

# Towards a good status of waters

Carbon Action science webinar:  
soil, carbon sequestration and water protection

9 March 2021

Airi Kulmala/MTK



# Water protection important for farmers and forest owners

- Agriculture and forestry depend on water
- Water protection is an integral part of responsible and sustainable Finnish agriculture and forestry
- Good agricultural and forestry practices are a basis for water protection, supplemented by additional measures as appropriate



Photo: Kulmala

# MTK's and SLC's Water Programme

- Tells about the water protection work done by our members
- Brings up topics to improve the efficiency of water management
- Emphasizes the importance of measured data and research results when planning measures
- Encourages to increase know-how
- Gives examples to our members to improve water protection



## MTK's and SLC's Water Programme

Towards a good  
status of waters

SLC

# Focus on the soil fertility in agriculture

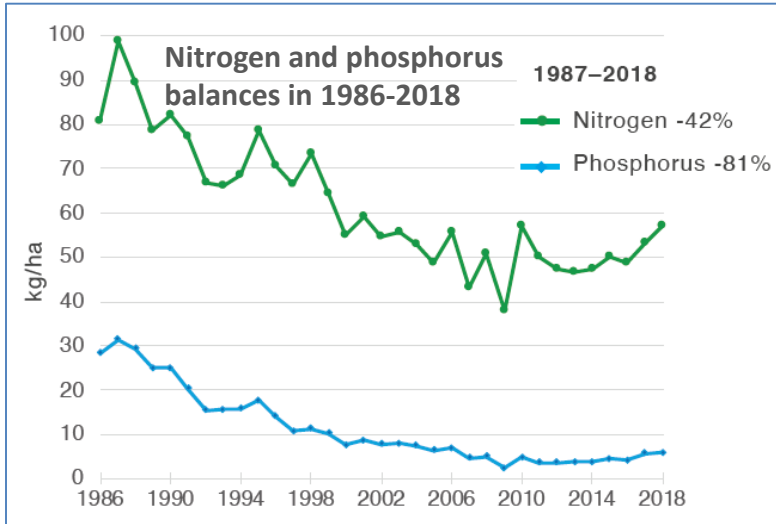
- A good soil structure and water management are the basis of the fertility of soil and the first step in water protection
- The better crops utilize the given nutrients, the smaller the risk of leaching
- Besides environmental problems leached soil particles and nutrients cause financial losses for farms and increase the maintenance need for ditches
- Most of the load occurs outside the growing season, but work for the waters is done largely during the growing season
- Higher risk of erosion and leaching of nutrients in winter and autumn due to climate change
- The positive effect of frost on clay soil structure can be lost when winters are milder



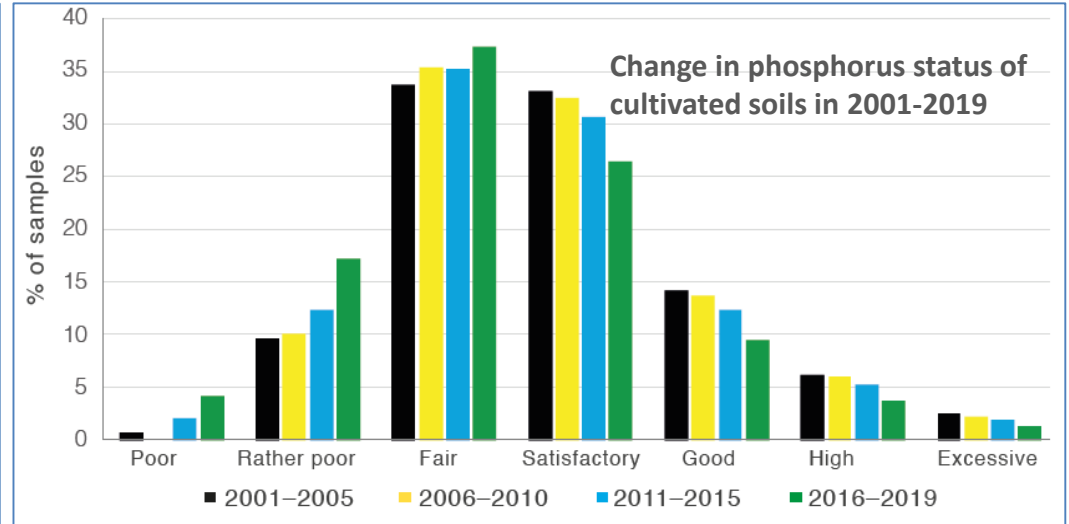
Photo: Kulmala

# P fertilization and P status of soils

- Measures have had an effect: N and P balances have decreased, and the phosphorus content of soil have started to decrease
- P discharge in agriculture has decreased by 18% compared with the beginning of the agri-environment support (1995-1999)<sup>1</sup>



Source: Luke/Statistics 16.9.2020



Source: Eurofins Viljavuuspalvelu 27.10.2020

<sup>1</sup>The environmental impact assessment of the RDP for Mainland Finland (2014-2020)

# How to proceed?

E.g.

- Improving the **fertility of soils**
- **Targeting cost-effective** water protection measures based on the **discharge risks**
- Increasing especially green **plant cover during winter**
- Utilization of **precision farming and digitalization** in the planning and implementation of farming practices
- Increasing **contracting services and equipment sharing** so that the latest technology can be used more easily on farms of all sizes
- Reducing the **need to clear new fields**: co-operation between farms, parcel arrangements and rotation
- Boosting the **recycling of nutrients**
- Converting **poorly productive parcels** into areas that promote biodiversity or for forestation

# Knowledge & communication

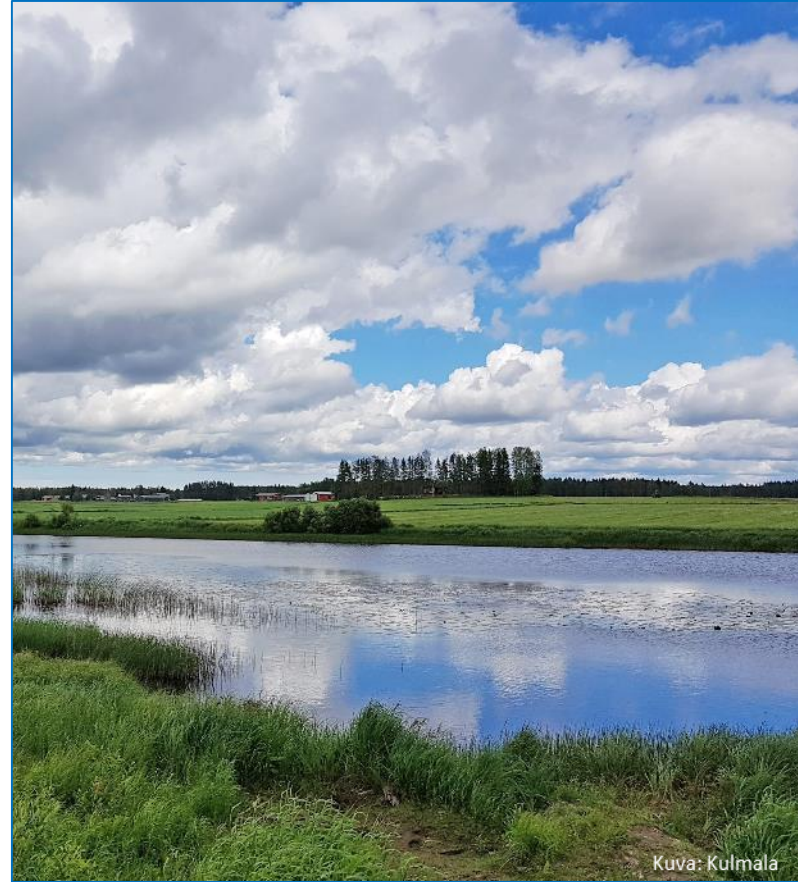
- Long-term research and monitoring data: effectiveness of measures, selection, targeting and dimensioning of measures, model development, evaluation of the cost-efficiency, decision-making
- New research results quickly from research to practice through advisory services and communication
- Education of water issues in agricultural and forestry schools
- Communication toward consumers



Photo: Lauttalammi

# TOWARDS A GOOD STATUS OF WATERS

- through agricultural and forestry practices that reduce loads
- using cost-effective and well-targeted water protection solutions
- through catchment area-specific planning
- by applying more precise research data and by increasing know-how



Kuva: Kulmala





More information:  
[www.mtk.fi/vesiohjelma](http://www.mtk.fi/vesiohjelma)  
(program available also in English)

[www.slc.fi/vattenprogram](http://www.slc.fi/vattenprogram)

[airi.kulmala@mtk.fi](mailto:airi.kulmala@mtk.fi)