

Sustainability Initiatives in the Canadian Port Sector

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Maritime ports are critical nodes in the Canadian resource-based economy that can have significant environmental impacts near coastal communities and marine ecosystems. To address these impacts, Canadian Port Authorities (CPAs) assess their environmental performance using the Green Marine Environmental Program (GMEP). Reliance on this program necessitates its evaluation as an effective initiative to address sustainability in its broader context.

maritime ports

sustainability initiatives

port sustainability

environmental performance

Green Marine (GM)

United Nations Sustainable Development Goals (UN SDGs)

1. Canada's Commitment to Sustainable Development

The FSDS 2019–2022 prioritizes the goals and targets of the United Nations Sustainable Development Goals (UN SDGs) within the Canadian landscape ^[1]. Central to Canada's commitment to implementing the UN SDGs, the government continues to develop policies and programs that will focus on reconciliation with Indigenous peoples, reducing poverty, strengthening the middle class, advancing gender equality, justice for all Canadians, and climate action through clean energy and oceans ^[1]. The FSDS encompasses 13 goals that will allow the government to support international agreements, informed and sustainable decision-making, strong environmental legislation, partnerships with Indigenous peoples, as well as maintaining engagement with Canadians and key stakeholders ^[1].

In addition to the FSDS, Transportation 2030, released in 2016, is a strategic plan to improve trade and economic growth, create a cleaner environment, and improve the well-being of the middle class ^[2]. The main components of the plan are to provide travelers with: ameliorated, low-cost modes of transportation; a safer, more secure transportation system; to reduce air pollution through green and innovative transportation; build competitive marine corridors that are environmentally sustainable; and to improve trade corridors to global markets ^[2]. An outcome of Transport 2030 was the Port Modernization Review conducted by Transport Canada to improve “sustainable and inclusive economic growth through effective governance and innovative operations” ^[3].

The Review has five key objectives:

- Facilitating the movement of goods and people to keep Canada's economy competitive

- Strengthen relationships with Indigenous and local communities
- Improve environmentally sustainable infrastructure and operations
- Enhance port security and safety
- Optimize governance and accountability

Upon completing the review, Transport Canada identified key areas requiring additional research and analysis, including the role of CPAs in Canada's supply chains, innovation and best practices in port operations, competitiveness barriers and opportunities, as well as port governance, financing, and service delivery models [3]. The intent is to engage with key stakeholders to identify the changes required for the port system to meet the key objectives outlined in the review. Unfortunately, there is no significant evidence to suggest that Canada's port sector has prioritized "sustainable and inclusive economic growth" since the Review was first published in 2016 [3].

2. Overview of Sustainability in the Canadian Port Sector

Though they are federal entities, the CPAs do not meet the same governance reporting standards that are required in Canada's private sector, inconsistently reporting financial, social, and environmental performance [4]. Despite some CPAs meeting, and often exceeding, these reporting standards, this inconsistency in reporting across the sector suggests that there is significant room for improvement. This is an opportunity for the federal government, as well as the CPAs themselves, to implement mechanisms to ensure that sustainability performance is focused on continuous improvement, above and beyond regulatory compliance. Unfortunately, while CPAs are extensions of the federal government, they do not appear as partners in the FSDS goals (Table 1). This is troublesome as the CPAs could play a significant role in achieving these goals.

Table 1. Relevance of the Canadian Federal Sustainable Development Strategy (FSDS) goals to CPAs.

FSDS Goals	Are CPAs Explicitly Implicated? Do CPAs Have a Role?	
1. Effective action on climate change	No	Yes
2. Low-carbon government	No	Yes
3. Clean growth	No	No
4. Modern and resilient infrastructure	No	Yes
5. Clean energy	No	Yes
6. Healthy coasts and oceans	No	Yes
7. Pristine lakes and rivers	No	Yes

FSDS Goals	Are CPAs Explicitly Implicated?	Do CPAs Have a Role?
8. Sustainably managed lands and forests	No	No
9. Healthy wildlife population	No	Yes
10. Clean drinking water	No	No
11. Sustainable food	No	No
12. Connecting Canadians with nature	No	No
13. Safe and healthy communities	No	Yes

Program (GMEP) being the most common initiative [5]. A previous study by Hossain et al. also identified sustainability initiatives employed by the CPAs to improve sustainability performance; these included the GMEP, ISO 14001, and the Global Reporting Initiative (GRI), as well as initiatives by individual ports based on industry best practices [6].

While the GMEP has been widely accepted as the standard for environmental excellence in the North American maritime industry, there are no claims linked to the broader definitions of sustainability. Though port performance indicator programs have historically focused on environmental indicators, given that CPAs are embedded within local communities, it is also important to consider the social and economic externalities associated with their operations [7]. Each CPA has obtained certification through the GMEP to improve environmental performance; however, in most cases, it is the only initiative adopted by CPAs to address sustainability. More recently, the GMEP has begun to include social metrics such as Community Relations in their program, with the intent to improve relationships with community stakeholders through open and transparent dialogue [8]. Members of the GMEP are pushing for a shift in performance metrics to evaluate sustainability holistically, using the social, economic, and environmental dimensions, and the program has begun using language focused on sustainability, rather than environmental performance, in their most recent publication [9][10][11]. Reliance on the program necessitates an evaluation to determine if the program adequately addresses goals identified by the UN SDGs and Canada's FSDS. This study aimed to describe and evaluate the GMEP and identify performance gaps relative to the UN SDGs. This will provide CPAs, as well as the GMEP, with a baseline assessment of the program's ability to address relevant SDG targets. Merits of the GMEP and areas for improvement are presented, based on elements identified throughout the port sustainability literature.

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