

WHAT ARE NATURE-BASED SOLUTIONS?

Risks, concerns, and opportunities

– A Joint GYBN-Y4N-YOUNGO Information Brief –



Global Youth
Biodiversity
Network



About this information brief

This information brief has been produced as part of a partnership between the Global Youth Biodiversity Network, Youth4Nature and YOUNGO to explore the risks, concerns and opportunities around the concept of Nature-based Solutions, and to share this information with our youth communities. It is intended to contribute towards the building of a common youth position on this topic. This information brief was written by Mirna Inés Fernández and Marina Melanidis, with thanks to Heeta Lakhani, Cathy Li, Sébastien Willemart, Julian Lo Curlo, Amelia Arreguin and Christian Schwarzer for contributions and review.

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1 Definitions and Proposed Principles

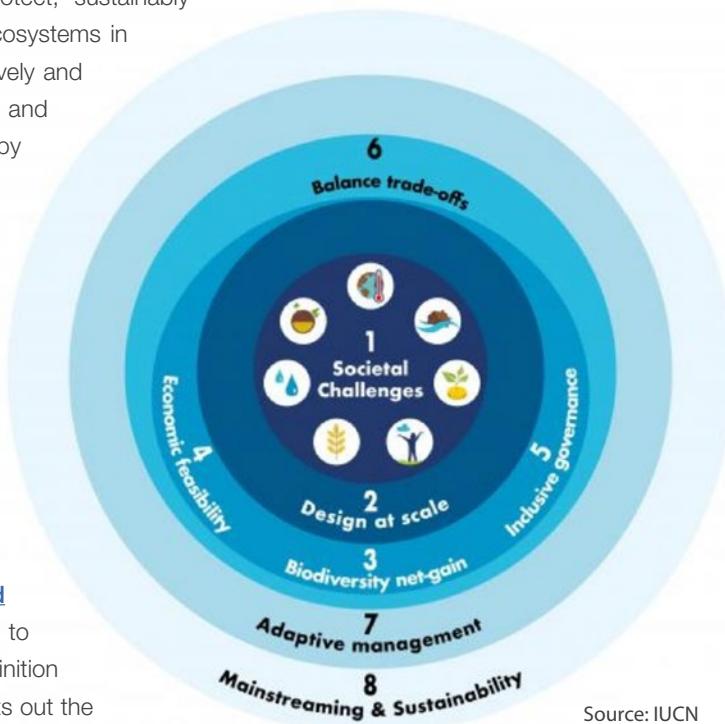
The term “Nature-based Solutions” (NbS) started being used in the late 2000s, being first put forward by practitioners as the International Union for the Conservation of Nature and the World Bank, and promoted afterwards by policymakers in Europe (Eggermont, H., et al., 2015). It was used in the context of finding new solutions to mitigate and adapt to climate change effects, whilst simultaneously protecting biodiversity and improving sustainable livelihoods. Some of the most widely used definitions are:

IUCN - International Union for Conservation of Nature

“Nature-based Solutions are actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits. They are underpinned by benefits that flow from healthy ecosystems and target major challenges like climate change, disaster risk reduction, food and water security, health and are critical to economic development.” (Cohen-Shacham, 2016)

IUCN's definition is the most widely used among international organizations, especially among civil society. After several rounds of consultation with its members, IUCN has also released a [Nature-based Solutions Global Standard](#) which aims to provide further clarity about the concept's definition and implementation. The Global Standard sets out the following criteria that must be met in order for an action to be considered as an NbS:

1. NbS effectively address societal challenges
2. Design of NbS is informed by scale
3. NbS result in a net gain to biodiversity and ecosystem integrity
4. NbS are economically viable
5. NbS are based on inclusive, transparent, and empowering governance processes
6. NbS equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits
7. NbS are managed adaptively, based on evidence
8. NbS are sustainable and mainstreamed within an appropriate jurisdiction



European Commission

The Commission defines Nature-based Solutions as

“Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural

features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions.” (European Commission, 2021).

This definition is almost exclusively used by the Commission itself, and by organizations and institutions that apply for funding under Horizon 2020 and Horizon Europe, the EU’s major research and innovation funding programmes. For more information on the EU’s policy on NbS, [see their website](#).

Variety in Definitions

It’s important to clarify that NbS does not have a legal, or universally agreed definition. It’s not uncommon to see many different wordings when different organizations or institutions apply and define “NBS”, sometimes even varying within the same organization. For example, [on this area of their website](#), WWF defines NbS as “a suite of actions or policies that harness the power of nature to address some of our most pressing societal challenges, such as threats to water security, rising risk of natural disasters, or climate change.” Whereas, within WWF’s report [“Enhancing NDCs through Nature-based Solutions”](#) (March, 2020), the organization adopts the IUCN definition of NbS.

Recently, more and more organizations and institutions are leaning towards adopting the IUCN definition for NbS, making it the most widely used.

The Four Guidelines for Nature-based Solutions

Several environmental non-profits and research institutions, with leadership by the Nature-based Solutions Initiative (NbSI) have developed [“four guidelines”](#) to help shape the NbS discussion, especially in the lead-up to UNFCCC COP 26 where nature is a primary theme. The objective of these guidelines is to “[deliver] successful, sustainable NbS with long term benefits for people and nature.” They are as follows:

1. NbS are not a substitute for the rapid phase-out of fossil fuels and must not delay urgent action to decarbonize our economies.
2. NbS involve the protection, restoration and/or management of a wide range of natural and semi natural ecosystems on land and in the sea; the sustainable management of aquatic systems and working lands; or the creation of novel ecosystems in and around cities or across the wider landscape
3. NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits
4. NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem

For a longer and more comprehensive overview of these four guidelines and the evidence behind them, see the latest publication by the [Nature-based Solutions Initiative](#) (Seddon et al., 2021).

2 Science, Climate Change, and Momentum

The term “Nature-based Solutions” has gained a lot of momentum in international policy spaces over the last 3-4 years (Hanson et al, 2020). It is seen by its proponents as an umbrella term, that encompasses a range of ecosystem-based approaches, including Ecosystem-based Adaptation (EbA), ecological restoration, green infrastructure, and ecosystem services (Cohen-Sacham et al., 2019; Pauleit et al., 2017). It has also been featured in some of the most recent global assessment reports from the Intergovernmental Panel on Climate Change, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, and the Global Commission on Adaptation (IPCC, 2019a, 2019b; IPBES, 2018; GCA, 2019). Seddon et al (2021) summarizes the ways in which NbS has been recognized in science like this:

“The potential of NbS is now recognized by all the major international scientific bodies working on climate change and biodiversity, and there is a growing consensus around key caveats concerning the limits of NbS for climate mitigation, the potential adverse impacts of some actions on biodiversity and food security, and the need to accompany NbS with deep cuts to fossil fuel emissions.”

That said, much of its momentum in policy spaces has been associated with its application to the climate crisis, and climate mitigation in particular. “Natural Climate Solutions” (NCS) is another three-letter acronym sometimes used interchangeably with NbS, and is defined as “improved land management actions that increase carbon storage and/or avoid greenhouse gas emissions across global forests, wetlands, grasslands, and agricultural lands” (Griscom et al., 2017). NCS have been found to have the potential to provide 37% of the cost-effective CO₂ mitigation needed until 2030 in order to reduce warming below 2 degrees (Griscom et al., 2017). This critical and potentially quite significant role of natural ecosystems in reducing CO₂ levels and emissions helped build the explosive increase in momentum for NbS that we see today and has been supported by a wide range of organizations and activists, from [the Nature Conservancy](#) to [Greenpeace](#), to [Greta Thurnberg](#) (for a larger list of NCS and NbS supporters, see [this coalition](#) founded by George Monbiot).

accompanied by rapid and transformative decarbonization - increases in global temperature above 1.5 degrees will restrict the capacity of natural ecosystems to absorb carbon dioxide, will decrease their resilience, and could transition ecosystems from net sinks to net sources (Seddon et al., 2021). In other words, NbS can play a significant, but limited, role in mitigating climate change, and only if we simultaneously decarbonize the global economy.

The momentum for NbS doesn’t seem to be going away: NbS was a key theme at the 2019 UN Secretary General’s Climate Action Summit, and a key theme during the Global Commission on Adaptation’s 2021 Climate Adaptation Summit. NbS has been recognized as one of the five major action tracks of the upcoming COP26, hosted by the UK, and has been included in the zero draft for the post-2020 biodiversity framework set to be finalized during COP15, hosted by China.

3 Potential Risks

- **Not a single, agreed definition**

The concept of Nature-based Solutions has been defined by many different institutions and agencies, therefore the actors dedicated to its implementation can adhere to any of these definitions.

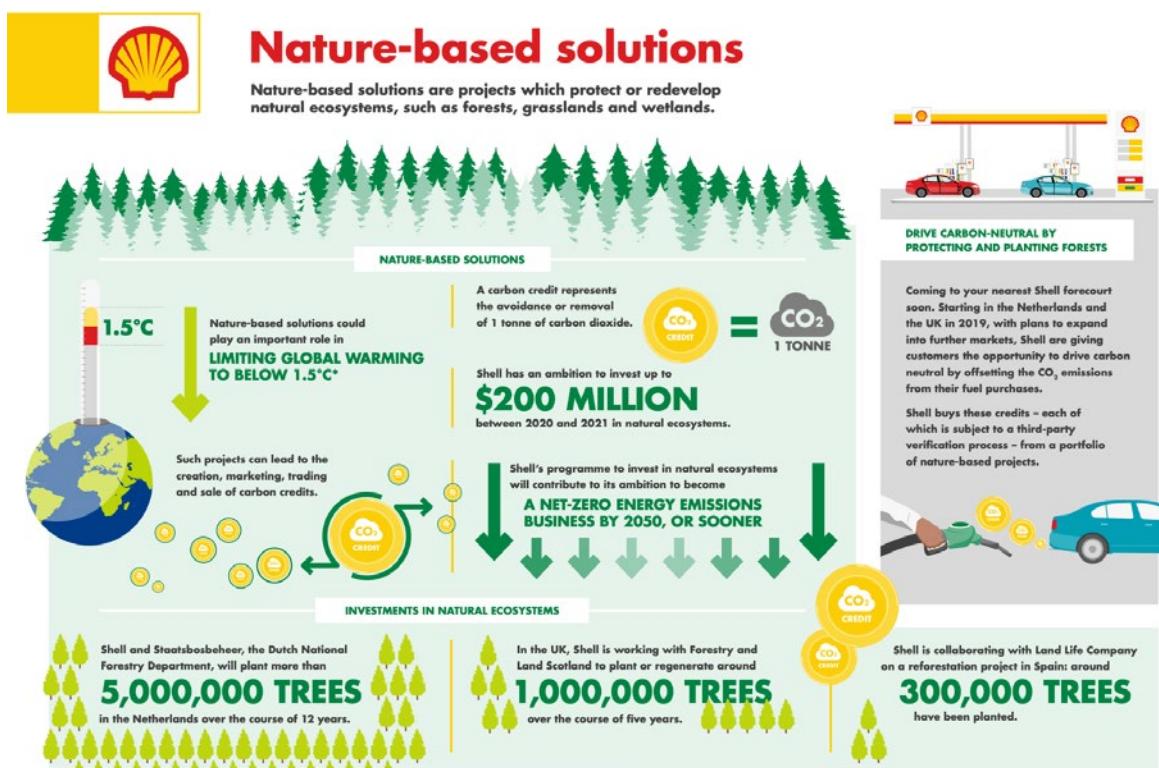
For instance, while the IUCN framing puts biodiversity and human well-being at the heart of NbS, the EU framing puts economy and social assets as priorities, while sustaining environmental conditions.

Also, there is not a definition agreed by the Convention on Biological Diversity (CBD). A proper definition will need the inclusion of the perceptions of key stakeholders as Indigenous Peoples and Local Communities, Women and Youth. It would be difficult to implement NbS in the Post 2020 Global Biodiversity Framework without a concrete and operational definition, criteria and guidelines for implementation. Any gaps in the definition or implementation guidelines could give room for risks associated with the concept, which are explained below:

- **Offsetting and delayed decarbonization**

An important concern is that fossil fuel companies and high-emitting countries appear interested in using the pledges related to Nature-based Solutions to avoid confronting the reality that limiting global warming needs a steep reduction in fossil fuel use.

For example, one of the biggest oil and gas multinationals, Shell, launched a programme focused on NbS in 2019. [On its website](#), Shell states that they have increased investments dedicated to the protection or development of natural ecosystems, such as forests, grasslands and wetlands, to capture more carbon from the atmosphere and help their customers offset their fuel use using carbon credits.



Source: Shell

Also, the carbon trading firm Verra is setting up “an external working group focused on forest carbon innovations”. Verra states that “As is the case with other Nature-based Solutions (NbS), finance for such approaches has been slow to materialize. Carbon credit sales would help drive funding to nature-based solutions and thereby assist in addressing this barrier.” Verra has applied to provide carbon credits to be used by the aviation industry’s Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). One of the fastest-growing sources of greenhouse gases on the planet is the aviation industry, and carbon offsets will only maintain the status quo of their operations.

Regarding NbS for climate mitigation and adaptation, experts point out that since natural systems are affected — and often harmed — by climate change. The more the planet warms, the less effective many of these so-called solutions will become over time. That means they cannot be a substitute for emissions reductions but are merely one piece of an increasingly urgent and multisectoral response to the climate emergency. The challenge, as mentioned by Seddon, et al. (2021) is “how to direct funding towards well-planned NbS projects that do not further delay decarbonization”.

• **Greenwashing**

Over the last two or three years, the term NbS has gained a lot of momentum in different sectors. Unfortunately, it has also been co-opted by corporations, governments and intergovernmental organizations to falsely re-brand highly damaging practices as “green” (GFC, 2020).

An example of how big corporations are using NbS or natural climate solutions, to greenwash their impacts on the ecosystems is the “Markets for Natural Climate Solutions initiative” launched at the UN climate negotiations in Madrid by the International Emissions Trading Association. This scheme will offset the emissions of some of its partners in the fossil fuel industry, including Shell, Chevron and BP. [Many have warned](#) that this is another example of greenwashing from bad-faith actors promoting monoculture tree-plantations as “offsets” for business-as-usual fossil fuel emissions.

• **Monoculture**

An assessment published in the scientific journal Nature (2019) of government pledges made under the Bonn Challenge last year found that tree plantations were the most popular “restoration” option, with 45% of all commitments involving planting vast monocultures of trees. Such plantations can lead to land grabbing, rights violations, soil erosion, freshwater depletion, biodiversity loss and many other impacts. Plantations also store a fraction of the carbon that natural intact forests can, and emissions from land clearance and displacement of other land uses (e.g. agriculture) often totally undermine any mitigation potential. A focus on tree plantations also distracts from the need to include other ecosystem types such as wetlands and grasslands in NbS which also play a significant role in carbon storage while contributing to a wide range of other benefits such as climate change adaptation (Seddon et al. 2021).

In recent years, tree-planting fever has taken hold with governments and the private sector increasingly committing to planting more and more trees which they equate to “restoring” millions of hectares of ecosystems. One of the first initiatives was the Bonn Challenge, launched in 2011 to restore 150 million hectares of the world’s deforested and degraded land by 2020 and 350 million hectares by 2030. More recently, “1 Trillion Trees” was launched at the 2019 World Economic Forum.

- **Benefits not rigorously assessed**

There are concerns over the reliability and cost-effectiveness of NbS, and their resilience to climate change. Trade-offs can arise if climate mitigation policy encourages NbS with low biodiversity value, such as afforestation with non-native monocultures. This can result in maladaptation, especially in a rapidly changing world where biodiversity-based resilience and multi-functional landscapes are key.

The focus of high-level multilateral pledges for nature and climate policy is currently on forests, due to its powerful role as a CO₂ source and sink (Seddon, N., et al., 2019). There is an urgent need for natural and social scientists to engage with policymakers to ensure that NbS can tackle both climate change and the biodiversity crisis while contributing to sustainable development.

- **Carbon colonialism**

The emphasis on NbS can be also an attempt to get away from the imperative of reducing consumption, particularly in developed countries.

Investment from the private sector has become increasingly central to development in the global south, and in recent years the guidelines for this kind of interventions promote “green” approaches as Nature-based Solutions. This is demonstrated via investment in economic activities associated with environmental claims, including plantation forestry and carbon trading initiatives (Lyons & Westoby, 2014). Therefore, a lot of the very needed funding to implement environmental projects in the global south is tied to offset industrial and polluting activities in the global north.

It is also important to realize that global carbon markets disconnect northern-based carbon credit consumers from the profound adverse local livelihood impacts that interventions focused only on the carbon sequestration can have. Not taking these impacts into account put north-south market-based green development interventions far away from being solutions to climate change.

- **Diverted biodiversity finance**

In the case of the Convention on Biological Diversity, including the term “Nature-based Solutions” along with “Ecosystem Approaches” may divert finance that would originally go to the implementation of the Ecosystem Approach. This is because, bad-faith actors not willing to follow the principles defined in the CBD for Ecosystem Approaches would likely find it simpler to, instead, implement false solutions under an umbrella concept, like NbS, that is not clearly defined.

International public climate finance is similarly turning to afforestation with commercial tree plantations, and a recent example of this is the Arbaro Fund, which will create 75,000 hectares of tree plantations across seven countries in the Global South over the next 10 years. Despite strong opposition from civil society, earlier this year the Green Climate Fund (GCF) granted it 25 million USD in co-financing.

4 Warning Voices

Several warning voices have arisen from civil society organizations and networks, pointing to different risks that the co-optation of this term can pose. For example, the [briefing](#) called “Nature-based solutions or nature-based seductions?”, published by the Third World Network, highlights that claiming that nature-based solutions can sufficiently mitigate climate change is a “dangerous myth”. Recognizing that the term, which is vaguely defined, includes many positive actions and approaches, the briefing focuses on the description of a particular agenda pushed by a group of actors that uses NbS to justify offsetting, greenwashing and carbon colonialism.

Also, the Climate Land Ambition and Rights Alliance (CLARA) reported to its members that indigenous and farmers' movements had begun to reject the phrase out of concern that it is “becoming a meaningless term that legitimises harmful approaches.” In a recent [submission](#) to the Standing Committee on Finance regarding the Forum on Finance for Nature-Based Solutions, CLARA requested the Co-facilitators to clarify whether and to what extent this Forum considers the use of land-based credits to offset emissions in other sectors as within the scope of NbS.

The Global Forest Coalition magazine [Forest Cover on its edition 61](#), highlighted how hype around NbS is being used in different contexts as a cover for pushing forest offsets, monoculture tree plantations and other false solutions. This special edition of the Forest Cover was part of the part of the #OurNatureIsNotYourSolution campaign, referring to the theme chosen by CBD for the International Biodiversity Day, “Our solutions are in nature”.

A recent report called [Chasing Carbon Unicorns: The deception of carbon markets and “net zero”](#), calls NbS the “new catch-phrase”, that is used as an offset to distract attention from the need to eliminate fossil fuel emissions, obscure the responsibility of corporates and elites for their carbon emissions, and the responsibility of governments to regulate them. This report has been released by Friends of the Earth International and supported by La Via Campesina, Indigenous Environmental Network, Corporate Accountability, Asian Peoples’ Movement on Debt and Development, Third World Network, Grassroots Global Justice Alliance, Climate Justice Alliance and Justiça Ambiental.



Source: <http://bit.ly/OurNatureIsNotYourSolution>

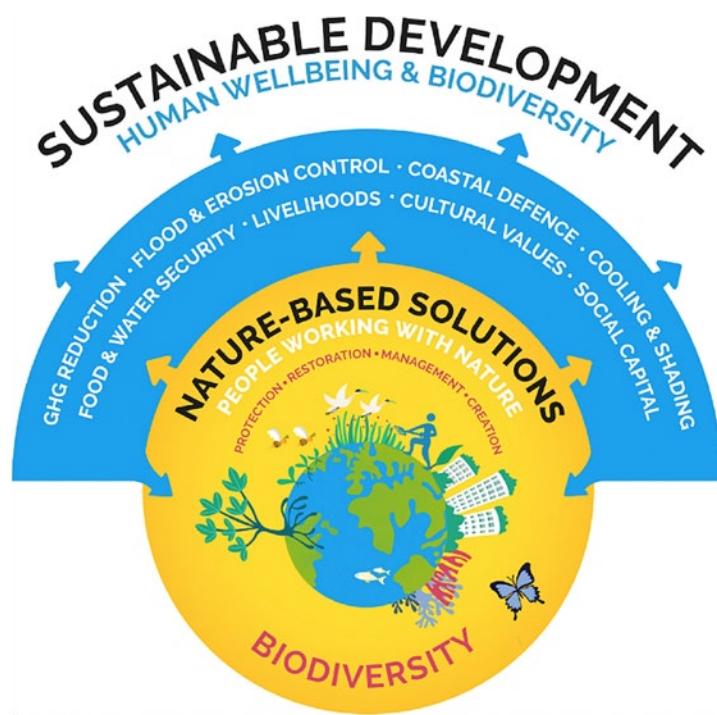
5 Potential Opportunities

In addition to the risks and concerns that NbS proposes, there are also potential opportunities that accompany the concept.

One opportunity presented by NbS is its potential role as a communication and bridging tool. It's relatively simple and intuitive framing of "solutions from nature" can foster understanding and engagement across different sectors and within the general public about the interconnectedness of people, nature, and climate (Cohen-Shacham et al., 2019; Seddon et al., 2021). Because NbS is considered an "umbrella term" that includes other, older ideas such as ecosystem-based adaptation, ecosystem-based disaster risk reduction, forest and landscape restoration, natural climate solutions and others, NbS could be a "first step" into these conversations for groups and individuals that otherwise wouldn't engage with these concepts and support the "mainstreaming" of nature and biodiversity into other sectors and wider decision-making. Perhaps one of the most significant examples of NbS as a bridging tool is its potential as a pathway towards incorporating issues around biodiversity loss into climate initiatives, to better link these interconnected global crises in policy and finance (BirdLife International and National Audubon Society, 2015; WWF, 2019).

Proponents of NbS also note its capacity to be multifunctional by delivering benefits for society and the environment together (Calliari, et al., 2019). Specifically, NbS has the potential to facilitate policy that is solutions focused (Morecroft et al., 2019), to encourage interdisciplinary thinking (Nesshöver et al., 2017) and multi-actor collaboration (Albert et al., 2019), and to overcome sectoral barriers (Kabish et al., 2016).

It is also important to note the financial opportunity that NbS presents. As mentioned above, NbS is being featured in an increasing number of significant new programmes and policies by governmental and non-governmental institutions, including by the private sector (Seymour, 2020). Depending, of course, on the sources of funding and its eventual destination, this surge in financial pledges could represent a significant opportunity to address ecosystem degradation and destruction, while also addressing the climate crisis and supporting human wellbeing.



Source: Seddon et al., 2021

6 Ecosystem Approach

The ecosystem approach has been defined under the CBD as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”. Application of the ecosystem approach was meant to help reach a balance of the three objectives of the Convention: the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems.

As described by the [Conference of the Parties](#), the ecosystem approach is the primary framework for action under the Convention. The Conference of the Parties, at its Fifth Meeting, endorsed the description of the ecosystem approach and operational guidance and recommended the application of the principles and other guidance on the Ecosystem Approach ([decision V/6](#)). The seventh meeting of the Conference of the Parties agreed that the priority at this time should be on facilitating the implementation of the ecosystem approach and welcomed additional guidelines to this effect ([decision VII/11](#)).

In 1998, key aspects of the approach had been refined into 12 principles (the Malawi Principles) for presentation at CBD COP IV. These principles formally became the basis of the EA when they were adopted by the CBD in 2000. These principles, rather than promoting a single sectoral or species approach, encourage decision making that takes into account how ecosystem processes will be affected over space and time (e.g., principles 3, 7, and 8). Some others relate to involving and empowering stakeholders (e.g., principles 1, 2, 10, 11, and 12), reflecting arguments that different stakeholder groups should be involved, the desirability of devolving or decentralizing management, and the value of different forms of knowledge (Waylen et al., 2014).

Comparison table on principles and criteria for Nature-based Solutions and the Ecosystem Approach

The following table compares each individual principle outlined under the Ecosystem Approach with the IUCN Global Standard Criterion/Criteria, and the Four NbS Guidelines that most closely align with it. The purpose is to illustrate better the key elements on each of these frameworks, so these can be taken into account when developing youth positions about safeguards and implementation guidelines at different levels.. Note however, that the ecosystem approach principles and IUCN standards were proposed to support the design and implementation of NbS on the ground, whereas the NbS guidelines were created to help guide the uptake of NbS into international policy. Hence this explains in part why some of the principles and standards have no equivalent in the guidelines as they are more relevant for practice rather than policy. Vice versa, NbS guideline 1 has no equivalent in the other frameworks as it is more relevant to policy rather than practice.

Ecosystem Approach	IUCN Global Standard Criteria for NbS	NbSI's Four Guidelines for NbS
Principle 1: The objectives of management of land, water and living resources are a matter of societal choice.	Criterion 1: NbS effectively address societal challenges Criterion 5: NbS are based on inclusive, transparent and empowering governance processes.	Guideline 3: NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits.
Principle 2: Management should be decentralized to the lowest appropriate level.	Criterion 5: NbS are based on inclusive, transparent and empowering governance processes.	Guideline 3: NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits.
Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.	Criterion 2" Design of NbS is informed by scale Criterion 3: NbS result in a net gain to biodiversity and ecosystem integrity.	Guideline 2: NbS involve the protection, restoration and/or management of a wide range of natural and semi-natural ecosystems on land and in the sea; the sustainable management of aquatic systems and working lands; or the creation of novel ecosystems in and around cities or across the wider landscape.
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.	Criterion 4: NbS are economically viable Criterion 6: NbS equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits.	No clear comparison.
Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.	No clear comparison.	Guideline 4: NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem.
Principle 6: Ecosystems must be managed within the limits of their functioning.	Criterion 3: NbS result in a net gain to biodiversity and ecosystem integrity.	Guideline 4: NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem.

Ecosystem Approach	IUCN Global Standard Criteria for NbS	NbSI's Four Guidelines for NbS
Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.	Criterion 2 : Design of NbS is informed by scale.	Guideline 2: NbS involve the protection, restoration and/or management of a wide range of natural and semi-natural ecosystems on land and in the sea; the sustainable management of aquatic systems and working lands; or the creation of novel ecosystems in and around cities or across the wider landscape.
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.	Criterion 8: NbS are sustainable and mainstreamed within an appropriate jurisdictional context.	Guideline 4: NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem.
Principle 9: Management must recognize that change is inevitable.	Criterion 7: NbS are managed adaptively, based on evidence.	No clear comparison.
Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.	Criterion 6: NbS equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits.	No clear comparison.
Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.	Criterion 5: NbS are based on inclusive, transparent and empowering governance processes.	Guideline 3: NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits.
Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines.	Criterion 5: NbS are based on inclusive, transparent and empowering governance processes Criterion 8: NbS are sustainable and mainstreamed within an appropriate jurisdictional context.	Guideline 3: NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits.
No clear comparison.	No clear comparison.	Guideline 1: NbS are not a substitute for the rapid phase-out of fossil fuels and must not delay urgent action to decarbonize our economies.

7

Final Reflections and Proposed Safeguards

As many of the warning voices state, without clearer definitions and principles to guide these efforts, the term “Nature-based Solutions” could be used to justify projects that harm local communities and that deflect attention away from the need to pursue rapid reductions in carbon emissions and address the root causes of the ecological and climate crisis.

It is important to highlight that the term is not inherently “bad”, as there is an urgent need for solutions to protect, restore and sustainably manage nature. However, there are already multiple examples of NbS being co-opted by the private sector and corrupted with intentions of greenwashing and offsetting. Even proponents of NbS have been raising warning signs about its co-option and use for greenwashing, calling for “unity” and a “core vision” surrounding what NbS are and what they are not (Seddon et al., 2021). The Nature-based Solutions Initiative has also just shared some concerns and perspectives related to the [misuse of nature-based carbon ‘offsets’](#), which should be taken into account when developing a unified vision on NbS. This may be especially important in the climate policy world, where the momentum for nature is only continuing to grow, resulting in rapid uptakes in corporate funding commitments and government-backed pledges and programmes, many of which heavily emphasize carbon “offsetting”.

The CBD has defined a similar concept to NbS, “Ecosystem Approaches”, and calls upon Governments and international organizations to apply it in line with 12 principles and guidance developed for their implementation. For Nature-based Solutions, IUCN’s Global Standard outlines implementation criteria that further defines which actions can be considered as an NbS. Additionally, four guidelines for Nature-based Solutions to climate change have been proposed by a consortium of civil society, led by the Nature-based Solutions Initiative to guide the concept’s uptake in international policy.

There are very important elements which are emphasized in the Ecosystem Approach Principles, the IUCN Standard criteria for NbS, and the NbSI’s Four Guidelines for NbS. These should be taken into account if Nature-based Solutions are to be officially defined in a multilateral process such as the CBD or the UNFCCC, in order to ensure ecosystem integrity, equity for nature and people, and sustainability. If a concept of Nature-based Solutions continues to be prevalent across both biodiversity and climate policy, programmes, and targets (which its incorporation into upcoming major environmental events suggests) it universally accepted and defined safeguards are critical in order to ensure its implementation doesn’t harm biodiversity and its protectors. Such safeguards would include:

- Safeguards for Biodiversity and highly biodiverse ecosystems, ecosystems structure and ecosystem functions
- Safeguards for native species, preventing the introduction of Invasive Alien Species
- Safeguards for Indigenous Territories, respecting the principle of Free, Prior and Informed Consent
 - i.e. Safeguards that prevent land grabbing, co-option, and tokenism, and that centre local participation and leadership, and integrate traditional knowledge and technologies.
- Safeguards for human rights, particularly for environmental defenders, and from a gender perspective
 - i.e. Safeguards that prevent marginalization/exclusion, forced displacement, violence, intimidation, corruption etc.
- Safeguards to guarantee inclusiveness (i.e. a “leave no one behind” principle) and the equitable and socially just distribution of co-benefits
- Red-lines to avoid that NbS is used for greenwashing and offsetting
- Red-lines to prevent monoculture schemes

Finally, it is important to remember that the climate crisis and biodiversity crisis demand transformational change. This means going beyond incremental change, and instead restructuring our economies to work within the limits of the biosphere while prioritising justice and human well-being. Framing Nature-based Solutions as market mechanisms is narrow-sighted, and it completely ignores the social and ecological complexities that must be addressed if these approaches are to be successful. In order for NbS to be a part of the transformational change we need, they must truly centre biodiversity, people, and justice.

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