



REPUBLIC OF ESTONIA
MINISTRY OF RURAL AFFAIRS



Digitalization for land improvement activities and opportunities of the future development

Marko Gorban

Deputy Secretary General for Agricultural and Rural Life Policies

Ministry of Rural Affairs of the Republic of Estonia

Why do we need conferences?

- Set a good example of efficient co-operation between neighboring countries
- Every country has its specificities, however, there's always something to learn
- It is a 40 years old tradition



Why do we need conferences? (2)

Conference - Agricultural drainage systems, their maintenance and cross border cooperation



Why do we need conferences? (3)

Conference - Agricultural drainage systems, their maintenance and cross border cooperation



Why do we need conferences? (4)

Conference - Agricultural drainage systems, their maintenance and cross border cooperation



Why do we need land improvement?

- The growing population of the world needs more and more food
- The growing demand can no longer be satisfied with the introduction of new agricultural land
- The increase in agricultural productivity depends on how well the agricultural land already in use is exploited
- Impact of climate change – growing number of weather related production risks

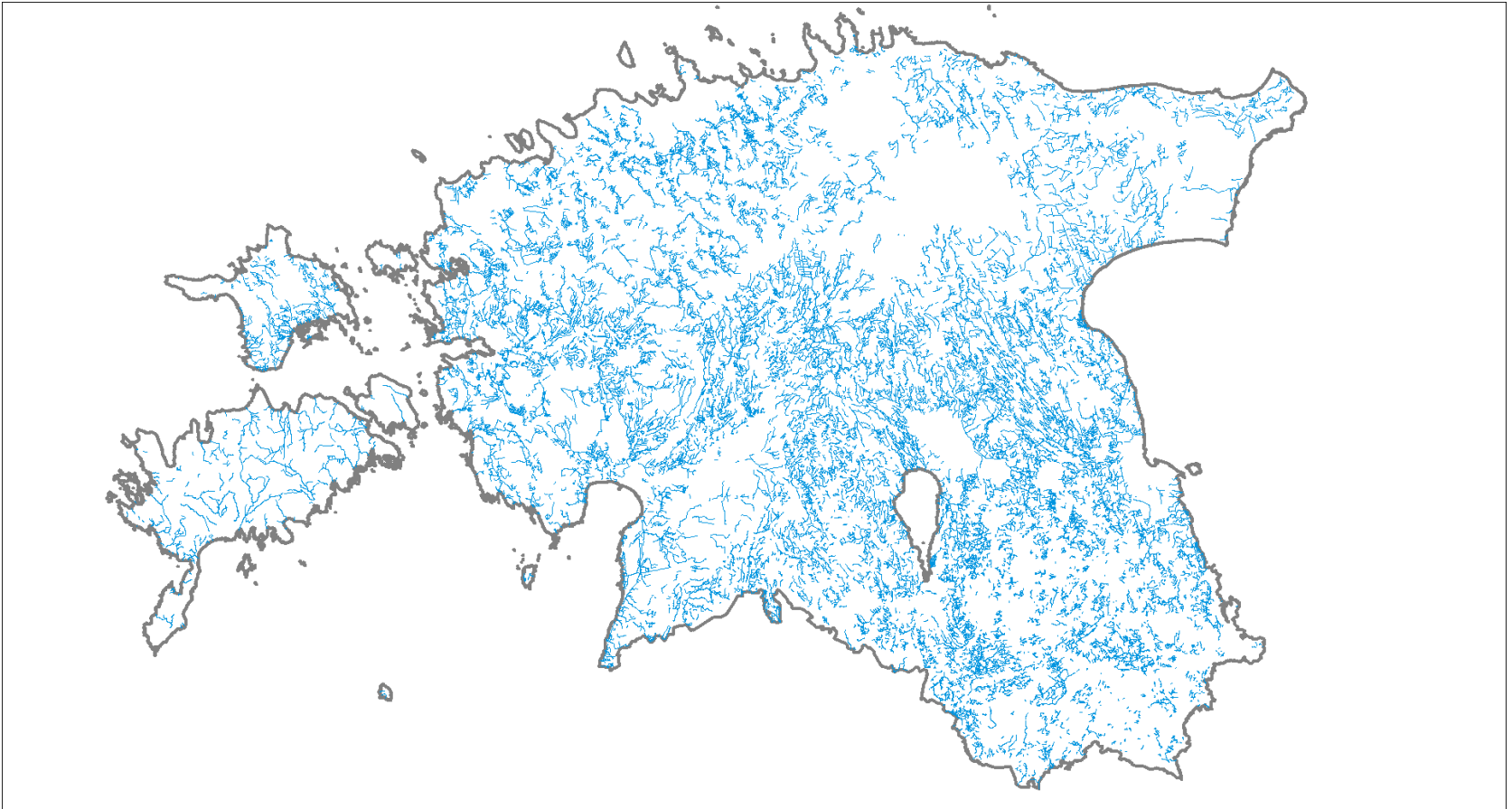
Land use in Estonia

- Estonia has good conditions for food production:
 - is located in the temperate zone, water resources are available (annual volume of precipitation 520-820 mm exceeds evaporation 360-440 mm)
 - is one of the EU countries best equipped with agricultural land (0.70 ha of agricultural land per capita)
- Before accession to the EU, less than 800 000 ha of agricultural land in use, now close to 1 million ha (20% organic)
- About 2,2 million ha of forest land

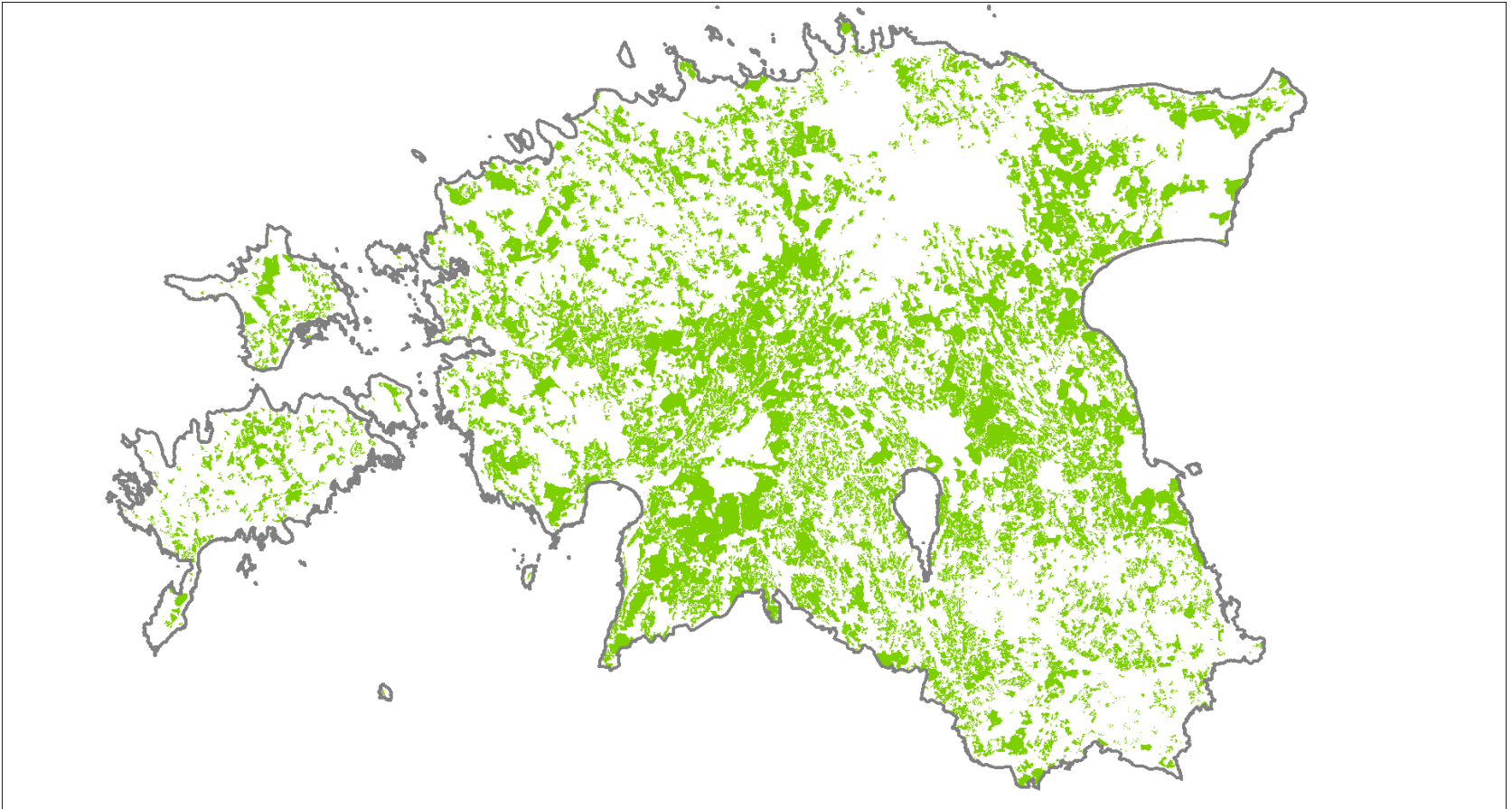
Drainage systems in Estonia

- Total – 1363973 ha
- Agricultural land systems 640443 ha
including
 - Two-way regulation of hydrologic condition 3625 ha
 - Irrigation systems 81ha
- Forest land systems 723530 ha

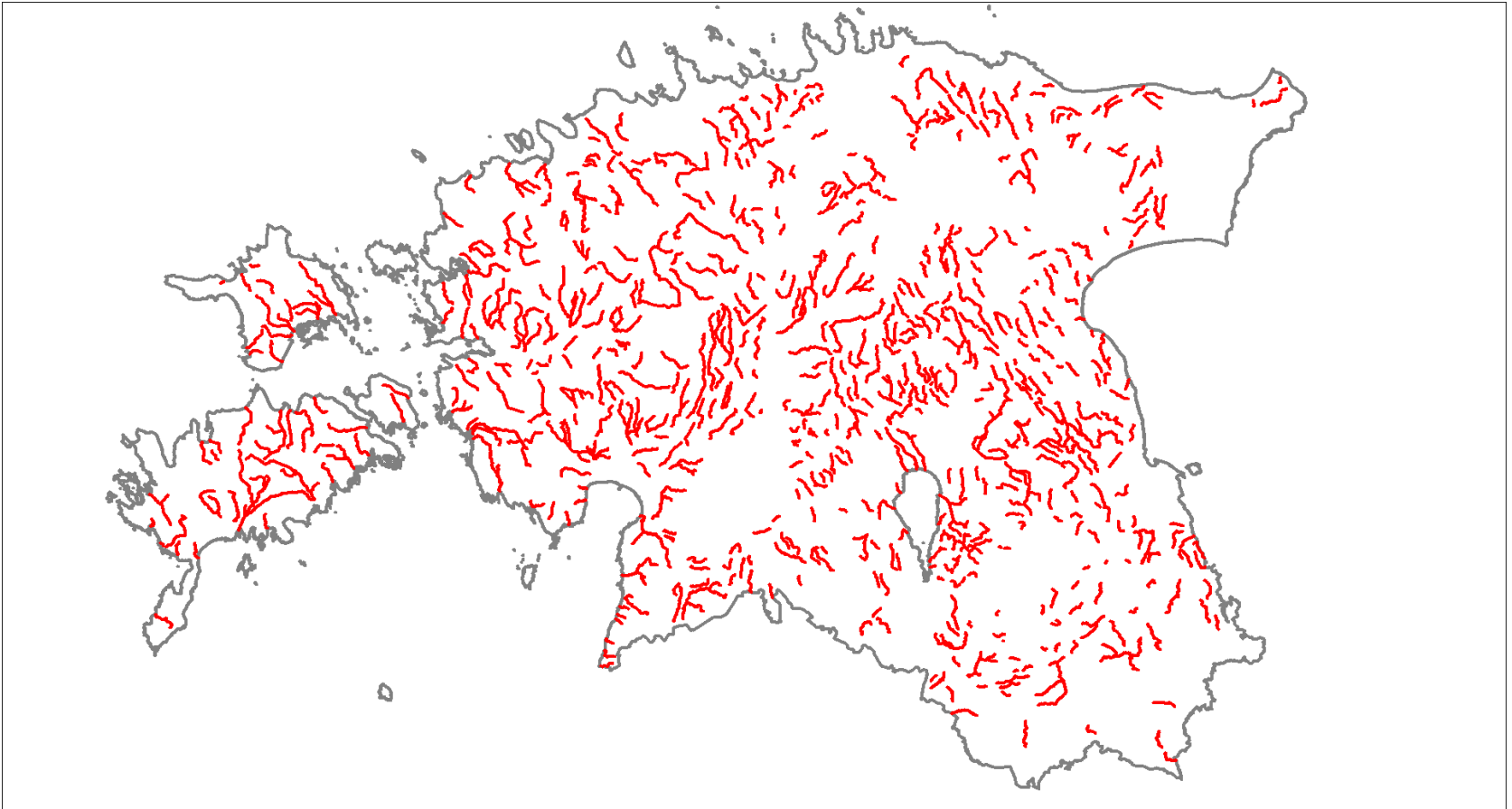
Recipient systems in Estonia



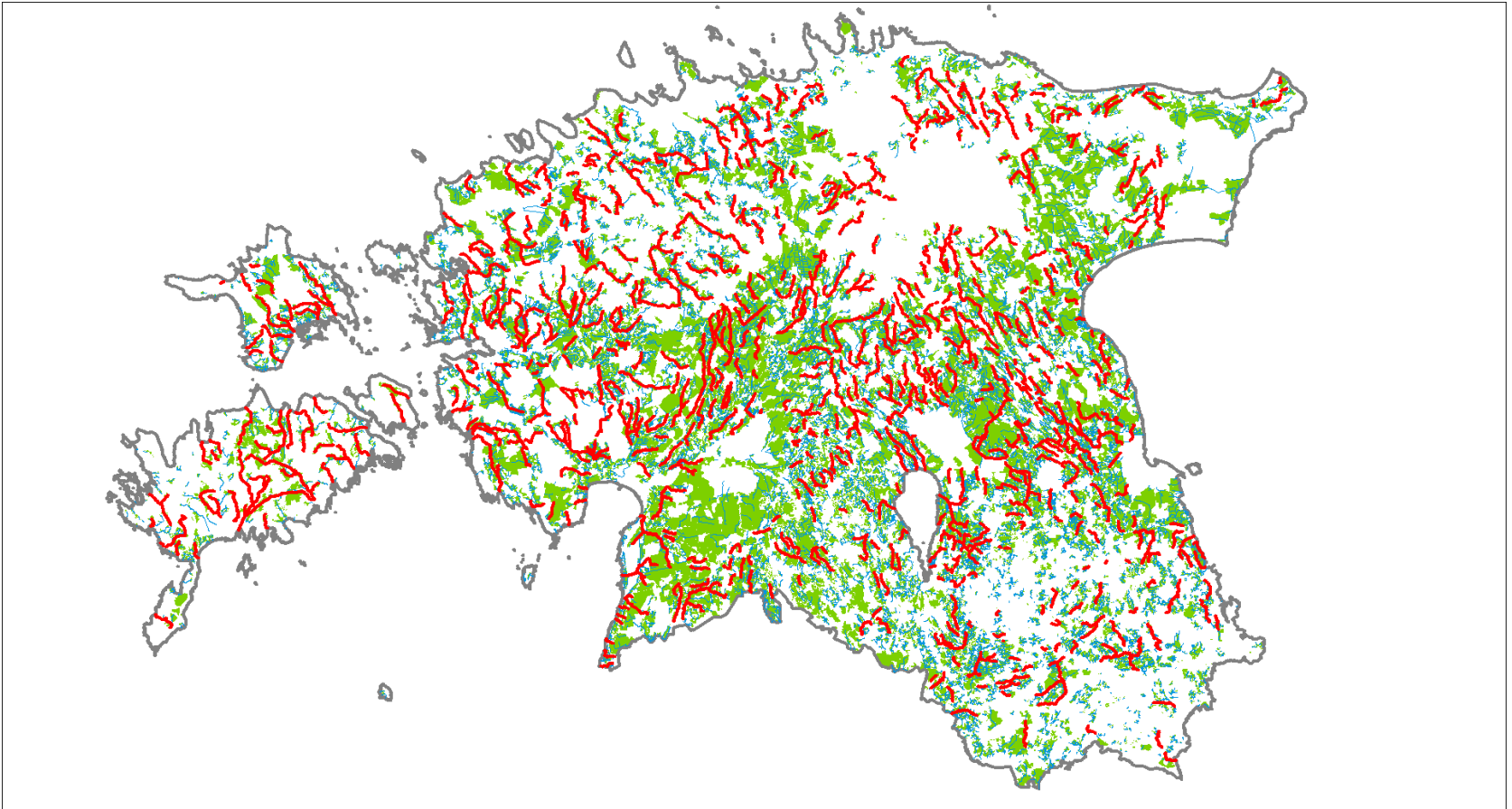
Drainage systems in Estonia



Commonly used ditches (governmental funding)



Total land improvement systems



Support for land improvement in Estonia

- Mainly Rural Development Plans resources are used to support maintenance of land improvement systems
- In RDP 2014-2020 EUR 49 million is foreseen for this purpose
 - it is planned to establish at least 370 construction works required for the protection of the environment and to maintain 1,650 km of jointly used recipients

Digitalisation in Estonia

- Estonia is known as an e-country
- We have online services for the most everyday things – voting, parking, tickets, prescriptions etc.
- Our government offers various online procedures that are quick and easy– e-signatures using ID-card, Mobile-ID or Smart-ID, banking services, establishing of companies, tax declarations etc.
- Start-ups from Estonia – Skype and TransferWise
- Mobile solutions being developed to provide agronomy and farm management advice for a farm in a simple and affordable way (VitalFields)

Role of digitalisation in agriculture

- World around us is changing – have to follow the trends and face the challenges
- Future is digital
- Digitalisation can help us make the next step in creating growth in agricultural sector and in rural areas.
- Important that we exploit the benefits of the technological progress
- Developing different e-solutions can benefit our consumers, producers and enterprises, making it easier to communicate, provide services and making business

Land improvement and digitalisation 2020+

THE BENEFITS OF **SMART AGRICULTURE**



Increased **PRODUCTION**

Optimised planting, treatment application and harvesting improve yields.



Real-Time Data and **PRODUCTION INFORMATION**

Real-time access to information about sunlight intensity, soil moisture, markets, herd management and more provides for better and faster decisions by farmers.



Better **QUALITY**

Precise information about production processes and quality helps farmers adjust and increase the specificities of the products as well as nutritional values.



Improved **LIVESTOCK HEALTH**

Sensors can detect and prevent poor health in animals early on, reducing the need for treatment. Livestock management can also be improved through geofencing location tracking.



Lower **WATER CONSUMPTION**

Lower water consumption due to soil moisture sensors and more accurate weather forecasting.



Lowered **PRODUCTION COSTS**

Better resource efficiency through automatised processes in crop and livestock management, leading to lower production costs.



Accurate **FARM AND FIELD EVALUATION**

Data about historical yields help farmers plan and predict future crop yields as well as the value of their land.



Reduced **ENVIRONMENT, ENERGY AND CLIMATE FOOTPRINT**

Increased resource efficiency reduces the environment and climate footprint of food production.



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**Thank You for Your
attention!**