ICABCCI

Integrated Climate Action
for BC Communities Initiative

LCR Tool

LCR: Advancing the Co-Benefits of Climate Action

APRIL 2021

SFU

ACT Adaptation to Climate Change Team

real estate foundation
BRITISH COLUMBIA

About this Document

This document is part of a suite of resources that describes the low carbon resilience (LCR) approach to planning and decision making and offers detailed guidance on how Canadian communities can put it into practice. An LCR approach coordinates and mainstreams adaptation, mitigation, and co-benefit strategies into policy, planning and implementation processes. **Deborah Harford**, Executive Director of ACT, Simon Fraser University (SFU)'s Adaptation to Climate Change Team, and SFU ACT Research Associate **Dr. Alison Shaw**, Principal, FlipSide Sustainability, worked together to develop the Integrated Climate Action for BC Communities Initiative (ICABCCI) to help local governments implement LCR through strategic climate action policies and programs.

This LCR Tool connects climate action with important co-benefits, advancing key community priorities relating to health, equity, biodiversity, and economic development.

Authors

Alison Shaw, PhD, CPC, Research Lead, ICABCCI, ACT
Deborah Harford, Executive Director, ACT
Kacia Tolsma, Research Coordinator, ICABCCI, ACT

Acknowledgments

ICABCCI is an initiative of ACT (the Adaptation to Climate Change Team) at Simon Fraser University. The university has three campuses in Metro Vancouver, which is in turn on the traditional and unceded territories of the Coast Salish peoples, including the Sḵwx̱wú7mesh (Squamish), Stó:lō and Səl̓ílwətaʔ/Selilwitulh (Tsleil-Waututh), and xʷməθkʷəy̓əm (Musqueam) Nations. ACT gratefully acknowledges the support of the Real Estate Foundation of BC and SFU for ICABCCI. To learn more about ICABCCI and the team, visit act-adapt.org/icabcci/.

Table of Contents

1. OVERVIEW: A SYSTEMIC RESPONSE TO A COMPLEX CRISIS

The climate crisis is no longer a far-off threat; it has arrived on Canada's doorstep. Cities, towns, and villages are grappling with wildfires, flooding, unpredictable weather events, and local economic hardships, among other consequences. Local governments are working with constrained resources to address the challenge, while advancing other priorities such as service delivery, health, equity, and biodiversity.

As climate change is a structural issue with multiple touchpoints, local governments must respond to the climate challenge with systems thinking. This is the spirit and substance of the low carbon resilience (LCR) approach to planning and decision making. It embeds climate adaptation (risk reduction) and mitigation (emissions reduction) in local government processes, while simultaneously benefiting the community priorities mentioned above (see Figure 1). Climate researchers refer to the multiplier benefits of climate actions as co-benefits; taken together, they constitute a pillar of the LCR approach.

Figure 1: The LCR approach considers climate risk and vulnerability, emissions, and co-benefits alongside cost, feasibility, and other criteria.

This systemic view of climate action encourages decision-makers to pursue integrated strategies and investments that climate-proof their communities while strengthening overall sustainability. The LCR approach embeds three key questions in all decision processes, relating to:

1. **Risk:** Does the investment or action minimize community vulnerability to projected climate impacts such as flooding, wildfire, heat, and other extreme events?

2. **Emissions:** Does the investment or action measurably reduce corporate and/or community emissions and help advance carbon-reduction goals?

3. **Co-benefits:** Does the investment or action advance community sustainability goals such as health, equity, biodiversity, and economic savings and development?

The LCR approach brings into focus the multiple considerations and trade-offs of a wide array of policy options, projects and decisions made today and their legacies for tomorrow. This approach demonstrates that adaptation and mitigation are two sides of the same coin; both are responses that aim to minimize the impacts of climate change and build resilience into the future. Local government leaders must advance climate action in lockstep with other social, economic, and environmental goals. An LCR approach highlights and advances these interdependencies.

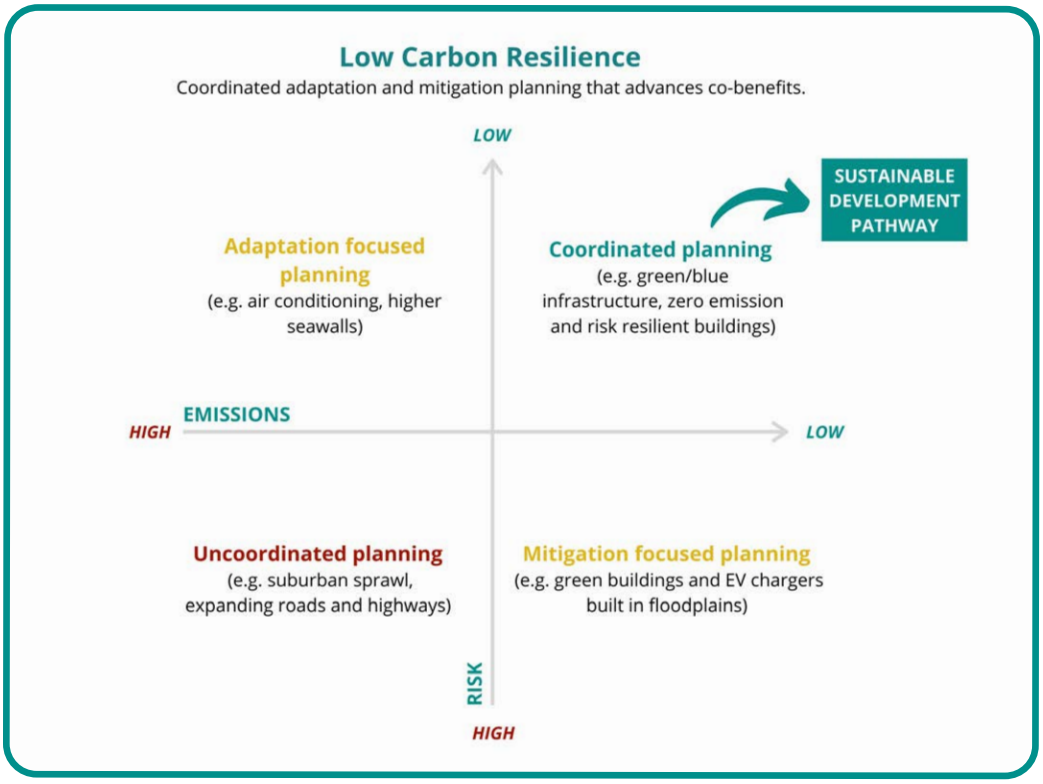

Figure 2: The LCR planning approach coordinates adaptation and mitigation planning and co-evaluates climate action opportunities that advance multiple co-benefits, i.e., other social, economic, and environmental goals.

Figure 2 showcases the need to move away from separate climate adaptation and mitigation planning and action. Discrete professional and planning silos can lead to contradictory results that are maladaptive (lower-right quadrant) or emissions intensive (upper-left quadrant), missing opportunities to identify synergies and build in longer term returns on investment. Adopting a systemic LCR approach (upper right quadrant) helps decision-makers evaluate climate strategies for their potential to reduce risk and emissions and identify co-benefits that advance multiple goals.

2. LCR: CLIMATE ACTIONS THAT MULTI-TASK

Co-benefits are the positive social, economic, and ecosystem results of a policy or measure aimed at reducing climate risks and emissions. These form a crucial component of an LCR approach, linking climate action to overall sustainable community development. Put another way, an LCR approach builds climate actions that multi-task.

Climate change bumps up against virtually every social, economic, or environmental community priority. The flipside of advancing the co-benefits of climate action is that risk and emissions reduction become a co-benefit of other community decision processes.

For example, building a healthy, connected community means diversifying transportation modalities (public and active transportation) while also removing cars from the road, reducing emissions and congestion, enhancing access to emergency corridors and shelters, limiting heat effects, improving air quality, increasing equitable access to amenities, and contributing to improved green corridors and habitats that can also help reduce flooding.

Similarly, local investment in natural assets reduces the need for costly, emissions-intensive infrastructure upgrades by decreasing the burden on aging stormwater infrastructure while minimizing flood and heat risks, sequestering carbon, reducing maintenance requirements, benefiting overall community health and well-being and, when planned correctly, enhancing habitat to support biodiversity.

The LCR approach assumes that climate action does not and should not occur in isolation. Instead, climate action must align with broader community safety, resilience, and sustainability goals. The LCR Co-Benefits Table showcases these "additional" benefits that can occur from taking climate action, and is designed to inspire systemic thinking.

3. THE CO-BENEFITS TABLE: THE MULTIPLE UPSIDES OF SYSTEMIC ACTION

Staff and practitioners can use the LCR Co-Benefits Table, below, as a communications and engagement tool to showcase the advantages of systemic climate action. Its icons serve as shorthand for the range of potential social, environmental, and economic benefits.

Several ICABCCI partner communities use a version of this table in their climate change action plans. To mobilize this LCR Tool further, the ICABCCI team has created a folder of co-benefit icons, each in accessible format (.png). Local government staff can use them to represent and promote this type of systemic thinking in plans, presentations, and reporting documents.

NB: Please note that this is an explanatory tool, not an exhaustive one; we intend to expand and refine it over time.

Economic Co-Benefits

Supports green job creation	Diversifies local economy	Reduces costs/ increases savings
Fosters innovation and green, clean industries	Supports clean energy transition	Promotes a circular economy
Reduces risks to property values	Reduces waste/ optimizes resources	Avoids community damages and costs over time

Environmental Co-Benefits

Enhances biodiversity	Supports habitat creation	Improves water retention and absorption
Enhances pollutant capture	Improves air quality	Reduces extreme temperatures
Improves water quality	Increases carbon sequestration/storage	Promotes regional connectivity

Social Co-Benefits

Enhances human health and well-being	Supports local food security	Limits tax increases
Improves climate awareness and access to data and information	Improves community livability and vitality	Enhances local autonomy
Advances equity and social inclusion	Reduces congestion	Improves public safety, disaster preparedness and response

ACT Adaptation to Climate Change Team

ACT (the Adaptation to Climate Change Team) in the Faculty of Environment at SFU brings leading experts from around the world together with industry, community, and government decision-makers to explore the risks posed by top-of-mind climate change issues and to identify opportunities for sustainable adaptation.

Contact Us

Simon Fraser University Vancouver
#3230, 515 West Hastings Street
Vancouver, BC Canada V6B 5K3

adapt@sfu.ca
604.671.2449
@ACTadaptation
www.act-adapt.org/

Design by Bright Wing Media