



LIFE
CLIMATE
PATH
2050

Workshop on methods and models for the preparation
of GHG emissions projections up to 2050

Model LULUCF

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Hybrid event, 15.9.2021

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CBM model

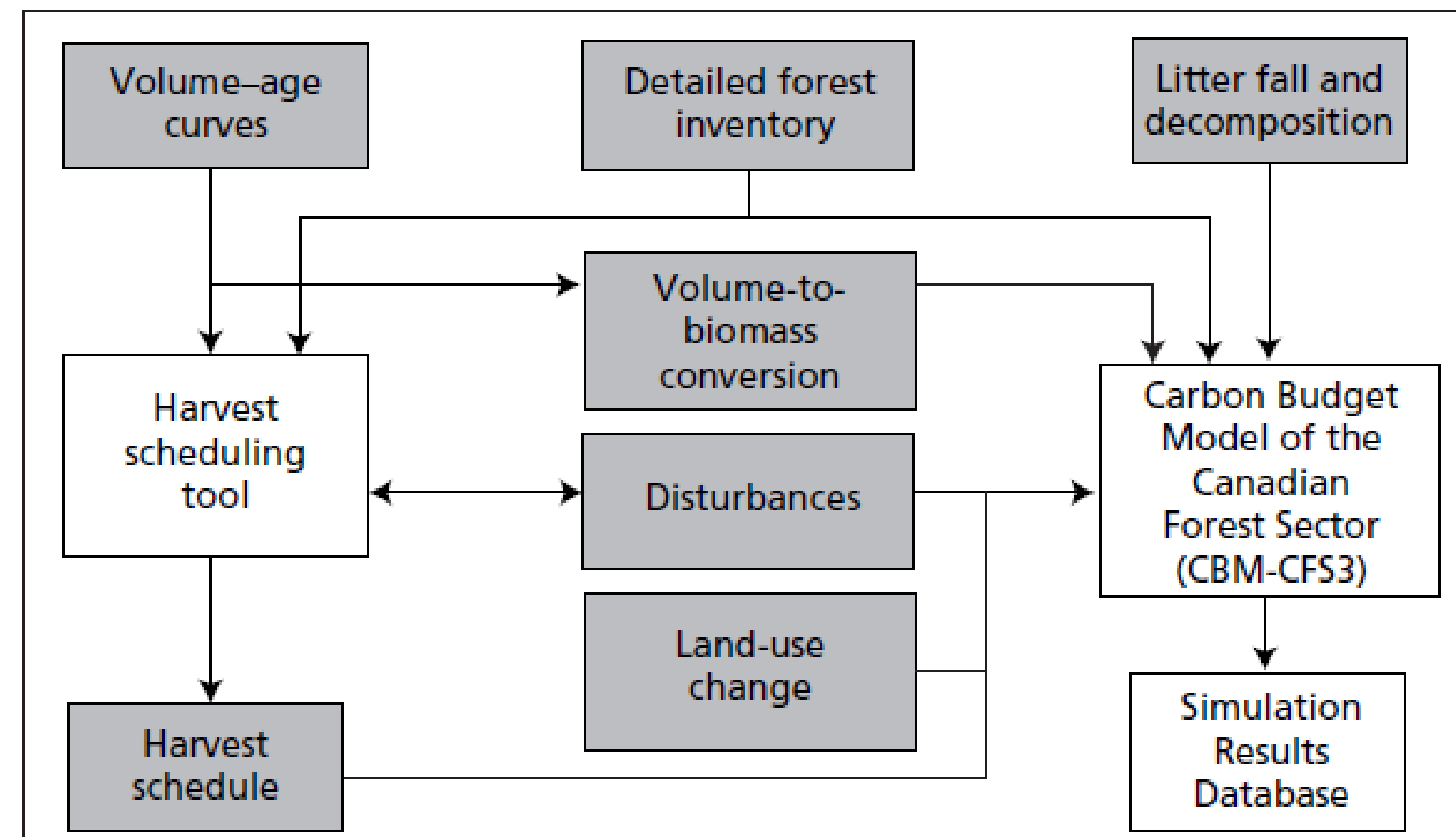
Purpose of the model:

- to simulate the dynamics of forest carbon stocks
- to calculate carbon stocks and carbon stock changes for the past or into the future
- to simulate and compare different forest management scenarios to assess impacts on carbon
- to assist forest managers in the planning of forest management
- to support decision-making and policy development

CBM model

Required input data:

- Forest inventory data (area, growing stock, age class etc.)
- Growth curves for individual forest species (or groups of species)
- Disturbances
- Harvest schedule
- Land-use change

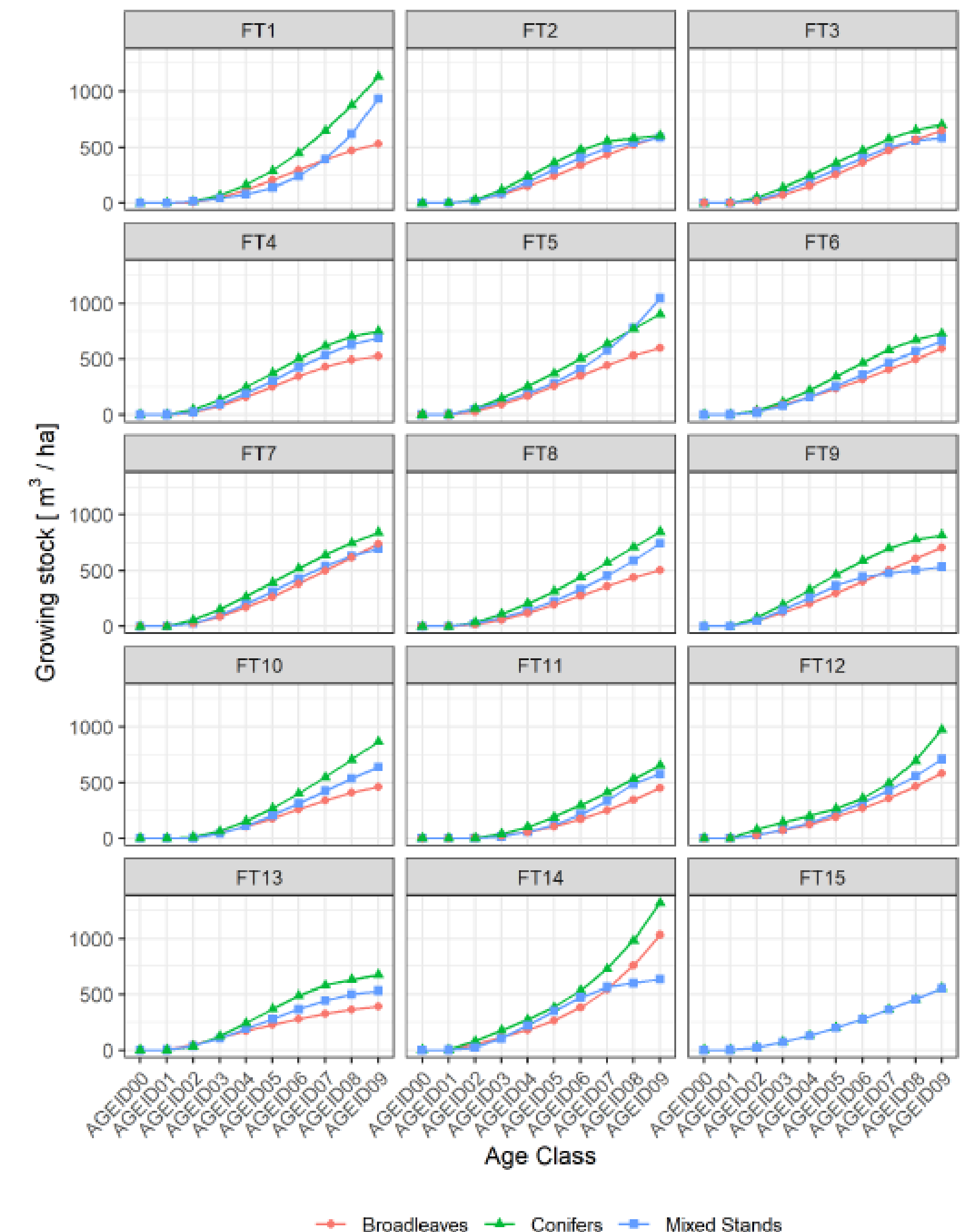


Kull et al. (2019)

Model update and calibration

Improvements:

- Improvement of growth curves for forest types
- Modification of Archive Index Database (AIDB) parameters
- Harvesting types (thinnings)
- Distribution of harvest between different forest types (harvest relative to growing stock)
- Addition of final fellings to disturbance matrix

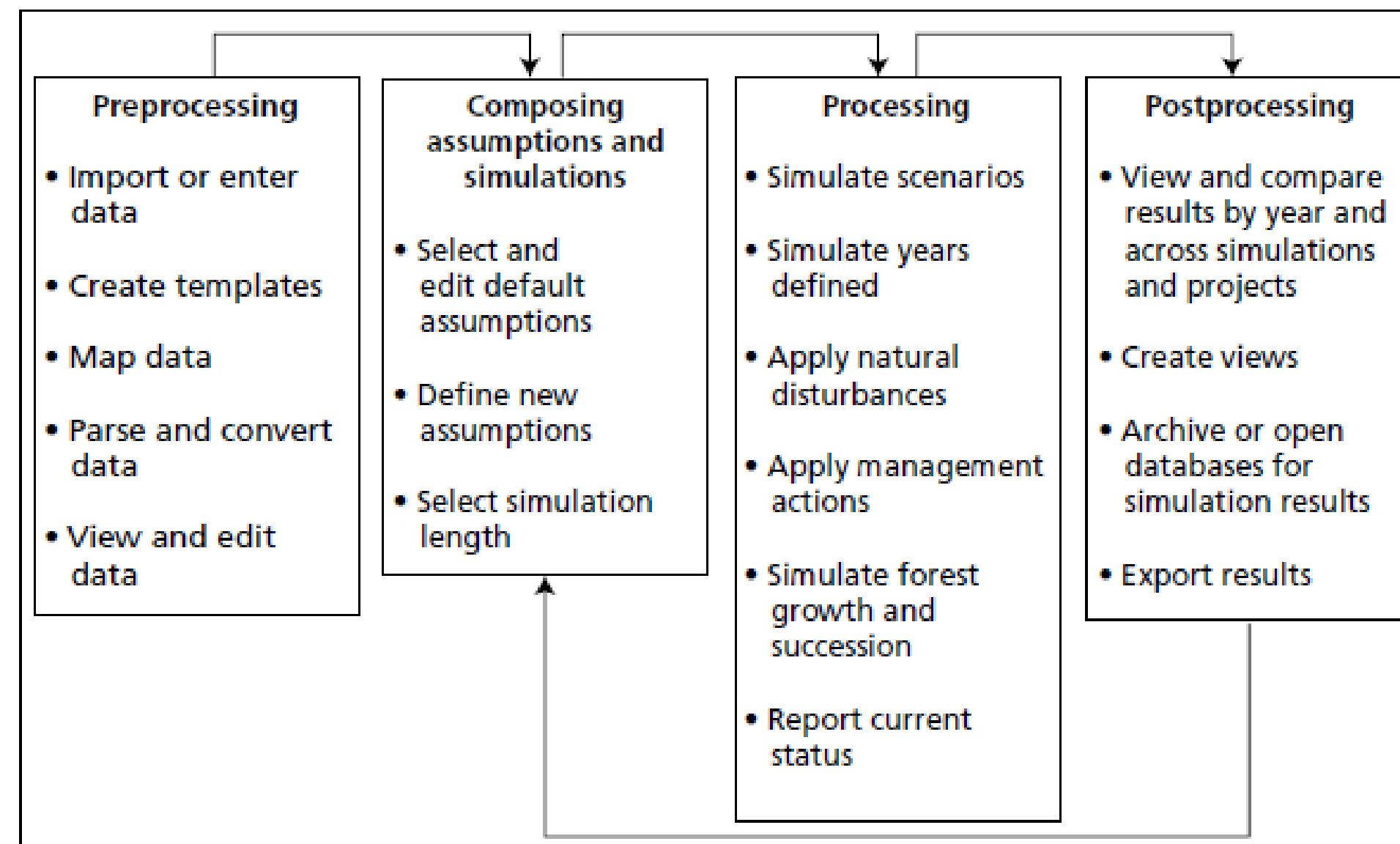


Jevšenak et al. (2020)

Model structure and outputs

Simulation results:

- Carbon stock and carbon stock changes:
 - Aboveground biomass
 - Belowground biomass
 - Deadwood
 - Litter
 - Soil
- Age-class distribution



Kull et al. (2019)

Project results

- LULUCF scenario projections until 2030 were used in the NCEP
- LULUCF scenario projections until 2050 were used in the long-term climate strategy
- LULUCF projections were used as part of the EU reporting (Reg. EU 2018/1999)
- Projection of GHG emissions and removals for managed forests (Jevšenak et al., 2020)
- Dissemination of results on European Geosciences Union (EGU) 2021




Article

The Effect of Harvesting on National Forest Carbon Sinks up to 2050 Simulated by the CBM-CFS3 Model: A Case Study from Slovenia

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