Nature protection

and other socio-ecological issues

What if the United Nations was off the mark?

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8 of June 2023. The sweltering summer heat ceased as we entered the imposing air-conditioned lobby. In the large conference room, the solemn background music and the blue light announced that a great challenge was at stake: the safeguarding of the oceans. World Ocean Day[1] was the first event I attended at the United Nations (UN) Headquarters.

During 3 months, I attended conferences, spoke with diplomats, read articles and observed, trying to understand how this diplomatic world works, where indigenous leaders demanding the protection of their lands meet the Saudis, who have come to present their futuristic city project The Line[2].

From a scientific conference on the decline of biodiversity to the presentation of a startup involved in coral restoration with IA, including a show of magnificent traditional songs and activist' speech calling for the end of fossil fuels, the United Nations attempts to unite the forces of all the stakeholders toward one goal: "Making peace with nature". Yes, "making peace with nature is the essential task of the 21st century", declared UN Secretary-General António Guterres.

The UN is known for its ambitious speeches but have they come to fruition? After seven years, how—if at all—have the Sustainable Development Goals worked toward guiding public policy- making and bringing about much needed societal transformations toward a sustainable future for all – human and non-human?

[1] https://unworldoceansday.org/un-world-oceans-day-2023/

[2] https://www.neom.com/fr-fr/regions/theline

Table of contents

Introduction

Humanity is currently facing one of the greatest challenges of its entire history: improving the living standards of an ever-growing global population, while protecting the environment that sustains its existence.
The Sustainable Development Goals (SDGs) adopted by UN member states as part of the 2030 Agenda[3] for Sustainable Development (UN, 2015) have been widely hailed as the most comprehensive global framework for addressing the twin challenges of environmental change and development.
Launched in 2015, the SDGs provide a "shared blueprint" for the world into a sustainable future covering 17 ambitious goals. These include poverty eradication, zero hunger, good health, quality education, gender equality, access to clean water and energy, decent work and economic growth, sustainable industrialization, reduced inequality, sustainable cities, responsible consumption and production, climate action, life below water and on land, peaceful societies and strong institutions, and finally, cooperation and partnerships for the goals (UN, 2023b).
Succeeding the Millennium Development Goals (MDGs), the SDGs represent a normative, legally non-binding framework, which was agreed by the UN General Assembly for a period of 15 years (ending in 2030). While MDGs focused on supporting developing countries, the SDGs center on sustainability, highlighting the linkages between the environment with socioeconomic dimensions[4] (Eisenmenger et al., 2020).

However, at the midpoint of implementation of the 2030 Agenda, the world is not on track to meet most of the Goals by 2030. A preliminary assessment of the roughly 140 targets with data show only about 12% are on track; close to half, though showing progress, are moderately or severely off track and some 30% have either seen no movement or regressed below the 2015 baseline (Spangenberg, 2017; UN, 2023a) - See appendix 1. Thus far, we have to admit that the SDGs have had little transformative impact on policy, rules, programs, or institutions that may spur sustainable development at the international, national, and local level (Elsässer, 2023).

This is particularly the case regarding environmental issues. While the UN calls for "transformational change" and "making peace with nature" (press.un, 2021; unfccc, 2021), business as usual continues and over 1 million of the estimated 8 million plant and animal species on Earth are now at substantially increased risk of extinction in the coming decades (IPBES, 2019). Despite the adoption of the Convention on Biological Diversity (CBD) - the conservation movement's fundamental global agreement (See appendix 2 for more details) - countries failed to fulfil their commitments to reduce biodiversity loss (Butchart et al., 2016). As a result, almost none of the targets for 2020 have been reached at the global level for SDG 14 and 15 (for the protection of life below water and on land respectively[5]) (*Transitioning to Sustainable Life on Land*, 2021).
This is all the more serious as time is running out: we are in a state of planetary emergency. The ecological crise - driven in large part by unsustainable human activities - require urgent and immediate global action. Science clearly shows that biodiversity loss, land and ocean degradation, pollution, resource depletion and climate change are accelerating at an unprecedented rate. This acceleration is causing irreversible harm to our life support systems and aggravating poverty and inequalities as well

[3] The Agenda 2030 brings together 17 goals, with their 169 associated targets (i.e. sub-goals) and are broken down into a list of 244 measurement indicators to assess progress in achieving the SDGs over time.
[4] On one hand, environment–humans linkages include both nature's contributions or services to people (e.g. provisioning of oil, regulating of climate, etc.) and the negative disservices it provides (e.g. floods, disease, etc.). On the other hand, these linkages also include the impacts humans have on the environment, both positive (e.g. protecting and restoring ecosystems, conserving species, etc.) and negative (e.g. pollution of water, degradation of soils, etc.) (Scharlemann et al., 2020).
[5] Goal 14: "Conserve and sustainably use the oceans, seas, and marine resources for sustainable development." Goal 15: "Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss."

as hunger and malnutrition. Unless halted and reversed with immediate effect, it will cause significant damage to global economic, social and political resilience and stability (IPBES, 2019).

It becomes particularly clear that the achievement of the environment-related SDGs (notably the SDG 15 – see appendix 3) is crucial for the implementation of all the other SDGs and to ensuring post-2030 sustainability (e.g. Reid et al., 2017). In this perspective, this report aims at understanding **how the UN deal with environmental sustainability and biodiversity conservation issues**[6] **and why environment-related SDG fail to be achieved.**

The main hypothesis is that the current neoliberal capitalist paradigm (the economic system but also the world view that it conveys) in which the UN operates for achieving the SDGs not only fail to enhance transformative change needed to protect the natural world, but even strengthen current trajectories towards social and ecological unsustainability.

The first part critically investigates the causes for failures of the environment-related SDGs achievement, with a focus on the SDG 15 ("life on land") and the green economy approach that starts to reconfigure the conservation world. The second part, more personal, suggests tracks to rethink SDGs through a systemic[7] and socio-ecology perspective[8].

The report thus argues that the UN has to redefine its SDGs based on a reconnexion of our western society to nature which required a paradigm shift at two main levels, both structural (moving from the current growth economic model to a degrowth paradigm) and philosophical (moving from a human-centered to an Earth-centered society). This shift should able to *protect* the natural world but also, and above all, to *live* in a truly sustainable way with it.

[6] This research will not only focus on SDG 15 (life on land) as ecological issues go well beyond the protection of nature. However, a focus on SDG 15 is necessary because it is the main objective directly linked to this issue. We will only briefly address SDG 14 which is specific to biodiversity and aquatic ecosystems.

[7] A systemic approach takes into account all the elements of a system and the interactions between them.

[8] Social ecology integrates social and natural science approaches for the study of sustainability challenges, by analyzing the relationships of resource use and societal change (Groß, 2016).

1 Why does the trajectory towards sustainability is failing?

1.1 Focus on environmental-related SDGs

The Sustainable Development Goals (SDGs) […] represent a coherent, collective vision of a better future for all and provide a framework by which progress towards this vision may be monitored. One of the great strengths of the SDG framework in its current formulation is its recognition of the intimate links between human well-being, economic prosperity and a healthy environment.
UNEP (United Nations Environment Programme), 2015

1.1.1 A siloed vision of the SDGs

The challenges posed by biodiversity loss, climate change and achieving a good quality of life for all are deeply interconnected and need to be tackled in an integrated way as a matter of urgency - from the local to the global level. Maintaining a planet that is conducive to life and fulfilling for humans and other species is therefore one and the same challenge (Díaz et al., 2019) - hence the term "socio-ecological transition".

The UN does recognize that the three pillars of sustainable development (society, economy, environment) are inextricably linked and the SDGs overall are characterized as "integrated and indivisible" (UN, 2023b). However, current UN documentation continues to present the global goals and their targets as a linear, enumerated list and the SDGs are treated in isolation and their links are neglected. Thus, the SDGs, targets and indicators related to socio-economic issues are not - or only very briefly - linked to environmental issues (Reid et al., 2017). Nor are environmental or climate-related SDGs and targets linked to each other, despite the interconnected nature of climate change, biodiversity loss, land degradation, or air and water pollution (Beckmann, 2021).

The compartmentalization of the SDGs improves their comprehension but, in practice, the lack of systemic approach leads to many failures in the 2030 Agenda progress. This fragmented and narrow view gives rise to numerous contradictions and inconsistencies between and within the goals and targets, leading to significant trade-offs (i.e. achieving one goal or a target counters the achievement of another one), especially in disfavors of environmental issues (Eisenmenger et al., 2020; Pradhan et al., 2017; *Transitioning to Sustainable Life on Land*, 2021). These latter are often considered a secondary issue and is still underrepresented in the 2030 Agenda: the 17 SDGs and their 169 constituent targets include only two goals (SDG 14 and 15) and 29 targets that explicitly address environmental concerns (in addition to the SDG 13 "Climate Action")[9] (Reid et al., 2017). The situation is such that, to date, SDG 15 (protection of life on land) is one of the SDGs with the highest number of trade-offs and the fewest synergies ("co-benefits" between goals or targets) (Díaz et al., 2019; Pradhan et al., 2017).

Examples
For instance, dealing the end of world hunger (SDG 2) without taking ecological issues (e.g. SDG 15) into account has tended to favor intensive agriculture (supposedly to ensure good yields), without considering the harmful consequences such an agricultural model has on the environment. As a result, land has become barren and local farmers dependent on agribusiness. A systemic vision would put forward solutions such as agroecology, which, in addition to providing goods yields, is truly sustainable as it takes care of both humans (better health, food and financial autonomy because farmers are no longer dependent on agribusinesses) and of the land (restored ecosystems) (Tordjman, 2021). Equally, in attempting to solve the problem of

[9] Seven other SDGs indirectly refer to the natural environment although they focus on human concerns (SDGs 2 "Zero hunger", 6 "Clean water and sanitation", 7 "Affordable and clean energy", 8 "Decent work and economic growth", 9 "Industry, innovation and infrastructure", 11 "Sustainable cities and communities" and 12 "Responsible production and consumption").

climate change in isolation, we tend to invest in technological innovations that are supposed to reduce CO2 emissions, but whose production and use require a great deal of energy and material resources, and have, consequently, a high environmental cost (deforestation, pollution from the extraction of raw materials, etc.) (IUCN, 2022). The absence of a link between the human sphere and the natural sphere can inadvertently lead to a reduction in biodiversity through otherwise well-intentioned policies. Such biotic impoverishment can, in the long term, halt or reverse the progress made towards sustainable development (Naeem et al., 2016).

Furthermore, although the purpose of the agenda is admirable, in reality it promises far more than it is likely to deliver. This is partly because declarations on the SDGs and their associated targets have had to be crafted to achieve political acceptability by nations with diverse and often conflicting interests. In order to satisfy all countries ratifying the agenda, many goals are rather vague and open-ended and lack compatibility. Additionally, the extent to which countries pursue the SDGs is voluntary and it is up to them to decide which targets they will focus on and how these will be achieved. No penalties will be imposed on nations that fail to adequately address any of the SDGs. Furthermore, as each country reports on its own progress in achieving the SDGs, this gives them the opportunity to paint a more favorable picture of their achievements than might be justified (*Transitioning to Sustainable Life on Land,* 2021).

As we shall see hereunder, this short-sighted, compartmentalized implementation tends, in fact, in our current neoliberal system, to prioritize the economic dimension of sustainable development to the detriment of environmental one (Elsässer 2023; Reid et al., 2017).

1.1.2 Is sustainable development an oxymoron?

Advocacy of economic growth has always been unequivocal in the most influential major sustainability declarations and agreements:

- The Brundtland report (1987), the first major international declaration concerning sustainable development, called for "internationally expansionary policies of growth" in industrial countries and for "more rapid economic growth in both industrial and developing countries"[10].
- The Declaration of the UN Conference on Environment and Development held in Rio de Janeiro in 1992 advocated "economic growth and sustainable development in all countries, to better address the problems of environmental degradation"[11];
- The 2011 UN Environment Programme (UNEP) report on the green economy stated that "the key aim for a transition to a green economy is to enable economic growth and investment while increasing environmental quality"[12];
- The Rio 2012 declaration reaffirmed "the need to achieve sustainable development by promoting sustained, inclusive and equitable economic growth"[13];
- The current SDG 8 calls for "sustained, inclusive and sustainable economic growth"[14].

Yet increasing evidence shows that economic growth supported by the UN contributes to biodiversity loss via greater resource consumption and higher emissions (see Figure 1) - see for instance meta-analysis Otero et al. (2020). As a result, the Goal 8 on economic growth (i.e. 3% annual global GDP) violates Goal 12 (Responsible consumption and production) and the environmental-related SDGs such as the Goals 14 and 15 (Protection of life beyond water and on land) (Hickel, 2019). Several studies confirmed this trend. According to Jain & Jain (2020), countries which have attained high scores on Sustainable Development Goal Index (SDGI) – i.e. a very high achievement as regards SDGs – were also the countries with a high ecological footprint. Equally, Hametner (2022) showed that over the past

[10] *Report of the World Commission on Environment and Development. Our Common Future*. United Nations, 1987
[11] *The Rio Declaration on Environment and Development*. United Nations Conference on Environment and Development, 1992
[12] *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*. Nairobi: United Nations Environment Program, 2011
[13] *Resolution adopted by the General Assembly on 27 July 2012*. United Nations, A/RES/66/288
[14] https://sdgs.un.org/2030agenda

five years of available data, most EU member states have seen socioeconomic progress combined with environmental degradation. In other words, the existing mode of achieving [economic and social] SDGs is at the cost of environmental degradation and thus reinforce, paradoxically, current trends towards less sustainability. The question then arises: isn't sustainable development an oxymoron?

> The UN maintains an ambiguous position since, while pleading for a significant increase in the size of the global economy, it recognizes the fact that the current economic model is detrimental to sustainability: for instance, António Guterres, Secretary General of the UN, announced on Twitter that "the current model of infinite growth in a world of finite natural resources will lead to inflation, climate chaos, and conflicts"[15], and a recent UN report highlighted that "over the last 50 years, the global economy has grown nearly fivefold, due largely to a tripling in extraction of natural resources and energy that has fueled growth in production and consumption […]" (UNEP, 2021).

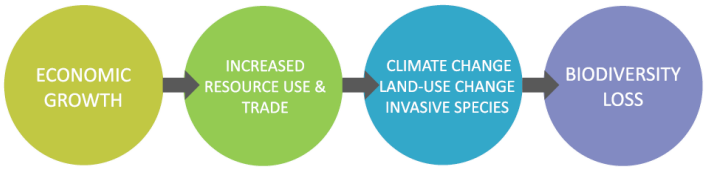


Figure 1: How economic growth contributes to biodiversity loss (Otero et al., 2020). The increasingly unequal and resource-intensive model of development drives environmental decline through climate change, biodiversity loss and other forms of pollution and resource degradation.

1.1.3 The decoupling myth

> *Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to* ***decouple*** *economic growth from environmental degradation […]*
>
> (UN, 2015)

To counter the negative effects of growth on the natural world, the UN has been advocating decoupling for several years now. Decoupling means having an economic growth while reducing environmental impacts thanks to an increasing of the efficiency of resource use (UN, 2023a). This would enable what we call "green growth", i.e. an economic growth that is environmentally sustainable[16]. This conceptual framework is based on neoclassical economic theory (environmental economics[17]), leading to the belief that economic growth will decouple itself from its environmental base through dematerialization and depollution because of the improvement in eco-efficiency (increased resource productivity and decreased pollution) (Kothari et al., 2014).
Advocating decoupling as a solution to lighten our ecological footprint while increasing the GDP let's think that economic growth is possible and is even necessary to achieve sustainability. Yet the literature has provided ample evidence that sustained absolute decoupling has not occurred so far, and is unlikely to occur, especially on the long-term, at the global level and at a fast enough rate to ensure global sustainability[18]. These studies suggest also that, under current socioecological conditions, economies with higher GDP – even with efficiency gains – tend to consume more raw materials and energy, notably

[15] Posted on the António Guterres account on June 17, 2022.
[16] Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. https://sdgs.un.org/publications/towards-green-growth-17025
[17] Not to be confused with ecological economics – see appendix 4 on weak vs. strong sustainability
[18] *Relative* decoupling means that GDP grows faster than resource use and is not sufficient to achieved sustainability on the long-term and at the global level.
The only way to achieve the GDP growth while at the same time reducing material footprint is to achieve *absolute* decoupling. Absolute decoupling means that resource use declines in absolute terms while GDP grows; this requires that resource efficiency (i.e., the ratio GDP/resource use) grows faster than GDP. Unfortunately, the material efficiency of the world economy has been worsening in the 21st century, not improving… (Hickel, 2019). Even the UN themselves explicitly recognized that absolute decoupling was not possible to achieve.

because of rebound effect[19] (Hickel, 2019; Otero et al., 2020; Parrique, 2022[20]). All of this evidence not only suggests that increased economic growth will not support transformation towards sustainability, but even worse, may tend to reinforce negative environmental externalities (Eisenmenger et al., 2020).
The latest IPCC report bury once and for all the myth of a sufficient decoupling between GDP and ecological load. World experts on the subject describe decoupling as "insufficient" with reduction rates "far too low", and green growth as a "misleading" and "misguided" strategy that "is partly based on faith"[21].

It has also been noted that UN's documents on decoupling lack precision and clarity. Although the notion of decoupling is mentioned in the target 8.4, it is not expressed in the indicators supplemented for it (8.4.1 & 8.4.2). The latter merely measure absolute figures of "material footprint" and "domestic material consumption".

In light of ample evidence showing that absolute decoupling is unlikely under current conditions, the unreflexive growth emphasis of the biodiversity and sustainability policies seems to stand in the way of safeguarding biodiversity and sustainability as a whole.

1.1.4 Technology, solution or problem to the ecological crisis?

"We envisage a world in which development and the application of technology are climate-sensitive, respect biodiversity and are resilient" (UN, 2015).

By promoting green growth and decoupling, the current sustainable development paradigm implicitly favors technosolutionism[22]. In order not to jeopardize growth, reducing our ecological footprint will not be achieved by simply and directly reducing resource use, but through more innovation, data, high technology and artificial intelligence. The UN is therefore focusing on technological advances to meet today's ecological challenges.

"Pushing boundaries: Technology and AI to accelerate the SDGs in the Arab Region"; "Accelerating Achievement of the SDGs and Climate Action through Digital Public Infrastructure and Digital Public Goods"; "Harnessing the Power of Digital Innovation for a Sustainable World Post-COVID-19"… Many UN's events were focused on deployment of technology during the High-Level Political Forum (HLPF)[23] in July 2023.

However, the UN overlooks the fact that these technologies (such as electric cars) generally solve a particular problem (decarbonization)... while exacerbating others (extracting resources to manufacture batteries leads to a loss of biodiversity through deforestation and pollution of the soils). The production of technologies also has a significant human cost such as child labor in mines (Mallory, 2023) and can have deleterious social consequences, since a policy of technological innovation in an unequal society tends to reinforce inequalities and personal gains (Ziegler, 2020).
The point here is not to be technophobic, but to be technocritical about the global impact of technologies on the ecological (and social) issues - the very problem they are supposed to solve.
From a non-systemic point of view, the technological solutions advocated by the UN on a global scale are merely adjustments to the current system, "patches on a flat tire". They do not address the root causes of the problem and therefore do not lead to radical system change. These technological solutions only

[19] The "rebound effect" occurs when the efficiency gains are overcompensated by growing used. Consequently, increased economic growth and efficiency gains will not suffice to support a transformation towards sustainability.
[20] Timothée Parrique's book ("Ralentir ou périr, l'économie de la décroissance") devotes an entire, well-sourced chapter to the myth of decoupling
[21] To read the report: https://www.ipcc.ch/report/ar6/wg3/
[22] Technosolutionism, or technical solutionism, is the reliance on technology to solve a problem often created by previous technologies. According to this concept, all problems could find solutions in better and new technologies.
[23] The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level.

serve to maintain a system that has no vocation for structural change. In short, as long as technology remains part of the dominant neoliberal system, technological solutions risk to remain inadequate or even environmentally harmful.
What's more, betting on technology - which consumes a great deal of energy and raw materials - against a backdrop of shrinking resources can leave us perplexed as to the relevance of these so-called "solutions of the future"[24].

1.1.5 SDGs focus on consequences instead of tackling the causes

According to Spangenberg's study (2017), SDG targets focus on changing states (i.e. socio-ecological conditions such as water quality) and unsustainable impacts (e.g. climate change). However, they neglect the need to change pressures (e.g. water pollution is addressed, but not the type of agriculture that causes it) and support the driving forces behind pressures. Indeed, the 2030 Agenda unreservedly endorses infinite economic growth, free trade and deregulation, without mentioning their ecological and social effects. Targets 17.10 and 17.11 of the SDGs aim to give an even greater role to free trade agreements under World Trade Organization rules (Eisenmenger et al., 2020).
Yet there is ample evidence of the negative environmental effects of trade liberalization regimes and trade-related investment agreements (instead of facilitating "decoupling", trade agreements may tend to reinforce negative environmental externalities) (Weber & Weber, 2020). Good governance and the fight against corruption and organized crime, necessary for accountable and effective institutions, also remain unspecified (Spangenberg, 2017). By the same token, planetary boundaries, and the need particularly for industrialized countries to abide by them (Hickel, 2019), do not find mention anywhere in the SDGs (Eisenmenger et al., 2020; Spangenberg, 2017).
Failing to address pressures that have caused the situation to be problematic reduces policy options to restoration and adaptation instead of reducing and eliminating the problems in a causal manner. As long as this gap is not filled and targets for reducing pressures are not formulated, efforts to achieve the SDGs will remain curative, addressing symptoms but not causes (Spangenberg, 2017). See Figure 2.

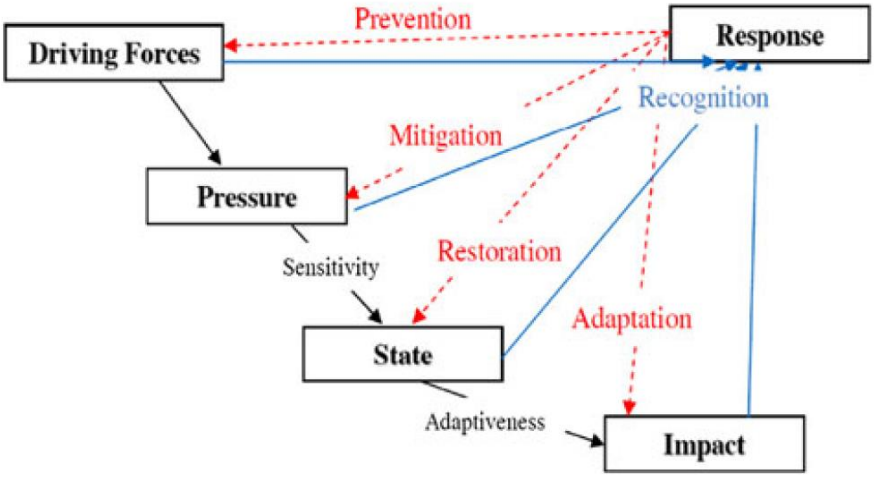


Figure 2: DPSIR[25] model of intervention of the SDGs targets – Targets relating to the state and impacts are manifold, while targets relating to pressures are absent and targets relating to driving forces support rather than address them (Spangenberg, 2017).

[24] For more details on technology and socio-ecological crisis, see the research work of Aurore Stéphant, Philippe Bihouix and Arthur Keller.
[25] DPSIR (drivers, pressures, state, impact, and response model of intervention) is a causal framework used to describe the interactions between society and the environment.

1.2 Focus on the SDG 15

SDG 15 (Life on land)[26] : "*Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*" (UN, 2015).

1.2.1 The main drivers of biodiversity loss are not addressed

According to a UN report of the 2022 HLPF (UN (HLPF), 2022), "tackling the root causes of biodiversity loss is the only way to halt the current decline". Yet very few key UN conservation policy documents address the main drivers of biodiversity loss, starting with SDG 15. Indeed, this goal focuses on protection (e.g., soil and land restoration, sustainable forest management, or ecosystem conservation), without really dealing with destruction. The major direct causes of biodiversity loss recognized by the IPCC, such as pollution, climate change and changes in land use (e.g., intensive monoculture or urbanization) are not mentioned. Only the objectives of reducing poaching and controlling invasive species are addressed (*Transitioning to Sustainable Life on Land*, 2021).

As mentioned above, the effects of globalization are totally overshadowed in UN reports, and this is no exception for SDG 15. Yet one study revealed that 30% of global threats to species were due to international trade (excluding invasive species). With international trade chains accelerating the degradation of habitats far removed from the places of consumption, this finding underlines the importance of examining biodiversity loss as a global systemic phenomenon, rather than looking at degrading or polluting producers in isolation (Lenzen et al., 2012).

Economic development is the main contributor to biodiversity loss through its impact on natural ecosystems (*Transitioning to Sustainable Life on Land*, 2021). The only way to truly protect and regenerate nature is to *reduce* the impact of human activities on it by *decreasing* our production and consumption (as absolute decoupling is impossible). It is therefore high time that the SDG 15 explicitly recognizes and addresses the systemic relationships between the pressures of the economic system (e.g. overproduction, overconsumption, pollution...) and the impacts on biodiversity.

1.2.2 Progress in the achievement of SDG 15... to be taken with caution

- Indicators who do not reflect the reality

A study of Zeng et al. (2020) shows that while most countries are progressing well towards environmental SDGs, this has little relationship with actual biodiversity conservation. In effect, this positive trend contrasts with the other regional and global assessments showing a high biodiversity loss. Such a discrepancy between the current trend in biodiversity loss and the outcome of the indicators means that many of them do not adequately reflect progress towards environmental conservation goals. This underlines the need to incorporate indicators that measure the true state of the world's biodiversity and the threats to it, or risk the SDGs serving as a smokescreen for continued environmental destruction throughout the decade.

In addition, the 2022 report on SDGs (UN, 2022) highlighted two main positive developments regarding the SDG15 which may seem, a priori, to be advances from a socio-ecological point of view: protected areas expand ("Nearly half of the areas essential for biodiversity freshwater, terrestrial and mountain biodiversity and mountain environments are protected") and global efforts to promote access and benefit sharing of genetic resources gain momentum ("133 countries and the European Union have ratified the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the CBD"). However, here as well, this claim may be read in a cautiously optimistic way.

[26] For more details on SDG 15 see appendix 3.

- The case of protected areas

In December 2022, the project to expand protected areas[27] to at least 30 per cent of the world's land and ocean by 2030 was agreed at the COP15 meeting of the Convention on Biological Diversity, and became a target of the Kunming-Montreal Global Biodiversity Framework. This project, known as 30 by 30 - is seen by the UN as the cornerstone of a successful deal to protect nature (CBD, 2022).
However, while the global coverage of protected areas has increased[28], the overall loss of biodiversity continues unabated, raising doubts as to the real effectiveness of these areas (Bhola et al., 2021). Furthermore, these initiatives were strongly challenged for not taking into account local populations who could directly be affected by placing 30% of the earth by 2030 (30 by 30) or half the earth (Half Earth) under protection. Indeed, protected areas are premised on separation between humans and nature. Although the degrees to which humans can access resources vary considerably across the six distinct categories of protected areas, the SDG 15 indicators do not specify what categories of protected areas are to be championed, or how they are to link to lives and livelihoods. This leaves the door open for implementing protected areas in the name of SDG 15 in ways that do not recognize sufficiently their impact on lives and livelihoods. As a result, the expansion of state-owned-and-managed protected areas can come at the expense of local communities, by preventing them access to food and traditional spaces, despite Aichi Target 11's requirement of equitable management of protected areas (Krauss, 2022).

Furthermore, SDG 15 has no mechanisms to protect and respect indigenous and local communities' lands, rights and knowledges. Its indicators and targets – all quantitative – do not mandate listening to those whose lives and livelihoods are immediately affected by conservation-related decisions. There is equally no indicator for measuring the individuals affected by its interventions, and the impacts that result from them. Besides, the notion of "Indigenous peoples" does not appear in the environment-related SDGs of the 2030 Agenda (only in SDG 2 – Zero hunger and SDG 4 – Quality education), and SDG 15's only mention of "communities" comes in 15.c, in reference to building communities' capacity to combat wildlife poaching. These observations raise broader questions about the degree to which SDG 15's ideas of conservation are inclusive and people-centered (i.e. a conservation mode giving voice to those affected by conservation and advancing human well-being) (Krauss, 2022).

Fundamental role of indigenous people
Knowledges and efforts of Indigenous peoples in conserving land often go unrecognized (Tauli-Corpuz et al., 2020). Indigenous peoples manage fishing, gathering, terrestrial animal harvesting and other uses of wild species on more than 38 million km² of land, equivalent to about 40% of terrestrial conserved areas, in 87 countries. Indigenous lands contain about 80% of the Earth's biodiversity while making up 20% of the world's territory and have been effective at limiting deforestation and environmental degradation, partly more so than protected areas, underscoring the need for conservation support their rights and recognize their contributions (Sze et al., 2021).

- The case of genetic resource sharing

This third objective of the CBD (i.e., ensuring the equitable sharing of the benefits derived from the use of the resources represented by biological diversity) emphasizes that, in order not to hinder the development of science and technology, States must guarantee access to genetic resources to any interested scientist or industrialist. In exchange, local populations must give their "free, prior and informed consent", and share in the benefits of future discoveries. This can be in the form of money,

[27] A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN Definition 2008).
[28] The average percentage coverage of areas essential for biodiversity by protected areas has risen from over a quarter in 2000 to almost half by 2021 (United Nations, 2022).

such as a percentage of royalties on future patents, in the form of local investment and/or technology transfer, or any other form that satisfies both parties. While this may sound like a win-win situation, the reality is quite different. The various agencies and administrations are not trained in the subtleties of the use and circulation of genetic resources, nor in the complexities of intellectual property law, which is constantly evolving and often radically different from the categories of thought used locally. As for the local populations, it's easy to imagine how far removed their worldview must have been from the reasoning and attitudes of the teams arriving there. Nevertheless, they were quick to learn this new language, at least some of them, with the help of NGOs. Playing the intellectual property game is often the only way for these peoples to survive (Tordjman, 2021).

Indigenous people's rights undermined by the protected areas target

Joan Carling is the global director at Indigenous Peoples Rights International and has been involved at COP15 on a political level. I met her at a HLPF side event (July 2023).

In an interview[29], Joan Carling stressed that the target to protect 30% of the world's land and ocean by 2030 has become the primary concern of indigenous people. Indeed, as national policies relating to protected areas are very exclusionary, they fear evictions and prohibition to their sustainable livelihoods. Indigenous call it "fortress conservation". It will also undermine their traditional knowledge because then they cannot even make use of it and teach the younger generations if they are not allowed into these conservation areas. Recent flashpoint cases of evictions to create protected areas include the Democratic Republic of Congo, Tanzania, Kenya, Nepal and India. Indigenous leaders, scientists and some conservation organizations are sounding the alarm that other targets also need to be prioritized such as an effective recognition of local communities' land rights and the protection of their access to resources.

Joan also raised the issue of benefit-sharing (e.g., of genetic resources) to which they claim the recognition of full and effective participation of indigenous people. The common demand of communities is to have direct access to financial support for their conservation management work and their livelihoods because most funds are not currently paid to them currently. They also ask for more transparency and for simplified procedures. Indeed, through protected area mechanisms, the UN imposes Indigenous people to operate in the Western view which require highly complex legal and technical skills (on Indigenous land rights for instance). One of the other limitations for them is during negotiations (e.g., very limited participation in working groups, Indigenous proposals are presented by the States and therefore require their support…). Facing the UN, Indigenous peoples are totally powerless and subject to its rules that disadvantage them at every level.

Moreover, according to Joan, there is still a refusal by many states to legally recognize indigenous' rights, lands, territories and resources, in spite of the fact that it's scientifically proven that the territories of Indigenous peoples are better managed and have better biodiversity compared to those by states. This is, she said, because some of the states are also looking into what are the other uses of their territories and its resources.
For example, transitional mining as a response to climate change [the mining of high-tech metals that clean energy technology relies on], uses nickel and lithium that is found in our territories.
In short, instead of projecting half Earth (50% protected areas on Earth), it would perhaps be more relevant for the UN to focus on the effective protection of the rights and lands of Indigenous peoples by restricting the grabbing of their land by the West (especially since scientific studies prove that Indigenous peoples and their territories are a successful alternative than current protected areas for conserving biodiversity).

[29] https://news.mongabay.com/2022/12/all-the-issues-impacting-indigenous-people-at-cop15-qa-with-joan-carling-and-ramiro-batzin/

In sum, UN's optimistic discourses on SDG15 progress have to take cautiously. The positive advances in terms of conservation noted by the UN (i.e., the sharing of genetic resources and the implementation of protected areas) benefit the West but often disadvantage Indigenous peoples. Even if, in theory, there has been a growing recognition of the important role of indigenous people and community-led conservation efforts (Garnett et al., 2018), SDG15 fails in practice to acknowledge interdependencies and connections between humans and nature (Krauss, 2022).

There is serious doubt whether SDG 15, as currently constituted, can live up to its objectives of protection, the latter can only be truly effective if it takes into account both nature and humans. That is why there is an urgent need for conservation that is more inclusive of diversity, including diverse knowledges and contributions, and has less agenda-setting by few, largely male - largely Global Northern voices. The voice of Indigenous Peoples must be heard and listened to by the UN far beyond the songs they share with us during major events at Headquarters.

1.3 Green economy – the new oxymoron?

"Nowadays people know the price of everything and the value of nothing.", Oscar Wilde

"Green economy" (or "green growth") has become the new buzz word in UN's sustainability discourses, particularly in light of the Rio+20 Conference. Seen as a win-win solution to both promoting economic growth and conservation actions[30], politicians have set their hopes into this concept which is seriously changing the way nature is protected (Brand, 2012).

Green economy (or blue economy) refers to the idea of valuing nature (or oceans) in economic terms. Nature thus becomes "natural capital[31]" that generates flows of ecosystem services[32] that, in turn, can be economically evaluated and marketed. In this paradigm, the ecological crisis is presented not as a basic structural problem but as a boon, and economic growth as necessary, virtuous and saving (Tordjman, 2021).

"Putting a value on our natural capital is needed since markets everywhere are still failing to incorporate the true value of nature" (UN (HLPF), 2022)

The integration of biodiversity conservation into the neoliberal economic logic is based on the understanding that putting a price on nature will allow us to become aware of the value of nature and make informed decisions to better protect it. If we stick to this assertion, the monetary valuation of natural or environmental assets indeed proved useful, as early as the 1960s, as part of cost/benefit analyses designed to locally help public decision-makers. What's new, however, is a much more macro-economic vision, which emerged in the wake CBD (1992)[33], to arrive at a global assessment of the value of natural capital worldwide (Tordjman, 2021).
Gradually, and with the blessing of the UN, biodiversity conservation is being integrated into market mechanisms, with the emergence of new devices sometimes referred to "nature-based solutions", such as biodiversity offsetting and payments for ecosystem services. This new conservation perspective, driven by faith in market mechanisms, advocates for collaboration with resource users and economic players, particularly from the private sector. In addition to be attractive for relevant socioeconomic actors, the green economy approach is nowadays endorsed by many major conservation organizations, for example the World Wildlife Fund or Conservation International (Tordjman, 2021; Turnhout et al., 2013).

[30] The United Nations Department of Economic and Social Affairs (UNDESA) sees that the concept of a green economy "embodies the promise of a new development paradigm, whose application has the potential to ensure the preservation of the earth's ecosystem along new economic growth pathways while contributing at the same time to poverty reduction".
[31] Natural capital is defined as a "stock of materials and information generating a flow of goods and services that promote human well-being".
[32] The concept of ecosystem service is defined by the Millennium Ecosystem Assessment (MEA) in 2005 and is defined as "all the benefits that human societies derive from ecosystems". They are classified according to four types: provisioning services, which represent all the goods taken directly from natural environments (hunting, fishing, forestry, etc.); regulating services, which correspond to ecological functions from which we derive certain indirect benefits (regulation of pollution, disease, the water cycle, climate stabilization, etc.); cultural services, which refer to the various non-use values that can be attributed to natural environments (recreational, aesthetic, educational, spiritual or moral values, etc.); and finally, supporting services, which do not represent services in the strict sense of the term, but are the prerequisite for the production of all other functions (primary production, soil formation, etc.).
[33] What counts in the dominant approach at the time of the Rio Convention is not only biodiversity as a whole, but above all the elements that make it up, the genetic resources that can be individualized and appropriated.

TEEB
One of the programs which is taking a central place in the international system for the protection of biodiversity is The Economics of Ecosystems and Biodiversity (TEEB, 2007-2011)[34]. The TEEB project aims, in line with the approach to nature protection in terms of natural capital and ecosystem services, to "make the values of nature visible" to "integrate them into decision-making processes for all levels". In 2010, TEEB produced a very influential report, presented at COP 10 of the CBD in Nagoya, and available in four versions: one setting out the basic principles and the other three intended for decision-makers who wish to "green" their practices, in the respective areas of national and international policies, local and regional policies and business. The vocabulary used – "biodiversity bank", "currency", "exchange rate", "equitable exchange" explicitly testifies to the financial perspective extension to the protection of natural environments. Its management is entrusted to Pavan Sukhdev, a former banker at Deutsche Bank who subsequently became president of the WWF in 2017.

However, while the green economy approach is seen by the UN as an improvement over the conventional neo-liberal economic model, its mechanisms remain in reality fundamentally questionable and open to criticism on a number of counts (i.e. ecologically, socially and philosophically).

1.3.1 Green economy from an ecological point of view: protection or destruction?

"Regrettable as it may be, it is highly likely that the world's biodiversity concerns will ultimately be reduced to a cost-benefit analysis", Brian H. Walker

The commodification of nature translates nature's diversity into a single measure, a "currency", to be included in exchange systems. This conception of nature reduces biodiversity to a series of fragmented, inert elements. This simplification can be detrimental in the field, as it overlooks the great complexity of biodiversity, in particular the relationships and interactions within ecosystems, which are fundamental from a conservation point of view (Turnhout et al., 2013).

Furthermore, when biodiversity is translated into a singular measure or currency, it may thereby enter into systems of banking and exchange and become the credit for the ongoing creation of debits, which, simply put, are acts of biodiversity destruction or loss. Thus, and this is particularly clear in offset schemes, biodiversity becomes the capital upon which future biodiversity loss or destruction can be exchanged (Robertson, 2004). This system, just like carbon offsetting, is particularly vicious as it allows to continue human activities that have a negative impact.

In fact, the reason for protecting nature in this paradigm is no longer ecological but financial. The question is not "what to protect to ensure nature's survival and regeneration?", but "what to protect to make it economically / fiscally advantageous?". That is why protected areas today are positioned not where they protect best, but where they cost least (Venter et al., 2018) - which may explain why biodiversity continues to plummet while the number of protected areas increases (Devictor, 2021).

In short, as conservation is becoming market-dependent, it may will end up enhancing accelerated protection – just as much as exploitation, for example when the price of an ecosystem service drops below a certain threshold (Turnhout et al., 2013). The market environmentalism is totally unconcerned with the ecology of species or ecosystems, and ignores the question of the causes of destruction. All its mechanisms divert conservation issues in favor of a development logic in which biodiversity is only an adjustment variable (Devictor, 2021).

[34] https://teebweb.org/

1.3.2 Economic evaluation fails to represent all the values at stake in the protection of biodiversity

The notions of natural capital or ecosystem services only designate the portion of the natural world that is useful to human beings. It therefore only encapsulates the anthropocentric values of nature (i.e. values strictly focused on human interests) and neglects to take account of essential values such as non-anthropocentric values (intrinsic value among others[35]) (Maris, 2015). This vision can have harmful consequences from an ecological issue: by focusing conservation activities on ecosystems and species that provide the most benefits to humans risks the exclusion of keystone species that play a vital role in ecological processes and resilience to disturbances (Bhola et al., 2021).

What's more, if only anthropocentric values are taken into account, monetary evaluation on natural elements raises many questions of method and feasibility: how are these prices obtained?[36] If we assume that a cedar tress is not directly useful to us, how much does this tree cost? How can we monetize an irreversible loss such as the disappearance of the African elephant, knowing that in these strictly economic approaches, the cost of replacing an extinct species is meaningless? This reasoning leads us to question the relevance and the meaning of such an approach, as highlighted by the economist Helen Tordjman with the example of pollination[37]:
"It makes no sense to reduce pollination to the direct services it provides to mankind in the form of crop pollination. Insects and birds pollinate not only crops, but much of the planet's plant life. What would be the cost of a life without plants? It's infinite, because life on Earth would simply disappear."(Tordjman, 2021)

All these arguments ultimately gives rise to an ethical questioning, often excluded from debates in economics: should we give a price to nature? (Figuières & Salles, 2012; Maris, 2018a)
As Sullivan (2010) pointed out*, "markets do not in and of themselves produce moral behavior: Markets do not care if rainforests fall, if glaciers shrink, or if the values of indigenous cultures are displaced or captured in the service of capitalism. When nature [. . .] becomes converted into the dollar sign, it is the dollar not the nature that is valued."*

1.3.3 Privatization of conservation issue: towards a technocratic and managerial protection of nature?

By entrusting companies with the mission of protecting nature, the ecological question is transformed into a managerial and technocratic problem (Devictor, 2021). Nature, or rather its ecosystem services, are counted, evaluated, governed and marketed throughout the world, according to the well-understood interests of economic actors. The political issues raised by the protection of nature leave room for management based on expertise and managed by the market, effectively excluding any form of democratic and citizen participation. Such "governance" of biodiversity therefore tends to elevate the authority of science and technocracy above others. Here, decisions are usually made by powerful elites and technical experts (Tordjman, 2021). In addition, through a strongly utilitarian approach to Western conservation that focuses primarily on modern science and technology, the green economy approach selectively privileges certain aspects of scientific knowledge while ignoring the plurality of knowledge on biodiversity. As a result, the importance of cultural diversity and ethical and spiritual values

[35] Three types of values are especially incommensurable with economical profits: the value of legacy, which refers to the obligations of transmission of the natural heritage originally handed down to us; the value of existence, which refers to the moral consideration of interests other than those of the human beings; and the value of transformation, which refers to the capacity to examine and to criticize our preferences in order to include them in a rational and coherent vision of the world (Maris & Revéret, 2009).
[36] In addition, this process induces numerous biases as one of its principles is to respect the preferences of economic agents (it is easier to put a high price to a lion than on an insect, even though its ecosystem functions are fundamental).
[37] Insect pollinators, for example, are estimated to provide services worth US$153 billion per year to global agriculture (Gallai et al., 2009).

(especially in relation to other humans and the rest of nature) is largely underestimated (Kothari et al., 2014; Turnhout et al., 2013).

> Not surprisingly, there is nowadays a growing number of close partnerships between certain destructive sectors (such as the mining and oil sectors) and major nature protection NGOs. For example, WWF, Nature Conservancy and Conservation International have accepted several million dollars from Coca-Cola, IKEA, HSBC, Shell, Chevron, Nissan and Monsanto. This is accompanied by a progressive occupation, by business leaders or bankers, of positions of responsibility in environmental organizations (The Nature Conservancy, with Marc Tercek at its head until 2019 after having been manager of Goldman Sachs; or as mentioned previously, Pavan Sukhdev, former banker at Deutsche Bank, who became president of WWF in 2017) (Adams, 2017; Devictor, 2021).

Furthermore, the management of conservation issues by the private sector results in a concrete privatization of land. Ecological compensation mechanisms and payments for ecosystem services lead in particular to massive purchases of land by transnational corporations and institutional investors. This growing phenomenon of land grabbing at the global level leads to the expropriation of local and indigenous communities and raises great controversies (see below box on REED+ program) (Tordjman, 2021).

In the face of this situation, promoting a green economy thus should require – at least – strong regulatory frameworks. However, at national and international level, financial and economic policies are generally more powerful than environmental policies (Elsässer, 2023). The green economy approach remains thus excessively soft towards big private business and finance capital, and dependent on their goodwill (i.e., voluntary measures) not only to make their activities sustainable, but also to provide financial support for the transition to sustainability. There is virtually no mention of the need to reign-in irresponsible corporate behavior towards the Earth and people, through legal and regulatory mechanisms (Kothari et al., 2014).

> **Zoom on the REED+ program**
> The REDD+ Program (Reducing Emission from Deforestation and Forest Degradation, 2005) is a UN program for Payment for Ecosystem Services aiming at reducing deforestation in tropical areas. This is a system borrowing both from carbon markets and the principle of offsetting. The idea is to fight against deforestation by allocating GHG emission credits to forest owners who maintain them as they are rather than razing them for industrial agriculture or logging. These credits pay for the sequestration of carbon by forests, therefore the tons of CO2 which will not have been emitted since the forest will not have been affected.
> The mechanism was then designed to encompass afforestation and sustainable forest management activities (hence the + attached to REDD). Therefore, it is possible in certain cases to compensate for the destruction of a tropical forest with a eucalyptus plantation, since the forest is only considered as a "carbon sink": as long as what is emitted somewhere is absorption elsewhere, the overall quantity of CO2 does not increase.
> After around fifteen years of existence, the results of this system in terms of deforestation and benefits for local populations are clearly negative. Indeed, the "pseudo-forests" such as eucalyptus monocultures do not manage to absorb enough CO2 and also make the soils sterile[38].
> In addition, REDD+ contributes to the global phenomenon of land grabbing and expropriation of farmers and indigenous populations. Big environmental NGOs like the WWF or The Nature Conservancy believe that carbon sequestration by forests is an objective that legitimizes the expropriation of Indigenous peoples. However, it has been shown several times that these preserve forests better than these new devices. There is therefore no reason to chase them from their land. This phenomenon, called "greengrabbing", is in line with what we have mentioned regarding the creation of protected areas, which are emptied of their traditional inhabitants under the pretext of conservation (Tordjman, 2021).

[38] https://earth.org/carbon-offset-schemes/

> Like many other UN mechanisms, REDD+ systems are so complex that the people concerned rarely have the opportunity to enter into discussions as equals. The “free, prior and informed consent” normally required is almost never actually requested. For Alain Karsenty: “REDD+ is an instrument of incredible complexity which primarily delights consultants and expert firms” (Karsenty, 2015).

The UN thus continued faith in market mechanisms, despite evidence that they do not benefit nature protection, but also run counter to the objectives of equity and justice.

1.4 Anthropocentrism and dualism at their paroxysm

The handling of environmental issues by the UN has been marked from the start by an undeniable recent move on human issues. The Brundtland Report of 1987 defined sustainable development as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." This normative principle is therefore fundamentally anthropocentric[39], since the exploitation of nature by human is limited only in order to ensure the satisfaction of a maximum set of sustainable human interests (Maris, 2018b). Likewise, although the CBD signed in 1992 recognizes in the first sentence of its preamble the intrinsic value of nature, human concerns take over from the first article: the issue lies in the conservation of biodiversity but also and above all in "the sustainable use of its elements and the fair and equitable sharing of the benefits arising from the exploitation of genetic resources" (CBD, 1992). The Rio texts subordinate the protection of nature to the requirements of development. The interesting value is discarded; it is no longer a matter of sustainable management of biodiversity, that is to say its economic exploitation (Devictor, 2015; Larrère & Larrère, 2018).
Thus, the environment (the term nature does not even appear in the definition) is considered in a purely instrumental way, reinforcing a dualistic framework of thought between humans and nature. Thinking about the ecological crisis through the prism of sustainable development therefore means persisting in a relationship with the natural world that radically separates human beings from their environment. On the one hand, there are humans, present or future, who are rational beings and moral agents; and on the other, at their disposal, the natural world, provider of resources and services. Consequently, the normative framework in which sustainable development takes place is unsuitable and ineffective in terms of protecting biodiversity, because it does not encourage us to change our conception of nature and therefore our way of acting towards it. On the contrary, it supports the utilitarian and reductionist vision of nature inherited from Modernity, which is at the origin of the overexploitation of resources and environmental degradation (Maris, 2018b).

With the promotion of the green economy, the UN has not learned its lesson from failures of implementing Sustainable Development of the past decades. By putting a price to biodiversity elements, nature becomes disembodied or dematerialized, which reinforces this conceptual separation of humans from nature and perpetuates the dominant vision of a biodiversity that can be appropriated and monetized. In this, the concept of the green economy is particularly absurd and dangerous, because we now think of nature protection within the same dominant political and economic frameworks that are at the root of the current ecological crisis. There is no questioning the system: while ignoring fundamental planetary limitations, the new conservation approach embraces economic growth and continues to promote large-scale global trade. Unbridled consumerism in the global North is also not tackled head-on (Kothari et al., 2014). As highlighted by the philosopher Virginie Maris:
"At a time when it is becoming apparent that the current economic crisis has to a great extent been triggered by a society of (over-) consumption, accumulation and individualism – all consequences of the neo-liberal ideology that can trace its roots back to the founders of capitalism – it may be wise to question the relevance of adopting the vocabulary, the world view and rationality of the very movement that has caused the problem, so that we can attempt to resolve it." (Maris, 2015)

Integrating conservation into the dominant economic model deprives us of the opportunity to challenge this model at a more fundamental level. The biodiversity crisis should encourage us to re-evaluate our values and representations, and to question the foundations of modernity as much as Western hegemony. What humanity is facing is not an accounting problem, but a real moral challenge. And this is where the UN has a real responsibility. By focusing on integrating conservation into the dominant economic model, the UN is eclipsing an essential tool for dealing with this crisis, a truly philosophical reflection on human's place in nature: "Do we want to continue down the path of domination and systematic

[39] An anthropocentric view considers that only humans can be moral patients. In this view, concern for nature is justified only insofar as it is useful to man. Even so, protecting biodiversity can be a moral duty within this framework, in the sense that it is a resource for humans that must be preserved.

appropriation of every form of life on Earth, or are we ready to think about a new societal model based on respect for and harmony with the living world?". (Maris, 2015, 2018a; Maris et al., 2010).
There is therefore a real ecological and philosophical danger in allowing the idea to creep in everywhere that nature can be protected by current economic and financial mechanisms, and yet it is this trajectory which supports the UN in supporting the green economy and sustainable development as a whole.

1.5 Review of the first part: The way the UN is handling the socio-ecological crisis is erroneous

Understanding the crisis from a systemic point of view
The ecological crisis is the consequence of a non-harmonious relationship between humans and nature (or the biosphere, the planet - in short, their living environment). Human activities destroy nature and transform it into waste (pollution of the earth/air/water – faster than it can absorb and regenerate. Consequently, the ecological footprint (i.e. the impact of humans) exceeds the biocapacity (i.e. the capacity of the earth to "withstand" impacts), which induces an exceeding of planetary limits and causes an imbalance of the Earth system. This instability impacts all aspects of the system (ecological but also economic and social since the anthropic sphere depends directly on the natural sphere). We are therefore witnessing a **multifactorial and systemic crisis** which threatens the very conditions of habitability of the Earth.
For more details, see the fundamental work of Arthur Keller, engineer in the dynamic of complex systems[40].

This report, through an in-depth analysis of the SDGs from a conservation perspective, shows that the UN is missing the point in the way it deals with the socio-ecological crisis, for mainly 4 reasons:

- **The 2030 Agenda, through the SDGs, addresses the issues independently of each other** (no links between socio/economic/ecological issues, nor links between the different ecological issues)**, whereas they are complex multidimensional problems which interact with each other.**

The UN must therefore adopt a real systemic vision (i.e. understanding the issues in their totality with all the interactions – positive or negative feedback loops) and, consequently, consider systemic solutions, otherwise we risk continuing to aggravate the problems by trying to resolve them one by one (this is the case for example with the excessive use of technologies used to solve one aspect of the ecological crisis).

- **The SDGs only treat the superficial symptoms of the crisis when they must tackle the problem at the root**

There is confusion between causes and consequences. Climate change, erosion of biodiversity, pollution, etc. are not the causes that must be resolved, the ills that should be treated. These are only the consequences, the symptoms of a much deeper illness: us, our contemporary "Western" civilization which struggles to live in harmony with the biosphere. As long as the UN focuses only on these superficial symptoms (i.e. preserving nature) and not the real problem (i.e. changing western civilization), we will be missing the point. Only focusing on preserving nature without changing our way to think and act toward nature will be meaningless: what's the point of trying to save a species if we remain in a paradigm that kills one every 20 minutes? Conservation is ultimately more a human problem than a nature problem.

- **The UN still advocates economic growth at the expense of the living world**

Economic growth (whether green, sustainable, with efficiency gains and attempts at decoupling, etc.) is incompatible with the long-term preservation of the natural world. More and more studies, as seen before, prove that infinite growth (basic principle of capitalism) is impossible in a world with finite resources. Sustainable development – grow economically in an ecological way – is a myth. We wouldn't be in this situation otherwise. It is therefore time for the UN to review its priorities: putting the economy at the service of life (human and non-human) and not the other way around. Nature must now come first.

[40] See for instance this brilliant conference with A. Keller and A. Barrau
https://www.youtube.com/watch?v=EYGvfGyqDDY&t=2430s&ab_channel=AurelienBarrau

Indeed, the erosion of biodiversity (or rather "the annihilation of the living world") must finally be understood as the greatest catastrophe facing humanity and must be considered as the primary challenge since this threat conditions 1) all other ecological issues (only a restored nature will ensure its functions and therefore regulate the climate, the water cycle, sol fertility, etc.) and 2) the survival of humanity and therefore all socio-economic issues (for example the question of human rights or education simply no longer make sense in a world that has become unlivable). In short, if we are not able to deal with this biodiversity collapse, our ability to deal with all the other issues is reduced to nothing. So as long as the UN does not establish respect for living things (humans and non-humans) as the first, fundamental and immutable principle to guide the transition, then the latter will be an assured failure.

- **Finally, the solution advocated by the UN is essentially technical, while it is above all philosophical, moral.**

The fundamental problem, as said previously, is our inability to live in harmony with the living - in part because of the development of a society based on technology which, used without conscience or wisdom, has allowed and still allows us to increase tenfold our power to destroy nature. So, the solution is not technical, it is much deeper than that: it is philosophical. We must change our ways of life, of consuming and producing, but even more fundamentally, we must question our responsibilities and our duties towards nature, our role and place as human beings among the living. We must question the way we think about and perceive nature, because the way we consider nature determines the way we protect it. If this crisis must be, in certain aspects at least, positive, it is undoubtedly the opportunity that it offers us to radically rethink our relationship with the natural world. It is therefore time for the UN to focus on nurturing harmonious human-nature relationship and on the ethical and moral questions that this raises.

Hence, more than protecting nature per se, we must review our relationship with it. The issue therefore goes well beyond SDG 14 or 15. A deep and radical redefinition and reorganization of the SDGs from a systemic and socio-ecological point of view is fundamental.

2 Rethinking SDGs through the socio-ecological paradigm

2.1 Paradigm shift

The extermination of biodiversity and, more generally, the multifactorial and systemic crisis we face is a civilizational problem that requires a paradigm shift[41]. The adjustments recommended by the UN (technological, managerial solutions, etc.) are no longer enough. Structural changes are needed (the famous "transformative change" that the UN calls for in its speeches). We therefore need well-founded and rational reasoning, of course, but above all critical, innovative and disruptive thoughts, capable of considering radical solutions to tackle the roots of the problem ('radix', in Latin, means 'root'). It is time for the UN to defend engaged and ethical thinking so that individuals and peoples can become aware of biased narratives and develop a critical understanding of these issues – the UN must encourage a questioning of the current system.

2.1.1 Activating the right levers

If the UN fails having "transformative change", it's because it is currently content to activate the easiest but least powerful levers, by modifying the parameters of the system (as seen before, the UN makes adjustments in the system by putting in place incentives measures or managerial, economic and technological solutions, that only tackle the consequences). It is now urgent for the UN to focus on the less obvious but potentially much more powerful levers, i.e. those that enable a far-reaching change, a paradigm shift. Changing a system in depth requires changing the mindset that gave rise to it. As Einstein said, "You can't solve a problem by using the way of thinking that created it". However, the more powerful a lever is, the harder it is to activate, because the more the system will resist it (in concrete terms, the major economic and political powers that maintain this system have no interest in changing it).

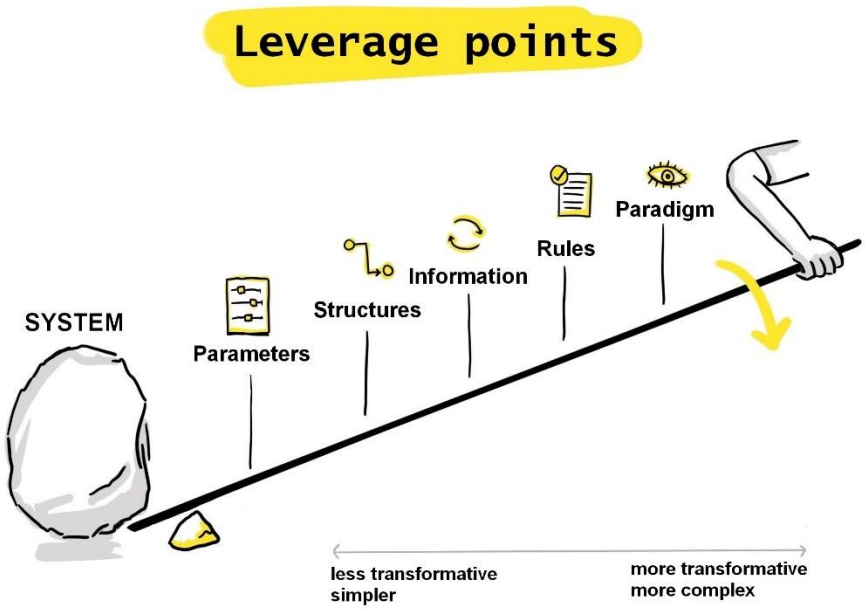


Figure 3: Leverage points for tilting a system
Source: Mathieu Dardaillon (adapted from the work of Donella Meadows)

[41] A paradigm is a representation of the world, a way of looking at things, a coherent model of worldview that rests on a defined basis.

2.1.2 A transdisciplinary approach

To develop the new SDGs from a systemic perspective, the UN needs to adopt a transdisciplinary approach to decompartmentalize issues and disciplines, and re-articulate opposites (which are in fact complementary), such as theory/practice, science/philosophy, natural sciences/social sciences, sensible/intelligible, reason/emotion, head/body/heart, local/global...
In addition to biologists, the UN also needs to call on more environmental philosophers, anthropologists, sociologists and conservation psychologists - to understand the causes of our inaction and inability to protect nature, and to identify the psycho-social levers that could lead us to change the way we look at and feel about the living world...

The UN also needs to call on inspirational (French why not) thinkers. To name but one:
- Arthur Keller, engineer in complex systems dynamics, to understand the socio-ecological crisis from a systems perspective
- Aurélien Barrau, astrophysicist and philosopher, to understand that the living is the most important issue, and that it's a philosophical issue, not a technical one.
- Timothée Parrique, ecological economist, to understand how degrowth is the only viable economic model for tackling the socio-ecological crisis
- Virginie Maris, environmental philosopher, to understand our moral stance towards living beings
- Helen Tordjman, economist, to understand the issues behind the financialization of nature
- Philippe Bihouix, mineral resources specialist, to understand why technologies are not the solutions
- ...and so many others who bring meaning back, shed valuable light on the crisis and ways to overcome it.

2.2 Transforming humankind's relationship with nature is the key to a shift of paradigm

The restructuring of the SDGs should be, according to me, guided by two major concrete principles:
1) limiting our hold on the planet and 2) reconnecting our western society to nature. These two approaches aim, in a systemic way, to tackle not only the direct factors of nature's extinction but also the underlying causes, both in a pragmatic, technical way (reviewing the economic model and the human production and consumption patterns, ...) and in a philosophical way (rethinking our moral and ethical system that guides our behavior).

2.2.1 Stopping the destruction of the living world: embedding the SDGs in a degrowth paradigm

Growing evidence in the field of ecological economics[42] suggest that it is possible to improve quality of life, restore the living world, reduce inequality and improve meaningful jobs – all without the need for economic growth (See Parrique for a review, 2022). In that regard, the UN must dare to let go of empty, breathless capitalism and set the SDGs in a paradigm of degrowth to return below planetary limits and ensure a peaceful future for society.

Indeed, degrowth is not recession (this, will happen if we stay in this growth paradigm). Degrowth is a social project aimed at reducing production and consumption in wealthy countries in a planned and democratic way, to reduce environmental pressures and inequalities, while improving quality of life (Parrique, 2022). In addition, only this model will make possible to reduce our stranglehold on the land of indigenous people, leaving them to flourish (instead of "helping them develop" in a western way).

[42] Not to be confused with environmental economics, which advocates economic growth

While some reports begin to mention the model of sober and prosperous degrowth as a promising alternative (e.g. Harmony with Nature, 2020), the UN remains generally reluctant about degrowth (this term is nowhere mentioned in the Agenda 2030). The World Trade Organization, for its part, presents degrowth as "controversial" in its 2022 report (*Climate Change and International Trade*, 2022).

Advances in ecological economics and movements to transform the neoliberal economic system also emphasized the need to explore alternatives to Gross Domestic Product (GDP). GDP alone did not guarantee improvement to living standards, nor did it take into account who benefited and who was left out. In a world of growing division and inequality, it is more important than ever for the UN to focus on broader measurements of health and well-being, not just wealth (see the work of economist Eloi Laurent for more details). Among the alternatives that already exist, we can quote The Canadian Index of Well-being or the Gross National Happiness Index of Bhutan. Furthermore, the former Prime Minister of New Zealand, Jacinda Ardern, unveiled a well-being budget in early 2019 (Harmony with nature, 2020).

In the Agenda 2030, target 17.19 states: "By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement Gross Domestic Product and support statistical capacity-building in developing countries." The term "complement" here means that GDP is to remain the dominant indicator of progress, whereas the phrase "by 2030" effectively shelves the problem until 2029 (Hickel, 2019).

2.2.2 Restoring our relationship with the living world (regenerating the living world): make the reconnection of our Western societies to nature a priority that transcends the SDGs

Increasing evidence show that only a society whose people are connected to nature (i.e. who feel integrated and linked to the natural world) is able to take care of nature while doing well for itself (e.g. Rosa & Collado, 2019). Nevertheless, over the past few decades, western society has become increasingly disconnected from nature: people have less and less contact with nature as a result of industrialization, urbanization, digital technology, etc. This phenomenon, known as the "extinction of the experience of nature", could explain the origin of the ecological crisis (e.g. Soga & Gaston, 2016). Consequently, rather than simply advocating the protection of nature (e.g. creating protected areas or managing forests sustainably), the UN must, through the SDGs, instill a dynamic of reconnecting our societies to nature.

- <u>Rediscovering the different forms of relationship we can have with nature.</u>

Reconnecting people with nature requires going beyond the material and economic relationship and recognizing and nurturing a multitude of relationships: experiential (being in contact with nature), emotional (i.e. giving pride of place to the affects), cognitive ("connaître pour reconnaître") and, above all, spiritual, in order to arouse a sense of unity and communion with nature (Ives et al., 2018).
The predominantly rational approach to the concept of nature, favored by the UN, tends to overshadow or even delegitimize these dimensions which arouses senses and feelings, so that "we think but we don't feel". And yet these are essential in generating a desire to protect nature: "We only defend well what we have learned to love" says the botanist Francis Hallé (2021). For the scientist and philosopher Vincent Devictor, "it has become necessary and urgent to throw overboard the anesthetics of thought, values and emotions. We act badly if we think badly, and we think badly if we feel nothing" (Devictor, 2015). In this sense, many models of thought within contemporary environmental ethics[43] adopt a critical attitude towards a "purely scientific" interpretation of nature (seen as a collection of simple objects subject to general natural laws), and propose alternative approaches in which nature is conceived as "a set of relationships in which humans are included" (cf. in particular the work of the philosopher Catherine Larrère (e.g. Larrère & Larrère, 2018). Environmental ethics therefore emphasizes the many ways in which humans are bestowed by nature with types of pleasure, joy, wonder, and even bliss and reverence.

[43] Environmental ethics is a mainly normative discipline and discusses the way people should behave and the values people should hold towards nature.

This eudemonic perspective (i.e. the search for overall meaning in life, through a sense of fulfillment and accomplishment in human and non-human existence - Aristotle) gives thus a new and relevant axis on which the UN should inspire its redefinition of the SDGs.

- Environmental ethics: the UN must move from an anthropocentric to an ecocentric moral stance

The Agenda 2030 makes no mention of the need to protect the natural world for its own sake, or to recognize our duties and responsibilities towards it. In short, nothing tells us to change our moral and ethical assumptions. And yet, this is the very root of the problem. Through the SDGs, nature has been fragmented, compartmentalized and objectified, reduced to its instrumental - and now economic - value. The UN adopts an anthropocentric perspective taken to the extreme, the result of a disconnect between our contemporary Western societies and the living world.
As we have seen, the anthropocentric motivation ("we must protect nature because it serves us or because it can be economically interesting") is insufficient and even detrimental to respecting and living in harmony with nature. The UN must therefore question the utilitarian conception inherited from Descartes, which presents human "as master and possessor of nature", and contribute to humbly rethinking our place in the world. An enormous shift in consciousness is needed: "the Earth does not belong to us, We belong to the Earth". From now on, the UN must claim an ecocentric (or Earth-centered) moral position[44]. True consciousness of the need to respect nature will not come from prizes, data or technological innovations, but from the feeling that we are deeply linked to nature, not only from a physical/material point of view, but also from a spiritual and philosophical one.

UN initiatives to restore human-nature relationships
UNESCO implemented some initiatives aiming at transforming and rebuilding positive relationships to link and connect humans with nature and biodiversity, notably with the Man and the Biosphere (MAB) program[45]. MAB is an intergovernmental scientific program which, by creating a dynamic and interactive network of "biosphere reserves", aims to improve people's livelihoods and safeguard natural and managed ecosystems (World Heritage, 2020). The UN also created, at the instigation of the Plurinational State of Bolivia, the "Harmony with Nature"[46] that commends all efforts to develop and implement an ecocentric worldview. Since its creation in 2009, the UN has hosted an annual dialogue, during which spokespersons address the UN General Assembly on key issues concerning the relationship between human beings and nature. However, these initiatives remain isolated and focus primarily on Indigenous populations when they should be more strongly and holistically embodied in the entire Agenda 2030 (and focus on our Western societies).

- Be inspired by Indigenous peoples

Although the knowledge of indigenous peoples is increasingly recognized by the UN, it is rarely taken into account by political decision-makers. As for their ontologies (i.e. their worldviews), they often remain, in the eyes of western people, of the order of a singular and foreign belief that might seem meaningless. Yet we have much to learn from their philosophy of life. In addition to effectively recognizing the rights of indigenous peoples, the UN should draw on their cultures and ontologies to guide the development of a new set of ethics for Western peoples.
In effect, Indigenous peoples are the guardians of biodiversity. They don't "protect" nature per se (the concept of nature doesn't necessarily exist for them), they live in harmony with it (culture and nature are linked). They understand that the meaning of life depends on the balance of coexistence between all forms of life. This balance is based on the belief that "the law is in the Earth - it is not in human" (Harmony with nature, 2020). The practices and cultures of indigenous societies are diverse, but they share fundamental values or principles such as: respect for all life and the rights of nonhuman nature;

[44] An ecocentric vision, in contrast to an anthropocentric one, considers that all living beings (on the scale of global entities such as species, communities of living beings, ecosystems) - and not just humans - must be taken into account in our moral concerns. Here, biodiversity must be protected for its own sake.
[45] https://fr.unesco.org/mab
[46] http://www.harmonywithnatureun.org/

holistic human well-being that puts spiritual and material aspects on the same footing; diversity and pluralism; responsibility; ecological integrity and resilience; simplicity (or the ethic of 'enoughness'); and qualitative pursuit of happiness ; but also the obligation to reciprocate for what is taken, to avoid waste, to manage harvests and to ensure the fair and equitable distribution of the benefits derived from wild species for the well-being of the community… All these proposals recognize that humanity must reconnect with nature (Kothari et al., 2014).

> The Ecuadorian Constitution recognizes nature as a subject of rights and grants her this status as Pacha Mama, the Amerindian earth-goddess. What's interesting here is that these rights are not an end in themselves, but a means to achieving sumac quawsay, the "good life" in Quechua (that also can refer to "vivir bien" or "buen vivir"), characterized by harmony between humans and non-humans. In this way, we move away from the duality of the intrinsic and the instrumental, as well as from the separation between the human and nature (Article 1 of the Ecuadorian Constitution states that "we celebrate nature, the Pacha Mama, of which we are an integral part") (Larrère & Larrère, 2018).

As such, their worldviews break with the anthropocentric logic of dominant Western visions. In their conception, "nature" often includes animals, plants, Earth, humans and spirits - all linked by reciprocal kinship relationships. They do not see themselves as superior to nature, but as part of a greater whole. It is this spiritual dimension that we, in the West, have lost. Essentially, we see nature as a mere inert object, separate from the human world[47], which we can exploit at will. As long as we have this simplistic, material vision of nature, we won't perceive the vital links we have with it, and we won't feel the kind of respect we owe to the living world as a whole.

> **Appropriation, not inspiration**
> Indigenous visions of Buen Vivir have been taken up in the official discourse and policy of some Latin American countries, and consequently by agencies such as UNEP (UN Environment Programme). In 2013, in a comparative analysis of the green economy approach and the development strategies of certain Latin American countries based on these indigenous visions, UNEP asserted that there was an essential similarity between the two. UNEP is able to assert this because, in adapting these concepts into constitutional, legal or administrative provisions, these countries have either distorted their original meanings and/or combined them with other, contradictory concepts. Bolivia, for example, has proposed in its national development plan to move from a "development model based on primary exports to a model based on the Vivir Bien philosophy, which proposes the fundamental complementarities of access to and enjoyment of material goods and effective, subjective and spiritual fulfillment in harmony with nature and in community with human beings". However, the plan also proposes high GDP growth rates and continued reliance on extractive industries to generate the resources and surpluses needed for sectors such as agriculture. It is therefore somewhat disingenuous here for UNEP or other agencies to claim that the green economy approach reflects, or is reflected by, indigenous notions of well-being (Kothari et al., 2014).

- Citizen participation

The UN must also adopt a strongly cooperative and democratic approach by actively involving citizens, which is not the case in the 2030 Agenda. Unlike business, citizens are not given an active role, other than having the relevant information and awareness about sustainable development, or acquiring the knowledge and skills needed to promote it. People's role as active political actors is totally absent from Agenda 2030 (Spangenberg, 2017). Yet this is crucial: if governments cannot be mobilized, it is imperative that the UN support and passionately defend citizens (climate and nature activists), especially in their mobilizations to put pressure on the political system.

[47] The western ontology, characterized by the separation between nature and culture is called, according to the anthropologist P. Descola, naturalism

Moreover, the UN must rethink conservation issues, making them more inclusive and recognizing the important linkages between biological and cultural diversity. For example, a bottom-up (rather than top-down) approach to the implementation of conservation policies will encourage the participation and acceptance of all stakeholders, especially local communities, and thus ensure their successful implementation. The UN must therefore support people-centered conservation (i.e., recognizing the role of people as beneficiaries, participants, and stakeholders in the conservation process) and science-led ecocentrism (i.e., advocating the use of science to design conservation strategies based on ecocentric thinking), which tend to have broad support within the conservation community (Sandbrook et al., 2011). As noted above, the UN has a critical role to play in establishing a more harmonious relationship with living things in our Western societies. Rather than simply raising awareness of the need to protect nature, the UN must lead our society to develop new ways of feeling, thinking, and acting in favor of the living world.

2.3 Restructuring the SDGs: reversing priorities and put the nature first

In the current model, the UN gives priority to human (economic) development, which has allowed – relatively and initially – social progress (although uneven). Here, biodiversity primarily seen as an external variable that is essentially affected as collateral damage during human development processes. However, as biodiversity is a foundation of ecosystem processes/functions, its decline impairs the magnitude and stability of ecosystem functions that, in turn, adversely affects human well-being, so that this current model is unsustainable.

Current perspective:
Human development (+) → human well-being (+) and biodiversity (-) → human well-being (-)

By putting nature first in the organization of the SDGs, the newer perspective emphasizes biodiversity as the foundation of a system that produces human well-being via its positive effects on ecosystem function so that the model is sustainable (in a socio-ecological point of view). Here, there is a shift from the environment as externality to the biosphere as precondition for social justice, economic development, and sustainability.

Newer perspective:
Biodiversity (+) → ecosystem functions / services (+) and human well-being (+)

(inspired from Naeem et al., 2016)

This framework provides insight and evidence for policymakers and the public to be cognizant that prioritizing ecosystem health goals can serve human development objectives which we deem as key to realizing the unified plan of action for people, planet and prosperity (Reid et al., 2017).

Some study worked on a new SDG framework whereby the environmental goals, Goal 14 (life below water) and Goal 15 (life on land), are recognized as a necessary precondition for achieving sustainable development. For instance, Reid et al. (2017), presented a relevant reconceptualized SDG framework akin to a tree that places Healthy Ecosystems as the roots for five branches of development (Clean Energy, Water Security, Food Security, Lives and Livelihoods, Governing for Sustainability). See Figure 4.

Figure 4: The environnemental roots to achieving the post-2015 Sustainable Development Goals. The dependencies of social and economic health on a strong ecological foundation are analogous to a tree. The roots are Healthy Ecosystems (Goals 14 – life below water – and goal 15 – Life on land -) that provide the basis for social and economic prosperity (branches and canopy) through ecosystem service provisioning and sustainable resource use practices.

Conclusion

This report attempts to provide a critical assessment of the SDGs, from a conservation perspective, to understand why the UN is failing to instill momentum towards a truly sustainable trajectory - while the SDGs were initially designed to reconcile environmental protection with socioeconomic development. This analysis calls into question the legitimacy of certain SDGs (such as SDG 8 on economic growth) and urges for a systemic rethink of the issues currently addressed by the environment-related SDGs.

Protecting nature goes far beyond SDGs 14 and 15 (life on land and life below water). It only makes sense if it forms part of a more global social project, a dynamic of radical and global socio-ecological transition. More than simply protecting biodiversity, this involves a paradigm shift, i.e. a different relationship with the world, and more precisely a profound change in the way we think about our relationship with living things. As long as an anthropocentric and dualistic vision persists, with human beings on one side and nature on the other, destruction will continue. We can only stop it by bringing about a genuine intellectual and philosophical revolution, and by seeking a position based on respect and harmony with nature (Maris, 2018a; Tordjman, 2021). In fact, what humanity is facing is not a technical or management problem, but a genuine moral challenge (Maris et al., 2010). The role of the UN is therefore to advocate, through its SDGs, a new ethic for living beings.

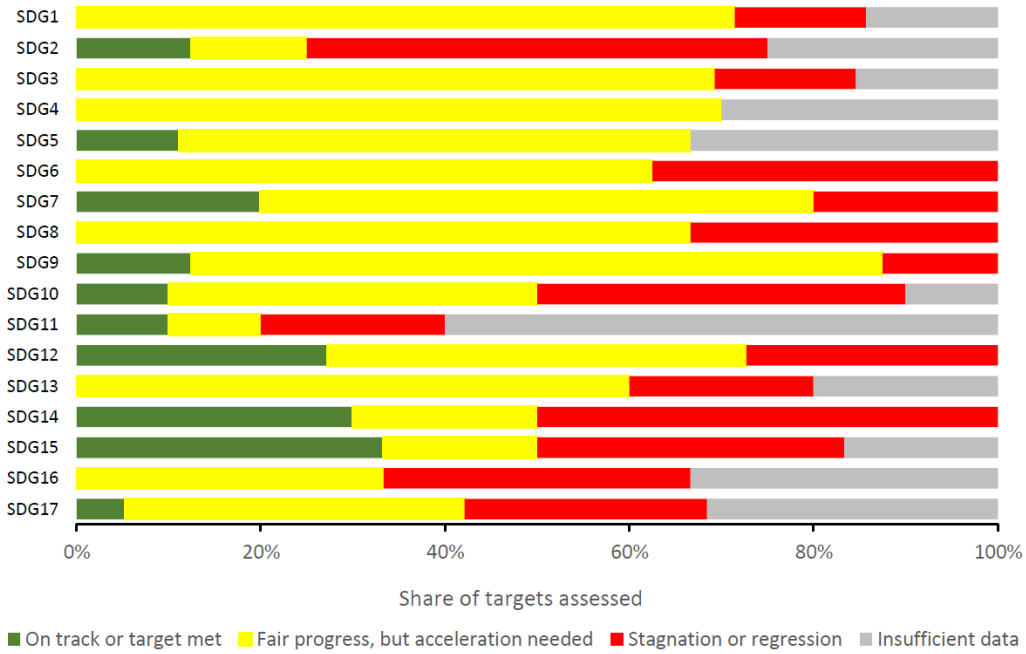
Yet neither SDG 15 nor the rest of the 2030 agenda addresses the fundamental ethical issues required for such a paradigm shift. Despite ambitious rhetoric calling for “transformative change”, the UN supports and encourages the current system. Instead of learning from the glaring failure of this model of infinite growth and “sustainable development” over the last few decades, the UN reinforces this paradigm by absorbing nature conservation into neoliberal capitalist mechanisms, the very ones that have precipitated the destruction of the natural world to date.
To believe that “green” growth will put an end to the erosion of biodiversity and other socio-ecological problems is a mistaken vision. Economic growth, at this stage, is not only destroying nature, it is also accentuating inequalities of wealth. In fact, as long as we remain within this capitalist growth model, it will not be possible to achieve all the SDGs simultaneously, and nature will always be the loser. Only a systemic approach that places living beings at the heart of our concerns will enable us to resolve not only the erosion of biodiversity, but also climate change, poverty, health, and so on.

Consensus between development (i.e. economic growth) and (strong) sustainability (i.e. socio-ecology) is impossible. It is therefore necessary for the UN to adopt a frank and assertive stance in favor of “integral ecology”, as presented by Pope Francis in his encyclical Laudato Si': Global governance must give priority to human rights and environmental agreements over economic, financial and trade agreements. Socio-economic development goals must now be based on the pursuit of human well-being within the limits of the planet (O’Neill et al., 2018) – “SDGs” should now become “SEGs”, for “Socio-Ecological Goals”.

The UN is unarmed to respond to today's challenges, between the pressure of lobbies and the capitalist world, as well as the lack of “power” in the face of state sovereignty. There's no doubt that a shift towards an Earth-centered paradigm will require courage and conviction. But it is up to the United Nations to play a leading role in the transition to the 21st century. It is time to make a choice: continuing to encourage deleterious growth or advocating prosperous sobriety and a reconnection of our societies with nature, ensuring a serene future for the human and non-human world.

Appendices

Appendix 1: Progress assessment for the 17 goals based on assessed targets, 2023 or latest data



The picture is incomplete due to persistent challenges in securing timely data across all 169 targets. While progress has been made in improving data for SDG monitoring, with the number of indicators included in the global SDG database increasing from 115 in 2016 to 225 in 2022, there are still significant gaps in geographic coverage, timeliness, and disaggregation. The chart below indicates that for 9 of the 17 SDGs, only around half of the 193 countries or areas have internationally comparable data since 2015, and only around 21% of countries have data for SDG13 (climate action). About 8% of latest available data are from 2023, 21% are from 2022, and 54% are from 2021 and 2020 (UN, 2023a).

Appendix 2: CBD

The main institutional tool for protecting biodiversity is the Convention on Biological Diversity (CBD), an international treaty signed at the Rio de Janeiro summit in 1992 under the aegis of the UN, and now ratified by 196 countries.

This convention was created to acknowledge the alarming rate at which species are disappearing et provides a global legal framework within which sovereign states can define their own environmental policy, as long as it complies with the main principles and procedures advocated. The convention sets itself three objectives: to conserve biodiversity, to promote its sustainable use, and to organize the equitable sharing of the benefits derived from the use of the resources represented by biological diversity.

In 2010, the “Aichi Targets” were adopted under the CBD by world leaders in the Strategic Plan on Biodiversity 2011–2020 to address the crisis of biodiversity loss. None of the Aichi Targets have been fully met. In December 2022, the fifteenth Conference of the Parties to the CBD (COP15) met in Montreal to adopt a new global biodiversity framework (GBF) updated after 2020.

Appendix 3: Sustainable Development Goal 15 (*Life on land*) and its targets and indicators.

SDG 15 (Life on Land) is clearly classified as a planet or environmental objective and calls to "protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss" (United Nations 2015).

SDG 15 divides into 12 targets and 15 indicators. They concern ecosystem conservation, restoration, and sustainable use in particular of soils, forests, mountains, and genetic resources (SDG 15.1–15.4, 15.6), the protection of biodiversity, natural habitats, and endangered species (SDG 15.5, 15.7, 15.8, 15.C), and policy improvements by better integrating biodiversity into planning and enhancing financial resources for conservation and sustainable use (SDG 15.9, 15.A, 15.B). Thus, the targets combine, in theory, conservation and sustainable use, support the development of clear property rights in natural resources and species and request improved governance and financial resources.

Fundamental role of the SDG 15:
Nature and its contributions to people have been found to underpin the achievement of all the UN Sustainable Development Goals (SDGs), whether directly for the goals on water, climate, oceans and biodiversity (SDGs 6, 13, 14, and 15, respectively) or through more complex interactions for goals relating to poverty, hunger, health, cities, education, gender equality, reducing inequalities and peace (SDGs 1, 2, 3, 4, 5, 10, 11 and 16, respectively). For the SDGs on energy, economic growth, industry and infrastructure, and consumption and production (SDGs 7, 8, 9 and 12, respectively), important feedbacks between these goals and nature and its contributions to people have had consequences for the achievement of all the SDGs. The decline of nature and its contributions to people therefore compromises our ability to achieve the SDGs (Díaz et al., 2019).

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goals and targets (from the 2030 Agenda for Sustainable Development)	*Indicators*
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	15.1.1 Forest area as a proportion of total land area 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.2.1 Progress towards sustainable forest management
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	15.4.1 Coverage by protected areas of important sites for mountain biodiversity 15.4.2 (*a*) Mountain Green Cover Index and (*b*) proportion of degraded mountain land

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	15.5.1 Red List Index
15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits
15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	15.7.1 Proportion of traded wildlife that was poached or illicitly trafficked
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 (*a*) Number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (*b*) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 (*a*) Official development assistance on conservation and sustainable use of biodiversity; and (*b*) revenue generated and finance mobilized from biodiversity-relevant economic instruments
15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation	15.b.1 (*a*) Official development assistance on conservation and sustainable use of biodiversity; and (*b*) revenue generated and finance mobilized from biodiversity-relevant economic instruments
15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities	15.c.1 Proportion of traded wildlife that was poached or illicitly trafficked

Sources :
https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202023%20refinement_Eng.pdf
https://sdgs.un.org/goals/goal15

Appendix 4: Strong vs Weak Sustainability, 2 contradictory visions in a single Agenda

When UN talks about "sustainability" generally refers, in practice, to the "weak" sustainability, in opposition to the "strong" sustainability.

The weak sustainability worldview believes in the full substitutability (i.e. a forest foregone can be compensated by higher economic income). Processes are considered reversible (physics tends to disagree) and the future is discounted; agents holding this world view tend to argue for delaying decisive environmental action, and for incremental rather than radical change.
This paradigm, reflects a neoliberal view widely spread in politics and supported by the power of business, with faith in the power of technology and markets to deal with limits. This worldview is defended by the environmental economists argue that economic growth and prosperity are preconditions for environmental responsibility. They believe that human ingenuity, powered by science and innovation, will come up with new solutions that fix the socio-ecological issues facing humanities ("techno-solutionism"). Business tends to endorse this view: in the run-up to the SDGs, it became obvious that business interest groups had interpreted sustainable development principles in a rather narrow fashion, seeking win–win opportunities. Their key messages in the preparation process were that growth and technology, together with corporate sustainability, are the key means to achieve sustainability (no trade-offs suggested), and that the role of governments should be to create an "enabling environment" for business, including a business-friendly trade system, pricing incentives, support for responsible business, and the possibility to participate in defining policy strategies and priorities. Many of these demands were taken on board by the UN Secretary General and found their way into Agenda 2030 (Spangenberg, 2017; *Transitioning to Sustainable Life on Land*, 2021).

On the contrary, the strong sustainability paradigm is based on social and biosciences, and assumes that uncertainty and tipping points (financially, socially, regarding climate and biodiversity) play a crucial role and have to be dealt with based on precaution (and with emergency !). This worldview is defended by ecological economists, who calls for a deeper and radical change in values and the protection of nature (Spangenberg, 2016).

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