



FINDINGS OF THE REGINA TRANSNATIONAL RESEARCH

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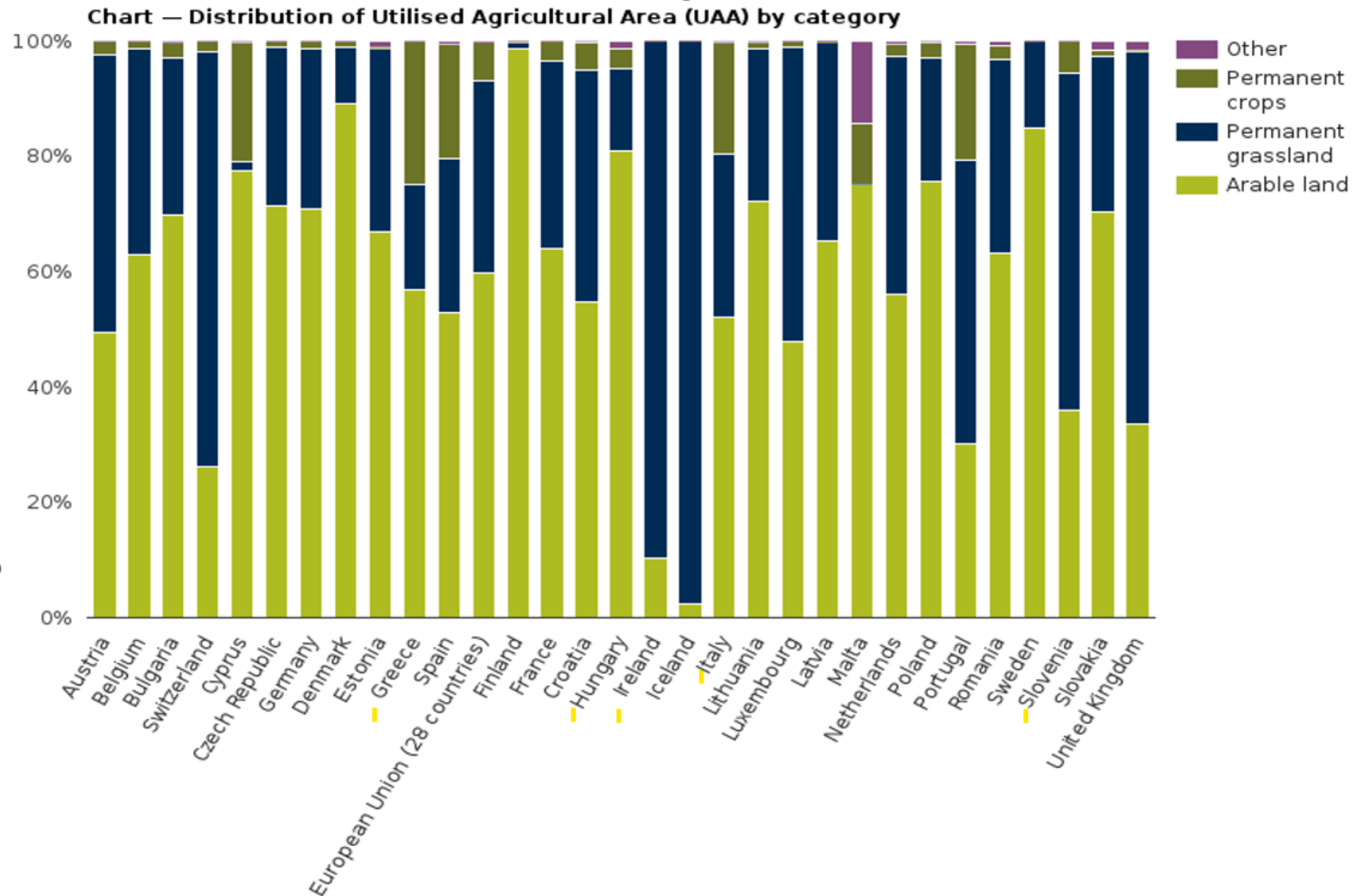
The research included:

- Desk study on the basic characteristics of the agricultural sector in each country and current levels of RA uptake
- Interviews with key stakeholders - farmers' associations, networks, educational institutions, NGOs, central government bodies, regional and local authorities, agricultural consortia etc.
- Online farmers' survey to map the uptake of RA and identify the farmers' needs in terms of knowledge, skills and attitudes
- Identification of RA case studies in each country as examples of farms making the transition to RA

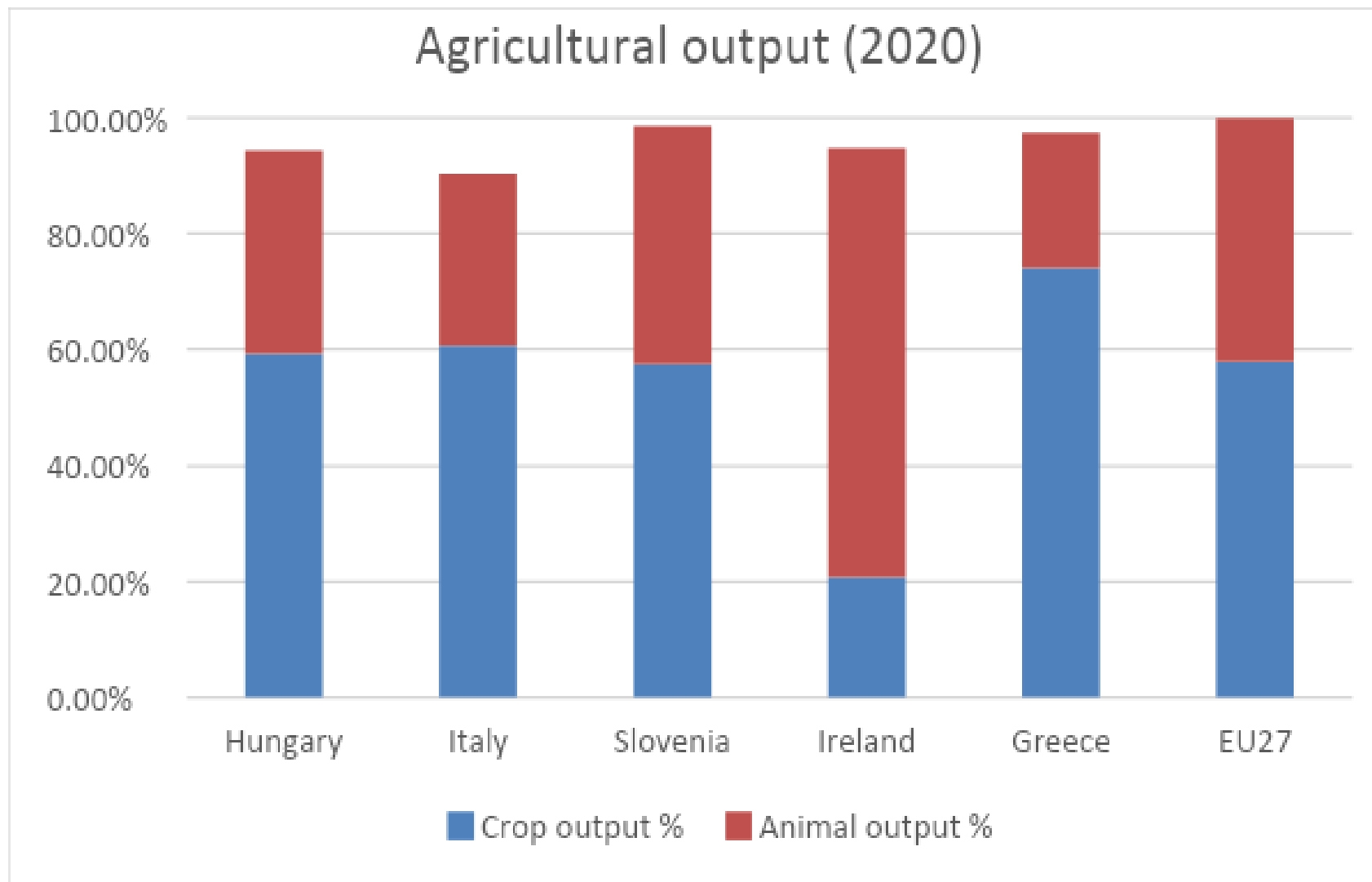
National Reports and a Synthesis Report

Brief overview of the agricultural sector in the partner countries

Distribution of Utilised Agricultural Area by category



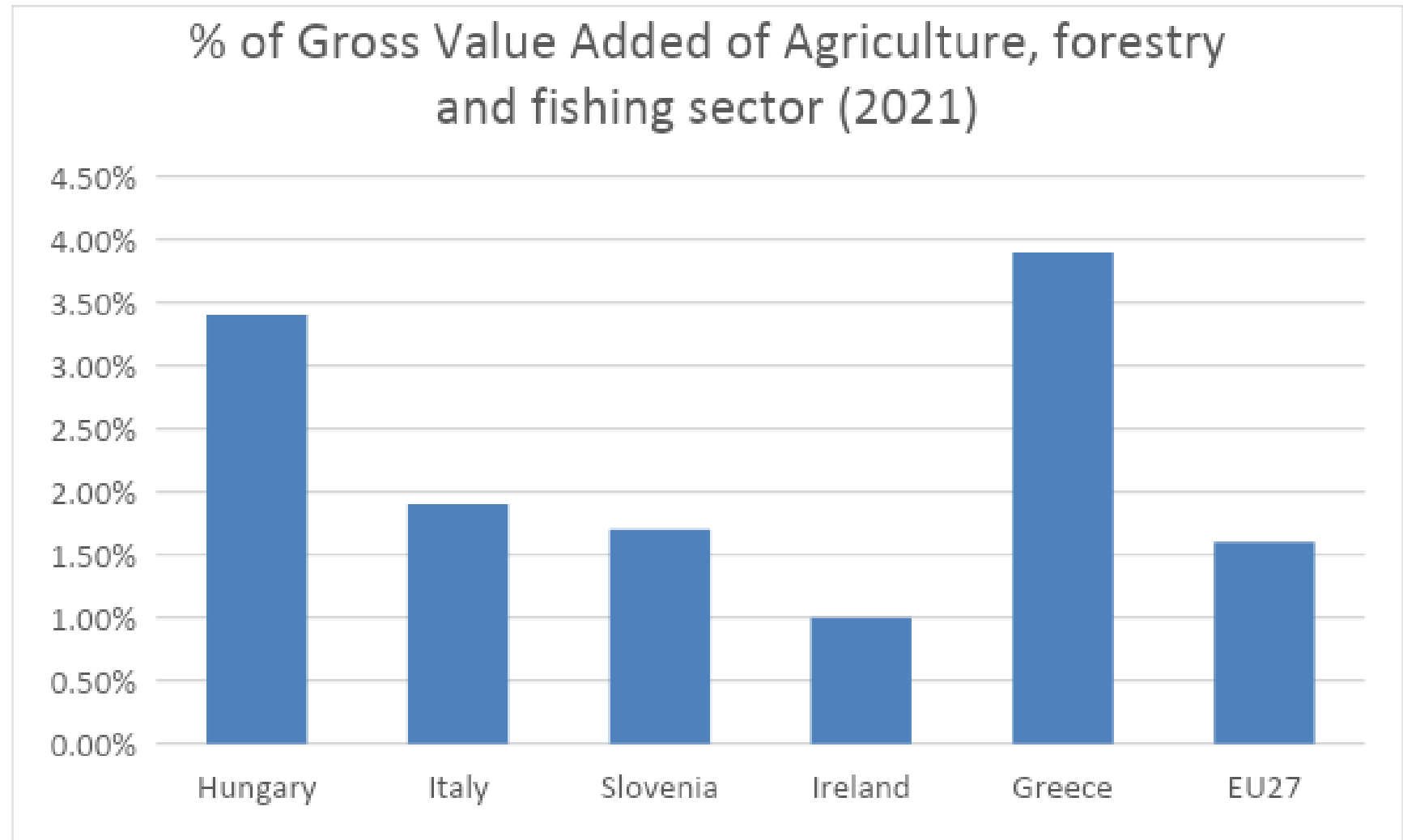
Agricultural output type



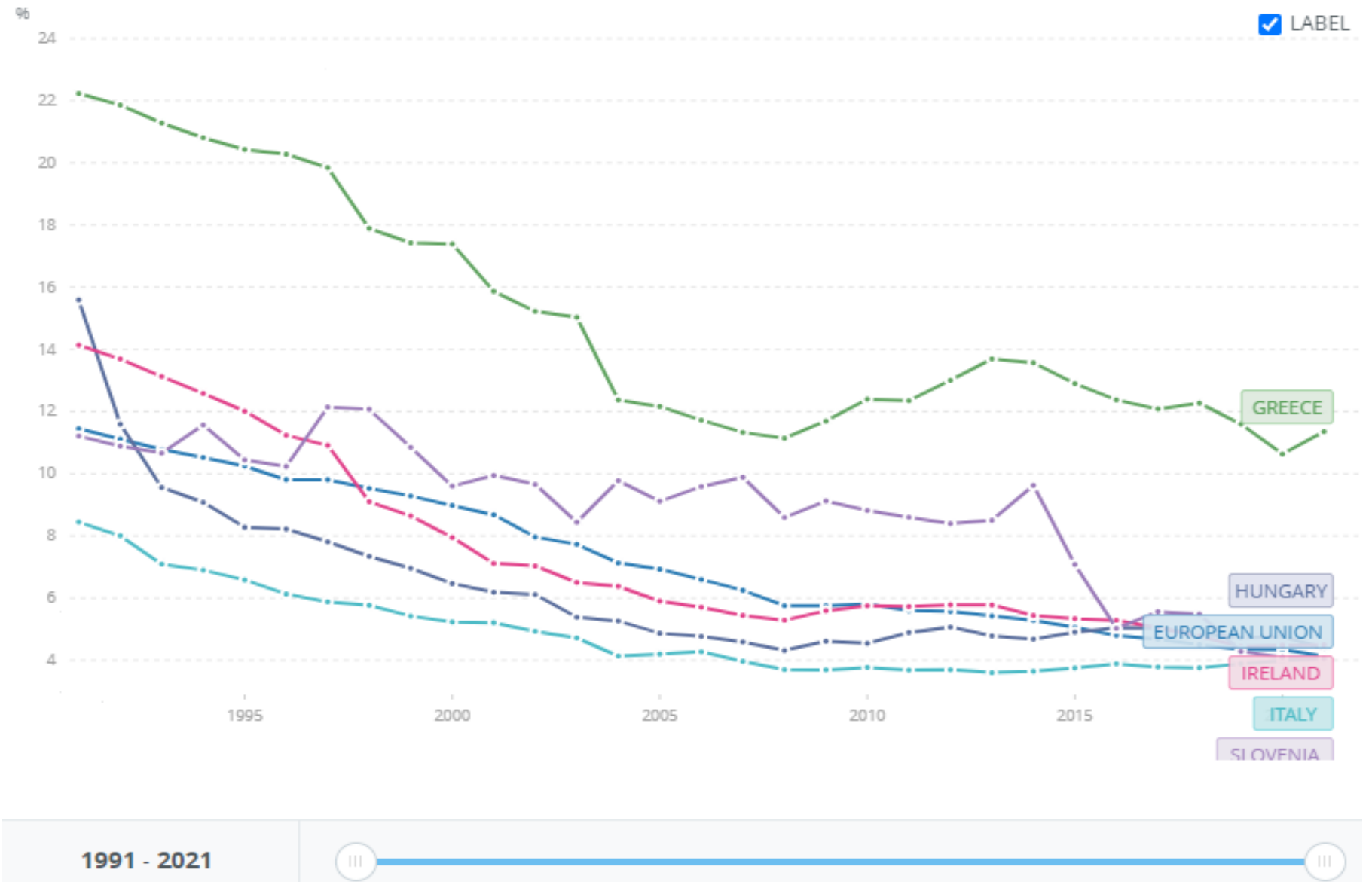
Farm structure

- Size of holdings: Very small size in Hungary and Greece (majority less than 5 Ha), moderate size in Italy and Slovenia (close to the EU average but still a majority of small holdings), greater size in Ireland (most between 10 and 50 Ha)
- Economic size of holdings: Very small in Hungary and Greece, moderate in Italy and Slovenia (higher than the EU average), greater in Ireland
- Age of farm holders: The trend of the ageing population of farm holders is confirmed in all countries (in Italy 41% are above 64 years old)
- Proportion of women holders: In Greece and Italy 1 in 3 holders is a woman (>EU27), lower percentage in Slovenia and Hungary. In Ireland only 12% are women.

Gross value added of agriculture, forestry and fishing sector



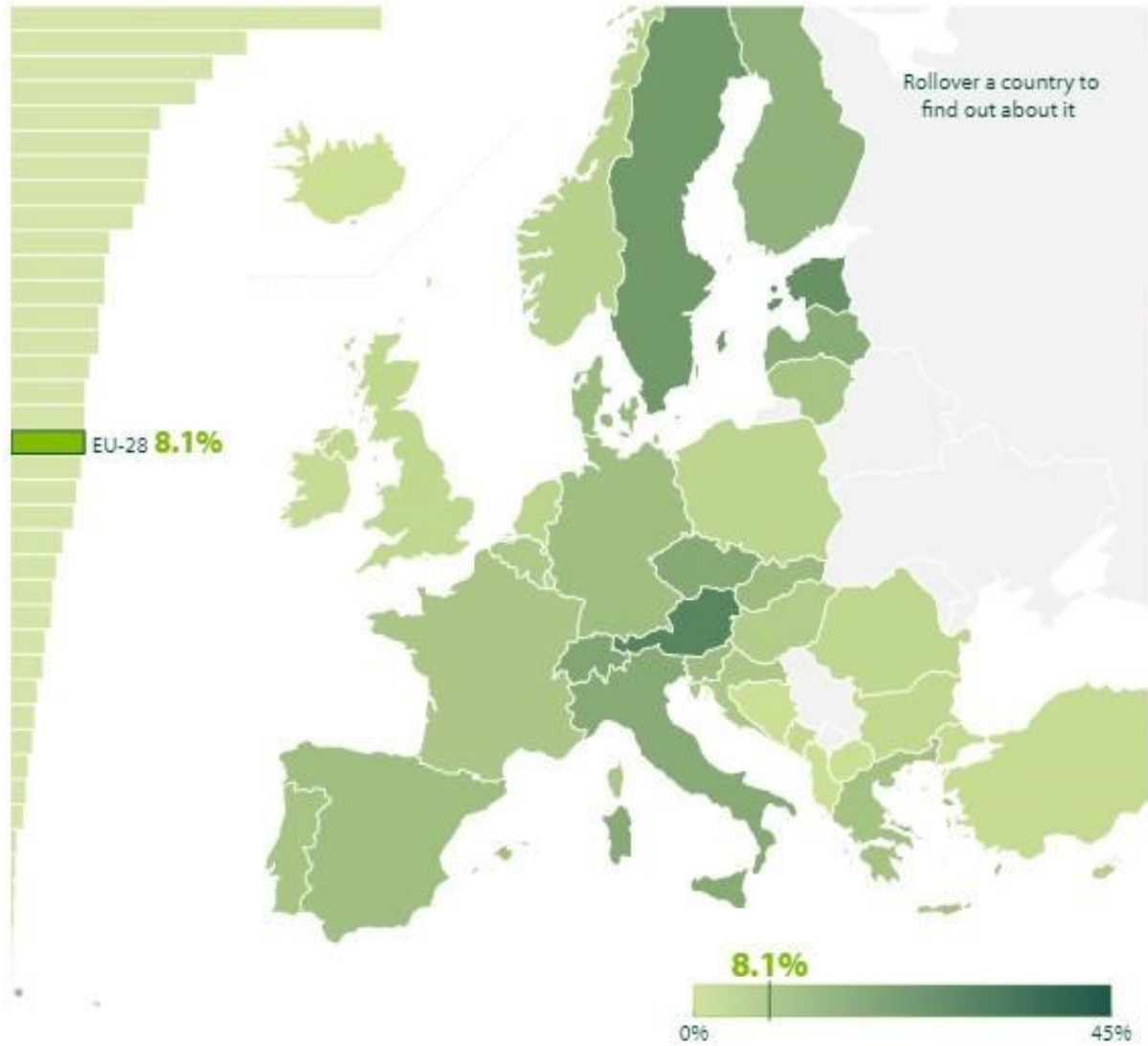
Employment of the agricultural sector



Overview of Organic Farming

- Organic farming is today the most widespread form of alternative farming in the EU
- Introduced in different times in the partner countries and followed different paces regarding integration into farming practice
- EU regulations provide a framework for the production of organic products across the EU, and member states can make additional provisions, but...too much weight placed on certification process, counterintuitive, bureaucratic.
- Italy is one of the leading countries in the EU in organic farming, with 15% organic land area and 1 in 5 organic producers in the EU.
- Slovenia follows with 10% organic land area, Greece with 9% (EU28 percentage), Hungary below the EU level (6%).
- Ireland records one of the smallest % of organic land area in the EU (1,6%)

Percentage of organic agricultural land



EU-28

14.6
million
hectares of
organic land
in 2019

Organic land use*

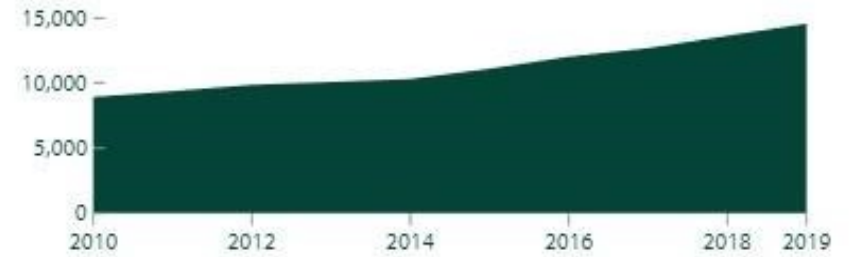
44% Grassland
6,355,637 hectares

45% Arable crops
6,588,400 hectares

11% Permanent crops
1,566,432 hectares

0% Other
69,192 hectares

Organic land area in 1,000 hectares



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



Overview of Conservation Agriculture

- CA was promoted in the CAP to address primary environmental problems, like CO₂ emissions from farming, decreasing biodiversity and limited water availability.
- 3 core principles:
 - Minimising mechanical soil disturbance
 - Permanent soil cover with organic material
 - Crop rotations
- Reported benefits:
 - Reduction in production costs (fuel and energy costs) by 65%
 - Reduction in labour costs (less requirements for labour) by 50%
 - Reduction in machinery depreciation
 - Yields comparable to conventional farming (depends on use of herbicides)
- Mainly integrated in farming practice in Italy and Slovenia through policies and the work of competent associations

Overview of Regenerative Agriculture

- Still no consensus definition
- Broader concept, not necessarily connected to specific farming practices
- Not excluding modern plant /animal breeding technology, tilling or use of inorganic fertilisers or pesticides, but aiming to their targeted and limited use.
- The aim goes beyond reducing the negative impact of farming, to achieving positive impacts through:
 - Restoring soil health to increase its capacity to sequester and store CO₂
 - Reversing biodiversity loss
- Recent interest by researchers, NGOs, farmers networks. Usually, farmers interested in RA are already involved in OF, CA, etc.
- RA is employed freely by farmers and does not (yet) carry certification and bureaucracy burdens. Unofficial groups through social media and networks provide support and experience sharing.

Farming practice	Suggested for carbon capture and storage	Suggested for biodiversity
Conversion of arable land to grassland	X	X
Grassland management (to capture carbon)	X	X
Woodland (wood pastures; silvo-pasture)	X	X
Native tree plantations on arable land	X	(X)
Agroforestry	X	X
Hedgerows, woody buffer strips, farmland trees	X	X
Improved crop rotations	X	
Crop diversity in rotations	X	X
Crop diversity - intercropping	X	(X)
Crop diversity - in sown/relay cropping	X	(X)
Minimize tillage: reduced, minimum or no tillage	X	X
Cover crops	X	
Retaining crop residues/Leaving crop residues on soil surface	X	
Organic amendments	X	(X)
Biochar	X	
Perennial crops	X	
Avoid insecticides, fungicides and herbicides	(X)	X
Field borders, etc. for beneficial insects (mainly pollinators and natural enemies to pests)	(X)	X
Flower strips (pollinators)		X
Buffer strips (often mandated for environmental/erosion reasons)	(X)	(X)
Herbal leys and summer fallows in crop rotations		X
Natural and semi-natural habitats		X
Landscape mosaics in space and time	(X)	X
Switch from large to small-scale landscape patterns, e.g. decreased field size	(X)	X
Supporting transitional habitats, reducing sharp boundary structures		X



- Findings from **Stakeholder interviews**

6 stakeholder interviews per partner country (Hungary, Italy, Slovenia, Ireland, Greece)
30 interviews in total

Stakeholder organisations: Farmers associations, networks, educational institutions, NGOs, central government bodies, regional and local authorities, agricultural consortia etc.

Knowledge of the term **Regenerative Agriculture**

- The term is not yet widespread
- Limited knowledge of the meaning, objectives and how to make the transition from conventional farming
- Too many terms used to describe different or overlapping approaches to sustainable farming can create confusion (integrated management, permaculture, agroforestry, biodynamic farming, agroecology, etc.)

Current uptake of **Regenerative Agriculture**

- Limited uptake in all partner countries
- Usually attempted by environmentally conscious farmers disillusioned by the organic farming movement

Obstacles to a widespread transition to Regenerative Agriculture

- Prevailing mentality of farmers who put the emphasis on increasing their production on the short term rather than reducing production costs in the long term
- Ageing population of farmers
- Significant gaps in training and knowledge/knowhow by experts with advisory role (e.g. agronomists) and farmers. The **change of mindset** is key: instead of relying on chemical inputs (passive mindset), farmers will have to adopt a culture of initiative and use alternative methods through knowledge, experimentation and monitoring (active mindset).
- Lack of incentives for farmers
- Social issues
- Costs of purchasing new machinery/organic fertilisers
- Uncertainty for production levels and great reduction of yields (Hungarian stakeholders)

Benefits of Regenerative Agriculture

- Economic benefits for farmers: Although the transition to RA requires 4-5 years, farms become more productive with lower production costs = increased income. Increasing international demand for RA products (cotton, hemp)
- Environmental benefits: Reversing the impact of agriculture on the environment from negative to positive (enhancing biodiversity, sequestering greater amounts of CO₂) and ensuring the soil keeps producing for the future generations
- Social benefits: Enhancing the farmers' role and social profile as guardians of biodiversity, attracting younger population in rural areas with a sustainable income
- Health-wellbeing: The uncontrolled use of chemical pesticides/herbicides in the past was strongly connected to health problems. Farmers employing RA report reduced stress levels and improved wellbeing from working in a natural environment rich in biodiversity

Prerequisites for a wider spread of Regenerative Agriculture

- Education and training: Key to respond to farmers' questions and doubts about RA. Empirical knowledge and experience can be recorded and organised. Education of agronomists/consultants is necessary to support farmers in the transition. Farmers' training not limited to conventional training methods, but including farm visits and experience sharing.
- Support in terms of funding and policies. Subsidies must be linked to measurable indicators regarding biodiversity and soil regeneration. Policy framework should cultivate a mentality of initiative among farmers.
- Marketing and selling RA products: follow the joint marketing practice employed in organic farming, creating rural RA districts

Stakeholders' willingness to contribute to education/training on **Regenerative Agriculture**

- All stakeholders interviewed in the partner countries expressed their willingness to support education/training on RA depending on their profile
- In Greece ELGO DIMITRA (public organisation offering official training to new farmers) expressed an interest to carry out a train-the-trainers course on RA and cooperate with Euracademy Association and the REGINA partnership

- Findings from **online farmers survey**

553 farmers participated in total



Profile

- Vast majority of male respondents
- Even distribution in age groups in Italy and Slovenia, younger farmers in Hungary and Greece (36-45), older in Ireland (55+)
- Smaller size of holdings in Greece and Slovenia (1-50 Ha), moderate size in Italy and Ireland (11-100 Ha), greater size in Hungary (50-1.000 Ha)
- Less than 5 persons permanent staff

Do you follow conventional farming methods, alternative or both?

- Most respondents in Hungary, Ireland and Italy follow conventional farming methods
- Even distribution in Slovenia
- Mainly alternative farming methods in Greece

Awareness of alternative farming methods

- Most farmers seem to be familiar with the concept of climate change, its causes and impacts
- More familiar with organic farming, conservation agriculture and sustainable farm management. Not so familiar with the term “Regenerative Agriculture”.
- Farmers in Hungary, Slovenia and Ireland are divided on whether conventional farming is sustainable.
- Farmers in all countries except Greece are divided on whether only conventional farming can produce enough food.
- Respondents in all countries agree there is not enough support (training, financial support) to introduce alternative farming methods

Awareness on Regenerative Agriculture

- Most respondents report they are familiar with different techniques of RA
- Awareness regarding the **benefits** of RA: Benefits like the reduction of labour, less farm mechanisation, increased farm revenue and less problems with plant diseases are generally not recognised.
- Main **obstacles**: lack of financial support from the state, financial uncertainty regarding the short-term future and lack of know-how.

Attitudes on taking up Regenerative Agriculture

- Most respondents reported they are either implementing RA practices now or are planning to do so in the future.
- Vast majority stated they would like to receive information and training on all proposed topics, including **regenerative agriculture farming practices (techniques)**, **economic benefits** of RA practices, **environmental benefits** of RA practices, **obstacles/difficulties** of RA and **financial support possibilities** for regenerative/alternative farming practices.
- Respondents from Hungary, Slovenia and Ireland would prefer **information**. Respondents from Greece and Italy would prefer **training**.

What factors
would enhance the
uptake of RA in
your farm?

- More financial support from government or EU
- More opportunities for training and technical support (e.g. by agronomists)
- Good practice sharing among farmers, networking
- Knowledge: lectures, workshops, demonstrations, instructions

Key factors for education-training on Regenerative Agriculture

- Need to **educate experts/consultants** on RA, to guide farmers on the transition taking into account their specific context (climate conditions, production type, farm structure, etc.).
- Need to **train farmers**, to:
 - Dissolve misconceptions and doubts, provide credible evidence
 - Build a positive mentality – initiative → learn, experiment, monitor
 - Collect empirical knowledge and organise as learning content
- Employ alternative training methods: Field schools, educational visits, sharing experience, learning by doing
- Create and maintain RA networks in each country to encourage sharing successes and failures, and enhance the marketing of RA production



THANK YOU

