

CLIMATE PREPAREDNESS AND ADAPTATION STRATEGY VIRTUAL ENGAGEMENT

Summary Report: July 14, 2020

Industry and Professional Associations

Context and Introduction

Through CleanBC, the Government of British Columbia has committed to releasing a **climate preparedness and adaptation strategy** in late 2020. Within the context of the ongoing COVID-19 pandemic and with support from SFU's Morris J. Wosk Centre for Dialogue (the Centre), the B.C. Climate Action Secretariat (CAS) is hosting a series of targeted workshops with external partners, including: young leaders, federal partners, academic and non-governmental organizations, local governments, industry and professional associations, and equity groups. This engagement process is designed to inform the strategy by encouraging dialogue and collecting partner input on possible thematic actions under consideration.

On July 14 2020, industry and professional association representatives participated in an online workshop. **This report summarizes the workshop discussions of 32 participants and 4 exit survey responses** and is independently prepared by the Centre. This report does not provide a representation of general public opinion on climate preparedness and adaptation, that of a randomly selected population sample, nor the opinions of CAS or the Centre. This report will be shared with CAS and workshop participants.

After a presentation and Q&A session, participants joined small breakout groups, along with a facilitator, notetaker, as well as representatives from CAS and various ministries. Each breakout group corresponded to a specific thematic area in the proposed Strategy and participants were assigned based on their thematic preferences.

During the breakout discussion, participants were asked to discuss two key questions:

- 1. What are the priority actions that the provincial government should take? What criteria should government use to prioritize actions?**
- 2. How can we build capacity in BC's economic sectors to better understand and manage climate related risks and position BC's industries as leaders in climate resilience?**

Priority actions per thematic area

Workshop participants were grouped into four breakout groups. One group discussed Theme 4 and the remaining three groups discussed Theme 5:

- Theme 4: Sustaining natural resources, species and ecosystems
- Theme 5: Building resilience into our economy and infrastructure

Participant input on proposed actions

Thematic Area	Participant input on proposed actions
<p>Theme 4: Sustaining natural resources, species and ecosystems</p> <p><i>data from breakout discussion and exit survey</i></p>	<p>There was support amongst the majority of breakout participants on the following points:</p> <ul style="list-style-type: none"> • We can achieve both the protection of ecosystems and a stable economy by prioritizing a symbiotic approach that acknowledges the relationships between these systems. <ul style="list-style-type: none"> ▪ The current potential actions are missing the link to economic activity. ▪ Establish baseline data in order to inform future plans (e.g. historical sampling of stock assessment for fish harvest). ▪ Conservation efforts need to be enhanced. • Increase awareness about adaptation, preparedness and the climate impacts currently affecting people through effective communication. <ul style="list-style-type: none"> ▪ There is still limited public understanding of climate change impacts, despite 30+ years of work. This may be due to how science is communicated or the use and abuse of climate science. ▪ <i>“We are lucky to have an organization like the climate change consortium in BC,”</i> we need to capitalize on the data it provides. ▪ Peoples’ direct experience helps them understand climate risks (e.g. Williams Lake fire). <ul style="list-style-type: none"> ◆ Rural communities and the forestry sector are thinking about climate change at the individual level because they know, from experience, that wildfire, flooding etc. can affect anyone at any time. ◆ It is important for communities (including Indigenous communities) to ensure their environments can sustain life for both themselves and future generations. ◆ <i>“Since communication is an on-going challenge, I hope that with this work, we can bust some myths. More than ever before... people are seeing that climate change is something that is happening now and not something of the future.”</i> ▪ People do not understand the meaning of ‘species at risk’ nor the drivers of difficult animal interactions (e.g. bears and urban encroachment) • Technology presents an opportunity for innovation (e.g. harvesting rain), job creation and increased provincial revenue. <ul style="list-style-type: none"> ▪ Technology can also play a role in planning through: <ul style="list-style-type: none"> ◆ Modeling and research. ◆ Providing platforms that allow for integrated, landscape level planning. <p>Breakout participants also discussed:</p> <ul style="list-style-type: none"> • Land-use impacts different industries, conservation and adaptation efforts, for example:

	<ul style="list-style-type: none"> ▪ Increased land valuation across land use categories would be helpful (e.g. can inform policies to limit urban sprawl on agricultural land, which is risking food supply). ▪ Invest in existing parkland. ▪ Forest adaptation is an important consideration. ▪ Water management is a key component of adaptation (e.g. what we do to the landscape, how we store and manage water). <p>Other participant comments included:</p> <ul style="list-style-type: none"> • Government should incorporate climate change resilience into all its plans and investments. • <i>“What is it about government that they don’t follow the science? They run on 4-year cycles but climate change is a much bigger investment.”</i> • Focus on a few initiatives and areas that can actually be implemented rather than watering down the strategy through broad/general efforts: <i>“knowing how stressed government resources are, you need to have a harder headed analysis of what will actually make a bit of difference.”</i> • <i>“Unlike some other themes this is one where the province has primary jurisdiction [alongside Indigenous Nations]. You need to show greater ‘leadership’ and less ‘facilitation.’”</i> • <i>“Natural resource and biodiversity conservation officer positions could to be created. Linkages with research, industry and academic communities could be created.”</i>
<p>Theme 5: Building resilience into our economy and infrastructure</p> <p>Group A</p> <p><i>data from breakout discussion and exit survey</i></p>	<p>There was support amongst the majority of breakout participants on the following points:</p> <ul style="list-style-type: none"> • Water is a key issue that unifies BC’s multisectoral society (i.e. agriculture, forest, transportation, etc.) and can be an entry point for cross-sectoral collaboration. <ul style="list-style-type: none"> ▪ Prioritize Action 5.2 (working with agriculture sector) because it deepens our understanding of the relationship between agriculture and water. ▪ Focus on water infrastructure to guarantee sustainable water sources (acute needs should be prioritized while long-term solutions are developed). ▪ There seems to be a lack of public awareness about the severity of this issue. ▪ Tidal water is a unifying economic issue for sectors reliant on ports for export. • The COVID-19 response compliments many actions that build climate resilience. <ul style="list-style-type: none"> ▪ What are some of the transformational approaches to the pandemic from which we can springboard? ▪ People are currently concerned about many intersecting challenges (social justice, climate justice, COVID-19 etc.). As a result, prioritizing actions that have co-benefits is important. • Consider the financial impacts of long-term transitional risks (impacts on asset values, cost of production etc. due to changes in policy, regulations or market drivers) as well as physical climate risks. <ul style="list-style-type: none"> ▪ Ensuring economic and financial stability through climate change is dependent on a number of factors and needs to be a priority (factors include

the speed at which impacts are felt, the variety of energy sources developed etc.).

Breakout participants also discussed:

- Prioritization will be a balancing act. Models will show the tradeoffs that inform public policy decisions and, like with COVID-19, the overall financial impacts/consequences of climate change will only be fully understood after the fact.
- Incorporating investment into the strategy:
 - The financial risks (e.g. investment risk) of climate change needs to be addressed collectively. If not, underwriters and insurance companies may make economic growth difficult (e.g. challenges getting a loan due to climate uncertainty).
 - The province needs to invest in infrastructure (e.g. investment needs for transportation are higher than current funding levels).
- There is opportunity for synergies with current parallel processes:
 - Upcoming report highlighting challenges, actions and programs that Engineers and Geoscientists BC can offer.
 - Well-documented ongoing work with the agricultural sector, from which priorities can be extracted.
- Diversify and expand our energy system to ensure consistent power for economic development: *“we are lucky to have a multi-pronged energy system.”*

Criteria for prioritization:

- Financing.
- Prioritize solutions that have multiple co-benefits (including integrating climate resilience into COVID -19 responses).
- Prioritize solutions with co-benefits that support disadvantaged communities (e.g. adaptation actions that prevent gentrification).
- In order to provide feedback (and understand impacts of potential regulations stemming from this strategy on our sectors), a timeline for implementation, including the role of each provincial department and financial plans for implementation would be helpful.

Other participant comments included:

- Define the role government will play in leading the collaborative approach referenced in Action 5.1 (collaborating with business and industry) (e.g. develop sector specific case studies and highlight innovations to mainstream climate solutions).

	<ul style="list-style-type: none"> • If we are serious about this issue, we need to enact legislation that will withstand election cycles (e.g. the UK has mandated climate budgeting- all budgets submitted to Parliament now have to account for climate impacts). • Boost resiliency of intensive industries by conducting evaluations similar to the approach that has been taken in the agriculture sector. • Greater planning and interaction between government and industry is needed. • <i>“During the break-out sessions it became clear that various industry sectors have different perspectives on climate risk and actions that they are already doing [and] all those need to be considered for the adaptation strategy to be successful.”</i> • <i>“There are opportunities to work with BC Ministry of Health on Waterworks Design Guidelines, and pilot projects exploring the social determinants of health. Working with health authorities including FNHA need to be explored.”</i> • Prioritize multi-level data collection on the impacts of climate events. • Implement mandatory financial reporting of climate-related risks and opportunities. • Adopt a multi-sectoral principles approach to financial/investment decision-making.
<p>Theme 5: Building resilience into our economy and infrastructure</p> <p>Group B</p> <p><i>data from breakout discussion</i></p>	<p>There was support amongst the majority of breakout participants on the following points:</p> <ul style="list-style-type: none"> • Action 5.1 (collaborate with business and industry) is a top priority; every other action seems to already be underway. • A macro-economic lens should be applied when prioritizing actions. <p>The breakout participants also discussed</p> <ul style="list-style-type: none"> • The following points (although contradictory) were made about Action 5.3 (future climate projections incorporated into environmental assessment and permitting processes): <ul style="list-style-type: none"> ▪ This action is a priority because construction is vital part of BC’s economy. Climate projections should be built into all permitting processes. ▪ This action is redundant because it is already expected within current environmental assessments. ▪ Question about which sectors require environmental permitting and which do not. • The following points were made about Action 5.7 (increase support for decision makers re: land use planning): <ul style="list-style-type: none"> ▪ This action is important because a provincial land use planning approach is currently missing in BC. ▪ This action should address collateral in mortgages (e.g. need to have data to ensure clients do not buy land in floodplains). ▪ Need to consider which definition of land-use is being used.

- ♦ The province has a use-orientated lens (concern that it may become too expensive and unwieldy if adaptation work focuses on land resources).
 - ♦ Individuals and insurance companies are working at an Official Community Plan level (e.g. floodplain management).
- Companies operating in BC are competing on world markets and policies need to account for this.
 - Consider the role of the financial sector in this strategy, including what can be learned from their approach to risk assessment.
 - The goal of adaptability should be to limit and decrease exposure to risk because if the overall exposure is low then the possible loss is also low. Currently planners are not decreasing exposure.
 - A challenge is that decision makers and planners are using current conditions as benchmarks rather than future estimates/predictions.
 - What is acceptable in terms of loss? Who is going to absorb this loss?

Suggested criteria for prioritizing actions included:

- Macro-economic considerations need to be at the forefront:
 - Compare outcome to what we're trying to achieve globally: trade goes beyond provincial borders, as do emissions.
 - Losing low carbon jobs creates a greater adaptability risk.
 - Ability to sell our products on the world stage.
 - Pension funds, insurers and credit unions are at risk.
- Actions must be integrated with municipal level governments because they drive new building decisions.
- How do we ensure the strategy is focused, tactile, pragmatic, doable and cost-effective? To do "*otherwise is virtue signaling.*"
- What are the greatest risks? What are tools that address them? This is going to be different for each sector.
- Evidence-based and outcome driven.
- Actions that give us the "*biggest bang for least amount of bucks*" should be prioritized.

Gaps in the strategy:

- There are no actions that incentivize investments in climate resilience.
- There is no reference to seismic resilience; this could be included in 5.2 (working with the agriculture sector).

	<p>Other participant comments included:</p> <ul style="list-style-type: none"> • Be cautious when using language that has very specific definitions in other policies (e.g. contaminated sites are narrowly defined in remediation legislation). • Need strong provincial leadership for the many intersections between private and public sectors (e.g. well-resourced floodplain mapping). • Proactive engagement with industry is necessary for implementation (e.g. building industry needs a generous timeline to incorporate adaptation costs, especially as step code and green infrastructure requirements are increasingly onerous). • Support innovation and jobs in the new economy. Building climate adaptation requires a government-wide response (e.g. all Ministries).
<p>Theme 5: Building resilience into our economy and infrastructure</p> <p>Group C</p> <p><i>data from breakout discussion</i></p>	<p>There was support amongst the majority of breakout participants on the following points:</p> <ul style="list-style-type: none"> • Prioritize data collection; the provincial government has a role to play in gathering and sharing information. <ul style="list-style-type: none"> ▪ There is little to no data on climate impacts for certain sectors (e.g. public transportation, mining etc.). ▪ Official data is required to inform the prioritization of actions, present an overview of impacts and model future impacts. Improving datasets will help identify vulnerable assets (which will guide infrastructure planning and engineering) and allow industry to choose the most suitable plan of action. <ul style="list-style-type: none"> ◆ A private company cannot publish data itself because it will be perceived as biased. ◆ Businesses do not have enough quantitative data to inform modeling or adaptation plans (e.g. fire and flood data may be available but windfall and snow data is not). ◆ The government should regularly encourage companies and institutions to collect data, then review and assess it. • Innovative and adaptive infrastructure will be required for climate resilience. <ul style="list-style-type: none"> ▪ Designs need to consider that data will change: we are designing for what the future could hold but we must also integrate flexibility. The ability to redesign infrastructure when facing major changes will be key to adaptability. ▪ The province should provide codes, standards and guidance for planning and engineering (e.g. dam design considers flooding but does not consider climate change, especially near-term events). • Resilience needs to be built into a decarbonized transportation sector. <ul style="list-style-type: none"> ▪ How can people travel for business and visit family in a safe way? ▪ The future of the aviation sector will be impacted by climate change: <ul style="list-style-type: none"> ◆ Protect airports' infrastructure and assets.

- ◆ COVID-19 has had a dramatic impact. Are there opportunities to reduce environmental impacts in the recovery (e.g. public transit to airports)?
- ◆ Aviation is difficult to decarbonize. Any mitigation measures for this sector will rely on innovation (e.g. changes to fuel or weight)
- Increase awareness about climate adaptation and mitigation in order to shift societal understanding of what is coming and what is possible.
 - Climate preparedness work needs to include discussions about the economic and physical realities of designing infrastructure for the future climate.
 - There is a societal expectation that “*everything will work regardless of what [is] thrown at you.*”
 - There is a general lack of awareness regarding personal carbon footprints (e.g. role of household vehicles in emissions).
- Ensure flexibility within the strategy to encourage responsiveness to new data.
 - “*Have a plan if things fail, because they may.*”
 - Develop iterative plans for our essential services.
 - Continue to model future impacts with the data currently available, even though we anticipate new data to arise.

Breakout participants also discussed:

- The role of cost per tonne in climate adaptation and mitigation:
 - Within the aviation sector, embodied carbon is increasingly a consideration and cost per tonne is a useful tool for decision-making (with environmental factors being considered alongside other objectives).
 - Cost per tonne is region specific, but in BC the cost is moderate due to how the targets were set.

Other participant comments included:

- Keep in mind the impact of climate change on migrant workers and marginalized communities.
- To establish priorities, the government needs to better integrate with industry (e.g. what are the existing plans, goals, targets and what research is already taking place).
- Learn from COVID-19: improve our resilience to climate impacts (expected and “*future shocks*”) while being mindful of complex the problems/issues that may require longer term planning.
- Consider the financial responsibilities of the business community, institutions and individuals (e.g. penalties or fines).
- Include an economic lens as well as a climate lens (what actions will use less resources while also positively influencing climate goals).

Exit survey responses

data from exit survey

Exit Survey comments included:

Theme 1 – Preparing for extreme weather and climate risks

- *“Not sure if there is traction from public to consider future climate risk, government should consider providing sector specific and regional level data summaries, climate data projections, risks and adaptation strategies.”*

Theme 2 - Building a shared path with Indigenous peoples

- *“Establish weather monitoring networks, communications infrastructure, and community gathering places” in climate resilient areas.*

Theme 3 - Supporting equitable, climate resilient communities

- *“Look at mainstreaming solutions that have multiple co-benefits (e.g. heat pumps that offer heating and cooling solutions, urban planning to include green space and active transportation opportunities can tackle air quality and promote urban heat island impacts). Ideas that align with COVID-19 recovery should be identified.”*

Theme 6 – Leading the way in the provincial public sector

- *Commit to: “ deliver on carbon neutral government promises [and] province wide and regional climate risk assessments and adaptation options.”*

Theme 7 – Develop foundations for ongoing success

- *“Have regard for transitional risks as well as physical climate risks. BC could very well position itself as a climate and sustainability thought leader.”*

Other comments:

- *“BCCIC is developing a Industry and Professional Association climate change guide and checklist. Please see if there are any recommendations that are relevant for government.”*
- *“There is a lot of on the ground knowledge out there that needs to be considered from many different stakeholders. Past experience and history is paramount but it has to be balanced with science and research for future.”*

Engagement Question 2

How can we build capacity in BC's economic sectors to better understand and manage climate related risks and position BC's industries as leaders in climate resilience?

Below are four themes that emerged in response to this question. Each group discussed these topics to varying degrees so each bullet point should be considered as a stand-alone comment rather than a statement of consensus.

The government needs to take a collaborative, integrated approach with industry and between departments to reduce silos and their effects. The province has a role in leading this collaboration to increase the effectiveness of the strategy and encourage industry buy-in.

- Ensure that the strategy builds on current adaptation work, includes existing players and encourages cross-sector learning to avoid duplication.
 - Learn from marine management, which often deals with uncertainty (e.g. weather and markets).
 - Learn from the methodology developed by the agriculture industry to build capacity and identify strategies and actions.
 - ◆ Other sectors should undergo this process; there is a willingness to learn from each other.
 - ◆ A sector-wide adaptation plan should be approached with caution because industries are not homogenous (e.g. big, small, private and publicly traded companies).
 - Develop plans that bridge the gaps created by siloes within government and industry: *“We don’t want trees everywhere, we don’t want grass everywhere, we don’t want mines everywhere. When we build a small plan for just one sector, we tend to segregate ourselves. It doesn’t bring us together.”*
- Design planning processes with a climate lens.
 - There is huge interest in a planning tool that incorporates climate change adaptation. Once it is in place we will need technical support for implementation.
 - Now is the time to incorporate a climate lens because major planning initiatives (including renewed land use planning in the North East) are currently underway in the province after years of relying on very old planning paradigms.
 - Look to existing work:
 - ◆ Landscape level planning that incorporates future ecosystem states (e.g. will be part of a promised update to forest planning via the Forest Practices Act).
 - ◆ The Ministry of Forests, Lands and Natural Resources are designing a planning process that incorporates adaptation.
 - The cost of predictive tool kits is currently prohibitive.
- Examples of areas where there is potential for integration between industry and government:
 - Target zones for carbon, capture and storage.
 - Hot spots for energy integration.
 - Ensure robust electricity supply.
 - ◆ Can we develop a matrix of storage facilities across the province?

- Establish mechanisms for industry to turn to government about priority areas like water.
- Build resilience into everything – we are making decisions that will impact the next several decades.
- Cultivate proactive rather than reactive responses.
- Get the business community on board to developing their own sustainability plans and programs (e.g. set up workshops and bring in “*company after company*” to discuss priorities).

“Don’t waste a good crisis.” Learn from the challenges of and responses to COVID-19.

- Seize this unique opportunity to track how people, organizations and governments are affected and respond during a major crisis.
 - Food security has been impacted by COVID-19 as well as climate change.
- Capitalize on the newfound recognition of the importance of data amongst the public due to COVID-19.
 - “*We have a public that is aware of things that they took for granted, such as good supply.*”
- Consider the physical and mental health impacts of climate change.
- How we reinvest in our economy “*as things go back to normal*” is an important choice.
- Facilitate local community initiatives like neighbour networks that check-in on one another following extreme events (e.g. flooding).
- Identify resilience within our own borders (e.g. support ALR local food supply chain).

The strategy needs to be a living, flexible document designed to evolve as new data becomes available.

- The strategy should not be static. Develop an interactive and streamlined way to solicit revisions as needed.
- Communicate the strategy in an on-going way (not just every five years).
- Have a consistent framework that is integrated into planning and project design to promote industry adaptation capacity building.

Incentivize innovation and investment in climate adaptation.

- Incentivize investments:
 - Financial regulators need to incentivize investment and innovation within businesses that foster climate resilience (e.g. ask relevant questions when granting business loans).
 - Provide incentives for industry to build based on adaptability standards.
- Celebrate BC’s mitigation successes so that innovative companies stay in BC.
- Due to the design of BC’s carbon tax (with the Clean BC fund and benchmark) industry has a fixed \$30/tonne cost. Removing the carbon tax could incentivize innovation and investment.
- Estimate future trends to identify which jobs will be best to promote in the future.

Participant feedback

Total number of attendees (including tech hosts, facilitators, notetakers, government representatives): 51

Total number of workshop participants: 32

Number of survey responses: 4

- Overall, how satisfied or dissatisfied are you with your experience as a participant in this workshop?
 - Very satisfied 50.00% (2)
 - Satisfied 50.00% (2)
 - Neither satisfied nor dissatisfied 0%
 - Dissatisfied 0%
 - Very dissatisfied 0%

- The workshop facilitators were effective
 - Strongly agree 75.00% (3)
 - Agree 25.00% (1)
 - Neither agree nor disagree 0%
 - Disagree 0%
 - Strongly disagree 0%

- Would you say that you had plenty of chances or few chances to express your views in a way that felt comfortable to you?
 - Plenty of chances 75.00% (3)
 - Fair number of chances 25.00% (1)
 - Limited number of chances 0%
 - Very few chances 0%
 - Don't know/Not sure 0%

APPENDICES

Appendix A: Questions posted on Slido

Top voted questions/comments that were addressed during Q & A:

- What is your overall vision of partnership between gov and industry partners on climate adaptation and preparedness?
- How else is the gov engaging with Industry partners (beyond this workshop)?
- Given the unforeseen impacts from the COVID-19 pandemic, has thought been given to the currently unknown financial impacts from climate change?
- Are you able to share more about the 'fiscal and other considerations'?
- Are there other jurisdictions that have adaptation strategies in place that BC considers the gold standard?
- Can you talk more about the Indigenous engagement that is happening with this process?
- When the plan is updated every five years, will there also be a public consultation?
- How does BC plan to consider the future when it is unknown unknown and the current RA is based on RCP8.5 scenario which was built as an outlier scenario?
- Can the same thinking that got us here get us out of here? What options are off the table (e.g. restructuring of economy, population control measures).
- I would like to set up engagement between our association and our members with your group. How can we do that?
- How is the BC program integrating with other provinces and with the Federal Government? Are you eliminating redundancies and coordinating effectively?

Questions/Comments not addressed during Q & A due to insufficient time:

- Don't we face a credibility risk by using an extreme state for the climate risk analysis? Or diverting funds from other social programs?

Appendix B: Draft Strategy Actions

Theme 1: PREPARING FOR EXTREME WEATHER AND CLIMATE RISKS

Wildfire:

- 1.1 Partnering with Indigenous and non-Indigenous communities to expand the use of cultural and prescribed burning to reduce wildfire risks, create resilient natural ecosystems and preserve cultural practices.
- 1.2 Building on programs like FireSmartBC to raise public awareness about wildfire prevention and response.

Extreme heat:

- 1.3 Developing a B.C. heat alert response system to provide early warnings and help people prepare for extreme heat.
- 1.4 Taking future projections for hotter weather into account when designing buildings, e.g. adding shading or using efficient air conditioning systems.

Flooding and sea level rise:

- 1.5 Creating a B.C. Flood Risk Strategy in collaboration with federal, Indigenous and local governments that considers both present day flood hazards and the influence of climate change.
- 1.6 Expanding floodplain mapping by incorporating future climate projections and sea-level rise in updated floodplain maps.
- 1.7 Expanding the River Forecast Centre, which analyses snow pack, assesses seasonal water supply and flood risk, and predicts flows in B.C.'s rivers and streams.

Drought and water scarcity:

- 1.8 Piloting the development of water supply and demand management plans for watersheds where climate change is likely to result in greater water scarcity. These include watersheds identified by water managers, Indigenous communities, local governments and water stewardship groups.
- 1.9 Increasing knowledge of how climate change will impact stream flows, water quality and groundwater quantity to assist with water management and infrastructure decisions.
- 1.10 Strengthening the provincial drought management program to ensure episodes of water scarcity are addressed in a timely and coordinated manner across provincial agencies.

Reducing risks from ocean acidification and enhancing marine resilience:

- 1.11 Expanding monitoring of ocean conditions and acidification on the B.C. coast. This could be done in partnership with the federal government, Indigenous governments and communities, the fisheries and aquaculture industry, academics and the Pacific Coast Collaborative.

1.12 Developing an ocean acidification action plan in partnership with Indigenous governments and communities, including research to understand the impacts and identify ways to adapt.

Disaster risk reduction:

1.13 Developing further information, tools and guidance for including climate change considerations in disaster risk reduction and preparedness planning across B.C. including Indigenous communities.

1.14 Developing a new approach to prioritizing climate-related risks and supporting risk reduction and recovery.

1.15 Exploring ways to address the human health, mental health and addictions related impacts of severe weather events and climate change.

1.16 Exploring ways to use nature-based solutions to protect against the impacts of extreme weather. Nature-based solutions are actions to protect, sustainably manage and restore ecosystems in ways that value the wellbeing of natural systems and people. The approach aligns with the holistic relationships Indigenous peoples have upheld with the lands and waters in their territories for millennia.

1.17 Creating programs to support local governments in reducing current and future exposure to hazards.

1.18 Collaborating with the federal government and Indigenous governments to create and coordinate equitable programs for disaster risk reduction that meet the diverse needs of Indigenous communities.

Theme 2: BUILDING A SHARED PATH WITH INDIGENOUS PEOPLES

The potential actions under consideration will help lay foundations for holistic and lasting solutions and partnerships:

2.1 Developing tools to bring the changing climate into government-to-government relationships, including in planning, programs, negotiations, and decision-making.

2.2 Creating opportunities for Indigenous-led research and innovation, connecting knowledge and decision-making to the land.

2.3 Exploring ways to protect and preserve cultural heritage resources in a changing climate

2.4 Promoting collaboration among Indigenous communities for peer-to-peer learning, mentorship, development of guides and tools, and sharing information on climate adaptation and resilience, including land-based learning and healing programs.

2.5 Defining learning outcomes and developing curriculum for K-12 schools, other educational institutions, and practicing professionals in the province that address the changing climate and Indigenous values and epistemologies.

2.6 Exploring ways to address the human, spiritual, mental health and addictions impacts of severe weather events and climate change.

Theme 3: SUPPORTING EQUITABLE, CLIMATE RESILIENT COMMUNITIES

Potential actions and approaches working in partnership with Indigenous governments and communities, and local governments to:

- 3.1** Incorporate climate change considerations into policy, planning and budgeting, and asset management practices.
- 3.2** Facilitate a sustained regional collaborative approach to understanding and managing climate risks, which could include actions to ensure that communities with unique needs, such as rural and remote communities, have tools and supports that work for them.
- 3.3** Develop physical, mental, emotional and spiritual health programs to address the human impacts of severe weather events and ongoing climate change.
- 3.4** Build community programs to deliver basic public health needs (e.g., housing, food, drinking water, mental and spiritual health services, etc.) during extreme weather events.
- 3.5** Develop a B.C. food security plan addressing individual and household food security, food distribution in times of crisis, Indigenous food sovereignty and access to traditional food sources.
- 3.6** Ensure emergency plans and climate preparedness and adaptation strategies are inclusive, and review and enhance existing provincial crisis policy mechanisms with equity and inclusivity in mind.

Potential actions and approaches for protecting buildings and infrastructure include:

- 3.7** Incorporating future climate design factors into building codes.
- 3.8** Improving risk assessment and management approaches for drinking water systems, wastewater systems, and watersheds. This would include new guidelines for water system owners, health authorities and provincial agencies to improve public health and safety, infrastructure asset management, and environmental protection.

Potential actions and approaches for advancing equity include:

- 3.9** Working to better understand the disproportionate effects that climate change has on distinct populations, including populations identified by gender, age or ethnicity.
- 3.10** Working with partners to expand extreme weather responses for shelters and programming, including warming and cooling centres.

Theme 4: SUSTAINING NATURAL RESOURCES, SPECIES AND ECOSYSTEMS

Potential actions and approaches, working in partnership with Indigenous governments and organizations, local governments, and stewardship organizations:

- 4.1 Develop tools and approaches for integrating climate change knowledge into the management of species, ecosystems, and natural resources. This includes finding solutions within Indigenous ways of knowing.
- 4.2 Develop approaches to map, protect and restore corridors connecting natural areas, wildlife habitats, and other areas important to biodiversity to allow species and ecosystems to migrate and shift with the changing climate.
- 4.3 Improve monitoring, modeling and research to identify natural resources, species and ecosystems that are vulnerable to climate change. This would include detecting threats from invasive species.
- 4.4 Continue to build provincial understanding of climate change impacts and adaptation solutions for parks and protected areas. This could include adapting park infrastructure and addressing the impacts of the changing climate on cultural heritage sites.
- 4.5 Determine specific climate change impacts and potential adaptation measures for priority species such as salmon, moose and caribou.

Theme 5: BUILDING RESILIENCE INTO OUR ECONOMY AND INFRASTRUCTURE

Potential actions and approaches:

- 5.1 Collaborating with business and industry, including Indigenous enterprises, tourism, small businesses and sectors, to identify their key climate change risks and develop tools to manage them.
- 5.2 Working with the agriculture sector to build its resilience to climate-change impacts, including wildfire, flooding, drought and other extreme conditions, as well as slower-moving challenges like new pests and changes in the growing season. This could include developing tools to assess changing production risks and growing conditions. It could also include an agricultural water infrastructure program.
- 5.3 Developing guidance to ensure climate change and future climate projections are accurately incorporated into environmental assessment and permitting processes
- 5.4 Working with Indigenous governments, and local governments to strengthen our transportation and communications infrastructure.
- 5.5 Working with the forestry sector to ensure a resilient and diverse forest economy, for example, through a climate-informed forest harvesting and timber supply review system.
- 5.6 Working with industry, local governments and Indigenous governments to identify ways that contaminated sites management and remediation can take the changing climate into account to protect human health, the environment, and business interests.

- 5.7 Increasing support for provincial decision-makers to consider the changing climate in provincial land use planning and forest management initiatives.
- 5.8 Exploring and building on the recommendations of the Food Security Task Force to assess climate-related risks to food security in B.C. and promote innovative approaches to address those risks.

Theme 6: LEADING THE WAY IN THE PROVINCIAL PUBLIC SECTOR


Potential actions and approaches:

- 6.1 Assessing current and future climate risks to all public sector buildings.
- 6.2 Working with health partners to assess climate risks to health services and develop approaches for addressing them.
- 6.3 Through pilots and learning on public sector projects, supporting the private sector to adopt fiscally-responsible climate change risk assessment methodologies and resilient design solutions.
- 6.4 Sharing climate adaptation best practices across public sector organizations.
- 6.5 Modernizing the public sector capital planning and approval process by requiring consideration of future climate in decision-making.
- 6.6 Updating existing PSO reporting requirements to include climate risk management actions.

Theme 7: DEVELOP FOUNDATIONS FOR ONGOING SUCCESS

Potential actions and approaches:

- 7.1 Building the Province's capacity to respect Indigenous knowledge in decision-making and policy.
- 7.2 Working in partnership with Indigenous governments, organizations and peoples to find solutions to climate change challenges within Indigenous ways of knowing.
- 7.3 Developing a provincial "climate lens" to ensure that climate impacts are considered as part of all major decisions. This includes considering opportunities to manage climate risks and promote adaptation in development of legislation, regulations, and policy.
- 7.4 Expanding provincial and local stream flow, groundwater, snow, climate, and ecosystem monitoring networks in partnership with Indigenous governments and communities, local governments and others.
- 7.5 Working with health partners, in collaboration with Indigenous governments, communities and organizations, to conduct a climate change health, mental health and addictions risk assessment for B.C.
- 7.6 Developing tools, guidance, and mapping to support decision making for a wide variety of users.

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- 7.7** Developing funding sources for provincial, Indigenous, and local government programs to understand, monitor, and manage climate risks.
- 7.8** Supporting the Pacific Climate Impacts Consortium to expand its climate data, research, modeling and training services. This includes services for provincial government agencies, Indigenous governments and communities, local governments, public sector organizations, businesses and industries, and others.