

Lēmumu atbalsta sistēmas vietējā līmeņa plānošanai



Mats Söderström, Omran Alshihabi, Faruk Djodjic

Zviedrijas Lauksaimniecības zinātņu universitāte

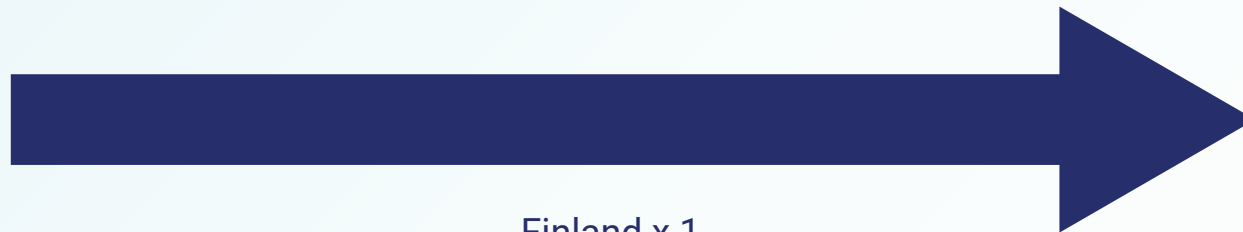
Daudzfunkcionalitāte, veselīga augsne

Vai mēs varam piedāvāt galalietotājiem uzlabotos modelēšanas datus un padarīt tos pieejamus un izmantojamus lēmumu atbalsta procesā šajā kontekstā – pasākumu ietekmes kvantitatīva noteikšana lauka/lauka ietvaros?

Pasākumu ietekme
par barības vielu zudumu
samazinājums no
(adaptētā) modelēšana

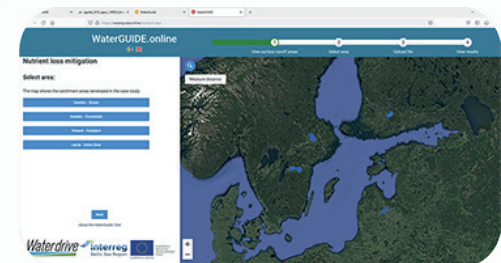
Samazināts līdz vietējai
līmenī, izmantojot ļoti
detalizēts digitālais
ģeogrāfiskie dati
un automatizētas metodes

Padariet datus pieejamus
gala lietotājam
– padomdevējiem,
lauksaimnieki interaktīvā
veidā sistēma



Finland x 1
Latvia x 1
Sweden x 2

WaterGUIDE.online



(Holger Johnsson,
Kristina Mårtensson, et al)

Nozvejas kultūras, strukturālās
kaļķošana, buferzonas
Samazinājuma modelēšana
ietekme uz reģionālo līmeni

(Faruk Djodjic et al)

mitrāji, erozijas risks,
plūsmas uzkrāšanās
Modelēšana uz
vietējā līmenī

(Kristin Piikki et al)

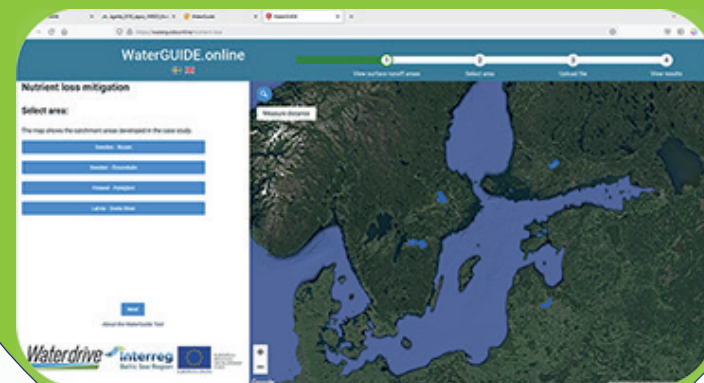
Funkcijas
mērogošanas
samazināšanai

Ļoti detalizēts
dati par augsnes struktūru,
organiskās augsnes,
topogrāfija, lauki

WP4 Ekonomisks,
telpiskie aspekti

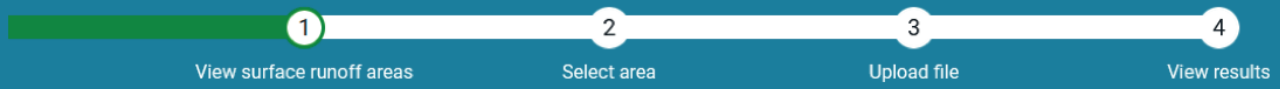
(Emma Svensson,
Magnus Bång et al)

Ģeogrāfiskie dati
un lietotāja interfeiss



Avots | <https://waterguide.online/nutrient-loss>

WaterGUIDE.online



Nutrient loss mitigation

Select area:

The map shows the catchment areas developed in the case study.

Sweden - Roxen

Sweden - Örsundaån

Finland - Pyhäjärvi

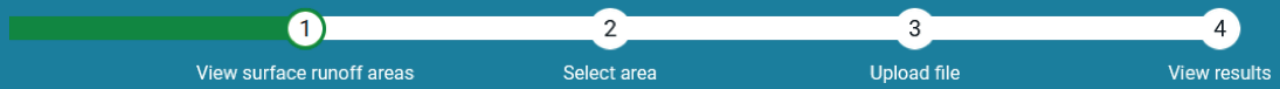
Latvia - Svete River

Next

About the WaterGuide Tool



WaterGUIDE.online



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- Finland - Pyhäjärvi
- Latvia - Svete River

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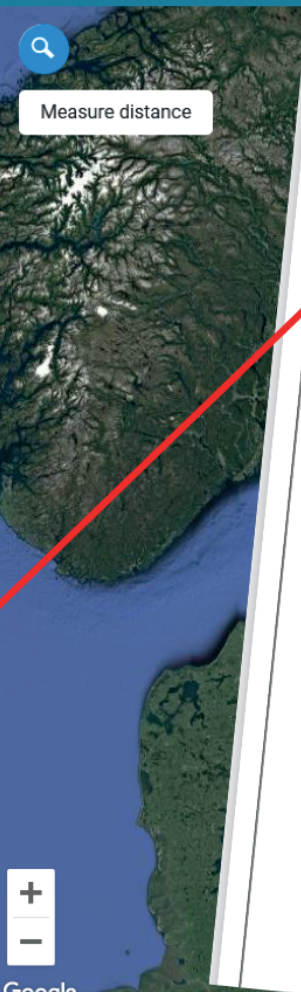
Latvia - Svete River

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About the WaterGuide Tool



Measure distance



version 2021-11-05

WaterGUIDE.online – Nutrient loss mitigation Manual and training material

Read the text in the box below before you use the system

This decision support tool was developed by the Swedish University of Agricultural Sciences (SLU) within work packages 3 and 4 in the Interreg Baltic Sea Region Programme project Waterdrive in collaboration with a number of project partners.

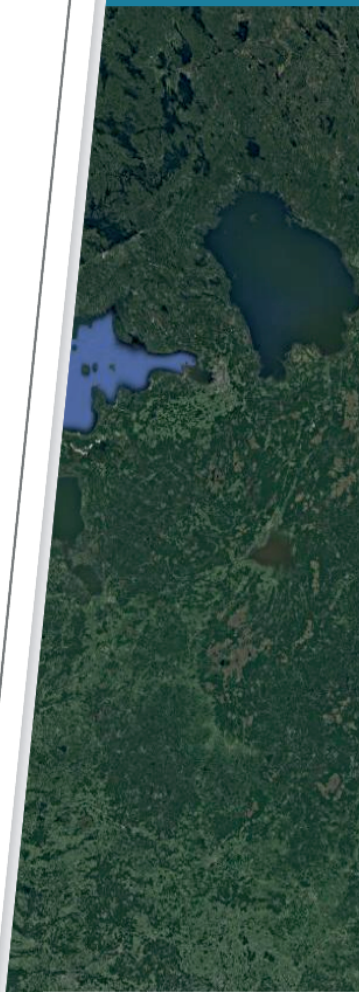
Please note: The decision support tool is provided as is, the information presented is not guaranteed to be error free, and in most cases it was generated in a more general scale than the field level. The authors do not take any responsibility for the use of the tool; all users are solely responsible for any decisions made based on the tool. The intended users of this tool should be well acquainted with local field conditions, and the information provided. It is recommended that you go through this document before general use. The tool shall be regarded as working material, which provides information for discussion that exemplifies how various types of data related to nutrient loss from arable land can be presented to users (e.g. farmers, advisors and authorities) at the field scale, or even within-field scale. All numbers of costs and payments mentioned are only examples in the system, and should be used only for testing the system. Please read information material before using the tool. Remember that changes of the tool can be made at any time since it is a developing product within the Waterdrive project.

Read more about Waterdrive, and WP3 and WP4 here: <https://water-drive.eu/about/>
More project info here: <https://projects.interreg-baltic.eu/projects/waterdrive-194.html>

Read more about R&D on decision support systems at SLU: <http://www.slu.se/LADS>

Contacts:
Mats Söderström, SLU, mats.soderstrom(at)slu.se
Omrán Alshihabi, SLU, omran.alshihabi(at)slu.se
Faruk Djodjic, SLU, faruk.djodjic(at)slu.se

View results



WaterGUIDE.online



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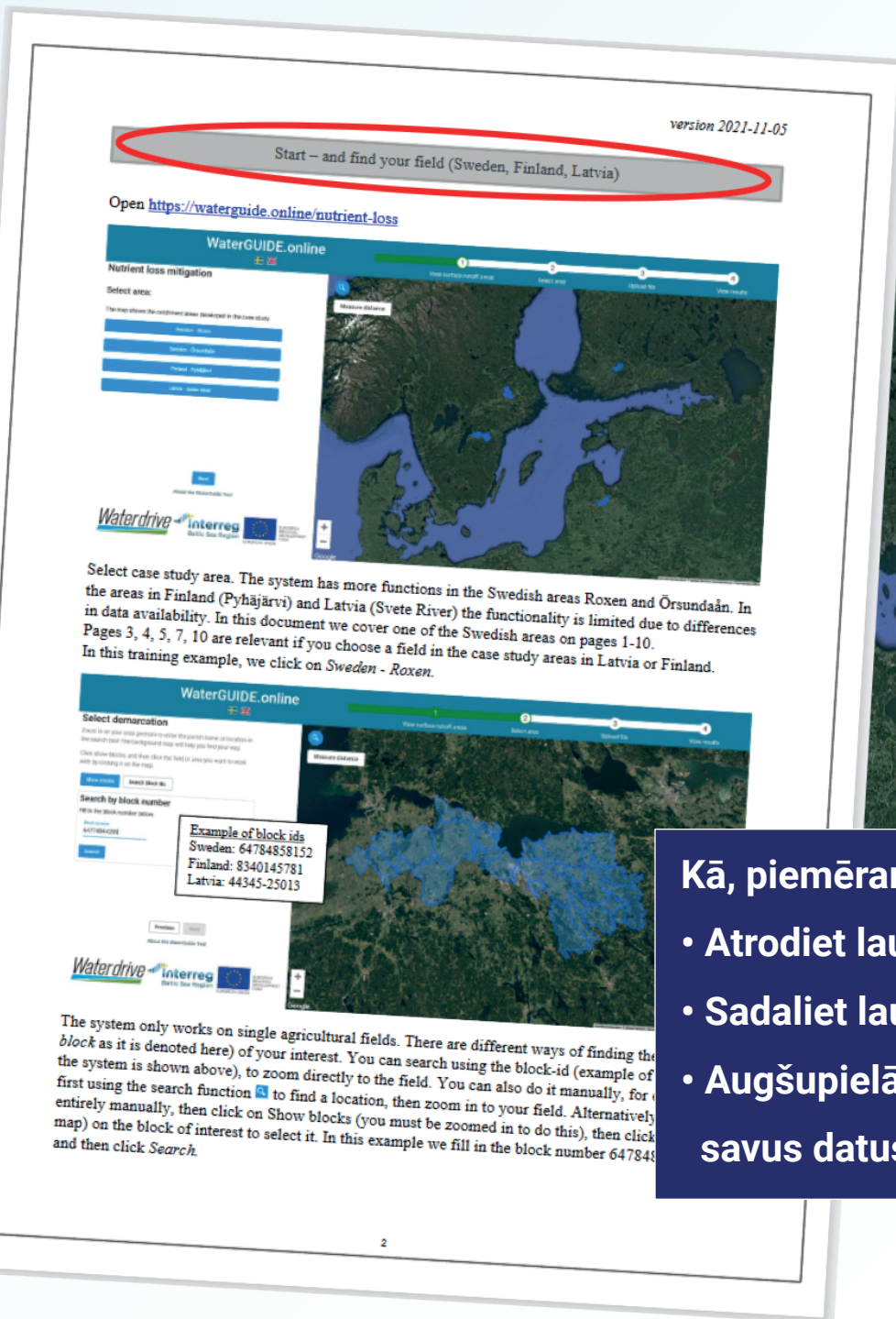
Sweden - Örsundaån

Finland - Pyhäjärvi

Latvia - Svete River

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About the WaterGuide Tool



Kā, piemēram:

- Atrodiet lauku
- Sadaliet lauku
- Augšupielādēt savus datus

Measures against nutrient loss adapted to the characteristics of the field

Navigate the tabs to see the results.

Hide field boundaries

Soil texture, erosion risk **Wetlands** Structural-liming Buffer zones Catch crops

Wetlands ⓘ

Wetland (optimal area)

- 1.00 - 5.00 ha
- 0.50 - 1.00 ha
- 0.25 - 0.50 ha
- 0.10 - 0.25 ha

Wetland area (ha)	0.1
Reduced P-losses (kg/ha/Year)	77.6
N-reduction (kg/ha/Year)	465.6
Load P (kg/Year)	194.0
Load N (kg/Year)	3481.3
Cost (SEK/kg P/Year)	307.0
Cost (SEK/kg N/Year)	51.0
Upstream (ha)	71.7

- Rezultātu cilnes:**
- Augsnes struktūra/erozijas risks
 - Mitrāji
 - Strukturālā kaļķošana
 - Buferzonas
 - Nozvejas labība



Previous New search

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Izvadiet tabulas datus, piemēram:

- N-, P-zudumu samazināšanas efekti
- Izmaksas
- Ekonomiskā kompensācija





Measures against nutrient loss adapted to the characteristics of the field

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New search

About the WaterGuide Tool



Wetlands

This result tab contain modelled values for potential locations of selected field are shown to provide overview. The map of the selected field is shown. This depends on the modelled field characteristics. If you are interested in to display detailed information, the optimal size is shown):

Izmantojiet dokumentāciju, lai skaidrošais teksts un atsaucēs

- **Wetland area (ha):** Calculated optimal wetland size, based on a hydrological load where 100 m (100 m³ water/m² wetland and year) is assumed to optimal. For run-off modelled values per sub-catchment are used. Only wetlands within a calculated optimal size range of 0.1-5.0 ha are displayed.
- **P-reduction (kg/ha/year):** Potential reduction in kg P/year in kg/ha wetland. Calculated according to Weisner et al. (2016).
- **N-reduktion (kg/ha/year):** As above but for nitrogen (N).
- **Load P (kg/year):** Load in kg P/year for the potential wetlands. Calculations are based on the average runoff and HELCOM Pollution Load Compilation 7 (PLC-7) type concentrations in the subcatchment (Hansson et al., 2019).
- **Load N (kg/year):** As above but for N.
- **Cost (SEK/kg P/year):** Potential cost in SEK/kg P/year for the wetland locations. Calculations are based on the following assumptions: a construction cost of 350,000 SEK/ha wetland and 20 years (17,500 SEK/year); maintenance cost 4,000 SEK/year; tenant costs depending on region (2,334 SEK/year where Roxen is location and 1,486 SEK/year where Örsundaån is located; from Statistics Sweden (SCB) in 2018).
- **Cost (SEK/kg N/year):** As above but for N.
- **Upstream (ha):** Calculated upstream drainage area in ha to a wetland location.

Please note: In reality, other locations for wetland may be more suitable due to local conditions not included in the modelling. The map shows the results from the modelling based on the data used and assumptions made.

More information in Djodjic et al. (2020)

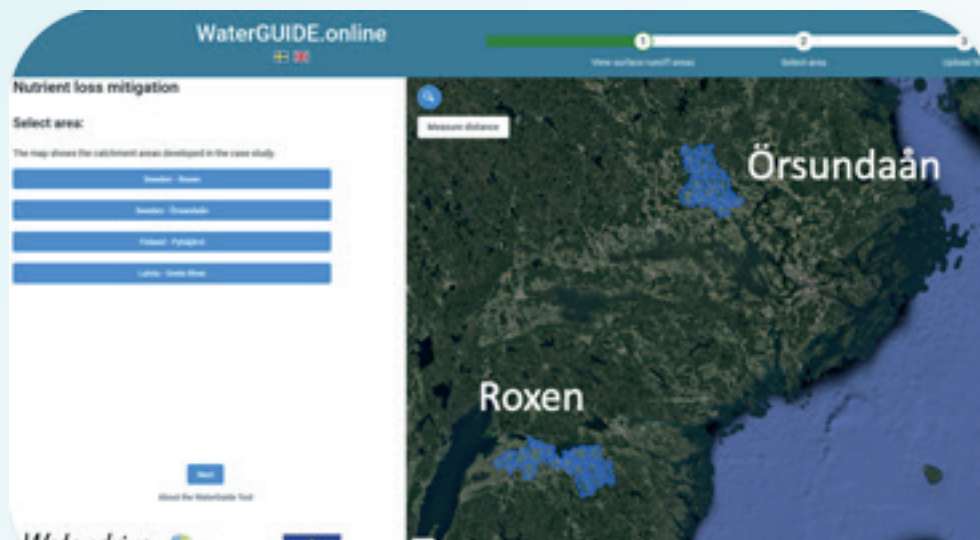
Atpakaļ uz reģionālo līmeni...

Reģionālie dati

Mērogošana

Vietējie dati

Vietējie reģionālie dati
pārskats
informācijas panelī



<https://waterguide.online/nutrient-loss>



https://bit.ly/waterguide_dashboard

Roxen rajons:
3379 lauki >2 ha aramzeme

Örsundaån apgabals:
2418 lauki >2 ha aramzeme

Piemērs: Ietekme uz

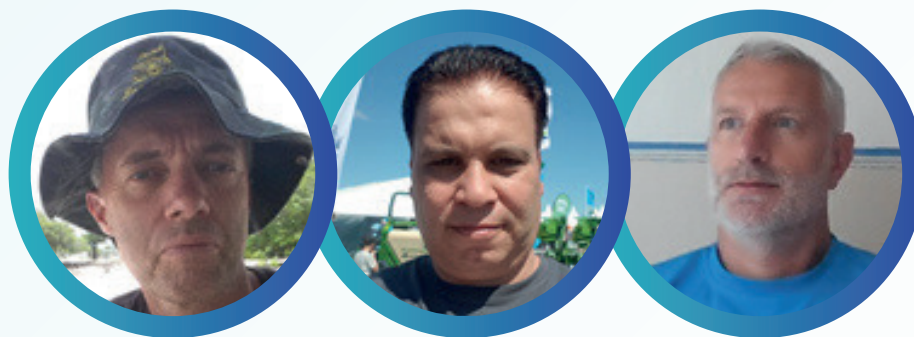
- segaugiem ar samazinātu slāpekļa zudumu
- strukturālā kalpošana ar samazinātu P zudumu

Noslēguma piezīmes

- Skatiet to kā prototipu – nav pabeigts, pirmais mēģinājums
- Izaicinājums samazināt mērogu – gan pētniekiem, gan lietotājiem
- Milzīgs datu pieprasījums – vietējiem datiem ir jāatbilst modelēšanai, trūkst daudz datu
- Viegli nepareizi interpretēt – nepieciešami testi un apmācība
- Piemērots grupu diskusijām – viena lēmuma atbalsta daļa, nevis vienīgā
- Jaunas iespējas – uzsākot darbu, parādās jaunas iespējas/vajadzības

<https://waterguide.online/nutrient-loss> | https://bit.ly/waterguide_dashboard

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