Figure 1. Overview of the modelling approach with, on the left-hand side, the CRCM5 regional climatic model driven at its boundaries by the CanESM2 global climatic model providing wind speed and soil temperature simulations for three climatic periods under 2 RCPs (4.5 and 8.5). Simulated soil temperatures are used to define the duration of a windthrow prone season (with unfrozen soil conditions). Weibull frequency distribution parameters are evaluated for wind speeds observed during either a fixed windthrow prone season, or one determined from simulated soil temperature. On the right-side, the ForestGALES model is used to evaluate the critical wind speed of balsam fir stands based on site and stand characteristics, and then calculates the risk of windthrow based on CWS values, and Weibull parameters. Windthrow risk is expressed in terms of windthrow return interval.