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# Challenge Dialogue Paper Highlights

June 2019

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**Adaptation  
Learning Network**

INSPIRING  
CLIMATE ACTION

ROYAL ROADS  
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INSPIRING CLIMATE  
**ACTION**

BC PROFESSIONALS'  
ADAPTATION NETWORK

Session 4: *What did we hear?*  
Highlights from the Challenge Paper Feedback

Challenge Paper distributed to ~140

96 responded

High level of interest – 68% response rate

~120 pages of often detailed, varied, feedback

Multiple themes repeated and woven throughout the responses

88 Organizations



Progress Report sent to ~230

Adaptive Resource Management  
 American Soc. of Adaptation Professionals  
 Architectural Institute BC  
 Assoc. of BC Forestry Professionals  
 Assoc. of Professional Biology  
 Assoc. Sci. Technologists & Technicians of BC  
 BC Assembly of First Nations  
 BC Climate Action Secretariat  
 BC First Nations Forestry Council  
 BC Housing  
 BC Hydro  
 BC Institute of Agrologists  
 BC Ministry of Agriculture  
 BC Real Estate  
 BC Society of Landscape Architects  
 BC Stewardship Center  
 BC Water and Waste Association  
 Canadian Federation of Municipalities  
 Capilano University  
 Chartered Professional Accountants of BC  
 City of Castlegar  
 City of Courtenay  
 City of Fernie  
 City of Fort St. John  
 City of Kimberley  
 City of Prince George  
 City of Surrey  
 City of Vancouver  
 City of Vancouver Council  
 City of Vernon

Climate Access  
 Coast Communications  
 College of Applied Biology BC  
 Columbia Basin Trust  
 Columbia Basin Trust - Climate Action Program  
 Cowichan Valley Regional District  
 Dawson Creek  
 Ebbwater consulting  
 Ecoplan  
 Emergency Management BC  
 Engineers and Geoscientists BC  
 First Nations Emergency Services Society  
 First Nations Fisheries Council of BC  
 First Nations Major Projects Coalition  
 Fraser Basin Council  
 Fraser Health Authority  
 Golder Associates  
 Indigenous Services Canada  
 Infrastructure Canada  
 Insurance Bureau of BC  
 Insurance Bureau of Canada  
 International Council for Local Environmental Initiatives  
 Law Society of BC  
 Metro Vancouver  
 Min. Forests, Lands, Natural Resource Operations and  
 Regional Development  
 Min. of Municipal Affairs and Housing  
 Municipal Natural Assets Initiative  
 Natural Resources Canada

North Shore Emergency Management  
 Nuu-chah-nulth Tribal Council  
 Okanagan Water Basin Board  
 Pacific Climate Impacts Consortium  
 Pacific Institute of Climate Solutions  
 Pembina institute  
 Planning Institute of BC  
 Private Forest Landowners Association  
 RDH Building Science  
 Regional Development  
 Robin Fenn Consulting  
 Royal Roads University  
 SHIFT collaborative  
 Simon Fraser University  
 SNC Lavalin  
 Solstice Works  
 Suncor  
 Thrive Consulting  
 Town of Creston  
 Tsleil-Waututh Nation  
 Union of BC Indian Chiefs  
 University of BC, Okanagan  
 University of BC, Vancouver  
 University of Northern BC  
 University of Victoria  
 Urban Development Institute  
 Urban Systems  
 Vancouver Island University  
 West Coast Environmental Law

# SUMMARY OF FEEDBACK



Ensure training is useful, transferable, timely



Build-on existing learning materials and initiatives



Co-create and test efficacy of courses –  
professionals and course developers



Include educ. & research orgs, large and small, think  
tanks, practitioners



Integrate training across professions – more  
coordinated response – decisions, policy, plans, etc.

# SUMMARY OF FEEDBACK



Ensure access to training and network in rural and remote areas



Understanding issues and incorporating contributions of Indigenous communities in training and network initiatives



Provide range of training options for diverse needs of multiple professional organizations



Provide current, fine-scale data and how to apply them to guide professionals



Include climate change mitigation or low carbon resilience in project

# SUMMARY OF FEEDBACK CONT'D



Expand project to engage, educate, and communicate beyond professional organizations and PSIs (e.g., politicians, leaders, public)



Incent enrollment with accreditation



Recognize and address climate change denialism or skepticism (small percent in respondents)



Address resource issues – cost of courseware, business, costs of climate action of clients of professionals

# KEY CHALLENGE (CHALLENGE PAPER P6)

ENGAGE STAKEHOLDERS TO (1) DESIGN, DELIVER, PARTICIPATE  
IN INTEGRATED BODY OF CPD CCA COURSEWARE FOR PROF.  
ASSOC. (2) GROW ACTIVE PROF. LEARNING COMMUNITY

69% response

general alignment with intention,  
*but...; or and...*

Range of diverse thoughts, general to  
specific:

- Course design and content
- Accreditation
- Enduring, current and ongoing learning
- Building a cross-disciplinary community of practice
- Effective communication – “not just a website”
- Urgency

- Navigating values and trade-offs
- Attention to slow-moving hazards

Mandate of project?

Include mitigation co-benefits

A few skeptics

Two key themes:

- Involving others – other pros, unregulated practitioners, other educations inst., regulatory, political, public; **Integrated approach for greater impact**
- **Integration among professional organizations, but complicated**

Reduce jargon, more definitions,  
rationale

*“Integrated approaches to recommendations and policies Are imperative... each profession must understand and respect what the other professions have to offer”*

# DEFINITIONS (CHALLENGE PAPER P8)

CLIMATE CHANGE ADAPTATION, LOW CARBON RESILIENCE, CPD, COURSEWARE, COMPETENCY FRAMEWORK, CONTENT DOMAIN

## 58% response

Many were aligned, but again:

- Less jargon
- Greater clarity
- More precision
- Greater breadth – e.g., include disruption of ecosystem services

## New Professional Governance Act

- “Qualified continuing education” and supports Indigenous reconciliation

## Connection between adaptation and mitigation

## Low carbon resilience

- “I like it” vs. vague, unclear

## Other definitions requested/offered:

- climate change, climate data, climate change mitigation,
- emissions reductions
- sustainability
- resilience, zero carbon resilience, climate resilience
- climate risk, risk assessment, risk tolerance
- adaptation measures
- uncertainty, trending analysis
- key stakeholder community, professional learning community,
- human security
- learning modalities, learning objectives,
- short/ medium/ long-term adaptations,
- co-benefits.

*“Climate Change adaptation capacity and skills has a substantially different meaning dependent on which profession you are speaking with, so sharing a common language is critical.”*



# EXPECTED OUTCOMES (CHALLENGE PAPER P7)

(1) ALIGNMENT ON MEANING & SIGNIFICANCE OF CCA; (2) CPD OFFERINGS AND PROFESSIONAL LEARNING COMMUNITY; (3) TOP CPD PRIORITY TOPICS FOR COURSEWARE; CORE CCA COMPETENCIES TO GUIDE CPD OFFERINGS & PROF. SKILLS MOBILIZATION

65% response

Degree of alignment varied:

- Aligned
- Aligned but – modification
- Aligned but – elaboration
- Not aligned

New suggested outcomes:

- Alignment on changes to professional code of ethics
- Identifying incentives for update
- Identifying champions for course topics
- Expand learning community – regulators, community leaders, and public
- Ensuring all professional organizations contribute to these expected outcomes

The expected outcomes sparked courseware thoughts:

- Specific ideas for courses
- Course objectives
- Process and rationale for selecting and prioritizing courseware development
- Rank according to need
- Rank according to maximum impact

*“The conversation/reflection this process sparks is just as important (if not more important) than the end result”*

# BACKGROUND (CHALLENGE PAPER P9)

There was notable interest in the background information provided:

- How will this information be used in the project; how was it chosen?
- This background information suggests maybe the current work is unnecessary?
- The significant depth and breath of the existing resources was remarked on
- Better to spent time on how to access, index, point to, borrow, integrate or enhance existing resources?

Courseware design should be led by professionals or as a collaboration between professionals and the associations with members field-testing

What's my role with this?

Other organizations involvement

## Other surveys suggested (n=28):

- CAB & ASPB
- ICLEI Canada; Building Adaptive Resilient Communities (BARC)
- American Soc. Adaptation Professionals
- Antioch Univ. Centre for Climate Preparedness and Community Resilience
- Can Assoc. Physicians for Environment
- Can Centre for Climate Services
- Capilano University – Earthworks & Environment Studies degree
- Climate Access
- EcoAdapt, Climate Adaptation Knowledge Exchange (CAKE)
- Engineers Canada, Public Infrastructure Engineering Vulnerability Committee
- Georgetown Climate Center, Adaptation Clearinghouse
- Infrastructure Canada – Climate Lens
- International Organization for Standardization (ISO)
- Marine Environmental Observation Prediction and Response (MEOPAR) Network
- Model Forest Policy Program – Climate Solutions University
- Northern Arizona Univ. Institute for Tribal Environmental Professionals, Tribes and Climate Change Program
- Ouranos Consortium on Regional Climatology and Adaptation to Climate Change
- Prairie Climate Centre, Prairie & Canada Climate Atlases
- Shift Collaborative and Interior Health, BC Climate Health Network
- Stewardship Centre for BC Green Shores program
- UBC School of Community and Regional Planning (SCARP)
- Univ. Fraser Valley - Geography and Environment
- University of Victoria Pacific Climate Impacts Consortium (PCIC)
- University of Waterloo Flood Policy Group
- weADAPT

# ASSUMPTIONS (CHALLENGE PAPER P12)

## 1 - Prof. play a crucial role locally:

- 50% aligned
- Not aligned professionals beholding or constrained
- Evidence?

## 2 - Prof. need new CCA knowledge and skills:

- Most partially aligned
- Constraints prevent or discourage new approaches
- Consensus on impact projections and best practices an issue

## 3 - Prof. need jurisdiction-, sector-specific and cross disciplinary knowledge for CCA

- Self-evident; too general; not for all

## 4 - Collaboration: regulators & prof. organizations will help build capacity:

- Elaboration: behaviours change via standards and code of ethics
- Education must extend to regulators and politicians
- How?
- Consultation with upcoming 'Prof. Governance Act' processes?
- Involve researchers and non-profits too

## 5 - CPD complement and build on existing CPD initiatives, not overlap and compete

- Half aligned; others implied alignment
- Understand current knowledge level and build-on / modify rating systems and standards
- Refresh old courses, recognize specific geographies and unique capabilities of local education institutions

## 6 - CCA CPD will require special competencies

- Some recommended competencies (systems thinking, problem solving, design thinking...)
- Opposing assumption: CCA does not need a new set because it is not a specialization; competencies should be transferable from or integrated with other professional skills and accountabilities

## 7 - CCA CPD will benefit from integration of Indigenous worldviews, knowledge, practices

- Indigenous worldviews, showcasing systems and place-based principles would strengthen courseware
- Is Indigenous knowledge formalized so it can support courseware?

*"I recommend something like this instead: 'There exists a core set of knowledge and competencies that all climate change adaptation professionals must possess irrespective of jurisdiction, sector, domain, or role. Professionals also require jurisdiction, sector, domain, and role-specific knowledge and competencies'."*

# ASSUMPTIONS CONT'D

8 - Professionals and communities working to advance reconciliation and respectful relationships with First Nations are of the most successful with collaborative innovation and long-term CCA efforts

- Most felt this was unproven and did not recognize efforts that had not included First Nations

9 - Climate mitigation efforts should not undermine CCA efforts and vice-versa; low Carbon resilience requires addressing both simultaneously

- 50% aligned fully; 25% confused or misunderstand; some – need to prioritize when addressing both, find right balance
- Adaptation most critical for human safety
- Need mostly separate responses

10 - CCA CPD curricula, courses and tools existing elsewhere can be modified for here and /or scaled-up

- Most respondents aligned; need to be mindful that one size does not always fit all

*“I very much applaud ‘10’. Too often innovators get stuck in the reinventing of wheels that are already working perfectly well in another place. Now that we are globally well-connected such networking as become much easier.”*

11 - Policy and regulations may necessitate CCA CPD offerings

- Some aligned, some confused
- Policy and regs might both drive the need and professionals can influence policy and regs change; clients and others will also have an influence

12 - CCA CPD needs to draw on learners’ existing knowledge, multiple perspectives, provide theory but focus most on practice and learning-by-doing

- Respondents largely aligned, some adding further considerations such as...
- Best available science
- Code and standards governing professionals
- Ensuring the perspectives are informed
- Could existing knowledge be inadequate, restrictive?

13 - CCA CPD should be accessible, regional tailored, suite different learning styles and support active and experiential learning

- Almost universal alignment; other suggestions – “on-demand”, supportive of relationship building and cross-disciplinary collaboration

14 - A social learning community/network that shares, integrates knowledge and practices will spur innovation

- Many ways for this offered...
- Design competitions; traditional knowledge and art components to stimulate discussion, regional practice development, motivations and rewards, leaders – moderators – facilitators that can help, make it a safe-space network, CPD gaps, strong connector function, CPD gaps

# CRITICAL QUESTIONS 1 & 2

(CHALLENGE PAPER P14)

## 1 – Types of knowledge and skills you might need to respond?

- 57 responses, few alike unsurprisingly; **themes:**
  - **Direct impact to health** – air quality, wildfire, heat, weather, sea rise
  - Ecological impact – water quality, invasive species, adapting forest management
  - **Built environment** – ports, freight and travel terminals, heat and paved surfaces, EV range, building materials, resilient landscapes
  - **Economic** – project funding, cost of inaction, smaller municipality capacity, property acquisition
  - **Social** – awareness, attitudes, behaviour, norms, legal, leadership, silo thinking, skeptics, unhelpful policy – regs - standards, client risk tolerance, mental health, socializing adaptation, embedding CA in plans and processes
  - **Complexity and uncertainty**
  - **Approaches** – green resilience, green infrastructure, natural asset management, reclamation
- **Resources needed – a sampling:**
  - **Knowledge and skills** – greater understanding of climate processes, barriers faced by professionals, supporting business/benefit cases, experimentation and safe failure, management and administration, communication, engagement, promotion, coping, accreditation, new standards, uncertainty and flexibility, monitoring data, vulnerability diagnosis, best practices repository, access to knowledge and expertise
  - **Integration** – response and recovery with long-term resilience
  - **Modeling, projection, visualization** – e.g, sea level rise and other impacts, drought tool, fire, infrastructure, economics, transportation, safety, risk...
  - **Applications** – Shoreline protection design, adaptive design; Silviculture, new species selection, stocking, fire/fuel, tenure

## 2 – Priorities for CCA CPD?

- 62 wide-ranging topic responses – wildfire, extreme weather, social issues, cultural transformation, infrastructure, buildings, landscape design; **9 most popular themes:**
  - **Accessing and using climate change data and tools** – the basic science, evidence, modelling, data use, mapping, forecasting, predicting, uncertainty, interpretation and application, scale, regional impact implications...
  - **Accessing adaptation knowledge and innovations** – Adaptation 101, emission scenarios over time, impacts now – here and abroad, directory of resources, CA toolbox (e.g., forestry), mapping vulnerabilities, quantifying co-benefits, assessment and implementation of (innovative) solutions, science-policy interface – science to application; advantageous considerations, operationalizing resilience, new technology adoption, case studies, planning
  - **Communication and engagement** – interpreting and communicating to different audiences, community engagement and mobilization, culture change...
  - **Ecological topics** – BGC zone shifts, plant and animal resilience; planting / habitat design; trees for future; species adaptation; species, mix, seed selection breeding, stand tending, fuels management for resilience; protecting and maintaining ecosystems and populations, maintaining biodiversity, drought and freshwater management...
  - **Risk** – integrated climate-risk-resilience assessments and response interventions; understanding risk, uncertainty, confounding factors, and consequences of inaction; translation to lay people; cost/benefit; scenario planning; tangible, intangible and incomplete information decision-making...
  - **Economics** – Costs of inaction, professional liability, cost/benefit, funding of adaptation, green economies, cost of new adaptation technologies, better economic evaluation tools...
  - **Teamwork, collaboration** – building collaborations; integrating interests of multi-stakeholders; understanding multi-/inter-disciplinary, multi-sector, interdependencies; collaborative and inclusive processes and co-design and planning; shared learning; coordination for CA – tools and training; social networks
  - **Indigenous topics** – Indigenous worldviews, knowledge, and practices; incorporating Indigenous knowledge; Indigenous-led stewardship; collaborating with Indigenous peoples; decolonizing approaches
  - **Resilience** – Understanding, operationalizing resilience, community resilience, green resilience framework, resilient decision-making, adaptive designs and plans

# CRITICAL QUESTIONS 3-6

## 3 – Top three CPD courseware design elements?

- 57 responses
- Top 3 related to accessibility: price; flexibility; timing; duration; rural, remote, Indigenous, disability access; low carbon learning
- Accreditation – most favoured but with caveats: include practical experience, link to provincial professional reliance, appropriate to area of expertise, qualified delivery, recognized by associations, supported by employers

## 4 – How to integrate Indigenous ways of knowing and practice in your own professional practice?

- 56 responses – many pointing to direct, sustained involvement
- Relationship building is key, seeking-out conversations, sharing information, cultivating cultural sensitivity, understanding privilege and reconciliation
- Facilitating dialogue with Indigenous experts, govt, spiritual leaders, knowledge-holders, elders, youth, other community members
- Participation over the full course of a project – design, development and delivery
- Valuing and advocating for Indigenous-led programs, projects, courses; redesign of existing
- Showcasing projects that include Indigenous knowledge
- Acknowledging territory and continued Indigenous relationships
- Developing and honouring formal agreements, respecting protocols, ensuring space for ceremonies
- Coordinating requests to reduce demand on groups with limited capacity
- Flexibility with timelines; encourage and facilitate participation
- Ensure funding is available and appropriate remuneration and hospitality
- Including Indigenous monitoring programs

- Consulting “in good faith”
- Weaving Indigenous knowledge and principles with western science to guide adaptation
- Need to raise awareness more among some groups

## 5 – How do you support resilience of Indigenous communities and people?

- 54 response similar to those for question ‘4’
- Relationship building and direct involvement
- Understanding and respecting protocols and reconciliation
- Elaboration on the need to support self-determination and avoid limiting progress
- Design education initiatives to enable full participation of Indigenous peoples

## 6 – Need for distinctive BC professional community of practice or network of services to support on climate adaptation?

- 55 responses with few opposed to a new CCA network
- Those unsure concerned with overlaps (e.g., BC Professional Associations Adaptation Working Group (PAAWG))
- Do we have the capacity and resources to maintain a network?
- Has the need been demonstrated?
- Service suggestions: Identifying and closing gaps (e.g., interdisciplinary tools); support of sector-specific guidelines; facilitating sharing of knowledge, best practices, and peer learning, and between sectors; mentorship; other forms of professional networking; comprehensive resource library; database of contacts and activities; news and updates; conferences, forums, webinars, podcasts, host events, directory for training
- Models to consider: American Society of Adaptation Professionals and Government of Canada’s Centre for Climate Services

# CRITICAL QUESTIONS 7-10

## 7 – How associations can encourage education and action?

- Make climate education a requirement for membership, accent designations, or meet annual CPD requirements
- Requiring as a means to adhere to practice and professional standards
- Creating and regularly updating best practice documents and courses
- Including climate change in vision, mission, codes of conduct, conferences and events, publications, stories, and positioning statements or papers
- Climate action champions, committees and plans for the association
- Offering awards and other incentives for note-worthy activities
- Lobbying governments for regulatory changes

## 8 – Required competencies (skills, knowledge, ability) for CPD and accreditation?

- Most of the 57 respondents supported mandatory competencies and training; a few with reservations
- Those that opposed mandatory training were climate skeptics
- Suggestion that certain criteria should be met before making it mandatory

## 9 – Barriers the project may face?

- 54 responses, top 3 barriers were related to 4 themes – resources (predominant), uptake, integrating professions, lack of regulations (and political will)
- **Resources** – funding and time for busy professionals; added cost of integrating and adopting; limited funding and human resource initially and to sustain it; some solutions also offered for these
- **Uptake** – time and cost, apathy, complacency, inertia, resistance to change, entrenched ideas and practices, relevance; some solutions offered
- **Integration** – distinct interests, entrenched processes, diverse needs, competitive products vs. creative commons approach of this project

- **Other barriers:** climate skeptics, differing ideologies, the economy vs. environment divide, attitudes of experts, academic vs. practical, collaboration - coordination – duplication- continuity challenges, clarity vs. uncertainty, sustaining First Nations involvement, unresolved land claims and resource issues with First Nations, translating learning into action, feelings of helplessness, lack of common language

## 10 – Other questions or concerns that should be explored?

- What are other jurisdictions in Canada doing?
- What existing processes could be tapped?
- What major funding sources are available, is it a priority and for who?
- What institutional incentives do we need to design?
- Who is responsible for tracking and reporting results on this?
- Who will be getting this information out the professionals and the public?
- How do we structure this work as a “continuing adaptation” framework?
- How do we reach those who do not believe?
- How do we make this something people don’t just have to do, but want to do?
- There is a fire hydrant of information on climate change; people are overwhelmed – how can we develop trustworthy sources to distil information for practitioners?
- How can climate change be integrated in an organization?
- How to cultivate champions within professional organizations?