

SFI CONFERENCE



SUSTAINABLE
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PEFC WEEK

FOREST + PEOPLE + NATURE



May 14-18, 2023 | Westin Bayshore Vancouver, Canada

NW ALBERTA CLIMATE IMPACT ASSESSMENT

Bill Adams

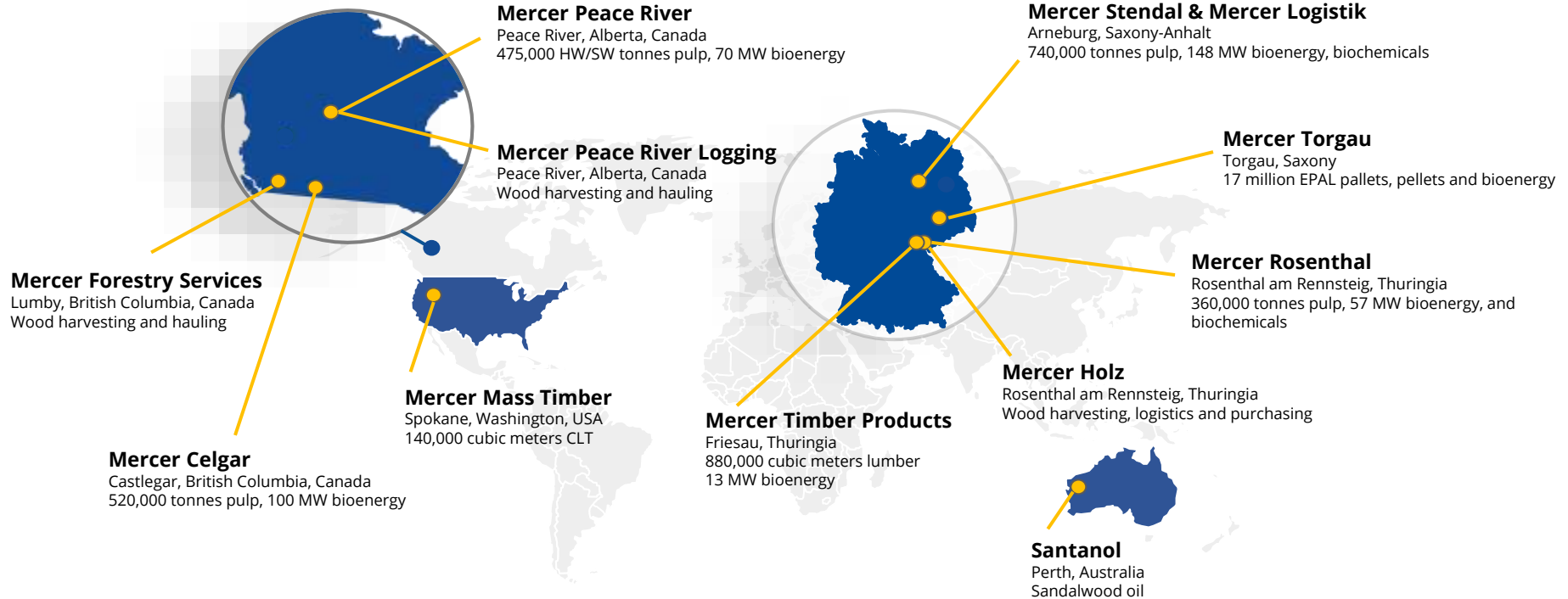
Vice President - Sustainability & Innovation

Mercer International



Transforming biomass into bioproducts for a more sustainable world

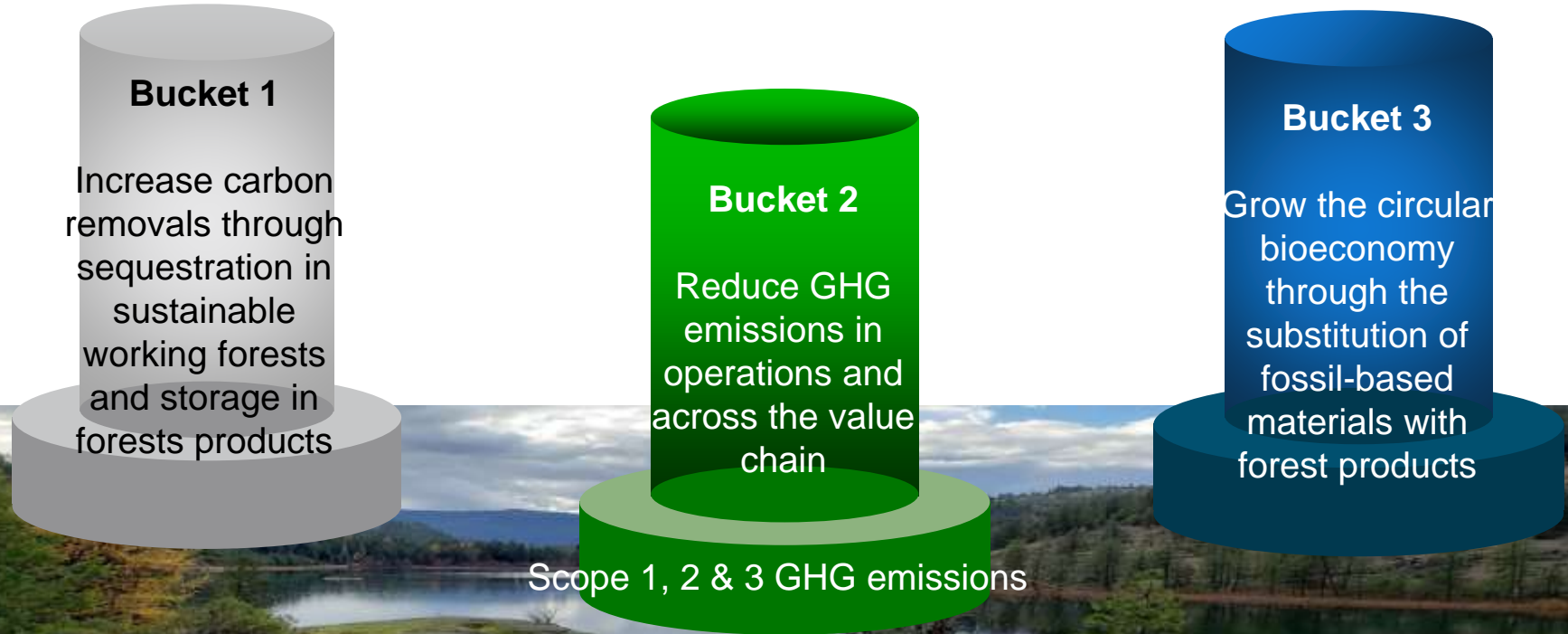
Mercer International Global Operations



Mercer International has responded to SBTi's urgent call for corporate climate action by committing to align with 1.5°C and net-zero through the Business Ambition for 1.5°C campaign.



The Three Carbon Buckets





Generic Carbon Budget Model (GCBM)



- Generic Carbon Budget Model (GCBM) is a spatial version of Natural Resources Canada's CBM-CFS3
- A key characteristic of the GCBM version is that it only models carbon stocks and flows where there is a forest yield curve associated with a pixel
- This means the unproductive forest that has no yield curve, and non-forest areas are excluded from the carbon accounting

Scale and Scope

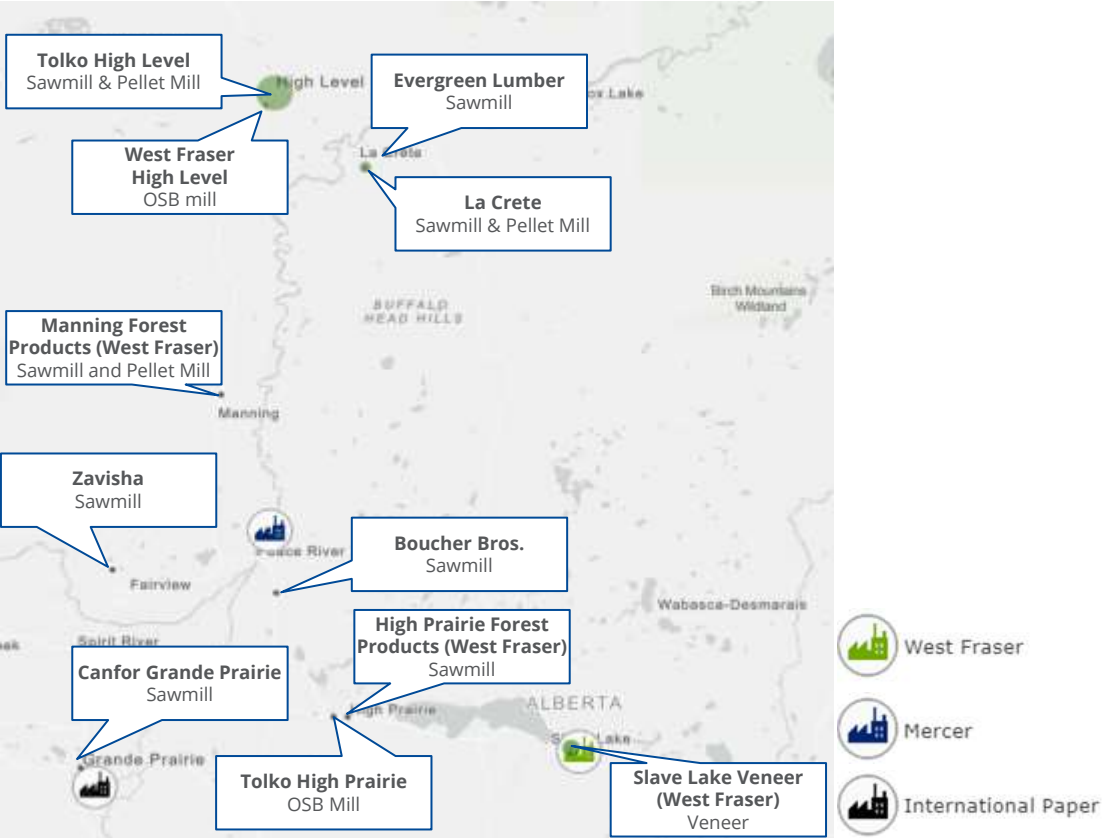


- The assessment covers the forests that provided the majority of Mercer's primary and secondary feedstock in May 1, 2020 - April 30, 2021 year (most recent year of complete harvest data)
- Five Forest Management Units considered:
 - P19 - Mercer West FMA
 - P20 - West Fraser FMA
 - P21 - Mercer East FMA
 - F26 - Tolko, Norboard, LaCrete FMA
 - P55 - Sustained Yield Unit

**7.3 million
hectares**

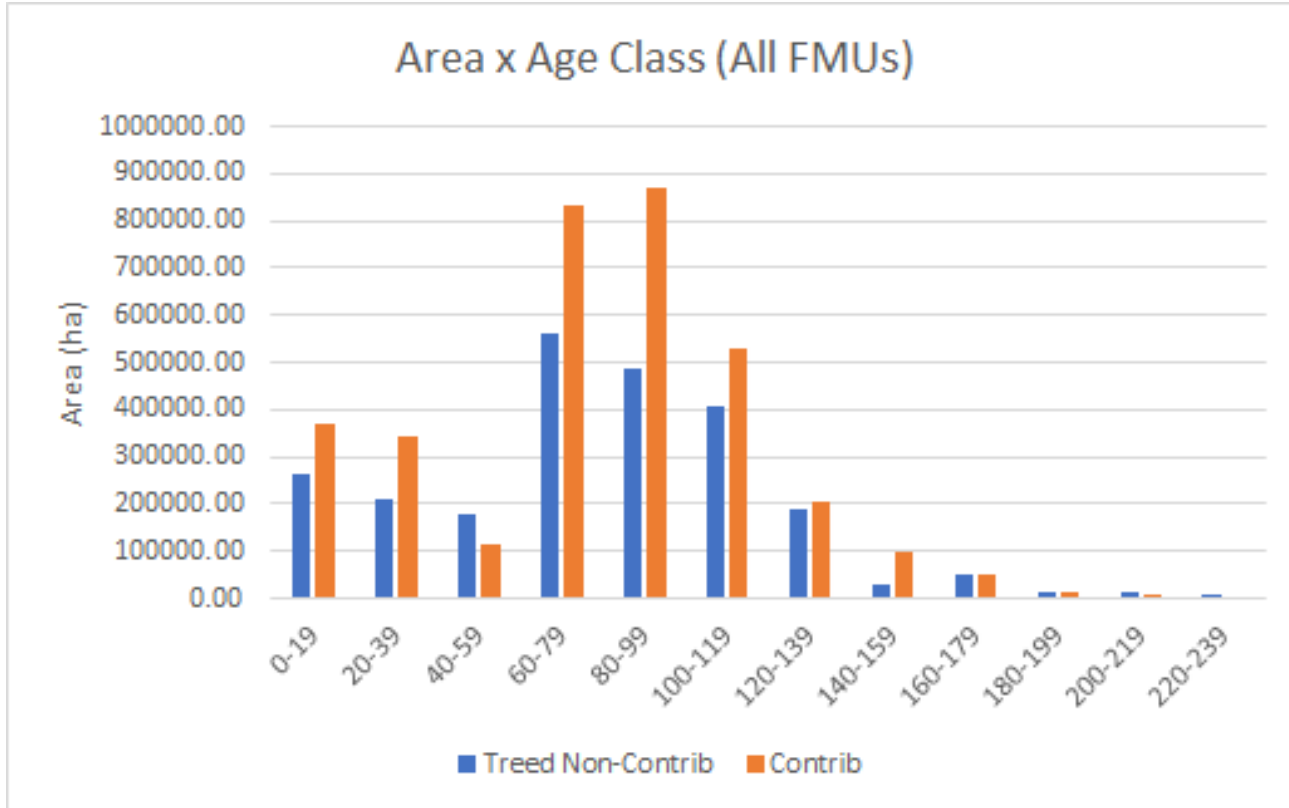


Map of Forest Operators in our Spatial Boundary



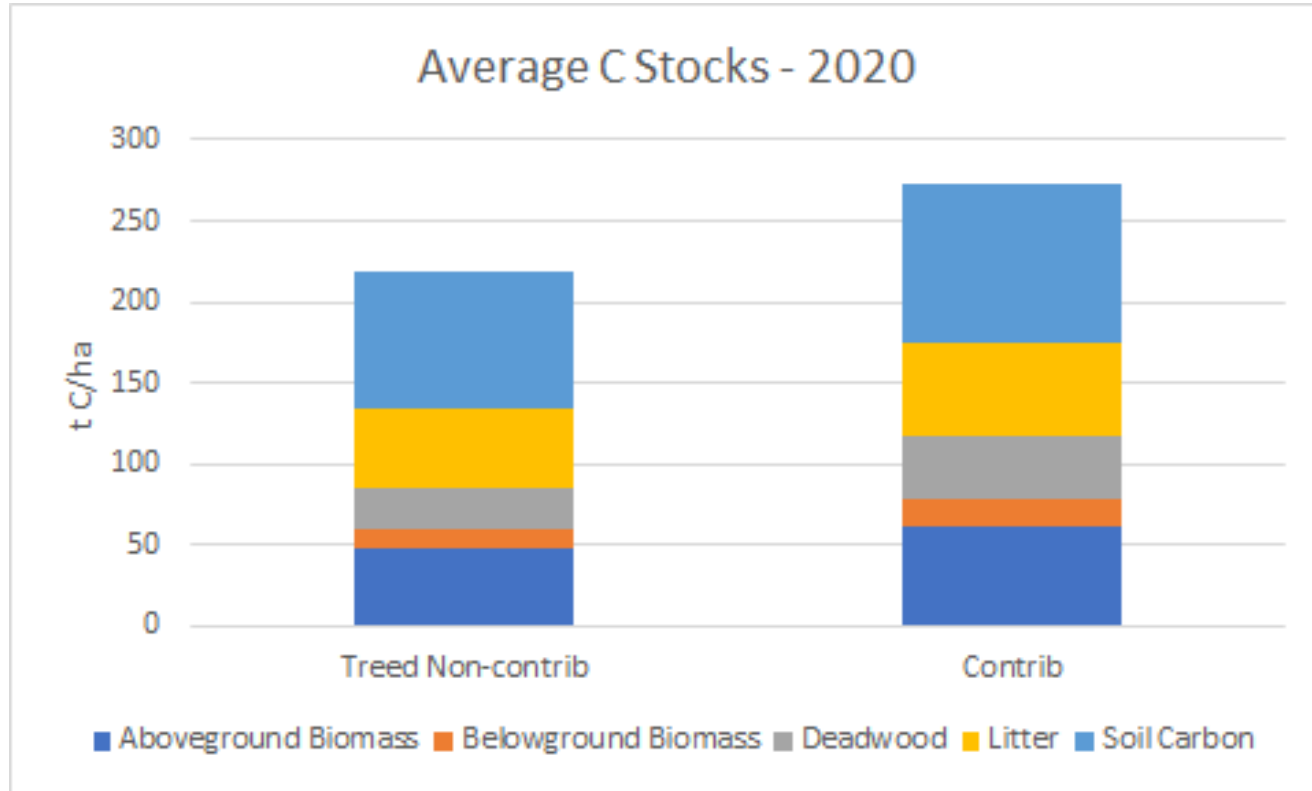


Age Class Structure - Similar on all 5 FMUs





Average Carbon Stocks





Disturbances in 2020 (hectares)

	Treed Non-Contributing	Contributing
Fire	0	23
Standard Harvest	568	3959
High-Utilization Harvest	114	8082
SUM	682	12064

- Harvest level represents 0.35% of the contributing landbase
- Fire obviously very low in 2020 - in 2019, 134,060 ha burned



Fluxes in 2020

The forest region sequestered 2.3 million tonnes CO₂e in 2020

	Treed Non-contributing (t C/ha/year)	Contributing (t C/ha/year)
Gross Growth	3.56	4.09
Annual Litterfall	2.18	2.47
Annual Mortality	0.97	0.92
Hardwood Production	0.00	0.10
Softwood Production	0.00	0.11
Net Growth	0.40	0.39

Main Conclusions

- NW Alberta's forest was a sink in 2020 – both contributing and non-contributing landbases
- The GCBM is an excellent forest ecosystem model that supports science based forestry.
- Determination of additional carbon benefits from long-lived forest products and the carbon emissions from equipment and transportation are necessary to quantify the full impact of the forest's role as a nature based solution to climate change.

**2.3 million
tonnes
CO₂e**