MEETING CAPITAL MARKET NEEDS FOR ESG REPORTING

A RESEARCH PROJECT OF THE NATIONAL INDEX ON AGRI-FOOD PERFORMANCE (PART 4)

Project 6: ESG (Environment, Social and & Governance) Factors

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Executive Summary

This paper assesses how global capital markets' considerations around environmental, social and governance (ESG) factors relate to the development of the emerging *National Index on Agri-Food Performance* (Index), Canada's first agri-food sustainability index.[1]

Today, ESG factors are important in driving access to capital and shaping related policy developments. In capital markets' parlance, the Index could be referred to a national ESG benchmark. Once operational, the Index is expected to provide a picture of ESG factors for the Canadian agri-food industry at a point in time. This could play a potentially useful contextual role for financial intermediaries but there are limitations. This paper considers ESG at the intersection of capital markets and the agri-food sector.

ESG is the subset of sustainability that is relevant to capital providers and companies. Sustainability involves meeting the needs of the present without compromising the ability to continue to do so in future.[2] ESG is used by capital markets to assess the materiality of risks to the status quo and the impacts of these on the attractiveness of investment opportunities, and financial return expectations.

An important prospective role of the Index could be to guide agri-food sub-sectors, companies and producers to undertake ESG "materiality mapping". That is, they could use this list as a starting point to decide which indicators are material risks (or opportunities) to their respective situation and use this for reporting purposes. While the Index remains in development, it is expected to provide a comprehensive list of indicators that clearly align with ESG factors. This could be of increasing interest to capital providers, such as banks or investors. They are assessing ESG factors to help inform credit and investment risk analyses. However, there are limitations. Only certain aspects may be deemed to be material to both agri-food and capital markets. As well, the Index aims to report on consolidated results for the agri-food sector and nationally. It is not reporting on individual farm or firm-level performance. The Index can, therefore, not be used to assess individual credit or investment decisions.

At a high level, the broad trends and insights offered by the Index could inform how the financial sector considers systemic or macro risks and opportunities facing the Canadian agri-food sector. Capital allocators typically welcome ESG reporting that relates to a framework such as what the Index may offer. In addition, providing national information on matters for which, to date, has not be pulled together in one place or reports on items that has not be easily retrievable or available provides greater transparency. It is also possible that agri-food organizations or sub-sectors might report on how they align with the Index. Using the Index as such a reference benchmark could provide capital providers with additional insights relevant to ESG matters. Even if such information is not used directly in financial calculations, it may still influence how investors consider material trends shaping the sector and be used as context to help inform investment decisions.

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[1] It is recognized by the author that this analysis has been undertaken concurrently to the Index being developed or made operational.

[2] https://eur-lex.europa.eu/summary/glossary/sustainable_development.html

The summary of these and other matters is presented in the table, below. It outlines key global ESG trends, its likely relevance to the agri-food sector, and prospective implications for the Index.

Global ESG assessments for investors / capital markets	Prospective implications for Canada's agri-food sector	Links to Canada's emerging agri-food sustainability index
1. ESG is now mainstream in capital markets: ESG disclosure is important in attracting funding **ESG disclosures face major data gaps and limitations**	Firm/farm organizations are expected to increase interest in reporting ESG metrics Granularity of metrics (on farms or firms) is the most relevant to capital markets	The Index presents a comprehensive view of ESG factors and a benchmark/point of comparison at a high level Over time, the Index could address data gaps and improve benchmarking on ESG priorities on a macro basis
2. Major capital markets sectors (such as banks and pension funds) are assessing climate and other financially material ESG information in decision-making	Credit allocations and investors decisions are weighing systemic risks that can undermine farm, company and industry prospects Well-managed ESG factors can lower costs and enhance profits	Index is a frame of reference for companies/supply chains about how to select ESG factors for reporting and capital raising purposes Index increases transparency by showing progress on systemic risks facing the sector
3. Capital markets want better and comparable reporting **ESG reporting is being standardized to increase comparability** **The call for mandatory sustainability reporting is increasing**	Sector could look for guidance on what to report so to increase transparency and prepare for possible mandatory transparency requirements Demonstrating climate/ESG leadership through transparency could enhance Canada's reputation and help build capital markets' trust	Index presents a non-prescriptive framework to report on agri-food sustainability but not proprietary metrics at the company/farm level. While a limitation, the Index could align the sector on the reporting priorities A credible reporting framework mitigates against perception of greenwashing
4. ESG is emphasizing metrics that are outcome-oriented	Firms that can present measurable outcomes can help to attract investment and government funding Credible metrics can enable sector to align with evolving capital and policy requirements	By profiling material ESG factors, Index may encourage adoption of best practices Index is expected to emphasize outcomes-based metrics, data permitting, a key to minimize greenwashing potential
5. The "E" in ESG dominates as governments look to climate risk disclosures to meet global goals **ESG is being driven by climate change risk disclosures and transition to a low-carbon economy**	ESG will increase scrutiny of agri-food supply chains' (incl. farmers') emissions and environmental impacts Capital is expected to flow to firms that show GHG emissions reductions	The Index devotes substantive space to this preeminent issue and other environmental impacts of food production thereby boosting transparency overall for a priority ESG issue

6. ESG is evolving as investors find ways to value non-financial factors including social factors – the "S" in ESG.	Sector will likely evolve in its determination of reporting materiality as the sector and investors assign value to such non-financial priorities and as data on these matters improve	Index aims to report on a variety of social and environmental factors that so far have not been financially measurable Still, reporting on such non-financial factors may attract ethical/values-based investors to agri-food opportunities Index is designed to evolve which may allow this tool to improve reporting on these priorities at a high level as they are assigned increasing importance by capital markets and as data improves

This paper addresses the importance, relevance and materiality of ESG for the Canadian context and benchmarking sustainability in turn:

Importance of ESG:

1. **ESG is significantly influencing capital markets**

    Addressing sustainability is prompting major commitments from governments and companies. An example is the trend to pledging net-zero greenhouse gas (GHG) emissions by 2050. More than 120 countries including Canada have committed to achieving net-zero GHG emissions by 2050[3] and such pledges by Canadian organizations and commodities are becoming more common.[4] In 2021, global financial firms announced USD $130 trillion of commitments to enable the low-carbon transition.[5]

    Given this focus, ESG is increasingly shaping capital-market decisions and capital flows. ESG's significant impact on public equity and debt can be directly measured by the substantial shift into ESG-influenced financial products. For instance, global sustainable funds were up almost 200% in Q3, 2021 reaching USD $3.9 trillion.[6]

2. **ESG reporting is being standardized and is outcomes-focused**

    a. There is tremendous pressure from investors to make ESG reporting outcome focused to track progress against stated goals with comparable reporting on metrics in standardized frameworks. For instance, the CEOs of the eight largest Canadian pension funds recently called on companies to adopt leading, standardized and outcome-oriented reporting formats for ESG reporting.[7] Specifically, they encouraged disclosures to adhere to the *Sustainability Accounting Standards Board* (SASB) standardized and metric-focused ESG formats based on industry classifications (see Appendix for details of SASB reporting standards for agri-foods sub-sectors).

    To increase comparability, voluntary ESG reporting is moving to fewer industry-agnostic standards that industry-specific reporting can feed into. For example, the establishment of the *International Sustainability Standards Board (*ISSB*)* will merge SASB with two climate-change reporting standards into one reporting standard. The streamlining of reporting standards is one of the most significant developments in

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[3] https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html
[4] https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050/advisory-body.html
[5] https://www.washingtonpost.com/us-policy/2021/11/03/climate-glasgow-bloomberg-carney/
[6] https://www.morningstar.co.uk/uk/news/216474/sustainable-assets-are-teetering-on-the-%244-trillion-mark.aspx The estimates on the size of ESG assets range from several trillion to $100 trillion.
[7] https://www.newswire.ca/news-releases/ceos-of-eight-leading-canadian-pension-plan-investment-managers-call-on-companies-and-investors-to-help-drive-sustainable-and-inclusive-economic-growth-844608554.html

capital market reporting in decades as it will develop a global baseline of outcome focused ESG disclosures.[8]

b. Climate change disclosures dominate ESG reporting. The leading climate-change reporting standard, the *Task Force on Climate-related Financial Disclosures* (TCFD) reporting format is one of the two other standards being merged into ISSB. This global body will further encourage the use of climate-related financial information and will support the widespread adoption of standards on how companies disclose current GHG emissions as well as the risks and opportunities posed by climate change on their financial position.

c. The *Financial Stability Board* (which monitors the health of the global financial system) determined that climate change is a critical ESG factor, as climate-related impacts could shock the financial system.[9] Subsequently, global bank regulators created the *Central Banks' and Supervisors' Network for Greening the Financial System* to strengthen international progress on the Paris Agreement.[10] Since climate change risks and opportunities are quantifiable, these financial authorities include them in their monitoring.[11] In addition, the federal government's focus on climate change in the financial arena is translating into action. For instance, the Department of Finance set up the *Sustainable Finance Action Council* and is pressing forward to improve climate disclosures in this country.[12]

d. Environmental factors may dominate ESG, but the "S" factor (social) is attracting more attention. Ongoing income inequality, worker health and safety, and the broader rise in social equity issues globally has resulted in capital markets holding companies to higher social standards.[13]

3. ESG information is driving investor demand

ESG reporting formats are driving responsible investing. Investors are benefitting from improvements in ESG transparency through the increasing availability of ESG data, particularly ESG rating scores of public companies. This supports better evaluation of investment risks and direct capital to public companies who measure and adapt their strategies to respond to the risks and to take advantage of opportunities. There is mounting research supporting the thesis

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[8] https://www.ey.com/en_ph/public-policy/what-to-watch-as-global-esg-reporting-standards-take-shape.

[9] Financial Stability Board https://www.fsb.org/2020/11/the-implications-of-climate-change-for-financial-stability/

[10] https://www.bankofcanada.ca/2019/03/bank-canada-joins-central-banks-supervisors-network/

[11] Financial Stability Board https://www.fsb.org/2020/07/stocktake-of-financial-authorities-experience-in-including-physical-and-transition-climate-risks-as-part-of-their-financial-stability-monitoring/

[12] https://www.canada.ca/en/department-finance/news/2021/05/canada-launches-sustainable-finance-action-council.html

[13] https://www.spglobal.com/esg/insights/the-importance-of-demystifying-measuring-the-s-in-esg

that ESG helps to drive investment outperformance over the long term.[14] This evidence is pushing up demand for ESG-linked investments.

However, despite these improvements, most investors are still unsatisfied with quality and breadth of ESG factors for which there is publicly available data. For instance, one study showed that although a variety of funds were all labelled as ESG investments, within the group the GHG reductions ranged from less than 7% to more than 58%.[15] The lack of available ESG data led almost half of the respondents in a 2021 survey of more than 1,000 investors across 16 countries to say it is 'holding back' their organization's further adoption of ESG'.[16]

4. Significance of ESG to Canada's capital markets

While ESG's specific relevance to Canada's agri-food sector is addressed further below, the growth and prevalence of ESG reporting has important ramifications for all financial players:

a. **Chartered banks:** Canada's banks have made financial commitments in the hundreds of billions to support environmentally sustainable finance activities.[17] ESG factors are driving access to credit. For example, banks now offer low-interest loans to their largest borrowers tied to sustainability performance.[18] Being signatories to the Net-Zero Banking Alliance, Canada's banks are assessing their entire portfolios against climate-related exposures.[19] They want to understand how their borrowers can contribute to the low-carbon transition as banks are expected to demonstrate with their regulators (and shareholders) how they are supporting this shift. This has implications for all borrowers who are not undertaking their own climate risk assessments.

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[14] https://www.institutionalinvestor.com/article/b1r9gb5p9k10b4/Here-s-More-Evidence-That-ESG-Funds-Outperformed-During-the-Pandemic

[15] https://www.dimensional.com/us-en/insights/beyond-the-label-esg-funds-may-miss-their-mark.

[16] https://www.irmagazine.com *Lack of robust data biggest barrier to greater ESG adoption, shows new survey.* Oct 21, 2022. This article is just one example of widespread commentary in capital markets studies, white papers and articles about ESG data gaps or the need for more data on ESG factors

[17] https://cba.ca/banks-in-canada-committed-to-a-net-zero-economy-by-2050

[18] Maple Leaf Foods became the first Canadian company to receive "sustainability-linked" credit terms (reduced interest rate) because its key sustainability targets were met. Bunge secured favourable credit terms linked to sustainability targets tied to GHG emission reductions, increasing traceability for key agricultural commodities and enhancing sustainable practices in soybean and palm supply chains. Bunge's interest rate is tied to the performance of five sustainability performance targets that highlight and measure Bunge's continued advancement of its sustainability initiatives across the following three areas: 1) reducing GHG emissions by improving industrial efficiency; 2) increasing traceability for main agricultural commodities; and 3) supporting increasing levels of adoption of sustainable practices across the wider soybean and palm supply chain. (Maple Leaf Foods Secures First Sustainability-Linked Credit Facility in Canada, Press Release, Dec. 11, 2019; Bunge Limited Closes its First Sustainability-Linked Revolving Credit Facility, Press Release, Dec. 16, 2019)

[19] https://www.unepfi.org/net-zero-banking/members/

b. **Institutional investors:** Asset owners, such as pension funds and insurers, are looking to ESG reporting to assess climate and other risks.[20] Consistent with pension funds' need for capital growth, they are actively seeking out ESG-focused opportunities such as climate-positive investment in renewable energy.

c. **Crown corporations:** Government financial institutions are expected to report on their ESG commitments. The 2021 Canadian federal budget requires Crown corporations to adopt the TCFD requirements and, for those with $1+ billion in assets, to report on climate-related financial risks in 2022.[21] TCFD reporting will require assessing climate risks embedded in loan portfolios.[22]

d. **Provincial agencies:** With ESG's use becoming pervasive in global capital markets, provincial capital market regulators and agriculture-focused financial agencies and boards will likely increase their use of ESG information in decision-making processes.

e. **Individual Investors:** More individual investors are making personal investments based on value judgements when assessing companies' ESG credentials. These investors will benefit from greater information and transparency about sector and sub-sector sustainability impacts, especially non-financial issues that they value.

[20] https://www.eiopa.europa.eu/browse/sustainable-finance_en
[21] https://manifestclimate.com/blog/tcfd-reporting-requirements-canada/
[22] For lenders, TCFD requires reporting of all climate-related risks in their investments so it will eventually impact credit decisions.

Relevance of ESG:

1. **The Index is not expected to be used to directly assess a company's ESG performance**

   Investors require detailed firm-level ESG performance metrics to make decisions. The Index does not disaggregate metrics by producer or at the company level, nor does it score individual performance.[23] From this standpoint, investors are unlikely to rely on this Index to assess individual companies.

2. **Capital markets can nevertheless benefit from the Index**

   a. The Index **is** a benchmark representing a *consolidated* assessment of Canada's agri-food sustainability performance. As global ESG reporting becomes more standardized, the Index's role of presenting such a consolidated view of the agri-food sector's ESG performance could become advantageous. Specifically, for the first time, the Index presents a list of categories of sustainability issues that can determine risk materiality. The Index is expected to identify detailed and relevant criteria for Canadian agri-food organizations to consider reporting on to the marketplace, including for capital markets. In short, the Index is setting out to do what global ESG reporting bodies seek to achieve. How Canada might leverage this opportunity in terms of national branding, improving market access for its food products, or attracting investment, has yet to be determined.

   b. The Index aims to create a common benchmark that can simultaneously bridge disclosure expectations sought by governments and capital markets alike. Governments may not explicitly embrace ESG as a policy tool, but Canada is committed to meeting the global net-zero GHG emissions goal and the *UN Sustainable Development Goals* (SDGs), among other global commitments. Governments worldwide (and in Canada's case, associated Crown agencies) are investing in the agri-food sector to speed the transition to a low-carbon economy and are introducing policies and programs to enable this shift. They also expect agri-food companies to disclose their progress and to be accountable. To a certain degree, Index metrics that satisfy government reporting on sustainability goals are generally consistent with capital markets' ESG information needs.

   c. A high-level benchmark can link to sustainability priorities (as noted above) but greater granularity of performance metrics would need to be broken down by sub-sector and in detail (e.g., producers, food retailing companies, etc.) to enhance the Index's relevance to capital markets. Still, the approach being taken by the Index could help the sector align with global ESG reporting formats (such as the new *International*

[23] The National Index is expected to evolve and report on disaggregated metrics over time, such as on a provincial basis and likely by consolidated sub-sector reporting, data-permitting.

Sustainability Standards Board, ISSB) which can, in turn, inform investors.[24] It is expected there will be some overlap between Index factors and the metrics that go into ISSB reporting as one example (refer to Appendix). Such convergence (at least at a high level) may prompt companies to align their disclosure priorities with the Index.

d. At a high level, the Index will essentially benchmark ESG factors across supply chains, from the inputs sector to production and then to processing and retail. Investors also need to consider ESG risk from a supply chain perspective. For instance, a group of businesses may be exposed to potential production disruptions due to social factors elsewhere (e.g., a food company could be affected by an ingredient supplier's loss of labour productivity due to adverse working conditions). The Index could spur companies to step-up their respective and proprietary against priority categories reporting both up- and down-stream.

3. Capital markets want outcome-oriented and comparable metrics

a. Some standardized ESG reporting is being regulated (mandated). To ensure integrity of claims, the European Union introduced the *Sustainable Finance Disclosure Regulation* in 2021. It will require proof of ESG in asset management.[25] Climate change disclosures are now mandatory in New Zealand.[26] North America is starting to follow suit:

- **i.** The Canadian Securities Administrators' have proposed a requirement for climate-related disclosures by public companies (which is largely in-line with the TCFD's guidance);[27] and
- **ii.** The U.S. Securities and Exchange Commission is expected to announce (in early 2022) mandatory climate-related public company reporting.[28]

Therefore, the Index could help Canada's agri-food sector to be ready for a marketplace that is moving towards more standardized disclosures. The development of four proposed sustainability blocks in the Index, the narratives and context for their inclusion and the detail on sub-indicators and metrics are some of the key design elements which could enable Canada's agri-food sector to adapt this work for a changing marketplace.

b. While a certain degree of standardization is occurring in the capital markets, rating agencies (such as MSCI in equity markets and Moody's in public debt markets) will retain their own proprietary assessment models. At this point, it is difficult to know

[24] See 2a in Importance section for more information on ISSB.
[25] https://www.morningstar.co.uk/uk/news/213385/will-the-sfdr-prevent-greenwashing.aspx
[26] https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/mandatory-climate-related-financial-disclosures/
[27] https://www.securities-administrators.ca/news/canadian-securities-regulators-seek-comment-on-climate-related-disclosure-requirements/
[28] https://www.complianceweek.com/risk-management/tcfd-recommendations-more-than-building-block-for-sec-climate-disclosure-rules/31175.article

exactly how publicly available metrics (such as those provided by the Index) will be used by such entities.[29] There may be an opportunity for agri-food companies to benchmark themselves against the Index in their ESG disclosures, and this information could be considered in establishing company ratings.

c. Investment fiduciaries[30] have a legal requirement to use financially-material information in making investment decisions. As a result of a Supreme Court of Canada decision on GHGs, the financial materiality of climate change has been legally established, putting an even greater onus on many capital market decision-makers to pay attention to climate-related information.[31] A variety of sources of relevant climate-related metrics could be increasingly sought after by fiduciaries to better understand system-level risks. This might help inform the context in which individual companies are assessed, including their how value chains benchmark ESG.

[29] https://hbswk.hbs.edu/item/what-does-an-esg-score-really-say-about-a-company
[30] Anyone who is legally responsible for managing someone else's money such as a public company board or a pension fund.
[31] https://ccli.ubc.ca/wp-content/uploads/2021/05/Bauslaugh-Pension-Opinion-1.pdf

Materiality of ESG:

As a benchmark and as a proxy, the Index might offer tangible benefits:

1. **Demonstrate progress toward meeting government goals pertinent to capital markets**

   a. **Climate and net-zero GHG targets**
   The Index is not designed to show the agri-food sector's specific pathway to achieve net-zero GHG emissions, but it is expected to address many financially material metrics that are associated with decarbonization efforts, such as mitigating and measuring emissions, and improving carbon sequestration. As government policies and programs use economic levers, such as carbon taxes, to steer capital to support the transition to a low-carbon economy, capital markets will expect to see credible metrics on the progress being made to meet such objectives. The Index has the potential to align such reporting disclosures across the agri-food sector because it sets out an array of relevant and inter-connected indicators.

   Measuring climate change impacts, trends and progress, for instance, not only involves tracking GHGs, but it also includes better understanding the role carbon plays in soil health, and its relationship to biodiversity, land use practices, fertilizer, and water impacts, all issues that are expected to be addressed in the Index. The holistic approach being taken by the Index therefore presents a comprehensive approach which may help inform how supply chains and capital markets assess risks and opportunities as part of a system-wide view of issues.

   b. **Government capital sources**
   Government agencies and Crown corporations that provide credit and other financial services to the agri-food sector can be expected to increasingly assess financially material climate-related or other ESG metrics. This will enable governments to account for their policy (and funding) actions in support of key global goals (e.g., net zero targets, SDGs). New Zealand Crown agencies have been asked to do so.[32] While it is beyond the scope of this paper to speculate, this could have implications for future credit allocations. Canadian Crown Corporations could start requiring more significant ESG reporting requirements from customers. The Index might inform how Crown agencies consider the breadth of ESG issues facing the sector and decide what may be relevant priorities to address.

2. **The Index could help to increase capital allocations to the agri-food sector**

   a. **Traditional capital sources incorporating ESG**

[32] https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/mandatory-climate-related-financial-disclosures/

i. Financially-material ESG information from the Index may be gleaned by investors on agri-food sub-sectors and contribute to portfolio allocation decisions. For instance, given that most of the emissions and water footprints of food companies rest within their supply chains,[33] then how ingredient or commodity suppliers manage those risks could shape the risk profile of the companies more directly. This could help shift stock portfolios by allocating an increasing portion to this stock market sub-sector (known as Consumer Staples).

ii. Index metrics could inform at a general level public market equity and debt ESG ratings observations about the sector. S&P Global Ratings, Moody's Investor Services and Finch Ratings are the largest three global ratings agencies. S&P Global notes that ESG can be used to provide "additional context" for risk assessments which "could contribute to a rating action".[34] It is to be determined if the Index could play any role in influencing such considerations. However, non-financial metrics presented in the Index could offer a supplementary source of credible information on the food system in which agri-food companies operate which may be picked up by their respective ESG reporting. As mentioned earlier, this may be of interest to such rating entities.[35]

iii. Private markets invest in companies or in farms either via private loans or direct equity investments. The transparency afforded by the Index on ESG in the agri-food sector and, in a limited way across sub-sectors for some indicators, should provide a frame of reference to help private market players assess system-wide risk. This could help increase confidence among private market decision-makers as they consider such risks. This transparency could enable positive impressions of the ESG context in which firms and farms operate and lead to increased private agri-food investment.

iv. Certain "mission-driven" or "impact" investors, such as foundations and endowments and boutique financial advisors, make investment decisions based on values. Social equity or environmental-driven investors could be conceivably interested in the insights presented in the Index, such as on metrics to enhance opportunities for underrepresented employees or to protect biodiversity. Such a frame of reference may encourage these investors to invest in firms and farms that demonstrate responsible practices as synced with national sustainability reporting.

[33] Scope 3 emissions make up an average of 89% of food and beverage companies' total emissions. *Smarter metrics in climate change and agriculture*, WBCSD, March 2020. For General Mills, 85% of its water footprint is found in its agricultural supply chains; 2018 Global Responsibility Report.
[34] https://www.spglobal.com/ratings/en/products-benefits/products/esg-in-credit-ratings
[35] https://mitsloan.mit.edu/ideas-made-to-matter/why-sustainable-business-needs-better-esg-ratings

b. New sources of capital driven by ESG

i. Green finance is growing rapidly. In 2021, global green bond issuance marked some USD $500 billion, up 68% over 2020. In 2022, this is expected to double to USD $1 trillion.[36] There are few statistics on green credit, including sustainability-linked loans. While outstanding green loans are currently relatively small compared to green bonds, the green loan market is growing even faster.[37]

The intent of the Index may impact green finance in two ways. First, accessing these financial instruments requires ESG verification. As noted earlier, while the Index does not report on an individual company's metrics (nor validate firm-level performance), the Index is expected to present a breadth of priority sustainability metrics for more fulsome disclosures. This may guide companies to consider sustainability themes of interest to report against on a proprietary basis to satisfy green criteria. Second, green bonds may be issued to support projects focused on diversity, equity and inclusion, biodiversity and other Index factors that currently have no financial valuation. If Index metrics help to measure the benefits from these investments, this may be a support step toward capital marketing according a "value" to these factors.

ii. Although nascent, the sale of carbon credits, also called carbon offsets, is creating new revenue opportunities for agriculture in general including outside of Canada. It is too early to say if the Index will have any meaningful role in this arena (the case has not been made in the current phase of work on the potential benefit of the Index to carbon credits). That said, as the push to net zero emissions intensifies, there will be likely increasing interest among investors in soil sequestration metrics, a matter that is likely to be measured at a high level in the Index.

3. Agri-food can demonstrate risks and opportunities

a. Individual equity investments

While the Index focuses on risks and impacts, it is also including leading indicators of change. This includes adopting new technologies and innovation to improve competitiveness and sustainability outcomes. One challenge is the lack of data to reveal the extent of these positive developments. ESG is not only risk- emphasis. It can also be a lens to identify opportunities. As the Index matures over time, better insights on new technologies and innovation-adoption may help inform growth-seeking equity investors. They seek out farms and firms that adopt new technologies and practices, including

[36] https://www.reuters.com/business/sustainable-business/global-green-bond-issuance-could-pass-1-trln-next-year-survey-says-2021-10-28/

[37] https://www.worldbank.org/en/news/feature/2021/10/04/what-you-need-to-know-about-green-loans

precision and innovative agriculture practices, and embrace biomass energy production. These examples promise to increase efficiencies and/or generate new sources of revenue. In addition, food producers and companies are expected to adopt advanced technologies to reduce the risks posed by the transition to a low carbon economy. Over time, the outcomes of these developments should demonstrate how the sector can remain an attractive sector to invest in and offer investors with a valuable benchmark by which to judge broader changes afoot within the sector. However, as noted earlier, Index information is too high-level in nature to assess the attractiveness of an actual investment.

b. Individual credit decisions

Just as in equity decisions, the Index could help lenders to ask the right questions by laying out a macro picture or baseline to compare and assess whether a producer or a company represents a greater than average risk compared to Index metrics. By using the Index, lenders may be able to identify which borrowers are managing ESG risks comparatively well or are positioning themselves for future opportunities (such as by capitalizing on new technologies and improving efficiencies) to lower costs and improved revenues. However, while the Index provides such context, it is not a substitute for a proper credit assessment.

4. Compliance

a. Voluntary reporting

Private market participants have historically preferred to respond to government policy and societal expectations through voluntary compliance, rather than through government regulation.[38] Index reporting can demonstrate to governments and regulators, as well as to capital markets and society at large (including consumers), that the agri-food sector recognizes the broad system-wide issues and opportunities that exist and should be addressed by the sector. Being transparent about such evidence-based metrics should help to dispel concerns regarding “greenwashing”.[39]

b. Regulatory reporting

It is uncertain at this point if the Index has the potential to help capital-market participants meet future and specific regulatory reporting requirements on financially-material ESG issues, notably climate-related risks and reducing GHG emissions. However, as noted earlier, the Index can present the connections between risk factors (e.g., water and biodiversity) which may encourage greater systemic risks assessments facing the sector. This could influence the breadth of issues that are considered for reporting.

[38] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804645/ Is particularly relevant to the food industry.

[39] In capital markets, greenwashing is making unsubstantiated or misleading claims about the ESG benefits of an investment

5. **Index as a frame of reference**

   The Index provides food system players with a frame of reference for reporting best ESG practices and can guide company-level metric development. In doing so, the Index can inform the agri-food sector about what metrics capital markets deem to be important.

   The Index may also help to identify sector and sub-sector risks and opportunities. For instance, it may help food companies identify opportunities to develop new products by assessing the whole sector's environmental impact compared to their own.

In addition, there are potential intangible benefits

1. **Canadian agri-food's international stature**

   By presenting Canada's agri-food ESG credentials and the progress being made to address ESG shortcomings, the Index could:
   - **a.** Signal to international investors that Canada's brand and reputation is solid and that it's a good place to invest
   - **b.** Showcase Canada's sustainability approach which may benefit Canada in international marketing and trade negotiations
   - **c.** Enhance trust in Canada's agricultural agri-food sector both domestically and internationally

2. **Reporting on ecosystems and externalities that capital markets may price in future**

   Many environmental and social factors are not being assessed and priced by investors. This might change in the future. Wetlands are an example of nature-based services – providing such benefits as nutrient filtration, flood mitigation, carbon sequestration, habitats and biodiversity. Capital markets may eventually accord a market value to such ecosystem services. How the Index profiles biodiversity may be of future interest to capital markets as these matters unfold. As noted above, global attention to biodiversity may also spur more interest by green bond investments.

Conclusion

This paper assesses how ESG factors and developments relate to the *National Index on Agri-Food Performance*. It considers the Index's limitations, its prospective utility for investors and financial intermediaries and how the Index might directly and indirectly facilitate access to capital for the Canadian agri-food sector. In summary, creating the Index is important, relevant and material to Canadian and global capital markets and to the country's agri-food sector.

APPENDIX

Sustainability Accounting Standards Board (SASB) – Major topics for disclosure by Food & Beverage industry sub-sector:[40]

Food Retailers Disclosure Topics: Gross scope 1 greenhouse gas emissions from fuel and refrigerants Energy & fleet fuel mgt. Food waste Data security breaches Food safety Product health & nutrition Product labelling & marketing Labour practices Mgt. of environmental/social impacts in supply chain **Processed Food Disclosure Topics:** Energy mgt. Water mgt. Food safety Health & nutrition Product labelling & marketing Packaging lifecycle Environmental/social impacts of ingredient supply chain Ingredient sourcing **Non-Alcoholic Beverages Disclosure Topics:** Fleet fuel Greenhouse gas emissions measured only in fuel consumption Energy mgt. Water mgt. Health & nutrition Product labelling & marketing Packaging lifecycle mgt. Environmental/social impacts of ingredient supply chain Ingredient sourcing	**Agricultural Products (processing, distributing and trading; milling; wholesale) Disclosure Topics:** Gross scope 1 greenhouse gas emissions Energy mgt. Water mgt. Food safety Workforce health & safety Environmental/social impacts of ingredient supply chain GMO mgt. Ingredient sourcing **Meat, Poultry & Dairy Disclosure Topics:** Gross scope 1 greenhouse gas emissions Energy mgt. Water mgt. Land use & ecological impacts Food safety Antibiotic use Animal care & welfare Workforce health & safety Environmental/social impacts of animal supply chain Animal & feed sourcing

[40] Non-SASB members can view Disclosure Topics under Food and Beverage at https://www.sasb.org/standards/materiality-finder/find/