

BC Circular Economy Policy Brief

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Zero Waste BC



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Gratitude

We would like to thank the Climate Caucus, Recycling Council of BC, Indigenous Zero Waste Technical Advisory Group and VGN Resources for their partnership and all of the participants for their ideas and enthusiasm but note that this document does not necessarily reflect the views or positions of these organizations.

Zero Waste BC will share this brief with the Province of BC staff and elected officials, those who sponsored and participated in pre-engagement sessions, and with the general public via the Zero Waste BC website.¹

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Terminology

Virgin materials - materials that have not yet been used in the economy

Non-virgin materials - those have previously been used, including those that have been reused, refurbished, repaired, recycled or composted.

These terms are defined in the Ellen MacArthur Foundation glossary² and help to better reflect our understanding of material flows.

Garbage will be used for unsorted, mixed materials that have been discarded to streams destined for the landfill or incineration.

¹ The four workshops held to inform brief development were conducted prior to and separately from any direct or contracted Province of BC consultation.

² Ellen MacArthur Foundation (2022). Circular Economy Glossary.

<https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary>

Executive Summary

The purpose of this policy brief is to provide guiding inputs to inform the consultation for and development of a Provincial Circular Economy Strategy (Strategy). Recommendations summary:

1. **RETHINK AND REDESIGN** – get the greatest effect for carbon and ecological footprint reduction and community impact. These are the recommended elements:
 - a. **Culture Shift**
 - b. **Product Design/Redesign**
 - c. **Policy**
 - d. **Shift in the Economic Model**
 - e. **Sharing Economy**
 - f. **Planning at the Community Level**
 - g. **Funding**
 - h. **Infrastructure**
 - i. **Partnership and Collaboration**
2. **REDUCE** – take actions to reduce single use items, decrease the toxicity of materials, avoid wasting food and leverage procurement.
3. **REUSE** – extend the life of durable goods by supporting programs and services that shift to reuse, repair and sharing products.
4. **RECYCLE/COMPOST** – create zero waste hubs, develop tools for separation, add requirements for sectors and expand extended producer responsibility (EPR) requirements to cover more products and strengthen regulations.
5. **MATERIAL RECOVERY** – support material salvage before disposal including clean ups and addressing marine debris.
6. **RESIDUALS MANAGEMENT** –address garbage flow leakage and trade agreement challenges as well as plan for disaster debris management.
7. **UNACCEPTABLE**– establish a clear policy to not support incineration and other forms of burning or destroying materials.

Background

Our current economy is a linear take-make-waste one that overconsumes resources and creates excess amounts of wastes and greenhouse gases (GHGs). To address this inefficient current system, the Province of BC has committed to developing a Circular Economy Strategy as part of its Clean BC plan.

Currently, policy on material flows has been disjointed with climate change, wastes and environmental impacts governed by the Ministry of Environment and Climate Change Strategy, economic development guided by the Ministry of Jobs, Economic Recovery and Innovation and resources by the Ministries of Forests; Land, Water and Resource Stewardship; Energy, Mines and Low Carbon Innovation and Agriculture and Food. Provincial work to date has focused in silos on extraction of resources, economic development and downstream material management aspects such as recycling, composting and disposal. Solid waste planning has been primarily a responsibility of regional districts and First Nations, as the Province has focused on supporting organics management and regulating Extended Producer Responsibility (EPR) programs. In the absence of a broader provincial strategy, the tools available to local and Indigenous governments are limited which makes it a struggle to make systemic changes – while our environment and society at large continue to experience worsening impacts of our linear economy.

Having a cohesive and comprehensive strategy for the reduction in consumption and associated negative environmental and social impacts, and circulation of materials will ensure better system harmonization to achieve Circular Economy goals, healthy communities and a vibrant and regenerative BC economy.

Circular Economy and Zero Waste

Many jurisdictions are broadening the conversations from how to handle waste to Circular Economy, Zero Waste and sustainable materials management. Waste is used as a verb and not a noun. This leads to a greater emphasis on preventing wasting of materials than managing waste. The concepts of Circular Economy and Zero Waste are similar.

A Circular Economy is defined by the Ellen MacArthur Foundation as being designed for the principles of eliminating waste and pollution, circulating materials and products (at their highest value) and regenerating nature. It should be based on renewable energy and materials. The butterfly diagram below shows the circulation of biological and technical nutrients (along the lines of a waste hierarchy) and the need to avoid externalities of burning or burying waste.

There are numerous benefits from developing and implementing Circular Economy and Zero Waste strategies. We are collectively using more resources than can be sustainably replenished and creating more wastes than can be absorbed by nature. The land use changes from extracting more natural resources for human consumption has led to the loss of habitats and biodiversity. Our collective [ecological footprint](#) is too large and growing. Every step in the supply chain takes energy, often with a large amount of greenhouse gas (GHG) emissions that are not fully accounted for. All products have an embodied GHG cost that is wasted when we fail to use the material or product for a long period of time or use it needlessly. Despite using an abundance of materials, equitable distribution of resources is also missing. Not only are there the environmental benefits of less waste, less pollution, less litter, decreased habitat and species loss, slower loss of soil nutrients and decreased climate changing gases, but also social benefits as societies become more resilient, have more jobs, and have lower material throughput to meet their needs and economic benefits when the Circular Economy fosters more local and circular businesses.

There is a growing awareness that lessons from Indigenous knowledge have an integral role in addressing human-caused climate change. As ongoing truth and reconciliation work continues, there is more recognition that our societies have been heavily disrupted by colonialism, capitalism and industrialization. A decolonizing approach will seek place-based solutions, a sharing economy and other regenerative solutions. These can directly support self-determined planning and resilience to support the Circular Economy.⁴

ZWBC workshops

Four pre-engagement sessions were held with local elected officials, local government staff members, First Nation community leaders and environmental non-governmental organization representatives in the fall of 2022 to raise awareness of the upcoming development of the Strategy, and to generate and share ideas for what should be included. These workshops built on existing work across sectors to support local Circular Economy and Zero Waste initiatives including: UBCM resolutions, the BC Intermunicipal Working Group on Zero Waste [2017 Discussion Paper](#); the [Climate Caucus](#) Zero Waste/Circular Economy Working Group 's [Councillors Handbook](#), the BC [municipal toolkit](#); [Indigenous Zero Waste Technical Advisory Group](#)'s (IZWTAG) organizing and toolkit; and policy papers including [A Zero Waste Agenda for BC](#) completed by Zero Waste BC in partnership with the Canadian Centre for Policy Alternatives.

⁴ Markets and Future of the Circular Economy, 2022. <https://doi.org/10.1007/s43615-022-00196-4>

Results or recommendations

The priorities identified at the workshops are summarized through a guiding framework and key areas organized by the Zero Waste Hierarchy where the upper levels of redesign, reduce and reuse are emphasized. While recommendations reflect the aggregated feedback from sessions, they were prepared and finalized by Zero Waste BC. More details on engagement inputs can be found in [this document](#).⁵

Guiding Framework

Clear definitions and sound guiding principles and values are critical to having a strong Circular Economy Strategy. The Ellen MacArthur Foundation's definition and design principles of Circular Economy and the Zero Waste International Alliance definition of Zero Waste and the Zero Waste Hierarchy are well-recognized and peer-reviewed. Recognizing the interconnectedness of all systems, participants elevated several values to be integrated into the Strategy development including: Traditional Indigenous ways; social equity; regional equity; resilience; valuing people over extraction; and community involvement to develop place-based solutions with quality, local jobs using more local materials to create healthy economies. Success should be measured using alternatives to growth and gross domestic product (GDP) with some suggestions noted in the References section at the end of this document. Other forms of non-virgin materials, aside from municipal solid waste, such as agricultural or industrial materials should be considered as well. While climate change factored high in the conversations, it was noted that wasting and carbon emissions are just two symptoms of our linear extractive system and that this Strategy should work to address all of the symptoms.

Priorities Identified by Level of Zero Waste Hierarchy

1. The **Rethink and Redesign** level of the hierarchy is defined as “systemic change to move towards a closed loop model; redesign of systems to avoid needless and/or wasteful consumption and includes actions that address the root causes of the current linear use of materials.”⁶ Several clusters of input fall under this umbrella:
 - a. **Culture Shift** – There will need to be a culture shift to move towards meeting global needs within finite resources; from needless consumption to sufficiency and thoughtful material use. Education at all levels, behaviour change programs that set new norms and communication campaigns that include youth and elders will be required. The Province

⁵ ZWBC. What We Heard. <https://www.zerowastebc.ca/wp-content/uploads/2023/01/What-We-Heard-Preparing-for-a-BC-CE-Strategy.pdf>

⁶ Zero Waste Hierarchy definitions are sourced from the Zero Waste International Alliance. <https://zwia.org/zwh/>

should take a lead role in planning, implementation and coordination, involving many partners in developing tools and sharing the campaigns.

- b. Systems and supports for **Product Design and Redesign** are necessary as wastefulness is often determined at this stage. The Province should use available levers to push for innovation and better design. EPR, in particular, has not delivered sufficiently on the redesign goal; adjustments to correct this gap are critical. Clear targets for how products are designed, how their lifespans can be extended and what materials are acceptable are instrumental to help companies develop better products.
- c. **Policy** creation and reform are some of the main tools available to the Province. Once the Strategy is completed, existing policies including the Environmental Management Act, Recycling Regulation, Hazardous Waste Regulation and Organic Materials Recycling Regulation should be updated to align with Strategy direction while new policies, protocols and programs should also integrate new directions (e.g. procurement) across ministries. Empowerment of local governments to also be able to support a Circular Economy should unlock more innovation and experimentation at the local level without burdening the Province.
- d. A Circular Economy is fundamentally a **Shift in the Economic Model**. This shift to a system that respects nature and the carrying capacity of the biosphere will require a change in how to support use of circular materials rather than low value extraction systems—with careful consideration of downstream impacts before they occur. Placing more value on labour to keep materials in use rather than a system of replacing materials frequently will be needed. Support for new business models will be required. There will also be new requirements of businesses. These adjustments will restrict old ways of operating while opening up new opportunities and require planning for a just transition.
- e. A **Sharing Economy** is a key way to reduce the need for and storage of items while strengthening the social fabric and resilience of communities. The Province should provide support for these elements.
- f. Circular Economy and Zero Waste **Plans at the Community Level** will drive change and innovation. Just as the Province has done for Official Community Plans and Climate Action Plans, it should provide tools for communities to develop their own plans. Empowering local governments to make bylaws to support Circular Economy and Zero Waste initiatives is required. Other aspects of local government planning such as land use, both to protect land as well as to allocate zoning and space for local reuse hubs and other Circular Economy infrastructure, should be emphasized.

- g. Suggestions for **Funding, Infrastructure and Partnerships** rounded out this section. A province-wide levy on disposal would add a disincentive for disposing garbage as well as fund Circular Economy innovation and initiatives.

Two areas were raised more often for action. For food, a focus on food security and equity, and reduced wasting across the supply chain is needed. Another large opportunity exist to address built environment materials that can decrease embodied carbon.

2. The **Reduce** level of the hierarchy is defined as “measures taken to reduce the quantity and toxicity of resources, products, packaging and materials as well as the adverse impacts on the environment and human health.” Under Reduce, there was strong support for further actions to decrease single use items and the wasting of food. Procurement protocols, research and systems could be used not just by the Province but also shared with Crown corporations, education and health institutions, local governments and other interested organizations for maximum impact and to reduce the work required to implement it. There is a need for more research and action to address the toxicity of some materials.
3. **Reuse** is defined as “actions by which products or components are used again for the same or similar purpose for which they were conceived and actions that support the continued use of products in ways that retain the value, usefulness and function.” It was recommended that the life of durable goods be extended by supporting programs and services that shift to reuse, repair and sharing products through reuse stores, refill systems etc. Reuse targets should be required for suitable EPR programs. The Province should help to eliminate current barriers to reuse and work with the federal government to bring in Right to Repair requirements. The Province should also actively support repair networks across BC. For food, scaling up of systems to recover and share surplus food would have myriad benefits including quantifying surplus so food systems can become more efficient and equitable long term.
4. **Recycle/Compost** is defined as “actions by which discards are mechanically reprocessed into products or materials or biologically processed to return to the soil.” Key aspects noted here include expanding EPR requirements to cover many more products and strengthening the regulations to improve accessibility, collection rates, systems for reuse and repair options and further producer responsibilities. Recycled content requirements, where safe, could drive demand. The Province should support eco-depots, Zero Waste Stations and demonstration hubs. Developing and sharing tools for source separation and sector specific guidelines is a suitable provincial role. Specific guidance was also given for wood waste and organics management.

5. **Material Recovery** is defined as “any operation to salvage additional materials after the actions above but does not include energy recovery and the reprocessing into materials that are to be used as fuels or other means to generate energy, which are unacceptable practices.” Priority recommendations focused on supporting material salvage before disposal, community clean ups and addressing marine debris.
6. **Residuals Management** is the “handling of discards that were wasted in a way that does not threaten the environment or human health and analysing what was wasted and why.” The goal is to minimize garbage sent for disposal while ensuring minimal environmental impacts. The Province should help to address garbage flow leakage and trade agreement challenges as well as plan for disaster debris management and coordinated waste audits across the province.
7. The **Unacceptable** level of the hierarchy includes “systems and policies which encourage wasting or threaten the environment and human health.” It was seen as important that the Province not support incineration and other forms of burning or destroying materials and that a clear policy on this would be very helpful to local governments.

Metrics

To measure the success of the Strategy, it will be important to measure the right set of metrics. These metrics should include carbon and ecological footprints (conducted at both local and provincial levels), material flows, jobs and data from waste composition audits as well as other measures of circularity. High quality data that is shared publicly will spur further innovation as well as allow ongoing course correction.

Appendix A References for Frameworks and Key Concepts

Circular Economy -Ellen MacArthur Foundation -what is a Circular Economy

<https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>; glossary

<https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary>

Doughnut Economics <https://www.kateraworth.com/doughnut/>

Degrowth <https://www.weforum.org/agenda/2022/06/what-is-degrowth-economics-climate-change/>

EcoCity Footprint Tool - <https://commons.bcit.ca/ecocitycentre/ecocity-footprint-tool/>

Ecological Footprint - <https://www.footprintnetwork.org/our-work/ecological-footprint/>

Sitra (2022). Tackling root causes: halting biodiversity loss through the circular economy <https://www.sitra.fi/en/publications/tackling-root-causes/>

World Happiness Index <https://worldhappiness.report/ed/2022/>

Zero Waste -Zero Waste International Alliance-definition <https://zwia.org/zero-waste-definition/>; hierarchy <https://zwia.org/zwh/>