

Research Agenda
Vibrant Forest Landscapes
2020-2023



Annual Report 2020

Summary:

In 2020 we began our first year of the research project funded by the Social Sciences and Humanities Research Council of Canada (SSHRC), entitled **Small and medium forest industries for vibrant local economies**. The research project focuses on forest conservation and development in landscapes in Indonesia, British Columbia in Canada, and Cameroon. Given the constraints of the COVID19 pandemic, in 2020 we focused our attention on building a global understanding of the challenges and successes of small and medium forest enterprises (SMFE)s, creating our conceptual framework, and refining our research questions. This report summarizes progress and outlines next steps for the SSHRC research project. We also document other activities that will be part of the newly established Vibrant Forest Landscapes Lab at UBC Faculty of Forestry.

Members:

Jeff Sayer, Professor (Principle Investigator)
Intu Boedihartono, Associate Professor
Chris Gaston, Associate Professor
James Langston, Lecturer
Rebecca Riggs, Post-doctoral fellow
Emilio Valeri, Doctoral student
Adinda Herdianti, Doctoral student
Lauren Nerfa, Doctoral student (based at University of Hawaii)

1. Seminars

In 2020 we held a series of seminars with guests on the forefront of SMFE research and practice. We invited guests focused in BC, Indonesia, and globally. Our guests included:

- Neil Byron University of Canberra
- Duncan MacQueen IIED
- Doug Konkin – Government of British Columbia
- Dris Ezzine de Blas – CIRAD, Montpellier
- Tony Cunningham – Independent, South Africa
- Rob Kozak- UBC, Forestry
- Brian Belcher Royal Rhodes University
- Zakir Machmud – University of Indonesia
- Chip Fay- Rainf forest foundation, Norway
- Verina Ingram and Serge Piabuo (Wageningen)
- David Montwé – UBC, Forestry
- Fernanda Tomaselli – UBC, Forestry
- Rod Taylor – World Resources Institute, Washington

- Kurt Niquidet – COFI, Victoria
- William Nikolakis – UBC, Forestry

Some key lessons that emerged from these seminars include:

We recognise broad definitions of SMFEs. We use the term SMFEs to include **informal and formal enterprises that manage, harvest, process or market forest products at small and medium scale**. We are interested in SMFEs that have a direct connection to forest and natural resource management. We include community forests that have an enterprise and/or income-generating component.

There is value in **understanding SMFEs at the landscape scale**, not as single entities. We consider a landscape as a space where a bundle of goods and services co-exist within which SMFEs are located. There may be sustainable development pathways that lie outside of forestry, or even outside of the physical landscape (i.e. remittances). With more economic activity and diversity in a landscape, there is more room for new enterprises to emerge. Landscapes that are dependent on subsistence may suffer from lack of opportunities. Landscapes that are dependent on a single industry may create opportunities for SMFEs but may be less resilient. The term diversity may have different meanings in the context of SMFEs – diverse businesses, diverse actors, ecological diversity, resilience through diversity etc.

Our research will not be restricted to narrow definitions of SMFEs but should recognise the range of ways in which rural people organise to derive benefits from forests. We will study how the **“ecosystem” of enterprises** emerges and self-organizes. We will adopt the broader understanding of prosperity, recently defined as ‘individual wellbeing values in line with the common good’ (Macqueen et al., 2020; Miller & Hajjar, 2020). We can consider the role of collective action, key actors, and decision-making in fostering benefits – how important are these elements? For example, the role of intermediaries (middlemen) and kinship networks.

Overall, we are interested in the **attributes of landscapes that favor the emergence and viability of SMFEs**. These could be policy or market triggers or be related to non-market conditions, such as capacity for self-organization and collective action. We are interested in a broad definition of successful SMFEs – how is success defined? What are the benefit flows of SMFEs – social, economic, environmental, financial, institutional etc.

2. Literature review

Our review of the literature began with major global studies (Badini et al., 2018; Hajjar et al., 2017; Macqueen et al., 2020) and other studies focused on SMFEs. This led to an overarching understanding of the enabling conditions and potential benefits of SMFEs (Figure 1) and a typology of different forest enterprises (Table 1). Some of the key research areas that emerged from the initial literature review are:

- The importance of institutional arrangements guarantee access to resources and to provide stable access to markets
- The opportunities and barriers for capturing benefit flows from SMFEs
- Human capital in SMFEs – what are limiting and enabling factors?
- How to leverage contribution of SMFEs to local economies?
- The links between SMFEs and ecosystem approaches and landscape governance
- How the devolution of power to communities influences equity and participation.

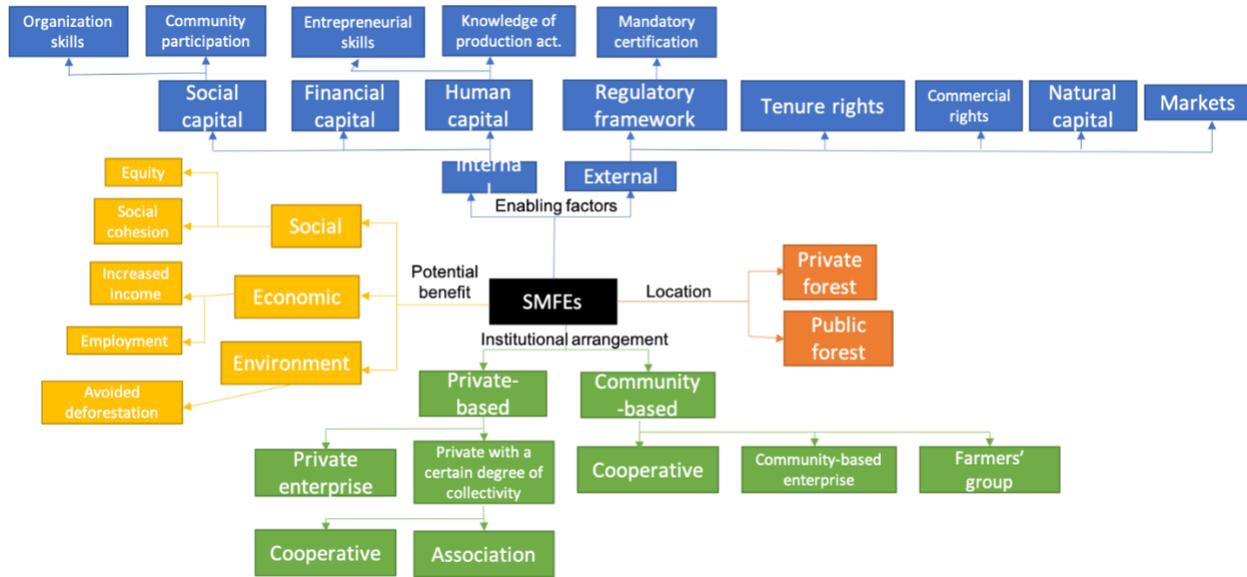


Figure 1: Starting conceptual framework for literature review on enabling conditions and benefits of SMFEs

Table 1: typology of forest industries

Informal industry	Micro-scale industry	SMFE	Large scale industry
Opportunistic Diverse products Product mix changes	Specialty products	More diverse products Less technical capacity Niche markets	Commodity product Economies of scale High technical capacity High investment needs Simple value chains
Diverse/Natural forests Wildlife trade Hunting	Mushrooms, Spices	Near-natural forests Higher species diversity Uneven aged stands Multiple uses High labor needs Opportunities for low skilled labor Long history Craftsmanship	Ecological simplification Uniform forests Even aged stands Few species Single predominant use Highly mechanized – high returns to labour, Highly skilled/trained workforce Short history
Often illegal Elite capture	Formalization	PES potential Resilience – ecological and economic	Vulnerable to market changes Highly competitive – small margins

Few/no rights of legal protection Insecure		Adaptable Can retain benefits locally Sustainable products	Little potential for PES May not adapt to changing contexts
Zero political support Zero access to finance No access to certification	Occasional political support	Weak political support Limited access to finance Minimal access to certification	Strong political support NGOs skeptical Can tap financial markets International certification available

To dive deeper, we asked UBC students to produce reports:

- Small and Medium Forest Enterprises in Nigeria: Economic, Environmental and Policy impacts by Susan Agber Kwaghdoo
- Small and Medium Forest Enterprises in Ghana: Challenges and Way Forward by Collins Tawiah Sekyere
- Illusions of empowerment? The paradoxes of community forestry in Cameroon by Vilbert Vabi

PhD students focused their literature reviews on:

- How powerful actors capture benefits of decentralized forest management by Emilio Valeri
- Governing market to promote productive learning environments for locally-controlled SMFEs by Adinda Rizky Herdianti
- How local perceptions of landscapes shape forest management strategies, the ecological characteristics of forest landscapes, and links to community resilience by Lauren Nerfa

3. Fieldwork

We were unable to conduct fieldwork in 2020 due to the COVID19 pandemic. However, we visited community forests, including West Bank in August 2019, Williams Lake in March, and Squamish in September 2020. We also visited the small mill at Malcolm Knapp Research forest. In July and October, we visited Quesnel and began collaboration with the Quesnel Forestry Initiatives Program. We received ethics approval to conduct fieldwork when UBC allows in-person research to continue.

4. Theory of Change

Due to COVID19 we were unable to hold a Theory of Change (TOC) workshop. However, we were able to pull together ideas and objectives discussed throughout the year into the beginnings of a TOC. As shown in Figure 2, the final TOC should be nested, including landscape, national, and global objectives. Activities should lead to outputs that match overall objectives. The TOC in Figure 2 is incomplete, intended as an example of what the final product could include.

Problem: Attempts to devolve forest management are not delivering on their potential to improve local livelihoods and conserve forest resources.
Purpose: We aim to influence policies and programs to "create space" for SMFEs and other local forest governance initiatives to prosper in ways that meet a broad range of development and conservation objectives.

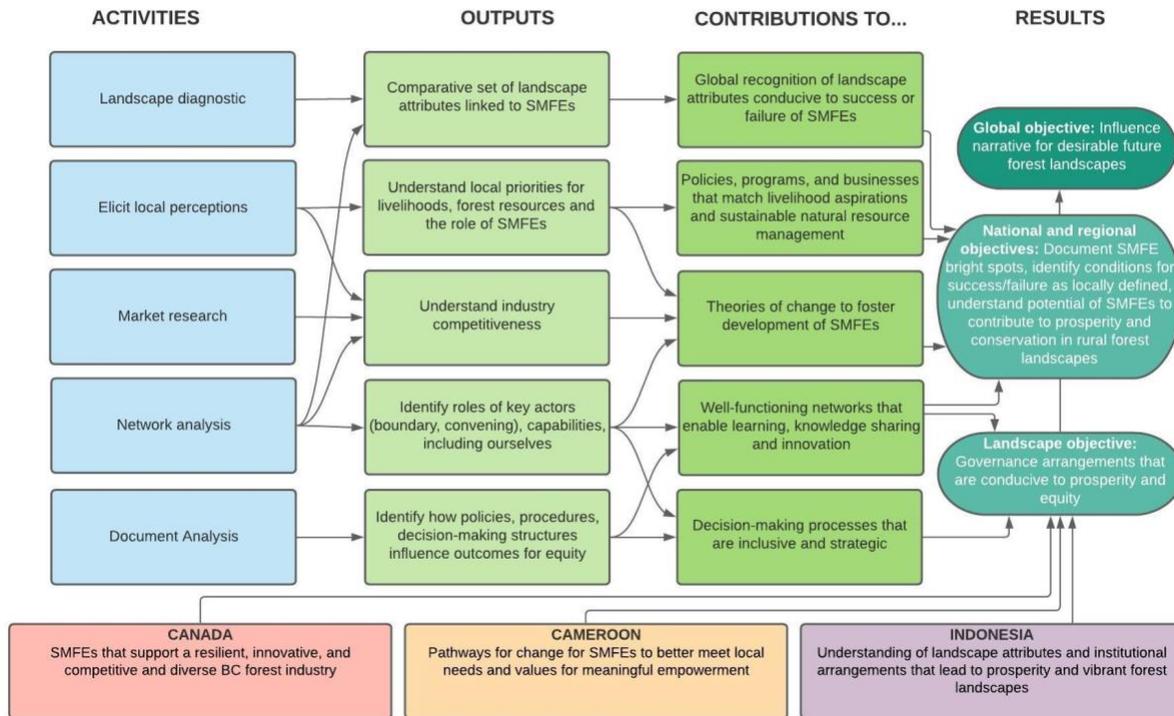


Figure 2: TOC

5. Research questions

Our literature reviews and discussions in 2020 led to overarching questions that will steer the focus of our research:

Overarching Aim: Identify critical attributes of landscapes that strengthen or constrain small and medium forest enterprises. What works in each landscape and if generalizable lessons emerge from 'bright spots'.

PhD Research topics: Adinda: What governance mechanisms increase the adaptability of SMFEs to market dynamics?

Emilio: What conditions enable decentralization reform in the forestry sector to foster meaningful participation of local communities in decision-making and enable them to capture more benefits?

Lauren: How do local perceptions and cultural practices shape plant species diversity, ecosystem function, and community resilience in tropical forest landscapes?

Indonesia: How can SMFEs overcome institutional barriers to achieve prosperity? What are the landscape attributes that lead to ‘vibrant forest landscapes’?

BC: What are the opportunities for BC to transition to a resilient, innovative, competitive and diverse forest industry?

- How can community forest stimulate growth in the value-added wood product manufacturing sector?
- What other options exist for forest industries to maximize contributions to local economies in BC?

Cameroon: How can CFs better meet local needs and values for meaningful empowerment and resilient landscapes? What institutional changes are needed and feasible?

Some other questions that we may want to consider:

- What will COVID mean for SMFEs?
- Is there any evidence for enhanced environmental outcomes compared to commodity industrial enterprises?
- What is the role of industry in creating conditions for successful SFMEs?
- Under what conditions do SMFEs and community forests yield intangible benefits to local communities?
- Do economies of scale determine optimal sizes for forest enterprises – do different scales of enterprise deliver different returns to land and labor?

6. Research design

Our research design has 3 major components: landscape-level analysis, national/regional analysis, and global analysis. We intend to select 2-3 landscapes in each country to focus in-depth analysis, with research questions decided by local needs and interests and PhD topics. Regional and global analyses will draw from multiple cases to address issues of generalizable application. We will combine quantitative and qualitative research methods. Potential landscapes of focus include:

Indonesia: Seram, Riau, Yogyakarta, North Kalimantan

British Columbia: Quesnel, West Bank, Cortes Island,

Cameroon: Sangha Trinational

Together, the PhD research projects will deliver a comprehensive understanding of the enabling conditions for vibrant forest landscapes (Figure 3).

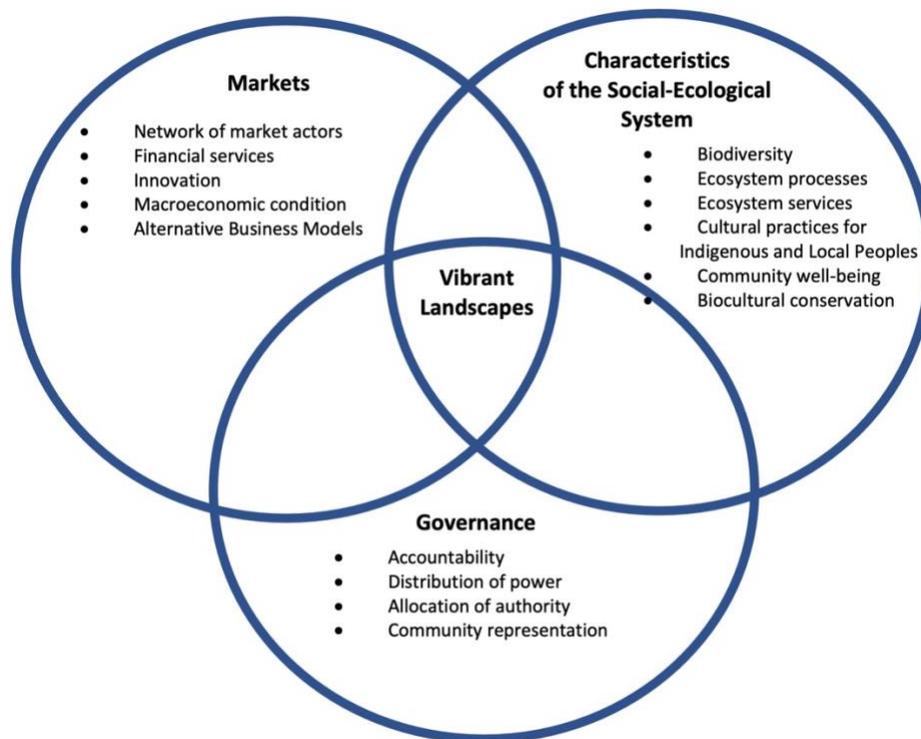


Figure 3: Enabling conditions for Vibrant Forest Landscapes that form the 3 PhD research topics

7. Indigenous perspectives

Our interest in SMFEs and community forest governance includes Indigenous and non-Indigenous initiatives. As First Nations and customary forest rights and ownership are key issues in British Columbia, Indonesia, and Cameroon, we will give special attention to assertion of rights to own, govern, manage, and benefit from forests by Indigenous people.

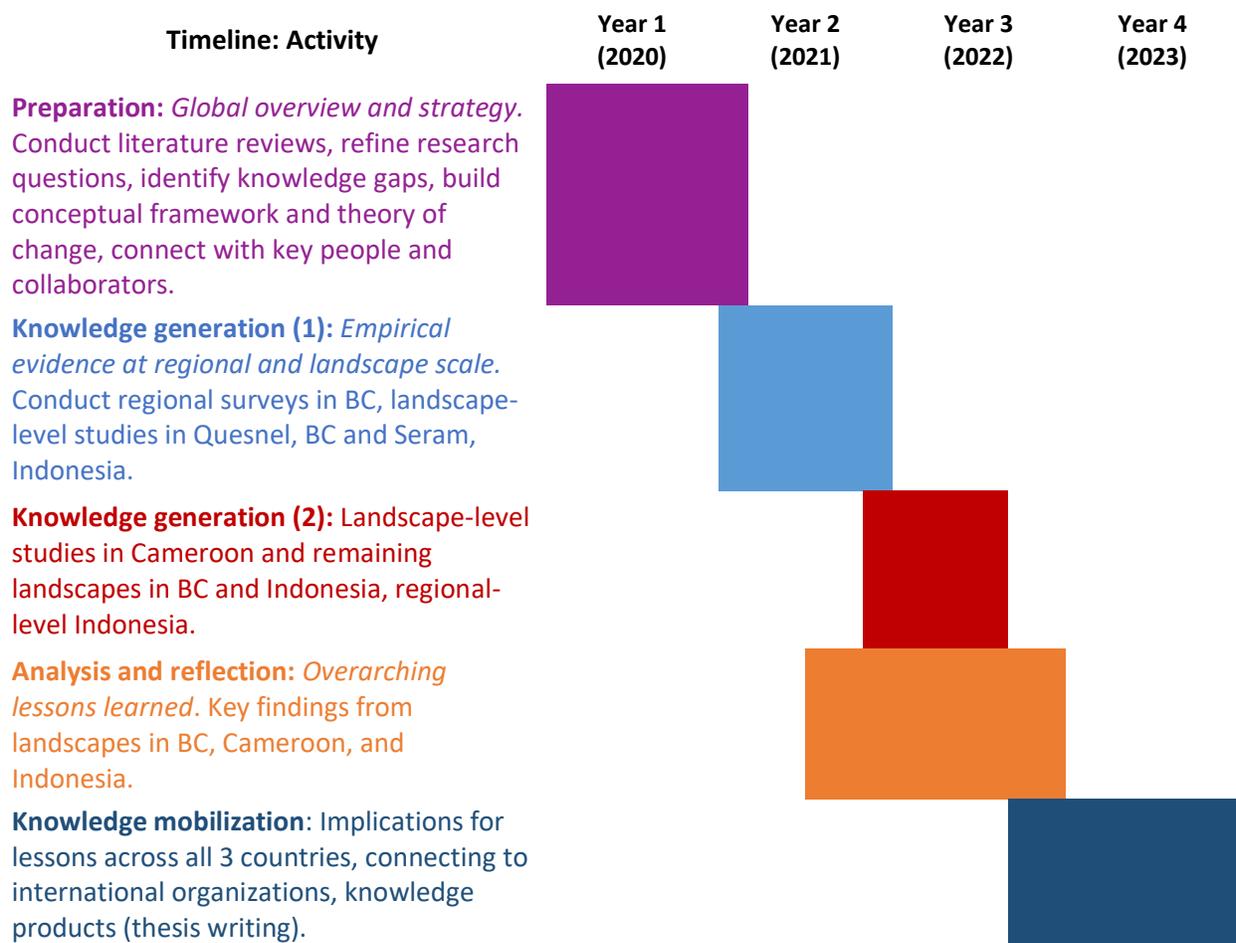
In British Columbia, the provincial government passed legislation in November 2019 to align BC's laws with the United Nations Declaration of Human Rights (UNDRIP), called the B.C Declaration on the Rights of Indigenous Peoples Act (DRIPA). In forestry and resources, DRIPA could provide a pathway for reconciliation and stronger engagement, decision-making power, and leadership for Indigenous people in forestry. We seek to observe and support these processes in landscapes in BC.

In Indonesia, customary communities are expanding their involvement in forest management through government-driven social forestry initiatives and customary forest claims. Customary communities have asserted claims over forests for many years, but recognition is growing and initiatives that transfer power from the Government to communities are gaining momentum. There is a need to learn from on-the-ground implementation of these initiatives and if they deliver expected outcomes. In areas that lie beyond the forest transition – where little natural

forest remains – many SMFEs are emerging to meet needs for forest products from “trees outside forests”.

In Cameroon, community forestry was introduced into legislation in 1994 but procedures for implementation were not finalized until 2009. Marginalised groups such as the Indigenous Baka communities occupy some of the world’s most biodiverse forest areas but at present derive very little benefit from the use of those resources (Oyono, 2010). Current evidence shows community forestry is not delivering on social, economic and environmental objectives (Duguma et al., 2018). Indigenous people who wish to acquire community forests struggle to overcome systemic marginalization (Assembe Mvondo, 2006). There is a need for improved actions and policies that deliver meaningful benefits to Indigenous communities; understanding local needs and values and identifying policy mechanisms that bring about desirable changes.

8. Timeline



9. Events and other research projects

Exploring the power of Indigenous art as a catalyst for linking economic growth to sustainable landscape (Funded by a Tri-council New Frontiers grant)

The purpose of this study is to understand how art can be used as a boundary tool for enhancing environmental sustainability and supporting the well-being of rural communities. Boundary tools are objects or activities that bring together people with diverse and often conflicting perspectives to build relationships and reach consensus around an issue. This study will bring together scientists and artists to learn how art is important to culture, well-being, environmental management, economic development, and other aspects of life. Focusing on Canada and Indonesia, we aim to improve understanding on the role of art in culturally and environmentally sustainable development. The study will have 3 stages. In stage 1, we will conduct a global online survey distributed to research scientists, conservation NGOs, artists, and policy-makers working in the environmental sustainability domain. In stage 2, we will interview artists and scientists at art workshops that we will convene in Indonesia and Canada. In stage 3, we will visit 2 remote communities (one in Canada, one in Indonesia), where we will interview local leaders and community members about economic, environmental, and social preferences in relation to natural resource management and art. An MSc student will join the lab in September 2021 to support the study.

Uncovering leverage points for inclusive, resilient, and sustainable infrastructure expansion in forest landscapes

The objective of this research is to develop local solutions for how actors in forest landscapes might successfully balance trade-offs of infrastructure development for inclusive, resilient, and sustainable outcomes. We will focus our research in two of the world's most threatened forest ecosystems, the Indo-Burma biodiversity hotspot in Cambodia and the Sangha Tri National transboundary conservation area in the Congo Basin. In forest landscapes in Cameroon and Cambodia, we aim to (i) evaluate the inclusiveness of infrastructure expansion to meet local livelihood needs, (ii) identify the attributes of landscape governance that promote resilient systems, (iii) derive lessons for how to leverage infrastructure expansion to deliver locally appropriate social, economic, environmental outcomes. We will submit an application to the SSHRC Insight Development Grant competition in January 2021 and if successful recruit an MSc student in September 2021 to support the study.

Opening Doors 2

Following the success of [Opening Doors](#), Chris Gaston introduced the idea of Opening Doors 2 in 2021. The program would focus on wall panels, exploring the use of an interior species (i.e. ponderosa pine) as a wood for carving. The program would ideally include wood sourced from the West Bank Community Forest or the Quesnel timber Supply Area and take place in Quesnel, using CNC (College of New Caledonia) campus facilities, in partnership with Ntityix Resources (West Bank), Quesnel Forest Initiatives Program, and small wood processing manufacturers (i.e. Kalesnikoff, pre-fab companies). Chris will begin by trialing the use of ponderosa pine as a carving material with CNC (computer numerical control) technology.

10. List of outputs from Vibrant Forest Landscapes in 2020

Grants Awarded:

- New Frontiers grant awarded for: Exploring the power of Indigenous art as a catalyst for linking economic growth to sustainable landscapes (2yrs, \$200,000)

Grant Applications:

- SSHRC Grant application: Learning from Customary Governance: Achieving Broader Societal Benefits from Forest Landscapes (4yrs, \$300,000)
- MITACS Accelerate: Governing innovation and knowledge sharing to increase adaptive capacity of forest industry in Quesnel, British Columbia (6 months, \$15,000)

Publications

- Sayer, J., Margules, C. (In Press) People and Biodiversity in the 21st Century, *AMBIO*
- Byron, R. N., & Sayer, J. A. (2020). Broadening ambition of forest policies: the Spears legacy. *International Forestry Review*
- Pattiselanno, F., Lloyd, J. K., Sayer, J., Boedhihartono, A. K., & Arobaya, A. Y. (2020). Wild Meat Trade Chain on the Bird's Head Peninsula of West Papua Province, Indonesia. *Journal of Ethnobiology*
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- Langston, J. D., Riggs, R. A., Boedhihartono, A. K., Kastanya, A., & Sayer, J. (2020). An island in transition: governing conservation and development in Seram, Indonesia. *Singapore Journal of Tropical Geography*
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- Riggs, R. A., Langston, J. D., Sayer, J., Sloan, S., & Laurance, W. F. (2020). Learning from Local Perceptions for Strategic Road Development in Cambodia's Protected Forests. *Tropical Conservation Science*
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- Nerfa, L., Rhemtulla, J. M., & Zerriffi, H. (2020). Forest dependence is more than forest income: Development of a new index of forest product collection and livelihood resources. *World development*
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- Reed, J., Borah, J. R., Chervier, C., Langston, J., Moeliono, M., O'Connor, A., . . . Sunderland, T. (2020). A methods toolbox for integrated landscape approaches. *Operationalizing integrated landscape approaches in the tropics*
- Acheampong, E. O., Sayer, J., Macgregor, C., & Sloan, S. (2020). Application of Landscape Approach Principles Motivates Forest Fringe Farmers to Reforest Ghana's Degraded Reserves. *Forests*
- Mansourian, S., Parrotta, J., Balaji, P., Bellwood-Howard, I., Bhasme, S., Bixler, R. P., Boedhihartono, A. K., Sayer, J., . . de Jong, W. (2020). Putting the pieces together: integration for forest landscape restoration implementation, *Land Degradation & Development*
- Rodewald, A., Arcese, P., Sarra., J, Tobin-de la Puente, J., ... Sayer J. (2020) Innovative Finance for conservaton: roles for ecologists and practitioners. *Issues in Ecology*

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doi:<https://doi.org/10.1016/j.worlddev.2019.104647>

Cover Photos:

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| L1: Lac Des Roches, BC | R1: Squamish |
| L2: Malcolm Knapp Research Forest | R2: West Fraser TFL, Quesnel |
| L3: Quesnel Forestry Initiatives Program | R3: Woodlot license holder, Quesnel |