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# WaterDrive

## -Case area Västervik Sweden

2020-05-29


Waterdrive

STØTTET AF

**Promille**afgiftsfonden for landbrug

Interreg Baltic Sea Region

EUROPEAN REGIONAL DEVELOPMENT FUND

EUROPEAN UNION

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# The Västervik method

1. Comprehensive Action plan
2. Kick off meetings in sub-areas with focus groups
3. Create interest in measures and find interested landowners
4. Individual advice - Choice of measures and location in cooperation with farmers, SWOT analyses. Multifunction in focus.
5. Help with design of measure, contact with entrepreneurs, and government contacts
6. Applications of (national and regional) grants for measures in cooperation with landowners

# Local municipality strategy for reducing nutrient load 2017

Lokal Åtgärdsplan för minskad övergödning i Västerviks kommuns kustvatten 2017-2021



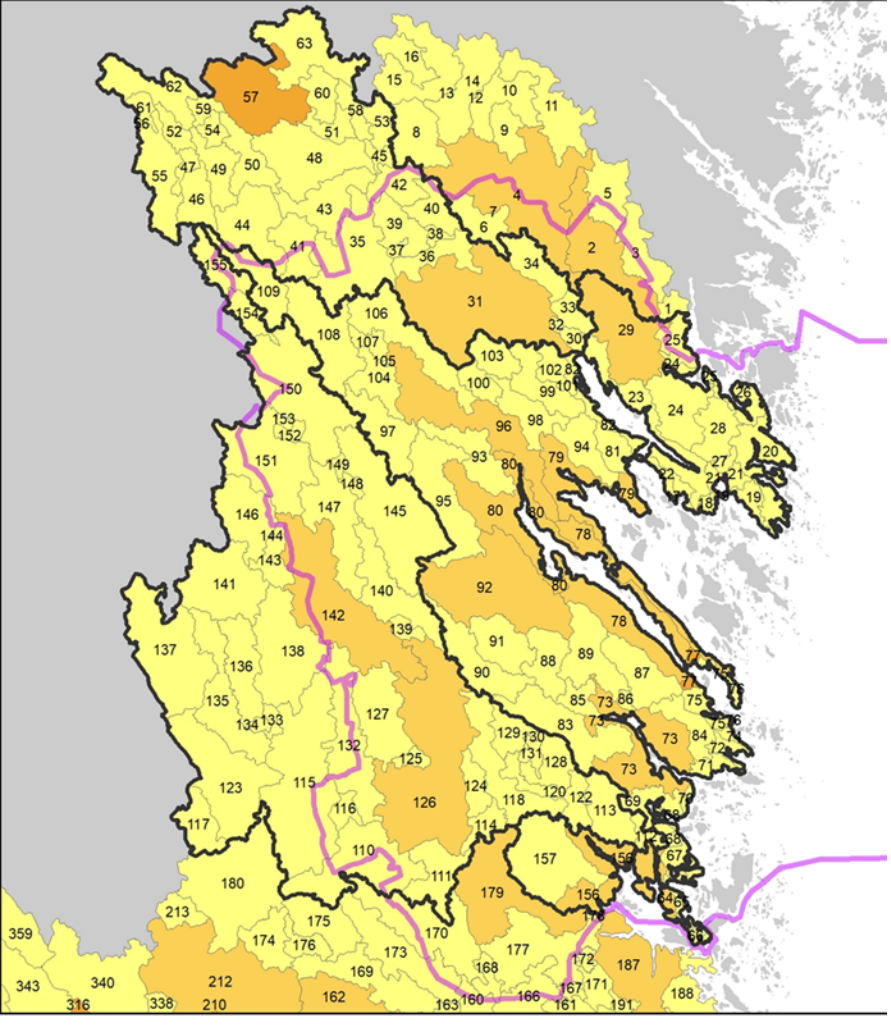
BALTIC SEA City Accelerator

Västerviks Kommun

Antaget av KS 2017-05-22

Uppdaterad med ny Vision 2030 antagen av KF 2017-06-19

# Modelling in a large scale



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# SWOT analysis

## On field - meeting with landowners and farmers

1. Optimize the plant environment by efficient nutrients use (advice, adapted crops, increased root growth, adapted fertilization and improved soil structure)
2. Keep the nutrients in the soil profile (reduces erosion, reduce soil compaction, improve soil structure, increase soil fertility)
3. Stop the load of nutrients before it reaches the sea (sedimentation ponds, wetlands)

# Challanges!



**Better water quality**
**Higher agriculture production**
**Circular economy**
**Public awareness**

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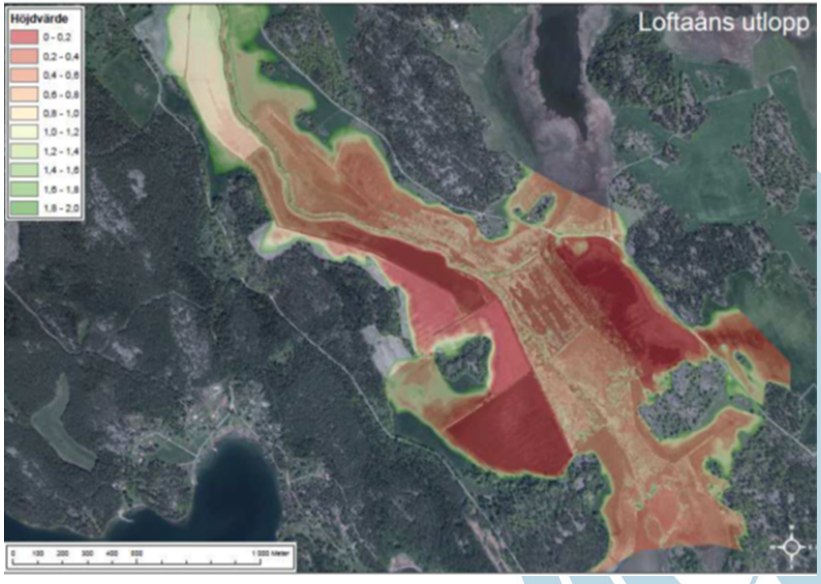
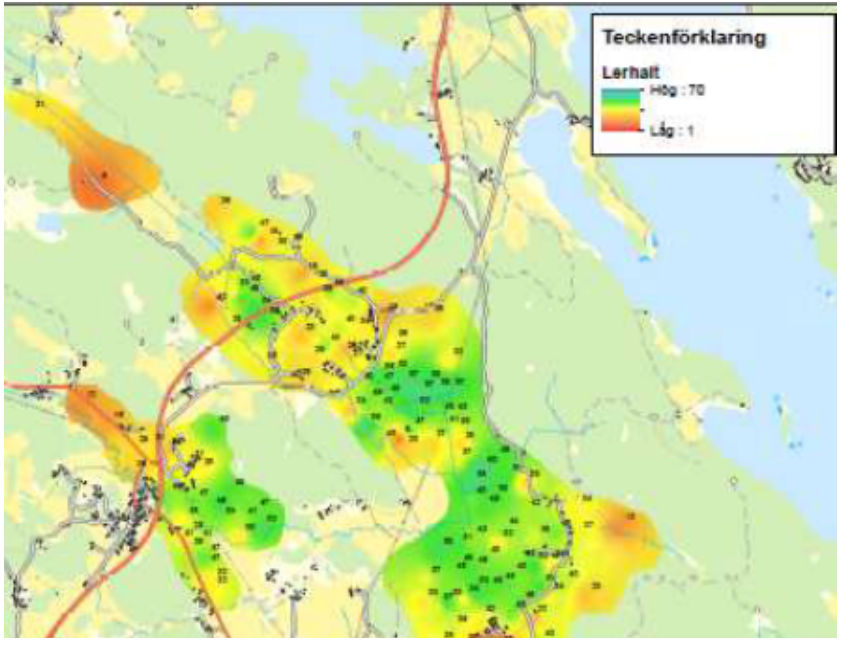
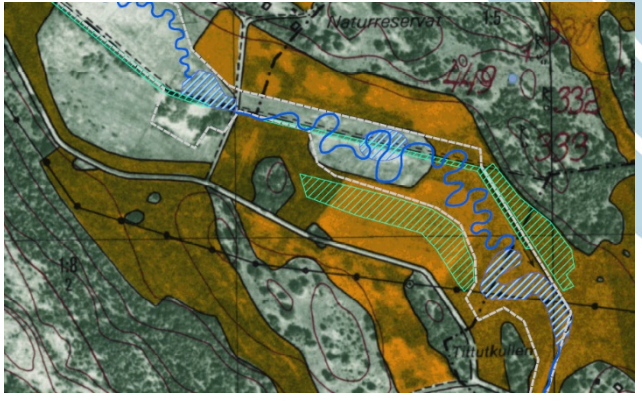
# GIS analyses and Soil mapping



# Structure liming

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# Wetlands and phosphorus ponds

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# Two step ditches

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# Filter ditches (lime and biochar)

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# Lofta River
# Measures planned 2018-2021

| Measure | Areal | P decrease | Year | Costs Euro |
|---|---|---|---|---|
| Soil mapping | 850 ha | 130 | 2019-2020 | 40 000 |
| Structure liming | 550 ha | 85 | 2019-2020 | 350 000 |
| Small wet-lands and Phosphorous ponds | 10 ha | 100 | 2019-2020 | 200 000 |
| Bevelling ditches | 50 ha | 40 | 2020-2021 | 250 000 |
| Two stage ditches | 500 meter | 130 | 2020-2021 | 125 000 |

+ Project management, monitoring etc 100 000 Euro

Area ha Farmland 2 700 ha

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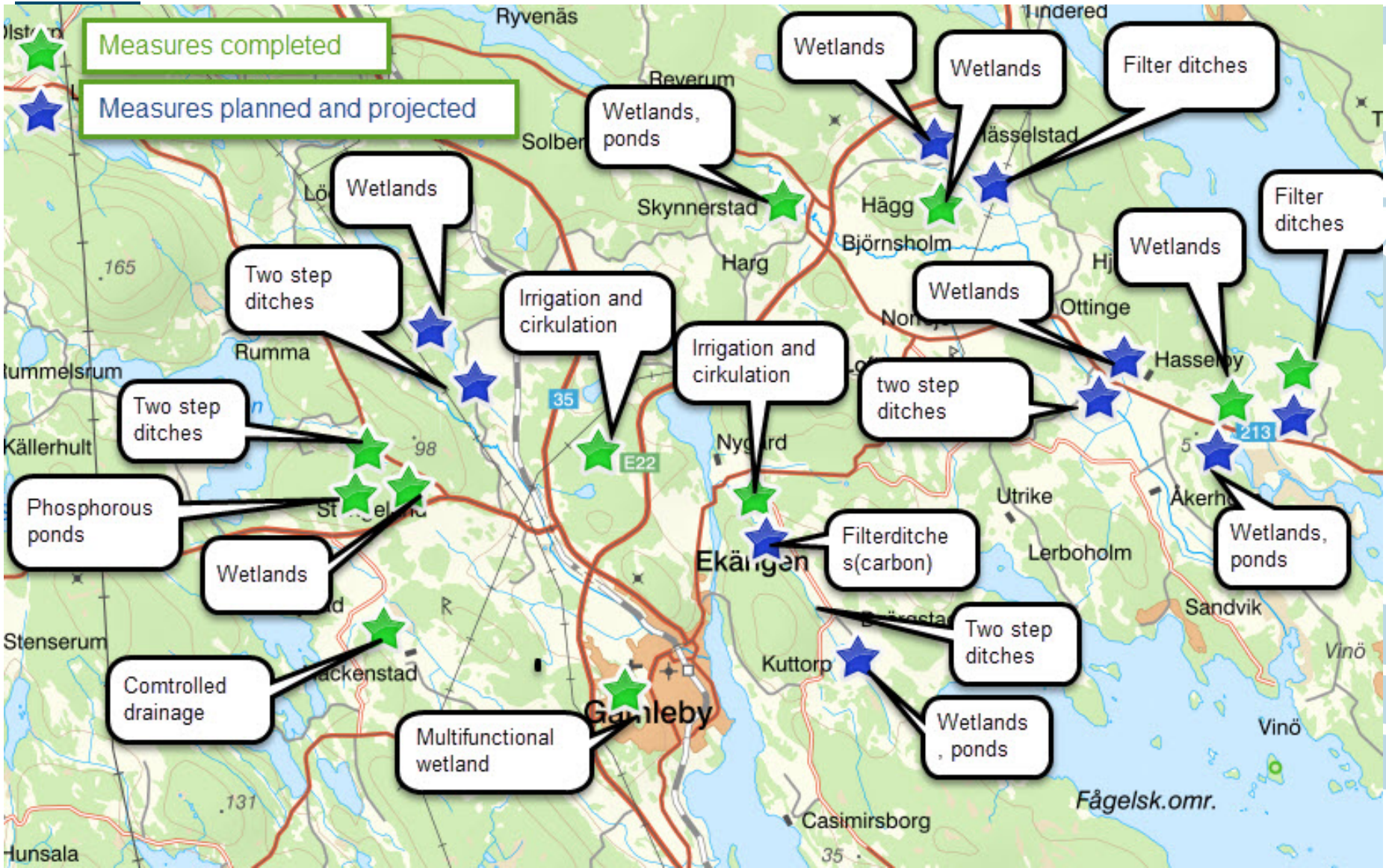
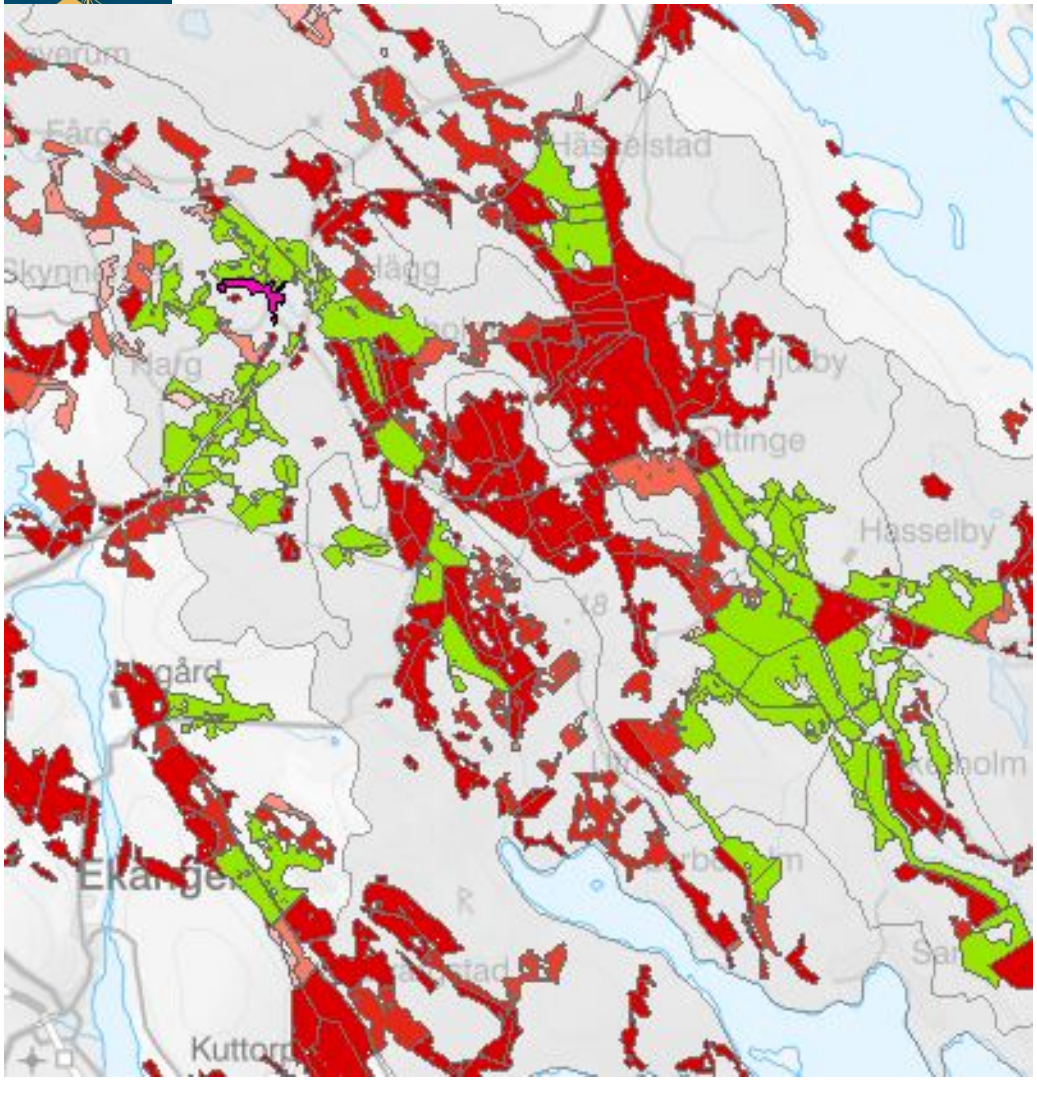
# Lofta River
# Implementation of measures

| Measure 2018/19 | Areal | P decrease kg/year |
|---|---|---|
| Soil mapping | 600 ha | 110 |
| Structure liming | 450 ha | 70 |
| Small wet-lands<br>Phosphorous ponds | 4 ha | 40 |
| Filter ditches | 0 meter | |
| Two stage ditches | 0 meter | |


Measures completed
Measures planned and projected
Wetlands
Wetlands
Filter ditches
Wetlands, ponds
Wetlands
Two step ditches
Irrigation and cirkulation
Irrigation and cirkulation
Wetlands
Filter ditches
Wetlands
two step ditches
Two step ditches
Phosphorous ponds
Wetlands
Filterditches(carbon)
Wetlands, ponds
Two step ditches
Comtrolled drainage
Multifunctional wetland
Wetlands , ponds
Ryvenäs
Skynnerstad
Hägg
Björnsholm
Ottinge
Rumma
Källerhult
Ekängen
Utrike
Lerboholm
Sandvik
Kuttorp
Gamleby
Vinö
Fågelsk.omr.
Casimirsborg
Stenserum
35
E22
213




Structure liming
Red = possible fields - planned
Green = measures completed

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# Västervik Case area
# Measures planned 2021-2024

| Measure | Total | P decrease kg/y | Lofta | Gby | St | Bo |
|---|---|---|---|---|---|---|
| Structure liming | 1150 ha | 180 | 550 | 400 | 350 | 350 |
| Small wet-lands and Phosphorous ponds | 25 ha | 250 | 10 | 4 | 7 | 7 |
| Filter ditches | 50 ha | 1600 | 50 | 50 | 50 | 50 |
| Two stage ditches | 9 km | 2340 | 1 km | 3 km | 3 km | 2 km |
| Irrigation and circulation | 670 ha | 2000 | | 250 ha | | 420 ha |

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