic working groups may feed into this, for example, economics and biodiversity, access, benefit-sharing and IPRs, livelihood and lifestyles, education and training, technology, policies, law and planning (assuming that they are considering micro-organism diversity in their deliberations).

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