## Monitoring of Douglas Fir stands health status in Wallonia using Remote Sensing

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..., as mostly worldwide forest, are impacted by climate changes **Douglas fir needle midge** (Contarinia pseudotsugae s.l.) was first reported in Belgium, and all Western Europe, in 2015-2016.



The combination of this new pest and attacks of several fungal pathogens (Phaeocryptopus gaeumanni, Siroccocus conigenus,...) contributes to a general degradation of the Douglas fir health status in Belgium.

Douglas ~ 7 % from total Walloon forest area (~ 39000 ha) - 46 % pure stands - 54 % mixed-species stands (Spruce, etc ..)

The main objective of this study is to evaluate the potential of SENTINEL-2 imagery to more accurately monitor the evolution of needle midge in Douglas fir stands.







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