



Government of Canada
Agriculture and Agri-Food Canada
Sustainable Agriculture Strategy
Via Email: aaafc.sas-sad.aac@agr.gc.ca

March 30, 2023

Re: Sustainable Agriculture Strategy Discussion Document

To Whom it May Concern,

The [Canadian Association of Physicians for the Environment](#) (CAPE) welcomes the opportunity to make this submission in response to Canada's Sustainable Agriculture Strategy [Discussion Document](#). Please accept the following comments and related references.

CAPE is a national physician-led organization working at the intersection of health and the environment. With a record of research and advocacy around evidence-based concerns relating to critical environmental health issues in Canada, CAPE-affiliated physicians and health professionals recognize there are important intersections and considerations for human and environmental health, and justice in the development of a sustainable agriculture strategy (SAS).

We intended to participate in the SAS survey. However, the survey did not provide adequate space for feedback about aspects of “environmental performance” other than climate change. As well, it does not consider the connections to human health. We are making this submission to articulate these connections, our concerns that they are not included, and some recommendations for how the SAS can bring human health considerations into the process.

Given CAPE’s particular interests and advocacy at the intersections of human health, environment and justice through a planetary health lens, and our core activities and strategic priorities outlined in our [Strategic Plan](#) — wellbeing economy, toxics reductions, climate crisis and equity and justice — we encourage the SAS to incorporate our recommendations herein.

We note that with regard to the questions in the discussion document, our comments speak mainly to qualitative considerations around:

- *Making the sector more resilient*
- *Supporting biodiversity*
- *Improving soil health*

and to the final question:

- *Do you have any other ideas, comments, feedback or suggestions to share on a Sustainable Agriculture Strategy?*

We have organized our response around three main themes or topic areas: 1) food/food systems, 2) toxics, and 3) justice — all through a planetary health lens. For the purpose of clarity, an explanation of the term *planetary health* and how we apply it follows.

The Rockefeller Foundation–Lancet Commission on Planetary Health¹ report defines planetary health as “the achievement of the highest attainable standard of health, wellbeing, and equity worldwide through judicious attention to the human systems—political, economic, and social—that shape the future of humanity and the Earth's natural systems that define the safe environmental limits within which humanity can flourish.” More simply, planetary health is “the interdependent vitality of all natural and anthropogenic ecosystems² or “the health of human civilization and the state of the natural systems on which it depends.”³ This understanding of the interconnectedness of the planet and health is fundamental to our approach here and informs a perspective that sees systemic changes as necessary.

In addition to the planetary health framework, we assert some fundamental principles that should also guide the development of the strategy:

- The precautionary principle
- Primary prevention
- Public health
- Environmental sustainability
- Social Justice

Food/Food Systems

Nutrition is a fundamental component of human health—a sustainable agriculture strategy needs to consider how different modes of agriculture impact human health both through direct consumption and indirectly through impacts on planetary health.

Our concerns regarding direct impacts are that conventional agriculture practices—which rely heavily on monocropping, soil disturbance, artificial inputs, and livestock production—pose health risks because they sacrifice the nutrient content and also pose significant health risks by applying levels of pesticides unsafe for human consumption.

Since the 1960's there has been a marked simplification of global agricultural production which has been increasingly concentrated on producing a select few, energy-dense, commodity crops.⁴ Relying on so few crops poses several risks. The simplification and specialization of agricultural production presents food security risks if global supply chains are significantly disrupted. It also creates a food system in which diets are less diverse and include more processed foods. Such dietary changes are of concern to us and they are associated with noncommunicable diseases, including adult-onset diabetes, heart disease, and certain types of cancer.⁵

¹ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60901-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60901-1/fulltext)

² The Canmore Declaration: inVIVO Statement of Principles for Planetary Health. Accessed February 24, 2022 at: <https://www.invivoplanet.com/about-us.html>

³ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)61038-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)61038-8/fulltext)

⁴ <https://www.pnas.org/doi/pdf/10.1073/pnas.1313490111>

⁵ <https://www.pnas.org/doi/pdf/10.1073/pnas.1313490111>

The simplification of crop output coincides with a marked decrease in the nutritional content of our food.⁶ While the precise impacts on human health are difficult to isolate and clearly delineate, it's becoming clear that regenerative agricultural practices show the opposite trend. They enhance the nutritional profiles of both crops and livestock due to their capacity to improve soil health.⁷ Uncertainty aside, this issue warrants greater attention—particularly as this strategy includes providing nutritious food as one of its aims

In addition to accounting for the ways our current agricultural systems impact human health, we are also particularly sensitive to the ways they impact the planet. As it stands, global agriculture is pushing several of our ecological systems past their planetary boundaries, which define the safe operating limits for nine different ecological systems that we depend on. It is estimated that as much as 48.6% of global agriculture is operating beyond planetary boundaries in regards to biosphere integrity, land-use systems change, freshwater use, and nitrogen flows.⁸ For context, three of these four systems are considered more stressed—meaning they are further outside their safe operating space—than the boundary for climate change.

This underscores the need to define the true boundaries of our natural systems and create sustainable food systems that operate within those boundaries. On a global level, this will require nothing less than a “u-turn” and radical rethinking of how we practice agriculture. We believe this kind of transformative change also applies to Canada — the first step is defining environmental performance based on ecological principles.

Recommendation: Create environmental performance indicators that reflect the capacity of ecological systems to sustain themselves; Set performance goals that work within these ecological boundaries rather than ones that merely improve performance ; Add a principle to be focused on the health of people eating the food our agricultural system produces.

Toxics

The climate emergency and other related ecological crises escalation represent existential threats. Governments must dramatically reduce CO2 and greenhouse gas emissions⁹ through integrated policy measures. Chemical pollution, including from pesticides, has crossed a “planetary health boundary”¹⁰ — the limits of nature to support human activity. Pesticides can negatively impact soil biodiversity, including reducing its carbon storage and sequestration abilities¹¹. The planning of future strategies in Canada cannot ignore these facts, nor can the development of the SAS.

We are concerned that in the section on pesticides the framing is largely positive. It omits human health concerns and the documented and suspected adverse health outcomes associated with the toxic effects

⁶https://www.chelationmedicalcenter.com/%21_articles/Changes%20in%20USDA%20Food%20Composition%20Data%20for%2043%20Garden%201950%20to%201999.pdf

⁷ <https://peerj.com/articles/12848/>

⁸https://sim4nexus.eu/userfiles/Gerten_et_al.%20-%202020%20-%20feeding%20ten%20billion%20people%20is%20possible%20with%20four.pdf

⁹ https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Headline_Statements.pdf

¹⁰ <https://pubs.acs.org/doi/10.1021/acs.est.1c04158>

¹¹ <https://www.frontiersin.org/articles/10.3389/fenvs.2021.643847/full>

of pesticide use.

There is strong evidence for the harmful effects of pesticide use on human and environmental health.

- Families of farmers who used the herbicide glyphosate experienced increased miscarriages and premature births.¹²
- Research in the agricultural area of Essex and Kent counties in Ontario found that breast cancer risk was elevated among women who ever lived or worked on farms.¹³
- Pesticides have been detected in the bodies of pregnant people, in amniotic fluid, in the umbilical cord, and in breastmilk.¹⁴
- Pesticides were found in 98.7% of children tested in Quebec.¹⁵
- The long-ago banned DDT and its metabolites are still detectable in the breast milk of Inuit people in the North.¹⁶
- Associations are found between exposure to pesticides and cancers, reproductive problems, non-Hodgkin lymphoma¹⁷, Parkinson's disease¹⁸, and more.

The many effective and safe alternative products and nature-based solutions for the control of pests are largely overlooked despite the benefit of their use without adverse outcomes of human, animal, and ecosystem health. Harm prevention through human and environmental protection should guide action on toxics within the SAS.

The SAS Discussion Document contains very little explicit language on human health. While soil health and the mental health of farmers are noted — and we agree these are of great importance and interconnected — we suggest a greater emphasis on and inclusion of human health considerations, including toxic exposures, in the strategy development. We suggest future work on SAS must include human health. If we include human health, the strategy must present more transformative changes rather than changes that only mitigate present harms.

From a planetary health perspective, not only would pesticide reduction lead to better human health outcomes, it would also support sustainable agriculture. The health co-benefits of pesticides reduction as a component of the SAS would be less toxic, more nutritious foods, and greater soil health.

Recommendation: Include explicit reference to human health considerations, including a commitment to pesticides reduction, in keeping with the COP15 Convention on Biological Diversity Target 7 to reduce risks from hazardous chemicals by 50%, and in consultation with Health Canada and the PMRA in their Transformation Agenda underway and future review of the PCPA, and with ECCC in any related and relevant law, regulations or policy that may intersect with SAS components.

¹² <https://docs.iza.org/dp12164.pdf>

¹³ <https://pubmed.ncbi.nlm.nih.gov/23164221/>

¹⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4626367/>

¹⁵ <https://www.inspq.qc.ca/pdf/publications/319-CharacterisationPesticidesEnfants.pdf>

¹⁶ <https://www.osti.gov/biblio/6614926-high-levels-pcbs-breast-milk-inuit-women-from-arctic-quebec>

¹⁷ <https://pubmed.ncbi.nlm.nih.gov/11464396/>

¹⁸ <https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fj.201700759RR>

Justice

No discussion of sustainable agriculture can occur without a recognition of the need for justice - including more specifically, environmental justice.

The U.S. Environmental Protection Agency defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."¹⁹ Canada is making strides towards environmental justice in a number of ways, bringing it into line with the 2022 UN General Assembly declaration²⁰ that a healthy environment is a human right. The right to a healthy environment is poised to be recognized for the first time in Canadian federal law under Bill S-5²¹ and the passage of Bill C-226²² will be the first step in a national legal strategy to address environmental racism and environmental injustice in Canada.

A concerted framework for environmental justice is necessary to address the climate crisis, toxic exposures, environmental racism, gaps in the protection of Indigenous peoples, health inequalities and social determinants of health²³ and likewise a sustainable agriculture strategy.

Planetary health and sustainability are dependent on several interconnected determinants, including Indigenous People's level determinants — Indigenous land tenure rights, Indigenous languages, Indigenous Peoples' health, Indigenous Elders and children²⁴. Indigenous voices are critical to the development of solutions to address planetary health with their recognition of the fundamental nature of interconnectedness the earth and all things living on it.

The Government of Canada's commitments for reconciliation with Indigenous Peoples must be applied, in particular #6 of the *Principles Guiding the Government of Canada's relationship with Indigenous Peoples*, which states that: "The Government of Canada recognizes that meaningful engagement with Indigenous Peoples aims to secure their free, prior, and informed consent when Canada proposes to take actions which impact them and their rights, including their lands, territories and resources."²⁵

The SAS Discussion Document states: "A sustainable agriculture sector in Canada means that Canada's food system is resilient and innovative, sustains our environment and supports our economy, and all people in Canada are able to access a sufficient amount of safe, nutritious, and culturally diverse food, as indicated in the vision of a Food Policy for Canada." The impact of pesticides on "country foods" must be included in the SAS as well as consideration of Indigenous People harvesting and living on land and in light of self-determination and consent to any strategies that affect their lands.

The 17 Principles of Environmental Justice²⁶ first outlined by Delegates to the First National People of

¹⁹ <https://www.epa.gov/environmentaljustice>

²⁰ <https://news.un.org/en/story/2022/07/1123482>

²¹ <https://www.parl.ca/legisinfo/en/bill/44-1/s-5>

²² <https://www.parl.ca/DocumentViewer/en/44-1/bill/C-226/first-reading>

²³ https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

²⁴ [https://www.thelancet.com/journals/lanph/article/PIIS2542-5196\(21\)00354-5/fulltext](https://www.thelancet.com/journals/lanph/article/PIIS2542-5196(21)00354-5/fulltext)

²⁵ <https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html>

²⁶ <https://www.ejnet.org/ej/principles.html>



Color Environmental Leadership Summit held in 1991 in Washington DC, U.S. has served as a defining document in the movement for environmental justice. Some of the key principles are critical to an SAS as well.

Recommendation: Apply a lens of justice, with consideration of the right to a healthy environment, and the principles of environmental justice, including Indigenous-led solutions in the development of the SAS.

We commend the government for its actions to develop a sustainable agriculture strategy leading to improved environmental and human health protection.

We recommend addressing weaknesses and gaps in the discussion document as outlined above. We support all measures that address the current scientific and other forms of evidence that will address ecological hazards related to current agricultural practices and approaches in Canada.

CAPE is pleased to answer any questions you may have about this comment and support the government in its actions for improved environmental health.

Sincerely,

Dr. Anjali Helferty, Ph.D.
Executive Director