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## **Canada's commitment to plant 2 Billion Trees (2BT) in 10 years is a good one How to make it a success?**

Our organizations support the government's commitment to plant 2 billion additional trees across Canada over ten years.

A well-designed, implemented and monitored tree planting program can make a meaningful contribution to Canada's ambitious nature and climate commitments, notably to halt and reverse the loss of biodiversity by 2030 and, longer term, to support the full recovery of nature and achieve net-zero emissions by 2050. Planting 2 billion trees can also enhance the resilience of communities to climate change and support Indigenous leadership in conservation, bringing significant co-benefits for human well-being.

But the early roll out and lack of transparency and clarity in how the government is implementing the 2BT program raises concerns that it won't meet its publicly stated objectives. Achieving the 2BT program's important climate, biodiversity, and human well-being goals requires planting the right trees, in the right places, for the right reasons and protecting them permanently. If the trees are simply cut down as part of commercial logging a few decades down the road, their long-term contributions to habitat, carbon storage and climate adaptation are similarly felled.

Tree planting needs to meet ecological criteria for biodiversity gains and go hand in hand with additional reductions in CO2 emissions produced across society. This means that the 2BT program should not be used to offset or replace direct reductions in fossil fuel production. Canada also needs significant improvements in its forest carbon accounting system to ensure accurate accounting of emissions from industrial logging and the role of nature-based solutions.

The 2BT program needs a clear strategy to ensure the supply of 2 billion additional seedlings, and a monitoring and evaluation framework that will support transparent performance measurement and reporting across the implementation of the program, informing the evaluation of progress towards the 2BT's main objectives. The 2BT program must also work to build the capacity of practitioners to deliver the scale of plantings that are needed to achieve the planting of two billion trees by 2030.

How can the government achieve this?

### **1. Honour the 2BT's High-level Goals:**

As originally announced, the Government's program to plant 2 billion trees by 2030 was intended to create [permanent and additional forest cover](#) in landscapes across Canada to contribute to the government's goals to address:

- Biodiversity Loss: contributes to Canada's efforts to halt and reverse the loss of biodiversity by 2030 and support the full recovery of nature by 2050;

- Climate Change: contributes to Canada's efforts to achieve net-zero greenhouse gas emissions by 2050, while enhancing resilience to climate change (climate change adaptation); and
- Resilience and human well-being: contribute to human, physical and mental health and safety by enhancing climate resilient landscapes that serve to attenuate extreme weather events, while increasing access to tree cover and natural areas.

We applaud these goals; they are the **right reasons** to plant trees across Canada.

To be clear, tree planting is only one of many actions that are needed to address these high-level goals. The 2BT program contributes, but certainly does not 'solve' these high-level issues.

To do right by these goals, the program must undertake the below.

## **2. Plant the *Right native trees***

It is imperative that the program address regional needs for genetically appropriate native trees to achieve regional forest habitat restoration needs. As further detailed below, a *dedicated, funded strategy* is needed to scale-up the supply of the right native tree seedlings to meet planting demands. This means regionally and genetically appropriate seed stock that is likely to survive through a changing climate.

Sustained funding is needed to build capacity for seed collectors, seed sorting and storage, and nursery propagation. For seedling "plugs" this typically requires 3 years. For "bare-root stock", which are needed for conditions not suited for seedling plugs (e.g. heavy clay soils), the timeline is longer, typically 3-4 years.

## **3. Plant in the *Right Places***

Planting efforts need to be proactively guided by a science-based strategy to plant the right trees in the right places.

But where are the priority planting areas for the 2BT? The absence of clear directives from a strategy that identifies the "right places" remains a significant gap in the federal government's current approach to the program. Strategic planting areas are needed to maximize the "ecological and social return on our investment dollar" (i.e. positive biodiversity outcomes including recovery efforts for forest species at risk alongside long term climate gains).

Towards this end, we suggest expanding the role of the NBCS advisory committee to provide guidance on the "right places". Planting proposals should then be screened to ensure the targeted restoration sites are prioritized to achieve positive biodiversity, climate and human well-being outcomes.

Our own recommendation is that planting be prioritized in two key areas:

**i) private and public urban, peri-urban and agricultural landscapes in populous southern Canada where ecosystems are fragmented, under protected, and facing significant biodiversity and climate pressures.**

Planting sites should be informed by biodiversity plans (natural heritage system plans) or watershed management and natural infrastructure plans that identify and prioritize restoration sites for positive biodiversity, climate resilience and human well-being benefits. The 2BT can also help align with and augment other government priorities, including:

- enhancing natural infrastructure for climate resilience in and near vulnerable urban areas;
- goals to expand Canada's protected spaces and conservation lands to 30% by 2030, through buffer plantings adjacent to urban and peri-urban parks and existing and future planned protected areas, or forest restoration needs within protected areas and conservation lands;
- working with Cities/municipalities to enhance the urban forest canopy (aligning with urban forest initiatives);
- supporting scientifically prioritised enhancements to ecological corridors (Greenbelt, A2A, Y2Y and more) and regional, or landscape level biodiversity plans.

**ii) targeted public northern landscapes damaged by seismic lines, intense forest fires or disease as well as some northern prairie agricultural lands.**

Tree planting in the north should target:

- public landscapes that have been damaged by industrial activity, are not naturally regenerating and where there is no legal commitment for anyone to restore;
- critical habitat needed for keystone species at risk (ones with broad habitat needs that would cover the restoration of habitat that is valuable to multiple species and overall ecosystem health, e.g. caribou);
- areas where there is clear evidence that intense forest fires are impeding natural regenerative processes could be a valuable target provided planted trees do not eventually become part of regular commercial forestry.

Given their widespread footprint and lack of natural regeneration, seismic lines are a high priority target for habitat restoration in northern landscapes. To return these landscapes to their previous functionality (i.e. the ecological processes occurring in the absence of anthropogenic and natural disturbance), restoration on seismic lines should recreate the natural vegetation structure that supports local species. In the case of seismic lines where there are legal requirements to *reclaim*, these areas can be enhanced by the 2BT to achieve *full regeneration*.

#### **4. Ensure Additionality**

Forests restored through the 2BT are required to be additional to status quo planting programs and this additionality needs to be tracked and demonstrated. To achieve this, a **dedicated program to secure the needed additional 2 billion native tree seedlings** is an essential first step. This new seedling supply *dedicated* to the 2BT should be monitored and reported throughout the full chain of custody: from seed collection through nursery propagation, through site preparation and tree plantings by delivery agents, through monitoring for survival assessments and geo-referenced reporting on total area planted.

Measurement should include the numbers of seedlings planted, survival assessments as well as **geo-referenced area planted**, managed via GIS. The area restored to healthy forest is a much stronger and more reliable metric than numbers of trees planted and can readily be monitored, measured and broadly shared via GIS reporting.

#### **5. Ensure the Permanence of the trees**

The promise of permanent new forest cover should be measured in terms of area restored to closed canopy with ecologically appropriate and functional understory and monitored through time. Infill planting and management may be needed to ensure healthy, closed canopy forests persist through time (2050 and well beyond).

The program's intent of permanence should be conveyed as a *notional* condition for planting contracts on privately-held lands (where there would be no guarantees unless under conservation easements through Land Trusts).

Newly established forests under the 2BT should not be included as part of any forest management unit or considered when calculating annual allowable cuts within provinces and the territories. Permanence and additionality should be a “condition” of 2BT transfer payments for planting on public lands by the Provinces and Territories and clearly identified as the goal of the program in the language of the agreements. Monitoring via satellite and GIS can be used to verify both additionality and permanence through time.

## 6. Build the Capacity to Deliver:

In addition to securing an adequate supply of locally and genetically appropriate native seed stock, funding is also needed to build the **capacity of program delivery agents** to prepare site plans, successfully deliver large-scale plantings, monitor survival and spatially report results using GIS data management. The support of adaptive management, including hosting workshops for practitioners to share lessons of what’s working and what’s not, will further enhance successful program outcomes.

Towards this end, we **recommend the formation of a “technical advisory team of practitioners”** from jurisdictions across Canada to help guide and expedite the delivery of a “field-ready” program to achieve 2BT goals. The Forests Ontario model has proven to be very successful and could help inform how best to build capacity across Canada for a “field-ready” program. This technical advisory body could be a subsidiary of the current NBCS advisory committee and help answer the technical questions described here, or other technical issues as delegated by the senior committee.

## 7. Ensure Reporting, Evaluation and Continuous Improvement:

The details of the 2BT program’s implementation should be transparent, publicly-listed, and include planting partners, numbers of trees planted, survivorship, area restored, locations of plantings (GIS) and alignment with biodiversity, natural infrastructure and watershed plans. Results of program partnerships should be evaluated and reported annually and conclusions used to improve program implementation. The Government should request that the Auditor General/Commissioner for Environment and Sustainable Development evaluate the 2BT program every three years.

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