Wind and snow damage in Norway

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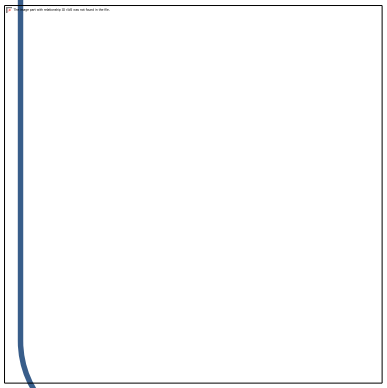
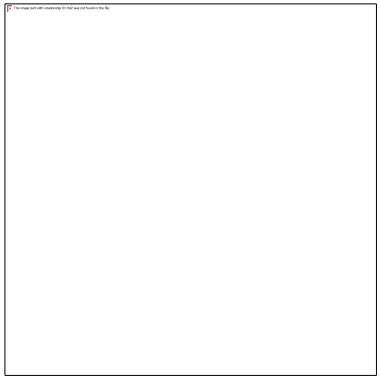
Risk Assessment

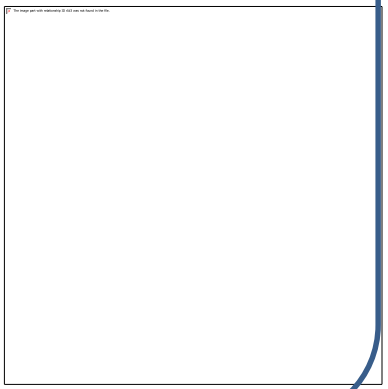
Characterization



Damage occurrence

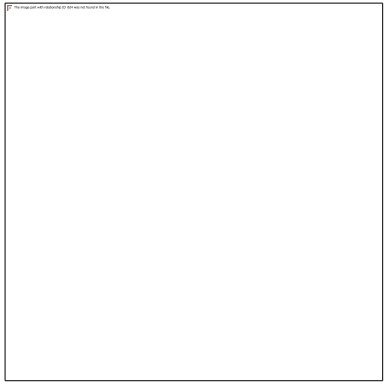


Damage

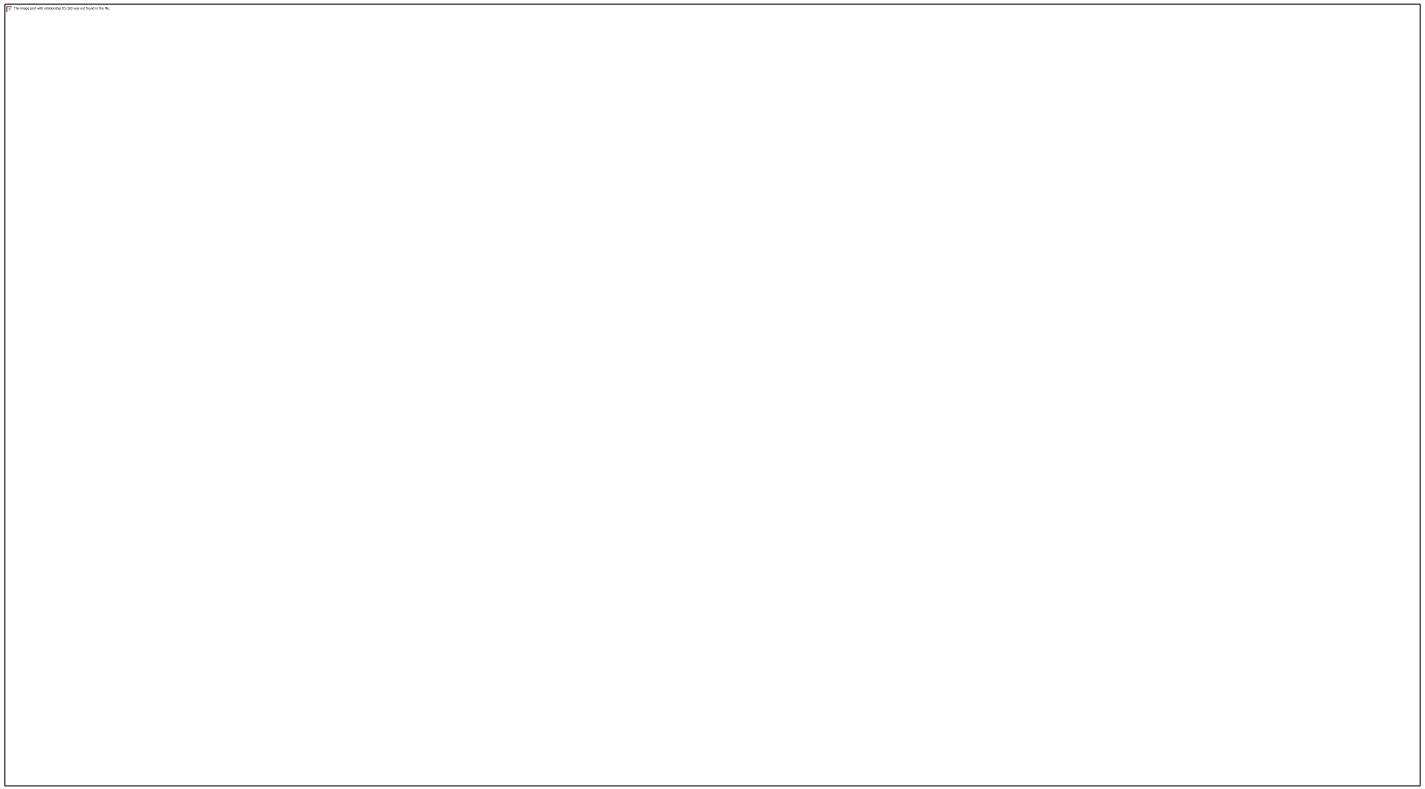


Risk Management

Optimization

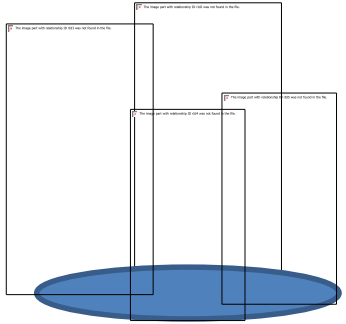


Snow, wind and browsing were the most frequent damages

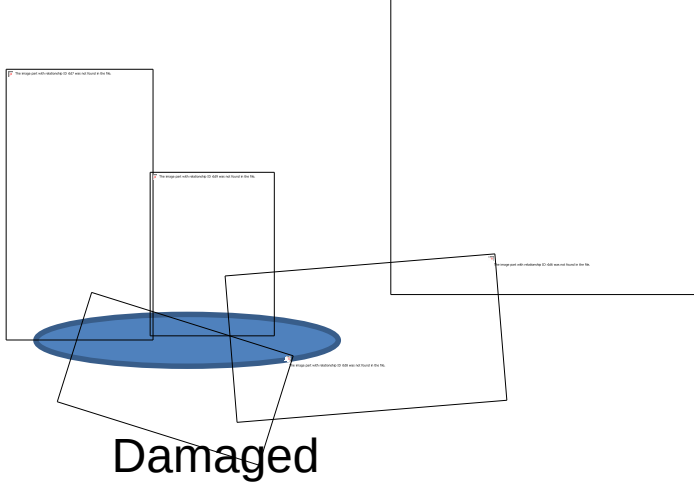


Step 1:

Damage occurrence

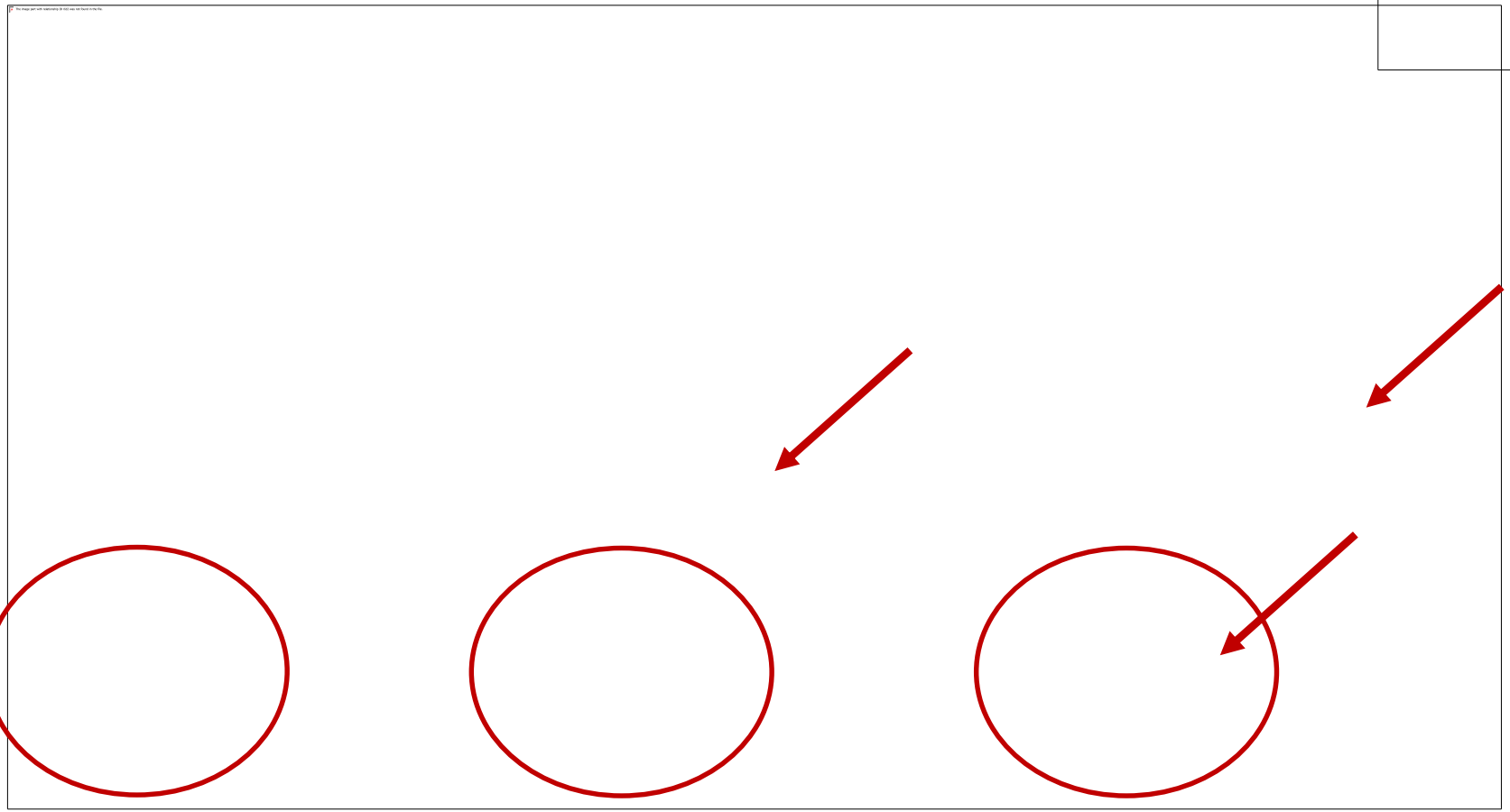


Undamaged



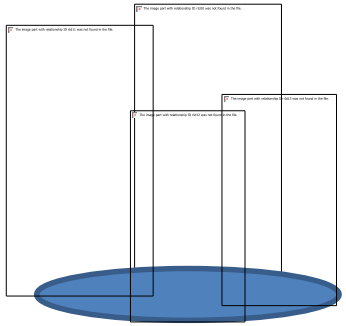
Damaged

The main variables associated with snow and wind damage occurrence



Step 1:

Damage occurrence



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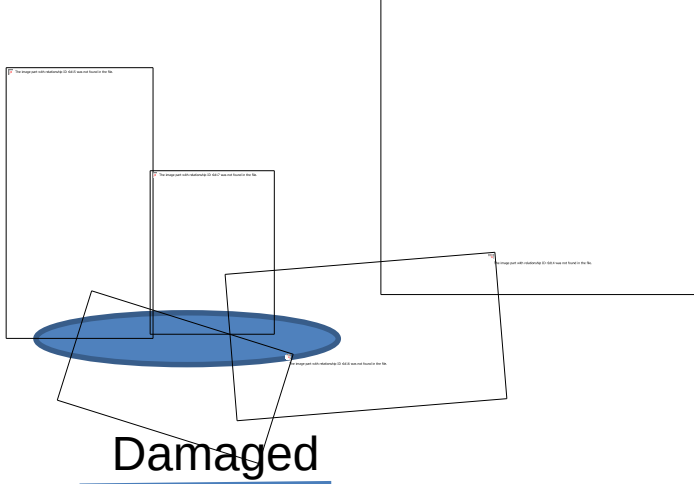
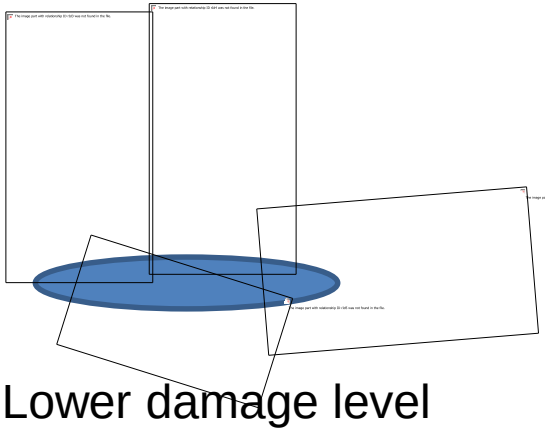


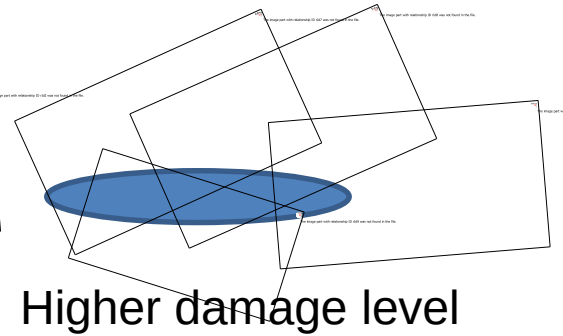
Damaged

Step 2:

Damage level

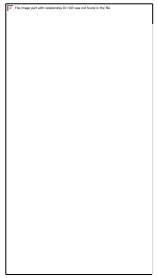


Lower damage level



Higher damage level

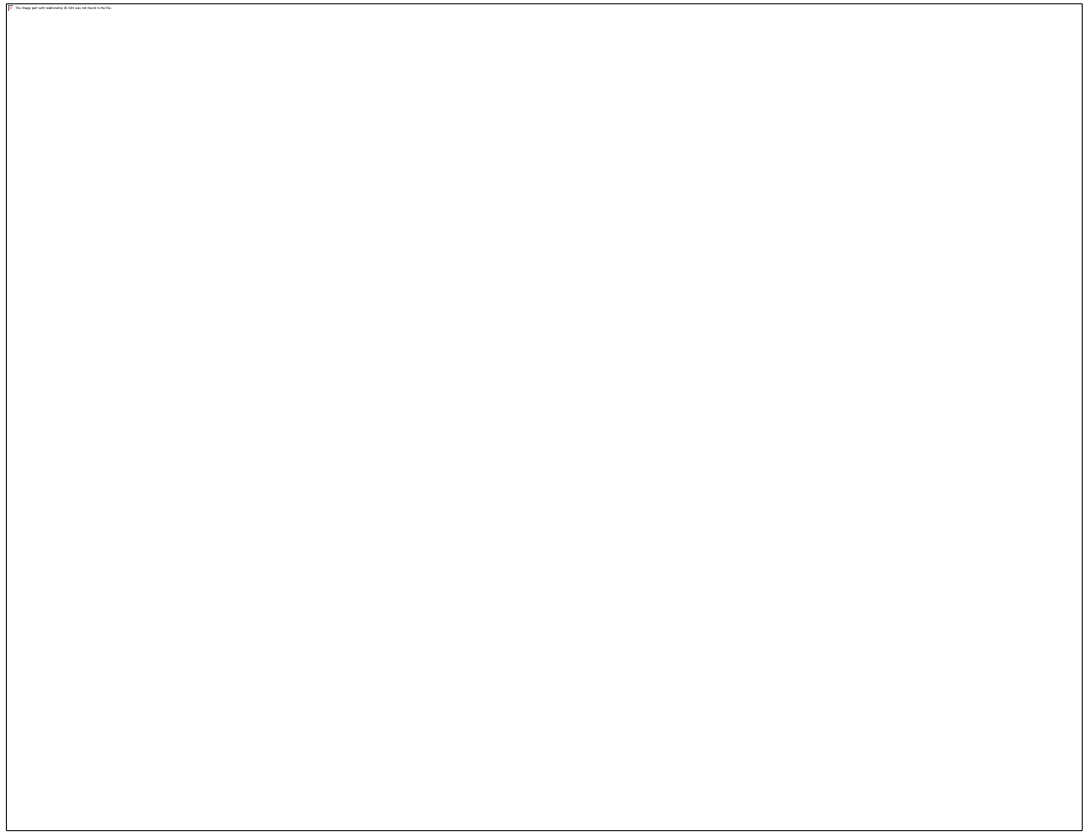
Increasing basal area is associated with a reduction in the tree vulnerability to be damaged

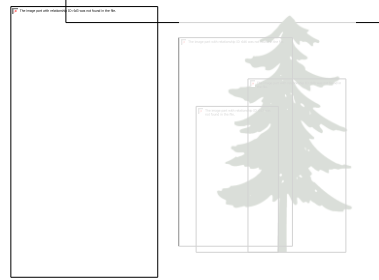


Spruce

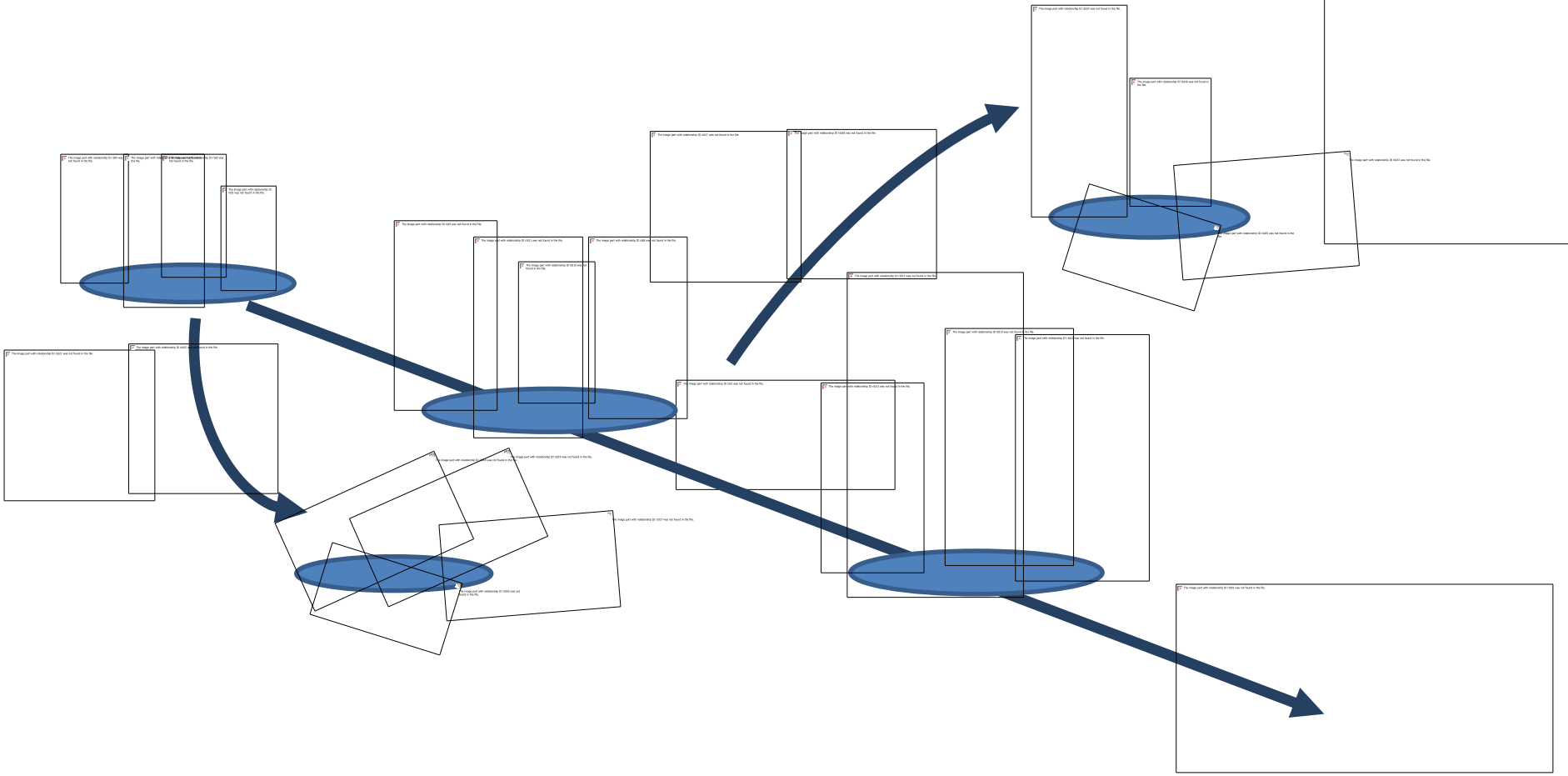
Birch

Increasing height is associated with increasing probability for a tree to be broken





Spruce Mixed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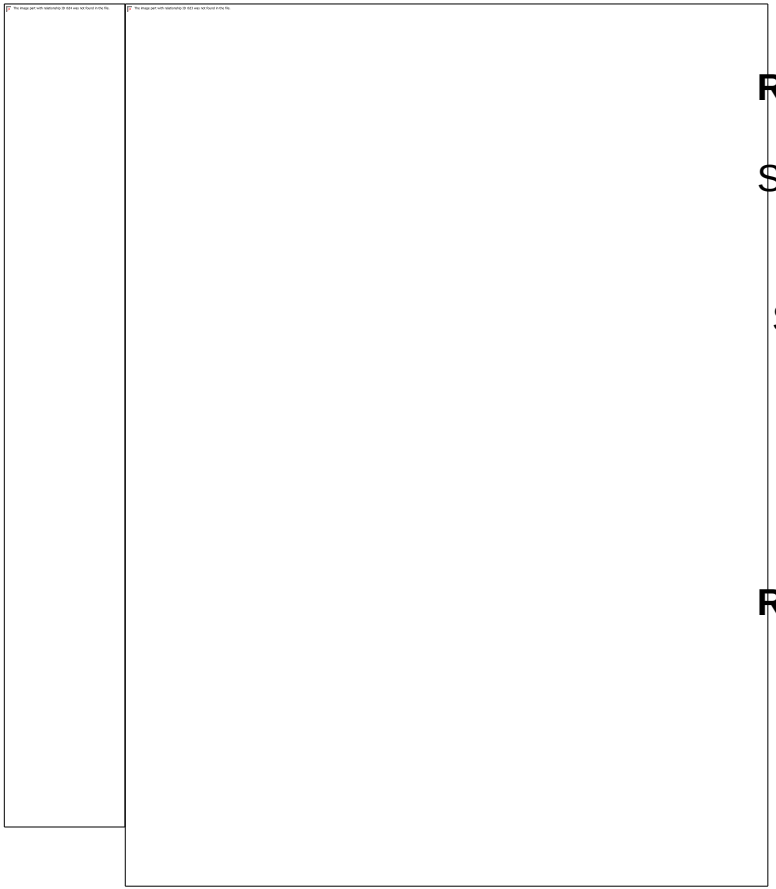
Risk consideration on a Spruce dominated stand have an effect on the optimal management



Risk of damage is considered

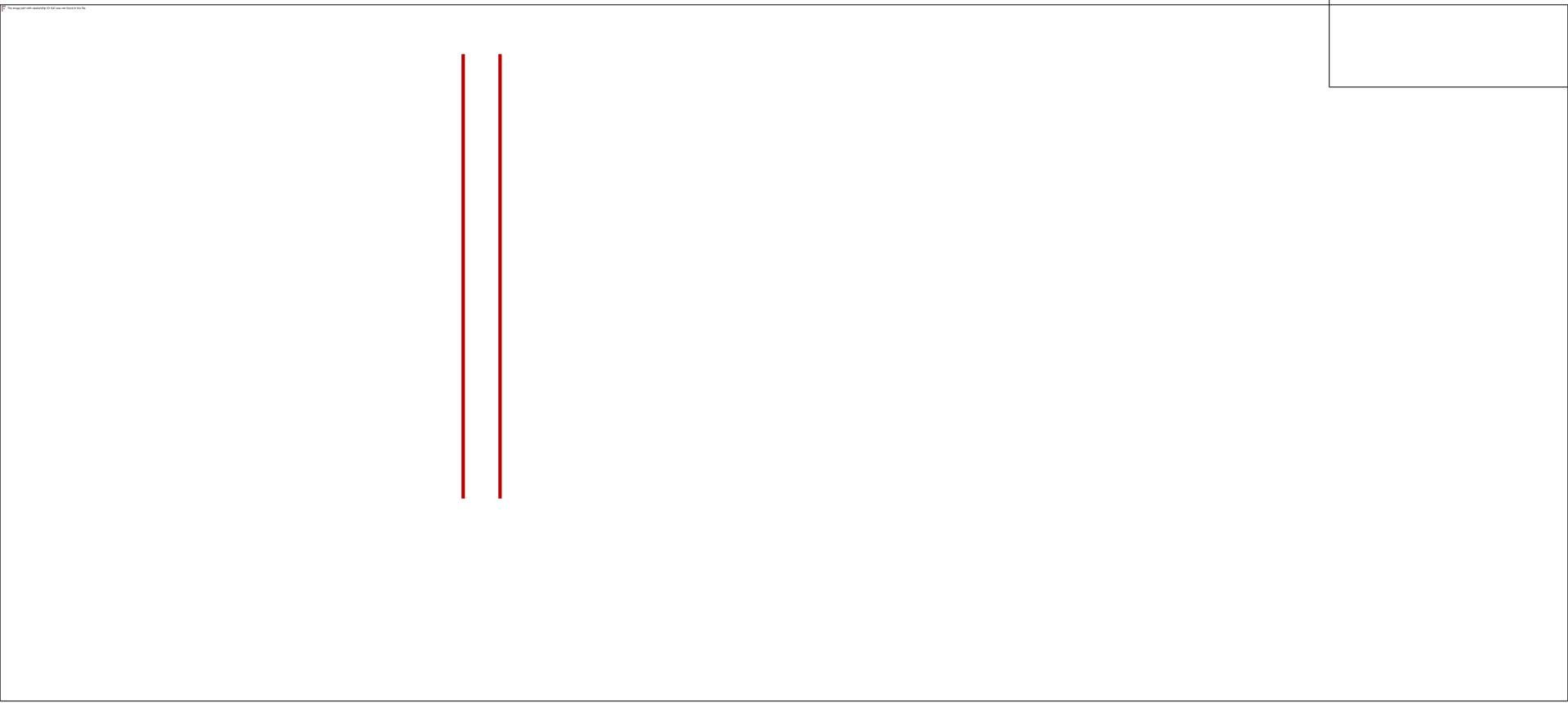
Stochastic (plot level)

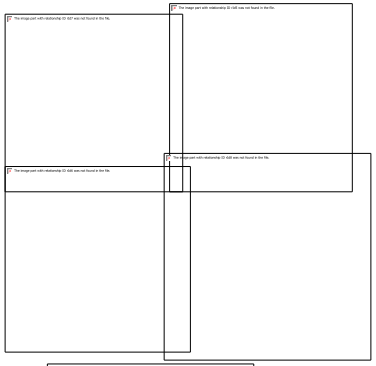
Stochastic (plot and tree level)

Deterministic

Risk of damage is not considered

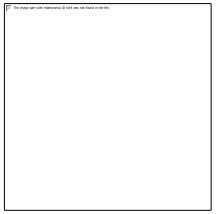
Considering the risk perception of the forest manager





NFI data can be used to integrate natural disturbances into forest management

Considering the risk of damage from snow and wind, could increase revenues



It would be easy to incorporate other consideration in the simulator and help managers to take more informed decisions

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