

**Submission of views to inform the 5<sup>th</sup> Global Dialogue on Forests of the Sharm el-Sheikh  
Mitigation Ambition and Implementation Work Programme**  
April 3, 2025

**Corporación Ecopar, Derecho, Ambiente y Recursos Naturales (DAR), Environmental Defense Fund (EDF), Fundación EcoCiencia, Global Carbon Project, Global Wildfire Collective (an initiative of Conservation Biology Institute), HIVOS, Instituto de Pesquisa Ambiental da Amazônia (IPAM), Red Mexicana de Organizaciones Campesinas Forestales, A. C. (RedMocaf), University of Northern British Columbia, and Woodwell Climate Research Center** appreciate the opportunity to jointly provide views on opportunities and actionable solutions related to the topic of the fifth global dialogue of the Sharm el-Sheikh Mitigation Ambition and Implementation Work Programme (MWP), focused on enabling mitigation solutions in the forest sector.

**We believe that the global increase in catastrophic wildfire represents a critical threat to the forest sector, serving as a major driver of global tree cover loss and forest degradation with significant consequences for emissions reduction efforts, and accordingly proposes wildfire management to be included as a key subtopic under the fifth global dialogue.**

### **Background**

In recognition of the MWP's goal to scale mitigation ambition and implementation in this critical decade, we welcome the focus on forests for the upcoming global dialogue. Harnessing and protecting nature will be essential to global efforts to reduce emissions. According to the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (AR6), 22% of total GHG emissions in 2019 came from agriculture, forestry, and other land use (AFOLU).<sup>1</sup> In turn, mitigation options across these sectors have significant potential for emissions reductions at a low cost, providing as much as 30% of the emissions reductions needed to limit warming.<sup>2</sup> Maximizing the mitigation potential of the AFOLU sector is essential to limit warming below 2°C.

Pursuing mitigation in the forest sector is particularly important, as efforts to conserve, protect and restore forests and other natural ecosystems offer the largest share of AFOLU mitigation potential, with estimated reductions averaging 7 GtCO<sub>2</sub>eq per year between 2020 and 2050.<sup>3</sup> The greatest near-term potential mitigation options to scale up climate action include reducing conversion of natural ecosystems and ecosystem restoration.<sup>4</sup>

Critically, mitigation solutions within the forest sector could also confer significant co-benefits for adaptation, biodiversity, and improving livelihoods that are key for the Sustainable

---

<sup>1</sup> [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf)

<sup>2</sup> [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_Chapter07.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Chapter07.pdf)

<sup>3</sup> [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_Chapter07.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Chapter07.pdf); Estimated average annual reductions from forests and natural ecosystems between 2020-2050 range from 3.9 to 13.1 GtCO<sub>2</sub>eq.

<sup>4</sup> <https://www.ipcc.ch/report/ar6/syr/figures/figure-spm-7>

Development Goals and other international priorities. For example, forests harbor most of the world's terrestrial biodiversity and support the livelihoods millions of Indigenous Peoples.<sup>5</sup>

### **The Impact of Wildfires**

Catastrophic wildfire represents one of the most significant challenges for addressing emissions within the forest sector. Globally, fire regimes are intensifying at an alarming rate, faster than humanity or natural ecosystems are capable of adapting to today. As result our current models for addressing fire are rapidly becoming much less effective. This is unsustainable and will result in ever-increasing greenhouse gas emissions along with growing threats to nature and communities.

***The greenhouse gas emissions impacts of changing fire regimes are increasing and threaten to undermine global climate change mitigation efforts.*** According to a 2024 National Academies of Sciences, Engineering and Medicine publication, “*Direct and indirect (i.e., climate change) human-driven changes in wildland fire regimes have the potential to increase GHG emissions at a scale that could inhibit global efforts to achieve “net-zero” GHG emissions in the coming decades*”<sup>6</sup>. A recent WRI report suggests that wildfire is one of the top drivers of global tree cover loss from 2001-2023, responsible for 113 Mha of loss.<sup>7</sup> Moreover, the frequency and severity of catastrophic wildfire events is beginning to increase, with concomitant impacts on GHG emissions. The most recent State of Wildfires assessment estimated that the 2023-2024 “*fire carbon (C) emissions were 16% above [the 2002-2024] average, totaling 2.4 Pg C.*”<sup>8</sup>

***The incidence of catastrophic wildfires is increasing across multiple regions, with escalating climate consequences.*** A recent study estimates that Canada's 2023 wildfires, which burned roughly 15 million hectares, resulted in carbon emissions of approximately 650 Tg C. If these wildfire emissions represented a country, they would have ranked 4<sup>th</sup> in total 2023 emissions, surpassed only by China, the U.S., and India.<sup>9</sup> Directly fire-related emissions from soil and exposed permafrost will likely add to that number in subsequent years, compounding the challenge. This suggests that wildfire emissions management may play a much more important role in addressing climate change than has been assumed to date.

Intensifying wildfire trends in the Americas and the Arctic continued in 2024. Greater than average wildfire emissions were reported across Latin America<sup>10</sup>, garnering international attention: Peru declared a state of emergency in several regions, remote Brazilian Amazon states reported some of the worst air quality in the world, and Bolivia lost a Greece-sized area

---

<sup>5</sup> FAO. 2024. The State of the World's Forests 2024 – Forest-sector innovations towards a more sustainable future. Rome. <https://doi.org/10.4060/cd1211en>

<sup>6</sup> National Academies of Sciences, Engineering, and Medicine. 2024. *Greenhouse Gas Emissions from Wildland Fires: Toward Improved Monitoring, Modeling, and Management: Proceedings of a Workshop*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27473>.

<sup>7</sup> <https://gfr.wri.org/forest-extent-indicators/forest-loss>

<sup>8</sup> <https://essd.copernicus.org/articles/16/3601/2024/>

<sup>9</sup> <https://www.nature.com/articles/s41586-024-07878-z>

<sup>10</sup> <https://atmosphere.copernicus.eu/copernicus-americas-saw-exceptional-wildfire-activity-2024>

(~15 million hectares) of vegetation to wildfire, representing an estimated over 100 million tons of carbon emissions<sup>11</sup> - a similar scale to total annual greenhouse gas emissions of a number of mid-sized nations.

***The scientific literature indicates that the observed trends in wildfires are not anomalies, but rather a broader trend towards increasing intensity and severity of wildfire in part as a result of climate feedbacks.*** According to the 2023-2024 State of Wildfires report, “the probability of extreme fire seasons of these magnitudes has increased significantly due to anthropogenic climate change, with a 2.9–3.6-fold increase in likelihood of high fire weather in Canada and a 20.0–28.5-fold increase in Amazonia. By the end of the century, events of similar magnitude to those observed in 2023 in Canada are projected to occur 6.3–10.8 times more frequently under a medium–high emission scenario (SSP370)”.<sup>12</sup> On a global scale - even under a low emissions scenario (RCP2.6) - future catastrophic wildfire incidence compared to the present is expected to increase by 14% by 2030, 33% by 2050, and 52% by the end of the century.<sup>13</sup>

Recalling the MWP’s goal to scale mitigation ambition and implementation in this critical decade, it is evident that the international community must bring its attention to this significant and escalating source of emissions. **Approaching mitigation solutions in the forest sector comprehensively requires wildfire preparedness, management, and response.**

### **Emerging Solutions**

Solutions to the growing wildfire challenge will vary across geographies. Nonetheless, practical actions can and are being taken now, at the local and global level, to advance global mitigation, adaptation and resilience goals. Illustrative examples of these include:

#### **Solutions for enhanced international and regional cooperation:**

- ***Harness new technologies to speed and scale fire response:*** Tools and technologies are emerging that can foster more rapid, data-driven decision-making amongst wildfire responders. One such tool includes [FireSAT](#), a planned global satellite constellation for rapid wildfire detection and more accurate and detailed fire monitoring. Multilateral and/or regional cooperation to establish effective technologies and datasets, and marshal the political and financial resources to develop and deploy effective strategies are avenues to further explore.
- ***Generate new science to enhance appropriate responses to novel fire dynamics:*** In environments where historical fire regimes appear to be changing at the greatest rate, such as in the Amazon and boreal regions, investments to strengthen the evidence-based understanding of the drivers, behavior and impacts of changing

---

<sup>11</sup> <https://fireandsafetyjournalamericas.com/bolivias-2024-wildfires-record-breaking-impact-captured-by-nasa/>

<sup>12</sup> <https://essd.copernicus.org/articles/16/3601/2024/>

<sup>13</sup> <https://www.unep.org/resources/report/spreading-wildfire-rising-threat-extraordinary-landscape-fires>

wildfire regimes in a changing climate can provide the basis for improved integrated fire management.

- ***Leverage existing and emerging climate and forest financing instruments:***

Resource constraints are a common bottleneck to scaling wildfire response and management. Climate and forest financing instruments that can support wildfire response and management include:

- High-quality tropical forest carbon credits and results-based payments: for example, addressing forest fires is a critical component of [Mexico's Integrated Sustainable Forest Landscape Program](#).
- The [Tropical Forest Forever Facility](#): This novel financing instrument, which could be applicable to all tropical forest nations that meet certain criteria, is still under design and would enable payments for intact, standing forests.
- Financing windows under the Green Climate Fund, Global Environment Facility, or others: these multilateral funds have supported country-driven wildfire projects, such as in [Colombia](#), [Guatemala](#) and [Lebanon](#).

Harnessing project learnings to consider a dedicated programmatic approach to wildfire management under these or related multilateral financing instruments could help unleash resources at the scale needed to address growing global wildfire risks.

Efforts to increase demand and price, streamline transaction costs and innovate up-front financing opportunities for tropical forest carbon credits and results-based payment instruments could help unlock more resources for large-scale, on-ground tropical forest conservation and wildfire management. Such “jurisdictional” crediting approaches may be well suited to address the need for large-scale action on catastrophic wildfire. As tropical forest carbon markets represent one of the few market-ready, at-scale avenues to channel private sector finance to tropical forest conservation available today, this may be a particularly timely opportunity given the NCQG’s heavy reliance on private sector funding to triple annual financial support to developing countries from \$100 billion to \$300 billion by 2035.

### **Solutions for national and subnational governments:**

- **Complete economic analyses, and balance investments across the 5Rs<sup>14</sup> of Integrated Fire Management:** While data are limited, a collection of global practitioners indicate that a significant majority of wildfire funds are allocated only to responding to wildfire, not to improving responses or pre-fire management and education.<sup>15</sup> This is less cost-effective than a systemic approach to investing in all dimensions of integrated and strategic fire management. We recommend countries complete analyses to better understand current spending as well as the full costs of

---

<sup>14</sup> The 5Rs of Integrated Fire Management are: 1) Review and Analysis; 2) Risk Reduction; 3) Readiness; 4) Response; and 5) Recovery.

<sup>15</sup> <https://www.unep.org/resources/report/spreading-wildfire-rising-threat-extraordinary-landscape-fires>

wildfire. Such economic data may be a useful precursor to developing budgets and policies that can more effectively address wildfire.

- **Integrating traditional knowledge and cultural burning practices into policies, regulations and implementation strategies:** In many fire-adapted forest regions, such as in Australia, Mexico, the western United States, and other dry mediterranean climates, Indigenous Peoples have a long practice and history of cultural burning, in which low-intensity and small-scale, human-induced fires are introduced to manage the landscape for beneficial ecological and cultural outcomes and reduce the risk of intense, forest-destroying wildfire. For example, the Karuk Tribe, located on west coast of the USA, is building capacity to restore cultural fire to their aboriginal landscape, currently under management of the US federal government. In Lomerío, Bolivia, Indigenous communities responded to 2019 wildfires by developing fire protocols, monitoring systems, conservation policies, and cultural strategies to regain control of wildfire management and protect their territory.<sup>16</sup> In Australia, research based on 22 years of data and covering millions of hectares of land found that “*under the leadership of Balanggarra, Dambimangari, Wilinggin and Wunambal Gaambera Traditional Owner groups, the fire regime of the north Kimberley region of Western Australia has improved significantly on Aboriginal- owned land.*”<sup>17</sup>
- **Pilot large-scale wildfire resilience programs:** As the threat of large-scale, catastrophic fires increases, on the ground management strategies must be designed and implemented at the appropriate places and scales, which often transcend any single property owner or local government’s sole jurisdiction. It is important to note that increases in catastrophic wildfire are occurring in managed as well as un-managed landscapes. Partnering with Indigenous peoples, rural communities, governments and the private sector to devise and operationalize such strategies, while building the policies, financing, capabilities and technologies needed to effectively respond to changing wildfire dynamics in their landscapes, offers a path forward to reduce catastrophic wildfire frequency and intensity. The Tahoe Central Sierra Initiative in the western USA is an example of a government, local and tribal collaboration to build resilience across a million plus hectare landscape in the Sierra Nevada, a landscape that has faced several large catastrophic wildfires over the last 10 years. The Initiative is developing science-based plans and management solutions and building private-sector partnerships and workforce to accomplish ambitious resilience goals. Another example of integrated wildfire management occurs in the Amazon basin region where the *Amazonía Sin Fuego* program,<sup>18</sup> implemented in Ecuador since 2017, aims to prevent wildfires through training, environmental education, and the promotion of sustainable agricultural practices. Inspired by successful experiences in Brazil and

---

<sup>16</sup> <https://www.sciencedirect.com/science/article/pii/S1462901123001624>

<sup>17</sup> Vigilante T et al. (2024) Factors enabling fire management outcomes in Indigenous Savanna fire management projects in Western Australia. *International Journal of Wildland Fire* 33, WF24092. doi:10.1071/WF24092

<sup>18</sup> <https://revistaeletronica.icmbio.gov.br/index.php/BioBR/article/view/1158/930>

Bolivia since 1999, it promotes integrated fire management by combining technical and sociocultural approaches, especially in provinces with high fire incidence.

Research has long forecast significant increases in the frequency and intensity of severe wildfires as temperatures and hydrological cycles shift in response to climate change. Each year brings additional examples of record-breaking wildfires, increasingly, in places where such fires have not been experienced with such severity before. Wildfire is already one of the greatest threats to forests and reducing greenhouse gas emissions, and forecast to continue to grow. **We encourage strategic wildfire management to be included as a key subtopic under the fifth global dialogue and welcome opportunities to support Parties and non-party stakeholders to identify and scale solutions.**

**Recommendation jointly submitted by:**

**Corporación Ecopar**

Contact: Didier Sánchez, Director Ejecutivo, [didier.sanchez@ecopar.org.ec](mailto:didier.sanchez@ecopar.org.ec)

**Derecho, Ambiente y Recursos Naturales (DAR)**

Contact: Hugo Che Piu Deza, Director Ejecutivo, [hchepiu@dar.org.pe](mailto:hchepiu@dar.org.pe)

**Environmental Defense Fund (EDF)**

Contact: Mark Moroge, Vice President of Forests, [mmoroge@edf.org](mailto:mmoroge@edf.org)

**Fundación EcoCiencia**

Contact: Carmen Josse, Directora Ejecutiva, [carmenjosse@ecociencia.org](mailto:carmenjosse@ecociencia.org)

**Global Carbon Project**

Contact: Pep Canadell, Executive Director, [Pep.canadell@csiro.au](mailto:Pep.canadell@csiro.au)

**Global Wildfire Collective, an initiative of Conservation Biology Institute**

Contact: Robin Jones, Executive Director, [robin.jones@consbio.org](mailto:robin.jones@consbio.org)

**HIVOS**

Contact: Doris Ortiz Barona, Representante legal de Hivos en Ecuador, [dortiz@hivos.org](mailto:dortiz@hivos.org)

**Instituto de Pesquisa Ambiental da Amazônia (IPAM)**

Contact: Ane A. C. Alencar, Diretora de Ciência, [ane@ipam.org.br](mailto:ane@ipam.org.br)

**Red Mexicana de Organizaciones Campesinas Forestales, A. C. (RedMocaf)**

Contact: Gustavo Sánchez, President, [svallegustavo@gmail.com](mailto:svallegustavo@gmail.com),  
[contactoredmocaf@gmail.com](mailto:contactoredmocaf@gmail.com)

**University of Northern British Columbia**

Contact: Philip J. Burton, Ph.D., R.P.Bio., Professor Emeritus, Ecosystem Science & Management, [Phil.Burton@unbc.ca](mailto:Phil.Burton@unbc.ca)

**Woodwell Climate Research Center**

Contact: Peter C. Frumhoff PhD, Senior Science Policy Advisor,  
[pfrumhoff@woodwellclimate.org](mailto:pfrumhoff@woodwellclimate.org)