Otsustamist toetavad süsteemid kohaliku tasandi planeerimiseks

Mats Söderström, Omran Alshihabi, Faruk Djodjic

Rootsi Põllumajandusteaduste Ülikool

Waterdrive Interreg Baltic Sea Region EUROPEAN UNION EUROPEAN REGIONAL DEVELOPMENT FUND WITH FINANCIAL SUPPORT OF THE RUSSIAN FEDERATION

Multifunktsionaalsus, terve pinnas

Kas saame lõppkasutajatele esitada täpsemaid modelleerimisandmeid ning muuta need kättesaadavaks ja kasutatavaks otsustustoe protsessis selles kontekstis – meetmete mõju kvantifitseerimine valdkonnas/valdkonnasiseses ulatuses?

Meetmete mõju toitainete kadumise kohta vähendamine alates (kohandatud) modelleerimine

Madalam kohalikuks tasemel kasutades väga üksikasjalik digitaalne geograafilised andmed ja automatiseeritud meetodid

Tehke andmed kättesaadavaks lõppkasutajale – nõustajad, põllumehed interaktiivses vormingus süsteem

Finland x 1

Latvia x 1

Sweden x 2

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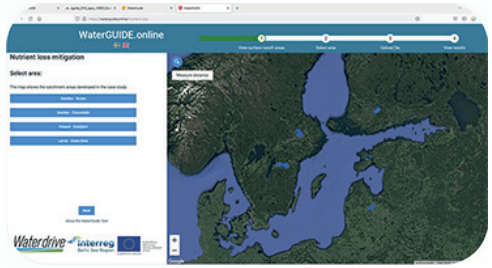


WP4 ökonoomne, ruumilised aspektid

(Emma Svensson, Magnus Bång et al)

Väga detailne andmed mulla tekstuuri kohta, orgaanilised mullad, topograafia, põllud

Püügikultuurid, struktuursed lupjamine, puhvertsoonid Reduktsiooni modelleerimine mõju piirkondlikule tasandile

(Holger Johnsson, Kristina Mårtensson, et al)

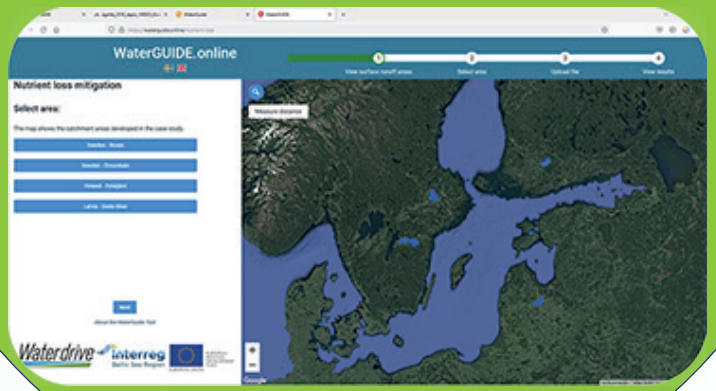
(Kristin Piikki et al)

Funktsioonid vähendamiseks

Märgalad, erosioonioht, voolu kogunemine Modelleerimine peal kohalikul tasandil

(Faruk Djodjic et al)

Geograafilised andmed ja kasutajaliides



Allikas | https://waterguide.online/nutrient-loss

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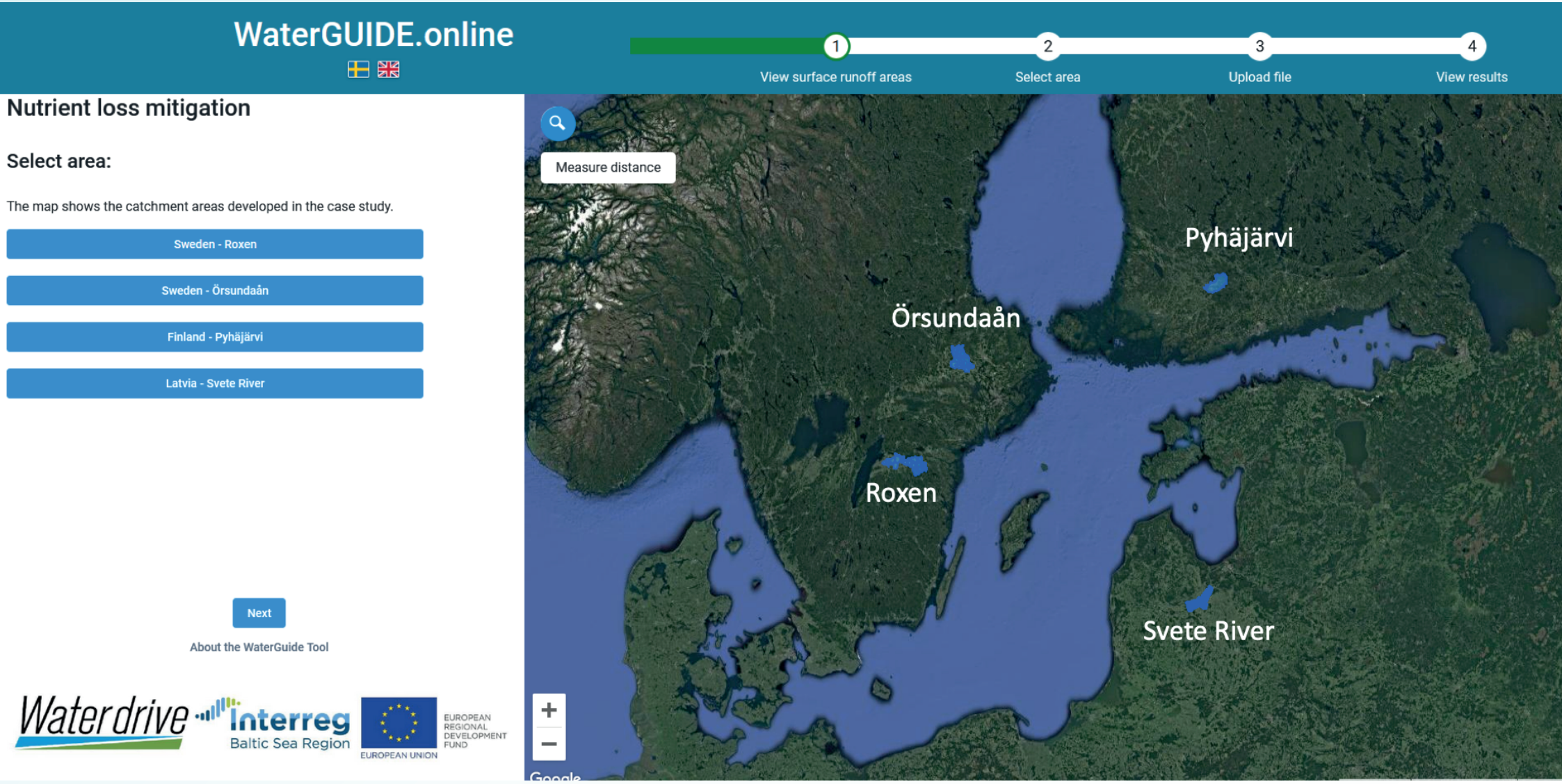

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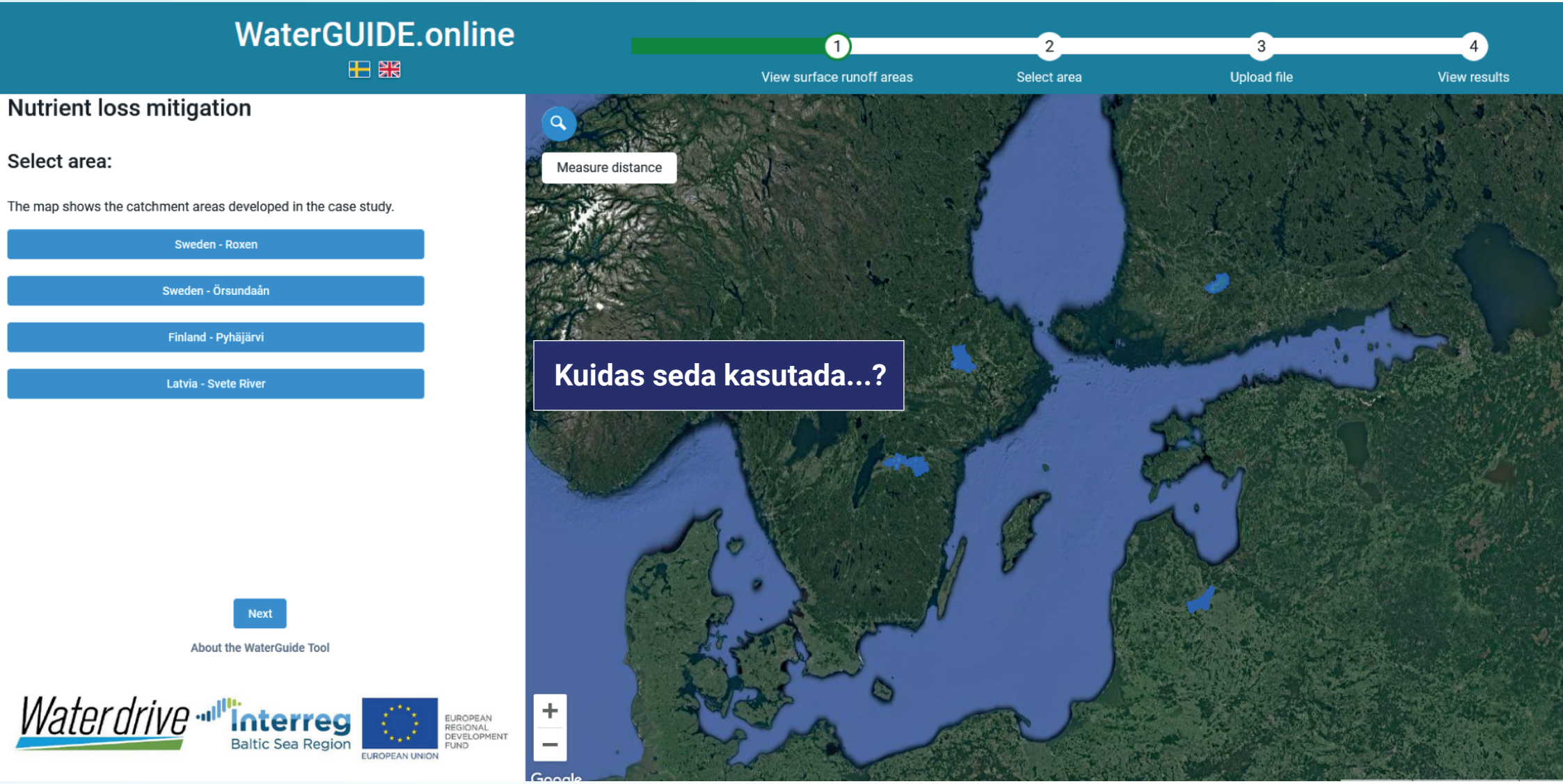

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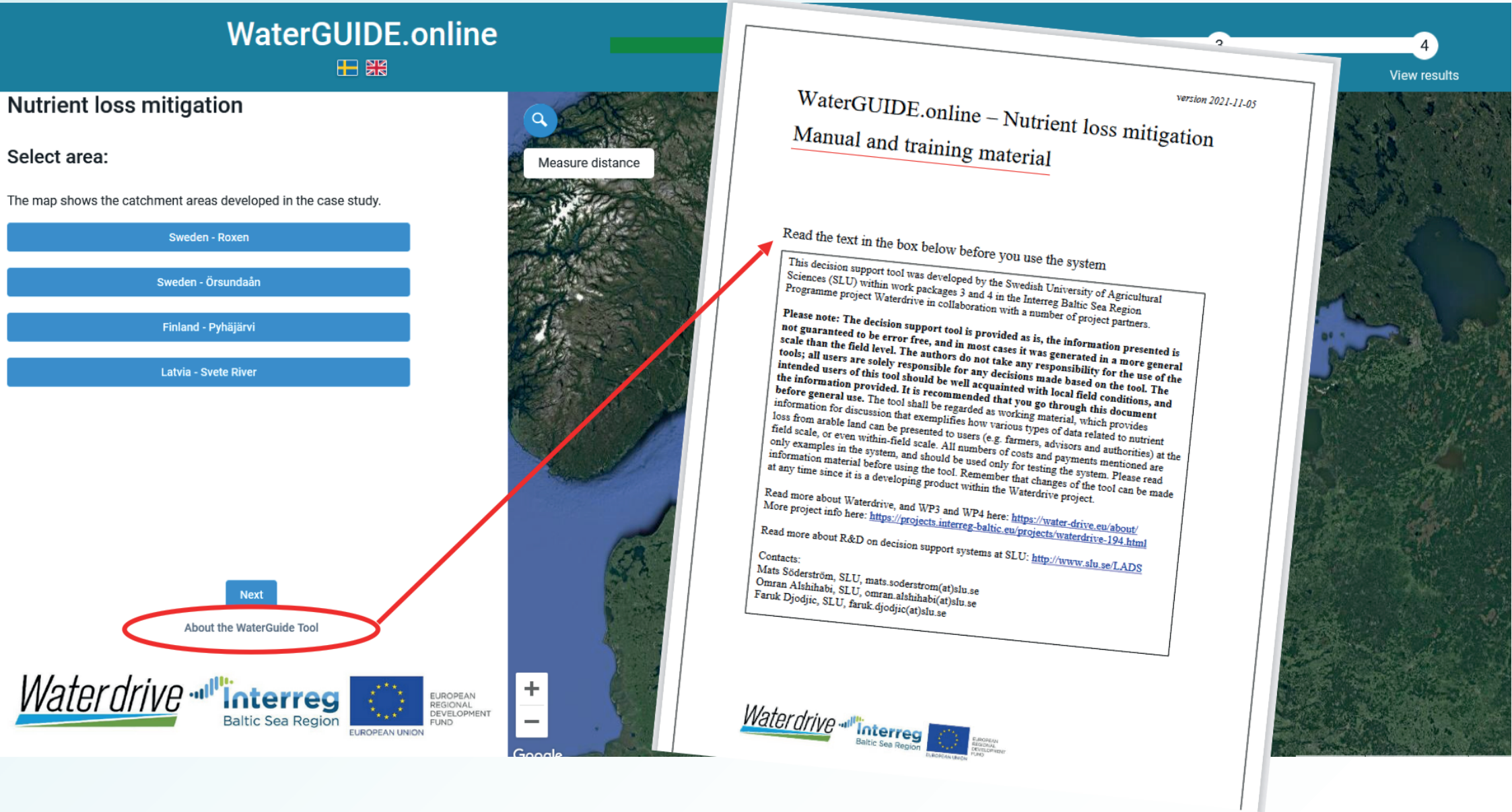

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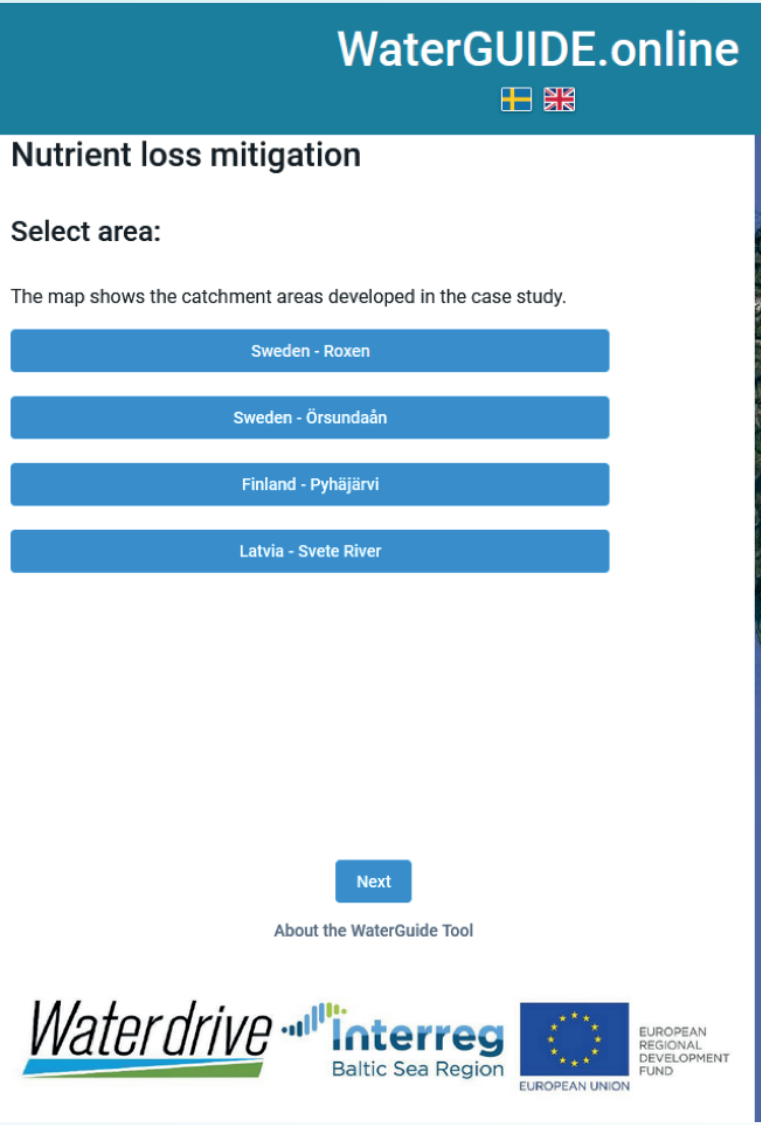

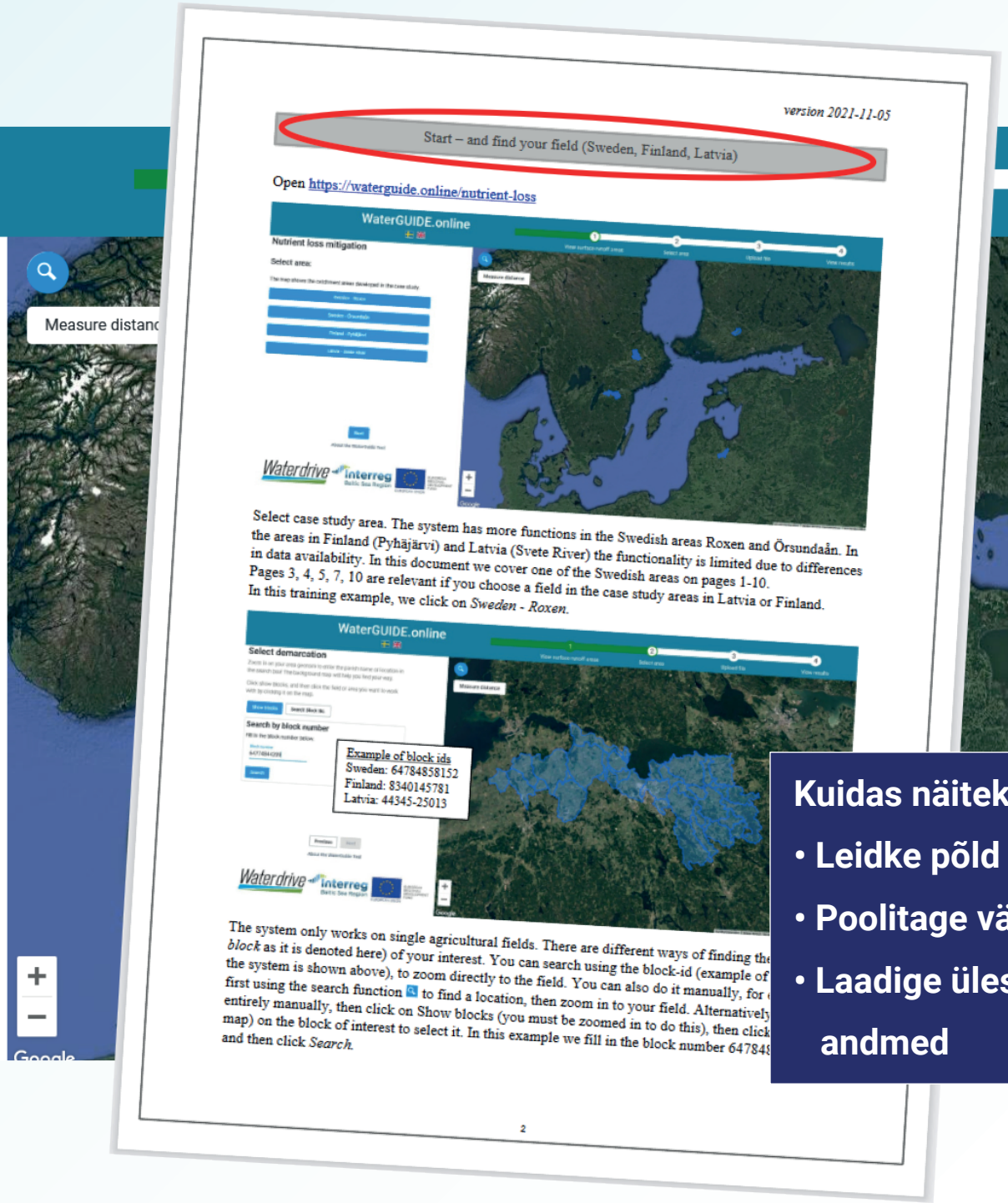

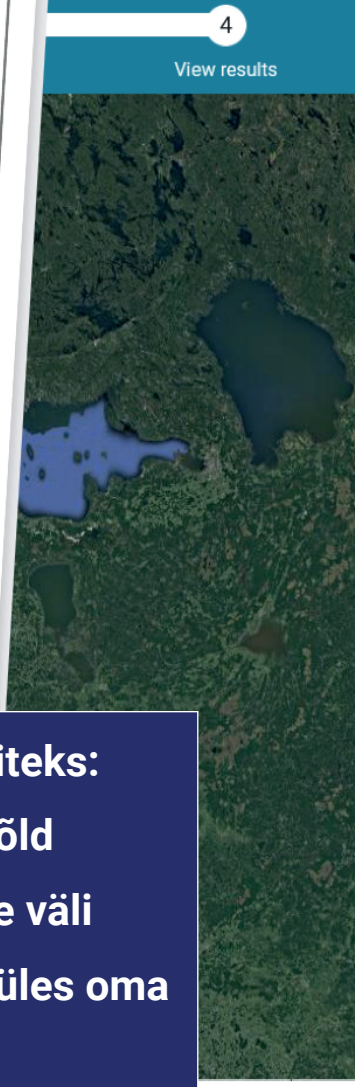

Kuidas näiteks:

- **Leidke põld**
- **Poolitage väli**
- **Laadige üles oma andmed**

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1 View surface runoff areas — 2 Select area — 3 Upload file — 4 View results

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

Previous | New search

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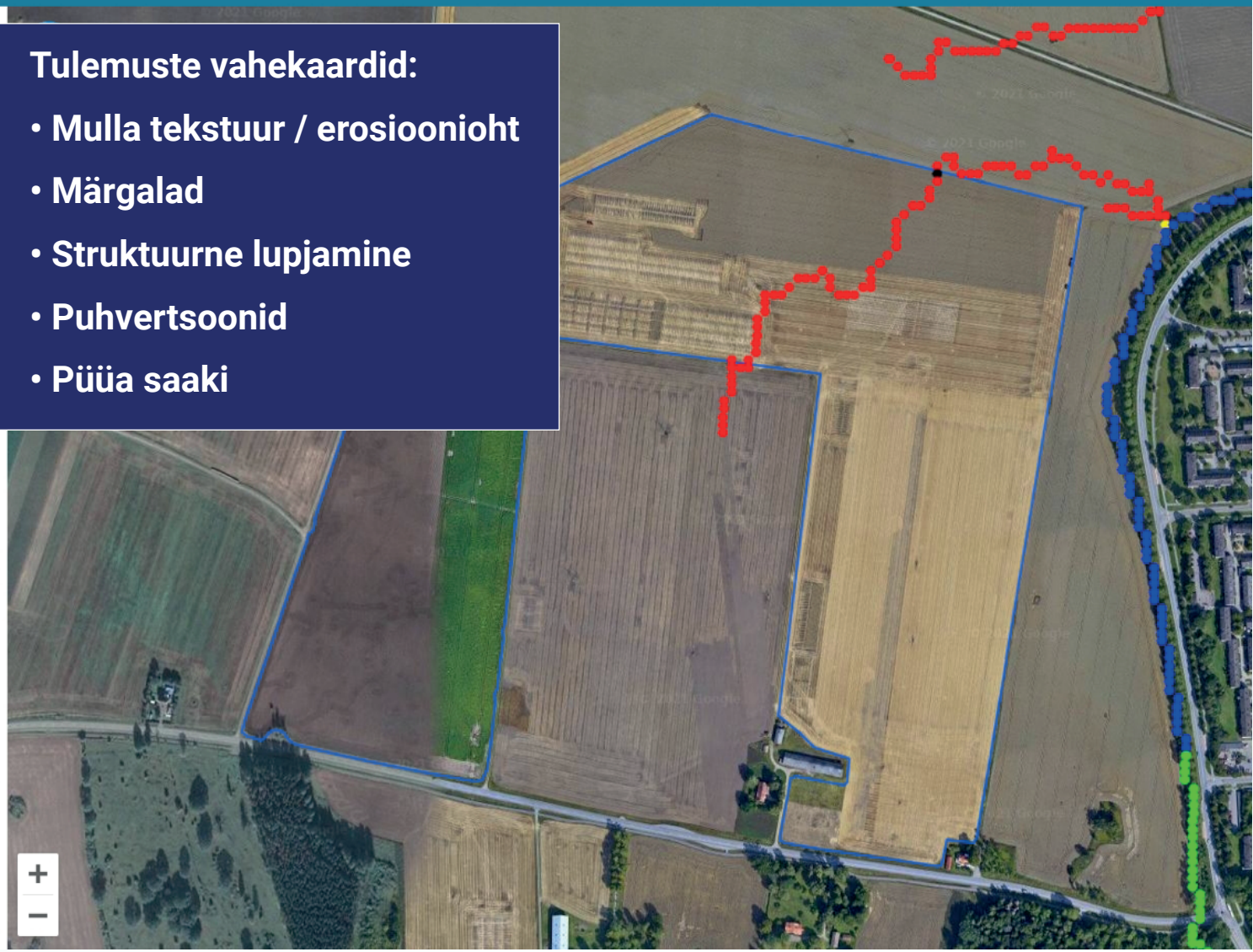
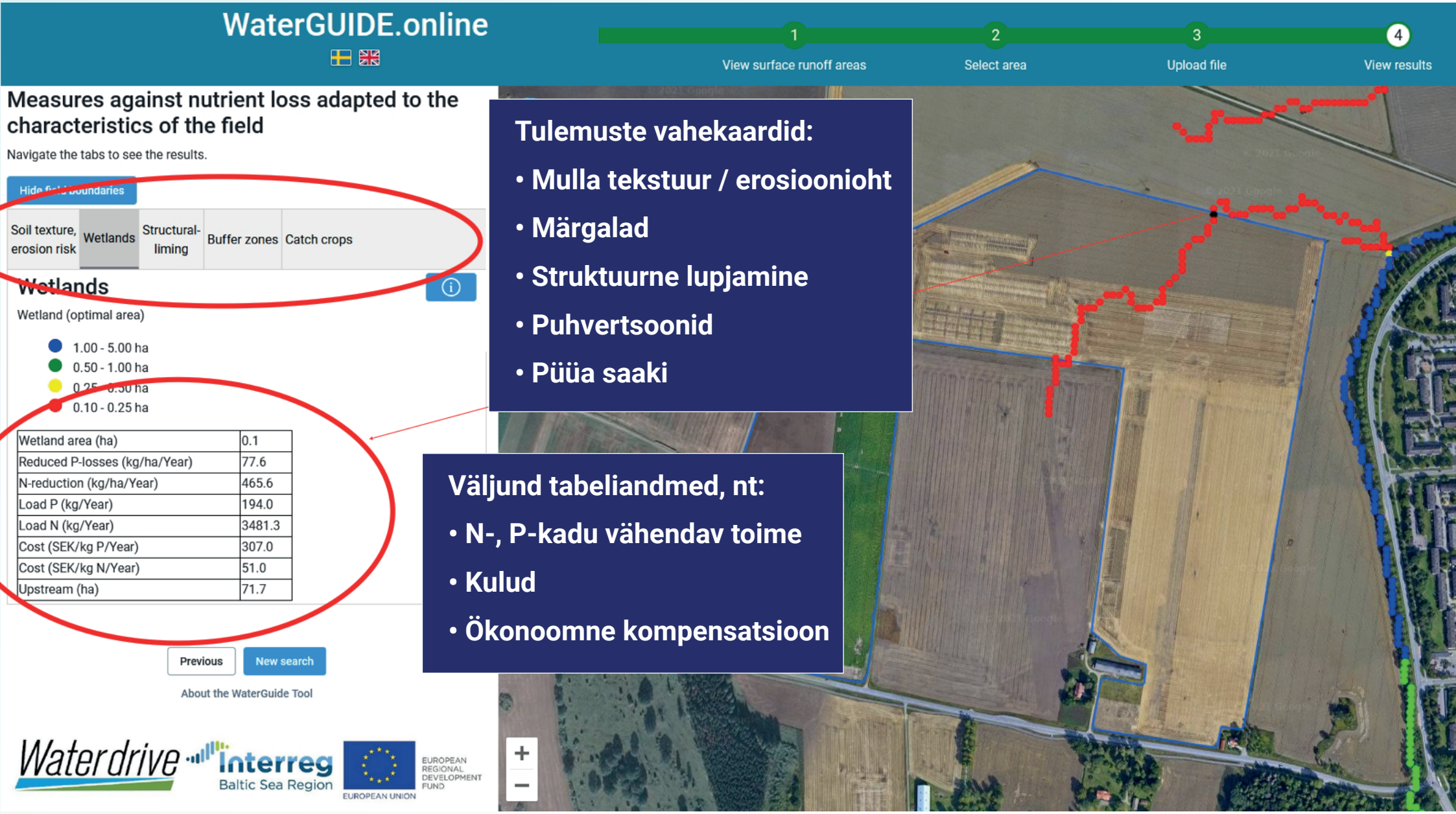
Tulemuste vahekaardid:

- Mulla tekstuur / erosioonioht
- Märgalad
- Struktuurne lupjamine
- Puhvertsoonid
- Püüa saaki

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• Püüa saaki
Väljund tabeliandmed, nt:
• N-, P-kadu vähendav toime
• Kulud
• Ökonoomne kompensatsioon

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Wetlands

This result tab contain modelled values for potential locati
selected field are shown to provide overvi
is shown. This depends on the modelled fi
are interested in to display detailed inform
optimal size is shown):

- 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. Calculatiosn 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.

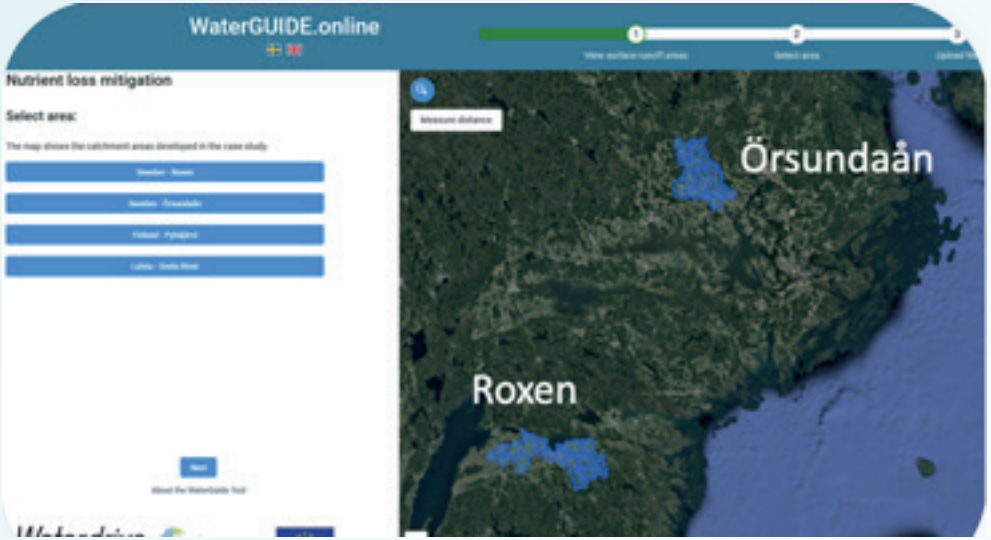
More information in Djodjic et al. (2020)

Kasutage dokumentatsiooni selgitav tekst ja viited

Tagasi piirkondlikule tasemele...

Piirkondlikud andmed → Vähendamine → Kohalikud andmed

Piirkondlikud kohalikud andmed ülevaadet juhtpaneelil



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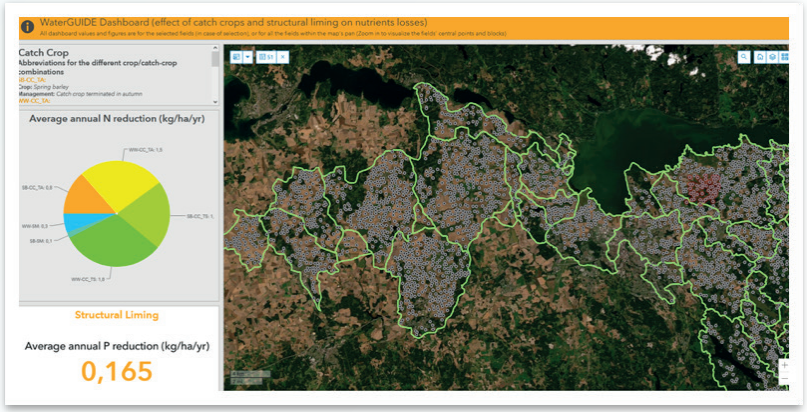

https://bit.ly/waterguide_dashboard

Roxen piirkond:
3379 põldu >2 ha põllumaad

Örsundaån area:
2418 fields >2 ha cropland

Näide: mõju

- katteviljad vähendatud lämmastikukadudega
- struktuurne lupjamine P-kao vähendamisel

Lõppsõna

- Vaadake seda prototüübina – mitte täielik, esimene katse
- Väljakutse mastaabi vähendamiseks – nii teadlastele kui kasutajatele
- Tohutu andmenõudlus – kohalikud andmed peaksid modelleerimisega sobima, palju andmeid on puudu
- Lihtne valesti tõlgendada – vajalikud testid ja koolitus
- Sobib rühmaaruteludeks – üks osa otsustustoetusest, mitte ainuke
- Uued võimalused – alustades ilmnevad uued võimalused/vajadused

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