

Third World Network Background Note on the “Ecosystem Approach” of the Convention on Biological Diversity

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In the policy discourse on climate change and biodiversity, the term “nature-based solutions” (NbS) has emerged recently. “NbS” is highly contested, and is currently imbued with a wide range of meaning by its users, ranging from many positive approaches that depend on ecosystems, to dangerous carbon offsetting mechanisms with negative impacts¹.

Some of the key concerns with the latter are: (i) offsets do not address the urgent need to stop fossil fuel emissions or reduce the overall concentration of carbon dioxide in the atmosphere, thus causing more biodiversity harm; and (ii) carbon markets and the NbS model have been held out as a means of climate action and financing conservation of biological diversity, but appropriating forests and lands to serve such NbS strategies threatens to dispossess indigenous peoples and local communities who are the most effective stewards of biodiversity.

The debate surrounding “NbS” is multi-faceted,² and one aspect is the semantic use of the term, in particular its potential use and adoption in the post-2020 global biodiversity framework (GBF) at the Convention on Biological Diversity’s (CBD) Fifteenth Conference of the Parties (COP 15) in 2022. If adopted, this would mark one of the most significant uses of the term in multilateral legal and policy fora³.

Those who are opposing the use of the term “nature-based solutions” in the post-2020 GBF are instead proposing the use of “ecosystem approach” and/or “ecosystem-based approaches”, as the ecosystem approach is rooted in the CBD and its COP decisions. Both terms are used to address a wide range of issues related to biodiversity, including climate change mitigation, adaptation and disaster risk reduction. The main focus of this background note is to illustrate this.

Some attempts at definitions and standards for NbS exist,⁴ but the term is so varyingly used by a multitude of opposing actors that any attempts to arrive at a meaningful definition, principles and safeguards in the context of the CBD, which is a legally binding international treaty, would likely be elusive. It could also open the door to activities that are harmful to biodiversity, and is an unnecessary distraction from the urgent action required to implement the CBD, which is already grounded in the ecosystem approach. Further work should instead be undertaken to build on the ecosystem approach.

¹ See for example: Stabinsky, D (2020) Nature-based solutions or nature-based seductions? Unpacking the dangerous myth that nature-based solutions can sufficiently mitigate climate change, Third World Network and African Centre for Biodiversity.

² See Stabinsky, D (2021) “Nature-based Solutions” and the Biodiversity and Climate Crises by Doreen Stabinsky, TWN Environment & Development Series 21, Third World Network, for a comprehensive discussion on NbS,

³ The 5th session of the UN Environment Assembly (UNEA 5) in March 2022 adopted Resolution 5/5 on ‘Nature-based solutions for supporting sustainable development’

⁴ The most significant being the UNEA 5 Resolution that decided that “nature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits, ...”

Ecosystem Approach

The ecosystem approach is a holistic strategy “for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” (Decision V/6). It is central to the CBD and is an approach that has been used since CBD COP 2 in 1995, where the ecosystem approach was adopted as the “primary framework for action” under the CBD (Decision II/8).

Its importance is reflected in the fact that each of the Convention's work programmes incorporates the ecosystem approach in its goals and activities, and the central role of the ecosystem approach is also reflected in the Strategic Plan of the Convention.⁵

Substantively, much work has been undertaken to elaborate on and guide the implementation of the ecosystem approach.

At COP 5 in 2000, a **description** of the ecosystem approach was adopted (Decision V/6 on Ecosystem approach):

- 1. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.*
- 2. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.*
- 3. This focus on structure, processes, functions and interactions is consistent with the definition of "ecosystem" provided in Article 2 of the Convention on Biological Diversity: "'Ecosystem' means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit." This definition does not specify any particular spatial unit or scale, in contrast to the Convention definition of "habitat". Thus, the term "ecosystem" does not, necessarily, correspond to the terms "biome" or "ecological zone", but can refer to any functioning unit at any scale. Indeed, the scale of analysis and action should be determined by the problem being addressed. It could, for example, be a grain of soil, a pond, a forest, a biome or the entire biosphere.*
- 4. The ecosystem approach requires adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning. Ecosystem processes are often non-linear, and the outcome of such processes often shows time-lags. The result is discontinuities, leading to surprise and uncertainty. Management must be adaptive in order to be able to respond to such uncertainties and contain elements of "learning-by-doing" or research feedback. Measures may need to be taken even when some cause-and-effect relationships are not yet fully established scientifically.*

⁵ Secretariat of the Convention on Biological Diversity (2004) The Ecosystem Approach, (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 50 p.

5. *The ecosystem approach does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, as well as other approaches carried out under existing national policy and legislative frameworks, but could, rather, integrate all these approaches and other methodologies to deal with complex situations. There is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions. Indeed, there are many ways in which ecosystem approaches may be used as the framework for delivering the objectives of the Convention in practice.*

In addition, 12 **Principles** of the Ecosystem Approach, which are complementary and interlinked, were also adopted:

Principle 1: The objectives of management of land, water and living resources are a matter of societal choice.

Principle 2: Management should be decentralized to the lowest appropriate level.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.

Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should:

(a) Reduce those market distortions that adversely affect biological diversity;

(b) Align incentives to promote biodiversity conservation and sustainable use;

(c) Internalize costs and benefits in the given ecosystem to the extent feasible.

Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.

Principle 6: Ecosystems must be managed within the limits of their functioning.

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.

Principle 8: Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.

Principle 9: Management must recognize that change is inevitable.

Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.

Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.

Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

Every principle is accompanied by their **rationale**.

Further, **operational guidance** for application of the ecosystem approach was also adopted:

- 1. Focus on the functional relationships and processes within ecosystems*
- 2. Enhance benefit-sharing*
- 3. Use adaptive management practices*
- 4. Carry out management actions at the scale appropriate for the issue being addressed, with decentralization to lowest level, as appropriate*
- 5. Ensure intersectoral cooperation*

The operational guidance points are proposed in applying the 12 principles of the ecosystem approach.

In 2004 at COP 7, **detailed annotations** to the rationale were further adopted, as well as **implementation guidelines** and clarification of **crosscutting aspects** of the ecosystem approach (Decision VII/11 on Ecosystem approach).

Thus for every principle, there is a rationale, annotations to the rationale and corresponding implementation guidelines (in Annex 1 to Decision VII/11). This is in addition to the description, operational guidance and clarification of crosscutting aspects of the ecosystem approach.⁶

In addition, consideration is given to the relationship between sustainable forest management and the ecosystem approach, as well as a review of, and development of strategies for, the integration of the ecosystem approach into the programme of work of the Convention (in Annex II to Decision VII/11). These programmes of work are: marine and coastal biological diversity, inland water ecosystems biological diversity, agricultural biological diversity, and dry and sub-humid lands biological diversity.

In Decision IX/7, Parties are invited to “Take into account the application of the ecosystem approach in the achievement of the Millennium Development Goals and climate-change adaptation and mitigation activities”.

Further, case studies have been collected in a database on the CBD website for further guidance in formulating a conceptual basis for understanding the ecosystem approach, and for providing a practical approach for its application: <https://www.cbd.int/programmes/cross-cutting/ecosystem/cs.aspx>

There is also an Ecosystem Approach Sourcebook, which is a tool to help practitioners implement the ecosystem approach and share experiences: <https://www.cbd.int/ecosystem/sourcebook/>. Once finalized, the Sourcebook will have several components: a case study database, information about the ecosystem approach, and the various tools and techniques that can be used to implement it.

⁶ Secretariat of the Convention on Biological Diversity (2004) The Ecosystem Approach, (CBD Guidelines) Montreal: Secretariat of the Convention on Biological Diversity 50 p.

Ecosystem-based approaches

"Ecosystem-based approaches" (EBA) is often used interchangeably with "ecosystem approach".⁷ The term is generally understood and used in its literal sense. Ecosystem-based approaches can be understood to mean the application of the ecosystem approach, with all its principles, guidance and guidelines, to other fields, including climate change.

However, like the ecosystem approach, its application is not limited to climate change. It has been used in relation to, inter alia, biodiversity of inland water ecosystems (Decision VII/4), marine and coastal biodiversity (Decision VII/5), and in relation to sustainable fisheries in Aichi Target 6 - "By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, ...".

Its use has also been encouraged in relation to mainstreaming biodiversity in the energy and mining, infrastructure, and manufacturing and processing sectors (Decision 14/3) and in relation to health and well-being (Decision 14/4).

In the area of climate change, the use of the term is often misleadingly circumscribed to adaptation and disaster risk reduction (DRR), as EBA to climate change adaptation and DRR is a well-developed concept.

However, EBA is also central to climate change mitigation and this is reflected in numerous COP decisions on multiple issues, for example, Decision X/20 on Cooperation with other conventions and international organizations and initiatives, Decision X/29 on Marine and coastal biodiversity, Decision XI/24 on Protected areas, Decision XII/3 on Resource mobilisation, and Decisions X/33, XIII/4 and 14/5 on Biodiversity and climate change.

In Decision 14/5, CBD Parties adopted voluntary guidelines for the design and effective implementation of EBA on climate change adaptation and DRR with principles and safeguards, overarching considerations and a stepwise approach. The full and effective participation of indigenous peoples and local communities (IPLCs), the integration of indigenous and traditional knowledge, and respecting the rights of IPLCs are included in these principles and safeguards.

Conclusion

The ecosystem approach has clear and mature articulation in the CBD, and has been substantively and comprehensively elaborated upon. It is well established, has a long history of use, and wide application. CBD Parties adopted it as the primary framework for action over two decades ago, and much work has been undertaken to develop the concept and its implementation since. It is central to the implementation of the CBD, has a sound legal basis and clear principles and safeguards.

⁷ Decision IV/1, B. Ecosystem Approach, states: *Recognizing* that in several decisions adopted at the third meeting of the Conference of the Parties the ecosystem approach has been addressed as a guiding principle, although the terminology used has varied, including: "ecosystem approach", "ecosystem process-oriented approach", "ecosystem management approach" and "ecosystem-based approach"

The biodiversity crisis demands that real action on biodiversity and to implement the CBD must be taken urgently. Amidst multiple crises, including climate change, the importance of the ecosystem approach and/or ecosystem-based approaches in the policy arena must be protected, as the promotion by vested interests of the term “NbS”, with little meaningful definition, principles and safeguards in the context of the CBD, threatens to supplant the implementation of the ecosystem approach.