

ENVIRONMENTAL STEWARDSHIP: AN IMPLEMENTATION GUIDE FOR BOARDS, MANAGEMENT, AND CLINICAL STAFF:

MEETING LONG TERM CARE
STANDARDS AND BEYOND



PURPOSE AND SCOPE

This guidebook provides an overview of some of the key steps and actions that senior leaders can initiate and support for their facility to move towards a climate-resilient, carbon net-zero, and environmentally sustainable health system. Rather than a comprehensive overview, this document is intended to be a primer to help the long term care sector (LTC) with their transition to a greener system: from those starting their journey to those looking for new ideas to implement within an already robust sustainable system.

In order to reach net-zero, LTC sites will need to develop a culture of sustainability which combines top-down and bottom-up approaches. However, health care is facing the climate crisis while also dealing with a global pandemic! The increased clinical demands and significant staffing shortages we are experiencing now will delay the process of creating a culture of sustainability. This guidebook emphasizes high impact initiatives which can be started now - as we gradually introduce an 'environmental sustainability lens' to the culture of the long-term care sector.



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HEALTH CARE AND THE CLIMATE CRISIS



WHY IS THIS IMPORTANT?

The global pandemic has taught us that we can focus the attention of the health care system on a clear purpose when there is a looming threat. Climate action is required from all sectors of the economy including health care. This effort is crucial in order to achieve the net-zero carbon emissions goal by 2050, which was established by the Canadian government. In addition, building climate resilience among health care institutions and their supply chains is urgently needed as they are already being impacted by a changing climate.

HEALTH CARE CONTRIBUTES 5% OF THE GREENHOUSE GAS (GHG) EMISSIONS IN CANADA, WHICH IS HIGHER THAN THE AIRLINE INDUSTRY.

The influence that health care can have in reducing emissions by others is significant.

New accreditation standards for governing boards and leaders as well as federal, provincial and local regulations, are requiring senior leaders to consider environmental stewardship in their strategic plans. This will affect enterprise risk management plans, capital investment plans, procurement policies and practices, and budgeting. In the future, recruitment and retention of young professionals will depend on the alignment of organizational priorities and commitments to shared values of social and environmental justice.

Health care governing boards, management, *and clinical staff* all play a key role that extends beyond the boundaries of their organizations. As highly respected leaders, their actions can positively influence staff, patients, visitors, suppliers, and entire communities. There is a high level of public contact and interaction with the health care system; therefore, the system itself should provide an exemplary commitment to environmental stewardship.

HEALTH CARE SHOULD CARE ABOUT PEOPLE AND THE PLANET.

REWARDS AND RISKS FOR ACTING NOW

REWARDS



- Leadership in your local community
- Positive staff culture and engagement
- Decisions made now will lock you into your future net-zero pathways (ie. new boilers, PPE contracts)
- Secure access to medical product supply chain with a focus on reusables
- Increase in infrastructure resilience

ABILITY TO MEET NEW STANDARDS



- New carbon reduction regulations
- An imperative to adapt to climate change (now) and build resilience (for the future)
- New Canadian accreditation standards for LTC leadership are coming soon

FISCAL RISKS

- Carbon tax: 600% increase expected this decade
- Climate inaction can demoralize staff, leading to decreased efficiency



HEALTH SYSTEM RISKS

- Needing to respond to a climate emergency in:
 - Operational services
 - Health services

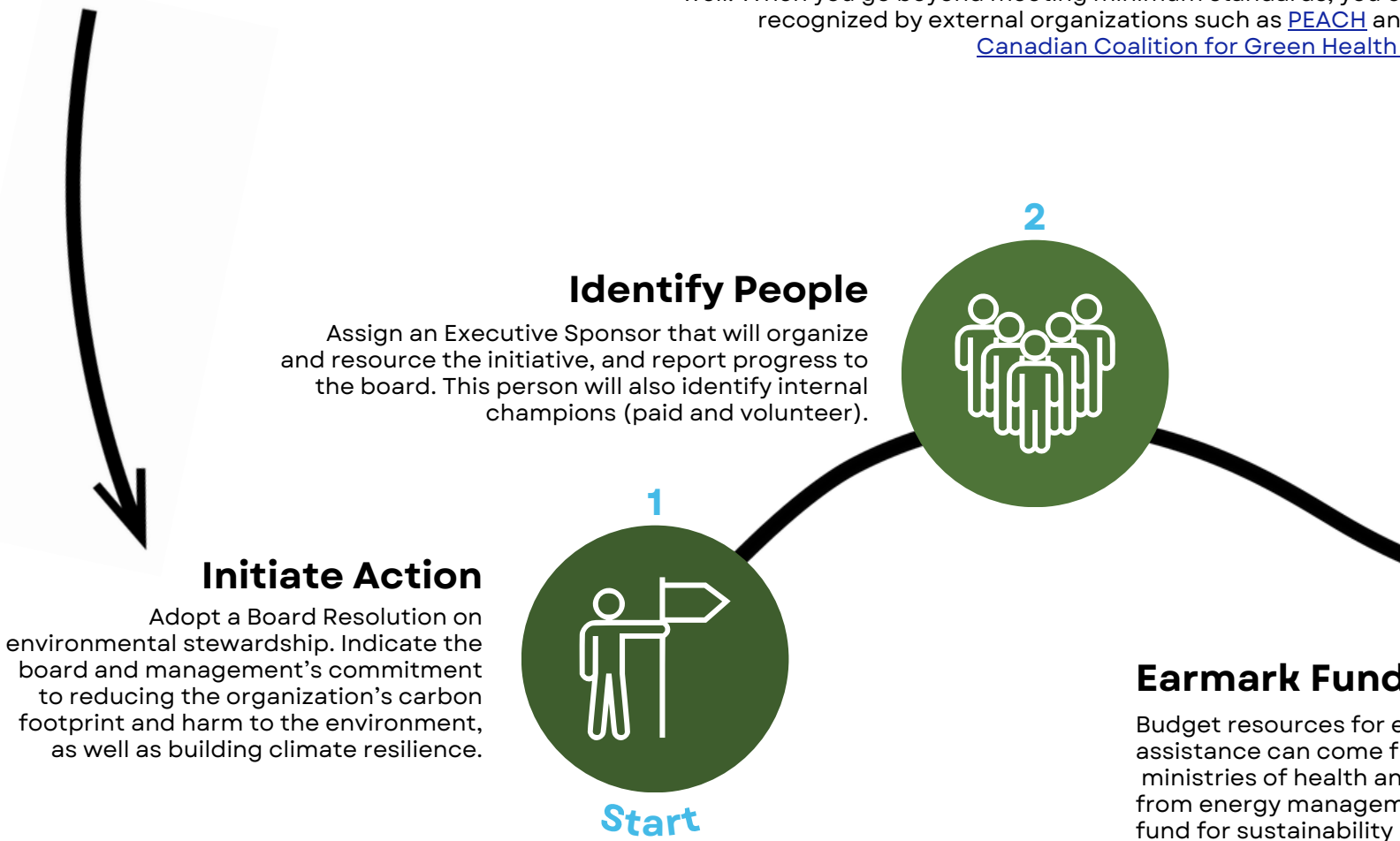
A ROADMAP TO ENVIRONMENTAL STEWARDSHIP

The Road to Environmental Stewardship can be rocky starting out, but once you have people and a plan in place it will build momentum.

Measure the impact of your initiatives and establish targets. Use the Green Healthcare Scorecard, currently under development, to enable you to assess your progress by acting as a benchmark. The scorecard compares your environmental performance to that of peer organizations. You can also use other spreadsheets to measure outcomes against targets.

Celebrate

Recognize the environmental stewardship projects in your organization to build momentum and encourage others to do the same well. When you go beyond meeting minimum standards, you can be recognized by external organizations such as [PEACH](#) and the [Canadian Coalition for Green Health](#).



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environmental stewardship. Financial from utilities savings, incentive programs, or h and the environment. Additionally, savings ment initiatives can be allocated to a special projects.

Pick your Projects

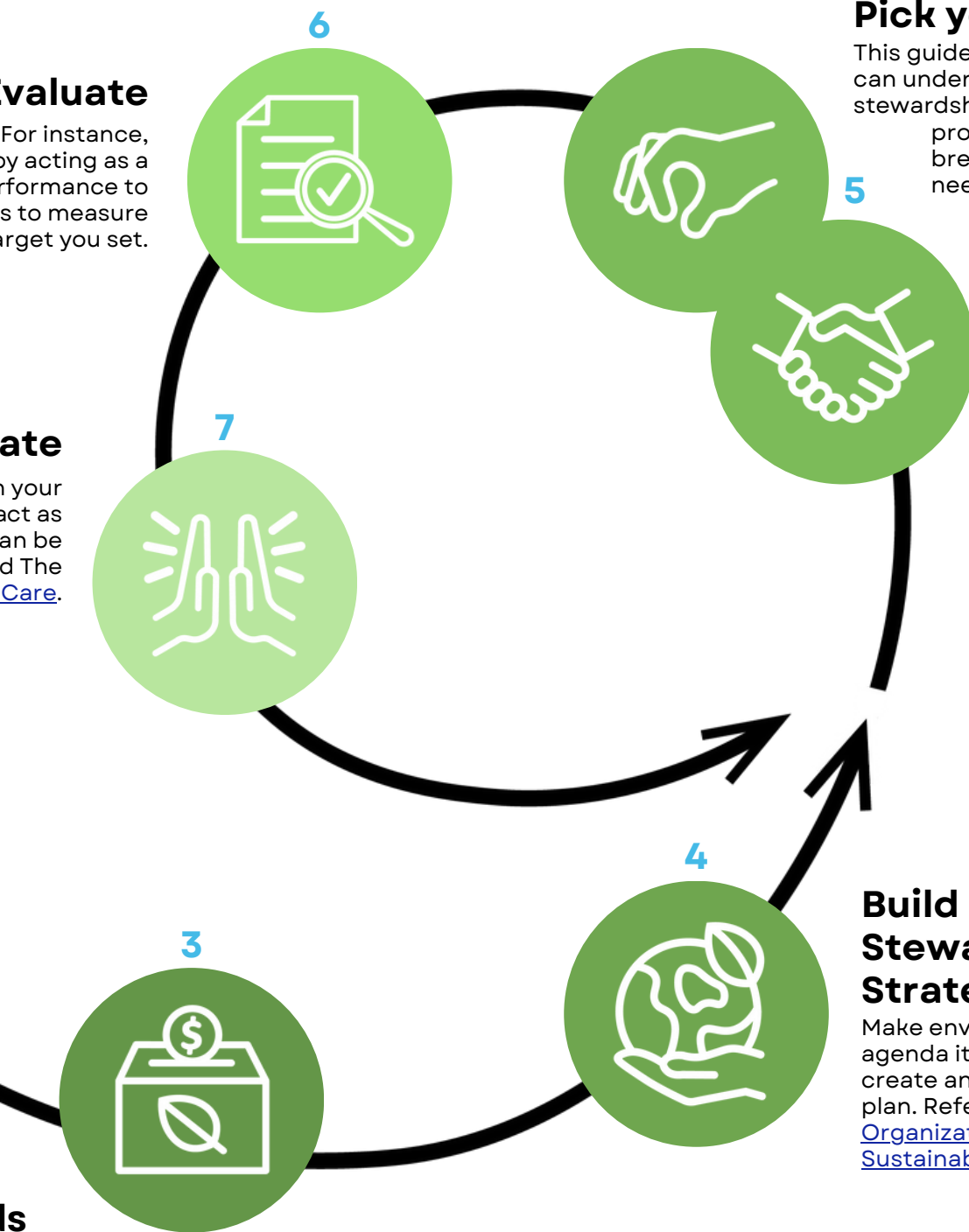
This guide lists a number of initiatives you can undertake to advance environmental stewardship. These are all high impact projects which demonstrate the breadth of departments which will need to participate.

Identify Partners & Collaborators

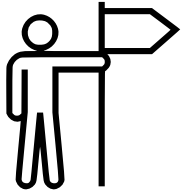
There are several organizations with resources to draw upon (see Appendix). You may also wish to work with similar organizations that are further along the journey.

Build Environmental Stewardship into your Strategic Plan

Make environmental stewardship an agenda item in strategic discussions to create an environmental stewardship plan. Refer to [CASCADES playbook - Organizational Readiness for Sustainability](#) for more detail.



ACTION ITEMS



LEADERSHIP

- Implementation of a Sustainability Strategy
- Appoint a leadership person for sustainability
- Divest foundation funds from fossil fuels to low-carbon funds ●

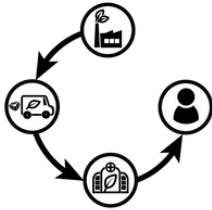


EDUCATION

- Clinicians follow the CWC recommendations for "Long term care" ●

The [Choosing Wisely Canada](#) (CWC) program was developed to educate clinicians on minimizing unnecessary tests and investigations.

- Wellness Activities ●
Facility encourages residents and families to plan and participate in environmental sustainability initiatives



SUPPLY CHAIN

- Procurement contracts contain weighting for sustainability of 10% or higher \$

The supply chain represents over 65% of health care's carbon footprint. LTCs work with procurement organizations that award contracts to suppliers using a scoring system. If 'sustainability' is part of the scoring, suppliers are motivated to develop sustainable products, compatible with a circular economy.

- Facility uses reusable gowns and linens ●
Reusable gowns and linens are as safe as single-use items. Where reusable PPE infrastructure is available there can be significant cost savings.
- Facility has a reusable sharps container program, or equivalent \$
Traditional sharps (needles, scalpels, etc) are disposed of in 'sharps' containers which are autoclaved or, in some cases, incinerated which generates significant GHGs and other pollutants. The reusable containers can be emptied and sterilized by the company, and then reused in the facility, resulting in significant financial and environmental savings.



DRUGS AND DEVICES

- Pharmacy has a sustainable prescribing strategy ●
Sustainable prescribing is done to decrease unnecessary medications, errors, interactions, and side effects. It is also important because pharmaceutical production and disposal release a significant amount of GHGs.

- Inhalers are transferred with patient from a hospital setting to the LTC home ●
When patients are transferred from hospital, their medications usually do not go with them. Meds are then thrown out. The facility can create a policy to allow inhalers to be transferred from acute care.

This section contains some of the action items that have the greatest impact in reducing the facilities' carbon footprint. This list also includes the **expected cost** to help choose between items. Some of these items will be a real challenge!

CAPITAL COST

- Savings, or no cost
- \$ Small cost
- \$\$ Medium cost
- \$\$\$ Large cost



BUILDINGS AND ENERGY

- Heating, Ventilation and Air Conditioning (HVAC) Systems are energy efficient** €€€

Older generation boilers and chillers produce much of a facility's GHGs. Upgrading to energy-efficient HVAC systems, using ground, air or water sources heat pumps, using wind or solar to generate electricity can further reduce GHGs.
- Over 90% of the facility has been converted to LED lighting** €€

Replacing old light fixtures with modern energy-efficient LED fixtures can significantly reduce energy expenditures.
- Facility, or proposed new build, is [LEED Gold standard](#) or higher** €€€

New builds operate with minimal GHG emissions.
- Facility does periodic energy audits and follows through with advice given** €

An energy audit reduces carbon footprint by finding problem areas in your building that are wasting energy. Reducing energy consumption will also save money on your energy bill.



FOOD

- Facility grows food or sources food locally** ●

Most healthcare meals travel thousands of kilometers from field to plate. It is possible to find local food sources and/or to grow food on site.
- Plant-based food options to patients are increased by 25%** ●

GHG reductions are associated with providing a more plant-based diet and decreasing the quantity of meat products offered to residents.
- Facility uses composting to manage food waste** €

Facility participates in onsite food waste composting, or in a municipal food waste collection and composting program. Composting decreases the amount of GHGs released by food waste.



TRANSPORTATION

- Facility has a secure area to store bikes, or other accommodations that encourage bike riding** €

Installation of bike stations (ranging in size and cost) can encourage employees to bike to work by providing a safe location to store bikes.
- Min. 2% of parking spaces at the facility are dedicated to carpooling or EV charging** €

Car travel by staff and visitors is a significant contributor to GHG emissions within health care. Therefore, encouraging carpooling can decrease environmental impact.



NATURE-BASED SOLUTIONS

- The facility has 25% green cover including green roof, food gardens, tree canopy, pollinator gardens and natural grass (except lawns)** €

Plants absorb CO2 and reduce heat island effect. They provide beauty and evidence suggests plants lead to improved patient outcomes.

ADAPTING TO CLIMATE CHANGE AND IMPROVING RESILIENCY

Regardless of how much we are able to limit our emissions, we will be impacted by climate change in the near and long-term future. Organizations should consider facility resiliency assessments as part of their enterprise risk management program.



GEOGRAPHIC LOCATION ASSESSMENT

Each health care facility will face a unique set of geographic challenges (e.g. areas prone to flooding, tornadoes, hurricanes, drought). A geographic location assessment can help identify these risks and plan to respond to possible mass disasters, as well as the critical health issues that their respective patient populations will suffer.

RESILIENCY AND VULNERABILITY ASSESSMENT

A resiliency assessment of the organization's operations identifies its readiness to respond to climate-related events like extreme weather. Infrastructure vulnerability assessments identify key infrastructure needs to prepare for climate-related events. This will allow organizations to improve institutional preparedness.

GENERAL CONSIDERATIONS

- Follow the [World Health Organization strategy](#) to develop climate-resilient facilities (LTC) and health authorities in conjunction with the local governing body
- Work with community partners to identify key patient populations which your facility should be prepared to care for
- Provide health care workforce training:
 - Team-based approach, including identified senior lead
 - Review and practice mass casualty and weather event strategies
- Board members to address climate change using a risk management approach
 - Allocate funds based on assessments
 - Prioritize actions
- Identify potential barriers to continual service delivery
- Review supply chain, and ensure stock of critical supplies

RESIDENT WELLNESS AND INVOLVEMENT

1

Projects oriented toward environmental stewardship provide an opportunity to **impact resident wellness** and create environmental sustainability consistent with the cultural context and values of those living in each facility.

2

Collaborating with residents and their families may provide the chance for **creative and unique action items** to be discussed and explored. These action items may be tailored to suit the needs of their home.

3

Creating environmentally sustainable changes in the home will **enhance core values** which already exist. These changes could become part of the usual workflow at the home, such as being a standing item on Resident and Family council agendas.

A unique feature of LTC is the potential for involvement of residents in implementing change. Resident and family engagement in issues relating to sustainability creates another opportunity to support residents' physical, social, and psychological needs.

EXAMPLES OF PROJECTS

- **Advocating** for more plant-focused menu options
- **Implementing** programs to reduce food waste
- **Encouraging** robust composting and recycling
- **Engaging** in outdoor activities (e.g., gardening, caring for the facility's natural lands)

GLOSSARY

Accreditation Standards - Accreditation Canada surveys health care facilities to rate them on the extent to which they meet national standards for quality and facility operations. New Standards regarding environmental stewardship are being implemented for LTC facilities

Circular Economy - A systematic approach to economic development designed to benefit business, society and the environment. It moves beyond recycling to keeping products in use, eliminating waste streams and regenerating natural systems.

Climate Adaptation- Measures which are taken to protect a community or an ecosystem from the impacts of climate change.

Climate Mitigation- Measures which are taken to decrease or prevent the emission of heat-trapping greenhouse gases into the atmosphere.

Divesting Foundation Funds - Many organizations have money invested in their foundations. By moving money from standard portfolios to low-carbon portfolios, significant greenhouse gases are saved.

Green Healthcare Scorecard - The annual benchmarking survey of environmental performance carried out by the [Canadian Coalition for Green Health Care](#) provides both comparative and retrospective information for participants. An expanded scorecard will be implemented for long term care and retirement homes in 2023

Greenhouse Gas (GHG) Emissions - GHGs are made up of carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄) and fluorinated greenhouse gases (F-GHGs).

HVAC Systems - Heating, Ventilation and Air Conditioning (HVAC) systems that generate much of a facilities' GHG emissions.

Nature-based solutions- Implementing sustainable designs and natural features into the built environment to promote adaptation and resilience. These solutions would include natural grasses, pollinator gardens, rain gardens, trees and green roofs.

Net-zero - Achieving a balance between the greenhouse gas emissions put into the atmosphere and those taken out. CO₂ emissions make up over 80% of GHGs and can be broken down into Scope 1 direct emissions (i.e. heating and cooling), Scope 2 indirect emissions (i.e purchased from utilities), and Scope 3 emissions generated from the operations of the company (i.e. supply chain, travel). In order to prevent the worst climate damages, global net human-caused emissions of carbon dioxide (CO₂) need to fall by about 45 percent from 2010 levels by 2030, reaching net-zero around 2050.

Sustainable Prescribing - This involves optimizing medications for patients, typically resulting in less medications prescribed. Also, in some cases, prescribers can switch from one medication to another one which produces less GHGs. For example, switching inhalers.

Sustainable Procurement - Building environmental sustainability factors into the rating system for the acquisition through purchase or lease of real property, goods or other products, works or services.

ORGANIZATIONS WITH KEY RESOURCES

LEADERSHIP

- Leadership strategy - <https://cascadescanada.ca/resources/all-topics/organizational-readiness/organizational-readiness-playbook/>
- Divesting from fossil fuels, investing in green energy - <https://www.shiftaction.ca>
- Elements of a green facility - <https://www.peachhealthontario.com/ideal-green-hospital>

EDUCATION

- Choosing Wisely Canada - <https://choosingwiselycanada.org/recommendation/long-term-care/>
- Calculating your footprint - <https://healthcareclimateaction.org/checkup>

SUPPLY CHAIN

- Procurement contracts - <https://sustainabilityadvantage.com/sp/case/>
- Reusable gowns - <https://journals.sagepub.com/doi/full/10.1177/01410768211001583>
- Reusable items - https://www.wastecare.com/Articles/Waste_Reduction_Recycling_Tips_Nursing_Homes.htm

BUILDINGS AND ENERGY

- New buildings - <https://www.cagbc.org> (see 'zero-carbon')
- Energy manager, heating systems, and LED lights - <https://practicegreenhealth.org/topics/energy/energy>

DRUGS AND DEVICES

- Deprescribing strategy - <https://www.deprescribingnetwork.ca/>
- Medication safety <https://ismpcanada.ca/consulting/>

FOOD

- Plant forward diets - <https://www.nourishleadership.ca/sustainable-menus>
- Composting - <https://greenhealthcare.ca/wp-content/uploads/2017/07/CCGHC-Organic-Waste-Case-Study-June17-2013-FINAL.pdf>
- Sourcing locally - Halton Healthcare – Knowing your Power to Purchase Local (case study done by the Greenbelt)

TRANSPORT

- Active Transport - <https://cape.ca/resource/active-travel-toolkit-en/>
- EV chargers - <https://chasecanada.org/wp-content/uploads/2021/03/ZEV-BACKGROUND-ENG.pdf>

NATURAL SYSTEMS

- Green space - <https://bcgreencare.ca/wp-content/uploads/2021/10/Green-Design-for-Climate-Resilience-and-Well-being.pdf>

RESILIENCY

- Health care Facility Resiliency Toolkit - <https://greenhealthcare.ca/climate-change-resiliency-toolkit/>

SUSTAINABLE DESIGN

<https://hospitalnews.com/benefits-sustainable-design-include-improved-care-long-term-cost-savings/>

MORE KEY GREEN ORGANIZATIONS

- <https://synergiesanteenvironnement.org>
- <https://nordicshc.org/>

CONTRIBUTORS

This guidebook was adapted from "ENVIRONMENTAL STEWARDSHIP: AN IMPLEMENTATION GUIDE FOR BOARDS, EXECUTIVE LEADERS, AND CLINICAL STAFF" by Neil Ritchie, Myles Sergeant, Curtis Lavoie, Kim-Chi Tran, Richard Webster, Sujane Kandasamy, Luz Paczka Giorgi, and Linda Varangu.

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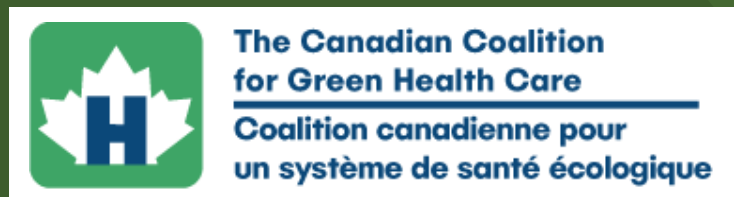
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All authors agree on the content presented in the final product.

This is a living document which will be revised as this field evolves.

We welcome your comments and suggestions.

SUPPORTED BY:



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