Bundesamt für Wasserwirtschaft

Eine Einrichtung des Bundesministeriums für Landwirtschaft, Regionen und Tourismus

EROWIN – Wind erosion in the Pannonian region: A major threat to arable soils under current and future climate conditions?

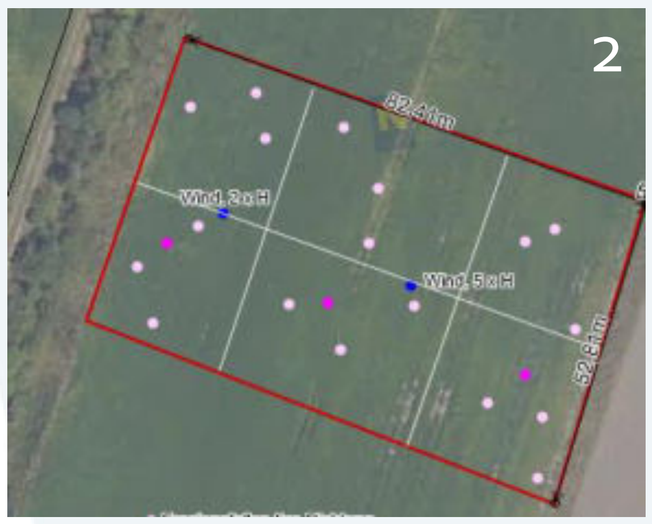
Thomas Weninger[1], Wim Cornelis[2], Karl Gartner[3], Nathan King[3], Barbara Kitzler[3], Lenka Lackóová[4], Simon Scheper[3], Franz Starlinger[3], Peter Strauss[1], Kerstin Michel[3]

Project ideas

- Wind erosion has not been scientifically investigated in Austria, the dimension of this threat for soil functionality is unclear.
- A combination of regional modelling, field measurements and lab experiment allows a classification of the relevance of wind erosion in Eastern AUT.
- The efficiency of windbreaks as a countermeasure is additionally investigated and their resilience to climate change is evaluated.

Project progress

- Field sites installed, continuous measurements running since winter 2019/20 (Fig. 1, 2).
- Regional modelling of wind erosion risk finished, management-dependent and potential future risk modelling in progress.
- Ecological resilience evaluation of windbreaks – field data collected from 50 windbreaks, analyses and dissemination in progress
- Wind tunnel experiment in BEL prepared but repeatedly postponed due to travel restrictions (scheduled for May, possibility for remote cooperation arranged)



First results

- Maps of soil susceptibility, erodibility and wind erosion risk (Fig. 3). In average low erosion risk due to low sand contents. Includes full digitalization of windbreaks in the region.
- Sediment transport rates throughout one vegetation period (Fig. 4), first analyses of physical thresholds, spatial variability, model calibration – we are prepared for final analyses after second measurement period.

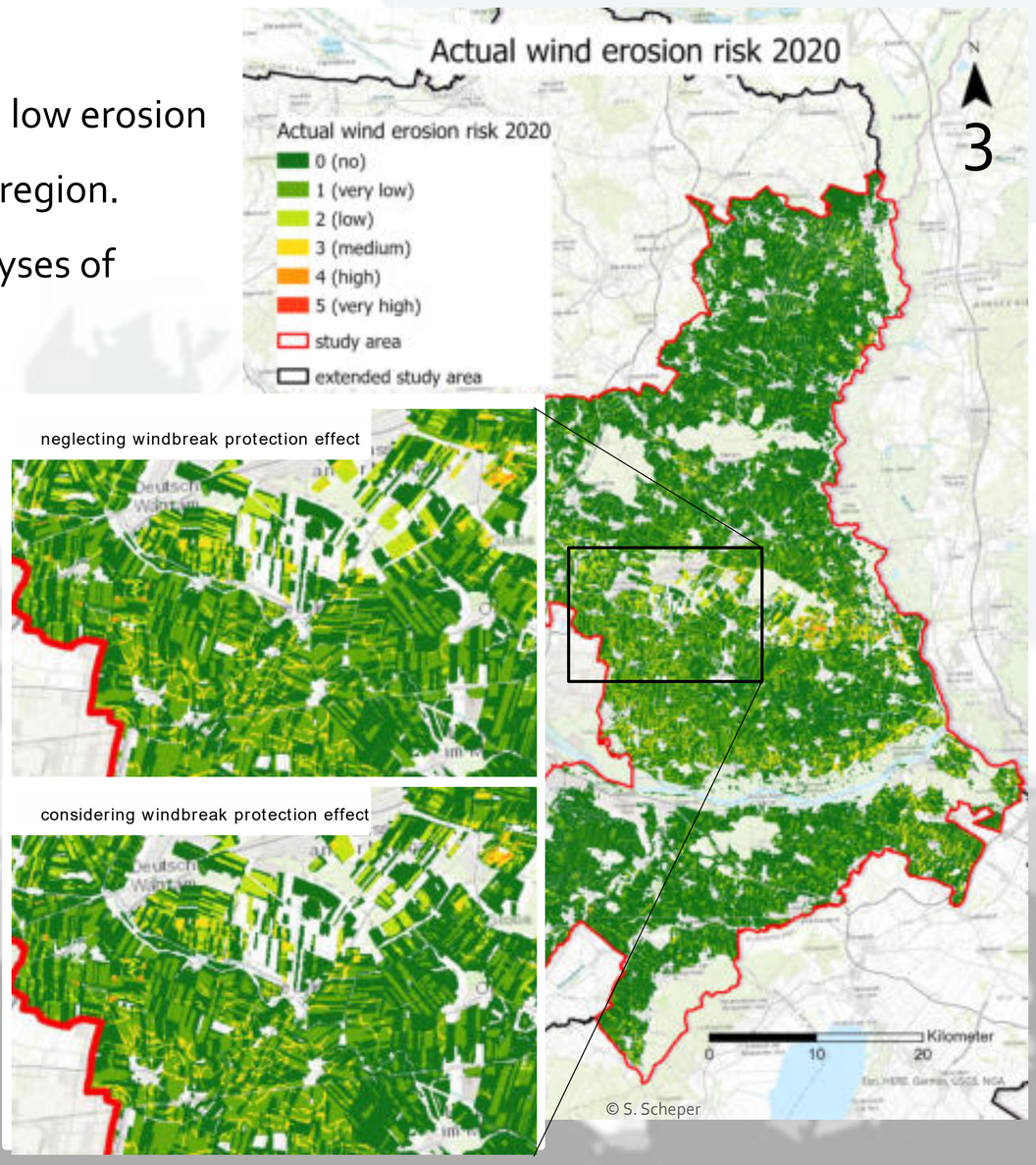
Dissemination

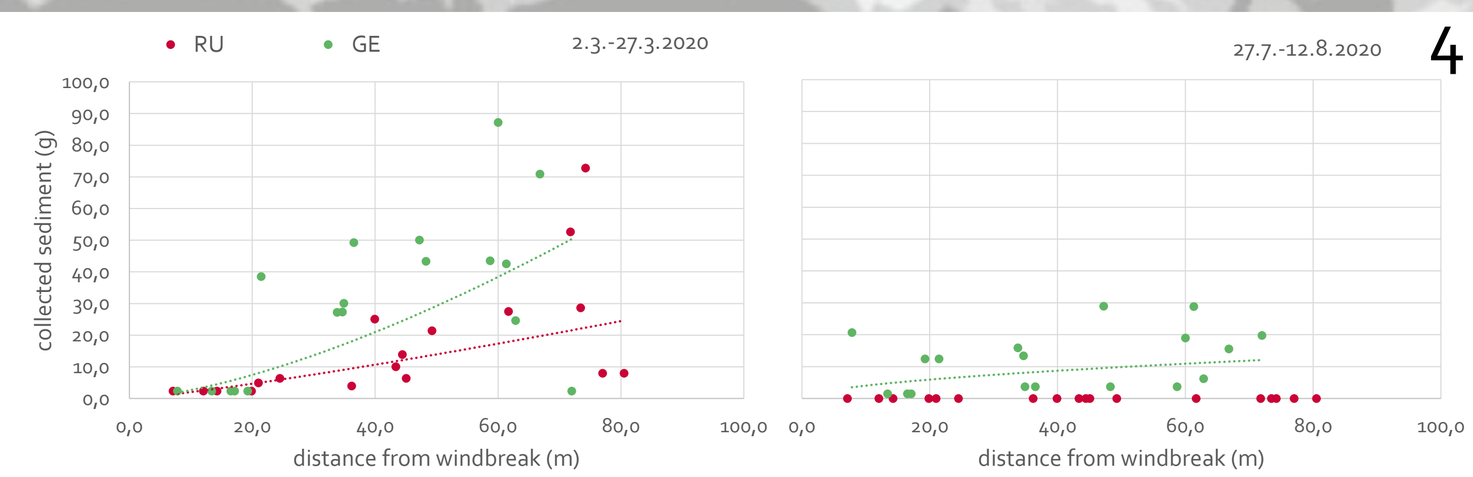
EGU General Assembly 2020, 2021; DBG und ÖBG assemblies 2020, 2021.

Peer-reviewed articles in preparation (literature review, regional modelling, spatial and temporal patterns of wind erosion).

Brochure for administration and farmers, educational video in preparation.

Continuous communication with stakeholders (ABB)





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Bundesamt für Wasserwirtschaft, Institut für Kulturtechnik und Bodenwasserhaushalt, 3252 Petzenkirchen, Pollnbergstrasse 1, Österreich Tel. +43 7416 52108-0 E-Mail: ikt@baw.at www.baw.at/wasser-boden.at