



**FARMERS  
FOR CLIMATE  
SOLUTIONS**

# **Climate Action in Agriculture Policy Around the World**

February 2021

# How does Canada stack up when it comes to climate policy in agriculture?

Canada made important strides in allocating climate-related funding for agriculture in its updated climate plan<sup>1</sup>, but we are still far behind our global peers. Around the world, countries are pledging significant funding to tackle greenhouse gas emissions and build resilience through more sustainable agriculture systems. Many countries that were already rolling out sustainable agriculture policies pre-pandemic have doubled down on these investments, acknowledging that supporting farmers to tackle the climate crisis while producing good food is a critical part of “building back better”. Others have announced new roadmaps in recent months. The countries that are most advanced in climate policy in agriculture now have clear targets, comprehensive strategies, and recognize that climate-friendly agriculture can be a pillar for both economic recovery and for addressing the climate and biodiversity crises.

Canada’s projected agricultural emissions are increasing to 2030<sup>2</sup>. A quick review of policies around the world demonstrates that Canada has a long way to go to match climate action in agriculture in other countries. Our food security, farmer livelihoods, and the resilience and competitiveness of our sector depends on a more ambitious, climate-focused policy in agriculture.



*The EU spends over 73 times more than Canada on agri-environmental programs on a per-acre basis. The US spends 13 times more.*

1 Announced in December 2020.

2 Environment and Climate Change Canada. [2019]. Canada’s Fourth Biennial Report on Climate Change. <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/fourth-biennial-report-climate-change.html>



# A tour of climate-related agricultural policies around the world:

## Key takeaways

1

**Emissions reduction targets for agriculture are increasingly common. Canada doesn't have one yet.**

*Two countries, Ireland and New Zealand, have entrenched agriculture-related targets in law. Countries like Germany, France and the Netherlands have clear targets for the agricultural sector. A similar target and/or carbon budget for agriculture in Canada would send much-needed signals to farmers and industry actors that a climate-oriented transition is necessary and underway.*

2

**Sustainability targets beyond emissions reductions are guiding whole-sector transitions. Canada can build on this.**

*Countries are setting targets for farms under sustainable or agro-ecological production, reduction of fertilizer use, acreage under certified organic production, and more. Some countries, like Ireland, have set numerous sustainability targets for the agricultural sector that contribute to their vision for a climate-resilient food system. Canada now has a target for fertilizer emissions reduction, which is a first step that must be expanded on.*

3

**Comprehensive and holistic strategies are guiding climate policies in agriculture. Canada has a chance in front of us.**

*Several countries have developed far-reaching strategies that address agricultural emissions, but also take into consideration biodiversity, farmer income, and more. The EU's Green New Deal and Farm to Fork strategy is particularly exemplary. The UK's recent agricultural transition plan is also an excellent example of the potential for strong strategy to guide reform. The development of a Canadian strategy that takes a holistic approach to climate-friendly agriculture will help us meet the challenge and urgency of the climate crisis. Canada recently announced the development of a first-ever Canadian Agri-Environmental Strategy. The success of this strategy will be measured by its ability to drive emissions reductions, improve farmer livelihoods and advance equity in our sector.*

4

**"Building back better" means driving climate action in agriculture. Canadian spending in agriculture should drive emissions reduction.**

*As governments spend unprecedented amounts of money in response to the COVID-19 pandemic, the potential to spur climate action in agriculture should not be overlooked. Countries like France, Germany, Denmark and others are leveraging stimulus spending to kickstart climate action in the sector. Even more action is expected under the new Biden administration in the US. Equally important is reform of harmful subsidies that work against environmentally-friendly practices. Canada should ensure stimulus for the agriculture sector prioritizes climate action and removes barriers to emissions reductions.*



# Case Studies:

## The potential of agricultural policies to advance climate-friendly farming by supporting farmers as leaders in the transition



### The European Green Deal: a bold step to addressing agricultural emissions

In 2019, the EU released its most comprehensive set of climate policy initiatives to date, the [European Green Deal](#), with the goal of making Europe a net-zero economy by 2050<sup>3</sup>. **In the immediate term, the [2030 Climate Target Plan](#) identifies the potential for climate neutrality in agriculture. The European Green Deal's suite of proposals for food sustainability are outlined in the [Farm to Fork Strategy \(F2FS\)](#), which aims to create a fair, healthy and environmentally friendly food system that will make European food “the global standard for sustainability” and improve the incomes of primary producers<sup>4</sup>.** The F2FS calls on food producers to reduce excess fertilizer use and reduce dependency on pesticides and antimicrobials, among other actions. To achieve a targeted reduction of fertilizer use of 20% by 2030, the Commission will act to reduce nutrient losses by at least 50%, while ensuring that there is no deterioration in soil fertility. The strategy includes eight concrete actions for farming, such as working with Member States to better address Common Agricultural Policy<sup>5</sup> (CAP) objectives, enact a carbon farming initiative, and improve pesticide regulations

Although the strategy must still develop actions to achieve policy objectives and reconcile social, environmental, and economic goals, it is nonetheless recognized as a groundbreaking advance in European food and agriculture policy-making<sup>6</sup>. **The EU has allocated 37% of its recovery fund for green transition, including EUR 7.5 billion to deliver on the F2FS and improve sustainability of European farm policy.**<sup>7</sup> The EU approach also includes a call to put sustainability considerations central to the [revised CAP](#)<sup>8</sup>, to be released in 2022, with the proposal stipulating 40% of its overall budget contributing to climate action<sup>9</sup>. Additionally, the European Commission released the [EU strategy to reduce methane emissions](#)<sup>10</sup> in October 2020, putting the EU at the forefront of international policy to reduce methane pollution.<sup>11</sup>

3 European Commission. [2019]. Communication - The European Green Deal. <https://eur-lex.europa.eu/legal-content/EN/TX-?qid=1596443911913&uri=CELEX:52019DC0640#document2>

4 European Commission. [2020]. Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system. [https://ec.europa.eu/food/sites/food/files/safety/docs/f2f\\_action-plan\\_2020\\_strategy-info\\_en.pdf](https://ec.europa.eu/food/sites/food/files/safety/docs/f2f_action-plan_2020_strategy-info_en.pdf)

5 The common agricultural policy [CAP] has defined the system of subsidies and programs supporting the EU's farmers since 1962 and has traditionally focused on farmer income support.

6 Schebesta, H., Candel, J.J.L. [2020]. Game-changing potential of the EU's Farm to Fork Strategy. *Nat Food* 1, 586–588 <https://doi.org/10.1038/s43016-020-00166-9>

7 Fortuna, G. [2020 Jul 3]. Bittersweet budget: what changes for CAP after EU summit deal. <https://www.euractiv.com/section/agriculture-food/news/bittersweet-budget-what-changes-for-cap-after-eu-summit-deal/>; Taylor, K. [2020, December 18]. EU agrees to set aside 37% of recovery fund for green transition. EURACTIV. <https://www.euractiv.com/section/energy-environment/news/eu-agrees-to-set-aside-37-of-recovery-fund-for-green-transition/>

8 European Commission. [2019b]. Annex to the Communication on the European Green Deal. <https://eur-lex.europa.eu/legal-content/EN/TX/?qid=1596443911913&uri=CELEX:52019DC0640#document2>

9 To incent climate-friendly practices, a higher EU co-financing rate of 80% would apply for environmental, climate and other management commitments. In addition, funding thresholds would increase by 15% for Pillar II interventions addressing specific environmental- and climate-related objectives, and by 2% for interventions supporting young farmers.

10 European Commission. [2020]. Communication - on an EU strategy to reduce methane emissions. [https://ec.europa.eu/energy/sites/ener/files/eu\\_methane\\_strategy.pdf](https://ec.europa.eu/energy/sites/ener/files/eu_methane_strategy.pdf)

11 Environmental Defense Fund. [2020]. EU Methane Strategy Offers Framework for Immediate Climate Action. <https://www.edf.org/media/eu-methane-strategy-offers-framework-immediate-climate-action>





## Portugal's Innovation Agenda for Agriculture 2030: A plan to build resilience

Portugal has an emissions reductions target for agriculture of 11% by 2030 compared to 2005 levels.<sup>12</sup> The country announced a COVID support package for the agricultural sector that will accelerate progress toward this target and its goal of having more than half of all agricultural land under certified sustainable production regimes by 2030.<sup>13</sup> It will also provide subsidized credit, focused on supporting small-scale farmers. The [Innovation Agenda for Agriculture 2030](#) lays out plans to conserve and improve soil fertility and build resilience in vulnerable ecosystems.



## Denmark's Climate Action Plan: Investment for concrete goals

Denmark has committed DKK 2 billion from 2020-2029 to reduce greenhouse gas emissions from agriculture, with a target of doubling organic farming acreage by 2030, among other goals. Its DKK 10 billion (USD 1.58 billion) green recovery fund will invest in additional policies put forward by its [Climate Act](#) and [Climate Action Plan](#).<sup>14</sup>



## Germany's COVID-19 Recovery Budget: A targeted commitment to climate-friendly agriculture

Germany has committed €3.3 billion of its recovery budget to help agriculture and livestock farmers transition toward more climate-friendly models.<sup>15</sup> The country is targeting a reduction of 31-35% of agricultural emissions by 2030, compared to 1990 levels.<sup>16</sup>



## Ireland's Ag-Climatise: An ambitious, legally-bound target with a roadmap to reduce agriculture emissions

In late 2020, Ireland finalized the [Ag-Climatise](#) roadmap for the agriculture sector, which aims to achieve a climate-neutral agricultural sector by 2050.<sup>17</sup> The extensive roadmap includes 29 actions with specific, ambitious targets to reduce emissions in the sector. This includes programs and strategies for nitrogen fertilizer use, manure management, sustainable land management for abatement, and sustainable energy/energy decarbonization. Over half of Ireland's CAP Rural Development Programme expenditures in 2017 were on climate-related measures through these schemes.<sup>18</sup>

**Additionally, the Ireland Climate Action Plan legally binds Ireland to a target of 8-9% reduction of agricultural GHG emissions by 2030 compared to 2017 or 10-15% cumu-**

12 OECD, 2020.

13 Infoagro Systems. (2020 May 19). Portugal announces a new package of measures for the agricultural sector. <http://agriculture.infoagro.com/news/2020/portugal-announces-a-new-package-of-measures-for-the-agricultural-sect/>

14 Danish Minister of Climate, Energy and Utilities. (2019). Denmark's Integrated National Energy and Climate Plan. [https://ec.europa.eu/energy/sites/ener/files/documents/dk\\_final\\_necp\\_main\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/dk_final_necp_main_en.pdf)

15 Millan Lombrana, L. and Rathi, A. (2020 Jun 5). Germany Just Unveiled the World's Greenest Stimulus Plan. Bloomberg Green. <https://www.bloomberg.com/news/articles/2020-06-05/germany-s-recovery-fund-gets-green-hue-with-its-focus-on-climate?s-ref=CZ0inxEB>

16 OECD, 2020.

17 Ibid.

18 Government of Ireland. (2019). 'Ag Climatise' – A draft national roadmap for the agriculture sector to 2030 and beyond - Public consultation. <https://www.gov.ie/pdf/?file=https://assets.gov.ie/84017/a7fc3034-e12c-4957-9b97-8ea6c9b0096f.pdf#page=null>



lative reduction against 2030 business as usual (BAU) emissions.<sup>19</sup> The sector is also expected to play a significant role in contributing to carbon sequestration (target of 26.8 Mt CO<sub>2</sub>e by 2030).<sup>20</sup>

Although the [2020 Nitrates Derogation program](#) allows certain intensive farmers higher limits of nitrate use compared to normal EU Nitrate Regulations until 2021, Ireland is taking additional action to reduce related emissions. **This includes the [Nitrates Action Programme](#), which among other components identifies opportunities for farm savings through improved grassland management.**<sup>21</sup>

## France's National Low-Carbon Strategy: Successfully spurring emissions reductions

Updated in March 2020, the country's [National Low-Carbon Strategy](#) targets an 18% reduction in agricultural GHG emissions by 2030 and a 46% reduction by 2050, compared to 2015 levels.<sup>22</sup> France also has a target of 50% of farms committing to agro-ecology by 2025. This strategy **includes numerous measures to improve on-farm nitrogen use efficiency, including increasing the use of nitrogen fixing legumes and selecting crop varieties that require less inputs.** Measures for livestock are also extensive, including for feed, manure storage, and enteric fermentation.

France's Low-Carbon Strategy also followed the recommendations of the [4 per 1000 Initiative for Food Security and Climate](#) to increase the carbon storage potential of soils in France. The initiative contains a wide array of carbon sequestration recommendations including: encouraging the use of cover crops; introducing temporary grasslands in crop rotation; reducing soil tillage; preserving wetlands on agricultural holdings and preventing artificialization of land; and encouraging the planting and restoring of hedges along field boundaries. **In public communications, France has identified funding some of these initiatives with COVID-19 recovery funding.** Under France's COVID-19 stimulus package, tax credits are also available for farmers who receive 'high environmental value' certification or who farm organically.<sup>23</sup>

## England's Path to Sustainable Farming: A seven-year transition toward fundamental change

The UK recently announced far-reaching changes to farming policy in England, which will fundamentally change how land management and environmental issues in agriculture are dealt with in the country. **The seven-year transition plan aims to provide more equitable support to farmers and is "centred on support that rewards farmers and land managers for sustainable farming practices."**<sup>24</sup> **Crucially, the government is reforming agricultural subsidies** that have historically flowed to renters or owners of agricultural land,

19 OECD, 2020.

20 Government of Ireland. (2020a). 'Ag Climatise' – National Climate & Air Roadmap for the Agriculture Sector. <https://www.gov.ie/en/publication/07fbc-ag-climatise-a-roadmap-towards-climate-neutrality/>

21 Government of Ireland, 2020a.

22 Government of France. (2020). Stratégie nationale bas-carbone. [https://www.ecologie.gouv.fr/sites/default/files/2020-03-25\\_MTES\\_SNBC2.pdf](https://www.ecologie.gouv.fr/sites/default/files/2020-03-25_MTES_SNBC2.pdf)

23 UNEP. (2020 Oct 7). Amid COVID-19, these 10 countries are aiming to kickstart their economies by repairing nature. <https://www.unenvironment.org/news-and-stories/story/amid-covid-19-these-10-countries-are-aiming-kickstart-their-economies>

24 Government of the UK. (2020b Nov 30). Agricultural transition plan 2021 to 2024. <https://www.gov.uk/government/publications/agricultural-transition-plan-2021-to-2024>



by 2028. Funds will be redirected to payments to farmers for environmentally-focused outcomes, including for emissions-reducing actions. Details of the UK's plans to 2024 are outlined in its [Path to Sustainable Farming](#) document and build on the recently passed Agriculture Bill.<sup>25</sup> Measures around Environmental Land Management include a Sustainable Farming Incentive (focused on issues such as soil health and reduced pesticide use), a Local Nature Recovery component (payments for habitat/species management, natural flood management and more) and Landscape Recovery component (focused on large-scale forest, peatland, or coastal habitat restoration). A National Pilot version of the scheme will work with 5500 farmers over three years to ensure the final schemes are fully effective. **Efforts to improve environmental outcomes in agriculture are explicitly linked to the UK's 25 Year Environment Plan and target of net-zero emissions by 2050.**<sup>26</sup>



## Scotland's Green Recovery: A comprehensive roadmap for agricultural transformation

Scotland recently unveiled plans for a green recovery and updated their planned climate actions to 2032.<sup>27</sup> **Included is a comprehensive roadmap for agricultural transformation to low carbon and sustainable food production, with environmental conditionality.** New farmer support schemes will be developed to incent on-farm emissions reductions, and existing programs, including for low-carbon equipment, will be scaled up. Scotland has identified a number of indicators to assess progress on the plan, and is also expected to develop a specific target for fertiliser emissions reductions in the near future. By 2032, Scotland aims for the entirety of the agriculture sector to have "adopted and be competently using all available low emission technologies throughout the whole sector".<sup>28</sup> **Emissions are expected to decline by at least 25% in the sector from 2020 to 2032.**

## The Netherlands' Clean and Efficient Agro Sectors Covenant: Setting the bar for successful reduction plans

The Netherlands was an early adopter of sustainable agricultural climate policy with the Clean and Efficient Agro Sectors Covenant (2008).<sup>29</sup> **Drafted in collaboration with the private sector, the covenant specified targets for energy consumption and GHG emissions for the period 2008-2020, with significant success in reducing N2O emissions.** Targets were updated in 2019 with the [Climate Act](#) and the [National Climate Agreement](#).<sup>30</sup>

**The Netherlands aims to reduce agricultural GHG emissions by 3.5 MtCO<sub>2</sub>eq by 2030,** through initiatives in livestock farming, improved soil management, reduced deforestation,

25 Ibid.

26 The UK government is also planning to raise the profile of action in agriculture at COP26: "We will use this opportunity to build momentum for the repurposing of agricultural subsidies to protect and enhance our biodiversity and build resilience against climate change across agriculture, land use and food systems. We will do this by creating an international 'coalition of the willing' to 'Build a Just Rural Transition'." (Ibid.)

27 Scottish Government. [2020]. Securing a Green Recovery on a Path to Net Zero: Climate Change Plan 2018-2032 - update. <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

28 p. 187. By 2045, Scotland's goal is: "our agriculture industry will have been transformed into a low emissions, holistic and integrated food production system that has a low environmental impact as well as benefiting nature, restoring biodiversity and contributing to our economy." (p. 189) <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

29 Adelphi & Ecofys. [2018]. The Agrocovenant in the Netherlands. <https://www.euki.de/wp-content/uploads/2018/09/fact-sheet-agrocovenant-nl.pdf>

30 Government of the Netherlands. [2019]. Climate Agreement. <https://www.government.nl/documents/reports/2019/06/28/climate-agreement>



and intensifying the **Greenhouse as a Source of Energy** program. EUR 252 million will be provided to fund measures including precision dairy farming<sup>31</sup>, study of nitrification inhibitors, and fertilizer replacement.<sup>32</sup>



## The United States' Plan for a Clean Energy Revolution and Environmental Justice: A COVID-19 recovery plan that includes sustainable agriculture

**Joe Biden's Plan** calls for a review of regulatory roadblocks for new emissions-reducing agriculture innovations, and for investment in climate-friendly farming, such as conservation programs for cover crops and other practices aimed at naturally restoring soil nitrogen and building soil carbon.<sup>33</sup>

The United States has a number of existing policies that help to incent sustainable on-farm practices (noting that their primary objectives are not emissions reductions). Funding for all major national conservation programs in agriculture is under the Agriculture Improvement Act of 2018.<sup>34</sup> Programs include encouraging grass or tree cover, long-term easements for the restoration and protection of wetlands, and technical and financial assistance for conservation practices and environmental stewardship.<sup>35</sup>



## New Zealand's Zero Carbon Amendment Act: A comprehensive and robust climate plan

Through their **Zero Carbon Amendment Act**, New Zealand has established legally binding mitigation targets for methane emissions<sup>36</sup> from agriculture.<sup>37</sup> It is the only country in the world whose emissions trading scheme (ETS) includes the agriculture, forestry and land use sectors, and the government is also working to develop a groundbreaking pricing system for agricultural emissions by 2025.<sup>38</sup> Emissions reporting from the sector is mandatory (including livestock emissions from 2024).

Although the ETS is New Zealand's primary tool to achieve domestic targets, the country has several innovative programs and policies to incent sustainable on-farm practices. The National Policy Statement for Freshwater Management includes measures to facilitate agricultural emissions reductions, such as incentivizing reduced fertilizer application, and implementing caps on nutrient discharge.<sup>39</sup> The Sustainable Land Management Hill Country Erosion Programme provides funding to regional councils for projects to protect erosion-prone areas,

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31 Adjusting practices in response to continuous data collection to minimize inputs (fertilizer) and maximize milk production and animal health. For more information, see <http://precisiondairy.com/proceedings/s1bewley.pdf>  
[mate-agreement](#)

32 OECD, 2020.

33 Biden for President. [2020]. Plan for a Clean Energy Revolution and Environmental Justice. <https://joebiden.com/climate-plan/>

34 Government of the United States of America. [2018]. Agriculture Improvement Act. <https://www.congress.gov/115/bills/hr2/BILLS-115hr2enr.pdf>

35 Natural Resources Conservation Service. [2020]. Alphabetical List of NRCS Programs and Activities. [https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/?&cid=nrcs143\\_008525](https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/?&cid=nrcs143_008525)

36 This includes a 10% reduction of biogenic methane emissions by 2030 and by at least 24% to 47% by 2050 compared to 2017.

37 Government of New Zealand. [2019]. Climate Change Response [Zero Carbon] Amendment Act. <https://www.legislation.govt.nz/act/public/2019/0061/latest/whole.html#LMS183736>

38 OECD, 2020.

39 The New Zealand government estimates this policy could achieve agricultural emissions reductions of up to 7.3 MtCO<sub>2</sub>e by 2030. Government of New Zealand. [2020a]. Third Biennial Report to the UNFCCC. [https://unfccc.int/sites/default/files/resource/new\\_zealand-br3-1-new\\_zealand\\_third\\_biennial\\_report.pdf](https://unfccc.int/sites/default/files/resource/new_zealand-br3-1-new_zealand_third_biennial_report.pdf)



including development of farm and agroforestry plans, agricultural land retirement, and soil conservation initiatives.<sup>40</sup> The Productive and Sustainable Land Use package provides extension services and technical support tools to assist farmers to improve land use practice. The program also has a carve-out for Maori landowners and agribusinesses.<sup>41</sup>

Beyond these specific programs, New Zealand's approach for agricultural funding has heavily focused on research and development, much of which focuses on increasing adoption of sustainable practices and improving on-farm resilience. For example, the Sustainable Land Management and Climate Change program funds projects on climate change adaptation, while other funds support agricultural greenhouse gas research.<sup>42</sup>

In addition, the One Billion Trees Program provides incentives to farmers to integrate and plant trees on agricultural lands, or retire land to native forest.<sup>43</sup> In response to COVID-19 impacts, New Zealand also allocated USD 750 million in funding to create 11,000 jobs for conservation, including wetland restoration, the revegetation of conservation areas and the protection of riparian zones, many of which are linked to agriculture.<sup>44</sup>

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40 The New Zealand government estimates this policy could sequester 2.3 MtCO<sub>2</sub>eq from 2016 to 2030. (Ibid.)

41 Government of New Zealand. (2020b). Farming funds and programmes. <https://www.mpi.govt.nz/funding-rural-support/farming-funds-and-programmes>

42 Ibid.

43 Government of New Zealand. (2020b). One Billion Trees Programme. <https://www.mpi.govt.nz/forestry/funding-tree-planting-research/one-billion-trees-programme/>

44 Government of New Zealand. (2020c). Summary of Initiatives in the covid-19 response and recovery fund (CRRF) foundational package. <https://budget.govt.nz/budget/pdfs/summary-initiatives/b20-sum-initiatives-crrf.pdf>, 11.



## About Farmers for Climate Solutions

Launched in February 2020, Farmers for Climate Solutions (FCS) is an unprecedented collaboration of Canada's most progressive farming organizations with the ultimate goal to advance climate solutions in agriculture policy. Farmers for Climate Solutions has three main objectives:

- To position farmers as leading voices calling for climate solutions in agriculture
- To build a strong constituency of non-farming Canadians who support their vision
- To engage decision-makers to adopt policies in agriculture that help Canada meet national climate targets.

Farmers are ready to lead but they need support. Farmers for Climate Solutions provides a platform for farmers to share stories about climate impacts and solutions, engage Canadians to support their vision, and advance programs, policies and practices that are good for agriculture, for all people, and for the planet.

**This report was co-authored by leadership from**



International Institute for  
Sustainable Development

**and the FCS Task Force**



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