

# SUBMISSION FOR THE FIRST INPUT PHASE OF THE GLOBAL STOCKTAKE

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Climate Action Network



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## About CAN International

Climate Action Network International (CAN) is the world's largest network of civil society organisations working together to promote government action to address the climate crisis, with more than 1500 members in over 130 countries.

CAN, as a UNFCCC constituency, has the mandate and legitimacy to fully participate in the Global Stocktake (GST). Civil society plays an integral role in not only identifying the challenges but providing the solutions, but also represents those facing the lived reality and experiences of climate change. Testimonies and stories throughout this submission will show how local communities, Indigenous Peoples, women in all their diversity, children and citizens are facing climate change and already implementing solutions at their local level, ensuring the GST hears and considers these perspectives.

To ensure an effective, inclusive, and comprehensive global stocktake, this submission focuses on four key issues which are particular priorities for CAN-International. By shining a spotlight on these under-addressed topics, this submission intends to raise their profile in the GST and encourage technical dialogues to further reflect on these. All relevant resources are available in the final Resources section.

### **Case studies and testimonies: Why do we need the stories from the ground to achieve the Paris Agreement?**

UN Secretary General António Guterres's Message of Support for the #WorldWeWant Campaign: *We live in profoundly challenging times. COVID-19 has devastated lives and economies around the world. But it has not stopped the climate crisis. Like the pandemic, global heating is hitting the world's most vulnerable communities hardest. Yet, as is so often the case, those who have done least to cause the crisis are taking the boldest steps to confront it. These stories of urgency and resilience from the front lines of the crisis are essential.*

Source and further information: [here](#).

# 1. EXECUTIVE SUMMARY

**Despite progress made to date, there remain immense gaps to fulfilling the goals of the Paris Agreement.** Global CO<sub>2</sub> emissions must at least halve this decade from 2019 levels to limit warming to 1.5°C accompanied by significant emissions reductions of other GHG. Yet, even with the 2030 NDCs submitted by last year, emissions are projected to be approximately double from 2010 by 2030 as required for 1.5°C<sup>1</sup>.

At the same time, rapidly worsening climate impacts everywhere are proof that we have entered the era of rapidly intensifying loss and damage (L&D). Total adaptation finance in 2019 only amounted to US\$ 20.1 billion, and yet adaptation costs in developing countries are expected to reach \$500 billion (£363bn) by 2050<sup>2</sup>.

An order of magnitude greater in public and private finance is required to unlock the pace and scale of action demanded by the climate crisis (at least an eightfold increase to meet the estimated \$5 trillion needed annually by 2030<sup>3</sup>), not least with respect to the continued under-delivery against the \$100bn climate finance commitment<sup>4</sup>. These represent investments that benefit biodiversity, air quality, living conditions and are lower than external costs of fossil fuels of almost \$US 6 trillion per year<sup>5</sup>.

The Global Stocktake is the core of the Paris Agreement's ambition mechanism. It should drive ambition on all three Paris goals and reflect on their state of affairs, but must also seek to identify ways to address existing gaps for reaching the Paris goals. **In doing so, considerations of equity, social and gender justice, intergenerational justice, the protection and promotion of human rights, just transition, and environmental integrity should be at the front of mind.** Successful climate action prioritises the needs of the most vulnerable, and holds those who caused climate change accountable. It positively contributes to sustainable development, and to the reduction of both poverty and inequality, whilst addressing the nature crisis, protecting ecosystems and biodiversity. Ambitious action on sustainable climate change solutions in line with the Paris Agreement will not only reduce health impacts, but offers health co-benefits including cleaner air, healthier diets and improved physical activity<sup>6</sup>. To achieve this, fossil fuels must be phased-out fast, while dangerous, harmful and questionable climate solutions should be avoided such as nuclear power, geoengineering, and unsustainable biomass use.

This is how CAN International sees the GST as a improvements and solutions provider on the following topics that are still facing challenges to be fully covered and implemented in climate policies and strategies:

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<sup>1</sup> [Climate Action Tracker 2021 - Glasgow's 2030 credibility gap](#)

<sup>2</sup> [UNEP 2021 - Adaptation Gap Report](#).

<sup>3</sup> [WRI 2021 - State of Climate Action 2021](#)

<sup>4</sup> [Climate Finance Delivery Plan 2021](#)

<sup>5</sup> IMF 2021 [Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies \(imf.org\)](#)

<sup>6</sup> [The public health implications of the Paris Agreement: a modelling study - 2021](#)

### **On loss and damage**

- The GST can scope capacity gaps to help countries mobilise efforts to address L&D.
- The GST should include a holistic assessment of information on all contributing factors to L&D. It must be reported as an outcome indicator for the Paris Agreement and could be established quickly using existing global risk databases
- Ensure coordination between UNFCCC, UNDRR and the SDGs. The Sendai Framework Monitor and progress on delivering the SDGs can inform the GST by highlighting data gaps and needs.
- The GST must link with the Santiago Network on Loss and Damage (SNLD) to monitor the effective delivery of technical assistance by the SNLD.

### **On the phase-out of fossil fuels**

- COP26 called for the phasedown of unabated coal and the phaseout of inefficient fossil fuel subsidies. The GST should assess the trajectory, measurement and definitional credibility of the language in this paragraph. In addition, the GST could offer clarity in communication and reporting modalities such as NDCs.
- International bunker fuels burned in maritime shipping and air transport emissions should be included in the GST.
- The GST is also the best opportunity to showcase the alternatives to fossil fuels, such as renewable energy or energy efficiency and conservation.

### **On the protection of natural ecosystems to stay within 1.5°C warming**

- The GST is an opportunity to assess progress on the implementation of the Paris Agreement's ecosystems provisions, and to identify the risks, damages and perverse incentives for biodiversity and natural ecosystems associated with current mitigation efforts, rules and definitions in the UNFCCC.
- Current GST proposals do not consider an assessment of Parties' progress in implementing Article 5 of the Paris Agreement and this urgently needs to be included, as mandated by 19/CMA.1 paragraph 26(a).
- It is crucial that the GST assess the adequacy, loopholes and perverse incentives arising from accounting and rules in the LULUCF sector – including the magnitude of unaccounted emissions - and suggest ways for Parties to overcome them.
- The GST must assess the extent to which Parties are aligning climate and biodiversity action, as well as highlight the key knowledge and policy gaps that are needed for coherent and integrated near and long-term planning.

### **On the consideration of human rights protection and public participation in the construction and implementation of NDCs**

- The GST is an important instrument to recenter our collective understanding of the role that human rights and social inclusion principles should play at the core of effective climate action.
- In addition to the principles of equity and best available science, the GST should therefore review climate action in light of human rights and broader social principles, including the rights of Indigenous Peoples, public participation, gender equality etc.
- The GST can't be an equitable process if it is not inclusive: Indigenous People, women, youth and other populations should be represented at every step.

## 2. Loss and Damage

*Proposition for an additional guiding question:*

- What are the existing financial flows for loss and damage, what are the needs for loss and damage finance, and what are the remaining gaps?

### **Introduction**

Loss and damage (L&D) is the “adverse impacts of human-induced climate change that cannot be [or wasn’t] avoided by mitigation or adaptation, or that will not be avoided in the future by adaptation”<sup>7</sup>. The human-made components of both vulnerability and hazard exposure are critical in this regard. As climate impacts escalate, action to proactively reduce climate impacts must be scaled up rapidly. Loss and damage is already a lived reality for people around the world. Climate-induced losses and damages dramatically multiply the social crises in societies that are already struggling with multiple injustices. Poor and vulnerable countries and communities are least responsible for climate change but are already facing the majority of its negative impacts. **The GST related to L&D should include a holistic assessment of information on all contributing factors.**

We do not have an indicator for how well we are delivering the Paris Agreement; the only widely recognised indicator is the reduction of greenhouse gas emissions. **Dealing with loss and damage globally must be reported under the GST as an outcome indicator for the Paris Agreement and could be established quickly using existing global risk databases.**

### **1. Loss and Damage finance**

Estimates of global annual economic losses for additional temperature increases of ~2°C are incomplete, but lie in the range of between 0.2 and 2.0% of GDP. For non-Annex I countries, total residual damages range from 116–435 billion USD in 2020, rising to 290–580 billion USD in 2030, 551–1,016 billion USD in 2040 and 1,132–1,741 billion USD in 2050<sup>8</sup>. **Despite such information being available, there are no ‘official’ and commonly accepted estimates of L&D finance needs.**

**Vulnerable developing countries have communicated what they need in order to address loss and damage** including<sup>9</sup>:

- Adequate climate information services, risk and needs assessments to inform planning
- Support to develop and implement approaches to address loss and damage from both extreme weather events and slow onset climatic processes

<sup>7</sup> Adjusted definition based on Mace, M./ Verheyen, R. 2016: Loss, Damage and Responsibility after COP21: All Options Open for the Paris Agreement. In: Review of European, Comparative & International Environmental Law 25 (2), 197–214.

<sup>8</sup> Markandya/ González-Eguino (2018)

<sup>9</sup> Based on: The Loss and Damage Collaboration 2021: [Why do developing countries need support to address loss and damage?](#); Schaefer et al. 2021a: [Financing Instruments and Sources to Address Loss and Damage from Slow-onset Processes](#)

- Support to develop and implement financial protection tools including social protection, climate risk insurance, contingency funds
- Measures to support people and communities displaced or forced to migrate by loss and damage through appropriate policies and resources at all levels
- Measures to address non-economic loss and damage, e.g. through Recognition of loss (accompanied/unaccompanied by financial payments), Active remembrance (e.g. through museum exhibitions, school curricula) Counselling (e.g. for people experiencing trauma related to loss and damage)
- Multi-stakeholder participation in the generation of data, assessment and response to L&D<sup>10</sup>

Scaled-up finance at a level commensurate with the need - based on the principle of common but differentiated responsibilities - is therefore essential for vulnerable countries and communities to recover from the climate impacts they are already facing to rebuild their livelihoods and economies. While finance for averting and minimising L&D has been mobilised in the form of finance for mitigation and adaptation, **finance for addressing L&D remains lacking, apart from insufficient humanitarian aid. Current financing mechanisms and modalities of the UNFCCC funds are not suitable for funding all relevant loss and damage activities.** Particularly measures to address loss and damage immediately following an extreme weather event as well as slow-onset processes at an early stage of occurrence – which would need rapid and large-scale financing - are not possible to fund through the existing UNFCCC financial architecture. This owes particularly to the financing mechanisms (with the exception of the GCF, all analysed funds are grants-only mechanisms) and the type of funding accessible through the funds, which is primarily distributed through multi-year projects with a long application and pre-project phase.<sup>11</sup>

A political solution is needed to support poor and vulnerable people and their countries in dealing with unavoidable and unavoids L&D. Setting up a L&D Finance Facility, as suggested by the G77 at COP 26, is needed in order to adequately support vulnerable countries in addressing loss and damage.

## 2. How effective is the UNFCCC in supporting countries in dealing with L&D?

**A review of the Warsaw International Mechanism<sup>12</sup>** highlighted that it has been unable to break away from a technical modality and deliver action. It is vital that the GST recognises not just the number and quantity of reports, and meetings held but translates these into action on the ground.

**Ensure coordination between UNFCCC, UNDRR and the SDGs.** The Sendai Framework Monitor and progress on delivering the SDGs can inform the GST by highlighting data gaps and needs.

## 3. Santiago Network on Loss and Damage

<sup>10</sup> [La Ruta del Climate - Loss and damage](#)

<sup>11</sup> Schaefer et al. 2021b: [Potential for loss and damage finance in the existing UNFCCC financial architecture](#)

<sup>12</sup> Practical Action - [Assessing the performance of the WIM ExCom](#)

**Santiago Network for L&D (SNLD).** The GST must link with the SNLD to monitor the effective delivery of technical assistance by the SNLD and as a measure that the work of the SNLD is responding to the priority needs of climate impacted communities.

#### **4. Properly addressing L&D at the national level**

**Lack of global datasets that reach communities on the frontline of the climate emergency.** Existing data sets are skewed towards developed economies and emphasise economic losses and damages versus non-economic loss and damage in the form of social, cultural and ecological impacts. Those that do exist are not directly comparable and cannot be simultaneously evaluated across countries.

**Dominance of insurance data.** Existing databases to assess L&D are largely focussed on insured losses and damages. This skews the data towards developed countries and regions with higher insurance saturation.

**Capacity building.** The GST can help shed light on where capacity gaps lie and where efforts to support countries to better understand loss and damage and thereby help them mobilise efforts to address loss and damage.

*N.B. There are also challenges assessing collective progress on national level adaptation, including on finance. There is no data on the state of gender-responsive or child-sensitive climate finance. Data on the amount of funding that is directed to locally led adaptation is also limited. CAN will make a submission on adaptation issues at the next opportunity.*

#### **5. Gender & children**

The impacts of climate disasters particularly threaten women's rights and human rights, as well as that of children who are set to experience more extreme weather than future generations.<sup>13</sup> There is a lot of room for improvement in data collection and analysis around loss and damage, which often ignores or marginalises gender-disaggregated data collection efforts. Hence, assessing the gendered dimensions of loss and damage related-data, including a way of raising the voices of women and LGBTQIA+ individuals in this field is critical.

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<sup>13</sup> Save the Children - [Born into the Climate Crisis: Why we must act now to secure children's rights](#)

## Case studies and testimonies: Loss and damage



### Case study: climate impacts - Malabon City, Philippines

Climate change is having significant impacts in Malabon City, especially flooding during the off-season.

“For this reason, local residents initiated a program to transform Malabon into a zero-waste city to reduce pollution and flooding. The initiative especially prohibits dumping of plastic and other solid waste to protect the health of people and the environment more generally. As heavy rains and typhoons become more frequent, Malabon city will have to cope with continued flooding. The government needs to invest more in local solutions and in upgrading the draining system.”

Source & further information: [here](#).

### Case study: climate impacts - Mallacoota, Australia

Extreme summer heat and prolonged droughts had led to increasingly large bushfires across Australia.

“We got the call to leave our houses to evacuate down to the wharf, which is where we stayed pretty much the next 24 hours and witnessed an apocalypse. The whole sky just went pitch black. It was like the darkest winter night you've ever seen and then everything just went red”, said Jann Gilbert, Bushfire survivor.

Source and further information: [here](#).



### Case study: climate impacts – Central Java, Indonesia

In the forests of Central Java climate change and massive deforestation have led to severe droughts, drastically reducing water supply and causing terrible floods and landslides during the rain season.

“We, women, are particularly affected as we are in charge of supplying water for our families. Women are also less informed when there is a disaster striking because we are traditionally more bound to home and avoid public places where information is spread. We had to stop this. We started building structured grassroots women groups. There are now around 50 of them. Together we conducted research and developed a gender-responsive emergency preparedness programme, which was presented to local authorities and later recognized by the government of Indonesia as a model of climate resilience.”

Source and further information: [here](#).

### 3. Phase out of Fossil Fuels

*Proposition for an additional guiding question:*

- What is the overall effect of Parties' Nationally Determined Contributions and progress made by Parties in the phase-out of fossil fuel use and production, and transition to clean, renewable energy, through a just transition and a human-right based approach that respects the rights of children, young people, marginalised groups and Indigenous Peoples, as well as the rights of future generations?

#### **Introduction**

Burning fossil fuels is the primary cause of the climate crisis. The IPCC in its most ambitious scenarios (WG I, 2021) and the IEA in its recent Net Zero scenario (IEA, WEO, 2021) that there is no way to limit warming to 1.5°C without phasing out fossil fuels<sup>14</sup>. The UNEP Production Gap report highlights and refines this imperative. Moreover, most fossil fuels activities are also very harmful for biodiversity, human health, and human rights, including the rights of children.

To reach the goals of the Paris Agreement, and ensure a climate safe world for all, the just transition from fossil fuels must begin today. The wealthy who have the biggest capacity to cope can ensure we stay within our sliver of a window of opportunity to remain within 1.5°C by: ending all Fossil fuel financing (subsidies, at home and abroad) must end; fossil fuel production and expansion must be terminated; significantly enhancing transition finance and support to developing countries so that we can achieve 50% CO<sub>2</sub> and similar rates of other GHG emissions reduction rates by 2030 compared to 2019 to limit warming to 1.5°C. This must come alongside a rapid, equitable deployment of renewable energy..

Consequently, the managed phase out of oil, fossil gas and coal alongside just transition measures is key to achieving the Paris Agreement and must be assessed in the Global Stocktake. There are general questions on mitigation and emissions reductions in the several guiding questions of the Global Stocktake. CAN International urges the GST to include a very dedicated question on fossil fuels, to ensure it will be visible and discussed. The reference to fossil fuels in Decision 1/CP.26 has once and for all broken the taboo against directly confronting fossil fuels in the UNFCCC process. This input is proposing a set of data, information and stories to start with the assessment.

Decision 1/CP.26 paragraph 20 calls for the phasedown of unabated coal and the phaseout of inefficient fossil fuel subsidies. The GST should assess the trajectory, measurement and definitional credibility of the language in this paragraph to stay within the global temperature goal of 1.5°C. In addition, the GST could offer clarity in communication and reporting modalities such as NDCs, information on domestic implementation and Long Term Strategies of overarching fossil fuel phaseout which is the only viable way in which to stay within the agreed temperature goal of 1.5°C as resolved by 1/CP.26 paragraph 16.

Countries are still very late in their fossil phase-out strategy and implementation (or did not even begin). The following figures are clear:

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- The OECD/IEA<sup>15</sup> finds that G20 country fossil fuel subsidies have nominally remained unchanged to those of a decade ago, at USD 159.3 billion in 2020 compared to USD 161.8 billion in 2010;
- According to analysis by the CarbonBrief<sup>16</sup> global coal capacity has grown every year between 2000 (1,066GW) to 2019 (2,045GW). CO2 emissions from existing plants will breach the remaining carbon budgets for 1.5°C and 2°C
- G20 members still provide at least USD \$62 billion per year (annual average for 2017-2019) on public finance for fossil fuels. Climate finance provided through bilateral, multilateral finance and export credits reached the same amount on average each year since 2017

### **Fossil fuels and health: a real threat**

Fossil fuel dependence damages health not only through the impacts of climate change, but also through the air pollution caused by their combustion, and through the destruction of local communities' land and resources caused by their extraction.

- Fossil fuel combustion accounts for 8.7 million premature deaths annually<sup>17</sup>;
- Compared to Paris Agreement pledges, limiting warming to 1.5°C above pre-industrial levels will reduce the additional lifetime exposure of newborns to heatwaves by 45%, droughts by 39%, river floods by 38%, crop failures by 28%, and wildfire by 10%.

A just and equitable phase-out of fossil fuels in the power generation, housing, and transport sectors will improve ambient and indoor air quality, promote healthier transport modes such as walking and cycling, and ensure communities have access to clean fuels for cooking, heating, and lighting. These health co-benefits can be gained only from real phase-out; not from offsetting. Fossil fuel phase-out will only be achieved through ending their subsidies, with funds instead allocated to renewable energy generation or health care and social protection. At present, net carbon subsidies are, in many cases, equivalent to substantial proportions of countries' national health budgets<sup>18</sup>

### **Fossil fuels and NDCs: we need ambition!**

The NDC synthesis report highlights the need for a significant increase in the ambition of NDCs between now and 2030. The total global GHG emission level in 2030, taking into account the implementation of all the latest NDCs, is expected to be 16.3% above the 2010 level compared to the 45% reduction required by the IPCC. According to the latest version of the report, 87% of countries have identified energy generation and transmission as one of their key mitigation priority areas in their NDCs, mainly by increasing the share of renewable energies and in some rare cases reducing primary energy from coal. A growing number of

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<sup>15</sup> OECD/IEA (2021), Update on recent progress in reform of inefficient fossil-fuel subsidies that encourage wasteful consumption, [www.oecd.org/fossil-fuels/publicationsandfurtherreading/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2021.pdf](http://www.oecd.org/fossil-fuels/publicationsandfurtherreading/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2021.pdf).

<sup>16</sup> Evans, S; Pearce, R, (2020). Mapped: The World's Coal Power Plants, <https://www.carbonbrief.org/mapped-worlds-coal-power-plants>

<sup>17</sup> Vohra, K., Vodonos, A., Schwartz, J., Marais, E. A., Sulprizio, M. P., & Mickley, L. J. (2021). Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem. *Environmental Research*, 195, 110754.

<sup>18</sup> [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01787-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01787-6/fulltext)

countries are ending new oil and gas licensing or financing. Most recently, Greenland, Ireland, and Spain announced an end to all new oil and gas exploration projects, while the UK government and the European Investment Bank (EIB) put an end to international public finance for fossil fuels. Chile will close all coal plants by 2040 and Barbados aims to be a 100% fossil-free state by 2030.

International bunker fuels burned in maritime shipping and air transport also represent significant emissions that cannot be ignored when conducting the Global Stocktake. The International Civil Aviation Organisation reported that international aviation represents 1.3 percent of global anthropogenic emissions, but that trends induced at 140th ICAO Assembly indicated that the 500 Megatons of CO<sub>2</sub> emitted in 2015 would triple by 2045.<sup>19</sup> The International Maritime Organisation similarly reported 1,000 Megatons of CO<sub>2</sub> around 2015, and identified that “business as usual” trends of up to 2,500 Megatons by 2050, and even when contemplating design and technical measures and operational measures, emissions would still only be “mitigated” to an increase to 1,500 Megatons by 2050.<sup>20</sup> Since the NDCs of Parties exclude these emissions from their national totals when reporting emissions, they must be considered by the UNFCCC as inputs within the Global Stocktake to assess progress towards the global temperature goal and progress towards the phase-out within this sector. The Global Stocktake must include these emissions as it reports out collective progress towards the temperature goal both to urge further work in phasing out the use of bunker fuels and development of alternatives, but also to reflect the required ambition by Parties needed in their NDC enhancement to achieve the temperature goal.

IEA projections in their recent Net Zero scenario indicate that wind and solar power must be on track to overtake fossil gas by 2023 and coal by 2024. And by 2030 solar and wind must jointly provide almost 40% of all global electricity, compared to 25% by coal and gas together.<sup>21</sup>

Creating a level playing field for renewable technologies, by eliminating subsidies and support for fossil fuel can ensure that renewable technologies like solar PV, wind energy, and green hydrogen can effectively provide the much-needed alternative to fossil fuels across multiple sectors and not just limited to electricity generation. Even in the “hard-to-decarbonise” and “hard-to-electrify” sectors like energy-intensive industries such as steel, chemicals, fertilisers, etc., and transport sectors such as shipping, heavy duty vehicles, etc. the rapid growth of renewable hydrogen (green hydrogen) and other energy carriers like synthetic fuels will complement the move to a rapid phase out of fossil fuels and 100% renewable energy future, thereby achieving the goal of limiting global warming to 1.5 °C and net-zero emissions by 2050 without having to resort to the use of nuclear power, and fossil-fuel based power combined with CCS and BECCS.

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<sup>19</sup> Submission by the International Civil Aviation Organization (ICAO) to the UNFCCC, December 2019 [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201912011815---SBSTA51%20ICAO%20submission\\_Final.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201912011815---SBSTA51%20ICAO%20submission_Final.pdf)

<sup>20</sup> Note by the International Maritime Organization (IMO) to the UNFCCC, December 2019 [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201911261754---IMO%20submission%20to%20SBSTA%2051\\_with%20annex.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201911261754---IMO%20submission%20to%20SBSTA%2051_with%20annex.pdf)

<sup>21</sup> IEA (2021), Net Zero by 2050, IEA, Paris <https://www.iea.org/reports/net-zero-by-2050>

Even in regions with low technical potential for one renewable source, the technical potential of other sources will be able to compensate for it. Furthermore, even in regions with low overall technical potential there are still significant opportunities for both enhanced trade of renewables in the region and increased deployment thus making the continued growth in RE globally a reality.

Energy efficiency and conservation will also contribute crucially to deep decarbonisation. The more countries invest in energy efficiency in all economic sectors, the less is the investment required in supply options for a 1.5°C pathway, and more the money that can be saved by households and companies. The IEA had shown in its 2021 net zero report<sup>22</sup> that an annual 4% improvement of economic energy efficiency will provide tremendous support to deep decarbonisation in this decade.

Teske, S.; et. al, in their article<sup>23</sup> have clearly outlined pathways that regions across the globe can adopt to reach the goal of 100% renewables by 2050, thereby achieving the goal of limiting global warming to 1.5 °C and net-zero emissions. While the technology pathways suggested are clearly ambitious, it outlines the steps that would be required, with defined five-year milestones, to achieve the target of decarbonization of global energy systems through 100% renewables and improvements in efficiency.

In recent years, there has been a growing movement among countries, cities, and companies pledging to source 100% of their electricity from renewables. According to REN21's *Renewables in Cities Global Status Report*, by the end of 2020, more than 1 billion people, around 25% of the world's urban population, lived in a city that had a renewable energy target and/or policy. 834 cities in 72 countries had adopted targets for renewables, with 617 cities setting targets for 100% renewable energy (with varying target dates), and 163 city governments having divested from fossil fuels.<sup>24</sup> The recently agreed net-zero criteria for corporate members of the NGO-backed Science Based Target Initiative (SBTi) saw more than 1000 companies across the globe signing up for procuring and sourcing 100% of their electricity needs from renewable electricity by 2030.<sup>25</sup>

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<sup>22</sup> IEA (2021), Net Zero by 2050, IEA, Paris

<sup>23</sup> It Is Still Possible to Achieve the Paris Climate Agreement: Regional, Sectoral, and Land-Use Pathways. *Energies* 2021, 14, 2103

<sup>24</sup> REN21 (2021), *Renewables in Cities 2021 Global Status Report* (Paris: REN21 Secretariat).

<sup>25</sup> [The Net-Zero Standard - Science Based Targets](#)

## Case studies and testimonies: Fossil Fuels



### Case study: climate impacts - Kuzbass, Russia

Coal companies are destroying rivers, forests, the environment and polluting the air. As a result, people who live in Kuzbass are getting sick and dying. Russia is the third largest exporter of coal in the world, 80% of exports come from Kuzbass, which is the main coal mining region in the country. Coal mining is performed by private companies, and their work carries many violations. Coal is extracted using the open method near and within villages and cities. Today approximately 200,000 people are living in such environmentally disastrous conditions.

Source and further information: [here](#).

### Case study: Indigenous resistance - Canada

Per capita, Canada remains the highest historical contributor to the climate crisis and the 10th largest historical emitting country. To do its part in limiting global warming to 1.5°C, Canada must keep at least 83% of oil reserves in the ground. [Indigenous resistance](#) to fossil fuel expansion in Canada and the U.S. has so far prevented the equivalent of one-quarter of emissions from these two countries. Beyond the objective of ending extraction of fossil fuels, Indigenous Peoples have articulated how these plans of oil and gas expansion are a direct threat to the sacred land and to the more-than-human relationship of Indigenous Peoples share with nature and biodiversity.

In the wake of this mobilisation, new opportunities have emerged for Canada to start having a serious discussion about a managed decline of fossil fuels. Canada joined 109 countries in Glasgow to reduce global methane emissions to 30% in 2030, and also 28 countries to end international public finance for fossil fuels, among others. But, delivery will require more than promises. The Global Stocktake must assess efforts from both governments and the fossil fuels industry to reduce emissions this decade to get us on the 1.5°C compatible pathway.



### Case study: Faith leaders call for climate action

The environmental movement is not the only civil society calling for climate action, especially the phase-out of fossil fuels. Faith leaders are among those who have joined as well.

Climate change is displacing people, they have nowhere to go. This disintegrates families. The oil industry is also impacting communities. The devastating disasters like floods and droughts, need collaboration. We must be inspired to protect the environment in our common home. We need to ensure that the World We Want is safe for everyone and that all the actions we are taking are geared towards this objective.

Source and further information: [here](#).

## 4. Alignment with biodiversity goals to stay within 1.5°C warming

*Proposition for three additional guiding questions:*

- *Mitigation.* What is the overall effect of Parties' Nationally Determined Contributions and overall progress made by Parties in enhancing and supporting the integrity of natural land, forests, coastal and ocean carbon sinks and reservoirs in line with Article 5 of the Paris Agreement?
- *Mitigation.* To what extent are Parties addressing perversities arising from current LULUCF accounting rules in order to reflect (a) carbon losses from currently unrecorded changes in ecosystem condition and integrity and (b) substantial but currently unaccounted emissions from wood-based bioenergy?
- *Cross-cutting.* To what extent are efforts undertaken to meet the Paris Agreement goals across each thematic area supporting (or not) biodiversity? Are Parties communicating and providing sufficient information on whether and/or how their national climate and biodiversity plans are integrated or aligned?

### Introduction

**We must urgently align our responses to the climate and biodiversity crises. Protecting and restoring biodiversity and ecosystem integrity on land and in oceans is critical if we are to keep global warming to 1.5°C and to adapt to the inevitable climate impacts.**

Article 5 of the Paris Agreement states that “Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs (stocks) of greenhouse gases as referred to in Article 4, paragraph 1(d) of the Convention, including forests.” The Paris Agreement in its preamble, also notes the importance of ensuring the integrity of all ecosystems and the protection of biodiversity when taking action to address climate change. Most recently at COP26, 1/CP.26 paragraph 21 emphasised the importance of ecosystems in achieving the long-term global goal of the Convention, and 1/CMA.3 paragraph 38 highlighted the importance of ecosystems in achieving the Paris Agreement temperature goal while 1/CP.25 paragraph 15 noted the importance of integrating action to prevent biodiversity loss and climate change.

**Delayed action on climate change and some poorly considered mitigation strategies can harm biodiversity, livelihoods and Indigenous Peoples rights, and within them Indigenous and local women, who are often excluded from decision making processes. This failure compromises the world’s ability to stay below 1.5°C, enhance resilience and meet the Sustainable Development Goals (SDGs)<sup>26</sup>.**

The Global Stocktake (GST) is a key opportunity to assess progress on the implementation of the Paris Agreement’s ecosystems provisions, and to identify the risks, damages and perverse incentives for biodiversity and natural ecosystems associated with delayed action and current responses to the climate emergency. In this context, CAN International is proposing three guiding questions for the GST to assess progress and provide valuable information for Parties

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<sup>26</sup> Deprez et al., (2019): <https://www.iddri.org/en/publications-and-events/study/towards-climate-change-ambition-better-integrates-biodiversity-and>;

Dooley et al., (2018): <https://www.clara.earth/missing-pathways>

to better promote synergies and minimise trade-offs towards an integrated and right-based approach to the climate and biodiversity crises.

### **GQ 1: Fulfilling the Paris mandate on natural land and ocean sinks and reservoirs (Article 5)**

The current GST proposals do not consider progress on Article 5 and this urgently needs to be addressed. **Maintaining and restoring the integrity of ecosystems is important for ecosystem stability, adaptive capacity and long term carbon storage.** The recently published IPCC Working Group 1 report outlines that natural land and ocean sinks have respectively absorbed 31% and 23% of anthropogenic carbon emissions over the last decade<sup>27</sup>. The IPCC WG1 report also outlines that land and ocean sinks are degrading, suffering the consequences of increased temperatures, and losing their ability to support mitigation and adaptation efforts. The integrity of reservoirs is impacted by fragmentation and loss of biodiversity. Just 3% of the planet's ecosystems are intact.<sup>28</sup>

As mandated by 19/CMA.1 paragraph 26(a), the GST should consider the state of greenhouse gas emissions by sources and removals by sinks and mitigation efforts undertaken by Parties, including the information referred to in Article 13, paragraph 7(a), and Article 4, paragraphs 7, 15 and 19, of the Paris Agreement. **We propose an assessment of Parties' progress in implementing Article 5 of the Paris Agreement.**

### **GQ 2: Assessing the adequacy, loopholes and perverse incentives arising from accounting and rules in the LULUCF sector**

It is crucial that the GST assess the nature, magnitude and scale of accounting loopholes and perverse incentives in the UNFCCC and suggest ways for Parties to overcome them:

- a) Carbon losses from changes in ecosystem condition: The LULUCF accounting framework under the Convention focuses only on net carbon flows, not on carbon stocks and therefore missing the importance of ecosystem integrity and stability. This stability is crucial for reducing ecosystem breakdown and the resulting release of huge volumes of carbon. The current definition of "forest" also does not differentiate between biodiversity-rich stable ecosystems and heavily degraded or plantation forests, leading to incentives for Parties to degrade or convert these, with negative consequences for both the climate and biodiversity. Therefore to address this the GST could propose for **Parties to adopt the UN 'System of Environmental Economic Accounting - Ecosystem Accounts' (SEEA-EA)<sup>29</sup>, which constitutes a comprehensive statistical framework for integrating measures of ecosystem integrity and the flows of services from them with measures of economic and other human activity.** An application of this system to carbon accounting in forests has also been elaborated and published<sup>30</sup>.
- b) Substantial unaccounted emissions: current LULUCF policies and accounting systems used by Parties are leading to unaccounted greenhouse gas emissions - failing to reflect emissions the atmosphere receives and sub-optimal decisions regarding ecosystem protection and

<sup>27</sup> IPCC, (2021): <https://www.ipcc.ch/report/ar6/wg1/>

<sup>28</sup> Plumptre et al., (2021): <https://www.frontiersin.org/articles/10.3389/ffgc.2021.626635/full>

<sup>29</sup> <https://seea.un.org/ecosystem-accounting>

<sup>30</sup> Keith et al., (2021): <https://www.sciencedirect.com/science/article/abs/pii/S0048969720378724>

management on land and in water. This is particularly the case for forests harvested for bioenergy. A lack of transparency and the use of projected business-as-usual baselines for forest harvesting emissions obscures the full impact of harvesting on emissions, the payback time for forest recovery, and the mitigation benefits of the counterfactual (i.e. forest protection) creating an illusion that it is acceptable to count emissions from burning wood as zero in the energy sector. As an example, recent analysis found that unaccounted emissions from the international trade of wood pellets alone has the potential to reach 69.52 MtCO<sub>2</sub>e/year in 2050<sup>31</sup>. Without addressing the LULUCF accounting system to include currently missing emissions, we cannot assess collective progress towards the Paris Agreement goals. **The GST should assess these perverse outcomes including the magnitude of unaccounted emissions and recommend solutions, for example** at a minimum, Parties should report on how they have aligned their accounting with trade partners to ensure bioenergy emissions are included, as suggested in the 2019 IPCC Refinement.

### **GQ 3: Integrated biodiversity and climate action**

The Convention on Biological Diversity (CBD) in its 5th Global Biodiversity Outlook (GBO-5)<sup>32</sup> and the IPBES Global Assessment Report (2019)<sup>33</sup>, showed a lack of progress of Parties on many fronts, including on the synergies between the biodiversity and climate agendas, although some advances have been noted in including nature in NDCs<sup>34</sup>. Both reports also identified the key elements for enhancing such synergies. Concerningly, recent science<sup>35</sup> indicates that some mitigation efforts and 1.5°C emission reduction pathways risk overstepping ecological planetary boundaries by accelerating land-conversion and biodiversity loss in some locations. Furthermore the recent IPCC-IPBES Workshop report warns that addressing climate change and biodiversity loss separately may lead to actions that inadvertently prevent the solution of one or the other, or both issues<sup>36</sup>.

**The GST should therefore assess the extent to which Parties are aligning climate and biodiversity action in implementing the Paris Agreement, as well as highlight the key knowledge and policy gaps that need to be filled to help guide more coherent and integrated near and long-term planning, including aligning monitoring and reporting across the UNFCCC and CBD conventions.**

Looking forward, the GST could provide recommendations to overcome these gaps. These could include, for instance (i) inviting the IPCC and the IPBES to work on a joint Special Report on climate and biodiversity to address some key research gaps (building from their recent co-sponsored workshop report<sup>37</sup>); (ii) requesting the SBSTA to undertake a work programme on how to deliver and account for integrated climate and biodiversity outcomes; and (iii) requesting the SBI to work on specific guidelines for enhancing domestic alignment between NDCs and NBSAPs

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<sup>31</sup> Funk, J. M., Forsell, N., Gunn, J. S., & Burns, D. N. (2022). [Assessing the potential for unaccounted emissions from bioenergy and the implications for forests: The United States and global](#). GCB Bioenergy, 14, 322– 345.

<sup>32</sup> [The Global Biodiversity Outlook 5 \(GBO-5\)](#)

<sup>33</sup> IPBES, 2019: [Global Assessment Report on Biodiversity and Ecosystem Services](#)

<sup>34</sup> WWF (2021): [wwf ndcs for nature 4th edition.pdf \(panda.org\)](#)

<sup>35</sup> Creutzig et al., (2021): [Considering sustainability thresholds for BECCS in IPCC and biodiversity assessments](#)  
Dooley and Kartha (2017): [Land-based negative emissions: risks for climate mitigation and impacts on sustainable development](#)

<sup>36</sup> IPBES and IPCC (2021): [ipbes-ipcc co-sponsored workshop biodiversity and climate change](#)

<sup>37</sup> Ibid

## Case studies and testimonies: Natural Ecosystems



### Case study: climate impacts - Sloviansk, Ukraine

"If this continues this way, we simply lose our lakes and many people will lose this site and what it offers in terms of treatment, healing and recreation and of course all this is the result of climate change," said eco-activist Pasikova Kapitalina. "Together, we all need to understand this problem and try to build our lives in a way to emit less CO2," Kapitalina added.

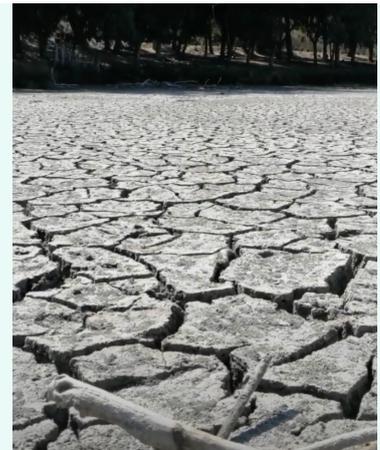
Source and further information: [here](#).

### Case study: climate impacts - Sidi Boughaba, Morocco

This is the story of the last source of fresh groundwater in the western shore of Morocco. Lack of precipitation and the exploitation of groundwater are endangering the entire ecosystem.

*"Certainly climate change had a direct impact on this situation especially with a decrease in precipitation and the elevation in the temperature of the lake's surface water. This provided the conditions for the eutrophication phenomenon that occurred in the lake due to increased activity of the algae and the proliferation of existing bacteria at the bottom that consumed dissolved oxygen and evaporated big amounts of water,"* said researcher Mohamed Benyekhlef.

Source and further information: [here](#)



### Testimony: Vasilija, 14 years old - Kosovo

*"Decision-makers in my community should focus more on activities that would reduce the risks of climate change. Since I live in a municipality that is surrounded by forests, the municipality as an institution should start with activities to promote the importance of forests for our health, but also for the health of children in our municipality. First of all, the world should raise awareness among the public on how much forests protect the territory where we live and how they contribute to cleaner air, then the next action should be raising awareness among young people about volunteer activities that can repair the damage that has already been done. Local authorities should strive to implement the environmental laws that have been enacted in cooperation with other institutions. These are just some of the activities that the local government could carry out."*

Source: [Born into the Climate Crisis: Why we must act now to secure children's rights | Save the Children's Resource Centre](#)

### Case study: climate impacts - Kilum Ijim Forest, Cameroon

The Kilum Ijim Forest covers 20,000 hectares. This rainforest is threatened by bushfires and overexploitation

*"We have so much biodiversity and ecosystem services that benefit our communities. But because of lack of opportunities, and lack of environmental education community members were engaging in burning the forest to increase their farmlands without understanding why the forest needs to be preserved. Indigenous women were not represented in forest management institutions but with our forest management class project we reorganised these institutions and we had women represented in the management, the executive and leadership bodies of these institutions. We make sure that the benefits of the forest reach out to women through training on sustainable natural resource transformation. This provided women with a better position in society."*

Source and further information: [here](#)



## 5. Consideration of Human Rights and participation approach in the construction and implementation of NDCs

*Proposition for an additional guiding question:*

- How do Parties use a human right approach, by including Indigenous knowledge and local communities' best practice, including those from women's and feminist's organisations? How are these populations part of the decision-making and NDCs processes? What are the challenges or lessons learned of these participating processes and how can they be improved?

### **Introduction**

The Paris Agreement's preamble reiterates the importance of human rights-based climate action that is integrated with additional crucial social principles, and all Parties to the Paris Agreement have legal obligations to respect and promote human rights.

In October 2021, States further recognized these linkages as they proceeded with the recognition of the human right to a clean, healthy and sustainable environment for all through a resolution of the UN Human Rights Council.

However, there remains a discrepancy between the preamble's vision and the implementation of the Paris Agreement. The science shows that this discrepancy hinders the effective implementation of climate action and limits the benefits that local communities and Indigenous Peoples have received from climate action.

The GST is therefore an important instrument to recenter our collective understanding of the role that human rights and social inclusion principles should play at the core of effective climate action. Indigenous Peoples and local communities have developed a high resilience capacity for centuries, have solutions and protections against the climate crisis and know how to protect ecosystems. Indigenous knowledge and public participation are key elements of effective climate action.

In addition to the principles of equity and best available science, the GST should therefore review climate action in light of human rights and broader social principles, including the rights of Indigenous Peoples, public participation, gender equality, land rights, intergenerational equity, and a just transition when looking at NDCs and national adaptation plans, as well as the provision of finance.

### **Key elements for Human Rights-based climate action**

Effective, real, and meaningful climate action is necessary to respect and promote the **human rights** of millions of people around the world who are threatened by i.a. loss of life, food and water sources, diseases, and displacement, or who suffer from adverse physical and mental health consequences of climate change, as demonstrated by the IPCC. This requires in particular addressing the vulnerability to adverse climate impacts faced by some of the people,

including as a result of historic, ongoing and structural marginalisation. To leave no one behind, climate action must address the particular vulnerability faced by the elderly, persons with disabilities, migrants and internally displaced persons, outdoor workers, women in all their diversity, and others exposed disproportionately to climate impacts. It is also critical that climate actions themselves respect human rights and are implemented with appropriate safeguards to avoid human rights abuses. This begins with the protection and effective participation of environmental defenders, who are increasingly facing violence and shrinking civic space.

**Indigenous Peoples** are on the frontlines of the direct consequences of the climate crisis as well as the strategies adopted by States to address it, and at the same time they are agents of change who can and do provide real and effective solutions. Indigenous knowledge is critical to effective climate action. The importance of indigenous knowledge for effective climate action has been recognized by the IPCC.

Combating climate change and promoting sustainable development require the effective engagement of all actors of society. The IPCC recognizes that **public participation and access to information** to empower citizens to play an active role in the transition enhances the effectiveness of climate decision-making and implementation of climate actions.

Land and natural resources are essential to millions of peoples' access to food, shelter, culture, work, water, health, and well-being. Climate action must account for the unique role that ecosystems and land play in fulfilling these rights. Moreover, **strengthening land tenure and (collective) land rights** leads to improved climate action, as recognized by the IPCC.

Women and girls are disproportionately affected by the climate crisis due to gender inequalities that restrict access to education, resources, decision-making spaces, and other opportunities, as recognized by the IPCC. At the same time, women and girls possess critical knowledge and are developing innovative **gender-just solutions** to mitigate climate change impacts.

A **just transition** is central to ensuring socially just and equitable climate action as it is fundamentally about realising the transition from a fossil-fueled economy to a fossil-free one in a fair and inclusive way for workers and communities and in a manner that creates decent work conditions.

**Intergenerational equity** and the duties of present generations towards children and future generations have long been recognized as fundamental principles of international environmental law. Children and youth are disproportionately impacted by the climate crisis (particularly those in low and middle income countries, and those who suffer from the impacts of inequality and discrimination) and they, as well as future generations, will face the consequences of climate change for a greater percentage of their lives.

## Case studies and testimonies: Human Rights and Participation



### Testimony: Diya, 16 years old - Bangladesh

*"Experiencing climate change at my little age might be the worst nightmare ever. Today my childhood experience of six seasons is nothing but a myth, which worries our generation. We are children. We have limited abilities and scopes compared to adults. We cannot make many decisions, we can tell our problems and pressure adults to find solutions. We are young, but we have the right to be heard, [...] to have a safe and better future. [...] As a child representative from a disaster-prone country, I am requesting that the leaders and decision-makers please listen to us and give additional importance to our voice. We promise you to become part of the solution".*

Source: [Born into the climate crisis](#), p. 39

### Case study: integration of Indigenous People in decision-making - Canada

Canada has a constitutional mandate and obligation to ensure all policies, measures and investments respond to the needs and aspirations of Indigenous Peoples. Indigenous Peoples have been structurally [excluded](#) from decision-making tables where federal climate plans are made. Achieving core climate, economic, and social objectives requires addressing the rights violations of Indigenous women and girls, especially those who live in the fossil fuel industry's footprint and considering the realities faced by Indigenous communities and Nations. Women and Indigenous women are underrepresented in climate-related planning and decision-making processes. Yet, women, Indigenous Peoples and Indigenous women are powerful agents of change in mitigation and adaptation. Canada should follow the example of the Marshall Islands, which have committed to a feminist implementation of their national climate plans.



### Case study: climate Impacts - the Sámi, Sweden

*"The Indigenous Sámi live in northern Europe. Their ancestral ways of living are closely linked to nature. The climate crisis is not only violating their fundamental rights, but threatens the entire Sámi culture. Reindeer husbandry is something very special, it has been around for a very long time. That is also why there are many old traditions, it is a very unique way of living."*

Source and further information: [here](#).

### Testimony: The ['World We Want'](#) has gender justice and climate justice at its core

*"Women bear more impacts from climate change compared to men. I want to say that we want explicit objectives for gender in the NDCs, to hold stakeholders accountable on work specific to gender and inequality" says Monica Anguparu.*

Source and further information: [here](#).



### Case study: improving community forest governance improves resilience in drylands - Mali

Upholding and securing the rights of Local Communities by ensuring that a rights-based approach is promoted when embedding the role of ecosystem restoration in climate action. Access and governance by the local people increase their resilience because the land and trees bring variety to their food, increases and diversifies their income and allows them to have a buffer for when a crisis, such as climate impacts their land.

Source and further information: [here](#).

## 6. Resources

### Loss and Damages

#### Phase-out of fossil fuels

Evans, S; Pearce, R, (2020). Mapped: The World's Coal Power Plants, <https://www.carbonbrief.org/mapped-worlds-coal-power-plants>

Health co-benefits from air pollution and mitigation costs of the Paris Agreement: a modelling study ([https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(18\)30029-9/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(18)30029-9/fulltext))

Hidden Costs of Fossil Fuels (<https://www.ucsusa.org/resources/hidden-costs-fossil-fuels>) - includes information on health impacts of extraction

Hidden Price Tags: How ending fossil fuel subsidies would benefit our health ([https://www.env-health.org/wp-content/uploads/2018/08/hidden\\_price\\_tags.pdf](https://www.env-health.org/wp-content/uploads/2018/08/hidden_price_tags.pdf))

IEA (2021), Net Zero by 2050, IEA, Paris <https://www.iea.org/reports/net-zero-by-2050>

It Is Still Possible to Achieve the Paris Climate Agreement: Regional, Sectoral, and Land-Use Pathways. *Energies* 2021, 14, 2103

Note by the International Maritime Organization (IMO) to the UNFCCC, December 2019 [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201911261754---IMO%20submission%20to%20SBSTA%2051\\_with%20annex.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201911261754---IMO%20submission%20to%20SBSTA%2051_with%20annex.pdf)

OECD/IEA (2021), Update on recent progress in reform of inefficient fossil-fuel subsidies that encourage wasteful consumption, [www.oecd.org/fossil-fuels/publicationsandfurtherreading/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2021.pdf](http://www.oecd.org/fossil-fuels/publicationsandfurtherreading/OECD-IEA-G20-Fossil-Fuel-Subsidies-Reform-Update-2021.pdf).

REN21 (2021), Renewables in Cities 2021 Global Status Report (Paris: REN21 Secretariat).

Submission by the International Civil Aviation Organization (ICAO) to the UNFCCC, December 2019 [https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201912011815---SBSTA51%20ICAO%20submission\\_Final.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201912011815---SBSTA51%20ICAO%20submission_Final.pdf)

[Tapping the potential of NDCs and LT-LEDs to address fossil fuel production](#) (2021)

The 2021 report of the Lancet Countdown on health and climate change: code red for a healthy future [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01787-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01787-6/fulltext).

[The Net-Zero Standard - Science Based Targets](#)

The public health implications of the Paris Agreement: a modelling study ([https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(20\)30249-7/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30249-7/fulltext))

Vohra, K., Vodonos, A., Schwartz, J., Marais, E. A., Sulprizio, M. P., & Mickley, L. J. (2021). Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem. *Environmental Research*, 195, 110754, <https://www.sciencedirect.com/science/article/abs/pii/S0013935121000487>.

## Alignment with biodiversity goals to stay within 1.5°C warming

Deprez et al., (2019): [Towards a climate change ambition that \(better\) integrates biodiversity and land use](#);

Dooley et al., (2018): [Missing Pathways — CLARA](#)

### Guiding Question 1

Plumptre et al., (2021): [Frontiers | Where Might We Find Ecologically Intact Communities?](#)

Biennial Reports (BRs), Biennial Update Reports (BURs), National GHG inventories, as well as independent sources and monitoring tools such as [Global Forest Watch](#) or [Global Mangrove Watch](#)

### Guiding Question 2

[Ecosystem Accounting | System of Environmental Economic](#)

Keith et al., (2021): [Evaluating nature-based solutions for climate mitigation and conservation requires comprehensive carbon accounting - ScienceDirect](#)

Funk, J. M., Forsell, N., Gunn, J. S., & Burns, D. N. (2022). [Assessing the potential for unaccounted emissions from bioenergy and the implications for forests: The United States and global. GCB Bioenergy, 14, 322– 345.](#)

### Guiding Question 3

[The Global Biodiversity Outlook 5 \(GBO-5\) | UNEP](#)

IPBES, 2019: [Global Assessment Report on Biodiversity and Ecosystem Services | IPBES secretariat](#)

WWF (2021): [NDCs for nature](#)

Creutzig et al., (2021): [Considering sustainability thresholds for BECCS in IPCC and biodiversity assessments](#)

Dooley and Kartha (2017): [Land-based negative emissions: risks for climate mitigation and impacts on sustainable development](#)

IPBES and IPCC (2021): [ipbes-ipcc co-sponsored workshop biodiversity and climate change](#)

Schindler Murray et al., (2021): [UNPACKING THE UNFCCC GLOBAL STOCKTAKE](#)

The SDGs, the IUCN, the CBD and the Sendai Framework for Disaster Risk Reduction, among others, are examples of other international forums that could provide insights with the related reporting efforts for these cross-cutting issues.

## Consideration of Human Rights and participation approach in the construction and implementation of NDCs

The [IPCC Sixth Assessment Report \(AR6\), Working Group I Contribution](#) (2021):

- Recognizes the importance of indigenous and local knowledge.

The [UNFCCC Technology Executive Committee \(TEC\) and the Climate Technology Centre and Network \(CTCN\) joint publication on “Stimulating the Uptake of Technologies in Support of Nationally Determined Contribution Implementation”](#) (2021):

- Contains evidence on how gender-responsive climate technologies can enhance effectiveness and equity of climate policies.

The [Global Witness “Last Line of Defense”](#) Report (2021):

- Documents empirically that people defending their homes, land and livelihoods, and ecosystems vital for biodiversity and the climate are under increasing attack, with 227 lethal attacks on land and environmental activists in 2020.

The [Global Climate & Health Alliance’s “Healthy NDC Scorecards”](#) (2021):

- Assesses the extent to which 94 NDCs ensure the integration of health into climate policies.

The [IPCC Special Report on Climate Change and Land](#) (2019):

- Recognizes that insecure land tenure affects the ability of people, communities and organizations to make changes to land that can advance adaptation and mitigation, and that securing land tenure rights, especially of Indigenous Peoples and women, leads to improved climate action.

- Recognizes that involving local stakeholders, and particularly the most vulnerable such as Indigenous Peoples and local communities, women, and the poor and marginalized, enhances the effectiveness of decision-making and governance.
- Documents that the four pillars of food security (availability, access, utilization, and stability) are already and will increasingly be impacted by the climate crisis.

The [Just Transition Center of the International Trade Union Confederation's \(ITUC\) Report "Union experiences and lessons from Canada, Germany, New Zealand, Norway, Nigeria and Spain"](#) (2019):

- Documents good practices and experiences of including workers and communities to build plans for a Just Transition, and showcases how this leads to support for climate action, and moves it forward.

The [IPCC Special Report on Global Warming of 1.5 °C](#) (2018):

- Confirms that climate-related risks in terms of i.a. health, food security and water supply are projected to increase with a global warming of 1.5°C and increase further with 2°C.
- States that reducing gender inequalities can reduce vulnerability to climate change and that poorly designed or implemented, adaptation projects in a range of sectors can increase gender and social inequality
- Recognizes that education, information, and community approaches, including those that are informed by indigenous knowledge and local knowledge, can accelerate the wide-scale behavior changes consistent with adapting to and limiting global warming to 1.5°C.

The [International Union for Conservation of Nature \(IUCN\) "Roots for the Future - The Landscape and Way Forward on Gender and Climate Change"](#) report (2015):

- Documents innovations and equitable and sustainable solutions to climate change across sectors led by women, and case-studies of gender-responsive initiatives.

The [World Resources Institute "Securing Rights, Combating Climate Change, How Strengthening Community Forest Rights Mitigates Climate Change"](#) Report (2014):

- Demonstrates on the basis of empirical and scientific evidence that expanding and strengthening community forest rights leads to lower carbon dioxide emissions and deforestation rates.

Save the Children's ["Born into the Climate Crisis: why we must act now to secure children's rights"](#) Report (2021):

- Demonstrates scientific evidence to quantify the extent to which children will experience extreme weather events as a manifestation of climate change, the disparities between generations, and the widening inequality between high-income and low- and middle-income countries.