CAPPING ECOSYSTEM EMISSIONS?

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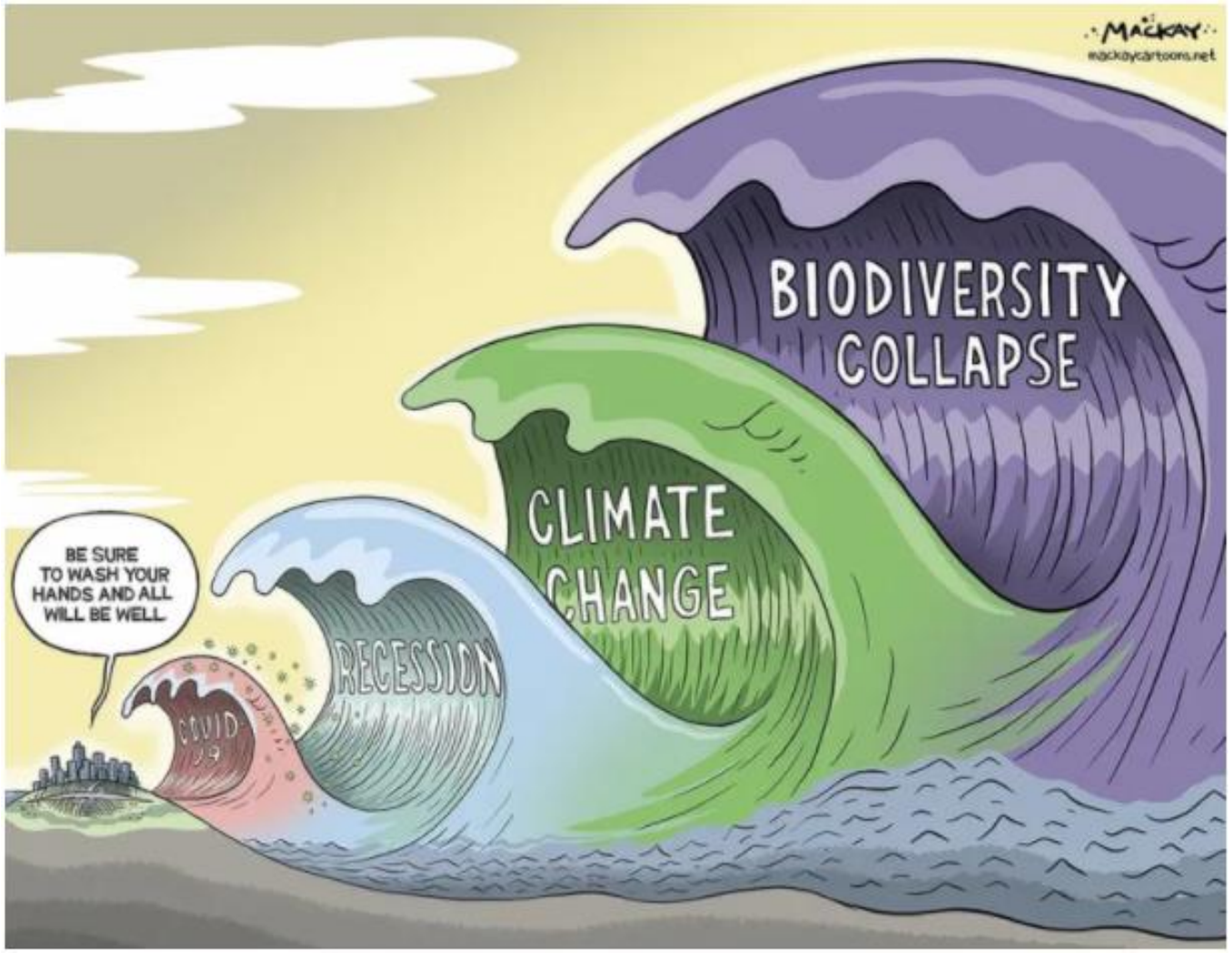
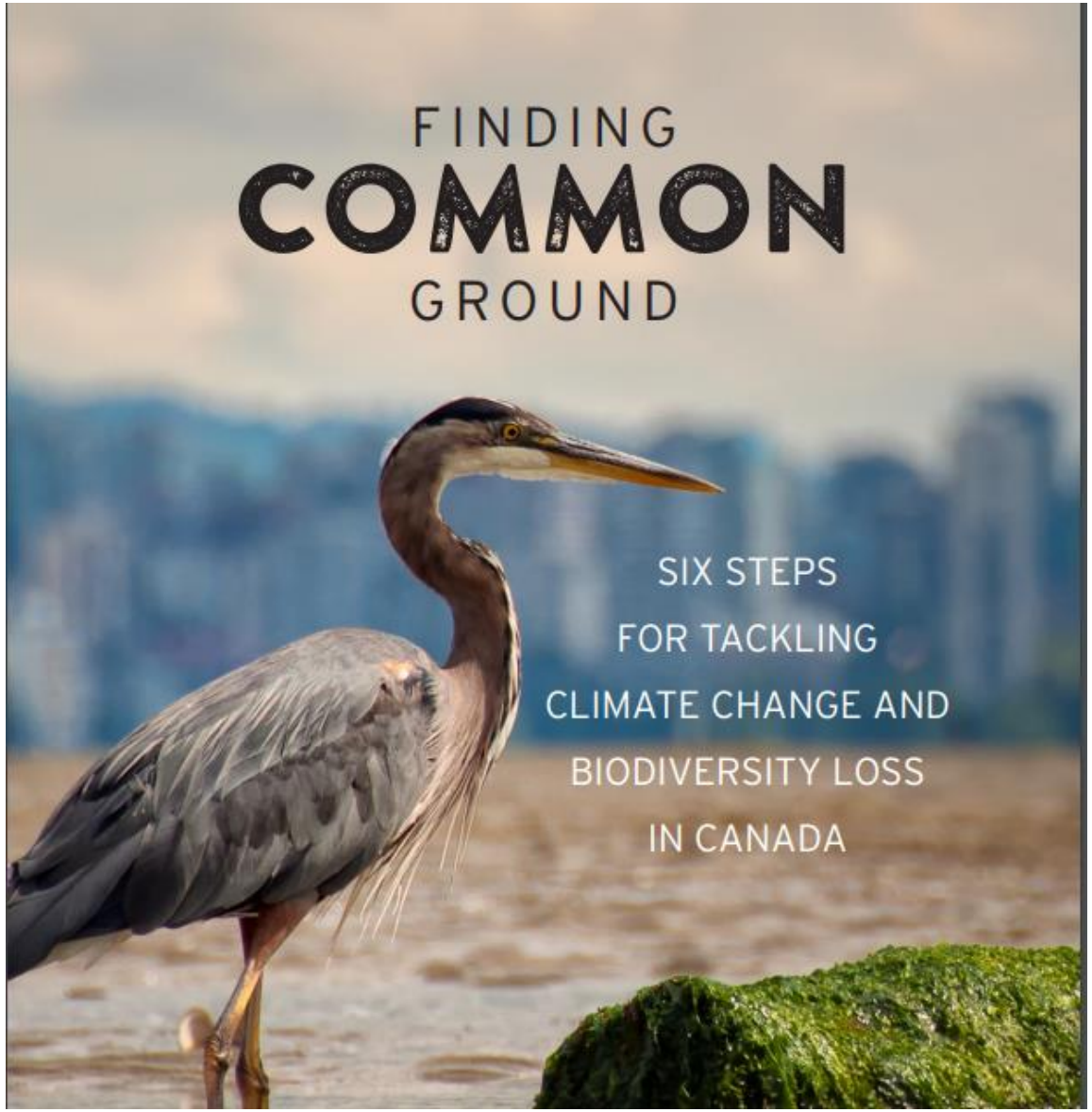
CPAWS

THE DUAL CRISIS



FINDING COMMON GROUND (2019)

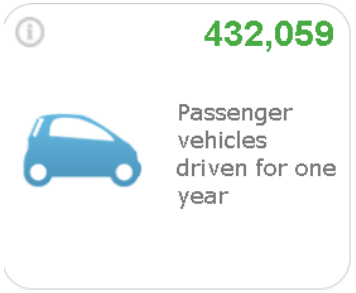
Climate change and biodiversity loss are among the most pressing challenges the world faces. Human activity, including industrial farming, logging, mining, hydro-electric development, and oil and gas exploration, have caused these twin ecological crises, which are closely interrelated.



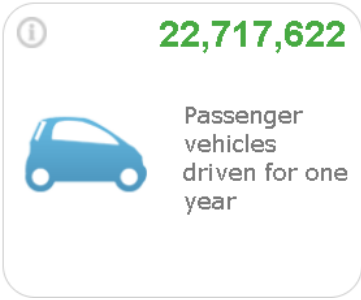
ECOSYSTEM EMISSIONS

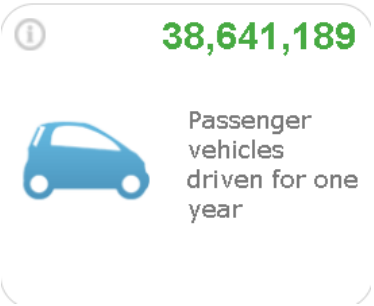
The GHG emissions are too large to ignore

1100 km^2 seismic line and winter road impacts on peatlands in Alberta represents about 2 million Mt of CO_2 eq emissions

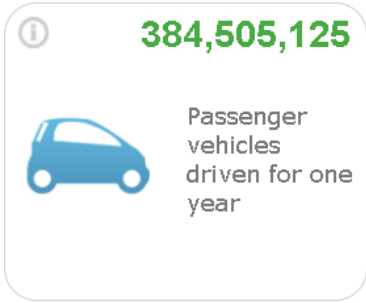


Surface mining and in-situ production GHG impacts on peatland and forests in Alberta between 2012 and 2030 will release an additional 107–182 million tonnes of CO_2 from land use impacts alone.





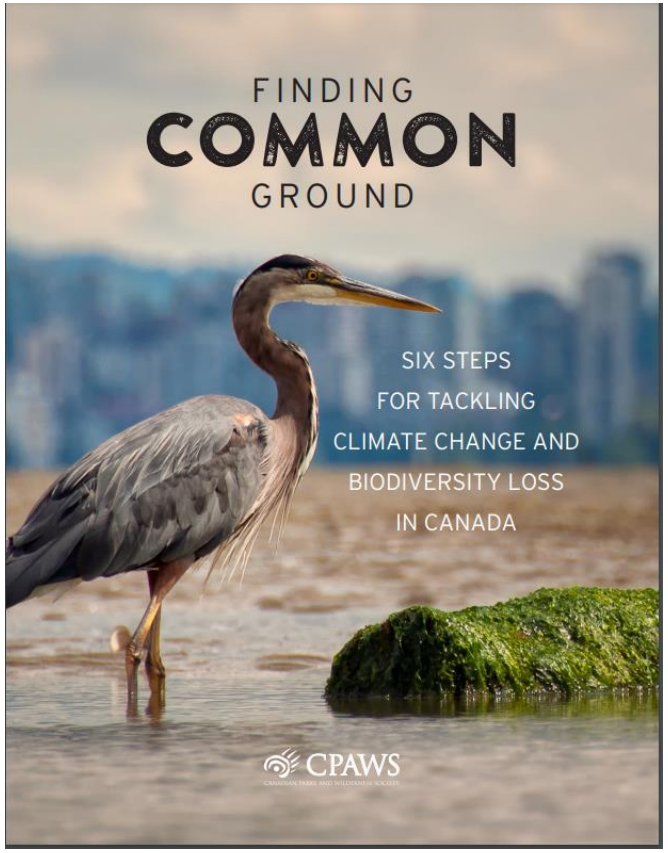
A new road in Manitoba through the boreal forests and wetlands was estimated to emit 544,447,355.2 tC, plus the loss of sequestration of 2,338,750 ha of forest and 1,723,750 238 ha of wetlands.



WE NEED POLICY INNOVATION

Big focus on offsets in relation nature-based climate solutions but we know this is not enough for nature or climate

THE ROAD MAP



Pg. 7. Finding Common Ground (2019)

Figure 2. Bridging Conservation and Mitigation: A Six-Step Roadmap for Federal Policymakers

1. **Increase the ecosystem emission reductions to be achieved by 2030** in Canada's commitments under the Paris Agreement. Describe the role of nature-based climate solutions for reducing those emissions.

2. **Start a Nature-Based Climate Solutions Fund** to invest in a range of activities that aim to reduce emissions from land-use change and ecosystem degradation and deliver biodiversity benefits.

3. **In parallel, develop:**
   a) **GHG accounting rules** for assessing emission reductions and mitigation options that explicitly consider nature-based approaches.
   b) **National rules for assessing the biodiversity impacts** of the solutions proposed for addressing GHG emissions.

4. **Identify the public and private sector players that generate the greatest ecosystem GHG emissions** in Canada, starting with activities that cause land-use change (such as deforestation) and result in long-term changes to ecosystems.

5. **Require federal agencies to screen all their proposed climate solutions** for both ecosystem emissions and biodiversity impacts.

6. **Expand the sources covered by the Greenhouse Gas Pollution Pricing Act** to include the ecosystem emissions generated by major emitters identified in Step 4.

CURRENT FEDERAL LANDSCAPE

- Funding for “nature-based climate solutions” (2020)
  - $3.16 billion over 10 years to plant two billion trees.
  - $631 million over 10 years to restore and enhance wetlands, peatlands, grasslands and agricultural lands to boost carbon sequestration.
  - $98.4 million over 10 years to establish a new Natural Climate Solutions for Agriculture Fund.

- Developing offsets for forest management and soils (2019/2020)

- Improving the quantification of ecosystem emissions in impact assessments (in the Strategic Assessment of Climate Change) (2020)

- Adding a Climate Lens to federal investments and policy, which hopefully includes ecosystem emissions (2020)

STILL MORE TO DO

- Continued improvement in quantifying our emissions from ecosystem degradation

- Modelling the pathways of the future (biofuels, wood products, etc.)

Table 1. National Inventory of GHG emissions: Land Types and Tracked Activities

Types of land	Activities considered when quantifying the emission or sequestration effects
Forest land	Managed forests and lands converted to forests; includes forest growth and anthropogenic disturbances related to forest management but excludes fire and most insect disturbances
Cropland	Management practices on land in annual crops, summer fallow and perennial crops (forage, specialty crops, orchards); immediate and residual emissions from lands converted to cropland
Grassland	Managed agricultural grassland (including tundra)
Wetlands	Peatlands disturbed for peat extraction or land flooded from hydro reservoir development
Settlements	Forest and grassland converted to built-up land (settlements, transport infrastructure, oil & gas infrastructure, mining, etc.); urban tree growth
Harvested wood products	Use and disposal of harvested wood products manufactured from wood coming from forest harvest and forest conversion activities in Canada

Source: Reproduced from Canada–National Inventory Report 1990-2016–Part 3 Table A9- 1 (Environment and Climate Change Canada 2018, p.9)

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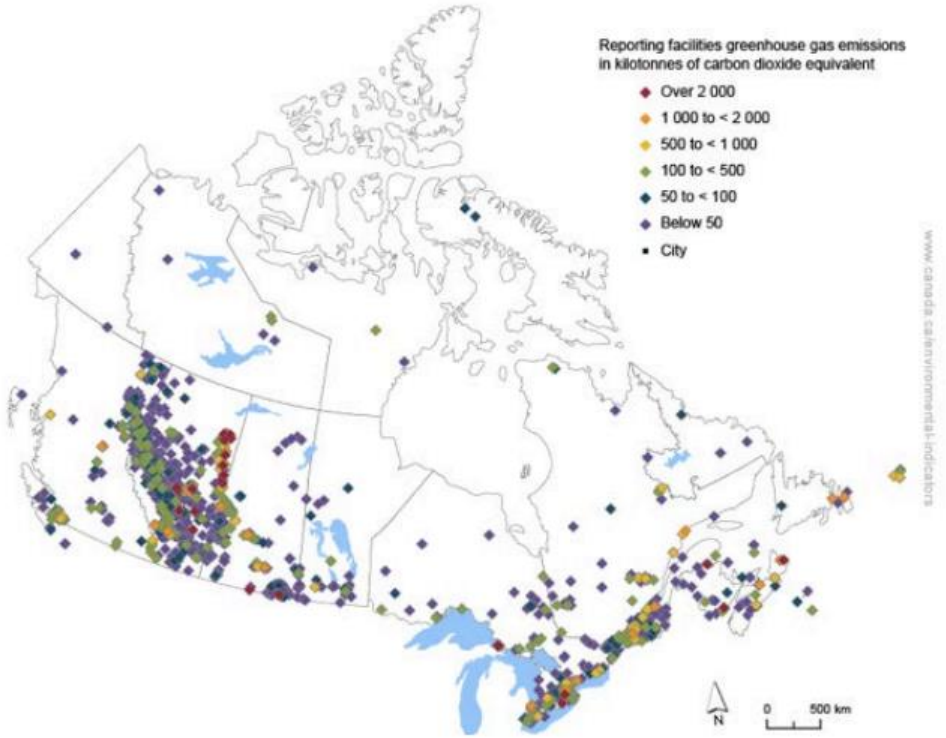
EXPAND THE GHG POLLUTION ACT

Expand the GHG Pollution Act to include large “ecosystem” carbon emitters and put a “price” on ecosystem carbon

- Who are the “big emitters”
- Understand rates of degradation by actor
- Review existing P/T regulations on land use
- Set thresholds
- Add price

Figure 4. Potential Model for Registry of Ecosystem GHGs Major Emitters: Greenhouse Gas Emissions from Large Facilities, Canada, 2017



Source: Environment and Climate Change Canada, Canadian Environmental Sustainability Indicators, GHG Emissions from Large Facilities.

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THANK YOU

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