BRITISH COLUMBIA | Ministry of Forests

BRIEFING NOTE FOR INFORMATION

DATE: April 14, 2022

PREPARED FOR: Rick Manwaring, Deputy Minister of Forests

ISSUE: Jurisdictional Scan of Global Forest Bioeconomy Clusters

BACKGROUND:

- In support of the *BC Bioproducts Strategy*, the Innovation, Bioeconomy and Indigenous Opportunities Branch commissioned a jurisdictional scan of successful forest bioproduct manufacturing clusters around the world.

- The forest bioeconomy is an emerging sector that is expected to see significant growth globally over the next decade. A forest bioeconomy cluster refers to a formally connected group of companies under an official organization with forest fibre as the primary feedstock for manufacturing. Stakeholders include large industry, research institutes, educational institutions, and spin-offs/ start-ups.

- Jurisdictions with the most activity in the forest bioeconomy have forest bioeconomy clusters which enhance the productivity of their members and play a vital role in innovation. If BC is to be a leader in the forest bioeconomy, at least one forest bioeconomy cluster must be realized here.

- The clusters included in the commissioned study were: BioEconomy Cluster of Germany; Paper Province of Sweden; CLIC Innovation of Finland; CRIBE of Ontario; and FOR/Maine of Maine. They were selected for their collective organizational structure, manufacturing capacities, and significant innovation and investments in new technology.

- Of the clusters studied, the best model for BC to learn from for how to build a cluster is the FOR/Maine cluster, while the best models for overall structure and collaboration are both Finland's CLIC Innovation and Sweden's Paper Province.

DISCUSSION:

The initiation of a cluster can often be traced back to both a 'champion' and strategic government investments that target the bringing together of the organizations that constitute such a cluster. The 'champion' serves as the catalyst able to connect and organize all interested parties and must be perceived as both highly credible and neutral (non-partisan) in the eyes of all stakeholders. They must also be forward-thinking and foremost business-driven and have a sufficient network of contacts. Strong project management skills are essential. Either at the outset or over time, the cluster will transition to being an organizing body, such as the Fraunhofer Society in Germany or an industry consortium in Sweden.

The buy-in of large industry is critical as no other stakeholder can provide the needed investment capital (in the range of hundreds of millions to billions of dollars) for transformational manufacturing infrastructure. These investments depend upon a solid and stable investment climate as well as

strong, and cost-efficient, forest fibre supply chain infrastructure. Understanding the needs and interests of these players must be a top priority in planning a cluster. Large industry should also be leading the direction of major projects of the cluster with the support of research institutes. Ontario's CRIBE has struggled to achieve commercial success as its leadership has primarily been research institutes.

Secondary to large industry, both research organizations and educational institutions are important for the research and development that is foundational to innovation and the provision of skilled employees within a cluster. The strongest clusters are centred on an open innovation model, in which research costs are shared amongst cluster members, as are the findings and innovations. Government must consider utilizing funding policy levers to encourage this model, such as requiring membership in the cluster, or explicit collaboration between organizations. Recruiting and retaining enough skilled employees is a consistent challenge across all clusters studied in the report.

Significant long-term government grants at the creation of the selected clusters proved critical to their establishment. In 2013, Sweden's Paper Province received a 10-year grant of ~$17M CAD; in 2012 Germany's BioEconomy Cluster received a 5-year grant of €40M. Across the board, it took between five and eight years before significant large investments were made in any of the clusters (e.g. €550M in the BioEconomy cluster by UPM Kymmene, €2.7B by Metsa Group in Finland), which is why long-term grants are needed. s.16; s.17

s.16; s.17

NEXT STEPS:

1. Continue with thorough cluster planning, including further collaboration with all clusters, and especially FOR/Maine, to develop a cluster strategy for BC
2. s.16; s.17
3.
4.

Attachment(s): 1. s.16; s.17
2.

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	Initials	Date
DM	RM	May 1, 2022
Associate DM		
A/ADM	SBerg	Apr 25, 2022
ED	JM	Apr 19, 2022
Program Dir/Mgr.	GO	Apr 14, 2022

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Withheld pursuant to/removed as

s.16 ; s.17