

Perspectives.

Issue No. 48

**Nature in Action
for Peace:
Challenges and
Opportunities
to Address
Environmental
Dimensions of
Conflict through
Nature-based
Solutions**

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Executive Summary

The improved understanding of the environmental dimensions of armed conflict and their link with peace and security raises the question of how to address such impacts. In response to the growing awareness that environmental, climatic and societal challenges require integrated approaches, the recent introduction of the Nature-based Solutions (NbS) framework has gained momentum. Though environmental degradation from military activities and environmentally harmful coping mechanisms of local and displaced communities can be broad and complex, the use of NbS and broader nature-positive approaches, bring the potential to minimise and mitigate direct impacts and can be an instrument for conflict prevention through shared natural resource management.

However, while the NbS framework has been advocated by many, others have pointed to important flaws, shortcomings and risks associated with it. These include, but are not limited to, the risk of avoiding carbon reduction through carbon offsetting, land grabbing and insufficient consent from local communities, greenwashing, human rights abuses, militarised conservation, insufficient focus on justice, negative impacts on the environment, and ambiguity and debate about definitions and criteria.

Next to listing existing guidance notes on NbS in conflict contexts, this paper outlines key lessons to successfully implement NbS in conflict-affected areas towards co-benefits for nature and peace. Each key lesson is grounded within a peacebuilding project that PAX was/is involved in and describes additional good practices. First, with the right standards and safeguards, NbS have the potential to contribute to security with positive impacts on nature and peace. Second, NbS must be based within and grown from local initiatives. Third, it is critical to disseminate information from diverse and independent sources in the project planning phase. Last, accountability must be ensured of all actors, in particular those with a disproportionate amount of power, such as governments, multinational corporations, and international donors.

PAX urges UNEP, UNEA members, and other international organisations championing NbS:

- To discuss and address criticism and recommendations regarding NbS in conflict-affected settings at UNEA 6, as listed, among others, throughout this paper;
- To recognize the importance of the environmental dimensions of armed conflicts and address them within multilateral environmental fora;
- To develop and formalise NbS standards and guidelines, with specific attention to conflict-sensitive implementation in conflict-affected regions and their potential for contributing to peace and security, ensuring that NbS protect and support the most vulnerable communities worldwide, i.e. those affected by violent conflict; and
- To build on an inventory of realized NbS in conflict-affected areas contributing to peace and security, their best practices and lessons learned, and thereby systematically explore the opportunities NbS offer to address conflict-linked environmental degradation and sustainable resource management throughout the conflict cycle, i.e. for conflict-prevention, response, peacemaking (mediation and negotiations), peacekeeping, remediation, restoration and peacebuilding.

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February 2024

Cover Photo:

Youth engagement committed to peace and environment in Santa Rosa, Colombia
Photo: PAX 2023.

Introduction

1.1. Emergence of Nature-based Solutions

In recent years, the concept of Nature-based Solutions (NbS) has gained popularity in response to the growing awareness that environmental, climatic and societal challenges require integrated approaches. Based on the idea that healthy ecosystems can serve human well-being, NbS aim to leverage nature to contribute to sustainable development and improve human livelihoods. NbS have thus been adopted in urban planning, poverty reduction, climate change mitigation and adaptation, disaster risk reduction, etc.

The term was first introduced by the World Bank in 2008, and was first defined by the International Union for the Conservation of Nature (IUCN and later similarly defined by the United Nations Environment Assembly (UNEA) in 2022 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.”*¹

In 2020, the IUCN developed a set of global standards for NbS, setting assessment criteria to ensure that NbS have positive environmental, climate and societal impacts. In total eight criteria were established: 1) NbS effectively address societal challenges, 2) the design of NbS is informed by scale, 3) NbS result in a net gain for biodiversity and ecosystem integrity, 4) NbS are economically viable, 5) NbS are based on inclusive, transparent, and empowering governance processes, 6) NbS equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits, 7) NbS are managed adaptively, based on evidence, 8) NbS are sustainable and mainstreamed within an appropriate jurisdictional context.² Several guidelines have been developed for the implementation of NbS in various contexts and for various purposes. For example, the IUCN’s ‘Guidance for using the IUCN Global Standard for Nature-based Solutions’ aims to help projects meet the NbS criteria.³ In collaboration with the Nature-based Solutions Initiative, 20 UK NGOs have created guidelines for NbS to climate change.⁴ The White House has created guidelines based on federal examples, focusing on technical assistance and federal assistance for NbS.⁵

The UN Environment Programme (UNEP) has widely advocated for the use of this framework in designing projects which integrate multiple Sustainable Development Goals. While the need to improve connections between the Sustainable Development Goals has always been recognised, NbS provide a framework and actions through which this can be realised. In 2022, the fifth session of the UN Environment Assembly (UNEA) set up the Intergovernmental Consultations on NbS for the collection of best practices in NbS, the assessment of the existing criteria and guidelines, and the identification of options to support sustainable investment in NbS.⁶ The intergovernmental consultations in October 2023 aimed towards strengthening resolution 5/5 on NbS at UNEA 6 in 2024.⁷ Part of the engagements included recommendations by civil society organisations to adopt a conflict-sensitive lens for NbS and to specify its connections with peace and security.⁸

1.2. Nature-based solutions, peace and security

In the peacebuilding field, a growing understanding of the environmental dimensions of armed conflict and their link with peace and security

1 IUCN (2023). [Nature-based Solutions](#).

2 IUCN (2020). [IUCN Global Standard for Nature-based Solutions](#).

3 IUCN (2020). [Guidance for using the IUCN Global Standard for Nature-based Solutions](#)

4 [Nature-based Solutions Initiative \(2020\). Guidelines for Nature-based Solutions to Climate Change](#).

5 [The White House \(2022\). Nature-Based Solutions Resource Guide](#).

6 [UNEP \(2023\). Intergovernmental Consultations on Nature-based Solutions](#).

7 Outcome documents of the international consultation in October are pending.

8 [PAX \(2023\). NGO Recommendations to the First Intergovernmental Consultations on Nature-based Solutions: A Conflict-Sensitive Lens: Nature-based Solutions for Peace and Security](#).

also has raised the question of how to address these impacts.⁹ Beyond preventive measures through improved legal protection,¹⁰ training of armed forces on military guidelines¹¹ for environmental protection, and improved analysis and response in humanitarian settings,¹² there is also a clear need to deal with conflict-linked environmental degradation in the wake of wars. Though environmental degradation from military activities and environmentally harmful coping mechanisms of local and displaced communities can be broad and complex, the use of NbS brings the potential to minimise and mitigate direct impacts¹³ and can be an instrument for conflict prevention through shared natural resource management.¹⁴

The importance of environmental considerations in peacebuilding initiatives is already integrated within many projects and organisations, and terms such as environmental peacebuilding and climate security have gained much attention in recent years. NGOs and intergovernmental organisations have developed several guidelines, toolboxes, criteria, and methodologies to improve climate and environmental sensitivity in peacebuilding projects, and vice-versa conflict sensitivity in environmental initiatives.

The United Nations University published a thematic review in 2023 analysing climate security projects' best practices and lessons learned based on a large sample of projects in combination with several in-depth case studies. Among other things, the paper calls for increased funding for climate security projects in conflict-affected areas, where investments are lacking due to heightened perception of risk.¹⁵ International Alert has identified a 5-step plan to "mainstream environmental action in peacebuilding programming". Advocating for climate and environment-sensitive peacebuilding, they suggest environmental considerations in the contextual analysis, project design and evaluation.¹⁶

In 2023, UNEP launched the conflict sensitivity toolbox for addressing climate-related security risks, aimed at identifying suitable responses to climate and environmental risks in conflict-affected areas.¹⁷ In the same year, the IUCN, IFRC, FEBA, Sphere, and SOMN created the Guide for Nature-based Solutions for Climate Resilience in Humanitarian Action.¹⁸ This guide builds on the lessons learned from NbS in disaster risk reduction and climate change adaptation and aims to distil lessons that improve the long-term resilience of vulnerable communities and the ecosystems they depend on. In

response to human rights concerns (elaborated upon in the section 'criticisms'), SwedBio has created guidelines for a Human Rights-based Approach to NbS.¹⁹

Other peace-positive guidelines for environmental initiatives have a regional focus, such as Conservation International's Methodology to Facilitate the Inclusion of Climate Resiliency and Conflict Sensitivity into Management Plans and Restoration Projects in African Rangelands (2023)²⁰ and Search for Common Ground's Pastoralism and Conflict Toolkit: Tools for Prevention and Response (2021).²¹

Among these initiatives, it is agreed upon that healthy and resilient ecosystems have the potential to solve many societal challenges, including in conflict-affected areas. Considering the environmental dimensions at each stage of the conflict cycle,²² we outline the potential impacts of NbS throughout the cycle. This is a generalised schematic based on the available literature, and it must be noted that conflicts often do not follow the conflict cycle precisely, and each NbS would be embedded in a specific local-to-international conflict context.

At the start of the conflict cycle, grievances and competition over natural resources have the potential to escalate tensions between

9 PAX (2020). [Witnessing the Environmental Impacts of War: Environmental case studies from conflict zones around the world.](#)

10 ILC (2022). [Protection of the environment in relation to armed conflicts – Texts, instruments and final reports.](#)

11 ICRC (2021). [Guidelines on the Protection of the Natural Environment in Armed Conflict.](#)

12 Zwijnenburg (2021). [Data-driven environmental decision-making and action in armed conflict - World. ICRC Humanitarian Law & Policy Blog.](#)

13 Zwijnenburg (2021). [Nature-based Solutions Vital to Mitigating Conflict-linked Environmental Damage. New Security Beat.](#)

14 Geneva Environment Network (2021). [Nature-based Solutions and Peacebuilding. Geneva Nature-based Solutions Dialogues.](#)

15 Gaston et al. (2023). [Climate Security and Peacebuilding: Thematic Review. United Nations University, Centre for Policy Research.](#)

16 International Alert (2022). [Mainstreaming environmental action in peacebuilding programming: Five key steps.](#)

17 UNEP (2022). [Addressing Climate-related Security Risks: Conflict Sensitivity for Climate Change Adaptation and Sustainable Livelihoods - Toolbox.](#)

18 IUCN (2023). [Guidance on Nature-based Solutions in humanitarian action launched in collaboration with Sphere.](#)

19 Hertz et al. (2023). [Adopting a Human Rights-based Approach to Biodiversity and Climate Action. SwedBio Discussion Paper.](#)

20 Moraga-Lewy et al. (2023). [Methodology to facilitate the inclusion of climate resiliency and conflict sensitivity into management plans and restoration projects in African rangelands. Conservation International.](#)

21 Jobbins et al. (2021). [Pastoralism and Conflict: Tools for Prevention and Response in the Sudano-Sahel. Search for Common Ground.](#)

22 Schellens and Diemer (2020). [Natural Resource Conflicts: Definition and Three Frameworks to Aid Analysis | SpringerLink.](#)

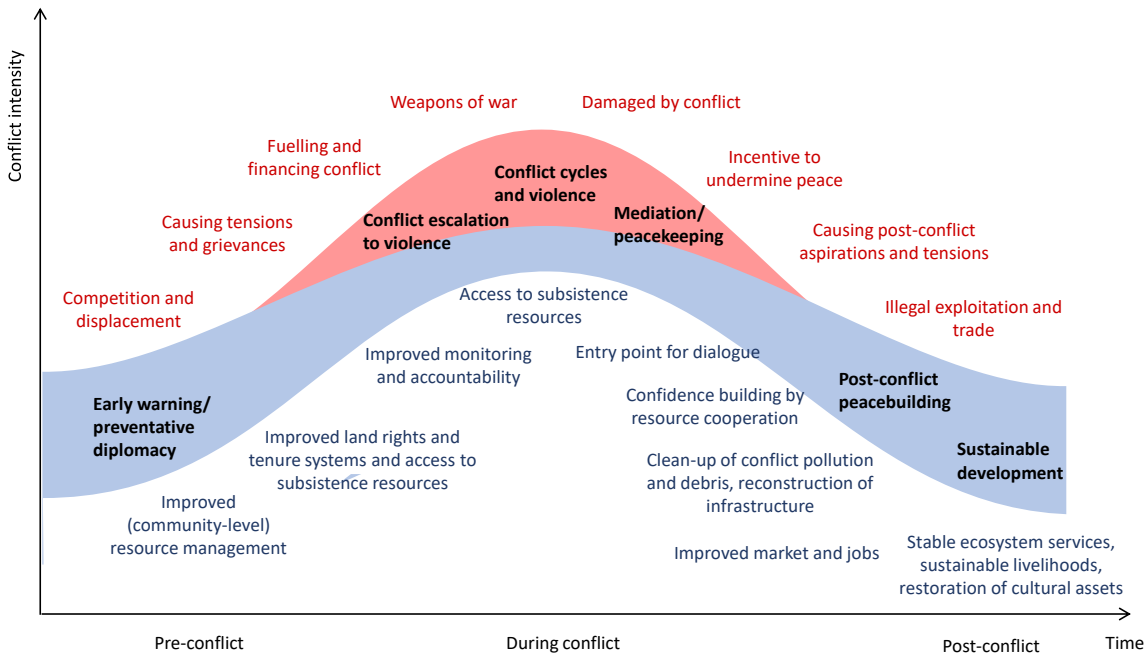


Figure 1. Environmental risks and opportunities for NbS contributing to peace throughout the conflict life cycle. Updated from Schellens and Diemer.²²

different groups. Improved resource management and land rights systems may reduce these tensions, mitigating the risk of a resource-based conflict. Furthermore, community-level resource management can lead to improved social cohesion and dialogue between different groups, thus minimising the risk of violence.

At the peak of the conflict cycle, NbS can improve vulnerable communities' access to subsistence resources, such as food, water, and shelter. It can furthermore increase monitoring and accountability efforts to ensure the equitable distribution of natural resources. It was found that NbS have been used in various projects as an entry point for dialogue, where other - less technical - topics are too contentious to bring together conflicting parties. Community participation in the management of natural resources during conflict thereby has the potential to bring groups together and facilitate dialogue, mediation and trust-building.

At a later stage, NbS can contribute to the restoration of a degraded environment from the impacts of conflict, through the clean-up of conflict pollution and debris, the facilitation of sustainable resource use, rehabilitation and reconstruction of critical infrastructure. Improved markets and trade of natural resources, as well as jobs in related industries, can strengthen post-conflict peacebuilding efforts.

Lastly, in an effort to create sustainable peace, NbS can contribute to environmental recovery and the provision of basic ecosystem services such as water and air purification, the establishment of sustainable income-generating activities and poverty reduction, the clean up of debris, the protection and restoration of cultural, spiritual, or religious assets, and continued increasing community cohesion, and trust-building.

1.3. Not necessarily a new thing

While the NbS definition and guidelines have been developed only recently, nature has been used to advance social needs and solve human problems throughout history. The use of nature in peacebuilding initiatives is also not new. The connection between environmental solutions, sustainable natural resource management, and peacebuilding have been advocated for decades, such as the 'Environment, Development, and Sustainable Peace: Finding Paths to Environmental Peacemaking' conference in 2004²³.

Before being formally integrated within humanitarian, development and peacebuilding initiatives, nature as a solution for societal problems has been deeply ingrained in many indigenous cultures for centuries. Indigenous peoples around the world have a longstanding history of seeking answers to human and environmental challenges in nature. In many indigenous cultures, humans

23 Wilson Center (2004). Environment, development, and sustainable peace: finding paths to environmental peacemaking.

are seen as one aspect of the complexity of life and the ecosystem around them.²⁴ To maintain a good standard of living and respect for living things, many indigenous cultures use ancestral knowledge to protect and restore their ecosystems, on which they depend for sustenance and cultural preservation.²⁵

In the international community, many peace and conflict researchers and practitioners began to focus on the link between natural resources and conflict as the number of civil wars increased after the Cold War.²⁶ In the 1990s the environment-conflict nexus was at the centre of many debates, and in the early 2000s the concept of Environmental Peacebuilding was popularized. The debate was revived once again with the first UN Security Council meeting on the impacts of climate change on peace and security in 2007.²⁷ Meanwhile, these decades saw an increase in projects and organisations with a focus on the connection between the environment and peace and conflict. For example, in 2003, the Afghan Conservation Corps facilitated labour-intensive employment opportunities that focused on nature conservation in post-war Afghanistan, where environmental degradation as a result of violent conflict had affected rural livelihoods and poverty rates.²⁸

Yet, the introduction of the NbS framework provides several additional benefits. First, the concept has received a lot of

international attention, creating important momentum to further the integration of nature into humanitarian-peace-development action. Additionally, NbS call for practical, bottom-up actions in which the interdependence of humans and nature is central. Building on concepts such as the 'ecosystem-based approach' and 'ecosystem services', and learning from past mistakes, NbS have the potential to benefit people and nature simultaneously. When implemented with a human-rights-based approach, the NbS framework can guide environmental initiatives and funding to support the most vulnerable communities in building a strong society, resilient against natural and human-induced disasters.²⁹

1.4. Criticism

While the NbS framework has been advocated by many, others have pointed to important flaws, shortcomings and risks associated with it. Over 360 organisations, including the Rainforest Foundation UK, have warned against the use of Nature-based Solutions.³⁰ Several key concerns are outlined below based on various reports from NGOs and CSOs, discussions with PAX colleagues, and input from practitioners from other organisations.

Avoidance of carbon reduction

As the NbS framework has gained popularity and credibility in the

international community, many (multinational) corporations such as Shell, Total, Microsoft, Delta Airlines, Heathrow Airport and many others have pledged to offset their carbon emissions through nature-based solutions.³¹ In many cases, they receive carbon credits in return, thus justifying the continued burning of fossil fuels on a large scale and pushing the solution away from carbon reduction. Investing in nature-based solutions allows corporations to 'green' their reputation while maintaining high levels of emissions.

Land grabbing and lack of local consent

Drawing parallels with the REDD+ framework, many organisations have highlighted the social and economic toll NbS projects have on indigenous and local communities in the Global South.³² First, they show that vast areas of land are needed to implement NbS, transforming landscapes to suit the needs of corporations or development organisations, while dispossessing communities from their land. In several cases, NbS have already been shown to enclose living spaces for local and indigenous communities, displacing many from their (ancestral) land, and giving rise to the term 'nature-based dispossessions'.³³ Second, consent from local communities is often lacking, as well as their participation in the design and implementation of NbS projects, leading to unwanted societal impacts.³⁴ For example,

24 Salmón (2000). Kincentric ecology: indigenous perceptions of the human-nature relationship.

25 Indigenous Peoples Major Group (2023). An approach to nature-based solutions from Indigenous Peoples Major Group.

26 Wilson Center (2017). 15 Years of Environmental Peacemaking.

27 Ide et al. (2021). Past and future(s) of environmental peacebuilding.

28 UN Assistance Mission in Afghanistan (2010) Afghanistan: The ACC livelihoods project successfully continued providing critical employment for the rural poor in 2009.

29 Sphere (2023). Nature-based Solutions (NbS) Sphere Unpacked Guide launched.

30 Rainforest Foundation UK (2022). Press Release: Over 360 organisations say "No to Nature Based Solutions!"

31 World Rainforest Movement (2021). More than 250 groups say NO to "Nature-Based Solutions"!

32 World Rainforest Movement (2022). Nature-based Solutions: miraculous weapon to save the climate or "final solution" for forests and their peoples?

33 GRAIN (2021). NO to nature-based dispossessions!

34 Culture Survival (2022). Nature-Based Solutions are False Climate Change Solutions: Indigenous Peoples Hold the True Solutions to Climate

in 2011, the government of Gabon introduced the Grande Mayumba project, which allows corporations to buy carbon credits through a carbon offsetting project in Gabon's forests. Local communities have spoken out about the secrecy with which this project was set up and their lack of participation and consent for the project.³⁵ For NbS with peace and security goals, free, prior, and informed consent as well as active, inclusive participation by relevant actors is necessary to ensure the project does not raise tensions but rather contributes to peaceful relationships between all actors.

Greenwashing

The private sector's interest in NbS has raised concerns about the risks of greenwashing among many organisations. Due to a lack of accountability and under-defined criteria, projects with potentially harmful effects on the environment and biodiversity may be labelled as NbS. As reforestation is proposed as one of the key solutions to the climate crisis within the NbS framework, there is a concern that it incentivises the creation of fast-growing, industrial, mono-plantations, with species such as acacia and eucalyptus.³⁶ These plantations are harmful both to the environment and local biodiversity as well as to communities that depend on the forest for their livelihoods. The term could thus be used by corporations to improve their image

and help them reach their climate obligations through interventions that are harmful to people and the environment.

Human rights abuses and militarised protection of nature

In some cases, environmental projects have resulted in grave human rights abuses and state-led violence. The rise in militarised conservation has contributed to a trend of increased violence towards indigenous people in national parks, their expulsion from their land, and other human rights abuses. The Virunga National Park and the Kahuzi Biega National Park in the DRC are well-known examples of what has been labelled 'fortress conservation', referring to the creation of protected areas through coerced displacement or exclusion of the existing inhabitants.³⁷ While these national parks are not labelled as NbS, several organisations which support the parks have promoted NbS, such as the World Conservation Society.³⁸

Minority Rights Group International and Forest People Programme have reported that indigenous Batwa communities have been subjected to extreme violence, including murder, (group) rape, and possible torture by park rangers in the Kahuzi Biega National Park³⁹. Several NGOs, including Minority Rights Group International, have concluded that these abuses were not incidental but

part of a systematic and organised effort to remove the Batwa by force⁴⁰. While these parks do not carry the term NbS, it is necessary that NbS do not lead to similar abuses, requiring improved criteria based on the lessons learnt from previous environmental projects, and heightened due diligence and awareness when implemented in conflict-affected or politically fragile areas.

Insufficient focus on justice

Several academic articles discuss the justice implications of NbS and conclude that thus far, NbS do not adequately address the three dimensions of justice. According to Kato-Huerta and Geneletti⁴¹ NbS tend to focus on the distributive dimension of justice, but insufficiently address the recognitional and procedural dimensions of justice. As a result, NbS thus far report negative or mixed results in delivering environmental justice. Like Kato-Huerta and Geneletti, Cousins⁴² argues that NbS should centre around the concept of justice, to ensure that NbS work towards "progressive, cohesive, anti-racist and social-ecologically sustainable communities."

Negative impacts on the environment and sustainability of interventions

Although the NbS criteria around net gain for biodiversity and ecosystem integrity are increasingly well-

Change.

35 World Rainforest Movement (2022). *Dangerous for Communities and the Climate: Nature-Based "Solutions" in Gabon*.

36 Milieudefensie (2022). *Report: How Shell is using Nature-based Solutions to continue its fossil fuel agenda*.

37 Oxford Reference *Fortress conservation* - Oxford Reference.

38 European Commission (2020). *EU, DiCaprio and GWC team-up to protect biodiversity* (europa.eu), WCS. *WCS Strategies for the Climate Crisis* - WCS.org.

39 Forest Peoples Programme (2021). *Fresh atrocities in Kahuzi-Biega National Park in the name of "security" and "conservation"*.

40 Flummerfelt (2022). *To Purge the Forest by Force: Organized violence against Batwa in Kahuzi-Biega National Park*. Minority Rights Group International.

41 Kato-Huerta and Geneletti (2022). *Environmental justice implications of nature-based solutions in urban areas: A systematic review of approaches, indicators, and outcomes*.

42 Cousins (2021). *Justice in nature-based solutions: Research and pathways*.

defined,⁴³ several NbS projects have negatively impacted the environment. Several projects labelled as NbS have included the planting of monocultures, the establishment of industrialised agriculture, the introduction of non-native species, and the creation of man-made ecosystems which are unnatural to the region in question.⁴⁴ More precise criteria are necessary to avoid harmful impacts on the environment and guarantee environmental benefits for affected societies. This includes rejecting reforestation efforts which justify the logging of old forests or the establishment of forests which will be logged later. NbS projects must have a long-term environmental goal, in which the added benefits for nature are not used for commercial purposes at a later stage. This ensures the sustainability of the intervention.

Ambiguity and debate about definitions and criteria

As the term is relatively new, there is much debate about its definition and criteria, especially in terms of its preciseness, rigour, and scope. The broad definition accepted by the IUCN and UNEP leaves room for many different types of projects,

but has simultaneously raised questions about which types of projects are 'nature-based enough', such as pollution or waste clean-up projects and environmental governance initiatives. There is a broader application of nature-positive actions to address conflict-linked environmental impacts that are worth exploring and including in response and remediation work.

For example, in Iraq, the fight against the so-called Islamic State caused severe destruction of urban areas, resulting in millions of tons of debris. At same time, the government also struggled with wide-scale oil pollution after the so-called Islamic State set fire to 19 oil wells. Work undertaken by UNEP focused on using nature-positive actions through debris recycling and applications of circular economy to deal with conflict-rubble.⁴⁵ With the use of microbes, scientists and Iraqi experts are developing a sustainable way of remediation of large swaths of oil-contaminated soils that can prove helpful for other areas of armed conflicts struggling with conflict pollution⁴⁶. Most practitioners would consider such projects to fall outside the boundaries of the current NbS definition because they

use mechanical and technological solutions instead of an ecosystem to address conflict pollution. However, strictly speaking, they can be considered actions to "restore [...] modified terrestrial [...] ecosystems" to address conflict challenges and improve human well-being as the definition prescribes (see section 1.1).

Finally, within the field of peacebuilding, the term 'solutions' is often avoided. The term evokes the idea that peacebuilding projects have the potential to solve conflicts and provide complete answers to large-scale security issues. While NbS may not provide complete solutions, it is nevertheless expected that they can contribute to peace and security.

As the concept of NbS continues to be developed, it is important to bring together different visions and create more precise and thorough criteria for NbS in the medium term. This will ensure better accountability and implementation of NbS, while broad criteria leave NbS vulnerable to greenwashing and environmentally and socially harmful practices.

43 IUCN (2020). [Guidance for using the IUCN Global Standard for Nature-based Solutions](#).

44 World Rainforest Movement (2021). [More than 250 groups say NO to "Nature-Based Solutions"!](#) | World Rainforest Movement (wrm.org.uy).

45 UNEP (2022). [Mosul's recovery moves towards a circular economy](#).

46 UNEP (2019). [Microbes offer hope of cleaning up Iraq conflict's pollution legacy](#).

2. Key lessons to take forward for NbS for peace and security

In light of these serious and far-reaching criticisms, a legacy of lessons learned from earlier related efforts, NbS' potential for local impacts in the most vulnerable communities worldwide, and growing international momentum around NbS, it is crucial to improve the knowledge around and the correct implementation of NbS in conflict settings. To move forward with the NbS framework in peacebuilding it is necessary to understand to what extent these shortcomings can be solved through improved standards, norms, criteria and guidelines for NbS project design and implementation and to explore the potential for NbS in realising peace and security objectives. The following section aims to answer these questions and share lessons from several case studies that are closely related to PAX, both positive and negative.

First, however, it is important to point to earlier efforts to improve NbS criteria related to human-rights concerns and applicable in conflict contexts. For example, in "Re-thinking nature-based solutions: seeking transformative change through culture and rights"⁴⁷ the Forest People's Programme emphasises that NbS situated in or impacting indigenous people's land must respect indigenous rights and land tenure and must

not proceed without free, prior and informed consent. Forest People's Programme "Local Biodiversity Outlooks 2",⁴⁸ explores the contributions of indigenous people to the protection and restoration of global biodiversity. They argue that indigenous knowledge and culture must be central in efforts to reach the UN biodiversity goals promoting a holistic approach that recognises the connection between people and nature. The Indigenous Peoples Major Working Group's submission at the Final Intergovernmental Consultations on Nature-based Solutions⁴⁹ rejects the notion that nature thrives through the absence of people. Instead, they call for culture-based solutions, which integrate cultural and spiritual aspects and identities in environmental and climate actions, and include indigenous people in decision-making when NbS are implemented on their lands. SwedBio emphasises the importance of a human-rights-based approach to NbS, especially ensuring access to information and justice through effective public participation, freedom of expression and association, and free, prior, and informed consent.⁵⁰ Last, both the Forest People's Programme and the Indigenous Peoples Major Working Group, as well as several other NGOs and organisations, call for the rejection of any NbS project which

includes carbon offsetting, carbon trading or any other action which delays the reduction of greenhouse gas emissions.

In addition to these recommendations, several key lessons from PAX projects and research reports inform us of additional criteria and guidelines for NbS to be successful in conflict-affected contexts towards a positive impact on nature and peace. While these projects were not conceptualised as NbS projects, the case studies have strong environmental components and can provide valuable lessons about how to integrate environmental aspects in peacebuilding projects or implement environmental projects in conflict-affected areas.

Lesson 1: with the right standards and safeguards, NbS have the potential to contribute to security with positive impacts on nature and peace

It has become widely accepted that environmental degradation, poor resources management, and climate change are contributing drivers of conflict in the 21st century, which necessitates research on how to reduce these drivers. The projects that are elaborated upon below demonstrate the potential of nature to contribute to positive

47 Forest Peoples Programme (2021). [Re-thinking nature-based solutions: seeking transformative change through culture and rights](#).

48 Forest Peoples Programme (2020). [Local Biodiversity Outlooks 2](#).

49 Indigenous Peoples Major Group (2023). [An Approach to Nature-based Solutions from Indigenous Peoples Major Group](#).

50 SwedBio (2023). [Adopting a Human Rights-based Approach to Biodiversity and Climate Action_layouted_161023_FINAL](#) (swed.bio).

action in conflict-affected and fragile security situations. With the right standards and safeguards, the use of nature in peacebuilding initiatives can reduce the drivers of conflict, improve social cohesion among conflicting actors, clean conflict pollution, and improve resource governance for sustainable peace. Addressing environmental problems with a conflict-sensitive, peace-positive approach has provided both societal and environmental benefits in conflict-affected contexts. This is demonstrated by several examples of PAX's work per key lesson below, but also by many other organisations cited in the sections above.

It would be valuable to expand the search for successful examples of NbS for Peace to support such initiatives in continuing and strengthening their work; but also to learn from their challenges and good practices, share these with other environmental and peacebuilding practitioners, and inspire more nature-positive peacebuilding and peace-positive environmental restoration. Yet, we should not lose sight of environmental projects that contributed to grave human rights abuses, and sometimes even aggravated or created conflicts. Our last case study reflects such a situation and the important lessons for NbS we should draw from it.

Case: Campesinos of Santa Rosa (Colombia) and their commitment to social organization, political participation, ecology, human rights, and interculturality⁵¹

The community of Santa Rosa was founded in 1870 and is located in the southwest of Colombia, in the south of the province of Cauca, 270 kilometres from its capital (Popayán). It has a strong indigenous presence but is also known for the arrival and transit of



Figure 2. Youth engagement committed to peace and environment in Santa Rosa, Colombia. Photo: PAX En Colombia 2020

settlers, peasants. They work this land as agriculturalists, which is also rich in extractive resources and spectacular nature, far away from centres of commercialisation and governance.

Many farmers in this region have been victims of displacement and other victimizing events due to the armed conflict of the past decades. Research showed that with 6,000 inhabitants, one in six was a direct or indirect victim of the conflict. . Access to subsistence resources was threatened by the presence of armed groups in rural areas. As a result, many young people were recruited by armed groups or were forced to join, and, without government protection, many were victims of violence. A local initiative established an intercultural and interethnic roundtable, as a result of increased cooperation between the different groups to improve land access and rights. PAX supported these initiatives as part of their peacebuilding program.

In 2019, PAX supported the realization of the diploma “Nature conservation, peacebuilding, and sustainable development” in collaboration with other organizations and the programme ‘Guardianship Action’ in which ex-combatants and youth are trained in the exploration of local ecosystems, nature conservation management and protection in the Amazon and its legal bases, and ecotourism. 65 leaders, consisting of representatives of the Inter-ethnic and Intercultural Roundtable and ex-combatants, participated in the course. The aim of the programme was to create new job opportunities and future perspectives based on the region’s environmental strengths and the communities’ pride in managing their magnificent landscapes. Minimising the recruitment of youth and reintegrating ex-combatants functioned as a safeguard of the demobilisation process, leaving behind a dark past of violence and state abandonment. It was a clear win-win for peace and nature protection.

51 PAX (2020). *Campesinos de Santa Rosa y su apuesta por la organización social, la participación política, la ecología, los derechos humanos y la interculturalidad.*

Further, this community is making another great effort with the support of PAX Colombia and other organizations towards the resolution of land use conflicts. The region still hosts many illegal land-use activities, such as illegal timber extraction, coca plantations, and mining of mineral resources, which are undermining both a healthy environment and the peace process. In the Inter-ethnic and Intercultural Roundtables, actions have been initiated so that all ethnic groups in the area can raise their land-related concerns and needs. For example, it has been expressed that there are indigenous reservations that need expansion. The need was also raised to delimit new environmental protection areas and buffer zones of national natural parks. This was realised in 2022, when the Santa Rosa Farmer's Reserve Area (Zona de Reserva Campesina), comprising 176,000 hectares, was established.

"(...) Prejudices (...) about rural cultures and societies, and the derogatory way in which they are referred to, make young people choose to acquire new habits of life and leave the territories."

Lastly, we highlight the efforts by a group of young people, mostly from peasant families in the municipality of Santa Rosa, that as a team promote new practices to make their territory known, empower themselves, and build a community commitment to peace. The inclusive youth organisation "Fundación Brisas del Macizo" seeks to rebuild the social fabric and community resilience through self-management. They especially recognize the environmental importance of their region and took their name from the most important water

source in Colombia: the Colombian massif from which the Magdalena, Patía, Putumayo, Caquetá, and Cauca rivers originate. One of its commitments, in addition to the initiatives to protect natural wealth, is influencing local (municipal) policy. Brisas del Macizo aims to organize young people to build territorial peace, respect different beliefs, recognise the diversity of culture, and protect their region's biological diversity, through political recognition and youth led projects.

Key lesson for NbS for peace and security: various concrete examples show the potential of NbS to contribute to peace

The community of Santa Rosa has demonstrated with various concrete activities how their efforts towards a peaceful future with economic opportunities are supported by the protection and sustainable management of their nature and land. Key success factors for that win-win situation seem to lie in strong intercultural exchange and youth power.

Other good practices to take forward

Promote interethnic and intercultural structures to address problems and foster participation: the Interethnic and Intercultural Roundtable is a space formed initially to resolve difficulties in the relationship of the indigenous communities of 8 reservations (Yanacona and Inga), the Afro community, and farmers. It allowed them to build trust and search for common elements, within the diversity of interests that exist between them. The young people of "Brisas del Macizo" are key participants in the activities promoted by the Roundtable.

Ensure means for youth to act and take up responsibility: The youth of

"Brisas del Macizo" conceptualised and coordinated activities which improved their self-esteem and their perspective of the future. The abovementioned diploma, and especially the training in ecotourism, were particularly successful in providing formative opportunities for young participants. These reiterated events and actions allowed them to raise awareness and empower young people in biological and cultural diversity, increase and achieve greater clarity on the issues of the political reality of the municipality, the region and the country.

Lesson 2: NbS must be based within and have grown from local initiatives

Case: the pastoralists in the borderland peace and border demarcation process of the Ilemi Triangle at the borderlands of South Sudan and Kenya⁵².

The borderlands of South Sudan and Kenya are inhabited by pastoralist communities, who rely on livestock herding for their livelihoods. As such, cross-border migration in search of water and pastures is important for their subsistence, especially in the climate-insecure drylands of this area. The disputed territory covers a mosaic of micro-environments and thereby functions as an ecosystem used by several pastoralist communities as a buffer zone to deal with the region's highly unpredictable climate. The livelihoods of the Toposa, Nyangatom, Turkana and Daasanach communities in the South Sudan-Kenya-Ethiopia borderlands revolve around water and pastures, inter-ethnic trade and cattle raids.

Violent dynamics have characterized this area, as a result of cattle raiding, limited government presence or capacity to protect civilians, a large availability of weapons



Figure 3. Pastoralism in the borderlands of Kenya, South Sudan and Uganda: Goats drinking at Lake Turkana. Photo: PAX 2022

and ammunition, and the commercialisation of cattle. This is exacerbated by local elites and politicians who use these communities as proxy forces to expand their territory in relation to the unclear border.

PAX has addressed some of these spoilers for peace in its borderlands programme that ran from 2006 to 2016⁵³. PAX, in collaboration with Bishop Paride Taban, the founder of Holy Trinity Peace Village Kuron, supported local organizations and churches in this area that act as intermediaries between rivaling communities and between communities and governments, army and police.

PAX wanted to ensure the protection of the livelihoods of the pastoralist communities in light of the promotion of peace and regarding the border demarcation process between South Sudan and Kenya. In many ways, through their pastoralist modes of production and related knowledge, pastoralist communities protect and manage

the region's vital resources of water and grasslands, socialized as they are through pastoralist education, cultural norms and customary rights. Next to supporting the borderlands peace programme, PAX mapped the pastoralist interests to advocate for community inclusion in the international process of border demarcation, resulting in a report that seeks to engage local actors for this purpose⁵⁴. Understanding these modes of subsistence goes hand-in-hand with forms of sociopolitical organization, customary rights and security mechanisms.

Key lesson for NbS for peace and security: Start from the involved communities

PAX suggests that any environmental or peace-oriented initiative starts from the perspectives and mechanisms that bear legitimacy among communities, in this case the agro-pastoralist communities of the Ilemi triangle. The participation of communities should be at the level of involvement in decision-making. Traditional

political structures, such as the akiriket and chiefs, are to be part of this process.

Other good practices to take forward

Long-term commitment: Both peace work and environmental stewardship need long-term commitment rather than one-off large-scale events or a few flagship individuals. We recommend a high degree of ownership by the local partners and avoidance of high staff turnover that characterises and impedes the work of many NGOs. This ownership is epitomised in the long-term commitment and dedication of individuals. The long duration of the programme has enabled trust and accountability among the partners in the cross-border peace network.

Cooperation between national and sub-national authorities and civil society: Opportunities to bring communities and governmental actors together should be explored at all levels, and require cooperation between national and sub-national authorities and civil society. Joint solutions, with high levels of engagement by communities and civil society, can contribute to more equitable resource sharing and clear and conflict-sensitive transboundary land and resource management.

In-depth political and conflict analysis of the context: This case of the borderlands is clearly very contextual and specifically focused on communities that have been inhabiting these borderlands. Therefore some recommendations from the project are only applicable in this specific context, e.g. on pastoralist routes and access to land. It is important that each case of NbS in conflict contexts requires a deepened political and conflict sensitive analysis of the situation

53 PAX (2017). *Sustaining Relative Peace: PAX and the cross-border peace network's support for human security among pastoralist communities in the borderlands of Kenya, South Sudan and Uganda.*

54 PAX (2022). *The Ilemi Triangle: Understanding a pastoralist border area.*

taking into account conflict sensitive transboundary land and water resource management.

Quality above quantity in economic investments: In case of the potential for improving markets, such as in the Ilemi Triangle, investment into a cross-border livestock trade network would offer economic opportunities to the communities and mutual benefits to all states involved through tax revenues. Investment to increase the economic returns per unit of natural resource, i.e. livestock in the Ilemi triangle, improves livelihood security and protects against overgrazing and related environmental degradation. Other such types of investments could consider the processing and storage of derived products and the quality of the produce.

Co-operate in a cross-border approach: Because of the cross-border dimension of the lives of pastoralists and of most environmental features in a landscape, PAX suggests a cross-border dimension to NbS initiatives in border regions. The cross-border nature of the programme is an exception in the world of peacebuilding and development, where both funding and project implementation strategies are generally limited to one country. As becomes clear in this programme, in areas where ethnic groups and/or conflict dynamics span several nation-states - just like the grazing lands and water resources used by various communities - a singular focus on one country inhibits an adequate response to conflict and environmental degradation.



Figure 4. Social leaders of the environmental committee of Cajamarca give PAX delegation explanation. Photo: PAX 2013.

Lesson 3: Ensure information dissemination from diverse and independent sources

Case: Informed community participation in the decision-making processes concerning the AGA mining project in Cajamarca, Colombia.⁵⁵

The mining company AngloGold Ashanti Colombia (AGA) had tendered concession contracts for La Colosa, a mining reserve near the municipality of Cajamarca, in the department of Tolima, in the central mountain range of Colombia. The objective of the La Colosa project was advanced mining exploration to identify areas of potential interest in terms of auriferous components, where exploitation would be technically, economically and environmentally feasible. The area of the project is 515.75 hectares, located entirely within the Central Forest Reserve, which was created under Law 2 of 1959. AGA started directing mining exploration in this zone in early 2007.

In 2000 a dialogue was started between the governments of the

United States, the United Kingdom, the Netherlands and Norway, some companies in the mining and energy industries, PAX, and other NGOs. The dialogue produced the 'Voluntary Principles', which is a voluntary code of conduct to help companies safeguard human rights and civic freedoms in the regions where they work. At the International Congress on Voluntary Principles held in Oslo in March 2009, Colombia joined as an 'involved government' in the process.⁵⁶

In 2006, PAX was already working in several municipalities in the region to strengthen local democracy, and supported different initiatives aimed at creating citizen oversight bodies that would allow oversight of public management. When a national public announcement about the La Colosa project was made at the end of this year, neither the local authorities nor the mining company AngloGold Ashanti had provided basic information to the local population about the project. In this context, groups of concerned citizens approached PAX, which then decided, based on what was known at that time about

55 PAX (2016). *Democracia vale más que el oro*.

56 PAX (2009). *Report on the AGA mining project in Cajamarca*.

La Colosa, to provide information to these groups about similar mining projects in other parts of Latin America. Between 2009 and 2013, PAX sponsored the arrival of prominent foreign experts to Tolima, and organized excursions for local civil organizers to mining projects in Peru and Brazil. In addition to the possible risks and impacts on the environment, from the outset, PAX was particularly concerned about the increase in social contradictions that this type of project generally entails, as well as the potential negative impact of such social tensions on public order and the security situation in the context of the Colombian internal armed conflict.

PAX and AGA entered into dialogue about the implementation of the Voluntary Principles, which the company has signed, and together carried out a risk analysis about security and human rights related to the mining project in 2011. At the end of the process, there was a disagreement between the company and the government, on the one hand, and PAX, on the other hand, regarding the publication of the results of the risk analysis. AGA announced to PAX its desire to implement the report's recommendations on information provision, communication strategy and community relations strategy. But in the months and years that followed PAX received no sign that the tense relationship between the company and the local population was fundamentally changing; on the contrary, it had become worse.

In the first half of 2013, the community of rice producers in the municipality of Piedras debated and took the initiative to organize a popular consultation to decide on whether or not to allow the establishment of some type of AngloGold Ashanti activity in their territory. This citizen initiative was carried out on July 28, 2013, and on this occasion, an overwhelming majority of the population of Piedras

demonstrated against activities related to mining in the municipality. Likewise, other communities that were within the area of influence of the mining area, such as the municipality of Cajamarca, wanted to follow Piedras' example. From then on, a new phase was established in the support for communities by PAX, which has always considered popular consultation as a legitimate and democratic mechanism that gives a voice to the local population in making decisions about projects that generate a great impact on their lives and their future.

Since then, PAX has witnessed how the La Colosa project became the emblematic case of an entire debate and political struggle between national and regional authorities about power over mining activity and citizen participation. The government and national authorities made several attempts to centralize decision-making on extractive projects, while in the local context, the actions of the AGA company continued to increasingly polarize between supporters and opponents of the project. But even under these adverse conditions, local communities and their elected representatives persisted in rejecting their exclusion from democratic participation. And this fight was not in vain: on May 25, 2016, the Constitutional Court issued a ruling in which it determined article 37 of the Mining Code as unconstitutional, which granted exclusive jurisdiction to national authorities to decide on matters of mining exploration and exploitation. This historic decision paved the way for a legitimate popular consultation on the convenience of mining projects. The local communities rejected AGA's mining exploration plans and the company thereby shelved its La Colosa project.

Key lesson: Ensure communities can inform themselves through diverse and independent sources

It is crucial that the public becomes informed about the potential costs and benefits of large-scale plans so that they can be constructively involved in the dialogue and political process. Only then can they determine what level of impact is acceptable to them. Local communities as a whole must play a pivotal role in the decision-making of the project and their concerns should be respected. This should start with the right to free, prior, and informed consent of the local population, based on independent information from a diversity of sources. Meetings organized by the company/organisation, during which only employees of the company or local organizations initiated by the company facilitate information, did not meet the abovementioned definition of independent information.

For example, in the case of the La Colosa project, the details concerning financial assurance measures should have been made available to the public prior to the approval of any exploitation licenses. Similarly, details regarding the amounts and recipients of all taxes and royalties for this project should have been made public prior to approval of any exploitation licenses. Citizen participation must begin with the right of the local population to meaningful and complete information about the project. The information provided by the company should be counterbalanced by information based on data collected and prepared by competent authorities, independently of the company.

Other good practices to take forward

Recognize the legitimacy of regional socio-political processes:

A crucial condition for building reciprocal confidence between the community and the implementing

organisation, is a recognition of the legitimacy of the social processes that matter in the region. This implies respect for the autonomy of the communities and their own processes. The experiences with the La Colosa project show that a state system of inspection, supervision and control, centralized at the national level, was deficient in protecting and addressing local communities' concerns. Appropriate and strong local engagement in decision-making was needed to counterbalance this.

Lesson 4: Ensure accountability of all actors, in particular those with a disproportionate amount of power

Case: Security considerations of gold mining and nature protection in Ituri province, DRC.⁵⁷

In 2015, PAX, CDPJ Wamba, and Réseau Haki na Amani documented chronic unsafety, ruthless exploitation and severe violations of human rights in the western part of the Mambasa district in Ituri province, DRC. Between militias and semi-autonomous troops of the Congolese army, the civil population depended on artisanal mining of gold as a major source of income. The mining activities were hemmed in between the national reserve 'Réserve de Faune Okapi' (RFO), where mining is prohibited and the concession of Canadian gold mining company Kilo Goldmines.

Various incidents were documented in relation to the nature reserve. In summary, in 2014 and 2015, there were attempts to forcibly evict artisanal miners from the natural reserve, leading to a series of violent incidents. At the same time, the DRC military protected semi-industrial gold mining by Chinese operators.



Figure 5. Artisanal mining in Eastern Province, DRC. Photo: Thierry N'Zeng, PAX 2014

The structural involvement of the DRC army in artisanal and semi-industrial exploitation included all kinds of human rights violations. Additionally, the presence of militias was entangled with the tense joined land use and cohabitation between the communities and the Réserve de Faune Okapi.

PAX advocated demilitarisation of the zone and apt governance by the Congolese state. Regulating small-scale mining activities of inhabitants and establishing local security committees in cooperation with religious and women's organisations was suggested to lead to profound improvements. PAX has not been active on the issue for several years and the situation has evolved.⁵⁸ Yet, PAX's experiences documented in 2015 have provided a number of lessons for the implementation of NbS in highly insecure contexts.

Key lesson for NbS for peace and security: Address the accountability of all actors, in particular those with a disproportionate amount of power

A quite straightforward lesson for NbS implementation in extremely fragile security contexts like this one is to not depend on or support disproportionately powerful actors with doubtful legitimacy or human rights violations. Investments in NbS thereby risk lacking any sort of accountability and potentially harming local communities. Such disproportionately powerful actors often include for example governments (whether highly centralized or not), multinational corporations, and international donors, e.g. who fund NbS. Rather invest in ensuring accountability and strengthened transparency of such actors, as well as a harmonized approach between the involved ministries and corporations e.g. the ministries of mining, environment and defence and the local communities. For corporate actors, this means adherence to international due diligence frameworks such as the UN Guiding Principles on Business & Human

57 PAX, CDPJ Wamba, and Réseau Haki na Amani (2015). *Exploiter (dans) le désordre: Cartographie sécuritaire du secteur aurifère à Mambasa occidental.*

58 UNSC (2021). Letter dated 10 June 2021 from the Group of Experts on the Democratic Republic of the Congo addressed to the President of the Security Council.

Rights⁵⁹ and the OECD Due Diligence Guidance for Responsible Business Conduct,⁶⁰ with heightened actions specifically for conflict-affected regions.⁶¹

Other good lessons to take forward

Start from the involved

communities: In this extremely fragile security context, PAX recommended the nature reserve's management to engage in an open and regular dialogue with the indigenous communities, taking into account their wishes and seeking real agreement with traditional leaders for their participation in the active planning and management of conservation programs.

Include efficient monitoring and complaint mechanisms of security incidents and human rights

violations: in conflict-affected settings, NbS implementation needs to include a trusted mechanism for continuous and structural monitoring of harassment, security incidents, and human rights violations.

Strengthen the legal capacities of local communities on relevant laws relating to nature conservation, natural resource use, and land tenure.

59 OHCHR (2012). Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework.

60 OECD (2018). OECD Due Diligence Guidance for Responsible Business Conduct.

61 OHCHR (2020). Report on business, human right and conflict-affected regions: towards heightened action. A/75/212. Working Group on the issue of human rights and transnational corporations and other business enterprises.

Conclusions and recommendations to UNEA, UNEP and international organizations championing nature-based solutions

The fifth session of UNEA called upon the Intergovernmental Consultations on NbS to research and collect best practices and lessons learned in NbS, the assessment of existing criteria and guidelines, and the identification of options to support the sustainable investment of NbS. Acknowledging the linkage between the environment and conflict and the need for increased integration of environmental dimensions in peacebuilding work, this paper proposes several key recommendations for the implementation of NbS in conflict-affected areas. These recommendations are grounded within case studies closely related to PAX and their partners' projects. We urge UNEP, UNEA members, and other international organisations championing NbS:

- To review the criticism and recommendations regarding NbS in conflict-affected settings and consider them at UNEA 6;
- To recognize the importance of the environmental dimensions of armed conflicts and address them within multilateral environmental fora;
- To develop and formalise NbS standards and guidelines, with specific attention to conflict-sensitive implementation in conflict-affected regions and their potential for contributing to peace and security if implemented with strong social and environmental safeguards, ensuring that NbS protect and support the most vulnerable communities worldwide, i.e. those affected by violent conflict, instead of further deteriorate their livelihoods and security.
- To build on an inventory of realized NbS in conflict-affected areas contributing to peace and security, their best practices and lessons learned, and thereby systematically explore the opportunities NbS offer to address conflict-linked environmental degradation and sustainable resource management throughout the conflict cycle, i.e. for conflict-prevention, response, peacemaking (mediation and negotiations), peacekeeping, remediation, restoration and peacebuilding.

PAX remains available and proactive to support any of the recommended efforts above.



Authors' biographies and acknowledgements:

This report is the result of the contributions of various activities and employees of PAX. PAX for Peace is an international civil society organisation based in the Netherlands, working for peace, reconciliation, and justice. The main authors of this report are:

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We are grateful to our colleagues who have offered their insights and feedback to this publication and would like to acknowledge (in alphabetical order) the contributions of Iris Wielders, Jean-Sébastien S  pulchre, Joris van de Sandt, Sara Ketelaar, Wim Zwijnenburg, and the colleagues who worked on the projects and reports cited throughout the publication.