

# UNITED NATIONS ENVIRONMENT ASSEMBLY

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In-person | At FACAMP



# RESEARCH GUIDE

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## RESEARCH GUIDE

### UNITED NATIONS ENVIRONMENT ASSEMBLY

# NATURE-BASED SOLUTIONS FOR SUPPORTING SUSTAINABLE DEVELOPMENT

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## PREFACE

Dear delegate,

We are very glad about your participation in the United Nations Environment Assembly (UNEA) at the FACAMP Model United Nations (FAMUN) 2024. We are delighted to know that you have accepted the challenge of participating in this simulation and, by doing so, act now to help us find solutions for our future. This will be a time of much learning and growth, and we would like you to know that we will be at your disposal, from researching the topic to the simulation itself, to ensure you have the best possible experience during the conference days!

With the goal of saving today our tomorrow, we, from the FAMUN 2024 team, invite you to think, discuss, and develop actions that reconsider the way we interact with nature. Extreme climate events are becoming increasingly frequent, directly affecting the lives of millions of people and other living beings. Responding to the climate-environmental crisis requires us to rethink how we live on this planet. FAMUN is the ideal environment to reflect on these issues that demand immediate action. In this process, the conference becomes an opportunity for you, as a future professional, to gain new perspectives and negotiate your differences to promote change. Tomorrow must be protected today, so we invite you to act now!

The first step in preparing for FAMUN is to understand the topic of the simulation. For this, we have prepared this research guide to assist and guide your initial study on the theme "Nature-based solutions for sustainable development". In the first pages of the document, you will find an introduction about the importance of UNEA and the main challenges to be addressed in the simulation. Following this, there will be a list of research sources, including reports, resolutions, websites, publications, and more, to help you go deeper into your preparation research for the simulation. Finally, we present the positions of regional groups, major groups, and stakeholders on the topic to guide the construction of your negotiation strategy during FAMUN.

Facing the challenge proposed by this theme, we invite you to rethink how we interact with nature and propose actions aimed at a truly sustainable future, fostering harmony between humans and nature. And this must be done in conjunction with the other delegations. We hope that through dialogue, diplomacy, and consensus, it will be possible to find nature-based solutions that are fair to both humans and nature as a whole!

Warm regards,

Luíza De Godoy Picarelli Marcolino – President  
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Gabriele Ushiroda – Secretary  
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## INTRODUCTION

Since the United Nations Conference on the Human Environment, which took place from 5-16 June 1972 in Stockholm<sup>1</sup>, global environmental issues have taken a more central position on the international agenda. This concern was a response to the consequences of the development process in many countries, such as increased pollution, contamination of rivers and soils, among other factors. Besides inaugurating the environmental discussion on the international agenda and proposing the concept of sustainable development<sup>2</sup>, the conference resulted in a declaration with principles to balance economic growth with environmental protection and the establishment of the United Nations Environment Programme (UNEP)<sup>3</sup> (United Nations General Assembly, 1972, pp. 1-2; Abreu et al., 2012, pp. 148-150).

UNEP's headquarters is located in Nairobi, Kenya, the first United Nations (UN) entity based in a developing country. The program has a technical character and monitors environmental agenda issues, providing data and scientific analyses to support policy formulation and the implementation of environmental actions (United Nations Environment Programme, 2023 c, p. 5).

When created in 1972, UNEP had a Governing Council<sup>4</sup> composed of only 58 Member States, responsible for deliberating about the functions of the program (United Nations General Assembly, 1972, pp. 1-2). However, since its inception, UNEP has worked with other actors, called major groups and other stakeholders, which include non-governmental organizations, groups representing indigenous peoples, women, children and youth, among others, to drive global commitments and coordinate actions to address the most urgent environmental challenges (United Nations Environment Assembly, 2024 b).

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<sup>1</sup> The United Nations Conference on the Human Environment, held in Stockholm in 1972, was a milestone in the history of global environmental preservation. It brought together representatives from 113 countries and over 400 governmental and non-governmental institutions to discuss the impacts of human development on the environment. A central point of the debate was the proposal of "zero development", which defended the stagnation of economic growth to avoid environmental crises. However, this idea conflicted with the interests of developing countries seeking to improve the quality of life of their population through economic growth. The conference addressed topics such as acid rain, air pollution, and the sustainable use of natural resources, resulting in the creation of an important document on the preservation and use of natural resources on a global scale that laid the foundations for future environmental conservation and sustainable development initiatives (Abreu et al., 2012, pp. 148-150).

<sup>2</sup> Sustainable development refers to a model of progress that balances economic growth with environmental preservation and social well-being. It is an approach that aims to meet present needs without compromising the ability of future generations to meet their own needs. The concept proposes building a prosperous future that respects natural resources, promotes equality, and protects the environment for future generations (Nações Unidas Brasil, 2020).

<sup>3</sup> UNEP was established by the United Nations General Assembly in 1972 through its Resolution 2997(XXVII) (United Nations General Assembly, 1972).

<sup>4</sup> A Governing Council is an entity responsible for making decisions and establishing guidelines for a specific organization or program. In the context of the UN, many agencies and programs have their own Governing Councils composed of representatives from Member States. In UNEP, the Governing Council comprises representatives from Member States who meet regularly to make decisions on policies, programs, and activities related to the global environment. These decisions may include the approval of environmental conservation projects, the allocation of funds for sustainability initiatives, and the setting of priorities for the global environmental agenda. The Governing Council plays a crucial role in guiding and directing UNEP's actions and operations, ensuring that its activities are aligned with the objectives and values set by Member States (United Nations Environment Assembly, 2024 b).





The environmental agenda gained greater visibility in the early 1990s with the United Nations Conference on Environment and Development (Rio-92), which discussed ways to implement sustainable development. The conference also drew greater attention to specific environmental agenda topics, such as biodiversity loss and climate change, resulting in the creation of specific conventions to address these issues (Abreu et al., 2012, pp. 149-150).

Twenty years later, a new conference was convened to discuss the progress of the commitments established in Rio-92: The United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in 2012<sup>5</sup>. The decision to create the United Nations Environment Assembly (UNEA) was a result of this conference, aiming to establish a more robust and universally representative body to address emerging environmental challenges from a sustainable development perspective – and more specifically, from the perspective of the 2030 Agenda and its 17 Sustainable Development Goals (SDGs), which were already being negotiated in that context (United Nations Environment Programme, 2023 c, p. 7).

UNEA was officially established in 2012 as a deliberative body, replacing the UNEP Governing Council. UNEA's primary function is to make decisions regarding environmental agenda issues, particularly to support policy formulation and the implementation of international law standards. Therefore, UNEA is the crucial decision-making forum for global environmental policies, while UNEP provides the essential technical and scientific support for implementing these policies. Due to the interdependence of these issues, decisions are commonly agreed upon by consensus among Member States (United Nations Environment Assembly, 2024 b).

Unlike the preceding Governing Council, UNEA comprises all 193 UN Member States, making it more democratic. Regarding leadership, UNEA consists of a Bureau, which includes a President, eight Vice-presidents, and a Rapporteur, who assist the President in general negotiations. Besides the Member States, UNEA includes major groups and other stakeholders who actively participate in the negotiations of agenda items, although they do not have voting rights. Nevertheless, the major groups and other stakeholders are important because they represent the demands of civil society and provide scientific, political, and legal knowledge, evidenced by their activist practices, which promote political pressure to hold States accountable (United Nations Environment Programme, 2023 c, pp. 10-11; 15-16).

UNEA convenes every two years to deliberate on various environmental agenda topics. Its 5<sup>th</sup> session, known as UNEA-5, was held in two parts: An online session in 2021 and an in-person session in 2022 due to the COVID-19 pandemic. The central theme of UNEA-5 was "Strengthening Actions for Nature to Achieve the Sustainable Development Goals". This session was particularly significant because it coincided with the 50<sup>th</sup> anniversary of the Stockholm Conference and the creation of UNEP. Moreover, in response to the consequences of the pandemic, UNEA-5 highlighted the connection between human health, environmental health, and

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<sup>5</sup> During Rio+20, world leaders gathered to discuss crucial issues related to global sustainable development. One of the main objectives of Rio+20 was to assess the progress made since Rio-92. In Rio+20, participants extensively discussed topics such as green economy, poverty eradication, and the need for effective environmental governance. Additionally, they debated the importance of establishing global goals and commitments to address the environmental and social challenges of the 21<sup>st</sup> century. Rio+20 emphasized the significance of international cooperation and collective action to tackle the environmental and social challenges of our time. It was a significant milestone in the history of sustainable development, demonstrating the commitment of countries to work together to ensure a sustainable future for present and future generations (Nações Unidas Brasil, 2020).





economic systems due to the increasing frequency and intensity of extreme weather events, underscoring the urgency of actions to combat environmental changes (United Nations Environment Assembly, 2024 a).

Guided by this theme, the 5<sup>th</sup> session of UNEA discussed ecosystem restoration, chemical and waste management, and plastic pollution, emphasizing the need for coordinated global actions. Additionally, UNEA held significant debates on climate change, including mitigation and adaptation measures, as well as the importance of involving indigenous communities and traditional peoples who are more vulnerable to the impacts of the climate crisis. Another crucial point was the need for financing to promote sustainable development (United Nations Environment Assembly, 2024 a).

UNEA-5 also discussed the central role of nature in addressing various global challenges. In this regard, the Assembly adopted its resolution 5/5 on 2 March 2022, the first (and only to date) on the agenda item "Nature-based solutions for supporting sustainable development". UNEA defined of what constitutes nature-based solutions (NbS) for the first time. While the concept was already used in academia and international and non-governmental organizations, Member States have yet to have a common understanding of its meaning. Now, through this resolution, UNEA defined NbS as:

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 (United Nations Environment Assembly, 2022, p. 2).

Given that the concept provided in the resolution is relatively broad, UNEA established some criteria through resolution 5/5 to define NbS, summarized in Table 1 below. For instance, NbS must be nature-centered but adapted to each country's local context; they should inspire innovations and scientific research; they must respect socio-environmental safeguards and are considered essential for achieving the SDGs. The resolution also recognizes the crucial role of NbS in combating the climate crisis. Still, it emphasizes that these measures are complementary and do not replace the urgent concrete actions to reduce greenhouse gas emissions responsible for global warming (United Nations Environment Assembly, 2022, p. 2).

Another relevant point for defining NbS is the alignment with ecosystem-based approaches, as defined in the 1992 Convention on Biological Diversity and reinforced in the 2022 Kunming-Montreal Global Biodiversity Framework. These approaches aim to preserve and restore ecosystems through integrated management of soil, water, and other living and non-living entities that share the same environment interdependently (Convention on Biological Diversity, 2024). Thus, NbS must be in harmony with these approaches, focusing on the preservation and restoration of ecosystems.

NbS must also be associated with truly sustainable consumption and production patterns that are not harmful to nature or indigenous and traditional peoples. In this context, resolution 5/5 recognizes the importance of including the perspectives of indigenous and traditional communities in the formulation of NbS, as they have ancestral knowledge and views that prioritize human life in harmony with nature (United Nations Environment Assembly, 2022, pp. 2-3).







**Table 1 - Criteria for defining nature-based solutions, based on resolution 5/5**

Criteria	Description
1	Must respect social and environmental issues and protect local communities and indigenous peoples
2	Can be implemented based on the reality and capacity of each Member State
3	Have the capacity to stimulate sustainable innovation and scientific research
4	Are directly linked to achieving the SDGs, including climate action, life below water, and life on land
5	Must preserve, restore, and sustainably manage natural or modified ecosystems
6	Must address social, economic, and environmental challenges, aiming for decisions that encompass human well-being, biodiversity benefits, and ecosystem conservation
7	Contribute to climate action by enhancing climate adaptation, resilience, and mitigation
8	Must be in harmony with the concept of ecosystem-based approaches

Source: Own elaboration based on UNEA resolution 5/5 (United Nations Environment Assembly, 2022, p. 2).

It is important to note that the involvement of other specific groups, such as local communities, women, youth, and children, ensures that the proposed solutions are culturally appropriate, socially acceptable, and ecologically viable, aligning with the criteria established for NbS in the UNEA resolution. Additionally, the participation of these groups promotes greater equity and social justice, ensuring that the benefits of NbS are distributed fairly and that the voices of communities most affected by environmental changes are heard and considered in political decisions. The inclusion of young people, in particular, is crucial for ensuring sustainability initiatives in the long term, fostering a new generation of environmental leaders committed to preserving the planet. Thus, including of all these stakeholders is fundamental for the effectiveness, legitimacy, and sustainability of NbS, strengthening the resilience of communities and ecosystems (United Nations Environment Assembly, 2022, pp. 2-3).

Agroecology is an example of NbS that demonstrates how local communities, especially women, can foster sustainable management practices based on nature. Through the restoration of ecosystems and biodiversity, agroecology aims to implement a food system in harmony with nature, thereby promoting a healthier environment and food, ensuring local population food security while improving the quality of life for people and the planet (Choi et al., 2023).





Despite the significant contribution of UNEA resolution 5/5 in providing a definition of NbS, it is possible to observe that academic articles, international organizations, NGOs, as well as public policies of various countries, present different interpretations of the concept. Thus, to make its definition more specific, UNEA requested UNEP to organize intergovernmental consultations with Member States, major groups, and other stakeholders to gather examples of best practices and assessment criteria, standards, and guidelines to improve the understanding and implementation of NbS (United Nations Environment Programme, 2024).

UNEA and UNEP made available the compilation of examples and best practices between 2023 and 2024. In the submissions presented during the intergovernmental consultations, it became evident that the broad definition of NbS made it difficult for Member States to have a common understanding of what these solutions are. In their submissions, each country highlighted measures related to their own interests, often contradicting each other (United Nations Environment Programme, 2024). In this regard, it is interesting to note how countries from the Global North and Global South<sup>6</sup> had different understandings of NbS.

Global North countries generally view NbS as an essential tool for addressing the climate crisis, ensuring food and water security, reducing disaster risks, and enhancing human health and well-being. However, they emphasize the importance of technology in ensuring the effectiveness of NbS. For these countries, NbS should be guaranteed and measured by economic growth and the creation of green jobs (United Nations Environment Programme, 2023 b, p. 1).

The European Union has developed a project called Connecting Nature Enterprise Platform, which aims to connect NbS providers and consumers. This project exemplifies the view of countries from the Global North about how NbS are fundamental for economic growth and the development of new economic practices (United Nations Environment Programme, 2023 b, p. 2). However, it is worth questioning whether nature is truly the focus of these actions or if they are a way to foster market practices through an environmentally acceptable discourse.

For Global South countries, NbS also represent a potential solution to the climate and environmental crises. However, different from the Global North, the priority is not necessarily technology for implementing these actions but instead using NbS to address socioeconomic issues. Some Global South countries defend that NbS should be grounded on climate justice, asserting that states who pollute more should lead initiatives and investments to reduce greenhouse gas emissions (GHGE) without disadvantaging other countries, especially developing countries (United Nations Environment Programme, 2023 a, p. 2).

The Third World Network, one of UNEA's stakeholders, shares this perspective. This non-governmental organization (NGO) advocates that NbS should be guided by the principle of common but differentiated responsibilities<sup>7</sup> established

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<sup>6</sup> The Global North and Global South are political (rather than geographical) categories used by the UN to refer to, respectively, developed and industrialized countries (especially in Europe and North America) and developing and least developed countries (especially in Latin America and the Caribbean, Africa, and Asia-Pacific).

<sup>7</sup> The principle of "common but differentiated responsibilities" refers to Principle 7 of the Rio Declaration on Environment and Development, which is one of the foundations of the international environmental regime. The principle establishes that: "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear





at Rio-92. This means that NbS should consider countries' different realities and capacities in implementing measures to address climate and environmental crises and related issues, particularly in terms of financing. The NGO warns that NbS should not be part of carbon and biodiversity offset markets, which – as market mechanisms – tend to reinforce inequalities between the Global North and Global South, endangering traditional local communities and nature itself by favoring profit and socioeconomic inequality (United Nations Environment Programme, 2023 e, pp. 1-3).

However, some specific countries from the Global South take this argument further, viewing NbS as an imposition by developed countries to circumvent the challenges they caused by forcing a development perspective based on extractivism and natural resource exploitation. Bolivia is the country that most emphasizes this issue, arguing that NbS, originating from a Eurocentric and anthropocentric view, promote environmental neocolonialism since the actions presented as NbS often function as market mechanisms to address problems created by capitalism itself (United Nations Environment Programme, 2023 d, p. 1).

Countries with a significant presence of traditional and indigenous communities, such as Bolivia and Ecuador, believe that NbS would only be truly effective if guided by an ecocentric perspective, prioritizing nature over market and profit concerns. They argue that the market-driven role assigned to nature by the capitalist system should be removed from the concept of NbS. One proposed approach is recognizing nature as a subject of rights, placing it at the center of priorities, and emphasizing the essential role of indigenous peoples, local communities, women, and youth in this process (United Nations Environment Programme, 2023 d, pp. 2-4).

Thus, there are two main approaches to NbS: One that views NbS as a mechanism to ensure human well-being, grounded in anthropocentrism and market logic, and another that calls for understanding and defining these practices from an ecocentric perspective, guided by ecosystem-based approaches and non-market mechanisms. Since the concept of NbS was developed in the Global North, the first approach has been predominant, receiving support from some international organizations and multinational companies. The problem with this approach is that NbS are seen as actions that perpetuate obstacles stemming from capitalism, such as socioeconomic inequality and the view of nature as merely a resource.

Meanwhile, the notion of NbS from an ecocentric perspective has been supported by a relatively small number of countries and some major groups and stakeholders, especially those connected to indigenous peoples, quilombolas, women, and youth. These groups are working to make NbS concrete alternatives to environmental neocolonialism, greenwashing<sup>8</sup>, and other actions that claim to be sustainable but are, in reality, driven solely by profit and the promotion of technologies, benefiting only a small segment of the population (International Institute for Environment and Development, 2021; United Nations Environment Programme, 2023 e, pp. 2-5; United Nations Environment Programme, 2023 d, p. 3).

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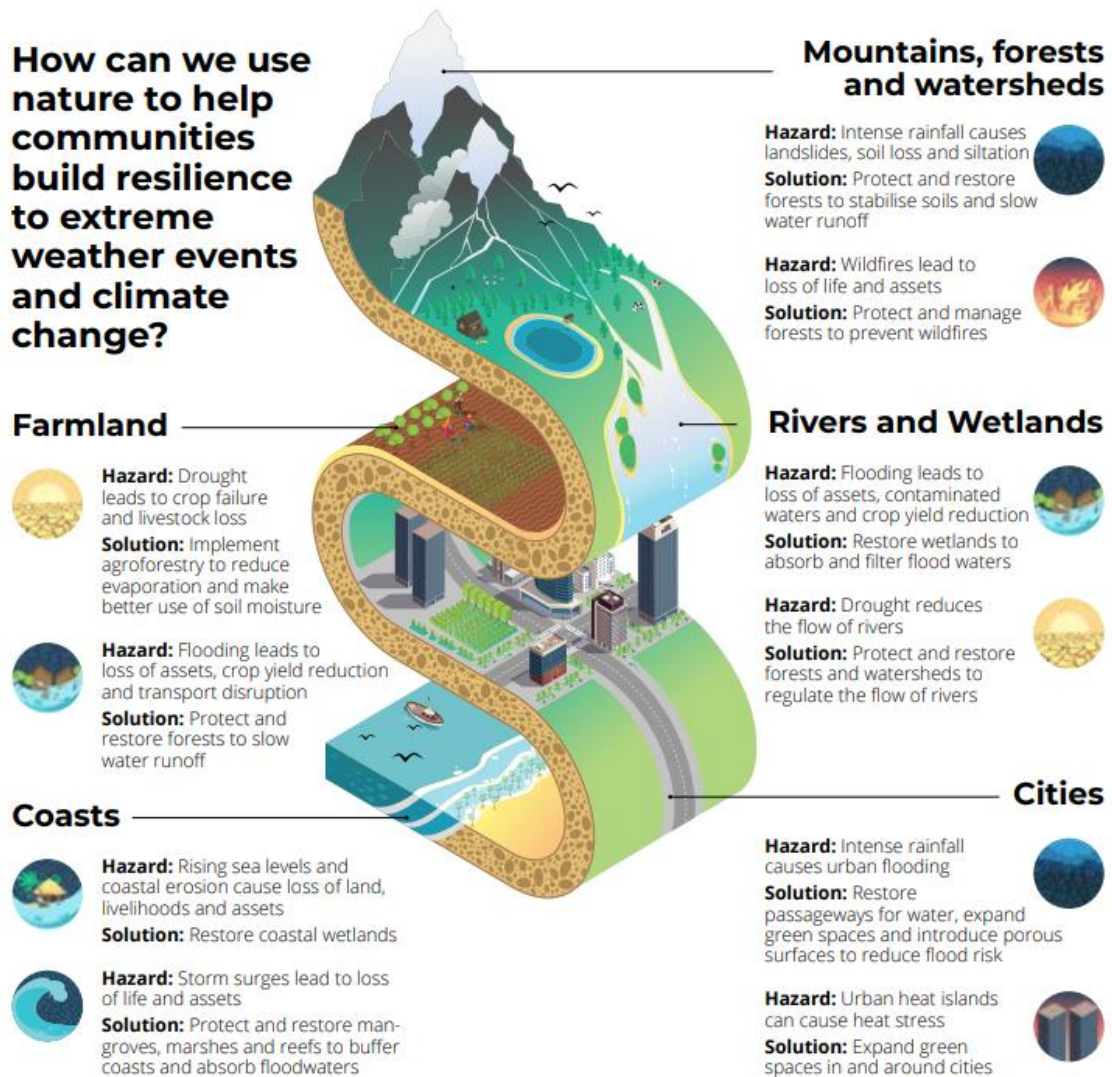
in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command" (United Nations, 1992, p. 9).

<sup>8</sup> Greenwashing can be defined as the act of making the public believe that a company or entity is taking significant actions to protect the environment when, in fact, it is merely promoting false solutions to the climate and environment crises, distracting from concrete and genuine actions (Choi et al., 2023).





**Figure 1 – Examples of nature-based solutions and their contribution to addressing the climate crisis**



Source: Adapted from Global Commission on Adaptation, Adapt Now report, 2019

Source: International Federation of Red Cross and Red Crescent Societies (2021, p. 1).

This effort to adopt an ecocentric perspective is crucial, given that NbS are already a reality recognized by both the Global North and Global South as essential tools for addressing climate and environmental challenges. They are, therefore, fundamental instruments for achieving the 17 Sustainable Development Goals (SDGs), especially SDGs 9 (Industry, Innovation, and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action), 14 (Life Below Water), and 15 (Life on Land).

In this context, UNEA currently faces several challenges in advancing discussions on NbS and ensuring that these actions genuinely prioritize nature. The **first challenge** concerns the implementation of NbS to address the triple planetary crisis, which entails the crisis of pollution, the climate crisis, and the biodiversity







loss crisis. It is important to note that the three components of this crisis directly stem from human actions on the environment and create a vicious cycle that tends to have catastrophic effects on all living beings (United Nations Framework Convention on Climate Change, 2022).

Climate change is a direct result of pollution and other human activities, particularly industrial activities, which are the main source of GHGE. These emissions raise the global average temperature, directly impacting the climate and terrestrial ecosystems. Therefore, NbS that aim to combat air pollution and the climate crisis by reducing carbon concentration in the atmosphere should be considered. Effective NbS for addressing the climate and pollution crises include the use of lichens and algae, tree planting, and the implementation of vertical greening systems and green roofings<sup>9</sup> (Menon; Sharma, 2021, pp. 4-5). Other examples of NbS for addressing the climate crisis are illustrated in Figure 1 above.

Another aspect of the first challenge is how NbS can respond to biodiversity loss. Changes in the planet's ecosystems, also resulting from human activities, such as agriculture, disrupt the stability of various ecosystems and the species dependent on them (United Nations Framework Convention on Climate Change, 2022). Over the past two decades, approximately 100 million hectares of forested areas have been lost, representing a 0.7% decrease in the land area occupied by forests. Furthermore, it is estimated that 1 million species worldwide are threatened with extinction (United Nations, 2023, pp. 42-43). Therefore, NbS must be implemented to restore terrestrial and marine biodiversity while addressing other issues. A significant example is reforestation, a solution commonly proposed for combating carbon concentration. However, it is important not to prioritize only plant species with high carbon uptake but also native species to avoid turning a solution for one crisis into the cause of another (Choi et al., 2023).

Another consideration within this first challenge is the different capacities of countries in terms of financial and technological resources to promote and implement NbS. In this context, it is crucial to consider the principle of common but differentiated responsibilities, especially regarding climate justice.

The **second challenge** UNEA must address is ensuring that actions proposed as NbS are guided by an ecocentric perspective, meaning that nature (rather than the market) is prioritized. In this aspect, it is important to consider non-market mechanisms when advancing NbS, as specified in Article 6.8 of the 2015 Paris Agreement. In that way, nature will not be used merely as rhetoric for the continued exploitation of natural resources for human benefit, which would increase the risk of perpetuating a cycle of environmental degradation and exacerbating the consequences of the planetary triple crisis in the name of economic growth (Hidalgo-Capitán et al., 2019, p. 14).

The challenge of adopting ecocentric NbS is substantial, given the pressure from existing economic and political systems oriented towards maximizing profit and short-term growth to the detriment of the long-term health of ecosystems and living beings in general (United Nations Framework Convention on Climate Change, 2024). Integrating ecocentric measures into NbS is a way of recognizing the interdependence between humans and nature and highlighting the importance of conserving ecosystems and biodiversity for all forms of life, not just human life. This

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<sup>9</sup> Vertical greening systems and green roofing are structures that promote the growth of vegetation in urban areas, such as on building walls and rooftops, which help not only in mitigating air pollution but also controlling temperatures (Menon; Sharma, 2021, p. 5).





involves implementing policies and practices that prioritize mitigating human impacts on the environment and ensuring the health of the planet for current and future generations (Faria, 2014, p. 8).

As examples of non-market mechanisms, we can cite the sustainable management of forests for climate mitigation and adaptation, the promotion of socio-ecological resilience, and mitigation activities with technology development or transfer supported by the involved parties (Observatório do Clima, 2024, p. 8). To achieve this, it is necessary to consider ways to promote a paradigm shift, fundamentally altering the mindset and structures of institutions and addressing the resistance of sectors interested only in the economy.

With this in mind, the inclusion of different political, social, and cultural groups in the discussions and decisions about NbS is crucial and represents the **third challenge** that UNEA must address on this topic. Among these groups, we highlight the importance of indigenous peoples, quilombolas, and other traditional communities with a more harmonious relationship with nature, often considered its guardians. In this sense, the knowledge and wisdom of indigenous peoples can significantly contribute to promoting NbS that is aligned with an ecocentric perspective. Women also represent a group capable of fostering a new paradigm for dealing with nature, especially because they are one of the groups most affected by climate change and environmental disasters. Therefore, bringing women to the forefront of discussions and decision-making processes is a fundamental step to ensure that NbS are adaptable to the local context and aligned with the population's demands. The same can be said for children and youth, whose involvement is also key for raising awareness about the magnitude of the problems that NbS can address. Also, involving children and youth in this debate will foster new political leadership committed to truly ecocentric actions. Thus, UNEA needs to make decisions to include these groups in discussions and decision-making processes regarding NbS at all levels.

Based on the concepts and challenges discussed, we present three questions to guide the UNEA debate at FAMUN 2024:

1. Considering the definition and criteria established by UNEA resolution 5/5, how can we promote and implement NbS to address each element of the triple planetary crisis, namely pollution, climate change, and biodiversity loss?
2. How can we promote and disseminate the ecocentric perspective to ensure that NbS are guided by non-market mechanisms and prioritize nature in addressing climate, environmental, and socioeconomic challenges?
3. What measures can be taken to ensure the inclusion of indigenous peoples, women, and youth in the discussion, development, and implementation of NbS?

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### UNEP Reports

#### **Intergovernmental Consultations on Nature-based Solutions Co-Chairs' Summary (2023)**

**Summary:** This summary was published in response to resolution 5/5 adopted by UNEA in 2022, which requested a consultation with governments on initiatives that could be aligned with the definition of NbS. Thus, the summary presents examples of policies and good practices from various countries regarding the implementation of NbS. From these examples, specific criteria and standards are identified to make the NbS concept less broad (p. 8-11). Examples of countries that effectively bring an ecocentric vision and place nature as the focus of a viable solution for sustainable development are highlighted. The main cases include São Tomé and Príncipe, with its Adaptation and Resilience Policy for Health (p. 23); Chile, with measures such as the Framework Law on Climate Change (p. 21); Cameroon, which included environmental protection as a pillar of its National Development Strategy 2030 (p. 23); Bangladesh, with its Biodiversity Paper (p. 23); and South Africa's commitments to nature-based solutions (p. 48).

#### **Nature-based Solutions: Opportunities and Challenges for Scaling Up (2022)**

**Summary:** Prepared shortly after the adoption of UNEA resolution 5/5 in 2022, this report provides definitions and explains the importance of NbS, especially for implementing the sustainable development agenda (p. 13-14). The report also gathers some of the challenges and concerns related to the concept of NbS, such as promoting actions that negatively impact and disrespect the rights of local communities, such as Indigenous People (p. 10-11). Additionally, the report presents examples of good practices that align with the criteria established in the definition of NbS (p. 15-16). It also outlines pathways to advance a common understanding of what NbS are (p. 21-25), which is crucial for the discussions in the simulation. Finally, the report provides examples and suggests ways to encourage NbS at the local level, for example, by involving local communities in these initiatives (p. 28-30).

#### **Nature-based solutions for climate change mitigation (2021)**

**Summary:** Published before the adoption of UNEA resolution 5/5, this report provides definitions of NbS and their characteristics, highlighting various ways NbS can substantially contribute to climate change mitigation (p. 4-6). Among the characteristics, the report highlights the sustainable management and restoration of both natural and modified ecosystems, addressing social challenges while providing benefits for human well-being and biodiversity. The report also discusses how NbS can mitigate climate change (p. 12-15) and, in doing so, respond to the triple planetary crisis. The document acknowledges, however, the difficulties faced in the implementation of NbS. In this regard, the importance of private sector involvement and the establishment of partnerships to expand NbS is emphasized (p. 24-26), as well as the issue of financing and state support for the effective implementation of these measures (p. 26).





### **Nature-based infrastructure: How natural infrastructure solutions can address sustainable development challenges and the triple planetary crisis (2023)**

**Summary:** The document presents a study on how NbS contribute to the infrastructure sector, assuming that natural infrastructure offers potential solutions to address the triple climate crisis. In this area, NbS perform functions that involve the protection, restoration, better management, and/or creation of natural resources and semi-natural ecosystems to provide relevant services for infrastructure development across 13 specific sectors (p. 6-10). The publication gathers examples of NbS implemented in the infrastructure sector, targeting areas such as housing, education, energy, finance, healthcare, among others (p. 16-19). Besides, the report presents case studies with concrete examples of how NbS have contributed to the infrastructure sector in countries such as Belgium (p. 20), Sri Lanka (p. 27), Tanzania (p. 28), Haiti (p. 36), and Sierra Leone (p. 42). Based on these discussions, the study identifies several barriers that hinder the advancement of NbS in the infrastructure sector and provides recommendations on how different stakeholders, such as investors, policy and decision-makers, researchers, and the international community, can contribute to enhancing the potential of NbS towards sustainable development (pp. 55-58).

### **Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies (2021)**

**Summary:** Although the focus is not specifically on NbS, this UNEP report discusses the urgency of transforming the human relationship with nature to address the current challenges of the triple planetary crisis (p. 4). The first part of the document provides an overview of how the current development paradigm does not respect the planet's physical limits (p. 51-66). Alongside this, the report highlights some consequences stemming from the lack of political will to meet the goals established in international agreements, such as the Paris Agreement and the 2030 Agenda for Sustainable Development (p. 67-100). The second part of the document outlines ways to overcome this scenario, showing that a systemic change is necessary to redefine how humanity interacts with nature. This can be achieved through cooperation and the sharing of different knowledge systems, as well as technological support (p. 101-106). In this regard, the report emphasizes how all actors have responsibilities, albeit different ones, towards nature and, more specifically, to promote this systemic change for truly sustainable development (p. 133-144).

## **Resolutions and other international decisions**

### **Resolution 5/5 – “Nature-based solutions for supporting sustainable development” (2022)**

**Summary:** Resolution 5/5 adopted by UNEA in 2022 is the only one so far that addresses the topic of “Nature-based Solutions for supporting sustainable development”. Firstly, the resolution recognizes the interdependence between the environmental and climate crises affecting the planet and the challenge of promoting human well-being, highlighting NbS as pathways to reverse or at least mitigate this situation. In this regard, the main contribution of this resolution is the definition of what constitutes NbS, agreed upon by consensus among UNEA Member





States, and the criteria to frame practices within this concept. One criterion is that actions must stimulate sustainable innovation and scientific investigation. The document acknowledges that NbS can significantly contribute to mitigating the climate crisis. To this end, the resolution emphasizes the importance of involving different actors, especially local communities, the youth, and indigenous peoples, and ensuring gender balance in discussions on the topic.

### **Kunming-Montreal Global Biodiversity Framework (2022)**

**Summary:** The Kunming-Montreal Global Biodiversity Framework was adopted by the Conference of the Parties of the Convention on Biological Diversity in 2022. The framework outlines objectives and targets to be followed in the coming years to preserve biodiversity and ensure the well-being of people. The document also emphasizes the importance of NbS and "ecosystem-based approaches" (p. 9-10). The framework is also significant because it recognizes that guaranteeing the rights, values, and knowledge of indigenous peoples and local communities is crucial for biodiversity conservation, as well as recognizing the rights of Nature (p. 5). By acknowledging the rights of Nature and Mother Earth, the framework not only values biodiversity and ecosystems but also promotes a harmonious and sustainable coexistence between humans and the planet Earth. NbS should follow this path, as this central focus on the rights of Nature ensures that biodiversity preservation is not treated merely as a means to secure resources for human use but rather based on the intrinsic value of living and non-living entities of Nature. By integrating these rights into the implementation of the global framework, the decision aims to ensure that policies and actions geared towards biodiversity preservation respect and protect Nature in all its forms, promoting collective and sustainable well-being for all forms of life.

### **Decision 14/5 – “Biodiversity and climate change” (2018)**

**Summary:** Decision 14/5 was adopted by the Conference of the Parties of the Convention on Biological Diversity in 2018. Although the decision does not specifically address NbS, it is mentioned in the preamble of UNEA resolution 5/5 on “Nature-based Solutions for supporting sustainable development” because it emphasizes the importance of an ecocentric vision based on the concept of “ecosystem-based approaches” to address climate change and disaster risk reduction. In this context, the decision highlights the crucial role played by indigenous peoples and traditional communities, whose practices and knowledge are aligned with the ecocentric vision. The annex of the document defines ecosystem-based approach (p. 6-7), as well as examples of how this approach is applied in practical actions for climate change adaptation and mitigation and disaster risk reduction (p. 7-8). This annex is relevant because, in the UNEA's definition of NbS, such solutions must be in harmony with ecosystem-based approaches.





## OTHER UN REFERENCES

### Other publications

#### **Resource Guide for Nature-based solutions: An output from the Intergovernmental Consultations on Nature-based solutions (2023)**

**Summary:** The guide was produced as a result of the intergovernmental consultations on NbS, which UNEA requested in its resolution 5/5 – “Nature-based solutions for supporting sustainable development”. The first section of the guide presents the definition of NbS and identifies the three dimensions that permeate this definition, which are: These solutions must work with nature in different ways; they must work with nature in a sustainable way, involving different ecosystems; and must be put into practice to effectively bring solutions, especially to social, economic and environmental challenges (p. 1-2). The second section of the guide provides examples that enable a better understanding of what NbS are. First, it lists other guides and databases, presenting concrete examples of NbS in different countries (p. 4-7). Second, it compiles examples of NbS in specific areas, such as NbS for ecosystem restoration (p. 7-8) and NbS for mountain and urban ecosystems (p. 8-11). The guide also provides practical examples of NbS to address specific social, economic, and environmental challenges, including NbS for biodiversity conservation, climate action (mitigation and adaptation), disaster risk reduction, agriculture and food security, and infrastructure (p. 11-17). Based on the examples presented, the guide provides a more technical overview of the main characteristics and presents proposals and criteria for implementing NbS (p. 19-20). The last part of the guide is dedicated to discussing financing for NbS and analyzes the current sources and financing opportunities available for these actions (p. 40-41).

#### **Economics of Nature-based solutions: Current status and future priorities (2020)**

**Summary:** This publication was produced by the UN Network of Economists and is part of a series addressing the topic of NbS. The report provides an economic analysis of NbS in specific areas, such as climate mitigation and adaptation. The document begins by providing definitions and presenting the potential of NbS to address the major climate and environmental challenges of today (pp. 7-10). In this initial section, a series of tables and graphs show examples of NbS for climate mitigation (pp. 14-19). The third part of the document (p. 47) highlights the challenges in "measuring" the economic value of NbS and other actions that stem from ecosystem-based approaches. This discussion is crucial to avoid reinforcing NbS market mechanisms, which prioritize profit over nature. Finally, the publication offers five recommendations to achieve a better understanding and advancement in the economic analysis of NbS (pp. 51-54).

#### **Nature-based solutions for agricultural water management and food security (2018)**

**Summary:** This report, organized by the Food and Agriculture Organization of the United Nations (FAO), discusses how NbS can be effective in addressing the challenge of water resource management to ensure agriculture and food security. First, the report addresses the issue of water resource management in the context





of increasing demand for agriculture and the consequences of climate change (pp. 1-4). It then introduces NbS and their contributions to this issue (pp. 5-9). The document also presents 21 case studies on the implementation of NbS in agriculture, highlighting both successful cases and failures in the process. Among the successful cases are Mexico (p. 19), Kenya (p. 20), Iran (p. 24), and Japan (p. 26).

## Official websites

### **Intergovernmental Consultations on Nature-Based Solutions**

**Summary:** The page titled “Intergovernmental Consultations on Nature-Based Solutions” presents a compilation of all documents related to the intergovernmental consultations on NbS held in 2023 by the request of UNEA in its resolution 5/5, adopted the previous year. In the menu located on the right side of the page, under the “NbS Examples Submitted by Participants” tab, you can find examples of NbS submitted by various countries such as Australia, Belgium, Brazil, Kuwait, and Montenegro, as well as by major groups and stakeholders like the WWF. In the same menu, under the “Final Intergovernmental Consultations on Nature-based Solutions” tab, you can find written submissions of the positions of various countries, including France, Bolivia, Germany, Canada, the United States, and others.

### **Nature-based solutions**

**Summary:** The UNEP website has an exclusive page that explains the importance of NbS for the Program's initiatives. First, a brief overview of how actions towards nature can contribute to solving some of the current problems related to environmental and climate issues is presented. Next, the website presents how UNEP has acted to promote and implement NbS, especially in collaboration with other UN organizations and entities, such as the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Development Program (UNDP).

### **Biodiversity and Nature-based solutions**

**Summary:** This UN page on climate action explains the role of biodiversity and NbS in the conservation and restoration of ecosystems and how this can help reduce the impacts caused by climate change. By providing a historical context, the page establishes a connection between human health and our relationship with the world in light of the COVID-19 pandemic. Finally, it mentions actions in Chile, Mexico, Cuba, and Samoa.

### **What is the Triple Planetary Crisis?**

**Summary:** The website of the United Nations Framework Convention on Climate Change (UNFCCC) features a page dedicated to explaining the triple planetary crisis. The page details the interconnection between pollution, climate change, and biodiversity loss, which constitute the three facets of the current crisis and provides relevant data to help us understand the magnitude of the problem we are facing. It also highlights the initiatives to address this crisis, emphasizing the actions resulting from UN climate conventions and programs, such as UNEP. Contributing to the UN





"Act Now" campaign, the final section offers examples of what we can do at an individual level to combat the triple crisis, such as reviewing our consumption patterns and demanding concrete actions from our political representatives.







## EXTRA RESOURCES

### Scientific Papers

#### **Nature-based solutions: A review of the concept (2020)**

**Summary:** The scientific article by Fraga and Sayago presents a historical background of the concept of NbS (p. 69-72) to propose a revised approach to this term. Writing before the adoption of UNEA resolution 5/5 in 2022, the authors identify the various existing definitions for the concept of NbS (p. 72-73) and contrast some of them. To better define and characterize the term, they provide a table with examples of what constitutes NbS (p. 75). Overall, the text demonstrates how NbS have been mobilized to use or mimic natural processes to promote social and economic well-being primarily. The article classifies examples of NbS into categories such as ecosystem restoration, green infrastructure, ecosystem-based management, and ecosystem protection. Based on this survey, the authors conclude the article by highlighting how NbS can be implemented in Brazil to pursue sustainable development.

#### **Nature-based Solutions: Conceptualization, applicability, and complexity in the Latin-American context, cases of Brazil and Peru (2021)**

**Summary:** The paper by Marques, Rizzi, Ferraz, and Herzog is an excellent resource for understanding the challenges related to defining the concept of NbS. First, the authors outline the evolution of the concept, showing the different definitions and how they have been used by various international organizations (p. 21). A significant contribution of the paper is distinguishing between solutions based on, inspired by, derived from, or supported by nature, and identifying when an action can truly be considered a NbS (p. 23). Based on this differentiation, the article discusses the opportunities and challenges of implementing NbS in the context of Latin America and the Caribbean, especially considering that the concept of NbS was coined in countries with realities distinct from those in the Global South (p. 24-26). As case studies, the article examines how the term NbS has been used in Peru (p. 28-36) and Brazil (p. 37-42) for watershed management, highlighting the difficulty in creating indicators that demonstrate the positive and negative impacts of initiatives at the local level. An interesting conclusion of the paper is the role of the practices and knowledge of indigenous peoples and local communities in promoting NbS in Global South countries, which need to be better integrated into the planning, monitoring, and decision-making processes in public policies (p. 44).

### Other references

#### **What Exactly Are "Nature-based Solutions"? (2023)**

**Summary:** The article published by the World Resource Institute (WRI), written by Choi, Rao, and Czebiniak, presents an intriguing discussion about what exactly NbS are. It explores the case of Seychelles in East Africa, where rising sea levels threaten the country's lower islands due to the reduction and disappearance of mangroves.





The article discusses how the government of Seychelles is using NbS to reforest deforested areas and restore local biodiversity, addressing environmental, social, and economic challenges simultaneously. The authors emphasize how NbS should be recognized as fundamental mechanisms for combating climate change and other current global challenges. In conclusion, the article explains what truly nature-based practices entail and why this debate is emerging today. It also raises questions about how the definition needs to be refined and the best ways to implement NbS.

### **What are nature-based solutions to climate change? (2022)**

**Summary:** The article published by the Grantham Research Institute on Climate Change and the Environment, written by Mercer, Serin, Pearson, and Kyriacou from the London School of Economics and Political Science, discusses how human activities impact natural ecosystems and significantly contribute to greenhouse gas emissions and global warming. The text highlights NbS as a vital response to mitigate climate change and the biodiversity crisis, which are components of the triple planetary crisis. It provides examples such as restoring ecosystems to absorb carbon from the atmosphere and promoting better integration of nature in urban and agricultural areas. The article interestingly presents a critical analysis of actions that claim to be NbS but actually result in negative impacts on biodiversity and local communities. Finally, it emphasizes the importance of following guidelines that ensure community inclusion, biodiversity protection, and environmental integrity.

### **Websites**

### **Nature-Based Solutions: Examples Implemented by Brazilian Cities (2022)**

**Summary:** This World Resources Institute Brazil webpage presents NbS and how they have been implemented in various Brazilian cities as strategies to address climatic and urban challenges such as landslides, floods, and inundations. Examples of such solutions include rain gardens, linear parks, slope restoration, and urban agriculture. The webpage highlights successful cases in cities such as Belo Horizonte, Campinas, Niterói, São Paulo, Recife, Salvador, among others, showing how these initiatives can be replicated in other cities to promote climate adaptation and social inclusion. The article discusses, for instance, how rain gardens and filter strips help in the drainage and filtration of rainwater, reducing floods and improving water quality. Green roofs and urban gardens promote sustainability, improving the urban microclimate and providing fresh food. These initiatives are interesting because they increase cities' resilience to climate change, besides bringing social, economic, and environmental benefits to the areas where they are implemented. Therefore, the article advocates for increased investments in public policies aimed at implementing NbS.

### **The Green Infrastructure and You (2024)**

**Summary:** "The Green Infrastructure and You" project was developed by the Nature-based Solutions Research Interaction Group (GIP-SbN), organized by postgraduate students from the University of São Paulo. One of the outcomes of this research project was the creation of an interactive map that gathers Green Infrastructure (GI)







initiatives in the city of São Paulo. GI is considered a NbS and is described as an interconnected network of natural areas and designed spaces that preserve the values and functions of natural ecosystems, maintaining clean air and water and providing various benefits to people and biodiversity. On the “database” tab of the website, you can find this mapping showing the locations in São Paulo where these green infrastructure projects are present, along with addresses, photos of some projects, and descriptions of the projects being carried out. The website is very interesting for analyzing the various green infrastructure projects and how they are close to us, within cities. It is also important to consider how they can contribute to mitigating climate issues.

## Databases

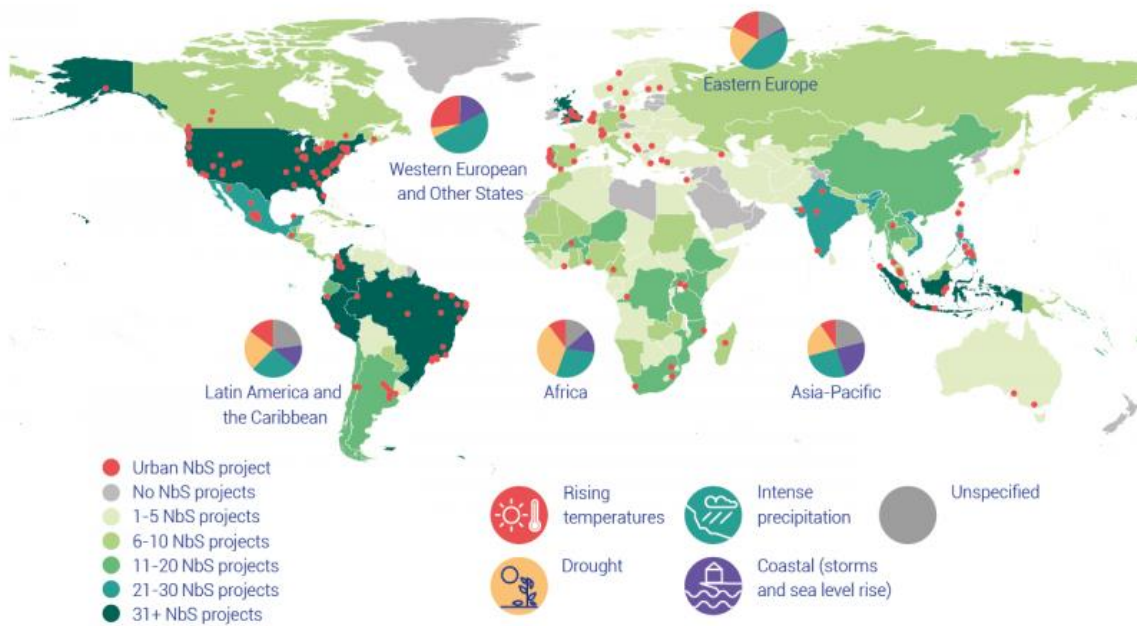
### **Implementation in nature-based solutions (2021)**

**Summary:** The UNEP website presents an interesting infographic (reproduced below) to analyze NbS around the world. According to the website, since 2006, but especially after 2015, about 400 projects on NbS have been funded in developing countries, mainly focusing on agriculture and water resource management. The infographic clearly compares the NbS implementation process among different countries. In this scenario, some countries in Latin America and Asia stand out with investments in more than 31 NbS projects, placing them on an equivalent level with industrialized countries, such as the United States. Mexico and India are notable cases among the countries with 21 to 30 NbS projects implemented. Following them, with 11 to 20 projects, there are countries like China, Chile, South Africa, Ethiopia, and others. The lack of investment in NbS projects in countries like Australia, Norway, and Sweden is remarkably concerning. Additionally, it is noteworthy to consider the key challenges influencing NbS project investments in different regions. While the primary concern in Western and Eastern Europe is increased rainfall (precipitation), in Africa, the main issue is drought, and in Latin America, there is a combination of factors, including precipitation, drought, rising average temperatures, and coastal issues such as storms and sea level rise.





**Figure 1 – Global map of nature-based solutions initiatives for climate adaptation**



Source: United Nations Environment Programme, 2021.

### **The Global Program on Nature-based Solutions: Map of Projects (2022)**

**Summary:** Managed by the World Bank, the Global Program on Nature-Based Solutions offers a comprehensive compilation of projects related to nature-based solutions in different countries. On the platform, users can access a variety of valuable information about projects worldwide that employ ecological approaches to address environmental, social, and economic challenges. The interface is intuitive, allowing for detailed searches. Users can filter projects based on various criteria, including geographic location, project type, environmental issue addressed, among others. Moreover, the interactive map feature provides a geospatial visualization of the listed projects, facilitating the comprehension of their global and regional distribution. It is possible to apply a subtitle to the map to observe flood-prone regions, the extent of green spaces globally, and urban temperatures. Delegates can utilize the available filters to refine their search and find specific projects relevant to their respective countries.

### **NBS Knowledge Database (2023)**

**Summary:** The NetworkNature website, funded by the European Commission, provides this database that consolidates knowledge on NbS intending to compile evidence on these practices and serve as an information source for public policies, research, among other purposes. The database features a comprehensive collection of NbS projects that address issues ranging from local practices to global policies. Among the available resources are detailed case studies. For instance, by searching projects in the United Kingdom, one can find the case of urban wetland restoration for flood control, biodiversity enhancement, and human well-being promotion





(<https://networknature.eu/nbs-resource/29718>). Additionally, the database offers in-depth technical reports on the effectiveness of NbS in different contexts and scientific papers exploring the economic and social benefits of NbS, such as property value appreciation and the creation of recreational spaces. Practical tools like planning guides for integrating these practices into urban and rural infrastructures are also available. You can research specific challenges by country in the database, such as climate change mitigation, urban adaptation, water resource management, and biodiversity conservation, facilitating the discovery of relevant examples and information crucial for delegates' positions.

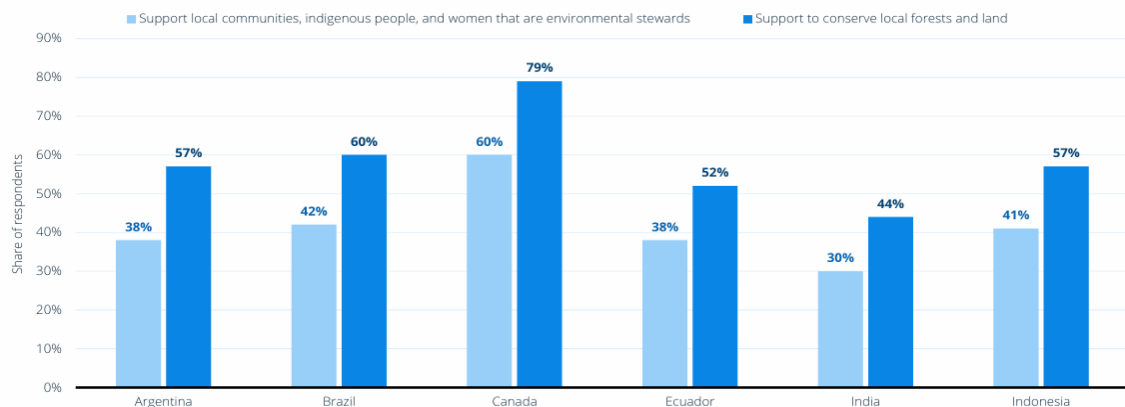
### **Statista overview report on nature-based solutions to the biodiversity and climate crisis (2021)**

**Summary:** The platform Statista published a report in 2021 that provided an overview of NbS focused on biodiversity and the climate crisis. The graphs below are extracted from this report.

#### **Graph 1 – Popularity of climate solutions policies based on nature-based solutions**

##### How popular are nature-based climate solutions policies?

Support for climate policies that focus on nature-based solutions in 2020, by selected country



Source: Statista, 2021.

Graph 1 illustrates the popularity of nature-based climate solutions policies in six countries based on 2020 data. The light blue bars represent the percentage of the population supporting NbS policies aimed at local communities, indigenous peoples, and women as environmental guardians. The dark blue bars depict support for policies conserving forests and local lands. Canada stands out, with 60% of its population supporting the first type of initiative and 79% the second type. In Brazil, 42% support the first type of policy and 60% the second. In contrast, India shows lower support, with 30% and 44%, respectively. Argentina, Ecuador, and Indonesia show intermediate variations due to each country's different perceptions and environmental needs, underscoring the importance of adapting NbS policies to local contexts.



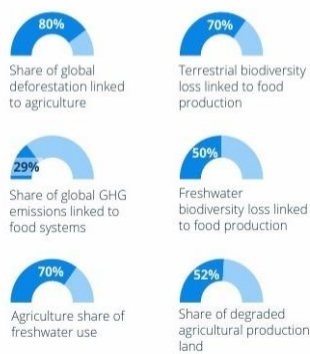


Graph 2, extracted from the same report, does not specifically address NbS but provides crucial data about the environmental impacts of the global food system on biodiversity loss, contributing to the triple climate crisis. Agricultural production accounts for 80% of deforestation and uses 70% of freshwater. Between 2001 and 2015, cattle ranching led to the deforestation of 10.5 million hectares, followed by plantation fiber, with 8.2 million; timber, with 4.1 million; palm oil, with 2.3 million; and coffee, with 0.7 million. Demand for commodities, such as beef and fiber crops, is one of the leading causes of deforestation, emitting nearly a third of greenhouse gases, while unsustainable practices contribute to forest loss. NbS should be deployed with the aim of changing this situation.

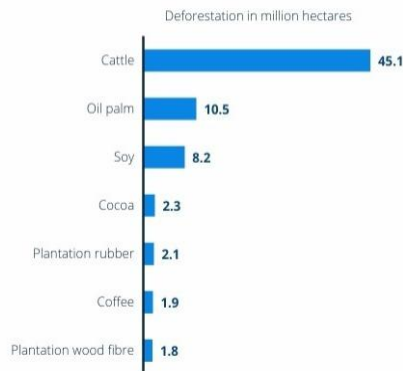
### Graph 2 – Unsustainable food system is driving biodiversity loss

#### Unsustainable food system is driving biodiversity loss

Distribution of the environmental impacts of food production worldwide



Global forest loss between 2001 and 2015, by specific agricultural commodity



Global food demand is the primary driver of deforestation that has facilitated biodiversity loss. The reliance on forest products for food is also contributing to climate change, accounting for nearly 30 percent of the greenhouse gas (GHG) emissions. Current food production is intense and depends heavily on the goal of producing more food at lower costs to keep up with the increasing demand and unsustainable lifestyles.

Globally, cattle pastures accounted for an estimated 45.1 million hectares of deforestation between 2001 and 2015, primarily for dairy and meat production. Over the same period, the seven agricultural commodities analyzed combined for 57 percent of all forest loss.

Source: Statista, 2021.

### Documentaries

#### **3x Arctic: The Ice Alert (2024)**

**Summary:** Through an engaging and captivating narrative, this documentary series delves into the depths of the Arctic, revealing not only the region's stunning beauty but also the silent devastation caused by climate change. By intertwining interviews with scientists, activists, and local residents, the documentary offers a multifaceted view of the impact of these changes, from the melting ice to the displacement of entire communities. Moreover, it does not merely point out the problems but also highlights innovative solutions and initiatives emerging in response to this crisis. As they watch the episodes of this series, delegates are invited not only to reflect on the consequences of human actions in the Arctic but also to recognize the urgent need for collective and collaborative action based on nature to address this global challenge. Available at Globoplay.





### **Trashed (2012)**

**Summary:** Trashed is a 2012 documentary that highlights the devastating environmental and social consequences caused by excessive industrial production and poor waste management. It addresses problems such as widespread pollution, contamination of natural resources, and damage to human health. The documentary also discusses possible innovations and solutions that could be implemented to mitigate these problems, such as promoting the circular economy, which seeks to reduce waste and maximize resource use through reuse and recycling. The film thus underscores the urgent need for collective actions and effective policies to mitigate the harmful effects of waste on our planet and society. NbS can be a pathway in this regard. It is a compelling call for awareness and change! Available on YouTube.

### **The Mother of All Struggles (2020)**

**Summary:** This important documentary focuses on Brazilian historical and cultural roots to understand the relationship between humans and nature. The Mother of All Struggles highlights women activists in the ecological agenda, such as Shirley Krenak, who value the knowledge of traditional peoples, their holistic relationship with the land, and their pioneering role in pursuing environmental protection and justice. The film emphasizes, above all, the nexus between gender and environmental issues, associating Nature with women. It addresses how both are violated and oppressed, thus pointing to common causes. Along these lines, the documentary shows how women are often more affected by the consequences of climate change and environmental degradation. So, it becomes evident that the debate on NbS must encompass not only environmental but also social and gender aspects. Available at PrimeVideo.





## OFFICIAL POSITION OF REGIONAL GROUPS

### Asia-Pacific

The countries that compose the Asia-Pacific regional group interpret the concept of NbS as the need to protect, conserve, and restore the environment to ensure sustainability and achieve the Sustainable Development Goals (SDGs) under the UN 2030 Agenda for Sustainable Development. Among the common objectives that the group aims to achieve through the implementation of NbS are the reduction of plastics, the reduction of Greenhouse Gas Emissions (GHGE), the pursuit of carbon neutrality, energy issues, and the implementation of a circular economy.

In this context, the objective linked to NbS that stands out the most in the speeches of Asia-Pacific countries is the fight against plastic pollution, as it is the largest form of ocean contamination in the region. Malaysia, India, and Thailand are countries that presented the issue of plastics as a priority. For example, Malaysia has established the Malaysia Plastics Sustainability Roadmap to make the plastic industry more sustainable by implementing a circular economy (United Nations Environment Assembly, 2022 a, p. 3). The Indian government has suggested banning single-use plastic items (United Nations Environment Programme, 2022 c), and Thailand created the Roadmap on Plastic Waste, aiming for 100% recycling of plastics by 2027 (United Nations Environment Assembly, 2022 b, p. 3).

However, it is worth questioning whether these measures, at least according to the information presented, fit the parameters necessary to be considered NbS. This is because many of the ideas presented by Asia-Pacific countries are more focused on recycling or reducing pollution, without necessarily emphasizing how they will protect or restore ecosystems for this purpose, distancing themselves from an ecocentric perspective to address the plastic problem.

Given the increase in the planet's average temperature, the objective of reducing GHGE is a global concern. One of the paths pointed out as NbS is reforestation practices, which aim to reduce and achieve carbon neutrality since trees are important means of extracting carbon from the atmosphere.

Countries like Bhutan and Uzbekistan presented good practices related to reforestation and the importance of afforestation as NbS for carbon capture on the planet to combat global warming and climate change. In their speeches, these countries mentioned actions such as maintaining 60% forest cover, urban greening, and expanding protected areas in their territories, which are essential for carbon capture (United Nations Environment Programme, 2022 a; United Nations Environment Programme, 2022 h). Similarly, Pakistan highlighted planting over 2 billion trees, intending to increase this number to 10 billion (United Nations Environment Programme, 2022 f). Singapore brought the interesting concept of a "city in nature", which, through urban greening practices and the implementation of natural parks, aims to integrate nature into the country's urban areas, contributing to greener cities (United Nations Environment Programme, 2022 g).

In these latter examples, efforts to restore ecosystems and biodiversity while addressing climate changes are in line with NbS criteria. However, it is important to note that just planting trees may not bring concrete solutions if it is not







accompanied by measures to reduce deforestation and the incessant extraction of minerals and other natural resources.

The energy issue is also crucial for the Asia-Pacific group since fossil fuel-based energy sources cause GHGE in the atmosphere. Countries like the Democratic People's Republic of Korea and Tajikistan have policies aimed at reducing their dependence on fossil fuels in their energy matrices through the development and construction of hydroelectric plants and solar panels, which are considered less polluting (United Nations Environment Programme, 2022 d; United Nations Environment Assembly, 2022 c, p. 1-2).

However, such measures do not always respect local communities or the animals whose habitats surround the facilities, raising doubts about whether they can truly be considered NbS. Additionally, these policies do not respond to the ecocentric approach, as nature is not exactly the priority.

In general, Asia-Pacific countries encourage international cooperation for financing and technology transfer to facilitate the implementation of NbS, as many countries in the region are developing countries. This issue was mentioned by Brunei, which highlights the importance of cooperation with developed countries and other developing countries, as well as the need for technology transfer and financing for nature and biodiversity conservation (United Nations Environment Programme, 2022 b). Cambodia also emphasized the need for financing combined with technology transfer for climate action to have a global impact (United Nations Environment Programme, 2022 c).

Thus, it is possible to observe that the main actions of the group to implement NbS are not exactly guided by an ecocentric perspective, which considers nature a priority and a path to ensure human well-being. In this sense, a challenge for the group is how to promote non-market initiatives that seek to promote the idea of sustainability guided by nature.

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## Latin America and the Caribbean

For the Group of Latin American and Caribbean Countries (GRULAC), the definition of NbS corresponds to short and long-term actions that enable ways to reduce the impacts of human action on nature through sustainable practices. These practices involve, for example, the circular economy, green job creation, and forest and biodiversity protection. These actions seek to move away from the paradigm of nature exploitation, aiming for its protection and preservation.

GRULAC intends to promote NbS as a public policy to integrate society and ecosystems as a whole. Especially in countries with a strong presence of indigenous peoples, such as Bolivia, this movement derives from the understanding that all living beings, human or non-human, are affected by environmental degradation and climate crisis. Thus, the policies of these countries comprehend a broader and holistic view of ecology, involving society and not just seeing nature as a source of resource exploitation for profit (United Nations Environment Programme, 2022 b).

Based on the speeches of GRULAC at UNEA-5 in 2022, NbS practices are considered extremely important for addressing the triple planetary crisis (pollution, climate, and biodiversity loss) as well as economic crises. Latin American and Caribbean countries are very vulnerable to the impacts of environmental crises because they are economically dependent on climate-sensitive sectors, such as agriculture. NbS are attractive to GRULAC because they propose a different way of dealing with environmental and climate problems, ensuring greater sustainability for the economy as well.

This is a priority for Grenada, which – as a Small Island Developing State – recognizes the importance of nature for humans to ensure the quality of life, health, and food sources, as well as economic development and prosperity. The country also recognizes nature as a crucial and urgent element in the fight against the triple planetary crisis, aligning with the NbS proposal. However, a challenge the country faces is funding and access to technologies that enable the implementation of these measures (United Nations Environment Programme, 2022 g).

Many Latin American and Caribbean countries struggle with funding and access to cutting-edge technologies, making international cooperation a priority during negotiations to implement NbS for sustainable development. Brazil presented this issue as a central matter during the 5<sup>th</sup> UNEA session (United Nations Environment Programme, 2022 c).

Some GRULAC countries have proposed NbS to recover the ancestral values of indigenous peoples, reflecting the richness of the ethnic diversity in the region. By recognizing and considering the traditional knowledge of these communities, these countries commit to environmental preservation and the promotion of social and cultural justice, which is aligned with NbS criteria. Ecuador exemplifies this by incorporating ecological transition as part of public policies, so these are aligned with indigenous values and principles of respect for nature as a living being (United Nations Environment Programme, 2022 f). Bolivia also emphasizes the balance between humans and nature by considering ancestral knowledge as a fundamental part of NbS (United Nations Environment Programme, 2022 b). Guatemala highlights the contribution of indigenous peoples and local communities in biodiversity conservation and sustainable resource management, promoting an inclusive and participatory vision for environmental conservation (United Nations Environment





Programme, 2022 h). In this sense, GRULAC contributes to promoting sustainable development from the perspective of indigenous and traditional peoples, who have kept a deep and respectful connection with nature for centuries.

Some GRULAC members emphasize the importance of prioritizing nature care in the protection of marine and terrestrial areas by creating laws and practical measures to restore ocean biodiversity, reduce predatory fishing, and hold companies and other producers accountable for improper waste disposal. Ecuador's practices are examples of NbS in this regard, such as expanding marine conservation in the Galapagos to preserve and restore ecosystems. The country also adopted a "zero marine waste" policy, with an environmental management approach that seeks to emulate natural recycling and regeneration processes, minimizing harmful human interference in ecosystems. These practices demonstrate a commitment to nature, sustainability, and the conservation of local ecosystems (United Nations Environment Programme, 2022 f).

A common issue addressed by the group involves tackling the global plastic crisis. The unrestrained and irresponsible production and consumption of this material exacerbate climate change through increased greenhouse gas emissions from fossil fuel burning, expand pollution levels on the planet, and contribute to biodiversity loss, jeopardizing human health and animal well-being. Another question is the problem of microplastic consumption, whose consequences are still being studied (Dena, 2024). In the context of NbS, GRULAC countries like Jamaica and Uruguay propose concrete and binding measures to reduce the impact of this material on ecosystems. Jamaica is promoting the implementation of binding measures to reduce plastic use, while Uruguay proposed the creation of an intergovernmental committee dedicated to plastic negotiations (United Nations Environment Programme, 2022 i; United Nations Environment Assembly, 2022, p. 1).

However, it is important to note that the initiatives mentioned may not be considered genuinely NbS. While these measures directly address the plastic pollution problem and bring significant environmental benefits, the underlying capitalist values may still be present. This occurs because plastic negotiations often involve economic and commercial interests that may not align entirely with NbS principles. For these measures to be considered genuine NbS, they need to incorporate a holistic approach beyond simply mitigating environmental impacts and promote a systemic transformation that values and strengthens ecosystem services. This means not only reducing plastic use but also regenerating affected ecosystems, promoting biodiversity, and implementing practices that reinforce the natural resilience of landscapes without overlooking economic and social challenges.

In the context of GRULAC, the energy issue emerges as a fundamental element for addressing climate and economic challenges. During the 5<sup>th</sup> UNEA session, countries in the region expressed the urgency of promoting the transition to renewable and sustainable energies as part of their efforts to mitigate climate change. Brazil and Chile have vast natural resources for clean energy production and have sought significant alternatives. Brazil highlighted sugarcane as a source for producing bioelectricity-bioethanol, aiming to diversify its energy matrix and promote renewable sources. Meanwhile, Chile has actively invested in clean energy sources such as solar and wind to diversify its energy matrix (United Nations Environment Programme, 2022 j; United Nations Environment Programme, 2022 d).

Just like the examples related to reducing plastic use in Jamaica and Uruguay, it is possible to question to what extent the initiatives presented as NbS regarding





the energy issue align with an ecocentric vision that values nature as a source of life rather than material resources to be exploited. Although the transition to renewable energies helps minimize environmental problems caused by humanity, it does not necessarily support nature and often focuses on profit potential. In Brazil's case, the ethanol policy is presented as an NbS example but overlooks biodiversity impacts caused by the monoculture of sugarcane, which is favorable to agribusiness sectors. These examples show a diversity of approaches to NbS within GRULAC, particularly concerning the energy issue, reflecting the complexity of environmental policies in the region and the need for effective multilateral cooperation to address common energy and environmental challenges.

Thus, although some GRULAC members interpret NbS as an approach to promoting a clean and safe environment for life, it is important to question whether these measures are genuinely nature-based or simply strategies that use environmental rhetoric for other purposes. It is crucial to examine whether these actions genuinely respect the principles of sustainability, ecological balance, and commitment to social issues.

Nevertheless, it is interesting to note that most GRULAC countries, such as Costa Rica, Belize, and Saint Lucia, associate NbS with economic and social issues. Costa Rica defends nature protection to boost economic growth and job creation. Saint Lucia sees NbS as essential to addressing climate change and ensuring clean water and food. Belize established policies and goals to address biodiversity loss. Guatemala also adopts strategies to conserve 30% of its marine and terrestrial areas, improving the quality of life and integrating local communities (United Nations Environment Programme, 2022 e; United Nations Environment Programme, 2022 a; United Nations Environment Programme, 2022 k).

It is important to consider that many GRULAC countries are categorized as developing countries, which may lead them to worry about the potential impacts of NbS on their economies. Adopting measures that prioritize environmental conservation may raise questions about economic growth and job creation, especially in sectors traditionally dependent on natural resources. Therefore, while seeking to implement NbS, these countries still face the additional challenge of balancing environmental preservation with capitalist economic and social imperatives.

This tension between environmental conservation and economic development can influence how NbS are conceived and evaluated, making it essential to constantly question and evaluate the effectiveness and authenticity of the solutions being proposed and implemented. It is worth considering the implementation methods of Costa Rica, Belize, and Saint Lucia, as well as whether they address environmental challenges holistically. Simply adopting comprehensive environmental policies, also focusing on social issues, and investing in sustainable practices may not be sufficient if there is no deep understanding of the interconnection between ecosystems and society, as well as a genuinely nature-centered approach to conservation and regeneration.

In conclusion, to address the environmental, economic, and social challenges of GRULAC, it is essential to adopt integrated approaches that truly support NbS and are aligned with the needs of the Global South. Promoting multilateral cooperation among countries in the region and beyond is crucial to overcoming these shared challenges. Forest protection, plastic use reduction, renewable energy promotion, and biodiversity conservation are issues that transcend borders and, at





the same time, are fundamental aspects of ensuring a sustainable and resilient future.

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## Africa and Arab League

At the 5<sup>th</sup> session of the UNEA, the definition of NbS presented by African countries and the countries that are part of the Arab League<sup>10</sup> was unclear, as many countries did not mention the concept, and when they did, they discussed it broadly. This is the case of Mauritius, which stated that NbS and the ecosystem approach should be at the core of environmental policies but did not explain what NbS are or how to implement them (United Nations Environment Programme, 2022 l). South Africa, referring to the broadness of the NbS concept, declared that caution is necessary with imprecise definitions that suggest nature can take responsibility on its own for recovering from the damage caused by human activity (United Nations Environment Programme, 2022 n).

Given the broadness of the concept, in the informal consultations conducted by UNEP in 2023 on the UNEA's definition of NbS adopted in its resolution 5/5, African countries declared that it is necessary to establish clearer criteria and standards to advance the discussion, highlighting the role of science in implementing these practices (United Nations Environment Assembly, 2022, p. 2; United Nations Environment Programme, 2023, p. 1). In the same document, various examples of good practices from African countries are mentioned, such as combating desertification and restoring ecosystems, as well as challenges related to NbS, such as the lack of funding and legal-regulatory mechanisms to advance the implementation of these measures.

The countries of the Arab League also recognize the importance of NbS. Bahrain highlighted that the country implements NbS for climate change mitigation and adaptation by expanding mangroves and green areas in its territory (United Nations Environment Programme, 2022 b). Iran, although not officially part of the Arab League, aligned with the group's positions on the topic. The country believes that NbS, when based on scientific evidence and traditional ecological knowledge, are important tools for ecosystem restoration and the implementation of the Sustainable Development Goals, especially SDGs 11, 13, 14, and 15. The country also emphasizes the crucial role of youth, women, and indigenous peoples in ecosystem restoration, aligned with NbS criteria (United Nations Environment Programme, 2022 i).

It is worth noting that Arab and African countries converge on the need to implement NbS and strengthen regional cooperation, especially to address challenges resulting from the relationship between the climate crisis, the vulnerability of areas in armed conflict, and extreme poverty. Ethiopia highlighted that nature could help countries solve economic, social, and even security problems. For example, by restoring ecosystems and improving agricultural activity, NbS can create employment opportunities. The country also presented the Green Legacy initiative, a policy to increase the number of trees not only in Ethiopia but also in neighboring countries, reinforcing the importance of regional cooperation to restore degraded areas. Nevertheless, it recognized that technology transfer and adequate funding are crucial to advance initiatives like this (United Nations Environment Programme, 2022 f). Similarly, Egypt mentioned that decisions regarding nature conservation to respond to the challenges posed by the climate crisis can only be

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<sup>10</sup> The countries that compose the Arab League are: Saudi Arabia, Algeria, Bahrain, Djibouti, Egypt, the United Arab Emirates, Yemen, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Somalia, Sudan, Syria, and Tunisia.







taken with greater cooperation among all states (United Nations Environment Programme, 2022 e).

The relationship between the climate crisis and armed conflict is a significant concern for Palestine, which states that the country's efforts for climate and environmental protection have been ineffective due to the occupation and attacks by Israel, as large portions of land and natural resources are being controlled and exploited. Additionally, waste and hazardous materials are improperly disposed of in landfills, contaminating ecosystems. It is evident that Palestine faces difficulties in advancing the implementation of NbS, as armed conflict in its territory increases poverty rates, limits progress in environmental and climate preservation actions, and generates hazardous waste harmful to nature and human health. Palestine, therefore, calls for better international support for least developed countries and their environmental development programs, especially for states under occupation (United Nations Environment Programme, 2022 m).

The role of NbS in water resource management is another common factor in the speeches of Arab League countries, especially to combat desertification. Jordan and Saudi Arabia, for example, address the challenge of water scarcity by promoting the implementation of the *hima* system for ecosystem preservation and regeneration<sup>11</sup>, which utilizes traditional regional knowledge and enables better care of water resources (United Nations World Water Assessment Programme, 2018, p. 81; United Nations Environment Programme, 2022 j). Iraq announced an initiative that, by establishing of nature reserves, seeks a more comprehensive management of the country's water resources to deal with sandstorms and other events resulting from water scarcity. Iraq also recognized that environmental initiatives could stimulate the green economy and create jobs (United Nations Environment Programme, 2022 h).

Related to water issues, another topic frequently discussed by African countries is the preservation of ecosystems and biodiversity, which are fundamental for mitigating the effects of climate change. This is a priority for Mauritius, as coral degradation has harmed its beaches, which are essential for promoting tourism, the country's main economic activity. NbS have been used to restore and preserve the corals, increasing resilience and contributing to the local economy (United Nations Environment Programme, 2022 l).

Angola and Gabon, for example, have increased their environmental protection areas and aim to further develop these protection mechanisms with the inclusion of a marine conservation area (United Nations Environment Programme, 2022 a; United Nations Environment Programme, 2022 g). The aforementioned Ethiopian Green Legacy initiative aimed to plant around 20 billion tree seedlings by 2022 (United Nations Environment Programme, 2022 f). Iraq has developed a reforestation and nature reserves policy (United Nations Environment Programme, 2022 h). Iran worked on habitat and coastal area conservation and increased the country's mangrove area to preserve the ecosystem, combined with measures to combat water scarcity (United Nations Environment Programme, 2022 i).

Another concern of African and Arab countries is food security, highlighting the role NbS can play in the agricultural sector, including in the fight against hunger and poverty. This is a concern of the Democratic Republic of Congo, which requested

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<sup>11</sup> The *hima* preservation system is centered on collective control over pastures and land conservation, with the allocation of territories for natural regeneration (United Nations World Water Assessment Programme, 2018, p. 81).





a report to understand the interdependence between the environment, food, and human and animal well-being<sup>12</sup>. The report identified the One Health program as an approach that seeks to enhance the living and health conditions of humans and animals through the protection of ecosystems. Additionally, the report highlighted how environmental degradation has been responsible for developing diseases that can be transmitted to humans and animals through food (United Nations Environment Programme, 2022 d; Food and Agriculture Organization of the United Nations et al., 2022, p. 39-41).

Cape Verde's speech emphasized the importance of promoting the resilience of productive systems and communities through agriculture. The country has invested in green and blue economies to make agriculture more sustainable, generate jobs, and increase local population income, enabling greater food security (United Nations Environment Programme, 2022 c). The United Arab Emirates, in partnership with the United States, developed the AIM for Climate initiative, which seeks to expand investments in agricultural innovations that contribute to climate action, especially through smart food systems. The initiative encourages the exchange of scientists and research for science and innovation at both national and international levels (AIM For Climate, 2024; United Nations Environment Programme, 2022 q). However, it is unclear whether this initiative is considered a NbS, as nature and ecosystems do not appear to be the priority.

Many Arab countries, such as the United Arab Emirates, mentioned energy transition as one means to achieve sustainable development as it helps combat the climate crisis and generate new jobs (United Nations Environment Programme, 2022 q). However, it is also unclear whether the energy transition policies presented follow an ecocentric approach and can effectively be considered NbS.

In general, both Arab and African countries assign significant importance to regional and international cooperation as a mechanism to ensure the implementation of NbS and the achievement of SDGs and their targets. In this regard, Bahrain and Malawi mentioned that global cooperation should strengthen funding mechanisms and technology transfer while addressing the inequality between developed and developing countries to achieve the SDGs (United Nations Environment Programme, 2022 b; United Nations Environment Programme, 2022 k). Tunisia and the United Arab Emirates further emphasized that these measures are necessary for promoting a circular economy, highlighting that innovative and sustainable solutions require North-South and South-South cooperation (United Nations Environment Programme, 2022 p; United Nations Environment Programme, 2022 q).

The disparity between the Global North and Global South was also mentioned by Iraq, which stated that it is necessary to consider common responsibilities and national specificities (United Nations Environment Programme, 2022 h). This idea brought by Iraq and other countries, such as South Africa (United Nations Environment Programme, 2022 n), reflects the principle of common but differentiated responsibilities, recognizing that while environmental responsibilities are common to all, each country has specific capacities to develop policies for environmental protection. Angola added that maintaining this principle from the Rio Declaration as the basis for UNEA-5 negotiations is essential to address socio-

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<sup>12</sup> The report was published in 2022 as a collaboration between the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), the World Health Organization (WHO), and the World Organisation for Animal Health (WOAH) (Food and Agriculture Organization of the United Nations et al., 2022).





economic and technological inequality between the Global North and Global South through capacity building and assistance to developing countries to achieve the proposed goals (United Nations Environment Programme, 2022 a).

Finally, when discussing NbS, Africa and the Arab League critique the traditional development model and how states have failed to implement the environmental agenda within this model. South Sudan, for example, states that NbS should represent much more than environmental practices but an alternative to the classical development model, putting nature at its to combat the climate crisis and poverty effectively. The country advocates for resolutions that promote greater effort, especially from developed countries, for climate action and the development of a new NbS-centered development model (United Nations Environment Programme, 2022 o).

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## Western Europe and JUSSCANZ

At UNEA-5, the countries comprising the Western European and Others Group (WEOG) and the JUSSCANZ<sup>13</sup> group defended the crucial role of NbS in achieving the SDGs. Reinforcing the concept defined by UNEA in its resolution 5/5, the regional groups understand NbS as practices that utilize natural processes to address primarily environmental challenges. These solutions predominantly include the development of technologies to foster ecosystem restoration, biodiversity conservation, sustainable resource management, and the construction of green infrastructure<sup>14</sup> (United Nations Environment Programme, 2023 a, p. 2).

The countries of WEOG and JUSSCANZ aim to implement NbS to achieve three main objectives: Reducing carbon and other greenhouse gas (GHG) emissions, protecting ecosystems and biodiversity, and reducing plastic use. As groups of developed countries, they prioritize scientific research in environmental protection and more sustainable technologies to address the triple planetary crisis. The groups emphasize the role of scientific knowledge in developing water filtration technologies, assessing deforested areas, and regulating carbon emissions through the development of sustainable energy sources (United Nations Environment Programme, 2023 b, p. 1).

For example, the United States defends the use of the best available technologies to mitigate pollution, including practices such as green roofs, permeable pavements, stormwater treatment systems, and increasing green spaces. The country seeks to reverse biodiversity loss by conserving 30% of land by 2030. The use of drones to reforest areas devastated by fires is common in the country, which in turn helps mitigate air pollution and alleviate the effects of the triple planetary crisis (United Nations Environment Programme, 2022 d).

Some WEOG and JUSSCANZ countries advocate for the adoption of clean energy sources such as solar, wind, and geothermal energy to reduce carbon emissions. Iceland is a leader in using clean energy for environmental protection. The country is part of the Wellbeing Economy Governments Partnership (WEGo), a collaboration between national and regional governments interested in promoting policies and practices to build economies prioritizing the well-being of people and the planet, contrasting with the traditional focus on economic growth as the main measure of success (Wellbeing Economy Alliance, 2022).

Canada also promotes technologies to reduce greenhouse gas emissions. The country supports projects like Nature Smart Climate Solutions, which applies NbS, such as ecosystem restoration and forest restoration and expansion, to mitigate climate change (Government of Canada, 2024; United Nations Environment Programme, 2022 b).

The importance of international cooperation for developing these technologies is highlighted in projects like PONDERFUL, which, although it does not include all WEOG and JUSSCANZ countries, involves collaboration among countries

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<sup>13</sup> JUSSCANZ is a group consisting of Japan, the United States, Switzerland, Canada, Australia, Norway, and New Zealand.

<sup>14</sup> According to the European Commission's Green Infrastructure Communication (2013), green infrastructure is a tool for providing ecological, economic, and social benefits through NbS. Green infrastructure is based on the principle that protecting and enhancing nature and natural processes, along with the many benefits that human society obtains from nature, should be consciously integrated into spatial planning and territorial development (European Union, 2013).





such as Germany, Switzerland, Belgium, Spain, the United Kingdom, Turkey, and others. The project explores innovative methods to use lakes and ponds as catalysts for the environmental development of other ecosystems, as well as using marine organisms to improve water quality (United Nations Environment Programme, 2022 b, p. 1).

The plastic problem is a common issue among the countries of these groups, which focus on promoting measures to reduce plastic use due to its environmental and social impacts, as well as strengthening international cooperation towards this goal. The countries have debated adopting legislative measures (such as banning single-use plastics in their territories), advanced and efficient recycling programs and solutions, and technological innovation policies to develop biodegradable materials that contribute to the preservation of terrestrial and marine ecosystems and their biodiversity (United Nations Environment Assembly, 2022 a, p. 1).

Australia provides examples of NbS best practices, such as the National Waste Policy Plan and the National Plastics Plan. Both plans aim to find alternatives for unnecessary plastic use and maximize its utilization. The plans also outline measures to reduce plastic's impact on nature, focusing on recycling, prevention, and raising public awareness about plastic's environmental harm (Australian Government, 2021; United Nations Environment Programme, 2022 a). Investments by the Australian government in the Pacific Ocean Litter Project (POLP), in collaboration with other Pacific countries<sup>15</sup>, aim to reduce the volume of disposable plastics in the ocean, which has intensified mainly by excessive tourism and improper disposal of domestic and industrial waste. The project goal is to preserve marine life and encourage other countries to take action based on various NbS (Secretariat of the Pacific Regional Environment Programme, 2024).

Japan also presents initiatives to reduce plastic use to protect oceans and their biodiversity through strengthened ties with G20 countries. The Osaka Blue Ocean Vision program specifically targets the elimination of plastic waste through public awareness campaigns and research investments. Additionally, Japan promotes the circular economy as an indispensable tool for reducing, reusing, and recycling plastics, as well as recovering affected ecosystems (United Nations Environment Assembly, 2022 c; Osaka Blue Ocean Vision, 2023).

The United Kingdom brought an interesting discussion to the NbS debate, focusing on the role of indigenous peoples. The country recognizes that restoring and protecting nature is the most effective and least costly measure to address climate change and other social issues such as hunger and poverty. Thus, the country has cooperated with biodiversity-rich countries to promote actions such as reversing deforestation and environmental degradation. The United Kingdom acknowledges that working with the local population, especially indigenous peoples, is crucial. Furthermore, the country points out that cooperation to reduce plastic pollution by at least 30% by 2024 is essential to protect oceans and biodiversity (United Nations Environment Programme, 2022 c).

The position of New Zealand is aligned with the United Kingdom's, and it also presents the wisdom and practices of indigenous peoples as an essential part of NbS. New Zealand recognizes the role of the Māori community in preserving and restoring ecosystems and promoting measures that prioritize nature. The Māori

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<sup>15</sup> The other countries involved in the project are the Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, the Marshall Islands, Samoa, the Solomon Islands, Tonga, Tuvalu, and Vanuatu.





worldview understands that nature should be respected and not exploited, an idea summarized in the concept of "Kaitiakitanga", which refers to the responsibility of humanity to protect and care for nature. Thus, New Zealand proposes that Māori knowledge should be incorporated into NbS as part of the necessary actions towards sustainable and circular economies (United Nations Environment Assembly, 2022 b). However, it is worth noting that the Māori community is at risk due to the obstacles posed by the modern lifestyle, which threatens their population.

In general, WEOG and JUSSCANZ understand that NbS should be guided by reducing plastic use, cooperating with indigenous peoples, restoring forests, promoting the use of clean energy, and applying technologies to reduce GHG emissions in the atmosphere. These initiatives reflect a comprehensive commitment to sustainability and climate change mitigation and an integrated approach to environmental protection.

However, it is necessary to question whether the use of technologies to restore nature can be genuinely considered NbS. This dilemma is particularly relevant given that the developed countries of WEOG and JUSSCANZ historically degraded the environment during the colonial and industrial eras but now seek to artificially restore this destruction through technology. It remains open how it will be possible to reconcile technology with an ecocentric approach and the knowledge of indigenous peoples, as proposed by the United Kingdom and New Zealand, especially in developing countries.

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## Major groups and stakeholders

Major groups and stakeholders represent civil society sectors that participate in UNEA discussions, presenting demands that may not always align with the official positions of Member States. They often pressure governments for decisions that primarily consider social perspectives, needs, and environmental protection and preservation. Although they do not have voting power in UNEA decisions, these groups are crucial for UNEA because they advocate for organized civil society's demands.

To understand how these groups perceive NbS, it is essential to consider their diverse and unique contexts and interests, and their respective realities reflect the way they understand such practices. Still, major groups and stakeholders converge their views in many aspects, especially because they share a common interest in environmental protection and sustainability.

Major groups and stakeholders converge in advocating for NbS that are inclusive, equitable, and effective, recognizing the importance of including groups often marginalized in environmental debates, such as children, youth, women, and indigenous and traditional peoples. The promotion of dialogue, cooperation, and collective action is central to their agendas, reflecting an understanding that addressing environmental and social challenges requires joint and collaborative efforts.

Some major groups, such as Children and Youth, Indigenous Peoples, and Local Authorities, focus on promoting the active participation and leadership of these groups in decisions and the implementation of NbS. Recognizing the diversity of perspectives and experiences within civil society, these groups believe that NbS can only be effective if they incorporate traditional knowledge and sustainable practices developed by local communities and indigenous peoples over generations (United Nations Environment Programme, 2023 a, p. 3; United Nations Environment Programme, 2023 b, p. 1-3; United Nations Environment Assembly, 2022 c, p. 1-2).

For these major groups, NbS should be built from the bottom up, considering the needs and values of these groups and ensuring their active participation in decision-making and implementation. Thus, in addition to promoting environmental conservation, NbS also become an instrument of climate and environmental justice, promoting social inclusion, strengthening communities, and contributing to the construction of more equitable and sustainable societies.

Another common point in the position of major groups and stakeholders concerns the broadness of the concept of NbS, which can end up masking practices that continue to harm nature. This criticism comes mainly from the Indigenous Peoples major group, which condemns how the concept of NbS has been associated with false solutions that do not provide real answers to the issues at hand (United Nations Environment Programme, 2023 a, p. 2).

Despite the shared views, each major group and stakeholder has specific agendas. For example, the Indigenous Peoples major group emphasizes the urgency of systemic change in how humanity interacts with nature, especially to combat climate change (United Nations Environment Programme, 2023 a, p. 3). The inclusion of traditional knowledge and practices in NbS, based on cultural, spiritual, and identity aspects, is a priority for this major group. This position aligns with the Circumpolar Inuit Council, which understands NbS not only as strategies for





environmental restoration and conservation but also as expressions of their communities and ways of life, cultures, and traditions about living in harmony with nature (United Nations Environment Assembly, 2022 b, p. 1). Thus, the integration of this ancient knowledge into contemporary solutions to environmental challenges prevails in the position of these representatives.

While it is not the focus of their negotiation priorities, the Children and Youth major group supports the demand of Indigenous Peoples by advocating for the inclusion of indigenous youth in the process of protecting and monitoring protected areas. The Raoni Institute in Brazil, for example, protects and monitors over two million hectares of indigenous lands, encouraging young members of the Kayapó community to document illegal deforestation and other activities that threaten their territory's integrity. Additionally, the Institute teaches sustainable agriculture and agroforestry methods to support the conservation of indigenous land. These actions demonstrate the importance of indigenous youth in biodiversity conservation and environmental preservation (United Nations Environment Programme, 2023 b, p. 10).

The Children and Youth major group is also responsible for involving young people in the restoration of mangroves and wetlands in El Salvador. By actively participating in this restoration project, young people understand the importance of preserving these ecosystems not only for local biodiversity but also for climate change mitigation. Mangroves and wetlands play a crucial role in atmospheric carbon sequestration and regional climate regulation, providing habitat for various species. Therefore, by participating in the restoration of these environments, young people demonstrate an understanding of the interconnectedness of biodiversity and climate and work actively to promote sustainability and environmental resilience in their communities (United Nations Environment Programme, 2023 b, p. 11).

For the NGO World Wildlife Fund (WWF), a stakeholder in UNEA, NbS play an essential role in reducing GHG emissions to combat climate change. WWF advocates for the elimination of fossil fuels and the use of renewable energy sources, as well as the restoration of marine and terrestrial areas to reduce GHG. The NGO also sees NbS as a way to ensure food security and public health if used to increase the resilience of food production systems, including the ones in traditional communities. However, WWF warns that care must be taken to avoid using NbS to reinforce predatory practices on nature (United Nations Environment Programme, 2023 f, p. 3; p. 5).

The stakeholder IBON International, an NGO that aims to promote the development of Global South countries and is based in the Philippines, takes a more skeptical stance on NbS and their contribution to reducing GHG emissions. The NGO argues that the concept has created spaces for "carbon colonialism" and greenwashing practices that harm nature and do not consider the needs of local communities, especially those in the Global South. IBON International also expresses concern about the use of NbS as a strategy only to mitigate the effects of harmful activities on the environment instead of directly addressing their root causes. This does not mean that NbS are not essential or effective, but rather that they should be part of a broader and more comprehensive strategy to address both the symptoms and the underlying causes of environmental problems. Therefore, they consider it crucial to ensure that NbS are implemented in a manner that complements the broader efforts to reduce environmental harm and protect ecosystems (United Nations Environment Programme, 2023 d, p. 1-2).







Other stakeholders, such as PAX for Peace (a Dutch NGO working on protecting civilians in armed conflicts) and the Third World Network (an international NGO based in Malaysia seeking to articulate Global South countries for the promotion of ecologically sustainable development), emphasize the importance of NbS for mitigating the climate crisis. These solutions are crucial for the conservation and restoration of natural ecosystems, such as forests, mangroves, and wetlands, which play a vital role in regulating the climate, absorbing carbon, and protecting against climate-related disasters. Furthermore, these stakeholders recognize the interconnection between biodiversity and climate and advocate for the protection and recovery of biological diversity as an integral part of nature-based climate mitigation strategies (United Nations Environment Programme, 2023 c, p. 3-4; United Nations Environment Programme, 2023 e, p. 1-3).

For the Local Authorities major group, the priority is ensuring coherence, coordination, and cooperation in environmental governance and promoting legislation as fundamental steps to implement NbS and address the challenges of the triple planetary crisis. The lack of cohesion and coordination among different decision-making levels hinders the effective implementation of public and international policies involving NbS. Measures such as implementing clean energy policies, sustainable transport, waste management, and sustainable land use at the local level should be taken to reverse this situation. Through governance, the Local Authorities major group also advocates for the participation of marginalized groups in decision-making involving NbS, acting in defense of climate justice. For the group, it is crucial to rectify the injustice inherent in climate change, where the communities that contribute the least to the problem are the most affected by its devastating impacts. Therefore, climate justice seeks to ensure that the most vulnerable communities facing the adverse effects of extreme weather events have access to adequate resources and adaptation measures. This includes not only the equitable distribution of resources but also the recognition of the rights of affected communities and the promotion of policies and practices that address the social and economic inequalities exacerbated by climate change (United Nations Environment Assembly, 2022 c, p. 1-2).

The association between NbS and responses to social challenges is also emphasized by stakeholders such as IBON International and the Third World Network. Both NGOs recognize that human well-being is intrinsically linked to environmental health, and promoting the conservation and restoration of ecosystems can generate significant social benefits, such as creating jobs that include women and youth and reducing poverty, especially in developing or least developed countries. As a result, these NGOs call for a broader approach to NbS that goes beyond the environmental pillar of sustainable development and also addresses human rights and the needs of the most vulnerable communities (United Nations Environment Programme, 2023 d, p. 2; United Nations Environment Programme, 2023 e, p. 3).

IBON International highlights the importance of considering the impact of environmental policies on the rights of frontline rural communities, women, urban poor, indigenous peoples, and other social groups, emphasizing that if NbS do not address these rights, they will not be effective (United Nations Environment Programme, 2023 d, p. 1). The Third World Network raises concerns about the implications of NbS for indigenous peoples and local communities, demanding respect and protection of their rights, as established by international human rights laws and norms (United Nations Environment Programme, 2023 e, p. 3).





PAX for Peace broadens the discussion about the impacts of NbS on social issues by discussing the positive effects of these actions on promoting peace and security, as environmental degradation and resource scarcity are often associated with conflicts and instability. Therefore, promoting practices that protect and restore ecosystems can contribute to conflict prevention and peacebuilding. According to PAX for Peace, effective and sustainable management of natural resources is essential for the peacebuilding process, as it strengthens communities' resilience and infrastructure against environmental adversities (United Nations Environment Programme, 2023 c, p. 2).

In sum, through their different positions and contributions, major groups and stakeholders have played a crucial role in the debate on NbS, providing a critical view of these practices, especially those that seem to reinforce the predatory view of humans over nature. Thus, while UNEA Member States present examples of best practices on NbS to address environmental challenges, it is the role of major groups and stakeholders to question the authenticity and effectiveness of these measures, as they may vary in their implementation and real impact. Major groups and stakeholders also play a crucial role in critically evaluating proposed solutions, ensuring they are grounded in solid evidence and aligned with real, long-term environmental, social, and economic sustainability goals (United Nations Environment Assembly, 2022 a, p. 2).

Therefore, while Member States provide the political and regulatory basis for implementing NbS, major groups and stakeholders bring the technical knowledge, practical experiences, and diverse perspectives to enrich the debate and catalyze concrete actions. Their contribution includes providing data and scientific evidence, developing strategies for civil society engagement, and promoting corporate responsibility and technological innovation. Their active participation strengthens the role of global governance and drives the effective implementation of NbS.

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