

SPECIAL COMMITTEE OF THE WHOLE Community Climate Action Plan

Monday, June 3, 2024 TO BE HELD IN THE BOARDROOM OF THE SUNSHINE COAST REGIONAL DISTRICT OFFICES AT 1975 FIELD ROAD, SECHELT, B.C. AGENDA

CALL TO ORDER 9:30 a.m.

AGENDA

1. Adoption of Agenda

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PRESENTATIONS AND DELEGATIONS

2. <u>Dr. Moliehi Khaketla, Medical Health Officer, Vancouver Coastal Health, Vancouver Coastal Health</u>
Regarding Links between Protecting Population Health in a Climate Emergency and SCRD's Community Action Plan

Verbal

REPORTS

3. Draft Community Climate Action Plan

Manager, Sustainable Development

Regional Sustainability Services (Voting – All)

Annex A pp. 2 - 30

COMMUNICATIONS

NEW BUSINESS

IN CAMERA

ADJOURNMENT

SUNSHINE COAST REGIONAL DISTRICT STAFF REPORT

TO: Special Committee of the Whole – June 3, 2024

AUTHOR: Raphael Shay, Manager, Sustainable Development

SUBJECT: DRAFT COMMUNITY CLIMATE ACTION PLAN

RECOMMENDATION(S)

(1) THAT the report titled Draft Community Climate Action Plan (CCAP) be received for information;

- (2) AND THAT the Community Climate Action Plan be adopted as presented or amended;
- (3) AND THAT the SCRD's renewed Official Community Plans incorporate science-based targets for Greenhouse Gas Emission reductions pursuant to section 473(3) of the Local Government Act;
- (4) AND THAT the following recommendations supporting core actions be implemented:
 - a. That a climate lens that builds on current practices and further operationalizes climate considerations in governance be brought to the Board for consideration in Q4 2024;
 - b. That a report outlining climate risks to assets and a framework to prioritize adaptation planning be brought to the Board for consideration in Q1 2025;
 - c. That a gap analysis of climate change's impacts on water supply and demand be brought forth for consideration in Budget 2025 in Q3 2025;
 - d. That Complete, Compact, Communities principles guide Official Community Plan renewal, as committed to as a signatory to the Climate Action Charter;
 - e. That a report outlining regulatory tools to support clean energy be brought to the Board for consideration in Q1 2025;
 - f. That the role of natural assets and green infrastructure be documented under the OCP renewal and made explicit in description of service levels;
 - g. That a proposal be brought forth for consideration in Budget 2025 to support the inclusion of ecological stewardship, habitat connectivity and restoration in new land use planning policies and regulations;
 - That the SCRD organizes education and training opportunities to increase market readiness for significant scaling of energy efficiency retrofits starting in Q4 2024;

- (5) AND THAT CCAP be the subject of a future inter-governmental meeting, proposed for Q3 2024;
- (6) AND THAT staff develop summary material, infographics, and activities to inform the community of the CCAP in Q3 2024;
- (7) AND THAT CCAP be referred to District of Sechelt, Town of Gibsons, shishalh Nation, and Skwxwú7mesh Nation for information, response, endorsement, or adoption as may be desired.
- (8) AND FURTHER THAT a review of CCAP be completed in three to five years based on annual progress reporting.

BACKGROUND

A Community Climate Action Plan (CCAP, Attachment A) has been developed to advance the 2023-2027 Strategic Plan's "Climate Resilience and Environment" lens and meet business needs. A draft CCAP was presented in April 2023 and was tabled pending completion of the Strategic Plan.

It has since been updated to highlight areas of SCRD focus and to reflect the Strategic Plan, technological changes, new legislation, and the evolution of programs at various levels of government. The entirety of the content remains materially the same as prior draft reflecting the comprehensive collaborative process to develop it.

This report presents the CCAP for Board consideration and adoption as well as mechanisms for its implementation.

DISCUSSION

The CCAP has two dimensions, the first is a description of what our community needs. The second describes the SCRD's roles and commitments in moving these actions forward. The CCAP builds upon the areas the SCRD is currently engaged in and establishes connections to maximize multi-solving and expediency.

The SCRD can act as a coordinator and champion of the report. Some actions and risks within the plan are beyond the responsibilities and powers of the SCRD and need to be owned and implemented by other stakeholders. The SCRD can perform a facilitation or advocacy role in these areas.

The Community Climate Action Plan consists of 15 goals, 25 actions and 58 supporting actions These are divided into the following themes:

- Good Governance and Enabling Actions
- Adaptation Buildings and Infrastructure
- Adaptation Drinking Water
- Adaptation Ecological Stewardship
- Adaptation Connectivity, Community Health, and Support
- Mitigation Mobility
- Mitigation Buildings
- Mitigation Carbon Dioxide Removal

A section on carbon dioxide removal (CDR) was added since the first version to explicitly address the critical need for these actions in "all modelled scenarios that limit global warming to 2°C by 2100."

Although work is occurring on sustainability and climate in all divisions at the SCRD, adoption of the CCAP will provide staff with guidance to structure work plans and make progress on priority items. Community partners will also benefit from transparency and clarity of priorities.

Staff recommend adoption of the CCAP as presented or amended.

1. Next Steps - GHG emissions targets:

Setting community greenhouse gas emission reduction targets is Action 1.2 under Good Governance and Enabling Actions. Section 473(3) of the *Local Government Act*² requires GHG emission reduction targets, and actions to support them, be incorporated into Official Community Plans (OCP). As such, it is proposed that this action be completed as part of the OCP renewal project. It is also proposed that targets be developed in collaboration with member municipalities and First Nations.

Science-based targets are now best practice and are to drop carbon pollution by 45% below 2010 levels by 2030 and eliminate it entirely by 2050.³ More recent guidance for developed countries are to reduce carbon pollution as much as possible by 2040.⁴

Recommendation: That the renewed Official Community Plans incorporate science-based targets for Greenhouse Gas Emission reductions.

2. Next Steps – Confirm the core actions the SCRD wishes to commit to.

Nestled in the CCAP are core actions with SCRD control or influence that can make a difference. Board direction to confirm these core actions is sought given they will become a focus for existing and incremental resourcing. Other actions in the plan could become core actions at the Board's direction. Each core action is accompanied by a recommendation to move implementation forward.

The proposed core actions where SCRD has greater *control* are:

a. Integrate climate lens into decision making and planning (Sub-action under 1.1). Recommendation: that a climate lens that builds on current practices and further operationalizes climate considerations in governance be brought to the Board for consideration. Implementation notes: Sustainable Development Division would lead using base budget resources, anticipated delivery Q4 2024.

¹ Intergovernmental Pannel on Climate Change, Carbon Dioxide Removal Factsheet. (2022). https://www.ipcc.ch/report/ar6/wg3/downloads/outreach/IPCC_AR6_WGIII_Factsheet_CDR.pdf

² Section 473, Content and process requirements

³ Federation of Canadian Municipalities. Partners for Climate Protection. Instructions for Milestone 2: Setting emission reduction targets. https://www.pcp-ppc.ca/resources/instructions-pcp-milestone-2-setting-emissions-reductions-targets

⁴ UN Press Release 20 March 2023. Retrieved from: https://press.un.org/en/2023/sgsm21730.doc.htm#:~:text=Specifically%2C%20leaders%20of%20developed%20count ries,target%20as%20early%20as%202035.

- b. Create Resilience Action Plans for critical infrastructure (Action 4.2).
 Recommendation: that a report outlining climate risks to assets and a framework to prioritize adaptation planning be brought to the Board for consideration.
 Implementation notes: Would be co-led by Sustainable Development Division and Asset Management Division using base budget resources, anticipated delivery Q1 2025.
- c. Continue to advance knowledge about climate change impacts on water supply and integrate evolving impacts of climate change into water plans. (Action 6.1) Recommendation: that a gap analysis of climate change's impacts on water supply and demand be brought forth for consideration in Budget 2025. Implementation notes: Already contemplated as part of draft Water Strategy, led by Infrastructure Services Department, anticipated delivery Q3 2025.
- d. Integrate Complete Compact Communities principles into Official Community Plans to facilitate walking, cycling and transit use (Sub-action under 12.1).
 Recommendation: that Complete, Compact, Communities principles guide Official Community Plan renewal, as committed to as a signatory to the Climate Action Charter. Implementation notes: Already contemplated as part of Official Community Plan renewal project, led by Planning & Development Division, final product deliver in Q4 2025.
- e. Increase public transit convenience and ridership (sub-action under 12.2). Implementation notes: No recommendation is proposed as the Transit Future Action Plan is adopted and implementation is progressing.
- f. Require new buildings to be more efficient and use cleaner energy (eg. By requiring adoption of higher performance steps of the BC Energy Step Code or the Zero Carbon Step Code). (sub-action under 14.1).
 Recommendation: that a report outlining regulatory tools to support clean energy be brought to the Board for consideration. Implementation notes: Co-led by Sustainable Development Division, Planning & Development Division, and Building Inspection Division, anticipated delivery Q1 2025.

The proposed core actions where SCRD has greater *influence* are:

- a. Develop inventory of natural assets and green infrastructure and associated level of service contribution (Sub-action under 5.1).
 Recommendation: that the role of natural assets and green infrastructure be documented under the OCP renewal and made explicit in description of service levels. Implementation notes: Would be led by Planning & Development Division in coordination with Sustainable Development Division, Asset Management Division, and Finance Division using approved project-specific resources; final product delivery Q4 2025. Partnership opportunities to be explored.
- b. Review and update Official Community Plans and regulatory tools to include ecosystem health. (Sub-action under 8.2).
 Recommendation: that a proposal be brought forth for consideration in Budget 2025 to support the inclusion of ecological stewardship, habitat connectivity and restoration in new land use planning policies and regulations. Implementation notes: Would be led by Planning & Development Division in coordination with Sustainable Development Division using base budget, approved project-specific

resources as well as potential incremental resourcing; final product delivery Q4 2025. Partnership opportunities and grant support to be explored.

- c. Support market readiness for significant scaling of renovations that improve energy efficiency. (Sub-action under 14.2).
 Recommendation: that the SCRD organizes education and training opportunities to increase market readiness for significant scaling of energy efficiency retrofits.
 Implementation notes: Sustainable Development Division would lead a start for basic items using base budget resources with anticipated delivery starting Q4 2024. Value proposition of increased programmatic levels to be explored alongside partnership opportunities.
- 3. Next Steps Public Participation

Awareness of the CCAP will support successful implementation. Recommendations are aligned with the inform side of the public participation spectrum. Further engagement would delay CCAP adoption and staff work plan alignment towards making progress on actions. However, there are several specific actions that involve public participation in a more participatory manner. Additionally, the following section, next steps on collaboration, guiding bodies, and steering groups, may complement public participation.

- a. Recommended: Make CCAP the subject of a future inter-governmental elected representatives meeting (proposed timeline of Q3 2024).
- b. Recommended: Develop summary material, infographics, and activities to inform the community. This is part of an already approved/funded project that will be implemented post adoption and can be delivered in Q3 2024.
- c. Recommended: Refer to District of Sechelt, Town of Gibsons, shíshálh Nation, and Skwxwú7mesh Nation for information, response, endorsement, or adoption as may be desired.
- d. Host inter-governmental elected representatives workshop on CCAP.
- e. Create 30-day comment period on Let's Talk Climate engagement page.
- 4. Next Steps Guiding & Monitoring the Plan

Reducing carbon pollution and building resilience to climate change touches many aspects of our community. Involving citizens in building a resilient and vibrant community increases the likelihood of success. Below are several options for the Board's consideration on how to involve citizens and partners.

During engagement and the many workshops of the Community Climate Action Working Group, there was a strong appreciation for the opportunity to share information and best practices as well as a recommendation for the SCRD to continue convening climate related groups to support coordination on actions. This has been written as Action 2.1 in the Governance and Enabling Actions section of CCAP and is recommended in Table 1 below. The Board may opt to modify this action or expand supporting actions in this section. Table 1 outlines other options, which includes more structured approaches such as advisory committees to the Board.

| Table 1: Frameworks for guiding body or steering group | | | | |
|---|---|--|---|---|
| Model | Objective it meets | Strengths | Limitations | Considerations if option selected |
| Recommendati on: Convene and participate in subject specific ad-hoc tables and events (Action 2.1) | Supports and builds momentum on specific actions while fostering learning. | Efficient use of time that reflects priorities and reduces duplication of effort. | Does not reinforce governance structures. | That these support core actions. |
| New Board Advisory Committee | Formally advises on Board policy referrals. | Known structure and formal information feedback channels. Supports Board governance with valuable community knowledge. | Higher staff time requirements (0.33FTE or more). Expectations of Members wanting involvement in operations or more dynamic change making may not be met. There are challenges to support equity in representation. | Meetings could be two or four a year to align with key governance milestones, such as budget proposal development and annual review of CCAP. |
| Integrate CCAP into existing Advisory Committees. | Integrates climate lens into existing advisory structures. | Supports consideration of climate risks and opportunities in existing governance. | Requires capacity building to inform and empower committee members. | Integration into terms of references and capacity building requirements. |
| Local government staff climate working group | Coordination of regional projects. | Enables progress and collaboration on issues that are regional in nature. | Given breadth of climate change, finding correct representatives may result in large group with limited relevance on some topics. May duplicate several subject specific collaborations. | Include senior leadership that can guide systemic level thinking of organizational response to climate crisis. |
| Arms-length Roundtable | Convenes representativ es of organizations with authority to enact actions. | Integrates CCAP into organizational priorities of key groups. | Climate is already driving consideration of organizations today so value-add may be limited. | Convene with goal coordinating workplans for eliminating climate pollution and resilience to priority climate risks. |

5. Next Steps – Board Involvement

The plan's actions do not explicitly outline a role for the Board beyond those tied to good governance. Beyond this, there are avenues for involvement for the Board's consideration, including but not limited to:

- a) Recommendation: Monitor and evaluate with annual reporting and prioritization with a review in three to five years.
- b) Support new programs.
- c) Develop advocacy framework and strategy (eg. AVICC/UBCM resolutions, specific correspondence supporting core actions or targeted).

6. Next Steps - Implementation Schedules

Implementation schedules and project charters are being developed as supplements to the CCAP. Combined with the prioritization of risks and actions already completed, this information will make actions more grounded and actionable. These action specific documents include elements such as integration and interfaces, costs and resourcing, lead and supporting organizations.

These schedules are intended to be operational work plans and living documents that will be updated regularly to reflect action development.

Organizational and Intergovernmental Implications

In the areas where the SCRD has services and jurisdiction, actions will be detailed further in the implementation schedules and completed using existing resources or through incremental resourcing and collaboration approved by the Board as part of the budget process.

Many of the proposed actions have overlap and interplay with member municipalities, First Nations, provincial ministries, as well as private and public groups. How to take action in these areas will be the prerogative and responsibility of these groups.

Climate impacts and actions are dynamic. Regular updates on CCAP progress will be provided to the SCRD Board in quarterly reports and an annual report will outline progress to date and the priorities for the year ahead. A review of CCAP is proposed in three to five years.

Financial Implications

The Sunshine Coast is facing a wide range of climate impacts that will strain adaptive capacity and resources. Simultaneously, reducing carbon pollution will require investments. Prioritizing where resources should be focused for the highest impact will be considered moving forward through strategic planning, budgeting and work-planning processes that build upon the completed prioritization workshops and public participation feedback.

Part of prioritization involves recognizing the many opportunities for multi-solving and cobenefits of a resilient community free of carbon pollution. These include business continuity, investment attraction, social equity and inclusion, and human health, to name a few.

More importantly, there are costs associated with inaction; a proactive approach has been shown to be the most cost-effective way to protect the services that people, businesses, and the economy depend on. For example, building and moving homes out of high-risk areas can

reduce the costs of coastal flooding by to 90% while using climate resilient materials and design for roads can reduce the costs of roads by 90%.⁵

STRATEGIC PLAN AND RELATED POLICIES

This CCAP is highly integrated with the Strategic Plan's Climate resilience and environment lens.

CONCLUSION

A draft Community Climate Action Plan has been created for the Board's consideration. The plan consists of 15 goals, 25 actions, and 58 supporting actions that build upon the existing actions taken by the SCRD to address climate change and allow the SCRD to proactively identify opportunities for action that advance the community towards low carbon resilience. The actions cover governance and enabling actions, adaptation, and mitigation.

The Community Climate Action Plan outlines a holistic view of what the community needs. Nestled in this are proposed core actions that can make a difference. Six of these core actions are in areas where the SCRD has more control and three of these core actions are in areas where the SCRD can exert influence.

Many actions involve jurisdictional overlap and interplay with member municipalities, First Nations, other provincial ministries, as well as private and public groups. How to take action in these areas will be the prerogative and responsibility of each respective group.

Following adoption, next steps will be completing implementation schedules to make actions grounded and actionable as well as developing graphic material to summarize the plan and increase awareness in the community.

Regular reporting with a review in three to five years is recommended.

ATTACHMENTS

Attachment A – Draft Community Climate Change Action Plan

Reviewed by:

Manager Finance X – T. Perreault

GM X – I. Hall Legislative X – S. Reid

X – R. Rosenboom

X – S. Gagnon

A/CAO X – T. Perreault Other

⁵ Ness, Ryan, Dylan G. Clark, Julien Bourque, Dena Coffman, and Dale Beugin. 2021. Under Water: The Costs of Climate Change for Canada's Infrastructure. Canadian Institute for Climate Choices. Ottawa, ON.

Sunshine Coast Regional District Community Climate Action Plan – DRAFT

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1. Land Acknowledgement

We acknowledge with respect and gratitude that this report was produced on the shíshálh swiya and the lands of the Skwxwú7mesh Úxwumixw. The First Peoples have been here since time immemorial and their history in this area is long and rich.

The Sunshine Coast Regional District recognizes the shíshálh and Skwxwú7mesh peoples as custodians of the land in which the Regional District is located. The Regional District respectfully acknowledges the First Nations' long history of stewardship, deep knowledge, and will look for opportunities to learn and collaborate on actions and issues of mutual interest related to climate change.

2. Executive Summary

The Community Climate Action Plan (CCAP) builds on existing SCRD and community actions to address climate change and allows the SCRD to proactively identify opportunities for action that advance the community towards low carbon resilience of its social, economic, built, and natural systems.

The Community Climate Action Plan consists of 15 goals, 25 actions and 58 supporting actions. These are divided into the following themes:

- Good Governance and Enabling Actions
- Adaptation Buildings and Infrastructure
- Adaptation Drinking Water
- Adaptation Ecological Stewardship
- Adaptation Connectivity, Community Health, and Support
- Mitigation Mobility
- Mitigation Buildings
- Mitigation Carbon Dioxide Removal

Nestled in the CCAP are core actions with SCRD control or influence that can make a difference.

Core actions where the SCRD has greater control are:

- 1. Integrate climate lens into decision making and planning. (Sub-action under 1.1)
- 2. Create Resilience Action Plans for critical infrastructure (Action 4.2)
- 3. Continue to advance knowledge about climate change impacts on water supply and integrate evolving impacts of climate change into water plans. (Action 6.1)
- 4. Integrate Complete, Compact Communities principles into Official Community Plans to facilitate walking, cycling, and transit use (Sub-action under 12.1)
- 5. Increase public transit convenience and ridership (sub-action under 12.2)
- 6. Require new buildings to be more efficient and use cleaner energy (eg. by requiring adoption of higher performance steps of the BC Energy Step Code or the Zero Carbon Step Code). (subaction under 14.1).

Core actions where SCRD has greater influence are:

- 1. Develop inventory of natural assets and green infrastructure and associated level of service contribution (Sub-action under 5.1).
- 2. Review and update Official Community Plans and regulatory tools to include ecosystem health. (Sub-action under 8.2).
- 3. Support market readiness for significant scaling of renovations that improve energy efficiency. (Sub-action under 14.2).

Best practices and public participation were used in the development of the CCAP:

- The adaptation planning process was guided by the International Council for Local Environmental Initiatives (ICLEI) Canada's Building Adaptive and Resilient Communities Framework (BARC). The process was community-focused and involved a Climate Adaptation Working Group, focus group discussion, and a community questionnaire. This allowed for a collaborative co-development of the adaptation parts of the plan.
- Climate mitigation actions were built using the Community Energy Association's Climate Leaders
 Playbook. The Playbook focuses on the areas of highest impact for rapid and deep emission
 reductions that are relevant to BC communities. This framework was complemented by
 workshops with community groups as well as a community questionnaire.

In the areas where the SCRD has services and jurisdiction, actions will be detailed further in the implementation schedules and completed using base budget resources or through incremental resourcing and collaboration.

A wide range of roles exist for the SCRD where regional district service areas or jurisdiction is limited or absent. These include advocacy, collaboration, various forms of support, convening, and facilitating. Many of the proposed actions have overlap and interplay with member municipalities, First Nations, provincial ministries, as well as private and public groups. How to take action in these areas will be the prerogative and responsibility of these groups.

3. Introduction

The SCRD is fully committed to tackling the climate crisis head-on. The 2023-2027 Strategic Plan prioritizes reducing carbon impacts across all services and activities, while actively protecting, adapting, and restoring our environment, particularly our vital watersheds and aquifers.

The SCRD's dedication to this cause is evident in recent initiatives such as the adoption of a Corporate Carbon Neutrality Plan, corporate greenhouse gas emissions targets, and an ambitious Transit Future Action Plan. These actions are part of a broader societal shift necessary for rapid and substantial reductions in greenhouse gas emissions.

The Sunshine Coast is already feeling the impacts of climate change firsthand, experiencing droughts, atmospheric rivers, heatwaves, coastal flooding, and ecological damage. However, the SCRD is actively bolstering community resilience through projects like the Church Road Well Field, water metering, and Fire Smart programs.

Canada's climate is warming at twice the global average rate, highlighting the urgency of our efforts. Across the globe, climate change is wreaking havoc on communities, economies, and ecosystems. "To avoid mounting loss of life, biodiversity and infrastructure, ambitious and accelerated action is required to adapt to climate change, while at the same time making rapid, deep cuts in greenhouse gas emissions."

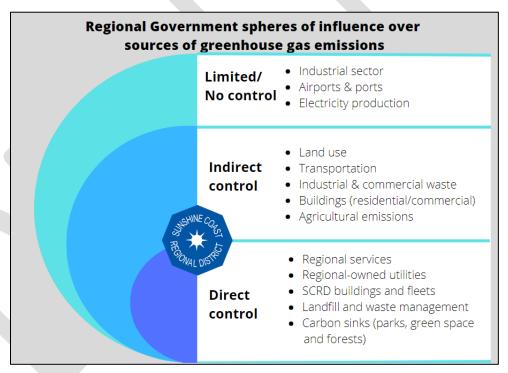
Intention of the Plan

The Community Climate Action Plan (CCAP) aims to enhance community vitality by leveraging existing efforts to combat climate change. It empowers the SCRD to proactively pinpoint opportunities for advancing the community's low-carbon resilience across social, economic, built, and natural systems.

The plan aims to assist organizations, institutions, businesses, and individuals of all backgrounds and ages in reducing carbon footprints and adapting to current and future climate-related challenges and opportunities. Developed through extensive community and government involvement, the plan reflects

community needs and will be further bolstered through ongoing engagement.

While the SCRD leads and supports the plan, some actions and risks fall outside its jurisdiction and require collaboration with other stakeholders. This shared responsibility model enhances community resilience beyond the regional government's jurisdiction.



¹ Canada's National Adaptation Strategy (2022)

https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/national-adaptation-strategy.html ² Intergovernmental Panel on Climate Change, Sixth Assessment Report. 2022. https://www.ipcc.ch/report/ar6/wg2/resources/press/press-release

4. Action Planning

Low Carbon Resilience – Embracing Mitigation and Adaptation

Addressing climate change requires a dual approach: mitigation and adaptation. Mitigation focuses on minimizing future climate changes, while adaptation helps us cope with the changes that are already happening and will continue to occur.

Low carbon resilience serves as a guiding principle to coordinate both adaptation and mitigation strategies, ensuring that actions reduce emissions and vulnerability without exacerbating each other.³ For instance, adaptation measures emitting large quantities of greenhouse gases should be avoided as they will further strain adaptive capacity.

It is crucial to understand that adaptation is not a substitute for mitigation efforts. Without rapid reductions in greenhouse gas emissions, our ability to adapt will be overwhelmed.

The effectiveness and durability of climate change actions on the Sunshine Coast depend on the extent to which they address both mitigation and adaptation. This multi-solving approach maximizes the impact of limited resources and extends to other community challenges, as many actions yield important co-benefits. As shown in Figure 1, when mitigation and adaptation overlap, the impact of limited resources are maximized.

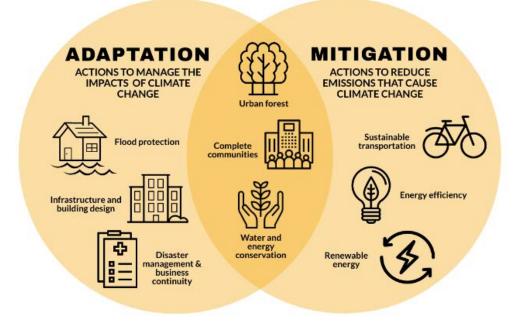


Figure 1: Overlap and Differences Between Climate Adaptation and Mitigation³

³ Simon Fraser University - Action on Climate Team; https://www.sfu.ca/act/low-carbon-resilience.html

Climate Adaptation Action Planning

The adaptation planning process was guided by ICLEI Canada's Building Adaptive and Resilient Communities Framework (BARC). The process was community-focused, convening the Climate Adaptation Working Group at multiple workshops. This allowed for a collaborative development of the adaptation plan.

The action planning process built on the climate impact and vulnerability work of the community working group. Over 250 potential actions were carefully refined and prioritized through iterative workshops and targeted interviews. A gap-analysis followed with targeted engagement culminating with a shortlist of ranked actions that are effective, feasible, acceptable, and equitable. Finally, these actions were prioritized as urgently needed or scheduled for implementation in a longer time horizon.

In parallel to this work by the core project team and the community working group, workshops with community groups were held to discuss potential actions. A community-wide questionnaire also included an adaptation section that was completed by 311 people.

Climate Mitigation Action Planning

Climate mitigation actions were built using the Community Energy Association's Climate Leaders Playbook⁴. The Climate Leaders Playbook focuses on the areas of highest impact for rapid and deep emission reductions that are relevant to BC communities. This framework was complemented by workshops with community groups.

Additionally, a community-wide questionnaire was conducted. A total of 390 people answered the climate mitigation section of the questionnaire, providing invaluable feedback on what actions are a priority, what might be missing, and how actions rank in priority against one another.

5. Vision Statement

By 2050, the Sunshine Coast has eliminated its carbon pollution and is a resilient, thriving community, where climate action has improved the quality of life for all people and ecosystems flourish.

6. Guiding Principles

<u>Social Equity</u>: Climate change impacts people differently based on factors such as their age, income and health. Vulnerable and equity-deserving groups have less adaptive capacity. Intentional change should recognize this differential impact and seek to reduce inequity in order to foster a more resilient and vibrant community.

<u>Reconciliation</u>: The Sunshine Coast Regional District is located on the unceded shishalh swiya and the lands of the Skwxwú7mesh Úxwumixw. The Regional District is guided by senior governments and takes inspiration from the United Nations Declaration on the Rights of Indigenous Peoples.

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⁴ https://www.communityenergy.ca/; https://bcclimateleaders.ca/playbook/

<u>Collaboration</u>: The Sunshine Coast is home to passionate and knowledgeable citizens and organizations. Co-creating climate action results in better outcomes. By emphasizing clarity on jurisdiction, roles, and responsibilities, the SCRD can invite synergies to accelerate actions and highlight opportunities for partners to support or lead actions towards meaningful impact.

<u>Prioritization</u>: The Sunshine Coast faces a wide range of climate impacts that will strain adaptive capacity and resources. Simultaneously, available funding for required net-zero investments is limited. Hence, prioritizing these resources on highest impact and multi-solving solutions is critical.⁵ Tools such as key performance indicators, carbon budgeting, and climate-related financial disclosure can assist in monitoring effectiveness and prioritization.

7. Themes, Goals, Actions – Climate Real, Climate Conscious, Climate Ready

Good Governance and Enabling Actions

Good governance and enabling actions are essential for building capacity and seamlessly integrating climate change considerations into daily business and decision-making processes. These actions are cross-cutting and apply across themes and goals.

Enabling actions for the SCRD primarily focus on internal processes: fostering good governance, effective planning, and robust monitoring and evaluation. These steps are pivotal for the successful implementation and sustained effectiveness of all proposed actions.

The identified actions prioritize integrating climate impacts and risks into current and future policies and directives. They also aim to enhance coast-wide knowledge sharing and collaboration opportunities, thereby increasing capacity and minimizing duplicated efforts.

| Goal 1: Integrat | Goal 1: Integrate climate action. | | |
|------------------|---|--|--|
| Action 1.1 | Bring climate lens into decision making. (see Building & Infrastructure, Drinking | | |
| | Water, as well as Ecosystem Stewardship sections for more related actions). | | |
| Sub-Actions | CORE ACTION WITH SCRD CONTROL: Integrate climate lens into decision making | | |
| | and planning. | | |
| | Understand the financial risks and opportunities for local governments from climate | | |
| | change. | | |
| SCRD's Role | SCRD will develop a climate lens, conduct internal reviews, and promote learning | | |
| | opportunities within departments and among community partners. | | |
| Action 1.2 | Set Greenhouse Gas (GHG) Goals. | | |
| Sub-Actions | Adopt a greenhouse gas targets policy. | | |
| | Keep track of progress and use that information to make decisions with tools like | | |
| | carbon budgeting and climate-related financial disclosure. | | |

⁵ E.g. 2021 Climate adaptation costs for municipal assets in Canada were estimated at \$5.3 billion per year yet available funding was only ¼ that. The Cooperators presentation by Don Iveson.

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| SCRD's Role | SCRD will facilitate a community discussion about CHC target | | |
|------------------|--|--|--|
| SCRD S Role | SCRD will facilitate a community discussion about GHG target. | | |
| Goal 2: Collabor | Goal 2: Collaborate better. | | |
| Action 2.1 | Join forces with other governments, agencies, and local groups to speed up action | | |
| | and avoid duplication. | | |
| Sub-Actions | Host and participate in dialogues to surface issues and find areas to work together. | | |
| | Facilitate collaboration opportunities on priority areas. | | |
| SCRD's Role | SCRD will convene, facilitate, and participate in various dialogues. | | |
| Goal 3: Share Kr | Goal 3: Share Knowledge | | |
| Action 3.1 | Keep the community, elected officials, and staff informed. | | |
| Sub-Actions | Share education information about climate science and know about upcoming | | |
| | educational opportunities. | | |
| | Provide opportunities for Sunshine Coasters to act. | | |
| SCRD's Role | SCRD will spread climate information through its communication channels. | | |

Adaptation - Buildings and Infrastructure

The built environment, including roads, power systems, and buildings, faces climate risks. The SCRD will team up with stakeholders to pinpoint vulnerable infrastructure and boost community resilience.

Traditional infrastructure such as buildings, roads, bridges, pipes, and power lines are not the only systems at risk from climate change impacts. The SCRD will also consider natural assets like forests and waterways to tackle emissions and enhance quality of life for Sunshine Coast residents.

These strategies will bring together local and regional partners, pinpoint vulnerable infrastructure, and equip governments with tools to protect both man-made and natural assets from climate impacts.

| Goal 4: Ensure Buildings and Infrastructure are climate resilient. | | |
|--|---|--|
| Action 4.1 | Develop a robust understanding of climate risks and adaptation framework for infrastructure. | |
| Sub-Actions | Work with local and regional partners to develop agreed upon risk tolerances and adaptation frameworks. | |
| | Conduct coastal floodplain mapping. | |
| | Expand knowledge of extreme weather risks (including atmospheric rivers, wildfires, and heat domes). | |
| | Continue expanding Fire Smart programming. | |
| Mitigation Co- | Some adaptation measures, such as air conditioning, may increase energy demand. | |
| benefit | Efficiency and renewable energy must play a role in meeting future energy demand. | |
| | Additionally, a better understanding of climate risks can ensure mitigation measures | |
| | such as trails are more resilient. | |
| SCRD's Role | SCRD will collaborate with partners on developing frameworks and knowledge. | |
| Action 4.2 | CORE ACTION WITH SCRD CONTROL: Create Resilience Action Plans for critical | |
| | infrastructure. | |
| Sub-Actions | Identify vulnerable infrastructure and develop adaptation strategies in collaboration | |
| | with partners. | |
| | Prioritize and integrate adaptation measures into asset management plans. | |

| | Continue expanding Fire Smart program. |
|---------------------------|---|
| Mitigation Co- | Improving infrastructure can be done in a way that supports reduction of GHG |
| benefit | emissions. |
| SCRD's Role | SCRD will pro-actively work on its own assets and facilitate knowledge sharing to |
| | reduce duplication of effort. |
| Action 4.3 | Enhance Stormwater Management. |
| Sub-Actions | Assess current capacity of stormwater infrastructure (e.g. culverts) to withstand |
| | projected more intense storms. |
| | Integrate stormwater management at the site level through zoning bylaw |
| | amendments and the Development Permit Approvals Process. |
| | Participate in provincial initiatives to enhance stormwater adaptive capacity. |
| Mitigation Co- benefit | Carbon sequestration co-benefits exist when nature-based solutions are used. |
| SCRD's Role | The SCRD will facilitate, and participate in relevant initiatives supporting local |
| | interests. |
| Goal 5: Integrat | e Natural Assets into Climate Adaptation. |
| Action 5.1 | Develop Natural Assets Inventory and management plans. |
| Sub-Actions | CORE ACTION WITH SCRD INFLUENCE: Develop inventory of natural assets and |
| | green infrastructure and level of service contribution. |
| | Collaborate with Town of Gibsons to build on existing natural asset program. |
| | Develop management plans for critical natural assets. |
| Mitigation Co- | Natural assets can contribute carbon sequestration. |
| benefits | |
| SCRD's Role | SCRD will Partner with leaders and focus on relevant natural assets for SCRD services. |
| Action 5.2 | Promote Low Impact Development Strategies for stormwater management. |
| Sub-Actions | Target under-utilized sites for non-permeable surface conversion and vegetative swales. |
| | Incorporate site-specific low impact development through regulatory tools and |
| | incentive programs. |
| Mitigation Co- | Natural assets can contribute carbon sequestration. |
| benefits | |
| SCRD's Role | SCRD will apply regulatory tools and co-develop projects within its jurisdiction. |
| Action 5.3 | Implement green shores programming. |
| Mitigation Co- | Natural assets can contribute carbon sequestration. |
| benefits | |
| SCRD's Role | SCRD will support programming and determine applicability on SCRD's coastal properties. |

Adaptation - Drinking Water

The Sunshine Coast is already witnessing how climate change is worsening summer droughts. Seven (and almost eight) of the last 12 summers had less rain than worse-case scenarios predict for 2050 under climate change. Threshold events may have already been crossed where non-linear changes are to be expected. This means planning for gradual changes may no longer be adequate.

The following actions seek to build understanding of how climate change will impact our water systems so that they can become more resilient. With impacts already being felt, there is a need to support efforts already underway with water users and operators.

| Goal 6: Ensure resilient water systems. | | |
|---|---|--|
| Action 6.1 | CORE ACTION WITH SCRD CONTROL: Continue to advance knowledge about | |
| | climate change impacts on water supply and integrate evolving impacts of climate | |
| | change into water plans. | |
| Mitigation Co- | N/A | |
| benefits | | |
| SCRD's Role | SCRD will conduct internal reviews, initiate appropriate technical assessments, and | |
| | foster learning opportunities within departments and amongst partners. | |
| Action 6.2 | Foster resilience and diversification of water supply for agriculture and other | |
| | water-dependent activities. | |
| Sub-Actions | Facilitate collaboration for knowledge sharing and alternative water source | |
| | development. | |
| | Promote rainwater harvesting and water conservation. | |
| | Support adoption of gray water systems in larger buildings. | |
| Mitigation Co- | N/A | |
| benefits | | |
| SCRD's Role | SCRD will raise awareness and foster collaboration. | |

Adaptation - Ecological Stewardship

The natural environment not only provides Sunshine Coasters with clean air and water, green spaces, and places to explore, it is also the front-line defense against the impacts of climate change such as extreme heat, flooding, and drought. All the while, it is a crucial carbon sink.

Natural spaces are also vital for the Sunshine Coast's biodiversity, where every life form holds value and deserves to thrive. Intensifying climate change increases stressors on all forms of life.

The actions outlined below aim to unite local and regional partners to protect and enhance ecosystem health, sustain biodiversity, support restoration efforts, safeguard endangered species, and preserve the natural environment.

| Goal 7: Improve SCRD's Role in Protecting Ecosystems | | | |
|--|--|--|--|
| Action 7.1 | Integrate ecological conservation and restoration into daily operations across | | |
| | SCRD departments such as Bylaw Services, Planning, Parks, and Utility Services. | | |
| Sub-Actions | Integrate conservation and restoration initiatives into planning, bylaw, parks | | |
| | Development Permit Approvals and regulatory processes. | | |
| | Promote innovative policies and practices to enhance watershed sustainability and | | |
| | drinking water source protection. | | |
| | Assess service levels to inform opportunities to integrate ecological resilience and | | |
| | conservation efforts. | | |

| Mitigation Co- benefits | Enhance carbon sinks and sequestration. |
|----------------------------|---|
| SCRD's Role | SCRD will review and prioritize opportunities, costs, and timing internally. |
| Goal 8: Enhance | Biodiversity and Ecosystem Health |
| Action 8.1 | Support ecosystem health monitoring and biodiversity protection mechanisms. |
| Sub-Actions | Collaborate with community groups and provincial partners for data collection and analysis. |
| | Use coastal floodplain mapping to inform coastal revitalization and sea level rise resilience. |
| Mitigation Co- benefits | Enhance carbon sinks and sequestration. |
| SCRD's Role | SCRD will increase transparency of ecological data and facilitate collaboration. |
| Action 8.2 | Develop programs and tools to promote ecological resilience and biodiversity. |
| Sub-Actions | Develop Biodiversity Strategy building on previous work. |
| | CORE ACTION WITH SCRD INFLUENCE: Review and update Official Community Plans and regulatory tools to include ecosystem health. |
| | Support shíshálh and Skwxwu7mesh Nations, Átl'ka7tsem / Howe Sound Biosphere Region, Provincial partners, and community groups such as Sunshine Coast Conservation Association and Loon Foundation in biodiversity protection work. |
| Mitigation Co- benefits | Enhance carbon sinks and sequestration. |
| SCRD's Role | SCRD will participate in regional initiatives and review community plans and related tools. |

Adaptation – Connectivity, Community Health, and Support

Climate change will significantly affect Canadians' health and well-being, bringing hazards like extreme heat, poor air and water quality, and mental health challenges. Additionally, recurring extreme weather events and property damage could lead to increased climate violence.

Sunshine Coast residents will not all feel these impacts equally. Those most vulnerable, especially due to racial, age, economic, social, and gender disparities, will suffer more, and sooner. The strategies outlined here will boost community resilience, enhance social support, and provide resources to equity-deserving communities.

| Goal 9: Foster Community Connection and Preparedness for Climate Change | | |
|---|--|--|
| Action 9.1 | Support and expand existing initiatives that increase community connectedness | |
| | and resilience at the neighborhood level. | |
| Sub-Actions | Support 'Know your Neighbor' campaigns that increase social ties and | |
| | preparedness. | |
| | Facilitate knowledge-sharing among neighborhoods to monitor and enhance social | |
| | support systems. | |
| Mitigation Co- | N/A | |
| benefit | | |
| SCRD's Role | SCRD will conduct outreach and facilitate community events. | |
| Goal 10: Enhance Community Resilience to Extreme Weather | | |

| Action 10.1 | Improve access to cooling and clean air centres and resources |
|---------------------------|--|
| Sub-Actions | Collaborate with health authorities and local partners to respond effectively to |
| | extreme heat and poor air quality. |
| | Assist outdoor workers with plans for heat and air quality emergencies. |
| | Expand emergency shelter access through local organizations. |
| Mitigation Co- benefit | Could increase demand for energy. |
| SCRD's Role | SCRD will lead internal process development and develop an Extreme Heat Emergency Response Plan. |
| Goal 11: Suppor | t Equity-Deserving Groups in Climate Adaptation |
| Action 11.1 | Implement programs to assist equity-deserving groups with adaptation |
| Sub-Actions | Collaborate with local organizations to identify needs and solutions. |
| | Address resource constraints to support equity-deserving populations. |
| Mitigation Co- | Building retrofits can lead to energy efficiency and increase in renewable energy. |
| benefit | |
| SCRD's Role | SCRD will participate and offer support as needed and able. |
| Action 11.2 | Develop climate anxiety programs for youth and elders. |
| Sub-Actions | Support school programs on climate education. |
| | Promote best practices on eco-anxiety research, including providing youth action opportunities. |
| Mitigation Co- benefit | Could lead to actions that are mitigation focused. |
| SCRD's Role | SCRD will promote existing and emerging programs and research. |

Mitigation – Mobility

Transportation accounts for 48% of greenhouse gas emissions produced on the Sunshine Coast.

Decreasing reliance on private vehicles will reduce emissions. Currently, only 15% of trips on the Sunshine Coast are made by walking, biking, or transit, but BC aims to increase this to 30% by 2030. Promoting transit, walking, and biking benefits the whole community, especially non-drivers, with better health and cost-savings.

Downsizing vehicles and switching to low and zero-emission vehicles (ZEVs) are other key actions. With a growing number of affordable models and BC's renewable energy sources, ZEVs are a viable option. By 2035, all new light-duty vehicles, including SUVs and light trucks, will be zero-emission, as mandated by provincial and federal laws.

| Goal 12: Shift beyond the car – 30% of trips made by walking, biking, or transit by 2030 (BC's Roadmap to 2030) | | |
|---|--|--|
| Action 12.1 | Expand active transportation programs and networks. | |
| Supporting Actions | CORE ACTION WITH SCRD CONTROL: Integrate Complete, Compact Communities principles into Official Community Plans to facilitate walking and cycling. | |

| | Develop safe routes within neighbourhood and between Gibsons and Sechelt, including bike lakes and greenway corridors. | |
|---------------------------|---|--|
| | Maintain and enhance active transportation infrastructure, accommodating e-bikes and micro-mobility. | |
| Adaptation Co- benefit | Diverse transportation options increase resilience, providing alternative routes during road damage. | |
| SCRD's Role | SCRD will update its Official Community Plans and collaborate with partners to advance plans and infrastructure improvements. | |
| Action 12.2 | Expand public transit, right sizing, carsharing, and carpooling. | |
| Supporting Actions | CORE ACTION WITH SCRD CONTROL: Increase public transit convenience and ridership. | |
| | Promote smaller, energy-efficient vehicles and car-sharing programs, including incentivizing developers to fund vehicles. | |
| Adaptation Co- benefit | Transit services can support mobility during extreme weather events, enhancing community access to essential services. | |
| SCRD's Role | SCRD will continue to implement Transit Future Action Plan and promote transit- oriented development. | |
| • | Transportation (Federal target: 100% of small vehicles, SUVs, and light trucks sales vehicles by 2035). | |
| Action 13.1 | Support the rapid adoption of zero-emission vehicles and electric vehicle charging stations. | |
| Supporting Actions | Require all new residential and commercial buildings are ready to accommodate charging stations. | |
| | Encourage public EV station installation and maintenance by sharing incentives and policy models. | |
| Adaptation Co- benefit | Electrification reduces air pollution, benefiting public health. | |
| SCRD's Role | SCRD will work to electrify its own fleet, evaluate policies it can implement, and play a support role for information sharing. | |
| | | |

Mitigation – Buildings

Buildings account for 15% of Sunshine Coast GHG emissions. Emissions are influenced by energy type and building design efficiency.

BC's Energy Step Code aims for net-zero-ready construction by 2032 with Step 4 coming online in 2027. Local governments can also adopt the Zero Carbon Step Code to require cleaner electricity be used.⁶

By 2032, existing buildings will still dominate the housing stock. Finding ways to best retrofit these homes will enhance comfort, reduced emissions, and can reduce costs. Actions include electrifying heating and cooling, improving airtightness, and adding insulation. Many older buildings require upgrades to their electrical connection.

Sustainability of building and renovating can be improved by choosing low-carbon materials with lower toxicity as well as enabling material recovery at end-of-life.

| Goal 14: Promote Efficient and Zero-Emission Buildings | | | |
|--|--|--|--|
| Action 14.1 | Support the construction of better new buildings. | | |
| Supporting Actions | CORE ACTION WITH SCRD CONTROL: Require new buildings to be more efficient and use cleaner energy (e.g. by requiring adoption of higher performance steps of the BC Energy Step Code or the Zero Carbon Step Code). | | |
| | Collaborate with Provincial Government and local construction sector to promote market readiness. | | |
| | Incentive and promote low-carbon building material. | | |
| Adaptation Co- benefit | Buildings can be more resilient to climate impacts such as heat waves and drought. Fire Smart and ecological resilience can be co-benefits if made explicit. | | |
| SCRD's Role | SCRD will promote market readiness and preparedness as it readies for implementation of better efficiency and zero carbon regulations. | | |
| Action 14.2 | Support better existing buildings. | | |
| Supporting Actions | CORE ACTION WITH SCRD INFLUENCE: Support market readiness for significant scaling of renovations that improve energy efficiency. | | |
| | Promote senior government or third party building energy labeling and benchmarking for better transparency. | | |
| Adaptation Co- benefit | Buildings can be more resilient to climate impacts such as heat waves and drought. Fire Smart and ecological resilience can be co-benefits if made explicit. | | |
| SCRD's Role | SCRD will facilitate and promote policy collaboration with local municipalities and inform the community of opportunities. | | |

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⁶ As of January 2024, 22 local governments have adopted the Zero Carbon Step Code, representing an estimated 44% of new residential multi-family buildings and 30% of small residential buildings. https://energystepcode.ca/implementation_updates/

Mitigation – Carbon Dioxide Removal

Carbon Dioxide Removal plays a critical role in "all modelled scenarios that limit global warming to 2°C by 2100." It encompasses all practices and technologies that remove carbon dioxide gases from the atmosphere and durably stores them in soils, structures, or geological formations. Some methods are well understood while others are still at an early stage of technological maturity.

| Goal 15: The importance of Carbon Dioxide Removal is widely understood and incorporated into planning. | | | |
|--|--|--|--|
| Action 15.1 | Promote awareness and understanding of Carbon Dioxide Removal | | |
| Supporting Actions | Share educational information on Carbon Dioxide Removal options such as regenerative agriculture, reforestation, improved forest management, building with wood, Direct Air Carbon Capture, and blue carbon management through wetland revegetation. | | |
| | Support tools for quantifying impacts of Carbon Dioxide Removal benefits and costs. | | |
| | Support pilot projects to expand Carbon Dioxide Removal projects on the Sunshine Coast. | | |
| Adaptation Co- benefit | In some areas, such as forests, agriculture, and wetlands, carbon dioxide removal can function alongside adaptation activities. | | |
| SCRD's Role | SCRD will integrate Carbon Dioxide Removal into its climate lens and support initiatives that relate to its services. | | |

8. Monitoring

This CCAP aims to help SCRD and local partners reduce greenhouse gas emissions and prepare for the impacts of climate change. A strong focus on implementation and monitoring will be essential to the Plan's success. All the while, keeping an eye on evolving laws, funding opportunities, technological advances will influence when and how the actions identified in this plan are implemented.

Regular monitoring and review are crucial for climate action. It fosters learning, adapting to change, and improves planning for the future. By tracking progress, the effectiveness of actions can be evaluated, and successes shared. Given how quickly things are changing, a review of CCAP is proposed in three years with annual updates on implementation progress.

Monitoring will be structured around sustainability indicators. These indicators will be detailed in the implementation schedules for actions. They will provide insights on GHG emission trends and community resilience.

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⁷ Intergovernmental Pannel on Climate Change, Carbon Dioxide Removal Factsheet. (2022). https://www.ipcc.ch/report/ar6/wg3/downloads/outreach/IPCC AR6 WGIII Factsheet CDR.pdf

9. Conclusion

The SCRD is fully committed to tackling the climate crisis head-on. In our 2023-2027 Strategic Plan, we prioritize reducing carbon impacts across all services and activities, while actively protecting, adapting, and restoring our environment, particularly our vital watersheds and aquifers.

This Community Climate Action Plan takes a comprehensive approach, blending adaptation and mitigation efforts through a low carbon resilience lens. It recognizes that addressing climate change requires tackling both reducing emissions and preparing for its impacts. This means ensuring actions don't worsen one problem while trying to solve another. A multi-solving approach built on partnerships will maximize co-benefit will ensure limited resources can achieve the highest value.

The plan outlines 15 goals, 25 actions, and 58 supporting actions, reflecting the Sunshine Coast's vision for a resilient future. It leverages existing efforts by the Sunshine Coast Regional District and aims to engage the entire community in reducing carbon footprints and adapting to climate risks.

While the SCRD spearheads the plan, some actions require collaboration with other stakeholders. Implementation schedules, including monitoring metrics, will be developed to track progress and inform annual updates and a formal review in three years. These schedules will evolve to keep pace with changing priorities and challenges.

10. Previous Work

- Climate Projections Report:
 - a. Summary: https://letstalk.scrd.ca/27980/widgets/122615/documents/81468
 - b. Full Report: https://letstalk.scrd.ca/27980/widgets/122615/documents/81762
- 2. Climate Risk and Vulnerability Assessment
 - a. Summary: https://letstalk.scrd.ca/27980/widgets/122615/documents/82678
 - b. Full Report: https://letstalk.scrd.ca/27980/widgets/122615/documents/81765
- 3. Community Greenhouse Gas Emissions Inventory (2019)
 - a. Summary: https://letstalk.scrd.ca/27980/widgets/122615/documents/81704
 - b. Full Report: https://letstalk.scrd.ca/27980/widgets/122615/documents/82736

11. Acknowledgements

The project team would like to thank all those who contributed to the making of this plan. Your contributions are invaluable as we move the Sunshine Coast towards low carbon resilience.

Special thanks are especially due to:

ICLEI Canada partners, in particular Ewa Jackson, Robert Wilson, and Josh Padolsky.

Daniel Hegg of Stantec for his support on the Community Emissions Inventory.

A special thanks to the Climate Adaptation Working Group (CAWG)

| Organization/Department | Member |
|---|-----------------------------|
| SCRD, Sustainable Development | Raphael Shay (Project Lead) |
| SCRD, Parks | Sam Adams |
| SCRD, Planning | Julie Clark |
| SCRD, Purchasing and Risk Management | Val Cropp |
| SCRD, Asset Management | Kyle Doyle |
| SCRD, Strategic Initiatives | Mia Edbrooke |
| SCRD, Protective Services | Jordan Pratt |
| SCRD, Emergency Management Program | Nancy Hughes |
| SCRD, Parks | Jessica Huntington |
| SCRD, Facilities | Allen van Velzen |
| SCRD, Utilities | Shane Walkey |
| SCRD, Strategic Initiatives | Alana Wittman |
| Ministry of Transportation and Infrastructure | Michael Braun |
| Vancouver Coastal Health | Craig Brown |
| Vancouver Coastal Health | Laura Chow |
| Vancouver Coastal Health | Sally McBride |
| Sunshine Coast Resource Centre | Katie Clogg |
| BC Parks | Rod Dalziel |
| School District 46 | Jenny Groves |
| Sechelt Chamber of Commerce | John Henderson |
| Sechelt Chamber of Commerce | Ryan Staley |
| Loon Foundation | Michael Jackson |
| BC Hydro | Mabel Lai |
| District of Sechelt | Meghan Lee |
| Town of Gibsons | Michelle Lewis |
| Gibsons Chamber of Commerce | Doug Marteinson |
| Skwxwú7mesh Nation | Renata Rovelo |
| Sunshine Coast Conservation Association | Suzanne Senger |
| Átl'ka7tsem / Howe Sound Biosphere Region Society | Ruth Simons |
| Pender Harbour Chamber of Commerce | Annelise Sorg |
| Town of Gibsons | Lesley-Ann Staats |
| Skwxwú7mesh Nation | Julia Stafford |
| Sunshine Coast Regional Economic Development Organization | Colin Stansfield |
| District of Sechelt | Marina Stjepovic |
| shíshálh Nation | Jesse Waldorf |
| Átl'ka7tsem / Howe Sound Biosphere Region Society | lan Winn |
| Sunshine Coast Tourism | Annie Wise |

Thank you to participants in the focus groups, including the SCRD's Advisory Planning Committees, the SCRD's Transportation Roundtable, The Sunshine Coast Climate Action Network, Chatelech Secondary School - David Teichrob's grade 12 Environmental Science Class, Transportation Choices Sunshine Coast, and the 390 people who responded to the Let's Talk Climate questionnaire.

The SCRD is interested in continuing to hear from others and thanks all those who have expressed interest in participating in the continued development and implementation of this plan.

12. Glossary

Adaptation: Includes any initiatives or actions in response to actual or projected climate change impacts and which reduce the effects of climate change on built, natural, and social systems.

Adaptive Capacity: The ability of built, natural and social systems to adjust to climate change (including climate variability and extremes), to moderate potential damage, to take advantage of opportunities, or to cope with the consequences.

Climate: The weather of a place averaged over a period of time, often 30 years. Climate information includes the statistical weather information that tells us about the normal weather, as well as the range of weather extremes for a location.

Climate Change: Climate change refers to changes in long-term weather patterns caused by natural phenomena and human activities that alter the chemical composition of the atmosphere through the build-up of greenhouse gases which trap heat and reflect it back to the earth's surface.

Climate Impact: The effects of existing or forecast changes in climate on built, natural, and human systems. One can distinguish between potential impacts (impacts that may occur given a projected change in climate, without considering adaptation) and residual impacts (impacts of climate change that would occur after adaptation).

Climate Projections: Climate projections are a projection of the response of the climate system to emissions or concentration scenarios of greenhouse gases and aerosols. These projections depend upon the climate change (or emission) scenario used, which are based on assumptions concerning future socioeconomic and technological developments that may or may not be realized and are therefore subject to uncertainty.

Equity-deserving: communities that experience significant collective barriers in participating in society. This could include attitudinal, historic, social, and environmental barriers based on age, ethnicity, disability, economic status, gender, nationality, race, sexual orientation and transgender status, etc. Equity-seeking groups are those that identify barriers to equal access, opportunities and resources due to disadvantage and discrimination and actively seek social justice and reparation. By using the word "deserving", the burden of change is shared with those in society that have power.

Extreme Weather Event: A meteorological event that is rare at a place and time of year, such as an intense storm, tornado, hailstorm, flood, or heat wave, and is beyond the normal range of activity. An extreme weather event would normally occur very rarely or fall into the tenth percentile of probability.

Greenhouse Gas (GHG) Emissions: Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of thermal infrared radiation, emitted by the Earth's surface, the atmosphere itself, and by clouds. Water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), ozone (O_3), and chlorofluorocarbons (CFCs) are the six primary greenhouse gases in the Earth's atmosphere in order of abundance.

Mitigation: The promotion of policy, regulatory and project-based measures that contribute to the stabilization or reduction of greenhouse gas concentrations in the atmosphere. Renewable energy programs, energy efficiency frameworks and substitution of fossil fuels are examples of climate change mitigation measures.

Resilience: The capacity of a system, community or society exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure.

Risk: The combination of the likelihood of an event occurring and its negative consequences. Risk can be expressed as a function where Risk = *likelihood x consequence*. In this case, *likelihood* refers to the probability of a projected impact occurring, and *consequence* refers to the known or estimated outcomes of a particular climate change impact.

Sensitivity: Measures the degree to which the community will be affected when exposed to a climate-related impact. Sensitivity reflects the ability of the community to function (functionality) as normal when an impact occurs.

Vulnerability: Vulnerability refers to the susceptibility of the community to harm arising from climate change impacts. It is a function of a community's sensitivity to climate change and its capacity to adapt to climate change impacts.

Weather: The day-to-day state of the atmosphere, and its short-term variation in minutes to weeks.

Appendix A - Policy Context Summary

International Policy Direction

The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) is the UN institution tasked with assessing the scientific basis of climate change, its impacts and potential future risks, and potential response options. In its Sixth Assessment Report (AR6), released in 2022, the IPCC declared with certainty the widespread impact of human-caused climatic changes. The report stated:

"Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt".8

The most urgent report to date, the AR6 Report states that even with major reductions of GHG emissions in the short-term there is greater than a 50% likelihood that global warming will reach or exceed 1.5°C in the near term. According to the report, "every increment of global warming will intensify multiple and concurrent hazards" and "climatic and non-climatic risks will increasingly interact, creating compound and cascading risks that are more complex and difficult to manage". The level of risk will depend on concurrent near-term trends in vulnerability, exposure, level of socioeconomic development, and adaptation." Now more than ever, it is crucial that cities implement comprehensive, effective, and innovative responses between adaptation and mitigation efforts to advance sustainable development and to capitalize on the co-benefits these strategies can provide. ¹⁰

Federal Policy Direction

Canada was one of 195 countries to sign the Paris Agreement in December 2015. The Agreement aims to keep the global temperature to well below 2°C degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5°C above pre-industrial levels. In terms of adaptation, the Agreement has a goal to enhance adaptive capacity, strengthen resilience and reduce vulnerability to global climate change, in line with the temperature goal. Canada has internalized this agreement through Canada's 2030 Emissions Reduction Plan and several supporting programs.

In addition to signing onto the Paris Climate Agreement, the Government of Canada recently released the National Adaptation Strategy outlining actions, objectives, and long-term transformational goals to increase Canada's resiliency to climate change. Following four guiding principles, including respecting

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⁸ Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability Summary for Policy Makers. https://www.ipcc.ch/report/ar6/wg2/resources/spm-headline-statements/

⁹ Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability Summary for Policy Makers. https://www.ipcc.ch/report/ar6/wg2/resources/spm-headline-statements/

¹⁰ Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability Summary for Policy Makers. https://www.ipcc.ch/report/ar6/wg2/resources/spm-headline-statements/

jurisdictions and upholding Indigenous rights, advancing equity and environmental justice, proactive risk-based actions, and maximizing benefits and avoiding maladaptation, the Strategy identifies five 'key systems' to approach climate change adaptation action:

- Disaster resilience
- Health and wellbeing
- Nature and biodiversity
- Infrastructure
- Economy and workers

The Strategy affirms that reducing the impacts of climate change requires collaboration, coordination, and ambition at all levels of government, sets out clear priorities and shared goals to support existing efforts, and identifies new opportunities for actors, both big and small, to bolster adaptation efforts in their communities. It recognizes the important role that municipalities, institutions, businesses, and individuals play in adapting to a changing climate, and provides case study examples of implemented adaptation efforts to spur local action and the metrics necessary to monitor their impact.

Provincial Policy Direction

The B.C. Climate Leadership Plan outlines actions to meet its 2050 emissions reductions target of 80% below 2007 levels. Amongst these actions are reducing natural gas dependency and emissions reductions in the transportation industry, the rehabilitation of forests and the improved performance of B.C. farms, supporting communities in the promotion of more energy efficient buildings and waste reduction, the advancement of a green economy and job growth while transitioning to 100% energy utilities, and the development of strategies to reduce emissions in B.C.'s public sector.

B.C.'s Climate Preparedness and Adaptation Strategy identifies key climate related risks, including severe wildfires, seasonal and long-term water shortages, heat waves, ocean acidification, glacier mass loss, as well as severe river and coastal storm surge flooding. The Strategy also sets forth a host of actions across four key pathways:

- 1. Foundations for success
- 2. Safe and healthy communities
- 3. Resilient species and ecosystems
- 4. Climate-ready economy and infrastructure

The Strategy seeks to improve access to data and training that supports Indigenous Nations and local governments while centering traditional knowledges Indigenous priorities in how we understand climate impacts and make decisions. The Strategy develops actions to prepare communities for the impacts of extreme weather events such as wildfires, flooding, and extreme heat through floodplain mapping, wildfire prevention, and emergency preparedness frameworks. Actions to enhance species and ecosystems include protecting and restoring watersheds, reducing ecosystem change, and mitigating coastal deterioration and ocean acidification. Further the Strategy seeks to support key industries to maintain a resilient economy and strengthen transportation and building infrastructure from the impacts of climate change.