Business Case for Forestry Adaptation

Dr. Sheri Andrews-Key
Chief Scientist & Principal - Innovative Climate Strategies
Adjunct Professor or Teaching & Program Lead, UBC CVA Micro-Certificate, Faculty of Forestry, UBC
Adjunct Professor, School of Environment & Sustainability, University of Saskatchewan

&

Dr. Harry Nelson
Associate Professor, Faculty of Forestry, UBC
Climate Change Adaption and The Business Case

“Now more than ever it is critical for companies to consider the impact of climate change and associated mitigation and adaptation efforts on their strategies and operations and disclose related material information”.

Source: Task force on Climate-related Financial Disclosures 2019 Status Report
ESG – Environmental, Social, and Governance issues

“Stakeholders and regulators are increasing their focus on ESG issues – looking for greater transparency on how organizations are managing their ESG risk/vulnerabilities and integrating them into their business strategies”.

CPA Canada 2021
“The task force was established to develop recommendations for more effective climate-related disclosures that could promote informed investment, credit, and insurance underwriting decisions and, in turn, enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system’s exposure to climate-related risks”.

“The focus is on market transparency and stability – better information will allow companies to incorporate climate-related risks and opportunities into their management and strategic planning processes – increasing companies and investors understanding of financial implications associated with climate change”.

Source: Task Force on Climate-Related Financial Disclosures
New Sustainable Forestry Initiative (SFI) forest certification system has a new Objective – Climate Smart Forestry:

Objective 9

CLIMATE SMART FORESTRY

Guidance: Indicator 9.1.1 - Prioritization of Risks and Vulnerabilities

Guidance: Indicators 9.1.2 and 9.1.3 - Identifying Adaptation Strategies
OUTLINE

1) Using the Climate Change Vulnerability Assessment (CC VA)

2) How the need for CC VA was met

3) Plugging the CC VA results into the LP Sustainable Forest Management system – both operational and strategic – moving to the business case for adaptation
1) The need for Climate Change Vulnerability Assessment

Extreme weather has been affecting LP’s business and ability to harvest and haul wood in a timely fashion.

Heavy and early snowfall (mid-Oct.) prevented soil from freezing all winter. Skidder rutting in January at -30 degrees was a new challenge for them.
Heavy fall precipitation caused fall flooding.

- Significantly exceeded spring runoff
- Didn’t haul wood from Sept. to mid-Dec.
Generally, LP’s forestry staff can adapt to climatic uncertainty and extreme weather on an *ad hoc* basis:

- Due to the high level of skill and experience of LP forestry operations staff (*some of whom will retire in the next 5 years*)
- Increased costs to being reactive instead of proactive (*creates a need for change*)
- Planned adaptation is superior to reactive adaptation
Government/Research: Significant focus on climate change mitigation.

However, the opportunities for a forest manager really lie with climate change adaptation, which happens at the local level.

Vulnerability Assessment: Unfortunately, the process of climate change vulnerability assessments has been a huge gap that neither LP Foresters felt their degrees nor 30+ years of work experience has prepared them for.
CCFM guidebook (Edwards et al. 2015) (Following comments from Paul LeBlanc, LP SFM Forester and Industry Lead on project):

- It is 172 pages long
- Realized that they can’t start and finish this (while leading and writing a 20-Year FMP),
- Also realized that this was too important to ignore or defer.
2) How the need for CC VA was met

- In Saskatchewan and Manitoba: carried out a climate change vulnerability assessment project that involved forest industry partners (Weyerhaeuser, Edgewood Forest Products, Louisiana-Pacific Canada and Spruce Products Ltd.), provincial governments, and other interested agencies on a regionally integrated basis.
Vulnerability Assessment Process

- Operational and planning staff were chosen from each company.
- Three phases of researcher-facilitated workshops focused staff on:
  1. pre-vulnerability analysis;
  2. detailed vulnerability analysis; and,
  3. short-listing vulnerability options.

- Decisions on how to implement and monitor adaptations were made.
Explore organizational readiness

Phase Two
Pre-vulnerability analysis

1. Provide Context
2. Current Climate and Forest Conditions
3. Future Climate and Forest Scenarios

Phase Three
Detailed vulnerability analysis

4. Assess Vulnerability

Phase Four
Identify, implement and monitor adaptation

5. Identify and Evaluate Adaptation
6. Implementation and Mainstream Adaptation

Adapted from CCFM Framework in Edwards et al., 2015
Main Outcomes

- Practical application of CCFM approach – FMA/FML scale;
- Vulnerabilities to extreme weather events were identified, and site-specific adaptations were developed to mitigate each vulnerability;
- Results have demonstrated that the CCFM approach can be successfully applied at the FMA level;
- The adaptation tools developed are currently being mainstreamed into each company’s Sustainable Forest Management system with respect to climate change.
Pre-Vulnerability Analysis

- Gain an understanding of the reasons for undertaking the assessment.
- Have a clear picture of the SFM system that will be assessed.
- Have a list of partners and potential partners, interested groups and individuals (including First Nations).
- Have confirmation of the scope of the assessment.
Detailed Vulnerability Analysis

• Assessed current and future impacts on SFM objectives
• Evaluated adaptive capacity of the SFM system
• Assessed current and future vulnerability
• Assessed overall SFM vulnerability

• DECISION POINT! Is adaptation required?
Adaptation: Development, Planning, Prioritizing, and Implementation

• Develop potential adaptation options for SFM objectives and the overall SFM system
• Prioritize adaptation options
• Recommend priority adaptation options for implementation (short-listed to 12 immediate adaptations)
Adaptation: Development, Planning, Prioritizing, and Implementation

• Through the Vulnerability Assessment we have developed a ranking of vulnerabilities and priorities within Weyerhaeuser/Edgewood and LP/Spruce Products SFM systems, with respect to climate change vulnerabilities/impacts.

• Implementation: Moving towards an integration of adaptation options within their SFM practices and planning.
Focus in on LP Example

• Decisions were made on how to implement, monitor, and evaluate adaptations as business case for 12 priority, short-listed adaptations.

• First five of 12 short-list options all related to Natural Range of Variation (NRV) and were combined into one business case.
Both Operational and Strategic items in short list:

- **Operational** example – Decommission and rehabilitate roads to maximize forest carbon sinks

- **Strategic** example - Maintain representative forest types across environmental gradients (monitor in 20-Year FMP)
3) Plugging the CC VA results into the LP Sustainable Forest Management system

- The Vulnerability Assessment project looked at the bigger picture of increasing climatic uncertainty and extreme weather in a more structured and strategic fashion (vs. ad hoc).

- The full range of vulnerabilities were identified, and their potential opportunities were explored and evaluated in a multi-phase structure – leading to the business case assessment.
New Sustainable Forestry Initiative (SFI) forest certification system has a new Objective – Climate Smart Forestry:

Objective 9 – LP Swan River in MB is well positioned to meet this new SFI objective
Moving from *Phase 4* of the Vulnerability and Adaptation Assessment

- **Phase 4** ranked the vulnerability assessment and prioritized adaptation options (on a scale of 1-high to 4-low). This resulted in a short-list of 12 climate change and vulnerability adaptation options. We then identified tools within the existing SFM systems to implement, monitor, and evaluate the adaptation options.

- Costs were attached to the different strategies.
LP Business Case

• Both market impacts (e.g. fiscal impacts) and non-market impacts (e.g. social and cultural, and ecosystem goods and services) were considered as well.

• This further develops the ‘business case for adaptation’ and how climate change and increasing uncertainty might influence investment decisions (e.g. access infrastructure, mill yard inventory etc.) for future LP operations.

• Note that cost savings were and will be pursued, but the analysis showed that there were many non-market benefits such as forest stewardship and improved social license.
Business Case for Adaptation

• The ‘business case for adaptation’ helped not only develop capacity within LP but is also essential in moving towards proactive adaptation and rewarding action.

• By using the results and evidence from LP’s own operations in conjunction with the scoping/planning exercise associated with the vulnerability assessment, they can assess the social, financial, and economic viability for different types of risk associated with their operations.
Moving Forward

• This allows LP to make more informed decisions for the future while also bringing in the time scale of adaptation beyond just long-term planning and what they may do short-term versus long-term.

• It is anticipated as this work continues, that LP may start to explore whether there may be points in time when there are shifts in external conditions (e.g., environmental change, market change, political change etc.) that might affect forest planning and decision making and to what extent those risks can be mitigated.
Conclusions

- Through the process of developing the business case for adaptation in the vulnerability assessment, LP has also assessed the potential adaptation options that could reduce future costs and help minimize negative social and financial impacts from climate change.
Acknowledgements

• Special thanks to Paul LeBlanc, District Forester, LP Forest Resources Division, Swan River, MB and staff

• Dr. Mark Johnston, Saskatchewan Research Council

• Natural Resources Canada – funding partner
What questions do you have?

Thank You