

# Key findings of the Thematic Group on soil and water management

Ben Allen / Silvia Nanni

ENRD CP/IEEP



# Results-based payment schemes for soil and water management



## What is a result-based payment scheme?

RBPS – Payments linked to results

MBPS – Payments linked to management

Hybrid – Part results / Part management

⚠ Not to be confused with performance-based approaches, outcome-based programming, payments for ecosystem services



Meadow birds  
Species-rich grassland



Large carnivores - Lynx (*Lynx lynx*)  
and Wolverine (*Gulo gulo*)



Golden Eagle (*Aquila chrysaetos*)



Peak District farm  
conservation scheme



Burren farming for  
conservation  
programme



Flowering meadows  
Pastoral management



RAPCA fire  
prevention scheme



Species rich grassland  
Species rich orchards



*Ergebnisorientierter Naturschutzplan*  
Nature Conservation plan



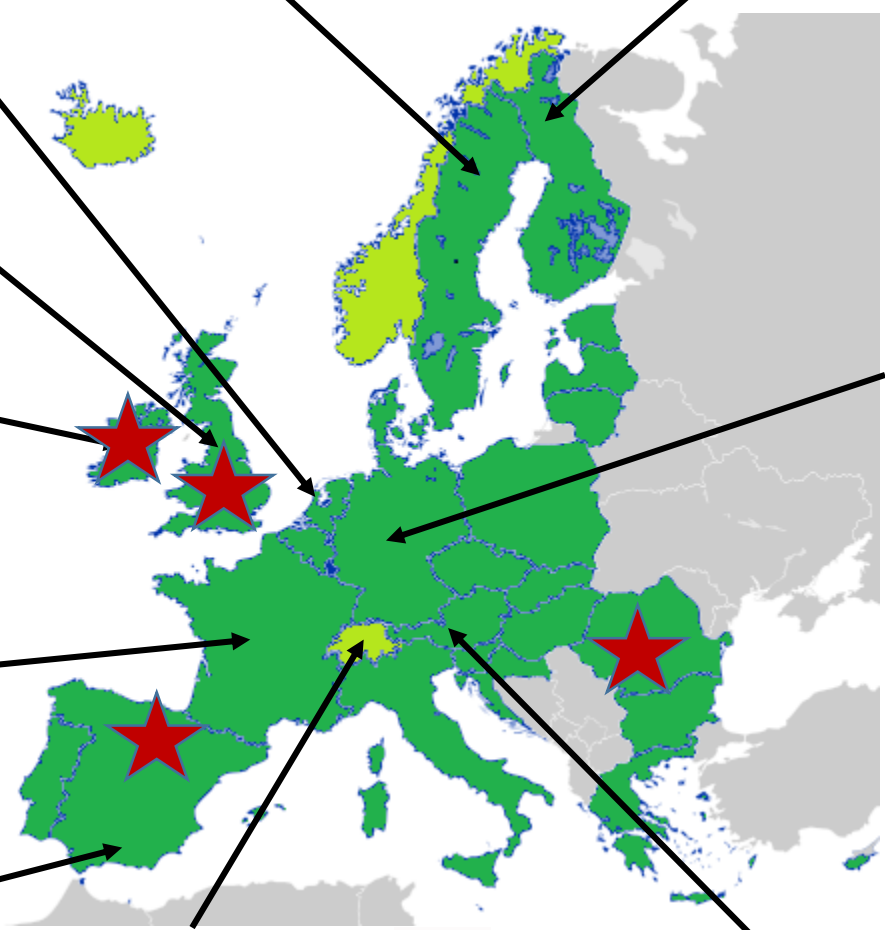
Species rich grassland  
Bird schemes:

- Harrier nest protection in arable fields
- Grassland birds
- Orchards

Animal Genetic conservation

Most Member States offer some form of support for animal genetic conservation operating on a results-based approach.

Examples can be seen in Italy, Germany, Ireland and Austria.





## Examples of RBPS AECM for soil and water

### Water quality RBPS/MBPS hybrid (Flanders)

**Objectives:** reduce N leaching and soil erosion; increase organic matter

**MBPS:** 4 low risk crops on 90% of arable land; soil analysis in first year

**Result Indicator:** residual soil N each year in every field must be 4kg N/ha  
< Flanders regulatory threshold

### Efficient use of irrigation water (Portugal)

**Objectives:** improve efficiency and reduce consumption

**MBPS:** irrigation system used, inspection of equipment in years 1, 3 and 5

**Result Indicator:** measured water consumption at least 7.5% < National  
Irrigation Authority reference level for crop and region



## Effective indicators for RBPS

### Checklist:

- Reliably representative of the specific objective and based on scientific data from the target area;
- Present consistently in target farmland area;
- Easily identified and measured by farmers and inspectors, using a simple, reliable and unambiguous method;
- Sensitive to changes in agricultural management within the timescale of the contract but otherwise stable over time;
- Unlikely to be influenced by external factors beyond the control of the farmer; and
- Not achieved easily by means other than agricultural management.

# Results-based payment schemes: Recommendations of the Thematic Group



## Recommendations for RBPS

- Being clear on what payments are for
- Longer contracts – to see results
- Linking support to land – not beneficiaries
- Compulsory training
- Pilot projects
- Forum for sharing good practice and experiences
- Guidance on the use of measure packages



# Collaborative and multi-actor approaches for soil and water management



## What are multi-actor approaches for soil and water?

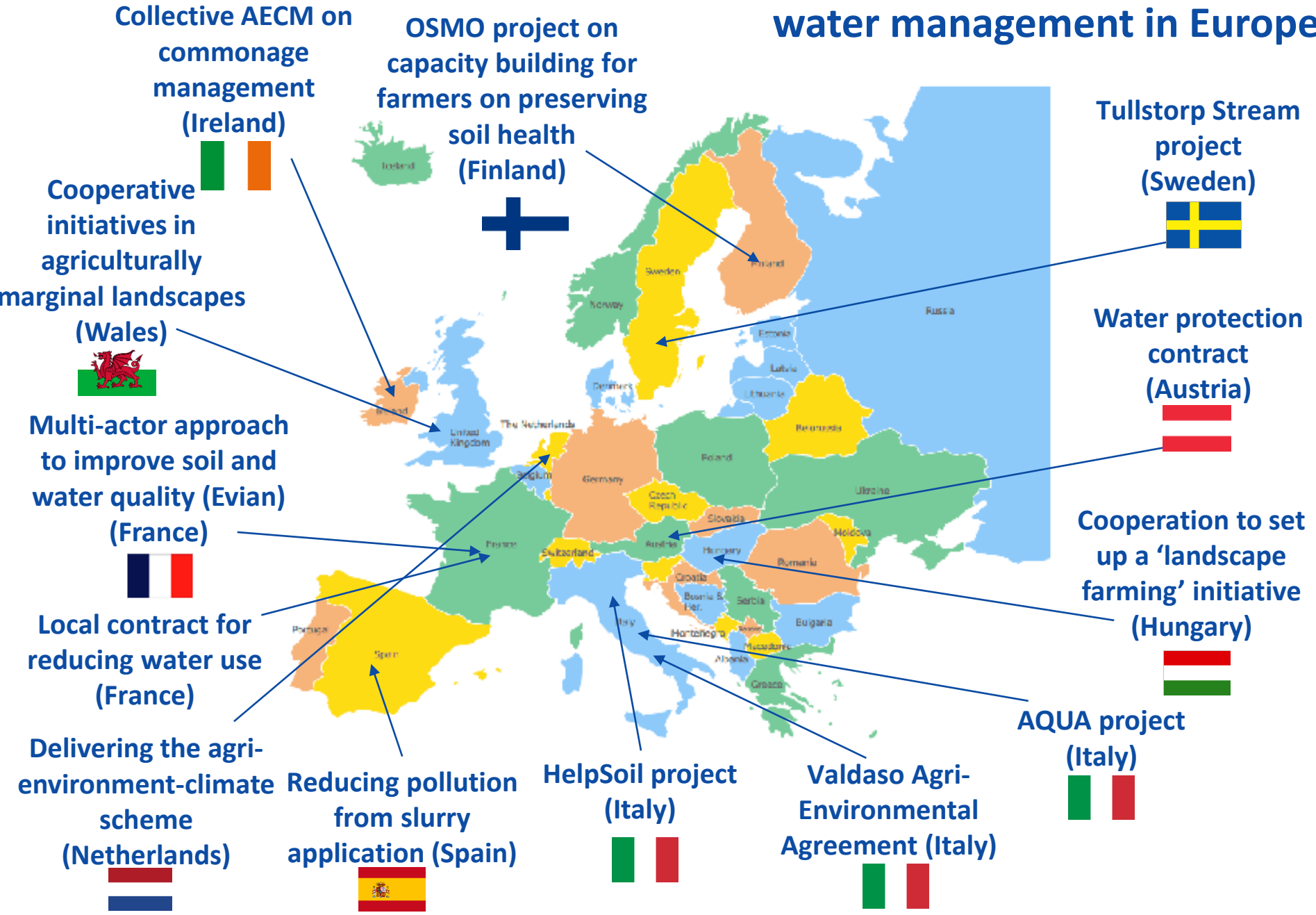
### Multiple forms:

- Action designed and implemented collectively;
- Action developed through coordinated effort but implemented by an individual or a single organisation

### Benefits:

- Achieving environmental improvements
- Improved understanding and changed behaviours

# A wide spectrum of approaches to soil and water management in Europe



## Example of successful leadership

### Tullstorp Stream project (SE)

- Reducing the outflow of nutrients into the Baltic Sea by soil erosion and flooding
- Use of RDP measures: non productive investments, AECM and cooperation
- **Project leader was primarily a farmer**
- **Trusted by the local community of landowners**
- 35 wetlands created, restoration of 9 km of riverine systems, and dissemination

Tullstorp Stream  
project  
(Sweden)



## Example of good governance structure

### Valdaso Agri-environment agreement (IT)

- Collaborative agri-environmental agreement for water protection and soil quality;
- Use of RDP measures: AECM, organic farming, knowledge transfer, cooperation
- **Grass-root initiative by farmers, paired up with local municipality as trusted partner**
- **Involved more than 100 farmers and 19 municipalities**
- Improved water protection and soil quality by establishing integrated agriculture and organic farming across 9000 ha



Valdaso Agri-  
Environmental  
Agreement (Italy)



# Collaborative and multi-actor approaches: Recommendations of the Thematic Group





## Supporting participation and leadership

- Selection criteria that are result-oriented and require broad participation
- Funding for focused extension services
- Flexible funding streams for local initiatives

## Supporting good governance and innovation

- Encourage innovation
- Collect and exchange of best practices and pilot projects



## Ensuring appropriate financing

- A two-stage approach for funding
- Designing selection criteria for collectives under both Cooperation (M16) and AECM (M10)
- Allocating higher proportions of transaction costs to agreements involving groups
- Explore other funding sources to complement RDPs (e.g. InvestEU)
- Facilitation to be an eligible cost for the duration of schemes
- Ensure existing collectives or groups in an area (e.g. local associations, NGOs, LAGs) have access to funding



# Soil and Nutrient management plans: 2014-2020 RDP design and implementation



## Nutrient management plans

- Nutrient management needs
- Specific actions, rates, times
- Farm-level but can be broader (NVZ)
- Beyond the legal requirements to:
  - Support & *incentivise the development of plans*;
  - Provide a *more systemic approach to* soil & water management;
  - Identify RDP measures to support *plan implementation*;
  - Provide *advice and training*

**Nutrient Management Planning  
Small AFO Summary Worksheet #2**

AFO OPERATION NAME \_\_\_\_\_ ANIMAL TYPE \_\_\_\_\_ Breeder \_\_\_\_\_  
 TYPE OF WASTE \_\_\_\_\_ OPERATOR \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

**Step 3. Area for Land Application.** (Attach aerial photo or topographic map and soil survey of farm showing land application areas. Include all buffers and setbacks that apply (Table 2).)

**Nutrient Management Planning  
Small AFO Summary Worksheet #3**

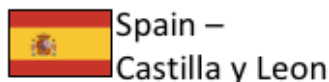
AFO OPERATION NAME \_\_\_\_\_ ANIMAL TYPE \_\_\_\_\_ Breeder \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_  
 TYPE OF WASTE \_\_\_\_\_ OPERATOR \_\_\_\_\_ DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

**Step 4. Determine Crop and Nutrient Needs for Each Field**  Planning Sheet  Record Sheet

Field name or no.	Spread-able score	Crop(s) to be grown	Soil test P rating	Recommendation N <sub>2</sub> P <sub>2</sub> O <sub>5</sub> H <sub>2</sub> O (lb./acre/y <sup>2</sup> )	P 1 N 0 E X	Basis of P application	Land application		Month of application
							Total nutrients N <sub>2</sub> P <sub>2</sub> O <sub>5</sub> H <sub>2</sub> O (lb./acre/y <sup>2</sup> )	Source of nutrients (fertilizer, compost, etc.)	
							<input type="checkbox"/> N/fertilizer		
							<input type="checkbox"/> N <sub>2</sub> P <sub>2</sub> O <sub>5</sub>		
							<input type="checkbox"/> N <sub>2</sub> P <sub>2</sub> O <sub>5</sub>		
							<input type="checkbox"/> N <sub>2</sub> P <sub>2</sub> O <sub>5</sub>		
							<input type="checkbox"/> N/fertilizer		
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							<input type="checkbox"/> N <sub>2</sub> P <sub>2</sub> O <sub>5</sub>		

NOTE: 1 cubic yard liter = 810 pounds (Use actual values, if available).  
1 ton = 2,205 cubic yards (Use actual values, if available).

## Nutrient management plans and the reference level (2014-20)



**M10.1.4** (sustainable agro-industrial crops) farmers must carry out **soil analysis** in order to establish a program of fertilization appropriate to the needs of the crop, adjusting the doses and achieving a more sustainable crop.



**M10.1.1** **Crop rotations** and minimising pesticide input is supported.  
**M10.1.2** – (in NVZs support for regional water protection). Required water protection **training**.  
**M10.1.3** – (regional soil protection) aims to prevent nutrient leaching  
**M10.1.4** (Env-friendly horticulture) - aims to prevent nutrient leaching



**M10.1.16** (preventative groundwater protection) includes '**Plans and records on fertilisation and soil sampling**'.

Objectives to:

- Reduction of nutrient discharge into ground and surface water through:
  - modified cultivation of arable land in regions that are vulnerable by high nitrate concentration;
  - maintaining grassland in regions with a high soil value and endangerment of ploughing
- Training of farmers on the relationship between fertilisation and nitrate concentration in water bodies, and through soil sampling

Support through RDP

Reference level

Required under law

**SMR:**

- 1** – **Record keeping** for fertilizer application
- 4** – **Registration** of phytosanitary treatments
- 10** – **Appropriate use** of phytosanitary treatments

**Fertilisation plan** required as a condition of entry into the AECM 10.1.1 is in keeping with the requirements of the Estonian Water Act.

**Record keeping** is also part of the Water Act requirements.

Minimum requirements set out in national law on use of fertilisers and pesticides in keeping with Nitrates & SUP Directives

# NMPs in 2014-20 RDPs

**LAW: -**

**AECM: 5 year cultivation plan and record keeping, with a compulsory measure for 'balanced use of nutrients'**

**LAW: Crop protection plan and Manure record keeping**  
**AECM: Planning by collective for habitat aimed at water quality**

**LAW: Fertilisation plan, record keeping**  
**AECM: Nutrient management actions**

**LAW: Fertilisation plan under specific conditions**  
**AECM: -**

**LAW: Fertilisation plan under specific conditions**  
**AECM: -**

**LAW: -**  
**AECM: nutrient management plan and soil sampling**

**LAW: Record keeping, application according to plant need**  
**AECM: Plans and records on fertilisation and soil sampling**

**LAW: 5 year nutrient management plan and soil sampling**  
**AECM: -**

**LAW: Fertilisation plan based on soil analysis**  
**AECM: Commitments and actions supporting nutrient management**

**LAW: Fertilisation records; registration of phytosanitary products**  
**AECM: Soil analysis to establish fertilisation programme**

**LAW: -**  
**AECM: Prerequisite for farm, irrigation, fertilisation plans.**

**LAW: Fertilisation plan; all farms if >170kg N**  
**AECM: NMP in first year**

**LAW: Fertilisation records; registration of phytosanitary products**  
**AECM: Soil analysis to establish fertilisation programme**



# Soil and Nutrient management plans: Recommendations of the Thematic Group



## Adding value to soil and water management

- SMPs to holistically address soil & water
- SMP or NMPs to include: analysis of land conditions; best management techniques to address any issues; the integrated planning of land management decisions; and ensuring implementations
- Guidance (e.g. templates) on how to prepare a plan and in which cases is needed; on how long a management plan should remain valid; certification of soil testing laboratories, ongoing monitoring and reviewing
- SMPs as a pre-requisite of support for soil & water management in RDPs
- Ensure RDPs add value to existing National or Regional requirements



## Targeting and monitoring

- Targeting to deliver action in the right areas coupled with clear guidance on the right measures & duration
- Clear priorities for a given holding highlighting the environmental and production benefits to farmers
- Ongoing monitoring and review to ensure the actions implemented are delivering results
- Careful assessment of the ability to measure impacts of management practices when developing indicators



## Encouraging and supporting action on the ground

- Demonstration farms and pilots, combined with dedicated extension services and advice through RDPs and other funds (e.g. LIFE)
- Set out clearly which measures should be used in different contexts to implement SMP priorities
- Ongoing training for farmers and farm technicians
- Consider land tenure status when planning how management plans should be put in place





## Thank you

[ballen@ieep.eu](mailto:ballen@ieep.eu)

[snanni@ieep.eu](mailto:snanni@ieep.eu)

### ENRD Contact Point

Rue de la Loi / Wetstraat, 38 (bte 4)

1040 Bruxelles/Brussel

BELGIQUE/BELGIË

Tel. +32 2 801 38 00

[info@enrd.eu](mailto:info@enrd.eu)