January 18, 2021

External Engagement Secretariat
Environment & Climate Change Canada
Sent by email: ec.secretariatdelengagementexterne-externalengagementsecretariat.ec@canada.ca

Re: Natural Climate Solutions Program Design

To Whom It May Concern:

Thank you for inviting us to participate in the discussion that took place on January 13th on potential approaches to implementing Natural Climate Solutions.

Wildlife Conservation Society (WCS) Canada is a national non-government organization with a mission to save wildlife and wild places in Canada through science, conservation action, and by inspiring people to value nature. In 2020 we partnered with the International Emissions Trading Association to seed an ongoing discussion forum and associated activities aimed at understanding new financial instruments and policy mechanisms to support and scale Natural Climate Solutions.

Specifically, we wish to understand and promote policy and finance options that will conserve Canadian carbon-rich landscapes and incentivize measures to avoid their conversion or degradation, including intact northern landscapes. The initiative being launched by Environment and Climate Change Canada could, if appropriately designed and implemented, be a valuable tool in this regard. In particular, we note that one of the three types of activities that ECCC is focusing on is the "Conservation of high carbon-storage ecosystems at risk of loss through conversion to other uses" and our remarks are largely focused on that aspect of ECCC's proposed program.

The following are a few preliminary comments that we're pleased to offer at this time, organized around the four questions you posed in the meeting invitation (although we're addressing them out of sequence). We begin with a few general considerations.

General considerations

Amid a growing recognition that the climate crisis will not be resolved without attention to the essential role of nature, the avoided conversion and restoration of northern forests and peatlands is a key component of global climate change mitigation strategies. Proactive safeguarding of peatland carbon stores in particular can have enormous co-benefits by conserving biodiversity and ecosystem integrity, potentially at vast scales. As the steward of the world's largest peatland C stock, Canada has a disproportionate role to implement effective policies and strategies to protect potentially irrecoverable C that can serve as a model for other countries. Initiatives that specifically protect peatlands through Indigenous stewardship, and apply the principle of avoidance rather than mitigation, show great promise in Canada. The quantification of peatland C dynamics in

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"unmanaged" land will also improve estimates of GHG emissions and removals for Canada's GHG inventory. These science-based policy initiatives can be achieved with urgent collaborative and coordinated action.

We welcome ECCC's focus on measures to conserve high carbon-storage ecosystems at risk of loss through conversion to other uses. However, it is important to recognize that these ecosystems are also at risk of carbon loss through ecosystem *degradation*. In other words, and consistent with IPCC practise, the focus should include both "Land Use Change" (conversion) and "Land Use" (degradation and restoration).

Ecologically intact boreal forests and peatlands in Canada constitute a major carbon storehouse at the global scale[1]. Canada holds 9% of the world's forests[2] and, together with the United States, 32% of global peatland cover[3], including the second largest peatland in the world, the Hudson Bay Lowlands.

Of particular concern is the "irrecoverable carbon" represented by intact ecosystems of the world—carbon stocks that are lost through land conversion and will not be recoverable on timescales required for avoiding dangerous climate impacts[4]. For peatlands in general, the large stores of carbon represent the accumulation of hundreds to thousands of years of the slight disequilibrium of CO_2 that is provided on a yearly basis as a persistent carbon sink.

The area in green in the below map depicts the area of intact forests and peatlands that are designated as "unmanaged" for the purpose of Canada's Paris Agreement targets under the UNFCCC[5]. This means that they are presumably outside the scope of federal offsets programs. However, there are significant activities and proposed activities in these areas that risk converting and/or degrading these intact forests and peatlands. One key example is the proposed Ring of Fire development within the Hudson Bay Lowlands in northern Ontario, including mine sites, transportation corridors and associated infrastructure. This underscores the critical importance of ensuring that any program aimed at conserving high carbon-storage ecosystems apply across the entire landscape, including areas designated as "unmanaged" for the purpose of UNFCCC reporting, in order to allow for proactive safeguarding of these carbon stores, and allow for long-term carbon management.

[1] WCS Canada 2020. https://storymaps.arcgis.com/stories/19d24f59487b46f6a011dba140eddbe7

[2] The Nature Conservancy, Lands of Opportunity: Unleashing the full potential of natural climate solutions (2017).

[3] Xu, J., P. J. Morris, J. Liu and J. Holden (2017). "PEATMAP: refining estimates of global peatland distribution based on a meta-analysis." Catena 160: 134-140.

[4] Goldstein et al. 2020 https://www.nature.com/articles/s41558-020-0738-8

[5] https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/carbon-accounting/inventory-and-land-use-change/13111

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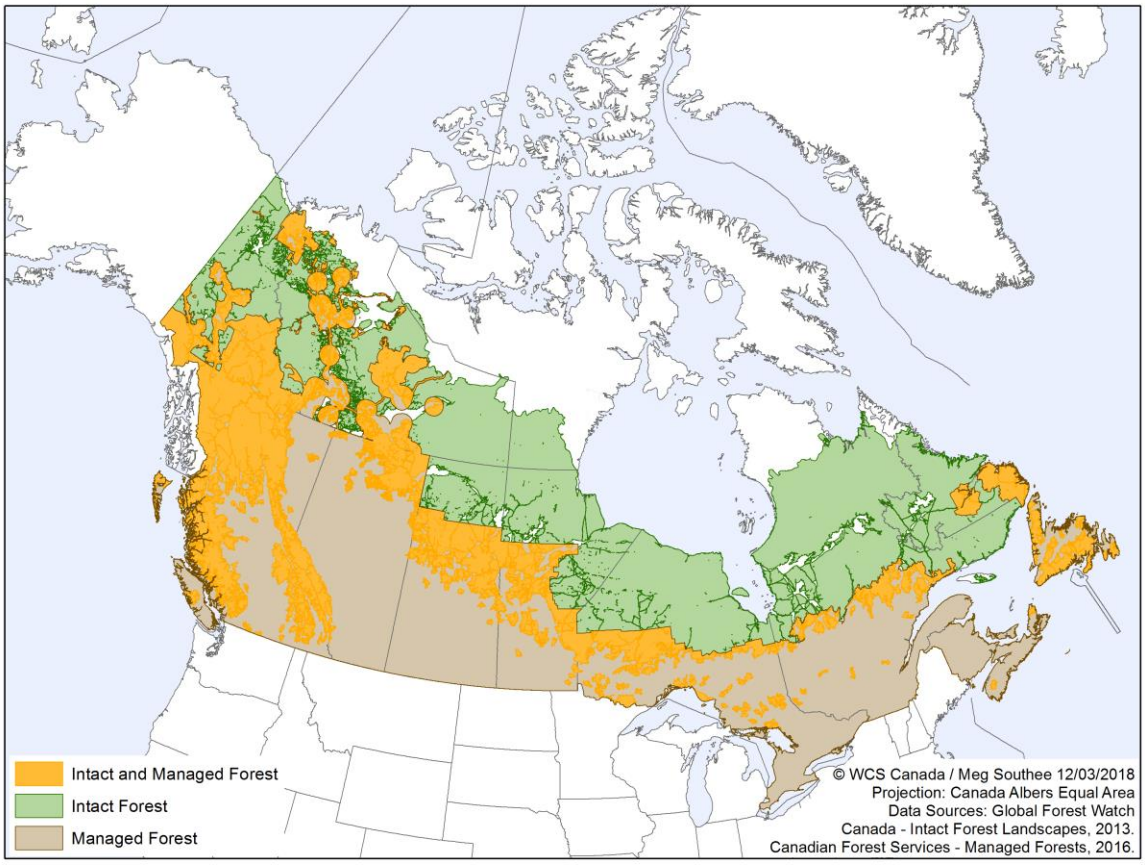

Recommendations:

1. **ECCC should support activities to conserve high carbon-storage ecosystems that address the risks of degradation of these ecosystems, as well as the risks of their conversion.**
2. **The areas considered within the scope of ECCC's Natural Climate Solutions program should include the entire Canadian landscape, and not just the area designated as "managed" under the UNFCCC.**

Design considerations (Question #2)

Additionality frameworks (such as those used for offset programs) favour degraded landscapes that could be restored or land management practices that could be improved, because it is easier to show the criteria are met. It is difficult to demonstrate positive carbon value in some ecosystems, and difficult to accurately quantify avoided emissions since they rely on counterfactual baselines to determine what would have happened in the absence of the incentivized measure. This difficulty presents challenges in quantifying measures to conserve land-based carbon, but in no way lessens the importance of proactive safeguarding measures to avoid conversion or degradation of these important landscapes.

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Prevailing NCS polices tend to place focus on afforestation and restoration, which are limited in scale and run the risk of foregoing additional benefits for human adaptation and biodiversity conservation that result from measures that avoid conversion and degradation of natural ecosystems.

A new program focused on measures to conserve high carbon-storage ecosystems will need to shed the constraints of existing programs if it is to have the desired impacts. This can be an opportunity for ECCC to encourage, support and test innovative and creative solutions. Such innovation does not come without risks – some projects will fail to produce the hoped-for results. However, by applying an adaptive management and "learn as we go" approach, ECCC stands the best change of piloting innovative new measures that have the potential to be scaled-up across the landscape. Federal leadership on this front can provide incentives and leverage to encourage participation from financial, philanthropic and private sector actors that have a multiplying effect.

Recommendation:

3. **We recommend that as ECCC develops a program aimed at conserving high carbon-storage ecosystems it does so in a way that is flexible and encourages experimentation, in order to stimulate creativity and innovation in developing and implementing new and effective natural climate solutions.**

Co-benefits (Question #3)

Intact forests of the planet have exceptional value beyond climate benefits – to biodiversity, human wellbeing and human health – compared to degraded and managed systems. Although there are exceptions, intact high carbon-storage ecosystems are often more resilient to climate change impacts than degraded ecosystems[6]. Keeping forests intact and avoiding degradation can provide significant climate benefits by avoiding emissions of stored carbon and maintaining major active carbon sinks. It is a weakness of current policy regimes that it is so hard to recognize and incentivize such action.

Recommendation:

4. **A Natural Climate Solutions program focused on conserving high carbon-storage ecosystems should have as its primary benefit the sequestration and storage of land-based carbon, with one or more required co-benefits to biodiversity conservation, climate resilience or climate adaptation.**

Existing programs (Question #1)

There are many federal and provincial programs aimed at encouraging land stewardship or creating new protected areas, with funds flowing to provinces or territories, to Indigenous organizations, and/or to private landowners. Many of these programs have the potential to also enhance or conserve carbon-rich landscapes. Perhaps most noteworthy in this regard is the federal support for Indigenous-led initiatives to establish Indigenous Protected and Conserved Areas, since in many of

[6] Watson et al. 2018. https://www.nature.com/articles/s41559-018-0490-x

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these sites the areas under consideration are healthy ecosystems that are more carbon-rich than degraded ones.

A program that could be used as a model is the Low Carbon Economy Fund. What's particularly relevant about this fund is that it includes two components – a Leadership Fund (exclusively reserved for grants to provinces and territories) and a Challenge Fund (that also welcomes proposals from municipalities, Indigenous communities and organizations, businesses, and not-for-profit organizations). The criteria for the Low Carbon Economy Fund don't currently include measures that would conserve carbon-rich landscapes, but it's possible to imagine a program that would do this, such as (for example) building on the Forest Carbon Economy Fund concept recommended by Ecotrust.

A "Leadership Fund" (retaining the terminology used by the Low Carbon Economy Fund) would provide funding to provinces and territories to support policies and programs that have potential carbon benefit. The strength of this approach is that it could be directed at measures across the entire landscape rather than narrow project boundaries. It allows for an equitable approach, with all actors within a particular province or territory subject to the same policies, or able to benefit from the same incentives.

A "Challenge Fund" would accept proposals from a broader range of potential proponents (e.g. provinces, territories, municipalities, Conservation Authorities, Indigenous communities and organizations, businesses, not-for-profit organizations). Criteria would need to be developed, for both project eligibility as well as for reviewing and approving proposals. The possible strength of this approach is that it could allow for considerable flexibility. For example, criteria could put an emphasis on projects that adopt innovative approaches and/or could be scaled up, if they prove successful. It could provide a relatively low-risk way to experiment with new approaches to carbon management.

For any such a fund to be successful it will be important that the guidelines are sufficiently flexible to allow for diverse and innovative projects to come forward, and it will be especially important to ensure that the project review process is sufficiently broad-minded and risk-tolerant.

Recommendations:

5. **ECCC should consider developing a program that invites proposals from governments, Indigenous communities/organizations and NGOs, aimed specifically at conserving high carbon-storage ecosystems.**
6. **The program should be sufficiently flexible to encourage creative and innovative projects, with an active adaptive management approach to managing project risks.**
7. **Project criteria should include considerations of the potential scalability of projects; so that innovative or experimental projects that turn out to be successful could be implemented at a much broader scale.**
8. **The project review process should include external experts, aimed at introducing fresh thinking and perspectives.**

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Tools needed (Question #4)

GHG fluxes from forests within Canada's "managed land" are estimated annually using the Carbon Budget Model of the Canadian Forest Service. This is reliant on detailed forest inventory data, which are not available from "unmanaged" forest. The model also cannot be applied to peatlands within "managed" forests nor to non-forested peatlands within "managed lands". Accurate assessment of C dynamics for all peatlands, for example, would enable far better understanding than we have now for C removal and would improve the inclusion of peatlands in GHG estimation and reporting, calculation of offsets, etc. Unmeasured and unreported GHG emissions from peatlands may have important implications for global climate mitigation targets, because if these are large, increased efforts will be needed in other sectors to meet those. The newly development Canadian Model for Peatlands (CaMP) is very promising, but more work and attention is needed on this and other modeling efforts to improve their accuracy.

Although carbon quantification and accounting has been the primary responsibility of Natural Resources Canada, investment and engagement is needed everywhere to make necessary improvements to quantification of and reporting on GHG emissions and removals relevant for unmanaged lands, and peatlands within managed lands. Incentives to develop targeted research strategies to help fill knowledge gaps and better inform decision-making by all ministries could accelerate action.

A critical issue to be addressed relates to "carbon tenure" on public lands. If the rules for carbon tenure ownership and transferability were to become formally recognized in a consistent way by all levels of government, it would be easier for the holder of that tenure to use it as a form of equity, in order to secure compensation for its conservation.

Recommendation:

9. **ECCC should work collaboratively across multiple government departments and ministries to develop the tools needed to accurately measure and monitor belowground carbon fluxes, as well as the governance mechanisms to recognize carbon tenure.**

We would be pleased to engage in any discussions regarding our comments and recommendations.

Thank you again for this opportunity to provide input into this important new initiative.

Sincerely,

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