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Imprint

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Humanity is currently facing multiple unprecedented crises, which can be traced back to the neglect of our relationship with the natural world. To date, responses have been insufficient – the Paris Agreement pledges, even if met, would still result in warming by a catastrophic 3.2°C above pre-industrial levels. Governments and corporations continue to pay "lip service" to taking action, when the priority should lie in significantly and urgently reducing fossil fuel emissions. Protecting intact and old-growth, carbon-rich ecosystems and encouraging restoration and regeneration of degraded ecosystems are essential additions to, but not a substitute for, real fossil fuel emissions reductions, and must be achieved based on respecting the rights to land and resources of Indigenous Peoples and local communities.

This expert analysis takes a deeper look into key issues that are relevant for the development of the EU Green Deal, respectively the EU climate target for 2030, the EU's Nationally Determined Contribution (NDC) under the Paris Agreement, and the EU climate law. The paper will dive deeper into the issue of a rights based approach for both people and nature from a climate justice perspective, the question of fair burden sharing and the role of natural ecosystems in responding to climate change.

Recently, the EU announced a Green Deal and is taking steps to become "the first climate-neutral continent by 2050." Climate neutrality (otherwise known as "net-zero") can be a step on the road to 1.5°C if done properly, where fossil fuel and land-use change emissions are reduced to zero, with emissions that can't be eliminated - such as from agriculture - cancelled out by carbon removals. However, now the European Commission has proposed to change the 2030 climate target to a net accounting target, by including removals from carbon sinks (forests), thereby watering down real emission cuts in sectors like energy, transport and agriculture. While reforestation and restoration of degraded ecosystems are urgently needed to address the loss of nature, and can "soak up" past emissions from land-use change, storing carbon in land is no substitute for reducing fossil fuel emissions. Carbon stored in forests and other ecosystems cannot offset ongoing fossil fuel emissions. Removals must be achieved in addition to ambitious reductions in fossil fuel emissions. Combining the two in a single "net-zero" goal obscures how much and how fast fossil fuel emissions are being reduced. To this end, separate targets are needed for emission reductions and emissions removals.

Despite the major opportunity for the EU under the current German presidency to show ambitious leadership through its Green Deal, its enhanced NDC and in its new EU Climate Law, there remain at least four significant risks in the development of the EU's approach:

1. The 2030 climate target is not sufficient to meet the 2°C, let

- alone the 1.5°C, objective under the Paris climate agreement. At least a 65% emission cut is required by 2030;
- It lacks a separate target for removals, that supports the restoration of ecosystems in the EU in alignment with the EU Biodiversity Strategy, and shifts the EU's focus away from emissions reductions as the priority;
- 3. It lacks an emissions budget and climate finance target that represents the EU's "fair share" of the remaining global emission budget; and
- 4. It leaves the "back door" open for inclusion of international land, forest and ecosystem-based carbon trading under Article 6 of the UNFCCC.

The risks associated with Article 6 of the Paris Agreement are particularly concerning, as the EU did not make human rights in Article 6 a red line at COP 25. Human rights must be respected and protected in all efforts to achieve global mitigation and adaptation goals, especially given that Indigenous Peoples act as stewards for almost one-fifth of the total carbon sequestered by tropical and subtropical forests. As we have seen from the Clean Development Mechanism, large-scale climate projects, such as those to be undertaken through Article 6, have long posed threats to human rights and the rights of Indigenous Peoples. By leaving open the inclusion of Article 6 trading, the EU exposes itself to possible violations of human rights as well as associated rights-based litigation. A real "green recovery" would also go so far as to explicitly respect the rights of nature, which the EU Green Deal does not.

The EU has not allocated sufficient finance to holistic approaches to nature protection. Whilst many argue that private finance is critical and public funds are not enough, one must question the motive for this ongoing reliance on market-based mechanisms, the very system that has led humanity to what is now a point of systems collapse. Very significant amounts could be reallocated within existing budgets, including subsidies provided under the Common Agricultural Policy and for the fossil fuel industry. Quantitative easing measures and new bond issuance could also make a very significant contribution. Large amounts of finance could be secured through innovative sources, including a dedicated international funding mechanism, which could generate substantial funds through financial transactions taxes, levies on aviation and fossil-fuel extraction, and reforms to the global tax system targeting large corporations and the super-rich. After another drought during the European summer; dwindling Arctic ice cover; and raging fires in Siberia, the Amazon and in the western USA, the EU, under the leadership of von der Leyen and Merkel now has the chance to define what climate leadership can deliver to combat the emerging impacts of the climate crisis - or what can serve as an insufficient and dangerous crisis response.

Key recommendations:

- Don't fall for accounting tricks: The EU must not delay emission reductions through the inclusion of natural carbon sinks in its target for 2030 or its understanding of climate neutrality for 2050. Removals can only be achieved through additional sequestration, and separate targets are needed for emissions and removals to ensure emission reductions are prioritised.
- No international offsets: The EU should explicitly exclude
 the use of international offsets under Article 6 of the Paris
 Agreement to meet the targets enshrined in the EU Climate
 Law. Previous international offset schemes, such as the Clean
 Development Mechanism, have failed to reduce emissions and
 have been disastrous for human rights.
- Establish a fair GhG budget: The EU has already used its "fair share" of emissions therefore it must reduce emissions to near zero as quickly as possible, and "pay back" its overuse of atmospheric space through contributing to adequate climate finance for vulnerable countries.
- Make polluters pay: The EU should redirect finance away
 from harmful subsidies for fossil fuel infrastructure and large
 agribusiness towards climate and biodiversity. New sources
 of finance, such as aviation levies or a meat tax, should be
 focused on protecting the vulnerable from climate impacts and
 supporting a just transition to a genuinely zero carbon economy.
- A rights-based approach: The EU must make human rights a red line in the Paris Agreement Article 6 negotiations, as well as bold action at home. The right to a healthy environment is internationally recognized, including by EU Member States through commitments to the UNFCCC, CBD, and human rights treaties. The EU must maintain a strong position on human rights, and the rights of Indigenous Peoples and local communities, in all climate actions.



Greenpeace action at COP 25 in Madrid

Section 1: Introduction

Multiple global crises: A context



Climate march during COP25 in Madrid

The disconnect between large parts of humanity and nature has never been more apparent than it is now. As the sixth mass extinction event barrels on, we are facing multiple unprecedented crises related to the environment, climate change, biodiversity, health and the economy. Each of these crises can be traced back to the neglect of our relationship with the natural world. Humanity has already exceeded the safe operating space for four of the planetary boundaries (Steffen et al. 2015), and it is estimated that the remaining carbon budget to remain below the 1.5°C threshold will be exhausted by 2029 (IPCC 2019). Climate science is showing that we are already either dangerously close, or exceeding tipping points in relation, to ice-sheet collapse, permafrost thaw, the loss of the Amazon and Boreal forests, and coral reef collapse (Lenton et al. 2019, Lovejoy and Nobre 2019). It is widely accepted that Paris Agreement pledges, even if they are met, would still result in warming by a catastrophic 3.2°C above pre-industrial levels (UNEP 2019). The rate of species extinction is accelerating (IPBES 2019); not one of the 2020 Aichi targets under the UN Convention on Biological Diversity (CBD) has been met (GBO 2020); and 2019 saw more environmental defenders murdered than ever before (Global Witness 2020).

We are now also experiencing an economic downturn unlike any other in human history, placing in jeopardy gains made to reduce extreme poverty since the 1990s (IMF 2020). The entire global population continues to struggle through the Covid-19 pandemic, which has contributed to the deaths of around a million people 1 and caused sharp rises in unemployment, with young people disproportionately affected (ILO 2020). The Coronavirus is an environmental and a human development crisis, brought about by unhealthy political and economic systems and unsustainable human practices (Ortiz et al. 2020). The impacts of Covid-19 are compounded by existing tensions and inequalities, and it discriminates based on poverty and economic disadvantage (Patel

et al. 2020, Bowleg 2020, Ahmed 2020). In a geopolitical context, the US has become weaker as a global power in the wake of Covid and we are seeing a concerning increase in "great-power" rivalry and "autocratization" of nations, leading to a more divided and unstable world.

These crises are not unexpected. For decades now, warnings have been ignored, or paid lip-service to by politicians and big business alike, especially those in the fossil fuel industry. Little action has been taken due to the inconveniences associated with taking real action. The risks of a global pandemic linked to the global trade in wildlife have been well known for many years (Karesh et al. 2005). The fossil fuel industry has been actively orchestrating and funding disinformation and doubt with the intention to undermine action on climate change for decades (Cook et al. 2019). Deforestation and forest degradation continue to occur at an alarming rate globally, significantly contributing to the ongoing loss of biodiversity, with slow progress in preventing the extinction of known threatened species (FAO & UNEP 2020).

Whilst this picture is bleak in the extreme, hope remains as people come together in solidarity to respond to the global health and economic crisis. Global and local movements are gaining strength: the Just Recovery² seeks to prioritise health, providing economic relief and shifting emphasis to workers and communities and away from rich corporate elites; Black Lives Matter emphasizes social justice and building community resilience; youth- and women-led opposition to the rise of authoritarian regimes is becoming more prevalent. And in the EU the desire for change and climate action is reflected in the polls through young green voters. The response to Covid-19 has been unprecedented, with billions around the world almost simultaneously accepting restrictions on their own personal freedoms to protect the old and vulnerable in their communities. This sense of solidarity and preparedness to work together as a global community provides an important indicator as to how an inter-connected humanity can act as one when needed.

The importance of building ecosystem resilience

Tackling climate change effectively can only be done if we significantly and urgently reduce fossil fuel emissions. At the same time, we can increase the diversity and resilience of the biosphere, by enhancing biosphere integrity.

Biosphere integrity is broadly defined as the long-term maintenance of key structures and functions of the biosphere (Lade et al. 2019), and as such is a core goal to achieve climate stabilisation. Increased integrity and resilience of the biosphere would enable climate, biodiversity and development goals to be reached sustainably, and should be a core aspect of any "green deal" or "climate law."



Climate Emergency: forest fires in Siberia

More carbon is stored in the biosphere than in known reserves of fossil fuels (Mackey et al. 2013). Protecting intact and old-growth, carbon-rich ecosystems and encouraging restoration and regeneration of degraded ecosystems are the most effective approaches to mitigating climate change using land systems. Laws and regulations related to climate change should enable and prioritise the maintenance and restoration of carbon-rich natural ecosystems, which have many other benefits, including the protection of biodiversity, maintenance of water quality, and enhancement of long-term soil carbon storage.

Maximizing the ability of ecosystems to adapt to a changing climate depends on maintaining and restoring ecosystem integrity. Ecosystem integrity is a critical factor for stability, and

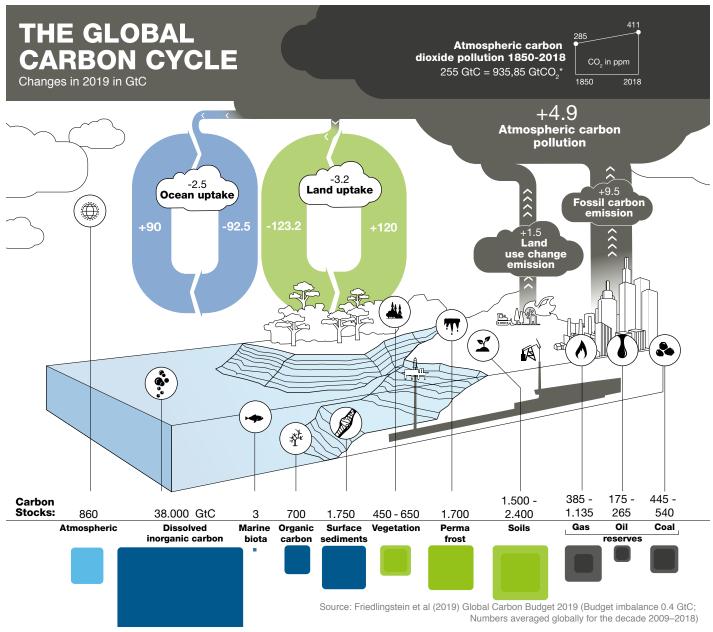
biodiversity plays an important function in underpinning this (Seddon et al. 2019). Understanding the role that ecosystem integrity plays – and putting in place responsible policies and measures – are critically important for success or failure in limiting warming to as close as possible to 1.5°C, and fundamental to inform and regulate management responses that minimize that risk. Such policies and measures should be aimed at improving the stability of ecosystems, to protect and restore their ecological functions and critical ecosystem services such as water quality and supply, as well as their natural carbon storage capacity. Also critical is understanding the role of indigenous communities in ecosystem protection, ensuring their rights are respected, including the right to free, prior and informed consent in any related processes.

Section 2: "Net-Zero"

As if the planet mattered

At the end of 2019, the European Union (EU) showed what appeared to be bold leadership with its announcement of a European Green Deal, which was largely welcomed by civil society for the potential to step up action on climate change, the focus on biodiversity and forest restoration, and the proposed commitment to funding this ambitious transition. The European Green Deal and accompanying Climate Law are the EU's way of achieving their contributions under the Paris Agreement, including through its Nationally Determined Contributions (NDCs) for 2030, and by becoming "the first climate-neutral continent by 2050."

The adoption of the Paris Agreement has seen an increasing focus on climate neutrality, otherwise known as "net-zero" targets, from States (including in the EU) and corporations. While the terms "net-zero" and "climate neutral" are not used in the Paris Agreement, the long-term goal in Article 4.1, which states that countries should "achieve a balance between anthropogenic emissions by sources and removals," has been widely interpreted to mean "net-zero" greenhouse gas (GHG) emissions, or "climate neutrality" as referred to in the EU Climate Law. "Net-zero" is essentially an accounting terminology, which suggests that



The global carbon problem of accumulating anthropogenic emissions

positive emissions are cancelled out by negative emissions (removals of GHG from the atmosphere), with the net total being zero. Based on this logic, many countries and corporations are calling for tree-planting, reforestation and restoration of degraded ecosystems to "soak up" ongoing fossil fuel emissions. This can place a heavy burden on forests and ecosystems. Expectations of what nature can contribute to climate mitigation are often inflated. There is a risk that this is delivered via expanded tree plantations, which place an extra burden on communities and natural ecosystems through increased demand for land. Yet, not only are annual carbon emissions from fossil fuels almost ten times greater than the estimated amount of carbon that could be stored by sustainable land carbon mitigation methods, but storing carbon in land does not compensate for ongoing fossil fuel emissions (Steffen 2016, CLARA 2018).

Storing carbon in land is no substitute for reducing fossil fuel emissions. Land systems can make an important contribution to mitigating climate change by removing carbon dioxide (CO₂) from the atmosphere or avoiding emissions of CO₂ to the atmosphere. Moving carbon from the atmosphere back to the land through reforestation and restoration of degraded ecosystems can reduce atmospheric carbon, but cannot offset ongoing fossil fuel emissions. This is because carbon in the atmosphere and carbon in land systems are both part of the "active" land-atmosphereocean carbon cycle – increasing the carbon in land systems simply replaces some of the "active" carbon that has been lost to the atmosphere over past centuries. Burning fossil fuels, which are otherwise permanently locked away, adds to the carbon cycle in aggregate. Once added, this new additional carbon cannot be removed from the carbon cycle in time-scales relevant to climate change.3 Continuing to burn fossil fuels while assuming that these emissions are being offset by increasing land carbon will lead to increased warming over the century.

A "net" accounting picture hides the amount of ongoing emissions from fossil fuels and land-use change. Many "net-negative" global scenarios assume that the level of removals is comparable in size with the remaining global carbon budget (Anderson and Peters 2016). In net-negative scenarios for 1.5°C, the upper end of assumed negative emissions (which range from 400 to 1000 Gt CO₂) is three times the size of the remaining carbon budget for 1.5°C (Rogelj et al. 2018). Such a massive reliance on removals in mitigation scenarios, whether by natural or technical sinks, throws into doubt the feasibility of achieving this scale of removals, ultimately risking higher temperatures (Dooley and Kartha 2018). The solution to this is to minimise reliance on removals by focusing first and foremost on reduction of fossil fuel emissions. The lower end of removals in modelled scenarios corresponds with the amount that could be achieved through ecosystem restoration, such as reforestation with native species and restoration of



Aerial view of brown coal (lignite) power plants in Germany



A farmer during bushfire in Snowy Mountains, Australia

degraded forests (Dooley and Kartha 2018, CLARA 2018). Current carbon stock in natural ecosystems has been estimated to be around a third lower than before the Industrial Revolution (Erb et al. 2017, Mackey et al. 2013). Returning all of this carbon to the land would be very difficult, but increased biosphere carbon uptake can pay off at least some of this "debt."

Achieving the Paris Agreement's goal of limiting temperature rise as close to 1.5°C as possible will require both a rapid reduction in fossil fuel emissions to zero through climate neutral wind and solar energy production, and CO₂ removal through natural ecosystems as much as possible to restore atmospheric carbon that was lost through the destruction of land and coastal ecosystems (Steffen 2016). This can be achieved through restoration of degraded lands, forests and other ecosystems, to enhance uptake of atmospheric carbon; preventing carbon stored in soils, vegetation and natural ecosystems from being lost in the first place; preserving biodiversity and ecosystem services; and protecting the lands and territories of Indigenous Peoples and local communities.

Section 3: A deeper dive

The EU Climate Law

In her first state of the union speech, Commission President Ursula von der Leyen proposed an at least 55% 'net-emissions' target. This is an important change in the approach to setting EU climate targets, as up to that point, Governments and MEPs had been discussing an emissions reduction target without natural sinks. This proposal now forms the basis for discussions for the new 2030 climate target and an EU Climate Law. The target is artificially inflated as it includes emissions absorbed by carbon sinks through land use, land use change, and forestry (LULUCF), which cannot replace real emission reductions from fossil fuels. In fact the EU forest sinks have reduced their ability to store carbon over the last ten years and are projected to continue doing so, mostly due to logging.

There remain three significant gaps in the EU's climate governance that risk undermining efforts towards this "net-zero" approach: the absence of separate targets for emissions reductions and removals; the lack of an emissions budget that represents the EU's "fair share"; and the failure to explicitly exclude the use of international market mechanisms for the achievement of the EU's climate targets. These shortfalls could create serious weaknesses in terms of environmental integrity, biodiversity and ecosystem protection and restoration, and pose serious risks of violations of rights of both people and nature.

While the current draft regulation includes reference to the biodiversity crisis and the need to align with the EU's 2030 Biodiversity Strategy, there is still a lack of clarity over the definitions of "nature" or "carbon sinks" when referring to removals, nor are there specific commitments to restore degraded ecosystems. The regulation is also silent on the role of an international market mechanism under Article 6 of the Paris Agreement, which is developing in concerning ways related to human rights. It could result in a major missed opportunity for the EU to take serious action on restoring degraded ecosystems as well as enhancing them, whilst protecting the rights of Indigenous Peoples and local communities.

Accounting tricks obscure emissions reductions

It is imperative that the EU provides for separate targets for emissions reductions and emissions removals, expressed in absolute terms (tonnes CO₂). This is critical for concretising the EU's commitment to focusing on emissions reductions as a priority. Separate targets for emission cuts and emissions absorbed by nature have significant advantages over combined 'net-zero' targets (NewClimate Institute 2020). Not only does this avoid obscuring the rate at which fossil fuel emissions are being replaced (Section 2), but also explicitly recognises that biological sinks do not compensate for fossil fuel emissions. "Net-accounting," whereby removals by sinks count towards targets, will delay action on reducing fossil fuel emissions

- and should be exposed through the use of separate targets. Furthermore, not only should these goals be separate, but they should also demonstrate a clear and ambitious commitment to restore a certain amount of hectares of degraded ecosystems in an effort to remove CO₂ from the atmosphere, and to protect biodiversity, water and soils. There is no explicit commitment to restore degraded ecosystems apart from reference to their consideration in the design of EU trajectories. However, considering the latest biodiversity assessments (IPBES 2019, GBO 2020), the EU should take urgent action to protect biodiversity in alignment with climate mitigation and agree to a stand-alone target to restore nature's carbon sink capacity. Finally, it is critical that the European Parliament Committee on the Environment, Public Health and Food Safety (ENVI) proposal for a post-2050 target for removals to exceed emissions is accompanied by an explicit commitment to a reduction in emissions as close to zero as possible, and that this target is upheld by the EU.

A just budget – the EU's fair emission reduction share

Emissions budgeting is an effective tool to understand remaining allowable emissions (European Climate Foundation 2020), although there are also limits to its policy usefulness given the large uncertainties around what is now a very small remaining global budget for 1.5°C or even 2°C pathways (Peters 2018). The EU is currently using a budget summed from emission budgets under specific instruments, calculated on the basis of trajectories defined by political decisions and based on the achievement of near-term targets in 2030 (European Climate Foundation 2020). It is not based on an assessment of the EU's share of the world's remaining emissions, and it is dishonest about the EU's remaining emissions (Meyer-Ohlendorf 2020).

An emissions budget should be developed that represents the EU's "fair share" of the remaining global emission budget (EcoEquity 2018). There are multiple, but no scientifically "correct," way(s) to calculate a fair share of global emissions for any particular entity, as such a calculation relies on ethical questions of distributive justice (Kartha et al 2018). Many different efforts at calculating fair shares have been published in scientific literature, and this exercise is complicated by the reliance on negative emissions effectively "expanding" the available budget. A recent publication analyzing the Paris climate commitments of the UK and Sweden found that without reliance on negative emissions, and based on "common but differentiated responsibilities and respective capabilities," these countries would need to increase their 2030 targets by at least a factor of two (Anderson et al. 2020).

For the EU as a whole, using the same approach as Anderson et al. (2020), the EU's remaining Paris-compliant carbon budget



Greenpeace activists are calling for more climate action due to increasing drought impacts on forests ecosystems

would be a maximum of 27 Gt CO₂ (for energy only). ⁵ This is less than 9 years of current emissions. However, when considering historical responsibility and capacity to act, which Anderson et al. (2020) do not include, the Climate Equity Reference Project calculates that the EU has already used up its fair share of the global emissions budget. Contributing to the global mitigation effort towards 1.5°C on the basis of equity would require a 169% reduction from the EU by 2030 (equivalent to a net-negative goal of -3 Gt CO₂) (CERP and SEI 2020). Developed countries and regions which have already exceeded their fair share of the emissions space, such as the EU and other wealthy high-emitting countries including the US and Australia, must commit to the most ambitious domestic emission reductions possible, while supporting the transition to zero emissions in poorer and more vulnerable countries through the adequate provision and scaling-up of climate finance (see Section 5).

International offsets and the EU Climate Law

International and land-based offsets should not be used to balance the EU's domestic emission reductions targets. This must be ensured in the EU Climate Law, and the EU should take a stronger position of leadership related to rights and Paris Agreement Article 6 under the UNFCCC (UN Framework Convention on Climate Change) negotiations.

According to the European Commission, "the EU has a domestic emissions reduction target and does not currently envisage continuing the use of international credits for EU ETS compliance after 2020" (European Commission, no date). This is in line with the 2030 Climate and Energy Framework (European Commission 2020c) and the revised Council Directive (EU) 2018/410 (2018) – the EU Emissions Trading Directive (EU-ETS).

However, the 2030 climate target does not make this exclusion for the non-ETS sectors, governed by the Effort Sharing Directive. The EU Climate Law proposal remains silent on the use of international carbon trading under Article 6, but does refer to the use of domestic emission reduction only for the achievement of a climate-neutral EU. It is imperative that the EU live up to its commitment to end the use of international offsets by explicitly excluding them from counting towards the targets set out in the Climate Law, both for 2030 and 2050. Otherwise, this would dangerously leave the door open to include REDD+ 6 – or worse, nature-based offsets across all ecosystems – to achieve EU targets.

There are major concerns relating to the use of international offsets under the Paris Agreement, both in relation to emissions reductions and to the lack of appropriate human rights safeguards. An explicit commitment to the exclusion of international offsets for the achievement of all targets in the EU Climate Law is therefore critical.

A dangerous carbon trafficking mechanism is emerging under Article 6

The Article 6 rulebook for trading of international offsets under the Paris Agreement is yet to be agreed (Evans et al. 2019). However, there are already multiple challenges concerning accounting of offsets under the Paris Agreement architecture. First, NDCs are not universal in nature – they concern different sectors, or different geographical regions, which pose specific challenges for accurate accounting (Schneider & La Hoz Theuer 2019). Second, some studies have predicted that the use of offsets could lead to less ambitious NDCs or mitigation measures for supported countries, with lower ambition forming the basis of questionable "additionality" claims from which countries or companies could



Tropical peatland in the Democratic Republic of Congo



Eucalyptus plantation and cleared land, Brazil

benefit in international market mechanisms (Schneider & La Hoz Theuer 2019). This is all in addition to the potentially harmful implications of offsets on nature, human rights, and the rights of Indigenous Peoples (Abate & Kronk 2013, Obergassel et al. 2017, Benites-Lazaro et al. 2019).

There are major risks and challenges emerging in the Article 6 negotiations associated with double counting of emissions reductions, whether through double issuance, double claiming, double use or otherwise; using international transfers from a cumulative mitigation effort over a period of years to achieve a single-year target; or the use of different metrics for mitigation targets, which can ultimately increase global GHG emissions if not appropriately converted (Schneider & La Hoz Theuer 2019). Furthermore, the trading of nature-based "offsets" can also result in temporary, rather than permanent, emissions reductions due to reliance on removals rather than overall reductions. Finally, the use of land-based credits for offsetting does not compensate for ongoing fossil fuel

emissions, and therefore does not contribute to climate mitigation, as explained in Section 2 above.

International offsets have long been recognised as placing environmental integrity at risk, with examples seen through the Clean Development Mechanism (CDM) over the years (Lee, 2014). Cases like the HCFC-23 abatement that ended up promoting the use of HCFC-22 allowed for the CDM to create a perverse incentive (Cames et al. 2016). Hydroelectric projects in India, Latin America and Africa have been heavily opposed by local people on the grounds of their environmental impact. Whilst some financial benefits have been received, serious questions remain as to whether the units generated in fact reduce emissions.7 A study commissioned by the EU shows that 73% of the potential 2013-2020 Certified Emissions Reduction (CER) supply from the CDM have a low likelihood that emission reductions are additional and are not over-estimated, with a high likelihood of such being applicable to only 2% of the projects and 7% of potential CER supply (Cames et al. 2016).

Human rights must be an EU Red Line

The EU's Green Deal should not end at the borders of the EU. The position taken in international negotiations, especially those related to climate and biodiversity, matter significantly. However, the EU did not make human rights in Article 6 a red line at COP 25 in Madrid. If the EU is to assert a leadership role in the so-called "green recovery," it would be inconsistent not to take a much stronger position on rights in the international climate negotiations as well as through bold action at home. Therefore, the Climate Law must not leave the "back door" open for use of international offsets to achieve domestic climate targets.

Human rights must be respected and protected in all efforts to achieve global mitigation and adaptation goals, and inform climate policies both at national level and in international cooperation, and especially where risky market-based mechanisms are concerned, generating carbon credits through communitylevel interventions in developing countries. Continued failure to address the impacts of climate change, with particular attention to the most vulnerable countries and sectors, constitutes an ongoing violation of a number of human rights, including the right to a healthy environment. 8 The Paris Agreement requires Parties, in undertaking climate actions, to "respect, promote and consider their respective obligations on human rights," including the right to health and the rights of Indigenous Peoples and local communities. Nothing poses a bigger threat to the natural environment and human societies today than climate change (Davies et al. 2017), and this has been widely accepted including by the UN Human Rights Council. 9 A clean and functional environment is "integral" to the enjoyment of human

rights, including the rights to life, health, food and an adequate standard of living (UNEP 2015). EU Member States recognize this important correlation, for example acknowledging biodiversity as a human right through their participation in the CBD and central international human rights agreements. Importantly, rights-based approaches to conservation and sustainable use of biodiversity by the EU will at the same time result in important climate mitigation and adaptation benefits (Morgera 2020).

Indigenous Peoples and local communities are among the populations most vulnerable to climate change, despite contributing the least to global warming. They face increasing pressure to resist occupation of their territories and exploitation of their resources, including timber, coal and other natural resources, whilst often being excluded from meaningful decision-making (Ramos-Castillo et al. 2017, Knox 2018). They are now at greater risk of harm through Covid-19 and are also at a disproportionate risk of being threatened or killed as environmental and land defenders (Global Witness 2020). Indigenous Peoples and local communities play critical roles in conserving and sustainably managing ancestral lands and territories, benefiting ecosystem protection at a global scale (TNC 2017). Indigenous territories comprise 40% of protected areas globally and serve as important habitats for biodiversity, as well as critical carbon sinks for climate change mitigation. Indigenous and local communities act as stewards for almost one-fifth of the total carbon sequestered by tropical and subtropical forests (Townsend et al. 2020). Indigenous-managed lands, particularly with secure tenure, have been shown to have lower deforestation rates, increased carbon storage, higher biodiversity, better conservation outcomes, and to benefit more people compared to lands managed by other entities (CAS 2020; Global Witness 2020).

Large-scale climate projects, such as those undertaken through the CDM or non-voluntary REDD+ projects to generate and sell carbon credits, have long posed threats to human rights and the rights of Indigenous Peoples and local communities (Barletti and Larson 2017). These investments have resulted in their displacement, resettlement, and loss of livelihood (Morgera 2020). In fact, renewable energy projects financed by the EU have had negative human rights impacts, resulting in the resettlement of indigenous villages in one case and opposition from traditional communities in another, due to threats to local livelihoods and ecosystems (Morgera 2020). The CDM fails to mention human rights in its rules and procedures, has no complaint or accountability mechanism, and no clear requirements for the conduct of community consultations (Obergassel et al. 2017, Timperley 2019). It has been widely criticized for its poor track record in environmental integrity and upholding human rights (Ervine 2015). Article 6 now appears to be moving down the same path, and making the same mistakes.



Free land camp 2019 in Brazil

Indigenous Peoples' groups and human rights advocates have expressed worries about the Article 6 rules under negotiation at the UNFCCC. The language concerning human rights in the draft decision texts has become increasingly weaker, with references to human rights being deleted towards the end of COP 25. The EU failed to take a strong position on this subject despite initially being vocal on rights and safeguards in earlier iterations of the text. Although not yet agreed, the trend in these negotiations indicates the remaining challenge to ensure that the failures of the CDM in protecting human rights and the rights of Indigenous Peoples are not repeated, and that these rights are supported by the EU in future climate mitigation efforts.

Human rights violations resulting from projects under Article 6, or even the CDM, are also a major litigation risk not only for countries where the damages take place, but also for the EU, especially as human rights-based climate litigation is increasing and courts are responding to this trend (Peel & Osofsky 2018). Individuals and communities from developing countries are increasingly resorting to climate litigation in the EU. 10 Victims of violations in the Global South are also turning to legal systems in the Global North in order to seek retribution and "lay blame" at the feet of those responsible in their home jurisdiction. 11 At the same time, some hold concerns that litigation outcomes may further impoverish already less-developed economies (Setzer & Vanhala 2019). Litigation related to Article 6 actions that violate human rights may rely on the Aarhus Convention, 12 for example, if the threats of rights-violation touch on issues such as access information and public participation.

A real Green Deal would respect the rights of nature!

In addition to protecting the rights of people, there is increasing support for the protection of the rights of nature, especially where nature is expected to play such a critical role in addressing climate



Pacific activists protest during the Fiji climate summit at the coal power plant Neurath in Germany

change and achieving ecosystem and community resilience. New Zealand, USA, India, Ecuador, Bolivia, Colombia and Palau have recognized the rights of nature in their Constitutions, legislation, or case law (See Annex 1). The carbon absorption capacity of the earth is diminished every time an ecosystem is damaged (IPCC 2019). Diverse natural ecosystems have a larger carbon capture capacity than monoculture plantations (Keenan 2018). Protecting natural ecosystems is essential for preventing catastrophic climate change and ecosystem integrity is critical for climate stability. A real "green recovery" would go so far as to recognize and respect the rights of nature, especially where so much dependence is placed on nature in order to remove anthropogenic carbon in the atmosphere. Ecosystems have a right to exist and develop their own natural cycles without human interruption and that right should be independently defended. The EU should value biodiversity beyond its utility to humankind (Guillaume et al. 2019), thereby placing individual and collective human rights in harmony with the rights of other natural communities on earth. Ultimately, this "ecocentric" – as opposed to anthropocentric – approach understands the intrinsic relationship between the well-being of nature and that of humans. It proposes a holistic relationship with nature, which is long overdue, and the lack of which has now brought human society to the brink of collapse (Guillaume et al. 2019). Granting rights to nature means that these rights can be represented, protected and eventually repaired, even if they are not aligned with a community or individual right. It allows for the decision-maker to decide after valuing not only competing people-rights, but also the rights of species

or ecosystems. Experience has shown that "when people and corporations have rights and nature does not, nature frequently loses, as evidenced by the continuing deterioration of the environment" (Chapron et al. 2019).

Ecocentrism is not a novel concept, and is evident at both national and international levels, in both constitutional and doctrinal contexts including in New Zealand, USA, India, Ecuador, Bolivia, Colombia and Palau (see Annex 1). This trend has also been explicitly recognized by the Inter-American Court of Human Rights (Advisory Opinion OC-23/17). The ENVI does provide support for ensuring that the biodiversity crisis, restoration of ecosystems, and maintenance of stable and long-lasting natural sinks are key factors in the determination of its trajectories. The EU should however go further and align with the countries identified, leading the much-needed shift in paradigm towards an ecocentric approach, and mitigate against the ongoing wholesale commodification of nature, exacerbated by carbon trading to achieve "net-zero." The recognition of nature rights is fundamental for the adequate protection, conservation, and restoration of nature for the EU Green Deal. Implementation of laws that enact the "polluter pays" principle more strongly must be the teeth of the precautionary principle to guide wise policy developments. The deal cannot be said to be "green" without this. An example of this could be the current development of deforestation-free supply chain laws in the EU. ¹³ If we define climate neutrality trajectories without recognition of nature's intrinsic value, we risk undermining the integrity of a framework that should be seeking to protect nature, ecosystems, and the climate.

Section 4: Mobilizing

Real "Green Finance"

Achieving climate neutrality by 2050 and stopping the destruction of ecosystems require considerably more financial support than is currently being dedicated to them. Existing budgets should be redirected (e.g. away from harmful subsidies), and additional sources of finance (sometimes called "innovative finance") provided beyond the budgetary commitments of national governments.

In July 2020, the European Council agreed a €750 billion coronavirus response package (Next Generation EU, NGEU), in addition to approving a revised €1,074 billion EU budget (Multiannual Financial Framework, MFF) for 2021-2027 (European Council 2020). The Covid-19 response package states that at least 30% of expenditure should contribute to climate objectives. ¹⁴ The European Parliament has been demanding more ambition, including that this 30% allocation be legally-binding and that there be an additional 10% biodiversity allocation (European Parliament 2020: para 15).

Redirecting EU finance

Increasing the share of the EU budget allocated for climate and biodiversity finance first and foremost requires directing existing budgets away from activities that cause harm, in particular through further reform of the Common Agricultural Policy (CAP). In its current form, the CAP directs the lion's share of payments to large farms and does more harm than good for ecosystems and the climate (Scown et al. 2020). The 2021-2027 EU budget anticipates €258 billion of direct payments to farmers (as part of a €344 billion budget line), further subsidizing large landowners and agribusinesses whose intensive methods contribute to climate change and biodiversity loss. Reforms have been tabled, with the European Council claiming that around 40% of CAP expenditure will be dedicated to climate action (European Council 2020: 42). The European Commission has suggested some welcome reforms, including reductions in chemical fertilizer and pesticides use, but the overall credibility of its actions to promote sustainable agriculture has been seriously questioned (Pe'er et al. 2020). For example, livestock farming is estimated to represent up to 17% of overall EU emissions, but CAP reform proposals include no targets for reducing livestock numbers (Levitt 2019). CAP reform measures also do little to shift the balance of subsidies away from large landowners and agribusiness (Green New Deal for Europe 2019: para 3.4.7). It will also be vital to redirect fossil fuel subsidies towards climate and biodiversity goals.

Green quantitative easing

It is often assumed that increasing finance for biodiversity and climate action from existing public budgets is an unrealistic goal, but this is not necessarily the case. Responses to financial crises in 2008 and 2020 have shown that trillions of dollars can be added to public budgets through financial instruments such as "quantitative easing" (QE), "Special Drawing Rights" and

new bond issuance. In essence, governments can create new money. Some of these financial assets could then be invested in climate mitigation, just transition and ecosystem restoration and conservation measures - if there is political will to do so. The persistence of low interest rates has eased concerns about spiraling inflation, while the absence of viable alternatives has meant that exceptional measures to increase the money supply are increasingly becoming the new norm (Reyes 2020: chapter 1). The key consideration in relation to the European Central Bank's (ECB) quantitative easing schemes, and similar initiatives by other central banks, is to ensure that money creation is allocated according to "green" criteria, such as those set out in the EU Taxonomy Regulation, which includes a classification of activities that contribute to the protection and restoration of biodiversity and ecosystems (European Union 2020: article 15). 15 The Network for Greening the Financial System, which includes central banks and regulators from the ECB and most EU countries, has recommended that these institutions integrate "sustainability factors" into their management of bonds purchased as part of QE (NGFS 2019: 28). This should be implemented in relation to any new bond purchases, including the reinvestment of funds received back by the ECB.

Innovative finance

At the EU level, "innovative finance" means developing funding mechanisms over and beyond the allocations made in the regular EU budget (MFF), which draws on contributions from EU Member States. The creation of the EU's own independent revenue streams has long been controversial, with some governments arguing that this could undermine national sovereignty. However, the creation of these new funding sources is slowly advancing, with the European Council agreeing to the limited development of the EU's "own resources," starting with a tax on non-recycled plastic waste that will be introduced in January 2021 (European Council 2020: para A29). This will be followed by the creation of a carbon border adjustment mechanism (see below), as well as the possibility that the EU-ETS will be revised to encompass aviation and maritime emissions (European Council 2020: para A29).

It is notable that environmental taxes and carbon pricing play a central role in the EU's innovative financing initiatives, although the terms under which these mechanisms are being created could greatly hamper their environmental effectiveness. The main achievement of environmental taxes and carbon pricing to date has been to raise additional revenue to invest in the transition to a zero-carbon economy, but the Council's proposal states that the proceeds of any new resources introduced by the EU after 2021 should be used for the "early repayment" of money borrowed by the Union to finance its COVID-19 recovery package (NGEU), a condition that is also agreed by the European Parliament (European Council 2020: para A29, European Parliament 2020: para 10). This strips away the possibility that the EU could

directly use additional revenues to invest in climate crisis mitigation and ecosystem resilience. Until 2027, therefore, any increased expenditure on ecosystems will have to come from redirecting existing budgets through stricter rules to tie expenditure to increase biodiversity objectives, including through the establishment of a legally binding 10% biodiversity funding target (European Parliament 2020: para 15).

Border tax adjustment

The European Commission is currently consulting on how to create a carbon border tax adjustment mechanism (European Commission 2020e). It claims that such a tax would help to avoid the risk that energy-intensive, trade-exposed industries would relocate outside the EU as it ramps up climate ambition, a problem dubbed "carbon leakage."

It is worth noting that there is currently "little evidence that carbon pricing has resulted in the relocation of the production of goods and services or investment in these products to other countries" according to the World Bank, backing up the conclusion of earlier studies conducted for the European Commission (World Bank 2019: 8, Ecorys 2013). Yet the risk of carbon leakage has

been routinely emphasised by industry lobbyists in the process of setting EU-ETS rules in order to push for a series of rebates, free allowances and loopholes (Carbon Market Watch 2015). This context is important because it is not clear to what extent a border tax adjustment would raise significant revenue. It could work either by imposing a tax or tariff on imports and/or offering rebates for exports (Mehling et al. 2019).

The promotion of a border tax could take the wind out of the sails of lobbyists who have used offshoring as a rationale for introducing loopholes in existing carbon pricing schemes. Depending on how such taxes are designed, they could also partly address the issue of emissions embodied in trade (outsourced or "extraterritorial" emissions).

However, there is a significant risk that border taxes become a "backdoor trade policy" that ultimately shifts the costs of tackling climate change onto countries in the Global South, increasing inequality (Böhringer et al. 2012). These risks could be countered by ensuring that revenues from carbon border taxation are used to support alternative low carbon and sustainable production in producing countries outside the EU, in the form of increased climate finance contributions (Carbon Market Watch 2020: 3).



A broad climate movement helped to phase out coal combustion in Germany

Exempting Least Developed Countries (LDCs) and Small Island Developing States (SIDS) from any carbon border adjustment would also help to ensure that it does not shift the responsibility for mitigation onto the most vulnerable countries.

Border taxes might also fall foul of World Trade Organization (WTO) rules on production and process methods, as well as those that control discrimination between different countries, although it is likely that there are design solutions that would resolve this issue (Van Asselt et al. 2019).

International climate or biodiversity-specific mechanism Conservation finance could also be supported by a dedicated international funding mechanism, but in pursuing this path it is important to learn from the mistakes of the past. Back in 2010, the CBD followed the path of the UNFCCC in suggesting that the solution to increased international financing lay in developing market-based mechanisms. In 2011 and 2012, the price of carbon credits under the UNFCCC's CDM collapsed, and has never recovered. The CBD's proposal, meanwhile, has had little take-up and it is not hard to see why: the most needed conservation projects tend to have low revenues and rates of return, making them unattractive for private investors, while specific market-based mechanisms like biodiversity offsets involve high transaction costs that make them unappealing as a source of investment (Suttor-Sorel 2019: 4; 7-8). The environmental integrity and social benefit of carbon and biodiversity offset projects has also been widely questioned (Childs 2020, Kill 2014).

There remains space for specific international mechanisms dedicated to biodiversity or climate finance, with taxation offering a far more predictable source of financing than offsets or trading. Various international taxation proposals have been floated as a means to raise climate finance, amongst them proposals for an International Air Passenger Adaptation levy (modeled on an existing international solidarity facility that funds UNITAID) (Chambwera et al. 2012), a Climate Damages Tax that imposes a levy on fossil fuel extraction (Richards 2018), or a sustainability charge on meat to cover for the environmental harms caused by farming. ¹⁶

Allocation from Financial Transaction Taxes

Another way to achieve the same goal would be to allocate a proportion of the revenue generated by a new international financing mechanism to biodiversity finance. Implementing a Financial Transaction Tax, as has long been proposed within the EU, would be one such mechanism, but this has been met with strong resistance from the financial sector (Giegold et al. 2020). In essence, the idea is to impose a modest fee on transactions as a means to both dampen financial speculation and raise revenue from the financial sector to pay for public investment.



Old resilient beech forest in Europe

A proportion of these revenues could then be dedicated to climate crisis mitigation and ecosystem resilience.

International cooperation on fiscal policy reform

Finally, reforms to the global tax system could significantly increase the availability of biodiversity or climate finance. Taxation revenues have been significantly undermined in recent decades by large corporations and the super-rich "opting out" of their social responsibility, often through the use of tax havens. Ultimately, a new "unitary" global system of taxation is needed to ensure that corporations are properly taxed on their global income, regardless of where it has been earned (Shaxson 2020).

This should also form the basis of any EU-wide proposal for a Common Consolidated Corporate Tax Base, which is amongst the proposals that the European Parliament advocates as a means to increase the EU's "own resources" beyond individual nation-state contributions (Cobham et al. 2017, European Parliament 2020).

With public finance accounting for 80% of the finance for conservation (Parker et al. 2012), increasing public revenue streams that can then be allocated to protect biodiversity, enhance ecosystem resilience and invest in climate crisis mitigation and adaptation should remain a core priority.

Section 5: Conclusion

A just Climate Law

Humankind is at a critical juncture. This is the moment for the EU to decide, and act with urgency, on how to avert the worst impacts of the climate, biodiversity, health, and economic crises we are all facing. In comparison to the lack of ambition from other key nations, the EU has made significant steps with the European Green Deal as a frame for a greener development, new climate mitigation targets and an accompanying Climate Law proposal, but significant gaps remain. EU Council President Von der Leyen, and her old party colleague Chancellor Merkel, now have the opportunity to show real leadership by minimising reliance on emissions removals by focusing first and foremost on emissions reductions in all sectors, and recognising that while the restoration of natural carbon sinks are important, they cannot offset ongoing combustion that destroys the climate. Gaps in the proposed EU Climate Law must be addressed, through the indication of separate targets for emissions reductions and removals; inclusion of an emissions budget to represent the EU's "fair share"; and explicit exclusion of the use of international market mechanisms for offsets to achieve the EU's 2050 climate neutrality objective.

Through all these, the EU must remain strong in upholding human rights, the rights of indigienous peoples and local communities,

biodiversity protection, and ecosystem integrity. These are especially important in the Article 6 negotiations, in which the EU must draw a red line for the inclusion of human rights protections. It should also follow the example of other countries in recognizing the rights of nature and emphasize an ecocentric approach in the implementation of the Green Deal in support of its EU Biodiversity Strategy.

Finally, the EU must move towards real "green finance" and increase the share of the EU budget allocated for climate and biodiversity. This must be done without dependence on markets that have not delivered much in solutions so far. There needs to be a redirection of existing budgets, away from activities that fund fossil fuels, industrial agriculture, including meat products, and forestry, and others that cause harm, in favour of measures for the protection and restoration of nature, including for the sustainable management of land outside protected areas. This will also require "innovative finance" and new laws and taxes that ensure polluters pay for their pollution. Finance needs to be distributed to especially vulnerable peoples in and outside the EU to protect them from the impacts of climate change and biodiversity loss, as well as support a just transition to alternative and ecological means to live and thrive as one global community.

- For detailed numbers, see https://coronavirus.ihu.edu/map.html
- For examples of NGO green recovery appeals, see 350.org Open Letter: Principles for a Just Recovery from COVID-19 and https://www.greenpeace.org/eu-unit/issues/climate-energy/4036/eu-recovery-money-should-fund-green-economy-not-polluters/
- 3 For the new CAN position on "High level principles and recommendations for transformative pathways towards "real-zero" emissions" including on fungibility,
- see: http://www.climatenetwork.org/publication/can-position-high-level-principles-and-recommendations-transformative-pathways-towards
- 4 For EU LULUCF emission trends, see https://www.eea.europa.eu/data-and-maps/daviz/ets-esd-lulucf-and-aviation-3#tab-chart_1 See: https://kevinanderson.info/blog/a-paris-compliant-energy-only-carbon-budget-for-the-eu27/
- 6 Reducing Emissions from Deforestation and forest Degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks.
- For a more detailed briefing, see, http://carbonmarketwatch.org/learn-about-carbon-markets/intro-to-the-cdm/
- 8 Although not yet enshrined in the core UN human rights treaties, the right to a healthy environment is recognized in other international instruments and regional agreements (e.g. the Aarhus Convention and the Escazú Agreement), and in many State jurisdictions all over the world (Knox, 2018).
- The UN Human Rights Council has recognized that climate impacts interfere with the realization of fundamental human rights. Adopted in 2019, the latest resolution on Human Rights and Climate Change, among others:
 - Affirms that human rights obligations, standards and principles have the potential to inform and strengthen international, regional and national policymaking on climate change; Emphasizes that the adverse effects of climate change have a range of implications for the effective enjoyment of human rights, including the rights to life, adequate food, the enjoyment of the highest attainable standard of physical and mental health, adequate housing, self-determination, safe drinking water and sanitation, work and development; and Recognizes that climate change poses an existential threat for some countries, and has already had an adverse impact on the full and effective enjoyment of the human rights enshrined in the Universal Declaration of Human Rights and other international human rights instruments. (Human Rights Council resolution 41/21, A/HRC/RES/41/21, 12 July 2019, Emphases supplied)
- 10 See eg 'The People's Climate Case': Case T-330/18, Carvalho and Others v. European Parliament and Council of the European Union ECLI:EUT:2019:324;
- and the recent Youth 4 Climate Justice Complaint to the ECHR https://youth4climatejustice.org/the-case.html.
- 11 Luciano Lliuya v. RWE AG, Case N. 2 O 285/15 Essen Regional Court, Germany.
- 12 Ratified by the EU on 17 February 2005,
- see: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII 13&chapter=27&clang=_en
- 13 EU Commission Communication on the FERC legislation, see https://data.consilium.europa.eu/doc/document/ST-11449-2019-REV-1/en/pdf 14 The absence of any exclusion list to ensure that the EU does not finance polluting industries means that this goal is easily undermined (Green 10, 2020).
- Further, the absence of any monitoring or enforcement measures to back up this target also critically undermines the broader goal of achieving climate neutrality.

 15 Quantitative easing can be loosely summarized as a form of "printing money." Since 2015, the ECB Asset Purchase Programme has added €2.6 trillion to its balance sheet
- to buy government and corporate bonds. It can add a further €1.35 trillion through its Pandemic Emergency Purchase Programme (ECB 2020).
- 16 For more info on a proposed meat tax, see https://www.theguardian.com/environment/2020/feb/04/eu-meat-tax-climate-emergency.

Annex 1: Jurisdictions and recognition of the Rights of Nature

Jurisdiction	Instrument	Provision/Recognition	Material Scope
Global	IUCN World Declaration on the Environmental Rule of Law	Principle 2, Right to Nature and Rights of Nature: "Each human and other living being has a right to the conservation, protection, and restoration of the health and integrity of ecosystems. Nature has the inherent right to exist, thrive, and evolve."	Nature/ Ecosystems
Bolivia	2010 Law of the Rights of Mother Earth	Grants legal personhood and rights to Mother Earth itself, or the Pacha-Mama.	Mother Earth
	2012 Framework Law of Mother Earth and Integral Development for Living Well	Specifies which rights Mother Earth holds, including life, diversity of life, water, clean air, and restoration, among others.	
	2016 Intended Nationally Determined Contribution	The Bolivian INDC contains multiple references to the rights of the Mother Earth and the "living well" concept as "the complementarity of the rights of peoples to live free of poverty and the full realization of economic, social and cultural rights and the rights of Mother Earth"	
Ecuador	2008 Constitution	Article 10: "Nature will be subject of rights recognized by this Constitution."	Nature
Colombia	Tutelar action Andrea Lozano & others, STC4360-2018 (Supreme Court Sentence) 2018	The Colombian Amazon was a subject of rights and ordered that the government take action to protect it.	Forests
	Tutelar action Centro de Estudios para la Justicia Social "Tierra Digna" & others, T-622 (Constitutional Court) 2016	Recognized legal personhood of the Atrato River and its right to be protected, conserved, and restored.	River
India	Mohd Salim v State of Uttarakhand & others, WPPIL 126/2014 (High Court of Uttarakhand) 2017	The Ganges and Yamuna and their tributaries are "juristic/legal persons/living entities having the status of a legal person."	Rivers and glaciers
New Zealand	2017 Treaty of Waitangi (settlement agreement between Maori people and NZ government)	Recognized the legal person Te Awa Tupua as an "indivisible and living whole, comprising the Whanganui River from the mountains to the sea."	River
USA	2006 Right of Nature Ordinance, Tamaqua Borough, Pennsylvania	Asserts the rights of natural communities and ecosystems. Over 10 other municipalities have followed. (Margil 2017)	Natural communities and ecosystems
Palau	Title 24 Palau National Code	"The Preserve is henceforth to be retained in its present primitive condition where the natural plant and animal life shall be permitted to develop undisturbed."	Ocean

References

- Abate R.S., Kronk E.A., (2013) Climate Change and Indigenous Peoples: The Search for Legal Remedies (Edward Elgar) https://doi. org/10.4337/9781781001806.
- Anderson K., Broderick J.F., Stoddard I. (2020) A factor of two: how the mitigation plans of 'climate' progressive' nations fall far short of Paris-compliant pathways. Climate Policy 1-15. https://doi.org/10.108 0/14693062.2020.1728209
- Anderson K., Peters G. (2016) The trouble with negative
- emissions. Science 354, 182–183.
 Benites-Lazaro L.L., Mello-Thery N.A, (2019) Empowering communities? Local stakeholders' participation in the Clean Development Mechanism in Latin America, World Development Vol 114, 254-266 https://doi.org/10.1016/j.worlddev.2018.10.005 Böhringer C., Balistreri E., Rutherford T. (2012) The role
- of border carbon adjustment in unilateral climate policy: Overview of an Energy Modeling Forum study (EMF 29), Energy Economics 42.2 S97-S110 https:// doi.org/10.1016/j.eneco.2012.10.003 Blundell, Richard et al. COVID@19 and Inequalities.
- Fiscal Studies, Vol. 41 Issue 2. https://doi. org/10.1111/1475-5890.12232 Bowleg L. We're Not All in This Together: On COVID-19,
- Intersectionality, and Structural Inequality. Am J Public Health. 2020;110(7):917. doi:10.2105/ AJPH.2020.305766
- Cafaro PJ., & Primack RB. (2014) Species extinction is a great moral wrong. Biological Conservation, 170, 1-2. Hepburn C., O'Callaghan B., Stern N., Stiglitz J.,
- Zenghelis D., (2020) Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?, Oxford Review of Economic Policy, graa015, https://doi.org/10.1093/oxrep/graa015
- Cames M., Harthan R., Füssler J., Lazarus M., Lee C., Erickson P., Spalding-Fecher R. (2016) How additional is the Clean Development Mechanism? Stockholm Environment Institute and INFRAS. Study prepared for DG CLIMA. Reference: CLIMA.B.3/ SERI2013/0026r. https://ec.europa.eu/clima/sites/ clima/files/ets/docs/clean_dev_mechanism_en.pdf Carbon Market Watch (2015) Carbon Leakage Myth
- Buster, https://carbonmarketwatch.org/publications/ myth-buster/
- Carbon Market Watch (2020) Carbon Border Adjustments: Climate Protection or Climate Protectionism?, https://carbonmarketwatch.org/publications/ carbon-border-adjustments-climate-protection-orclimate-protectionism/
- CERP and SEI (2020) Climate Equity Reference Calculator. https://calculator.climateequityreference. org
- Chambwera M., Njewa E., Loga D. (2012) The International Air Passenger Adaptation Levy Opportunity or risk for Least Developed Countries? IIED,
- https://www.ldc-climate.org/wp-content/up-loads/2018/02/LDC-paper-series-17.pdf
 Chapron G., Epstein Y., Lopez-Bao J.V., (2019) A Rights
- Revolution for Nature, Science, Vol. 363, Issue 6434, pp. 1392-1393 https://science.sciencemag.org/ content/363/6434/1392
- Childs M. (2020) Does Carbon Offsetting Work?, https:// friendsoftheearth.uk/climate-change/does-carbonoffsetting-work
- Cobham A., Janský P., Jones C., Temouri Y. (2017)
 Assessing the Impact of the C(C)CTB: European Tax
 Base Shifts Under a Range of Policy Scenarios, GUE/ NGL and Tax Justice Network, http://guengl-panamapapers.eu/wp-content/uploads/2017/11/ GUENGL-TJN-Assessing-the-impact-of-the-CCCTB.
- Cook J., Supran G., Lewandowsky S., Oreskes N., Maibach, E., (2019) America Misled: How the fossil fuel industry deliberately misled Americans about climate change. Fairfax, VA: George Mason University Center for Climate Change Communication. Available https://www.climatechangecommunication.org/america-misled/

- Davies K., Adelman S., Grear A.,. Iorns Magallanes C., Kerns T., Ravi Rajan S. (2017) The Declaration on Human Rights and Climate Change: a new legal tool for global policy change. Journal of Human Rights and the Environment, Vol. 8 No. 2, pp. 217-253. https://doi.org/10.4337/jhre.2017.02.03 Dooley K., Kartha S., (2018) Land-based negative
- emissions: risks for climate mitigation and impacts on sustainable development. INEA 18, 79-98. https:// doi.org/10.1007/s10784-017-9382-9
- Ecorys (2013) Carbon Leakage Evidence Project, https://ec.europa.eu/clima/sites/clima/files/ets/ allowances/leakage/docs/cl_evidence_factsheets_
- Ecoequity (2018), After Paris: Inequality, Fair Shares, and the Climate Emergency https://www.ecoequity. org/2018/12/after-paris/
- Erb K. et al (2017) Unexpectedly large impact of forest management and grazing on global vegetation biomass Nature 553
- Ervine K. (2015) Trading Carbon: Offsets, Human Rights, and Environmental Regulation. In: Ervine K., Fridell G. (eds) Beyond Free Trade. International Political Economy Series. Palgrave Macmillan, London. https://doi.org/10.1057/9781137412737_14
- European Climate Foundation (2020) Climate Laws in Europe: Good Practices in Net-Zéro Management, https://europeanclimate.org/content/ uploads/2020/02/04-02-2020-climate-laws-in-euro-
- pe-full-report.pdf European Central Bank (2020) Pandemic emergency purchase programme (PEPP) Questions & Answers https://www.ecb.europa.eu/mopo/implement/pepp/ html/pepp-ga.en.html
- European Commission (2014) A policy framework for climate and energy in the period from 2020 to 2030, COM 2014 (15), 22 Jan, https://eur-lex.europa.eu/ legal-content/EN/TXT/PDF/?uri=CELEX:52014DC001 5&from=EN
- European Commission (2019) Evaluations Study of the impact of the CAP on climate change and greenhouse gas emissions: final report, https://op.europa.eu/en/publication-detail/-/publication/29eee93e-9ed0-11e9-9d01-01aa75ed71a1
- European Commission (2020a) Roadmap: European Climate law achieving climate neutrality by 2050, 6 Jan, https://ec.europa.eu/info/law/better-regulation/ have-your-say/initiatives/12108-Climate-Law.
- European Commission (2020b) Proposal for a Regulation establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law), COM 2020 (80), 4 Mar, https://ec.europa.eu/info/sites/info/files/ commission-proposal-regulation-european-climate law-march-2020 en.pdf
- European Commission (2020c) The EU Budget Powering the Recovery Plan for Europe, COM 2020 (442), 27 May, https://eur-lex.europa.eu/resource. html?uri=cellar:4524c01c-a0e6-11ea-9d2d-01aa75ed71a1.0003.02/DOC_1&format=PDF
- European Commission (2020d) EU Biodiversity Strategy for 2030: Bringing nature back into our lives, COM 2020 (380), 20 May, https://eur-lex.europa.eu/ resource.html?uri=cellar:a3c806a6-9ab3-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF
- European Commission (2020e) EU Green Deal (carbon border adjustment mechanism), https://ec.europa.eu/ info/law/better-regulation/have-your-say/ initiatives/12228-Carbon-Border-Adjustment-Mecha-
- European Commission, Use of international credits, https://ec.europa.eu/clima/policies/ets/credits_en
- European Council (2020) European Council Conclusions, EUCO 10/20, 21 July, https://www.consilium. europa.eu/media/45109/210720-euco-final-conclusions-en.pdf
- European Parliament (2020a) European Parliament resolution of 23 July 2020 on the conclusions of the extraordinary European Council meeting of 17-21 July

- 2020 (2020/2732(RSP)), P9_TA(2020)0206, https:// www.europarl.europa.eu/doceo/document/ TA-9-2020-0206_EN.html
- European Parliament (2020b) Committee on the Environment, Public Health and Food Safety Compromise Amendments, 2020/0036 (OCD), 9 September 2020, https://www.europarl.europa.eu. meetdocs/2014_2019/plmrep/COMMITTEES/ENVI/ DV/2020/09-10/1207133EN.pdf
- European Union (2020) Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, https://eur-lex.europa.eu/ legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852
- Evans, S. and Gabbattis, J. (2019) COP25: Key outcomes agreed at the UN climate talks in Madrid Carbon Brief https://www.carbonbrief.org/ cop25-key-outcomes-agreed-at-the-un-climatetalks-in-madrid
- Faheem Ahmed, et al. (2020) Why inequality could spread COVID-19. The Lancet Public Health, Vol. 5, Issue 5, E240, May 1,. https://doi.org/10.1016/ S2468-2667(20)30085-2
- FAO and UNEP (2020) The State of the World's Forests 2020. Forests, biodiversity and people. Rome. DOI: https://doi.org/10.4060/ca8642en
- Galloway McLean, K. (2012) Land Use, Climate Change Adaptation and Indigenous Peoples. United Nations University. https://unu.edu/publications/articles/ land-use-climate-change-adaptation-and-indigenous-peoples.html#info
- Giegold, S. et al. (2020) A Financial Transaction Tax Deal Worth Fighting For, Euractiv 17 July, https://www.euractiv.com/section/economy-jobs/ opinion/a-financial-transaction-tax-deal-worth-fighting-for/
- GBO (2020) Global Biodiversity Outlook 5, Convention on Biodiversity.
- Global Witness (2020) Defending Tomorrow. The climate crisis and threats against environmental and land defenders. https://www.globalwitness.org/en/ campaigns/environmental-activists/defending-tomorrow/
- Green 10 (2020) Guaranteeing a Green Recovery in Next Generation EU, 13 July, https://static1.squarespace. com/ static/5eccca61ea936a6584ceb398/t/5f0dd6d9a314
 - 8f0ff2bf59c5/1594742530675/Guaranteeing+a+Gree n+Recovery+across+Europe+in+Next+Generation+
- Green New Deal for Europe (2019) Blueprint for Europe's Just Transition (edition 2), https://report.gndforeurope.com/
- Guillaume C. et al (2019) A Rights Revolution for Nature Science Vol. 363 (6434), 1392-1393. Hilson C. (2020) Hitting the Target? Analysing the Use of
- Targets in Climate Law Journal of Environmental Law Vol. 32 No. 2, p 195. ILO (2020) ILO Monitor: COVID-19 and the world of work
- (27 May 2020). Fourth edition Updated estimates and analysis. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/ briefingnote/wcms_745963.pdf
- IPBES (2019) Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [Brondizio ES., Settele J., Díaz S., Ngo HT. (eds)]. IPBES secretariat, Bonn, Germany.
- IPCC (2018) Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, et al (eds.)].
- IPCC (2019) Summary for Policymakers. In: Climate
 Change and Land: an IPCC special report on climate

- change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [Shukla PR. et al (eds)]
- Karesh WB, Cook RA, Bennett EL, Newcomb J. (2005) Wildlife trade and global disease emergence. Emerg Infect Dis, 11(7): 1000–1002. doi: 10.3201/ eid1107.050194
- Kill J. (2014) Economic Valuation of Nature. The price to pay for conservation? Rosa Luxembourg Stiftung, https://bw.rosalux.de/fileadmin/rls_uploads/pdfs/ sonst_publikationen/Economic-Valuation-of-Nature. pdf
- Knox John (2018) Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report to the General UN Assembly 73rd session, agenda item 74 (b), UN Doc A/73/188
- Lade S.J., et al. (2019) Potential feedbacks between loss of biosphere integrity and climate change. Glob. Sustain. 2, e21. https://doi.org/10.1017/sus.2019.18
- Lee M. (2014) EU Environmental law, governance and decision making, Hart Publishing.
 Lenton T. et al. (2019) Climate tipping points too risky
- Lenton T. et al. (2019) Climate tipping points too risky to bet against Nature 575, 592-595. doi: 10.1038/ d41586-019-03595-0 Levitt T. (2019) EU ignoring climate crisis with livestock
- Levitt T. (2019) EU ignoring climate crisis with livestock farm subsidies, campaigners warn, The Guardian 22 May, https://www.theguardian.com/environment/2019/may/22/eu-ignoring-climate-crisis-withlivestock-farm-subsidies-campaigners-warn
- Lovejoy TE., Carlos N. (2019) Amazon tipping point: Last chance for action. Science Advances Vol. 5, no. 12, eaba2949. DOI: 10.1126/sciadv.aba2949
- Mackey B., et al. (2013) Untangling the confusion around land carbon science and climate change mitigation policy. Nature Climate Change 3, 552–557. https://doi.org/10.1038/nclimate1804
- Margil, M. (2017) Why Nature Needs Legal Rights World Policy Journal, vol. 34, No. 2.
- McDowell N.G., et al. 2020. Pervasive shifts in forest dynamics in a changing world. Science 368, eaaz9463. https://doi.org/10.1126/science.aaz9463
- McLaren D.P., Tyfield D.P., Willis R., Szerszynski B., Markusson N.O., (2019) Beyond "Net-Zero": A Case for Separate Targets for Emissions Reduction and Negative Emissions. Front. Clim. 1, 4. https://doi. org/10.3389/fclim.2019.00004
- Mehling M., Van Asselt H., Das K., Droege S., Verkuijl C. (2019) Designing Border Carbon Adjustments for Enhanced Climate Action. American Journal of International Law, 113(3), 433-481. doi:10.1017/ajil.2019.22
- Meyer-Ohlendorf Nils, (2020) A European Climate Law
 Draft, Ecologic Institute https://www.ecologic.eu/
 sites/files/publication/2020/climate-law-draft-ecologic-14012020-final.pdf
- Network for Greening the Financial System (2019) A Call for Action: Climate change as a source of financial risk, https://www.ngfs.net/sites/default/files/medias/documents/synthese_ngfs-2019___17042019_0.pdf NewClimate Institute (2020) Options for supporting
- NewClimate Institute (2020) Options for supporting Carbon Dioxide Removal, https://www.c2g2.net/ wp-content/uploads/Options-for-supporting-Carbon-Dioxide-Removal_July_2020.pdf
- Norton-Smith, K., et al. (2016) Climate change and indigenous peoples: a synthesis of current impacts and experiences. Gen. Tech. Rep. PNW- GTR-944. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 136 p.
- O'Donnell, E. (2018) At the Intersection of the Sacred and the Legal: Rights for Nature in Uttarakhand, India Journal of Environmental Law, Vol. 30.
- Obergassel W., Peterson L., Mersmann F., Schade J., Hofbauer J.A., Mayrhofer M., (2017) Human rights and the clean development mechanism: lessons learned from three case studies Journal of Human Rights and the Environment Vol 8 Issue 1 https://doi.org/10.4337/jhre.2017.01.03.

- Ortiz AM., de Leon, AM.,. Torres JN., Cecilia Therese G., La Vina A. (2020) Implications of COVID-19 on Progress in the UN Conventions on Biodiversity and Climate Change. Available at SSRN: https://ssrn. com/abstract=3665170 or http://dx.doi.org/10.2139/ ssrn.3665170
- Parker C., Cranford M., Oakes N., Leggett K. (eds.) (2021) The Little Biodiversity Finance Book, Global Canopy Programme, 3rd edition, https://www. globalcanopy.org/publications/little-biodiversityfinance-book-3rd-edition-2012
- finance-book-3rd-edition-2012
 Patel JA, Nielsen FBH, Badiani AA, et al. (2020) Poverty, inequality and COVID-19: the forgotten vulnerable. Public Health. 2020;183:110-111. doi:10.1016/j. puhe.2020.05.006
- Pe'er, G., et al. (2020) British Ecological Society, People and Nature. Action needed for the EU Common Agricultural Policy to address sustainability changes. https://doi.org/10.1002/pan3.10080Citations: 10
- Peters G.P., 2018. Beyond carbon budgets. Nature Geoscience 11, 3.
- Ramos-Castillo, A., Castellanos, E.J. & Galloway McLean, K. (2017) Indigenous peoples, local communities and climate change mitigation. Climatic Change 140, 1–4 https://doi.org/10.1007/s10584-016-1873-0
- Reyes O. (2020) Change Finance, not the Climate, Institute for Policy Studies and Transnational Institute, https://www.tni.org/en/changefinance
- https://www.tni.org/en/changefinance Richards J-A., Hillman D., Boughey L.(2018) The Climate Damages Tax: A guide to what it is and how it works, https://www.stampoutpoverty.org/the-climate-damages-tax-a-guide-to-what-it-is-and-how-it-works/
- Rogelj, J., et al. (2018) Scenarios towards limiting global mean temperature increase below 1.5 °C. Nature Climate Change 8, 325–332. https://doi.org/10.1038/ s41558-018-0091-3
- Rolston H., III. (2012) A new environmental ethics: The next millennium for life on earth. New York: Routledge.
- Sarmiento Barletti, JP and Larson, A. (2017) Rights abuse allegations in the context of REDD+ readiness and implementation. A preliminary review and proposal for moving forward. CIFOR infobrief No. 190, October 2017. 7 DOI: 10.17528/cifor/006630
- Schneider L. & La Hoz Theuer S. (2019) Environmental integrity of international carbon market mechanisms under the Paris Agreement, Climate Policy, Vol. 19 No.3.
- Scown M., Brady M., Nicholas K. (2020) Billions in Misspent EU Agricultural Subsidies Could Support the Sustainable Development Goals, One Earth 3, 237–250, https://doi.org/10.1016/j.oneear.2020.07.011
- Shaxson N. (2020) How to make multinationals pay their share, and cut tax havens out of the picture, The Guardian 27 January, https://www.theguardian.com/commentisfree/2020/jan/27/multinationals-tax-havens-britain-us-corporate-glants
- Seddon N., Turner B., Berry P., Čhausson A., Girardin C.A.J. (2019) Grounding nature-based climate solutions in sound biodiversity science. Nature Climate Change 9, 824–8477. https://doi.org/10.1038/ s41558-019-0402-3
- Shoreman-Ouimet E., & Kopnina H. (2016). Culture and conservation: Beyond anthropocentrism. New York: Routledge.
- Steffen W., et al. (2015) ,Planetary Boundaries: Guiding Human Development on a Changing Planet Science. 10.1126/science.1259855.
- Steffen W. (2016) Land Carbon is no substitute for fossil fuels. The Climate Council, Australia.

 Stone C.D. (2010) Should trees have a standing? Law.
- Morality and the Environment, OUP
- Suttor-Sorel L. (2019) Making Finance Serve Nature, Finance Watch, https://www.finance-watch.org/ publication/making-finance-serve-nature-report/
- The Nature Conservancy (TNC) (2017) Strong Voices, Active Choices: TNC's Practitioner Framework to

- Strengthen Outcomes for People and Nature.
- Arlington, VA.

 Timperley J. (2019) Carbon offsets have patchy human rights record. Now UN talks erode safeguards.

 Climate Home News, 9 December 2019. https://www.climatechangenews.com/2019/12/09/carbon-offsetspatchy-human-rights-record-now-un-talks-erodesafeguards/
- Timperley J. (2019) COP25: What was achieved and where to next? Climate Home News, 16 December 2019. https://www.climatechangenews.com/2019/12/16/cop25-achieved-next/
- Townsend J, Moola F, and Craig MK. (2020) Indigenous Peoples are critical to the success of nature-based solutions to climate change. FACETS 5: 551–556. doi:10.1139/facets-2019-0058
- UNDP (2020) COVID-19 and Human Development: Assessing the Crisis, Envisioning the Recovery. Human Development Perspectives. http://hdr.undp. org/sites/default/files/covid-19_and_human_development_0.pdf
- UN Climate Action Summit 2019. Compendium of Contributions: Nature-Based Solutions. https://wedcos.unep.org/bitstream/hand-le/20.500.11822/29988/Compendium_NBS.pdf?sequence=1&isAllowed=y
 UNEP (2015) Climate Change and Human Rights.
- UNEP (2015) Climate Change and Human Rights. https://wedocs.unep.org/bitstream/ handle/20.500.11822/9530/-Climate_Change_and_ Human_Rightshuman-rights-climate-change.pdf. pdf?sequence=2&%3BisAllowed=
- UNEP (2019) Emissions Gap Report 2019. UNEP, Nairobi. http://www.unenvironment.org/emissionsgap

