



REPORT

The nature of conflict and peace

The links between environment, security and peace and their importance for the UN Security Council

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Executive Summary

Through its wide-ranging impacts on nature, **humanity has left the safe operating space for the Earth's natural systems that provide the basis for human wellbeing, prosperity and security.** This is particularly true for two closely interlinked crises: biodiversity loss and climate change. Ecosystems, which both sustain and depend on a balanced climate and healthy biodiversity, are at the centre of this double crisis. The consequences are far-reaching and touch all aspects of human society, from livelihoods, health, food, water and energy security to peace and conflict.

Environmental degradation and biodiversity loss are important drivers of insecurity and conflict around the world and, as they intensify, also increasingly impact global peace and security. This makes them of growing relevance for the United Nations Security Council (UNSC) as the mandated UN body for the maintenance of international peace and security. Environmental degradation and biodiversity loss are part of a complex web of interactions among different social, economic, political and environmental risk drivers. **Together, these interactions form the nature–security nexus.**

The climate–security nexus and the nature–security nexus overlap and cannot be fully addressed independently of one another. In fact, environmental factors are often a critical link in the pathway from climate change impacts to security risks. However, the nature–security nexus comprises additional interactions in which climate impacts play no or only smaller aggravating roles. Hence, the nature–security nexus puts biodiversity and ecosystems rather than climate change at its centre. This perspective allows for assessing the whole breadth of interactions between environment, peace and security.

The nature–security nexus: key pathways

Three main pathways form the nature–security nexus. These pathways spell out the different ways in which environmental degradation and biodiversity loss interact with conflict, insecurity and peace:

1. Ecosystem and biodiversity loss, livelihood insecurity and political instability: Climatic and environmental changes increasingly disrupt the systems that are the very basis for the livelihoods of billions of people around the world. The resulting food, water and energy insecurity can contribute to political instability, aggravate political

tensions and, in the worst case, overwhelm governments. As livelihood insecurity increases, population groups can become more vulnerable to taking part in illegal and criminal activities and being recruited into armed and terrorist groups. Environmental degradation and livelihood insecurity can also act as push factors for migration, which, if not managed well, can lead to tensions, violence and conflicts in receiving communities and add pressure on natural resources, job markets and public services.

2. The environment, conflict financing and organised crime:

Transnational environmental crime generates an estimated 110 to 281 billion USD annually. It constitutes around 38% of the financing for illegal, non-state armed groups, including terrorist groups, representing their largest source of income. Environmental crimes often form a central part of the political economy of conflicts. They provide important financial incentives for conflict actors to sustain and prolong instability and conflict. In addition, conflicts that involve natural resources are more likely to reignite after resolution than other types of conflict. Conflict economies in turn tend to corrupt and undermine state institutions, thus weakening states and pushing them towards more instability and conflict. Environmental crimes often directly involve the exploitation of natural resources and can be linked with significant negative environmental and social impacts.^a Five areas are particularly relevant for conflict finance and organised crime: illegal mining, illegal exploitation and trade of oil, illegal drug production, illegal wildlife trade and poaching, and illegal timber trade.

3. Competition and conflicts around natural resources:

Biodiversity loss and environmental degradation together with climate change have severe impacts on the availability of and access to natural resources such as water, forests and land. These changes can increase competition over natural resources. This competition in turn can escalate into violence, in particular in areas that have experienced violent conflict and/or where certain groups are excluded from natural resource management institutions or directly depend on natural resources for their livelihoods. While most of these natural resource conflicts are at the local, sub-national level, they can escalate into or play a significant role in larger scale conflicts such as civil wars. Where trans-boundary natural resources are under pressure, tensions between states can also increase.

^a Activities of indigenous peoples and other local communities (IPLCs) are sometimes informal or illegal, but not necessarily unsustainable.

The three pathways clearly show that **environmental crisis and insecurity often reinforce each other**. This vicious circle makes stability and peace harder to achieve and maintain. At the same time, it deepens the environmental crisis humanity is facing, in particular biodiversity loss and climate change. Together, they threaten the very basis of human civilization: its wellbeing, livelihoods and peace. **To break this self-enforcing cycle, all security, environment and development actors need to engage in a comprehensive environmental security agenda.** The aim of their concerted efforts should not be reduced to addressing the symptoms of the environment–conflict trap, but to tackle the root causes of environmental degradation, biodiversity loss, insecurity and conflict, with a particular focus on breaking the links between them. The three pathways laid out in this report are not just compound risks; they can simultaneously serve as multidimensional entry points for action.

The environmental security agenda complements the existing activities and initiatives on climate-related security risks: Environmental degradation and climate change risks often interact and reinforce each other. At the same time, nature-based solutions often provide benefits for both addressing climate change and building peace. A holistic approach including environmental factors can thus help to address climate–security risks more comprehensively and make sure that the focus on climate–security risks does not prevent action in other parts of the nature–security nexus.

Recommendations

All UN organisations and agencies have specific roles to play and are already working on different parts of the problem. In addition, and to complement these efforts, the **UNSC has a critical role to play because of its primary responsibility for maintaining international peace and security**. This goes hand in hand with the UNSC and the UN moving towards a more integrated and holistic understanding of peace and security. The current COVID-19 pandemic shows more clearly than ever that the traditional understanding of the maintenance of global peace and security is not sufficient to address the increasing web of interrelated security risks. The UNSC has acknowledged that a more comprehensive approach is needed to fulfil its mandate and move towards conflict prevention and sustaining peace.

The scale of the environmental crisis and its critical importance in driving insecurity make it imperative for the UNSC to acknowledge and address the full breadth of the nature–security nexus. It can and should fulfil its responsibility by ensuring its discussions and mandates adequately reflect all interlinkages between environmental factors and insecurity, and by mobilising action and using and further enhancing synergies across the UN system. **In particular, the UNSC should:**

1. **Successively expand action on climate-related security risks to address the links between the environment, conflict and peace.** To successfully and holistically reflect the climate–security agenda in the UNSC, the full dimension of the nature–security nexus should be considered as an integral part of the efforts to tackle climate-related security risks. This includes, for example, broadening the scope of topics addressed by the UN's Climate Security Mechanism.
2. **Make the links between environment, security and peace part of the UNSC's deliberations on individual countries and regions.** The UNSC should discuss specific environmental topics where this is relevant for peace and security in a specific region or country and invite respective experts on the matter from both external institutions and from within other UN bodies.
3. **Address the nature–security nexus as part of UN peace operations.** Peace operations need the mandates, capacities and resources to address the links between environment, security and peace in a comprehensive manner.
4. **Engage in preventive diplomacy to address trans-boundary environment-related security risks** by supporting constructive engagement and reassuring affected countries that their challenges are known and being addressed.
5. **Help to create awareness and convey urgency to address the nature–security nexus across the UN system.** This starts by ensuring that all links between the environment, security and peace are part of the UN's reporting and analysis and the UNSC's deliberations, and also includes organised exchange and collaboration with other UN agencies.

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List of Abbreviations

CAR	Central African Republic
CPT	Catholic Church–affiliated Pastoral Land Commission
DRC	Democratic Republic of Congo
FARC	Revolutionary Armed Forces of Colombia
ICRC	International Committee of the Red Cross
IHL	International humanitarian law
IOM	International Organisation for Migration
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
PKK	Kurdistan Workers' Party
RUF	Revolutionary United Front
SL	Shining Path
TTP	Tehrik-i-Taliban
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNHCR	United Nations Refugee Agency
UNODC	United Nations Office on Drugs and Crime
UNSC	United Nations Security Council
US	United States
USD	United States Dollar
WWF	World Wildlife Fund for Nature



Human encroachment into natural spaces, ranging from the expansion of urban centres to activities such as farming and livestock herding, is a critical driver of ecosystems degradation and biodiversity loss.

1 Background and report

The world is facing an environmental crisis of unprecedented scale. Humanity has crossed several of its planetary boundaries and is leaving what scientists call the safe operating space for Earth and the systems that provide the basis for human wellbeing and prosperity.¹ This is particularly the case for two interlinked crises: biodiversity loss and climate change. Ecosystems, which both sustain and depend on balanced climate cycles and healthy biodiversity, are at the centre of this double crisis.

The latest assessments on the state of ecosystems estimate that about 75% of the terrestrial and 40% of the marine environment have been degraded.² Between 1980 and 2000 alone, 100 million hectares of tropical forest were lost³ and wetlands have declined at a fast pace, with 35% lost since 1970.⁴ Between 1970 and 2016, the global average abundance of mammals, birds, amphibians, reptiles and fish has declined by 68%, reaching up to 94% in Latin America and the Caribbean.⁵ As of today, about one million animal and plant species are on the verge of extinction across all of Earth's ecosystems.⁶

Human-led habitat conversion, resource pollution and depletion, and the eradication of species is so widespread and rapid that ecosystems do not have a chance to regenerate or absorb these impacts.⁷ Parallel to this, human-induced changes to the Earth's climate through the release of greenhouse gases into the atmosphere put further pressure on biodiversity and ecosystems by degrading habitats and impacting the availability and quality of natural resources.⁸

At the same time, ecosystem degradation aggravates the climate crisis. There are several ecosystem services that are crucial for the mitigation of and adaptation to climate change.⁹ For example, forests capture and store carbon and regulate the climate; wetlands help to mitigate floods and protect coastlines;¹⁰ higher plant variation – or polyculture – reduces land erosion;¹¹ urban greenery helps to reduce cities' temperatures;¹² and mangroves and coral reefs reduce the impact of extreme weather events in coastal regions, such as cyclones and storm floods.¹³

The consequences of biodiversity loss and climate change are far-reaching and touch all aspects of human society, from livelihoods, health and culture to peace and conflict. In fact, environmental factors are important drivers of conflict dynamics and are impacting global peace and security. This includes climate change, but also other environmental factors: biodiversity, ecosystems and natural resources can all play a role in conflicts and insecurity, and often form one of the key links between climate change and conflict. In addition, destructive practices such as mining and environmental crimes can drive conflict and undermine peace, and often thrive in contexts of insecurity and conflict.

The links between climate change, environment, peace and security have gained increasing political attention, including in the UNSC. In the past 15 years, much of this attention has been on climate-related security risks. In 2007, the UNSC addressed climate change for the first time during a ministerial-level open debate initiated by the United Kingdom. Following a 2009 UN report on the security implications of climate change, the topic was solidified on the foreign policy agenda through a 2011 Security Council Open Debate.¹⁴ The resulting presidential statement (S/PRST/2011/15) acknowledged the need for conflict analysis and contextual information in light of climate change's role as a 'threat multiplier' that can aggravate existing threats and conflicts.

Subsequent Arria formula debates in 2013, 2015, and 2017 kept climate security on the UNSC agenda. Institutional developments since 2018 include the creation of the Climate

Security Mechanism, as well as the Group of Friends on Climate and Security.¹⁵ During its July 2020 UNSC Presidency, Germany organised a high-level debate and created the Informal Expert Group on climate-related risks to peace and security, which has seen widespread participation.¹⁶ In the 2021–2022 UNSC term, three of the five incoming non-permanent members – Ireland, Kenya, and Norway – have stated that climate security will be a focus of their work.¹⁷ These developments have gone hand in hand with an increasing inclusion of climate change considerations in peacekeeping missions. The UNSC has specifically recognised the role of climate change as a risk factor in the Lake Chad Basin, West Africa, Somalia, Mali, Sudan, South Sudan, the Central African Republic, the Democratic Republic of the Congo, and Central Africa.¹⁸

Yet, even before its engagement on climate change, the UNSC has addressed a broad range of environmental issues. Since the end of the Cold War, the number of UNSC resolutions that addressed natural resources and/or the environment increased sharply from 2.6% of resolutions between 1946 and 1989 to 19% between 1990 and 2016. Following the 1990–1991 Gulf War, for example, the UNSC issued Resolution 687, which held Iraq liable for “environmental damage and depletion of natural resources” as a result of the invasion of Kuwait, and established the UN Compensation Commission to handle environmental claims as part of war reparations (S/RES/687(1991)).

The UNSC has taken a particularly active role in natural resource management where it relates to security. The UNSC established the direct link between natural resources and conflict for the first time in 1998, when it adopted a resolution (S/RES/1173 (1998)) to prevent the União Nacional para a Independência Total de Angola (UNITA) from using revenues from diamond exports to finance the protracted civil war.¹⁹ Resolutions mostly focused on hydrocarbons and minerals, but forestry, wildlife and biodiversity have also played an increasingly important role. For example, between 2003 and 2013, the UNSC passed several resolutions on forestry resources in Liberia.²⁰ The UNSC explicitly referred to the link between conflict financing and wildlife for the first time in 2013, in a resolution (S/RES/2121 (2013)) on the Central African Republic (CAR), where it condemned “the devastation of natural heritage and not[ed] that poaching and trafficking of wildlife are among the factors that fuel the crisis in the CAR.”

These developments have been part of a broader trend in the UNSC and the UN as a whole to move from a traditionally narrow to a more integrated and holistic understanding of peace and security. The UNSC has acknowledged that a more comprehensive approach is needed to fulfil its mandate and move towards conflict prevention and sustaining peace ((S/RES/2282 (2016); A/72/707-S/2018/43 (2018)). This means addressing the full range of topics that are relevant for security as well as the different root causes and drivers of instability and conflicts.

The current COVID-19 pandemic shows more clearly than ever that the traditional understanding of the maintenance of global peace and security is not sufficient to address the increasing web of interrelated security risks of today. The UNSC addressed health issues as a threat to peace and security for the first time in 2000, when it met to discuss the impact of the HIV/AIDS epidemic on peace and security in Africa and adopted a resolution on HIV/AIDS and International Peacekeeping Operations (RES/1308 (2000)). It passed a second resolution on the matter in 2011, focusing on the impacts of the HIV/AIDS epidemic in conflict and post-conflict situations (S/RES/1983 (2011)). A similar recognition also accompanied the Ebola outbreaks in West Africa and the global COVID-19 pandemic. HIV/AIDS and Ebola are zoonotic diseases and although complete evidence is still lacking, there is a strong possibility that COVID-19 is also a zoonotic disease (see Infobox 2).

In terms of the environment, it is important to underline that both climate change and other environmental risks must be looked at in an integrated manner and as part of a holistic approach. Most climate-related security risks manifest through (local) biophysical impacts – for example, impacts on natural resources such as land and water – to which we need to add environmental degradation and biodiversity loss that is not related to climate change. This is not meant to distract attention from the importance of climate-related security risks, but to complement the resultant understanding. This understanding of climate change as a structural risk that is conditional on environmental, socio-economic and political contexts is perfectly compatible with the general understanding in the climate-security community that climate change is one important (environmental) driver of conflict and insecurity. It is also reflected in the UNSC resolutions that address the impacts of climate change, in which the latter are usually embedded into a broader range of environmental security challenges.

Scope of the report and key questions

This report focuses on the role of the UNSC in addressing the nature–security nexus. It does so to complement and broaden the current climate–security debate by highlighting the role that biodiversity loss and ecosystem degradation play in translating climate impacts into security risks, and identifying those areas where non–climate related environmental factors, such as biodiversity loss and ecosystem degradation, play a critical role as conflict drivers, for example in the case of environmental crime.^b

Against this backdrop, the purpose of this report is twofold:

1. Elaborate the interrelations between nature, climate, and peace and security by outlining the ‘nature–security nexus’ (Chapter 2). This discussion is structured along three main pathways that link environment and insecurity:

- **Ecosystem and biodiversity loss, livelihood insecurity and instability (Chapter 2.1)**
- **The environment, conflict financing and organised crime (Chapter 2.3)**
- **Competition and conflicts around natural resources (Chapter 2.2)**

2. Provide recommendations (Chapter 3) on the role of the UNSC to better address the nature–security nexus.

Underlying this report is a broad understanding of peace and security. It is based on the concept of human security, which is people–centred and includes different dimensions of security including economic, food, health, environmental, personal, community and political security.^c The report shows how human (in)security relates to different kinds of instability and conflict ranging from political instability and (organised) crime to urban violence, terrorism and violent conflict within and between states. It uses the term nature–security nexus to refer to the different ways environmental factors can play a role in driving conflict and undermining peace. Whenever possible the report refers to specific kinds of conflict and violence.

This report is based on a review of the existing literature and research on the links between environment, security and peace. It specifically draws on the key resources from the field of environmental security and research on the security implications of climate change, as well as related topics such as environmental crime. The report does not cover the entire range of working areas in which the global WWF network is engaged, but focuses specifically on the most security–related environmental factors, which are of most importance for the UNSC.

^b This does not mean that in these cases climate change does not play a role, but the causal link is different. For example, environmental crime–related environmental degradation is not caused by climate change, but can be aggravated by climate change.

^c The UN General Assembly agreed on a common understanding that is defined in resolution A/RES/66/290.

2 The nature–security nexus: key pathways

Nature and environmental factors are not the only drivers of insecurity, nor do they exist in isolation. Instead, they are part of a complex web of interactions between different social, economic, political and environmental risk drivers. In particular in fragile and conflict-affected contexts, environmental factors can undermine peace and contribute to different security risks ranging from political instability to organised crime and violent conflict.

The nature–security nexus comprises all of these interactions between environmental factors, security and peace. These interactions can be organised along three pathways that spell out how different environmental factors are linked with specific kinds of security risks. These pathways necessarily overlap and interact in multiple ways, but they also help to understand the different ways in which environmental factors can contribute to conflict and undermine peace, and how conflict is affecting the environment.

The climate crisis plays a central role as one subset of the nature–security nexus. The latter also comprises additional interactions in which climate impacts play no or only smaller aggravating roles. This means that some interactions would also appear without the effects of climate change, although climate change amplifies them. Hence, the nature–security nexus puts biodiversity and ecosystems rather than climate change at its centre. This perspective allows for assessing the whole breadth of interactions between environment, peace and security.

Infobox 1

What are biodiversity and ecosystems?

According to the UN Convention on Biological Diversity (CBD), biological diversity – often called biodiversity – is defined by the variability among living organisms from all of Earth’s ecosystems, as well as the ecological complexes (or ecosystems) to which they belong.²¹

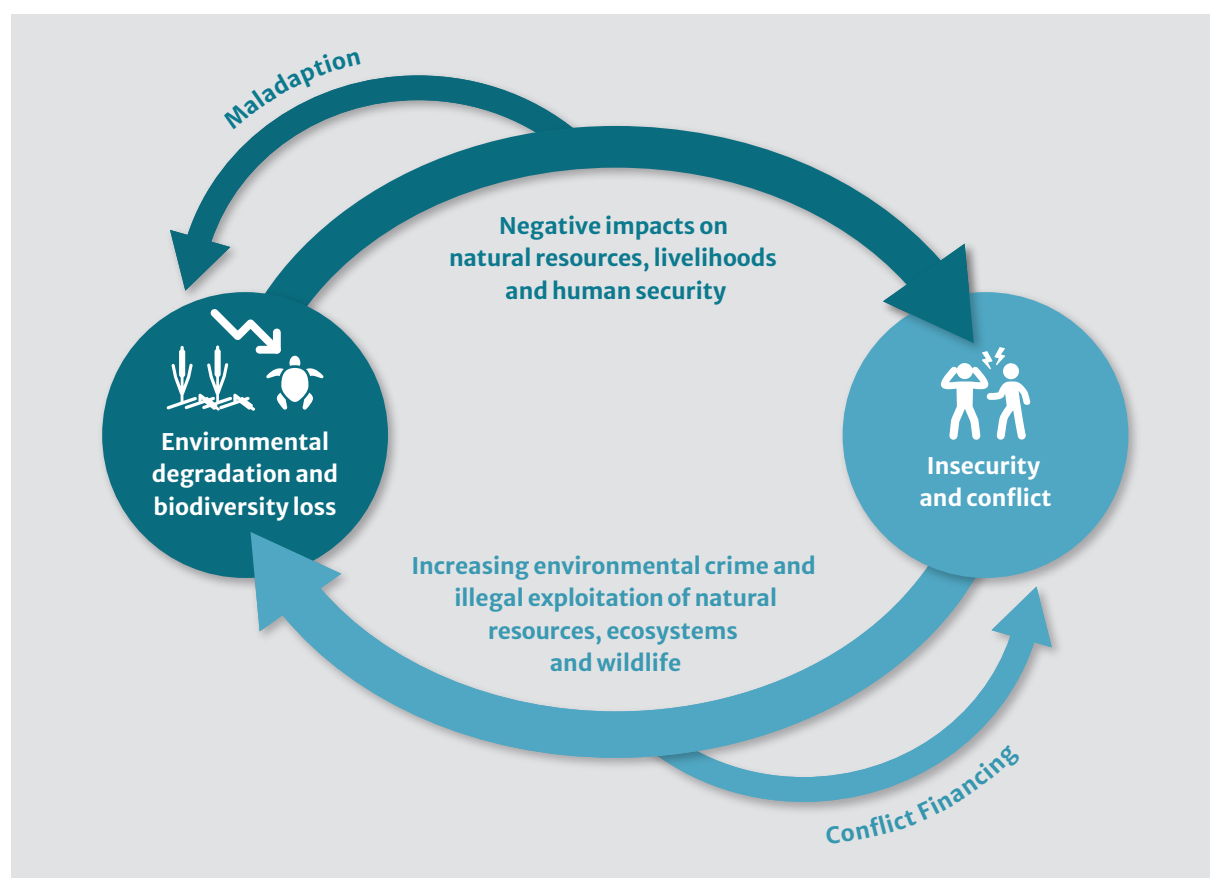
Our dependence on ecosystems is a fundamental aspect of human life and wellbeing. As humans, our survival requires animals and plants, which provide us with food, and natural resources such as water and air. Ecosystems are composed of living beings and natural resources interacting within a system. To function properly, they depend on a natural balance of elements to maintain their biodiversity. The beings that comprise biodiversity make use of natural resources for their own survival and in turn maintain healthy ecosystems.

Environmental crisis and insecurity reinforce each other

In general, the three pathways outlined in this chapter – 1) ecosystem and biodiversity loss, livelihood insecurity and instability; 2) the environment, conflict finance and organised crime; and 3) competition and conflict around natural resources – show that the environmental crisis and insecurity are reinforcing each other (see Figure 1). Environmental degradation and biodiversity loss can negatively affect natural resources, livelihoods and human security,

which in turn can contribute to conflicts, crime and political instability. At the same time, environmental crime and illegal exploitation of natural resources, ecosystems and wildlife play a role in prolonging conflict, undermining peace processes and fostering organised crime. They also often involve human rights violations while further degrading the environment and threatening biodiversity.

Figure 1: The nature–security nexus



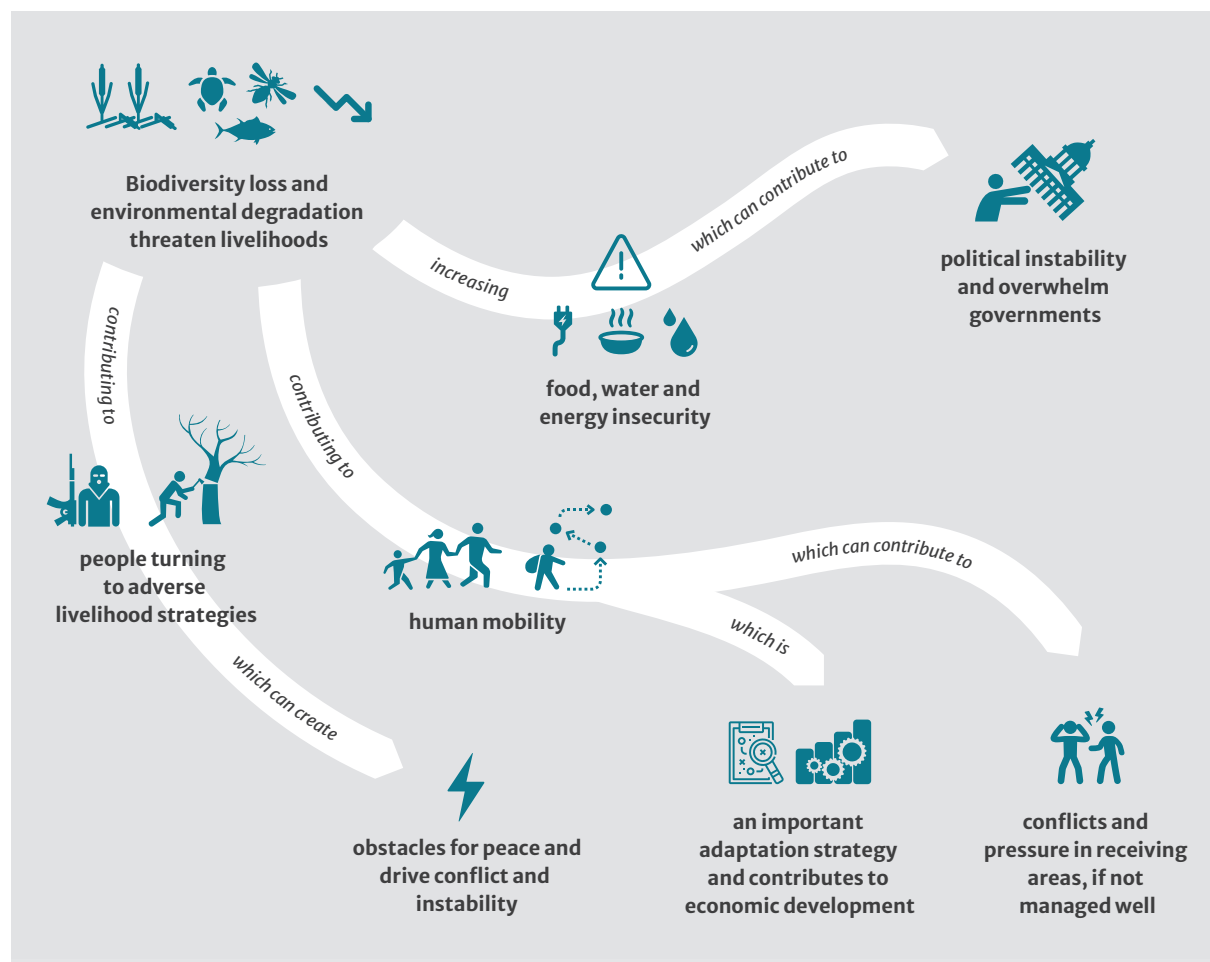
Source: adelphi

2.1 — Ecosystem and biodiversity loss, livelihood insecurity and instability

As climatic and environmental changes disrupt the systems that are the basis for the livelihoods of billions of people around the world, several security risks arise. The resulting food, water and energy insecurity can contribute to political instability, aggravate political and intercommunal tensions, and in the worst case overwhelm governments. As livelihood insecurity increases, population

groups can become more vulnerable to taking part in illegal and criminal activities and recruitment into armed and terrorist groups. Additionally, environmental degradation and livelihood insecurity can act as a push factor for migration, which if not managed well, can lead to tensions, violence and conflicts in receiving communities and add pressure on natural resources, job markets and public services.

Figure 2: Overview of ecosystem and biodiversity loss, livelihood insecurity and instability



Source: adelphi

Food, water and energy insecurity as drivers of political instability

Deteriorating ecosystems often have serious impacts on food, water and energy security. This deterioration can be caused directly by human activities that lead to pollution and overuse, or indirectly through climate change, which harms ecosystems by disrupting the delicate balance of elements, temperatures and resources needed to maintain plant and animal biodiversity. Together, these impacts mean that 2.67 billion inhabitants in 201 river basins around the world experience severe water scarcity during at least one month a year.²² Land degradation – which is caused both by climate change and by detrimental farming and water management practices – has reduced the productivity of 23% of the global land surface, with soil-related issues such as erosion, pollution, acidification,

salinization and loss of microbial biodiversity threatening food production.²³ Heatwaves have severely impacted energy security by reducing water available for thermal and hydropower plants while increasing energy demand for cooling.^{24 d}

Food, water and energy insecurity in turn can exacerbate political instability. Quickly rising food, energy or water prices and/or an insufficient supply can trigger political unrest, increase grievances and undermine the legitimacy of the government. This is particularly the case in situations that are already politically unstable and where population groups already feel marginalised. In these situations, governments can be overwhelmed and not willing or able to manage the increasing political pressure and tensions in a peaceful manner. At the same time, some politicians and governments take advantage of the social vulnerabilities

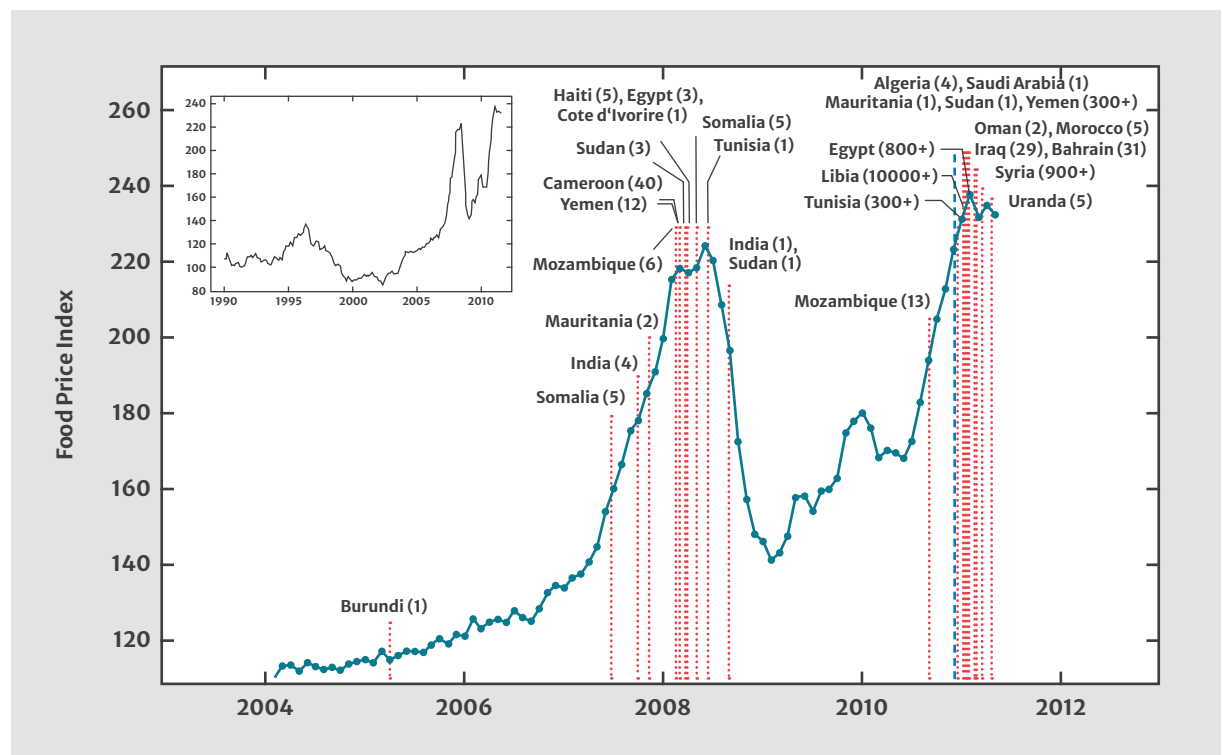
^d Food, energy and water security are so closely linked that their interaction is often referred to as the food–energy–water nexus. There are several ways in which these systems are interdependent: water is essential for food production and is a source of energy while energy is required for water pumping and treatment, as well as for food transportation and storage.

arising from resource and livelihood insecurity to rise to power, building on and exacerbating pre-existing grievances and offering simplistic, often exclusionary solutions, and ultimately further increasing political instability.^{25 26}

The links between food insecurity and political instability have been well researched: sudden supply shocks and related price spikes can contribute to the outbreak of riots and pro-

tests. The graphic below shows how global spikes in food prices (blue line) triggered so-called food riots (red lines). The numbers in the brackets represent the number of casualties in each country. The large price spikes in 2008/2009 and 2010/11 were both driven by extreme weather events, in particular droughts in some of the main wheat producing regions in the world. Some countries reacted by enforcing export bans which further drove up prices.^{27 28}

Figure 3: The link between food price spikes and riots



Source: Marco Lagi, Karla Z. Bertrand and Yaneer Bar-Yam 2011: The Food Crises and Political Instability in North Africa and the Middle East. Available at SSRN: <https://ssrn.com/abstract=1910031>, page 3.

Similar dynamics can be observed when it comes to water and energy prices and supply.²⁹ For example, protests broke out in Iran's Khuzestan province in July 2021 over lacking water supply, affecting agriculture and livestock, and contributing to energy blackouts.³⁰ An aggravating factor for this political instability was that Khuzestan is mainly Sunni Arab, which is a minority in Shia Iran and has frequently raised concerns over being marginalised in the country.

In India, a longstanding conflict between the states of Karnataka and Tamil Nadu over the allocation of waters of the Cauvery Basin, one of India's most important rivers with over 800 km length, has been the cause of repeated political protests and violence. Both riparian states require over 90% of the river's water for crop cultivation and livelihoods, and discontent with water allocation plans has led to repeated clashes and violence, most recently in 2016 when demonstrations and riots in both states led to 500 people being arrested and two protesters killed.^{31 e}

^e There have been concerted efforts to resolve the conflict since 2016. The Supreme Court ruled in a landmark judgement that "waters of an inter-state river passing through corridors of the riparian states constitute a national asset and no single State can claim exclusive ownership of its water" (Supreme Court of India (2018)). In 2018, the Ministry of Water Resources constituted the Cauvery Water Management Authority along with the Cauvery Water Regulation Committee to implement the decisions of the Cauvery Water Disputes Tribunal (Ghosh, N. et al (2018)). No new conflicts have been documented since.

Recruitment into armed groups and maladaptation

As livelihoods that depend on natural resources and functioning ecosystems deteriorate, people look for alternatives. This in turn can drive a set of security-relevant dynamics. Gender dynamics play an important role in this regard; for women and girls, for example, taking longer routes to fulfil their role of collecting water increases risks of gender-based violence.^f For men and boys, a lack of economic prospects and related threats to their identity as breadwinners and household heads increase their vulnerability to being recruited by non-state armed groups^g such as terrorist or organised criminal groups. In most societies in the world, men are still often seen as providers, carrying the responsibility to sustain their families financially.³² When a degraded environment limits livelihood and earning options, the income possibilities offered by these groups become more attractive. Beyond income, these non-state armed groups also exploit existing grievances between ethnic populations and the lack of public services, for example by offering education, healthcare and food provision.³³ Furthermore, recruitment into such groups can play into other traditionally male gender dynamics, such as the possibility of achieving social status by rising in the paramilitary ranks, or exercising aggression and violence.^{34 h}

It is not uncommon for non-state armed groups to look for recruits in places with high levels of environmental stress, or in the aftermath of disasters. In Iraq, biodiversity loss and environmental and resource degradation in the past decades, followed by a series of droughts in 2006,³⁵ created a fertile ground for the recruitment of young men into non-state armed groups and helped give rise to large terrorist organisations such as ISIS and Al-Qaeda.³⁶ In the Lake Chad Basin, social and economic inequality, poor governance and weak social cohesion converge with increasingly vulnerable livelihoods and growing resource competition to make the financial incentives offered by armed opposition groups more attractive for new recruits.³⁷

In some cases, livelihood insecurity also pushes population groups to take up livelihoods that further deteriorate the environment and drive conflict. This is also referred to as maladaptation. In Somalia, for example, frequent droughts

have led pastoralist communities to turn to illegal charcoal trade as an income source. The activity has severely increased deforestation, adding further pressures on local livelihoods. Moreover, non-state armed groups such as Al-Shabbab earned between 38 and 56 million USD in peak times from charcoal tradeⁱ in the region, strengthening the groups' scopes of action and driving further recruitment of young men.³⁸ In Afghanistan, farmers struggling to make ends meet amidst frequent droughts turned to poppy production – a drought-resistant, water-saving crop used for opium production.³⁹ In Colombia, poor peasant farmers have turned to illegal coca and marijuana production as other livelihood options have deteriorated.⁴⁰ They represent livelihood options in areas lacking infrastructure and public goods and provide a better income than most existing economic alternatives.⁴¹ However, most of the large profits go to middlemen and non-state armed groups (for a detailed discussion of the links between environment, crime and conflict finance, see pathway 2).

Migration and displacement increasing pressure in receiving areas

Through its impacts on livelihoods, environmental change can be a key driver of human mobility.⁴² Where environmental change and resource stress deteriorate living conditions, for example by increasing temperatures and food insecurity, migration is often used as an adaptation strategy.⁴³ Research suggests that environmental degradation mainly intensifies already existing migration trends, in particular internal, rural-urban migration as it negatively impacts the viability of agricultural and rural livelihoods.⁴⁴ Migration by itself is not a risk, but instead an important adaptation strategy and driver of economic development. However, especially when not managed well, it can contribute to a number of security-relevant dynamics, in particular by increasing pressure, tensions and instability in receiving areas, for example contributing to conflicts between migrants and host communities.

Urban areas are particularly affected: Rapid and unmanaged urban growth drives environmental degradation, as new settlements tend to encroach into peri-urban areas, leading to deforestation, loss of wetlands, and pollution

^f The specific role women play in conflict and peace is acknowledged in UNSC Resolution 1325 (S/RES/1325 (2000)).

^g While there is no internationally accepted definition of non-state armed groups, they are normally defined in opposition to state security forces. They challenge the state's monopoly of power and its capacity to control violence throughout its territory and cover a broad spectrum of actors both with and without intentions to take over political power and induce political change. They include militias, guerrillas, organised crime and terrorist groups. For more information see Nett & Rüttinger 2016.

^h Environmental factors and economic incentives are not the only or main factors driving recruitment. It is always a combination of factors: Membership in non-state armed groups provides recruits with not just a wage but also a larger religious or political purpose, the chance to gain respect, belonging and community. Negative experiences with state security forces are also often an important driver of recruitment.

ⁱ Al-Shabbab shifted away from charcoal trade in late 2015, taking it up again in late 2016 to early 2017. Its estimated revenue from charcoal is currently about 10 million USD.



Populations struggling to guarantee stable and sufficient livelihoods can be pushed to take up activities that harm the environment, such as charcoal trade.

of water and land, given the lack of appropriate sanitation and waste management.⁴⁵ Unplanned settlements are also at higher risk of weather-related disasters, such as landslides and floods.⁴⁶ The number of people living in settlements with poor living conditions – often called ‘slums’ – has been steadily increasing in the developing world and is set to triple by 2050.⁴⁷ Rural-to-urban migration and rapid urban growth put pressure on job markets and public services and exacerbate already existing security risks. For example, in Latin America, rapid and uncontrolled urban growth is contributing to urban crime and violence. A study looking at the impact of labour migration on violent crime in several metropolitan areas of Brazil showed that the arrival of low-skilled migrants in these areas correlated with an increase in homicide rates,^j though only in places where the labour market was not able to absorb the additional workforce.⁴⁸

Another key challenge are conflicts between host communities and arriving migrants over access to natural resources and public services. This often goes hand in hand with the stigmatisation and marginalisation of migrants. For example, in Mali, clashes between refugees from Ivory Coast and the host community Loulouni broke out after an initial welcoming and positive period, due to competition for the use of ‘common pool resources’ such as water, firewood, resins and fibres.⁴⁹ In Bangladesh, the arrival of about 700,000 Rohingya refugees fleeing from ethnic conflict in Myanmar has led to tensions with host communities at Cox’s Bazar, which saw an encroachment into forest resources, competition for land and firewood, and reduced employment opportunities as a consequence.⁵⁰

A further, often overlooked aspect of environmental migration is the disruption of cultures and traditions, which are often connected to and dependent on specific ecosystems and natural elements. Ruptures in traditional knowledge – which include the disappearance of ancient languages, rituals and records – are not just an immense cultural loss, but also signal the loss of environmental stewardship, which is a common practice among indigenous populations throughout the world.⁵¹ Disruption of the natural environment and of climatic cycles is driving indigenous populations of the Brazilian Amazon to move to other areas, including cities. For these populations, the loss of natural living spaces reduces their resilience by increasing their overall socioeconomic vulnerability, as their skills and livelihoods are connected to these spaces. Additionally, it puts them at higher risk of marginalisation and discrimination.⁵²

In addition to longer-term environmental changes and changes in migration patterns, sudden displacements present a whole range of additional challenges. Extreme weather events such as floods, droughts, storms and hurricanes are already displacing more people than conflicts every year.⁵³ At the same time, as climate change is increasing the severity and likelihood of extreme weather events, biodiversity loss is weakening the important functions that ecosystems have in preventing disasters. For example, the presence of vegetation cover on slopes protects against soil erosion and can prevent landslides under heavy rainfall; forests stabilise snow and reduce the risk of avalanches; wetlands help mitigate floods inland, reduce wave energy and height in coastal areas, and, together with dryland grasses and shrubs, help retain moisture and conserve soil during droughts.⁵⁴

Disasters and displacement in turn can drive criminality and directly threaten the security of those affected. This is particularly the case when, in the aftermath of disasters, state security institutions are overwhelmed and not able to respond to increases in instability and crime. For example, in Bangladesh, a rise in cases of slavery and human trafficking could be observed in the aftermath of disasters.⁵⁵ In Guatemala, displaced persons arriving in urban centres, particularly men and boys, had a higher likelihood of joining gangs or organised crime groups and committing petty crimes as a result of their sudden economic and social vulnerability.⁵⁶

Most of the time, displaced people can return to their homes after disasters. However, in cases where disasters occur regularly or where return is not possible anymore, tensions with host communities similar to those described before can occur. A specific case is coastal communities and small island states, which are permanently displaced by a combination of environmental degradation and sea-level rise. In extreme cases, such as Tuvalu, it is projected that entire islands might disappear by 2050 under current emission scenarios.⁵⁷ In Jakarta, large-scale groundwater pumping has caused the land to sink rapidly. As a result, about 40% of Indonesia’s capital currently sits below sea level, putting it at high risk of floods. In 2007, the seasonal monsoon submerged almost 70% of Jakarta’s landmass.⁵⁸

^j There is no data as to whether these crimes are committed primarily by the local population, migrants, or both.

Infobox 2

Environmental change and disease outbreaks

The COVID-19 pandemic is a striking example of the risks posed to humans by diseases, both in terms of direct health impacts and security. The UNSC adopted a resolution in July 2020 to demand the cessation of hostilities in all situations on its agenda and recognised “that conditions of violence and instability in conflict situations can exacerbate the pandemic, and that inversely the pandemic can exacerbate the adverse humanitarian impact of conflict situations” as well as “that the peacebuilding and development gains made by countries in transition and post-conflict countries could be reversed in light of the COVID-19 pandemic outbreak” (S/RES/2532 (2020)). The UNSC reiterated its demands in February 2021 (S/RES/2565 (2021)). Concretely, the pandemic placed significant restrictions on mobility, reducing the effectiveness of migration as an adaptive strategy when faced with livelihood insecurity and affecting the crucial flow of remittances. Additionally, governments that are already struggling to provide adequate social services are further strained by the economic burden of COVID-19. Their inability to manage the health crisis can further undermine their legitimacy and open space for instability and the rise of non-state armed groups. In addition, COVID-19 exacerbates existing inequities, disproportionately affecting vulnerable people, for example those working in the informal economy, which in turn can increase discontent and instability.⁵⁹

COVID-19 is presumably only the latest of many examples of harmful zoonotic diseases in recent decades, which also included Ebola, HIV/AIDS, and SARS.⁶⁰ The links between disease outbreaks, environment and conflict are multifaceted: ecosystem loss and the related destruction of animal habitats, coupled with the encroachment of cities into natural environments and more frequent contact between humans and wildlife, increase the risk of zoonotic diseases outbreaks.^{61 62} Another example of close proximity between humans and animals is wildlife trade.⁶³

Studies have confirmed that deforestation in tropical and temperate countries is linked with a rise in zoonotic diseases.⁶⁴ For example, a study of the Brazilian Amazon found that a 10% increase in deforestation corresponded to a 3.3% increase in malaria infections.⁶⁵ At the same time, climate change is expanding the range of such vector-borne diseases, which are a sub-type of zoonotic diseases. The WHO predicts that between 2030 and 2050, there will be an additional 60,000 malaria deaths per year, related to the expansion of the *Anopheles* mosquito range.⁶⁶

The consumption of both wild and farmed animals by humans presents a further threat to health. The lack of sanitary control of meat from wild animals means that they can be carriers of harmful pathogens that are transmissible to humans. With farmed animals, higher levels of sanitary control are offset by their close proximity to each other and to humans, making large-scale disease outbreaks more likely.⁶⁷

2.2 — *The environment, conflict financing and organised crime*

There are a number of economic activities that rely on the environment and natural resources and are linked to conflict, human rights violations and violent crime. Transnational environmental crime^k generates an estimated 110 to 281 billion USD annually and constitutes 38% of the financing of non-state armed groups, including terrorist groups, representing their largest source of income.⁶⁸ Environmental crimes often form a central part of the political economy of conflicts as they provide important financial incentives for conflict actors to sustain and pro-

long instability and conflict. In addition, conflicts that involve natural resources are more likely to reignite after resolution than other types of conflict.⁶⁹ These conflict economies create powerful obstacles for peace as the actors involved are often driven by the economic opportunities that conflict creates, which makes negotiating and maintaining peace challenging. In addition, conflict economies tend to corrupt and undermine state institutions, thus weakening states and pushing them towards more instability and fragility.

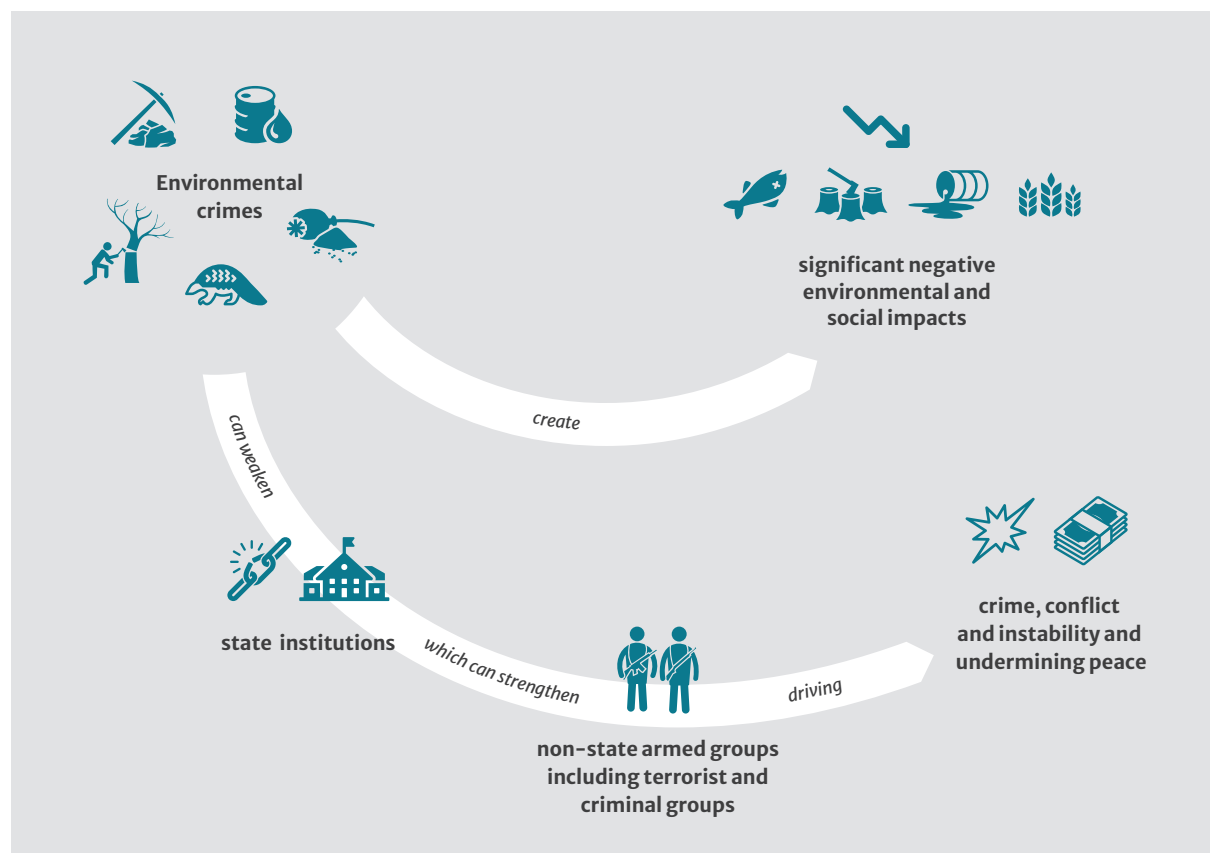
^k Environmental crimes are defined as “illegal activities harming the environment and aimed at benefitting individuals or groups or companies from the exploitation of, damage to, trade or theft of natural resources, including serious crimes and transnational organized crime” (Nellemann et al. 2016). Illegal activities are activities forbidden by law (e.g. production of illegal drugs), or comprise activities that are illegal when they are carried out by unauthorised actors (e.g. unauthorised practice of medicine). It is important to separate them from informal sector activities that are mostly legal: “Informal sector activities are not necessarily performed with the deliberate intention of evading the payment of taxes or social security contributions, or infringing labour legislation or other regulations. However, there can be some overlap, as some informal sector enterprises may prefer to remain unregistered or unlicensed in order to avoid compliance with regulations and thereby reduce production costs” (OECD 2002).

A wide-angle photograph of a desolate landscape. The foreground and middle ground are covered in vast, flat, orange-brown sand, which is the result of mining operations. A small, vibrant green plant with several leaves stands out in the lower center of the frame, growing from the sand. In the background, there are dark, rugged hills and mountains under a blue sky with some clouds. The overall scene conveys a sense of environmental degradation and the impact of mining.

Mine tailing in the outskirts of Huepetuhe,
a mining town in the Peruvian Amazon

Illegal mining is a major source of funding for armed and criminal groups. Its environmental impact ranges from water, soil and air pollution to extensive land use, ecosystem degradation and animal and plant species loss.

Figure 4: Overview of the environment, conflict financing and organised crime



Source: adelphi

Actors involved in these illegal activities range from militias and guerrilla and terrorist groups to criminal gangs and (organised) crime. However, it is important to underline that not everyone involved in environmental crimes and conflict economies is part of these groups. For example, as shown in the previous chapter, local population groups that experience livelihood insecurity can be pushed or forced to take part in such activities.

Environmental crimes often directly involve the exploitation of natural resources and can be linked with significant negative environmental and social impacts.¹ This pathway explores five areas that are particularly relevant for conflict finance and organised crime: illegal mining, illegal exploitation and trade of oil, illegal drug production, illegal wildlife trade and poaching, and illegal timber trade. However, it must be underlined that these different illegal economic activities often take place at the same time and interact with each other. For example, armed and criminal groups are often involved in different illegal activities and use the same trafficking routes and networks to get final products to their markets. At the same time, the proceeds of one illegal activity are often used to finance others.

Illegal mining

Illegal mining is a major environmental crime and is estimated to generate 12 to 48 billion USD annually.⁷⁰ The extraction of mineral resources is often used by armed and criminal groups to finance their activities.⁷¹ Non-state armed groups are estimated to derive 17% of their income from illegal mining.⁷² This is particularly the case in areas that are already affected by crime, instability and conflict. In these contexts, armed and criminal groups often tax mining activities and, to a smaller degree, also directly take part in them. The issue is widely recognised by the UNSC, reflected by 93 UNSC resolutions between 1946 and 2016 addressing minerals, mostly focusing on the role of minerals in financing groups that were considered to pose a threat to international peace and security.⁷³

Illegal mining is not only fuelling and perpetuating conflicts and maintaining criminal structures, but also has significant negative impacts on the environment. Even when managed properly, mining always goes hand in hand with significant environmental impacts, for example in the form of land use for mining pits and infrastructure, water

¹ Activities of indigenous peoples and other local communities (IPLCs) are sometimes informal or illegal, but not necessarily unsustainable.

use for mining and refining processes, and noise, water and air pollution, as well as mining waste. These in turn often lead to environmental degradation, deforestation, and biodiversity loss. Illegal mining activities normally do not adhere to environmental standards, and their impact on the environment and local population groups can be significantly higher compared to legal mining activities.⁷⁴

The links between mining and conflict have a long history and can be observed around the world: Diamonds, for example, played an important role in the civil wars in Liberia and Sierra Leone, which took place from the late 1980s to the early 2000s. Liberian warlord Charles Taylor supported the invasion of Sierra Leone by the rebel group Revolutionary United Front (RUF) in 1991, motivated by the desire to gain control over Sierra Leonean diamond fields close to the Liberian border. Diamond trade financed Charles Taylor's regime and the RUF⁷⁵ and had disastrous impacts on the environment that are still ongoing, as many of the mining sites that were expanded to finance the conflict were not rehabilitated.⁷⁶ After the end of the civil war, it was estimated that 80,000 to 120,000 hectares of land had been mined with minimal reclamation efforts, leaving behind deforested and degraded areas.⁷⁷ The UNSC imposed sanctions on the export of diamonds from Liberia in 2001, putting pressure on the RUF, which laid down their arms in 2002. Charles Taylor's regime, in contrast, turned to timber as a new source of revenue (see paragraph below on illegal timber trade), which can be regarded as an unintended side effect of the UNSC sanctions.⁷⁸

In Colombia, illegal armed groups^m are either directly or indirectly involved in gold, coltan and in some cases even coal mining. Research on the link between gold mining,

armed conflict, and criminality in Colombia between 2001 and 2013 found that illegal armed actors ran mining operations themselves or took part in the trade of mined gold. Illegal armed actors were also indirectly involved in mining by demanding protection payments from small-scale miners.⁷⁹ More recently, it has been reported that Brazilian miners pay Colombian illegal armed groups to provide security services to protect their gold mining and trade activities in various National Parks near the Brazilian border.⁸⁰

At the same time, small-scale gold mining is an important driver of deforestation in Colombia, resulting in land degradation, erosion, habitat fragmentation, loss of natural corridors, change of ecosystems, loss of biodiversity, and increased carbon emissions contributing to climate change.⁸¹ Mercury is used at such a scale in these operations that Colombia has had the highest levels of mercury contamination in the world for several decades.⁸² UNODC and the Colombian Ministry of Mining and Energy estimate that in Colombia, 69% of alluvial gold mining is illegal. The majority (60%) of illegal mining takes place in areas where it is explicitly prohibited, in particular national and regional parks, RAMSAR sites, páramo zones and forest reserve zones.⁸³

Looking at more recent developments on the African continent, non-state armed groups including jihadists groups in Burkina Faso, Mali, and Niger have taken control over small-scale gold mines in areas with limited state presence.^{84 85} In addition to generating income, mining sites also serve as recruiting and training grounds for non-state armed groups.⁸⁶ Small-scale mining in the region is also associated with severe environmental degradation, including deforestation and water and soil pollution, due to the release of toxic substances such as mercury or cyanide.⁸⁷

Infobox 3

Legal mining and conflict

Illegal mining as a means of financing non-state armed groups is not the only link between mining and violent conflict. Mining companies that do not necessarily operate illegally can also be directly involved in conflicts and violations of human rights, especially when they operate in fragile or conflict-affected areas and rely on public or private security forces for their protection.⁸⁸ In this context, real and perceived negative impacts of mining operations on communities, including on the environment upon which they depend, can create opposition that can escalate into violence.⁸⁹

A well-documented case is the civil war in Bougainville, Papua New Guinea, which was linked to the development of a large-scale copper mining project, the Panguna mine. The mine had significant negative environmental and socio-economic impacts and when the concerns of the local communities were not adequately addressed, the conflict escalated and became part of a larger independence movement. A civil war developed out of violent attacks by mining opponents on mining infrastructure, followed by heavy-handed responses by Papua New Guinean security forces. The conflict lasted over a decade and claimed between 15,000 and 20,000 lives.^{90 91} The mining company abandoned the mine in the face of the conflict and the environmental impacts have been compounded in the absence of a proper mine closure: "Since the end of mining activities 30 years ago, tailings have continued to move down the rivers and the waterways have never been treated for suspected chemical contamination."⁹²

^m In Colombia, the many non-state armed groups are mostly referred to as illegal armed actors.

Illegal exploitation and trade of oil

The illegal exploitation and theft of oil represents between 19 and 23 billion USD of lost government revenues and income for organised crime and non-state armed groups per year. Illegally procured oil, gas, gasoline and diesel sales constitute 20% of income of the largest non-state armed groups.⁹³ The scale of the problem is also underlined by 94 UNSC resolutions between 1946 and 2016 that address hydrocarbons.ⁿ Of these resolutions, 40 referred to Iraq's invasion of Kuwait and related embargoes and targeted sanctions. The others aimed at preventing non-state armed groups from accessing petroleum and related products, pressuring illegitimate governments, or focused on the effects of attacks on oil infrastructure.⁹⁴

One well-documented example of the complex links between oil and conflict is the Niger Delta, where oil spills, gas flaring and other activities of transnational oil companies have led to environmental degradation, negatively affecting land and marine resources. Grievances of local communities that engage in fishing and subsistence farming over lost income and improper compensation for these impacts have contributed to multifaceted conflicts in the region.⁹⁵ Non-state armed groups emerged in this context to demand restitution for environmental damages, greater shares of oil revenues for local governments and communities, and programmes to improve living conditions.^{96 97} At the same time, these groups steal oil to finance their own operations.⁹⁸ In turn, illegal refining of oil and third-party interference are an additional source of pollution in the Niger Delta.⁹⁹ This example shows how oil production and its environmental impacts can play a role in creating conflict and giving rise to non-state armed groups, that in turn use the same resource to finance their operations.

Another example is Mexico. There, the state-owned Pemex oil pipelines and trucks are also the target of non-state armed groups. The main perpetrators are criminal cartels.¹⁰⁰ Illegal tapping of pipelines has increased by 1,720% between 2010 and 2018 in Mexico. Both the theft of refined oil products and illegal pipeline tapping are negatively impacting communities and the environment. In addition to the violence that is associated with criminal activities, explosions and oil leaks are often the results of theft. For example, in January 2019, illegal pipeline tapping caused an explosion in the farming community of Tlahuelilpan, which resulted in the death of 137 people and led to significant pollution and environmental damage.¹⁰¹

Illegal wildlife trade and poaching

Wildlife trade consists of any sale or exchange of wild animal and plant resources. While legal and sustainable wildlife trade can contribute to maintaining healthy ecosystems and providing a source of income for local population groups,¹⁰² illegal wildlife trade usually has devastating impacts on species all over the world.¹⁰³ Illegal wildlife trade can play a significant role in driving and prolonging conflicts.¹⁰⁴ In addition, it increases the risk of transmission of zoonotic and vector-borne diseases that originate from an animal host or vector (see Infobox 2 in Chapter 2.1). It often involves highly-organised criminal groups and networks.¹⁰⁵ As with the other illegal activities discussed above, wildlife poaching tends to increase in fragile and conflict-affected areas.^{106 o} Compared to other environmental crimes and sources of conflict financing, wildlife appeared relatively late – in 2013 – on the agenda of the UNSC. It has not been a UNSC priority in the subsequent years and biodiversity, wildlife, trafficking, poaching, wildlife products, and natural heritage were mentioned in only 16 resolutions as of 2016, with a focus on Sub-Saharan Africa and threats to international peace and security connected to terrorism and transnational organised crime.¹⁰⁷

Wildlife crime is often linked to other criminal activities, as criminal groups rely on the same routes, facilitators and approaches for wildlife trafficking as they do for trafficking other commodities. In addition, UNODC underlines that the profits generated are used to “finance other criminal activities, and in some cases the proceeds finance conflict and contribute to instability. These crimes are often interlinked with corruption and economic crimes, and can threaten the rule of law, governance and national security.”¹⁰⁸ At the same time, wildlife crime has significant environmental impacts, in particular the poaching of keystone species such as elephants that are critical for the functioning of ecosystems, which can have wide-ranging impacts.¹⁰⁹

The scale of the challenges wildlife crime poses is also reflected by the adoption of sanctions on the Democratic Republic of Congo (DRC) and the Central African Republic in January 2014. The UNSC resolutions targeted individuals and entities that support non-state armed groups through, *inter alia*, illicit trade of wildlife or wildlife products. The resolution for the DRC specifically underlined “the linkage between the illegal exploitation of natural resources, including poaching and illegal trafficking of wildlife, illicit trade in such resources, and the proliferation and trafficking of arms as one of the major factors fuelling and exacerbating conflicts in the Great Lakes region of Africa” (S/RES/2136 (2014)).¹¹⁰

ⁿ This includes oil, natural gas, natural gas products, petroleum, petroleum products, oil infrastructure, oil installations, oil facilities, gas infrastructure, oilfields, and pipelines.

^o However, this does not mean it always and automatically increases. There have also been documented cases of poaching decreasing during conflict (IUCN 2021).

While the international focus is often on illegal wildlife trafficking in Africa and Asia, it is also a serious challenge in Latin America and the Caribbean. The region holds 40% of global biodiversity, but wildlife population sizes have been shrinking drastically over the past decades. Wildlife trafficking is not only threatening the region's biodiversity, but is also empowering criminal organisations. For example, in Mexico, criminal groups that are mainly focused on drug and human trafficking have become active in the illegal wildlife trade to diversify their sources of revenue.¹¹¹

Protected areas play a special role in the context of illegal wildlife trade, conflict and organised crime. Due to their often remote geographic location and the diversity of wildlife and other natural resources, protected areas frequently serve as base camps for non-state armed groups around the world.¹¹² At the same time, and sometimes as a reaction to these dynamics as well as the increasing professionalisation of poachers, conservation efforts by governments in some regions have become increasingly militarised. In this context, serious human rights violations by state security forces have been reported.¹¹³

Illegal drug production

Illegal drug production and trafficking is linked in several ways to conflict and environmental degradation. On the one hand, it is used by a range of different non-state armed groups from rebel groups to organised crime and gangs to finance their activities.¹¹⁴ Globally, almost 30% of income of the largest non-state armed groups is generated by the production, trafficking and taxation of drugs.¹¹⁵ On the other hand, it often leads to significant negative environmental impacts. The UNSC has addressed the production and trafficking of illicit drugs as means to finance armed activities in 37 resolutions as of 2016.

For example, Shan State in Myanmar is the centre of a longstanding conflict between the central government and local militias and paramilitaries. It is also the global centre for the production of crystal methamphetamine. The trade of this drug is very profitable and fuels criminality and corruption. This conflict economy not only prolongs the area's conflicts, it also has severe environmental impacts, "as many of the precursors and waste products are highly toxic and disposed of improperly into waterways or the ground – in huge quantities given that each tonne of meth results in some five tonnes of chemical residue."¹¹⁶

Latin America, and the Amazon region in particular, has long been a centre of global cocaine production. While there is a long history of farming and using coca leaves by many indigenous populations, illegal coca production has been used by non-state armed groups across the continent to finance themselves and their activities. This

ranges from gangs in Brazil, to guerrillas and paramilitary groups in Colombia and crime networks and gangs in Central America. Although land use change, especially cattle ranching and soy production, remains the largest driver of deforestation in the Amazon, coca cultivation continues to contribute to forest loss, in particular in remote and protected areas. However, coca production and deforestation have a complex relationship, for example in Colombia: in some regions, the two phenomena are concentrated in the same area; in other regions, coca is concentrated in already deforested areas; and in others, deforestation is not associated with coca cultivation. While some consider coca production as a 'spearhead' that paves the way for more important drivers of deforestation (indirectly increasing deforestation), others find that coca production is a symptom rather than a major cause of deforestation.¹¹⁷ Nevertheless, the latest UNODC report on illicit crops in Colombia shows almost half of the coca production takes place in areas of interest for conservation: 20% of coca production takes place in forestry reserves, 15.5% on land of Afro-Descendant communities, 8% in indigenous reservations and 4% in national parks.¹¹⁸

In addition, the militarised responses to illegal coca production have also had negative social and environmental impacts in some cases. Aerial glyphosate spraying in Colombia has been criticised by many local communities and environmental organisations for its impacts on health, local livelihoods and the environment. Similarly, recent military operations in Colombia have not proven to be effective in rooting out illegal armed groups, while at the same time being involved in human rights abuses.¹¹⁹

Illegal timber trade

Timber played and plays a role in conflicts around the world, by being traded or taxed by armed and criminal groups. It received international attention due to the role it played in several conflicts in Asia and Africa in the 1990s and 2000s, most notably in Liberia, DRC, Cambodia, Guinea, and Sierra Leone.¹²⁰ It is still playing an important role in many of today's conflicts. After hydrocarbons and minerals, forestry resources, including timber, timber products, round logs, logs, and charcoal, are the third most addressed resource by the UNSC and are mentioned in 40 resolutions as of 2016.¹²¹ Following the military coup in Myanmar in February 2021, research shows that deforestation increased as the military gained control over national forests and used logging, for example of teak, to generate incomes in the wake of international sanctions on other sectors.^{122 123 124 125} In the Mexican state of Chihuahua, local criminal groups have long been involved in illegal logging. In recent years, an influx of international drug trafficking organisations has greatly increased the level of violence as well as other social and environmental impacts. While these groups were mainly involved

in deforestation to produce poppy and marijuana, they are now also directly involved in illegal logging and the control of sawmills and use different actors along the timber supply chain to launder money.¹²⁶

Mirroring the other examples, inadequate efforts to protect forests from deforestation that do not include safeguards protecting and including indigenous people, local communities and human rights can also have negative conse-

quences and create new or exacerbate existing conflicts. In Mali, the paramilitary Forest Service was considerably strengthened in the 1980s to enforce conservation of natural resources and stop desertification. However, the Forest Service also became known for its predatory and corrupt behaviour, in particular towards local population groups who rely on access for forest resources for their livelihoods. Leaders of armed jihadi groups are using these grievances actively to gain the support of local population groups.¹²⁷

Infobox 4

Environmental defenders are increasingly victims of crime, violence and conflict

2020 has been the deadliest year for land and environmental defenders around the world, with 227 defenders being killed. These killings mainly took place in the context of ongoing conflict, violence and instability. Over one-third of deadly attacks were linked to logging, mining, small-agribusiness and hydropower dams and other infrastructure.¹²⁸ Other forms of aggression against defenders included death threats, judicial harassment, intimidation, beatings and violence.¹²⁹

Total number of documented killings per country

Colombia 65	Brazil 20	Honduras 17
	Democratic Republic Congo 15	Guatemala 13
Mexico 30	Nicaragua 12	India 4
		Indonesia 3
Philippines 29	Peru 6	South Africa 2
		Thailand 2
		Costa Rica 1
		Nepal 1
		Kiribati 1
		Uganda 1
		Saudi Arabia 1
		Iraq 1
		Sri Lanka 1
		Argentina 1
		Canada 1

Source: Global Witness 2021: Last Line of Defence. The industries causing the climate crisis and attacks against land and environmental defenders, page 11.

A significant number of those killed come from indigenous communities: This is particularly worrying given the positive role of indigenous communities in the sustainable management of ecosystems. According to the IPBES flagship report on biodiversity, nature and biodiversity degrade at a slower pace on indigenous lands.¹³⁰ This underlines their integral part in addressing both the climate and biodiversity crisis the world is facing.



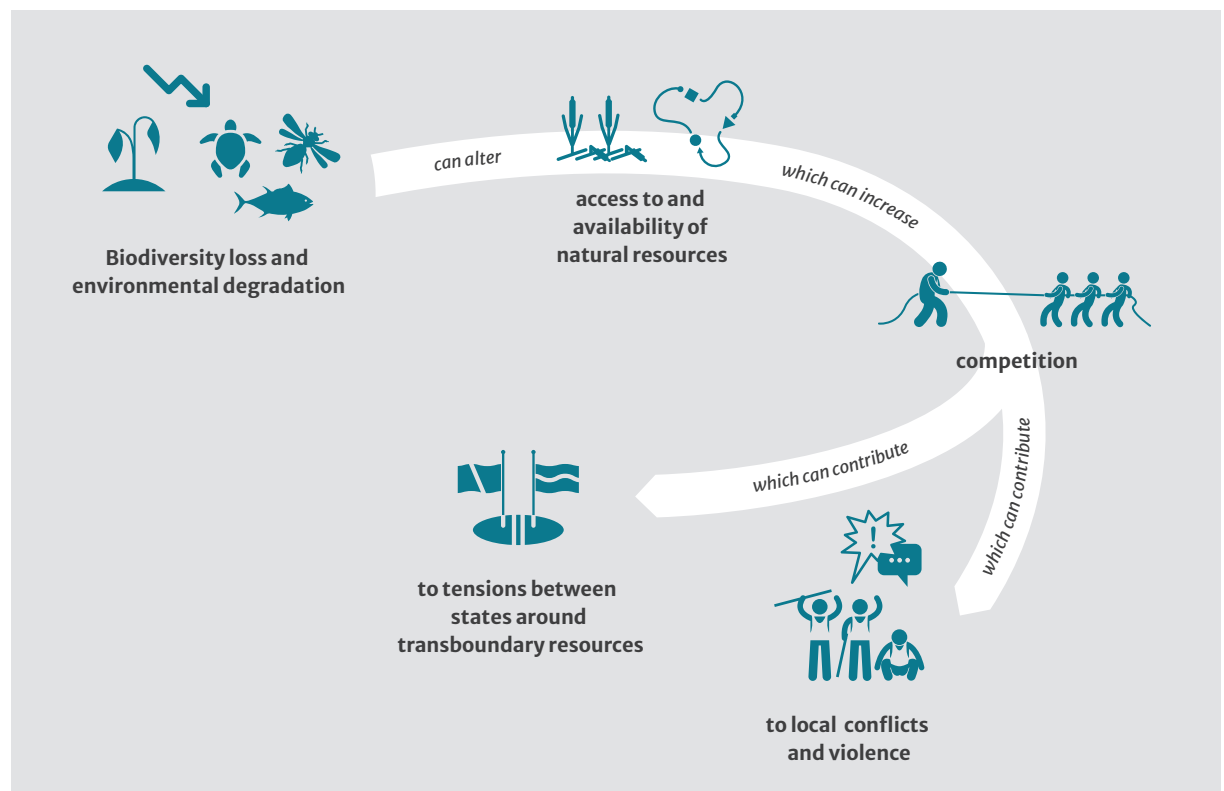
Limited management of shared waters and lacking interstate cooperation in Central Asia has led to tensions around countries' water use rights. Rising energy demand and large dam projects further aggravate grievances between up- and downstream countries.

2.3 — Competition and conflicts around natural resources

Biodiversity loss and environmental degradation have severe impacts on the availability of and access to natural resources such as water, forests and land. These changes in turn can contribute to violent conflicts around natural resources. As ecosystems degrade, they are less able to fulfil their essential functions, which often means that fewer resources are available. For example, the degradation of soil

biodiversity through pollution and overuse leads to the loss of productive lands. The UNCCD estimates that soil erosion occurs between 100 and 1,000 times faster in arable or intensively grazed lands.¹³¹ Forest degradation can also have a direct impact on water supply. For example, the water supply of Brazil's biggest city – São Paulo – is under increasing pressure from deforestation in the Amazon basin.^{132 133}

Figure 5: Overview of competition and conflicts around natural resources



Source: adelphi

These changes in the availability of and access to natural resources can lead to increased competition over natural resources. This competition in turn can escalate into violence, in particular in areas that have already experienced conflict, where certain groups are excluded from natural resource management institutions, and where groups directly depend on natural resources for their livelihoods (for more information, see Figure 6). While most of these natural resource conflicts are on the local, sub-national level, they can also escalate into or play a significant role in larger scale conflicts such as civil wars.

Natural resource conflicts are prevalent around the world. While they are normally driven by the same global megatrends (urbanisation, economic development and population growth) and context factors (see Figure 6), their dynamics differ significantly and are very context-dependent. To illustrate these differences, this chapter discusses two examples of local natural conflicts: pastoralist conflicts in Sub-Saharan Africa and land conflicts in Latin America. In addition, it discusses transboundary natural resource conflicts, in particular those around water resources.

Figure 6: Risk factors for competition over natural resources escalating into violence

Whether increased competition over natural resources escalates into conflict depends on a number of risk factors.

» A history of conflict & fragility

Civil war, ethnic rivalries, and interstate conflict often establish a culture of violence, weaken cooperative mechanisms, and make arms easily available.

» High dependence

Groups that are highly dependent on specific supplies of natural resources and lack alternatives may be more likely to pursue coping strategies that could spur conflict.



» Inequality & marginalisation

Imbalances in power and rights can lead to differences in access to resources, which can entrench poverty and inequality. Inequality, or the perception of it, can spur conflict between the “haves” and the “have-nots”. Marginalised groups are often excluded from formal methods of resolving resource conflicts.

Source: adelphi

Pastoralist conflicts in the Sahel

Livestock herding is and has been an important livelihood source in the Sahel for millennia. Today, however, it is at the centre of several local and regional conflicts throughout the African continent. Climate change and environmental degradation are clear aggravating factors in these conflict dynamics. A devastating period of consecutive droughts between the 1960s and 1990s contributed to the deterioration of rural livelihoods in the region.¹³⁴ Although the drought period was followed by a greening of previously dry areas, high rainfall variability and pockets of desertification in Nigeria and Sudan remained.¹³⁵ In addition, growing resource demand from population growth put additional pressure on natural resources. The population of the Sahel grows by 3.5% every year on average, doubling every three decades. The combination of these drivers means that the Sahel region is in a severe state of water and land scarcity. For example, water availability per inhabitant has dropped by over 40% in the past two decades.¹³⁶

Another important cause for conflicts involving pastoralists was the introduction of borders, and the transfer of land rights to the state and to private owners or groups by colonial powers, as opposed to the customary tenure arrangements put into place by the region's native populations.¹³⁷ While nomadism was practiced throughout the continent's history as an adaptation strategy to cope with

seasonal temperature fluctuations, droughts and floods, today, livestock herding for pastoralists often means crossing into private lands, into lands locked in contentious ownership battles, or into poor, overused and even dangerous public land. Therefore, clashes between farmers and pastoralists and among pastoralists are common.¹³⁸

Throughout the region, violent conflicts over land use between farmers and pastoralists occur mainly at the local level.¹³⁹ As the continent's most populous country, and due to high dependence on agriculture, Nigeria is one of the hotspots of farmer–herder conflicts, with fatalities growing exponentially since 2017. Climate change, environmental degradation, population growth, and insecurity have forced herders in the North to migrate to central Nigeria in search of pasture and water. Their movement has increased competition and disputes between herders and farmers over land resources.¹⁴⁰ In South Sudan, the rivalry between the Dinka and the Nuer pastoralist communities has been strongly aggravated in the past 30 years due to competition for increasingly scarce water and grazing land, as well as livestock raiding in the aftermath of droughts, leading to deadly clashes and an ongoing conflict situation.¹⁴¹ To aggravate matters further, the issue of who is a farmer and who is a pastoralist is often associated with specific ethnicities. This means that political actors have

been able to leverage ethnic rivalries, often escalating conflicts even further. In the beginning of the 1990s in Mali, for example, Tuareg herders in favour of communal property rights in line with a nomadic lifestyle clashed with farming communities, who promoted the extension of private property rights. Drawing on inter-communal and racial tensions against the Tuareg people, farmers often conducted attacks on civilians associated with Tuareg rebels.¹⁴²

In these kind of contexts, environmental and climate-related impacts like biodiversity loss, soil desertification, water depletion, and unpredictable rainfall patterns are more than simply 'additional' stress factors, but often play a role in pushing tensions into full-blown conflicts. No region in the world is as dependent on agriculture as Sub-Saharan Africa, making its economies more susceptible to climatic and environmental stressors.¹⁴³ With temperatures rising well above the global average and political instability continuing to plague the region, conflicts around natural resources are likely to further increase.

Land conflicts in Latin America

Economic development in Latin America, in particular the development of the agricultural sector, has gone hand in hand with rapid land use change. This has come mainly at the expense of rainforests: More than 70% of the region's deforestation is caused by conversion into pasture land, followed by 14% for commercial croplands, with hotspots in Argentina, Paraguay and Brazil.¹⁴⁴ This deforestation has an enormous consequence for regional biodiversity: according to the Living Planet Report 2020, 51.2% of biodiversity loss in Latin America and the Caribbean can be attributed to land use change.¹⁴⁵

Deforestation, mineral extraction and land grabbing are some of the biggest threats to indigenous peoples worldwide, but in particular in Asia and Latin America, which harbour the world's largest primary forests. The negative impacts on the environment create severe social and economic impacts for native populations, in turn leading to tensions and conflicts. In Panama, for example, the exploitation of one of the world's largest copper deposits

(Cerro Colorado) has been the source of conflict with local indigenous communities since the 1970s.¹⁴⁶ In 2020, the Catholic Church-affiliated Pastoral Land Commission (CPT), which has kept track of land conflicts in Brazil since 1985, recorded the highest number of cases ever. In 2019, indigenous groups in the Peruvian Amazon put out an urgent call to the government to implement immediate measures to address escalating land grabbing of indigenous territories.¹⁴⁷

Large-scale mining is another particularly conflict-prone sector. Nowhere else has mineral extraction resulted in so many conflicts in the past 20 years as in Latin America. Driven by a global commodities boom, many governments in the region have made the extractive sector a central pillar of their economic development strategies.¹⁴⁸ Many mining activities have expanded into ecologically sensitive areas that are often also the home of indigenous population groups. This has led to a number of conflicts. In Peru, for example, the extractive sector has been at the centre of severe social conflict with communities, including indigenous ones.¹⁴⁹ Human rights abuses and the criminalisation of community leaders and protesters are common in the context of conflicts around mining. In the past, protests have led to violent clashes with state security forces and resulted in deaths, mainly of civilians, but also of police officers.¹⁵⁰

Land rights and the exclusion of native populations can also be a driver of broader security issues. In Colombia, the region's highest concentration of land ownership and the inability of the government to regulate land use and conduct rural development policies contributed to the rise of the Revolutionary Armed Forces of Colombia (FARC). The resulting civil war lasted almost 60 years and was the longest in the Western Hemisphere, causing almost 300,000 deaths, kidnappings and disappearances.¹⁵¹ Since 1985, conflict-related violence has displaced over 8.1 million people in Colombia.¹⁵² The role of land access in the conflict has been widely acknowledged, and the 2016 peace agreement between the FARC and the Colombian government includes several provisions on land rights and a rural reform.¹⁵³

Infobox 5

The weaponization and destruction of natural resources in armed conflicts

In addition to the above-mentioned pressure that human activity is putting on ecosystems and biodiversity, there is also the deliberate destruction of natural resources in contexts of war and conflict. Environmental degradation in conflict situations primarily happens in two ways:

1. Strategic destruction of resources and areas of biological diversity as a weapon

Non-state armed groups use natural resources – water, in particular – as a weapon of war. In 2014, the Islamic State (or ISIS) gained control of large areas in Iraq and Syria which contained key regional water infrastructure. Their territory included the Euphrates river and the Tabqa Dam, critical for irrigation and energy in the region. This allowed the group to divert flows in order to harm enemies and expand territorial control. In some instances, the group released large volumes of water to cause floods and displacement, poisoned water with crude oil, or taxed its use to finance their activities. In 2015 in Nigeria, the military reported that Boko Haram poisoned water sources on several occasions, making their use dangerous for both humans and livestock.¹⁵⁴ Other illegal or non-state armed groups that have either targeted or used water as part of their operations and strategies are the FARC, Shining Path (SL), Kurdistan Workers' Party (PKK), and Tehrik-i-Taliban (TTP).¹⁵⁵

2. Environmental destruction as a casualty of conflict

Conflict frequently takes place within or around sensitive ecosystems, leading them to become casualties of war. In addition, environmental crimes often increase in situations of conflict. The large-scale bombing of Lao by the US between 1964 and 1973, which destroyed entire villages and countless acres of agricultural land and local ecosystems, shows the long-term effects of conflict on the environment. The toxic chemicals that polluted water, air and soil have continued to harm and kill both people and biodiversity for decades and continue to pose an environmental problem today.¹⁵⁶ In 2020, fighting in Nagorno-Karabakh at the Armenia-Azerbaijan border caused an estimated 102 km² of burned land, including of bio-diverse forest.¹⁵⁷ In the Middle East, the ongoing conflict between Israel and Palestine is taking its toll on the environment: the blockade on Gaza has led to overdraw of underlying coastal aquifers and the regular release of untreated sewage into the coastal area, leading to issues and temporary closures of Israeli desalination plants and affecting water quality and availability for the entire region.¹⁵⁸

The environment in international humanitarian law

The protection of the environment in contexts of war and conflict has always been a part of international humanitarian law (IHL), but it has received further attention in recent years. The International Committee of the Red Cross (ICRC) developed guidelines for environmental protection in armed conflict in 1994 and published an update in 2020. The guidelines outline a set of 32 rules on the ways in which the natural environment is tied to and affected by conflict, and proposes recommendations for its implementation.¹⁵⁹

Interstate tensions around shared resources and ecosystems

When natural resources are shared across borders, they can fuel diplomatic conflicts. This is particularly the case for transboundary water resources such as rivers and lakes. Many basins around the world are under pressure from environmental degradation and climate change. The Nile basin, for example, is under pressure from the conversion of wetlands and forests to farmland and the expansion of urban areas, high demand for fresh water, overgrazing, over-exploitation of fuelwood and fish stocks, and pollu-

tion, all adding to the degradation of the basin.¹⁶⁰ Similarly, the Mekong basin faces major environmental disruptions, linked to the construction of dams, excessive groundwater extraction, deforestation for export agriculture and unsustainable sand mining.¹⁶¹ In addition, both are expected to be severely affected by climatic changes, including increased temperatures, evaporative losses, and more extreme weather events.¹⁶²

Increasing demand for agriculture and hydropower has driven the development of dams and other infrastructure, which are often linked to severe environmental impacts while at the same time acting as flashpoints of tensions between states. The Blue Peace Index details how cooperation (or lack thereof) between up- and downstream states are at the centre of both tensions and conflict resolution, pertaining mostly to the building of hydropower infrastructure, agricultural practices and water pollution.^{163 164} For example, Southeast Asian countries in the lower basin of the Mekong river have long feared the consequences of China's hydropower developments and plans in the upper basin.¹⁶⁵ Along the Nile basin, disputes over water rights between riparian countries have a long history. However, tensions have been intensifying as populations and economies along the Nile grow. When upstream Ethiopia in 2011 announced its plan to construct the Grand Ethiopian Renaissance Dam, it sparked new diplomatic tensions that continue to threaten stability in the region because Sudan and especially Egypt fear its potential consequences for hydropower and irrigation infrastructure.^{166 167}

In Central Asia, an integrated regional energy and water infrastructure that was built during the time of the Soviet Union is also at the centre of regional tensions. After the implosion of the Soviet Union in 1991, Central Asian governments successfully agreed on water sharing and cooperation. However, these agreements failed to link water cooperation with the energy sector, effectively creating a situation of competition between countries on these different uses.¹⁶⁸ Consequently, upstream states do not always comply with the international agreements on water sharing, particularly during water and energy shortages at home, leading to diplomatic tensions,¹⁶⁹ as well as localised conflicts between border communities, such as in April 2021 at a water facility on the Kyrgyz-Tajiki border.¹⁷⁰

Many studies have pointed out that there are few if any historic examples of interstate wars over transboundary water resources.¹⁷¹ At the same time, the combined pressures of environmental degradation and economic and population growth have never been so high and are projected to further increase. This raises the question whether

the existing transboundary management and cooperation institutions between states will be able to manage this increasing pressure peacefully in the future. This challenge was underlined by a US intelligence assessment on global water security that found already in 2012 that out of seven important transboundary basins (Indus, Jordan, Mekong, Nile, Tigris-Euphrates, Amu Darya and Brahmaputra) assessed, five had limited or inadequate management capacity that can provide stability, increase cooperation, and mitigate political grievances over water.¹⁷²

There are efforts to improve global water governance. In particular, the UN Watercourses Convention, adopted in the 1990s, can act as a support mechanism for guaranteeing that agreements on the sharing and cross-border management of water bodies do not overlook the environmental dimension. The Convention seeks to address fragmentation in the global landscape of basin-specific agreements and push for a global treaty law. Among its many requirements are the protection, preservation and management of ecosystems in international waters.¹⁷³

In addition to transboundary waters, fishing has also been at the centre of interstate tensions. Because of the difficulty in defining borders and keeping it under constant watch, high seas are often at the centre of territorial disputes and criminal activity. In Somalia, the presence of foreign fishers (both legal and illegal) and related territorial disputes converged with institutional instabilities within the Somali fishing sector, weak governance and piracy to create an ongoing state of instability with recurring periods of conflict lasting for almost 30 years.¹⁷⁴ In the Pacific Islands, small island nations are fundamentally dependent on fisheries both for livelihoods and as a main source of national income due to tuna licensing fees. Marine ecosystem deterioration in the region is threatening the movement of crucial fish stocks out of the Pacific economic zones, and into the economic zones of powerful economies, such as the US. Besides the negative economic consequences for these already struggling economies, this shift can potentially lead to diplomatic tensions between Pacific and North American states, in addition to opening the doors for disputes over territories and fishing rights.¹⁷⁵

2.4 — *Conclusion: the need for a comprehensive environmental security agenda*

The three pathways that are part of the nature–security nexus show how environmental degradation, biodiversity loss, insecurity and conflict reinforce each other (see Figure 1). This vicious circle makes stability and peace harder to achieve and maintain. At the same time, it deepens the environmental crisis humanity is facing, in particular biodiversity loss and climate change. Together, they threaten the very basis of human civilization: its well-being, livelihoods and peace.

What can be done to address these existential risks and break this vicious circle? It is clear that militarised approaches alone are not the answer to these challenges, as many of the preceding examples demonstrated. Not only do they fail to address the root causes of environmental degradation, insecurity and conflict, but they frequently exacerbate environmental challenges and insecurity.

Instead, we need the engagement of all security, environment and development actors as part of a comprehensive environmental security agenda. The aim of their concerted efforts should not be reduced to addressing the symptoms of the environment–conflict trap, but to tackle the root causes of environmental degradation, biodiversity loss, insecurity and conflict, with a particular focus on breaking the links between them. The three pathways laid out in this report are not just compound risks; they can simultaneously serve as multidimensional entry points for action.

Action starts with environment and climate measures and policies that are conflict-sensitive and actively address environment-related security risks, for example by

establishing inclusive natural resource management institutions that bring together conflicting parties. This is especially important in already fragile and conflict-affected areas. At the same time, peacebuilding, humanitarian and stabilisation actions must understand environmental and climate risks in order to avoid harm. This includes reflecting on the role of natural resources and environment in peace agreements and strategies. Where possible, peacebuilding and stabilisation programmes should actively address environment-related security risks and help to improve sustainability and resilience against environmental and conflict risks. Experiences from environmental peacebuilding can be used to fully realise the peacebuilding and cooperation potential of environmental action. Lastly, livelihood and development programmes also have a key role to play in addressing the links between environmental degradation, conflict and insecurity and their root causes by building more resilient and sustainable societies.

This comprehensive environmental security agenda complements the existing activities and initiatives on climate-related security risks: Environmental degradation and climate change risks often interact and reinforce each other. In fact, environmental factors are often a critical link in the pathway from climate change impacts to security risks. At the same time, nature-based solutions often provide benefits for both addressing climate change and building peace. A holistic approach to include all environmental factors would thus help to address climate–security risks more comprehensively and make sure that the focus on climate–security risks does not prevent action in other parts of the nature–security nexus.

3 Recommendations for the UN Security Council

Responsibilities to address the nature–security nexus are dispersed across the UN system. All UN organisations and agencies have specific roles to play and are already working on different parts of the problem. For example, IOM and UNHCR are well positioned to address environmental migration, UNDP is a central instrument to strengthen the resilience of states and societies against climate and conflict risks, UNEP has specific expertise on environmental peacebuilding and addressing the negative environmental impacts of conflicts, and the Peacebuilding Fund and Commission can ensure that environmental concerns are more broadly integrated in peace–building efforts. In addition, and to complement these efforts, the UNSC has a critical role to play.

This role is based on its primary responsibility for safeguarding international peace and security. The scale of the environmental crisis and its critical importance in driving insecurity make it imperative for the UNSC to fully acknowledge and address the nature–security nexus. It can and should fulfil its responsibility by, as a standard procedure, ensuring its discussions and mandates consider all environmental factors that drive insecurity and undermine peace in any given scenario, and by mobilising action across the UN system in a coordinated manner. It needs to play its part in ensuring a comprehensive environmental security agenda that includes, but is not limited to climate change and its impacts. To this end, we recommend the UNSC to:

1. **Successively expand action on climate-related security risks to address the full breadth of links between the environment, conflict and peace.** With the climate–security agenda gaining traction in the UNSC, it is important that all aspects of the nature–security nexus are reflected as part of the efforts to tackle climate–related security risks. Any UNSC resolution on climate–related security risks should thus also reflect on other environmental factors and not look at them separately. In addition, the UN Climate Security Mechanism could be tasked with systematically considering all relevant environmental factors when synthesizing evidence from across the UN system. The overall aim is to avoid creating or sustaining silos when it comes to the environment, natural resources and climate change.
2. **Make the specific links between environment, security and peace part of the UNSC’s deliberations on individual countries and regions.** The UNSC should discuss specific environmental topics where this is relevant for peace and security in a specific region or country and invite respective experts on the matter from both external bodies and from within other UN bodies. The UN Integrated Strategy for the Sahel is a good example of a forward-looking approach that recognises the peacebuilding potential of environmental cooperation. Such deliberation could be supported by mandating peace operations and political missions to analyse the risks related to environment–conflict links and the opportunities of environmental peacebuilding.
3. **Address the nature–security nexus as part of UN peace operations.** Peace operations need the mandates, capacities and resources to address the links between environment, security and peace in a comprehensive manner. This needs to go beyond reducing the environmental footprint of missions and include specific actions to address environment–related security risks, for example by supporting host countries to effectively fight environmental crimes or to prevent and address conflict around natural resources. The UN has made significant progress in this field, but first experiences show that more support is needed for UN peace operations to address environment–related security risks.

4. **Engage in preventive diplomacy** to address trans-boundary environment-related security risks. Both tensions over shared natural resources such as water as well as international environmental crime can destabilise individual Member States or even whole regions. By supporting constructive engagement and reassuring affected countries that their challenges are known and being addressed, the UNSC can help contain and manage conflicts that otherwise fuel insecurity.
5. **Help to create awareness and convey urgency to address the nature-security nexus across the UN system.** Such awareness starts by ensuring that all links between the environment, security and peace are part of the UN's reporting and analysis and the UNSC's deliberations. Better anticipating, preventing and addressing conflict requires more contextual information on all aspects of the nature-security

nexus. For now, some topics such as the financing of armed opposition groups through natural resources are more advanced than others, such as livelihood insecurity and natural resource conflicts. These efforts also include organised exchange and collaboration with other UN agencies.

Looking further ahead, the UNSC will have to fully accept and specifically acknowledge that maintaining international peace and security requires not breaching the planetary boundaries^p that define the “safe operating space for humanity” and which nature will not negotiate. Whereas political will currently seems insufficient for an explicit acknowledgement of this fact in the form of a general resolution on the nature-security nexus, in time, the UNSC needs to systematically consider the effects of breaching these boundaries lest the world suffer consequences that threaten humanity's very existence.



Meeting in the Security Council Chamber
in New York, United States

The UNSC has a unique mandate to safeguard international peace and security. As climate change and environmental degradation are increasingly recognised as drivers of insecurity, the UNSC emerges as a crucial player for addressing these risks and implementing preventive measures on an international level.

^p The planetary boundaries framework consists of nine planetary boundaries (climate change, biodiversity loss, nitrogen cycle, phosphorus, ocean acidification, land use, freshwater, ozone depletion, and atmospheric aerosols) within which humanity can continue to develop and thrive for generations to come. Crossing these boundaries increases the risk of generating large-scale abrupt or irreversible environmental changes.

4

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