The ENRD Thematic Group on Resource Efficiency was set up based on interest expressed by various stakeholder groups in the Rural Networks Steering Group. The first meeting was organised on the 26 October 2016 in Brussels, with the participation of more than 20 representatives from European and national stakeholder organisations, research institutes, managing authorities, private companies and European institutions. Until July 2016 a further three Thematic Group meetings and a larger seminar will be organised on the theme of resource efficiency.

ENRD resource efficient rural economy Thematic Group discussed specific themes to work on

Coming together to discuss the priorities for the Thematic Group (TG) on resource efficient rural economy, the group decided to focus their work on three topics relating to the natural resources of soils and water. The focus of the group’s activities will be a range of challenges identified as relevant to each theme, many of which are cross-cutting.

During discussions on the sub-themes identified in the background paper¹, TG members highlighted the fact that they were highly interrelated. For example, the activities and actions put in place to address one issue, such as soil quality, would in turn help to improve other priorities, such as water quality and could also benefit soil carbon. There was a sense that these interrelated benefits should be better communicated with rural actors, including farmers, and that greater join up was required when implementing policies addressing single issues. The points raised here reinforce the outcomes of the Cork 2.0 conference earlier in the year. Here it was stated that “…increased pressure on natural resources resulting from growing demand for food, feed, fibre and biomaterial must be met by coordinated cross-sectorial policy responses. These should ensure the sustainable management of natural resources such as water, soil and biodiversity, being the very means of agricultural and forestry production.” (Cork 2.0 Declaration, Point 5²).

¹ An initial survey among potential participants identified three possible themes for discussion: (1) Improving soil and water quality through efficient land and nutrient management, (2) Improving water use efficiency, and (3) Carbon conservation and sequestration. See briefs here: https://enrd.ec.europa.eu/themes/green-economy/resource-efficiency_en. The three themes that the TG will work emerged based on discussion and reorganisation of the initial three themes.
As a result of these discussions a revised set of three sub-themes emerged as most pertinent for the thematic group to take forward. These are:

- **Soils and nutrients**: The focus of this theme is how to improve the quality and management of soils through improved land management and more resource efficient approaches to nutrient use. Diffuse water pollution from agriculture as well as soil compaction and erosion, are key threats to ecosystems and productive sectors. Improving soil and water quality can save costs, increase ecosystem resilience and improve productivity.

- **Soils and carbon**: The focus of this theme is how to improve the carbon conservation and sequestration potential of soils, thereby improving carbon sustainability throughout supply chains and increase the prominence of farmers and other rural actors in mitigating climate change. Carbon stocks in soils vary across the EU, but there is a large potential to increase them. The way in which soils are managed contributes to GHG emissions in agriculture, and their improved management can help to mitigate such emissions. In addition, soil provides the growing medium for biomass (that can sequester carbon) and have the potential to directly sequester carbon in the soil itself.

- **Water availability**: The focus of this theme is on how to improve the sustainable and efficient use and management of water resources in rural areas to ensure that water remains available throughout the year. Exacerbated by climate change, water resources in Europe are increasingly volatile (droughts and floods). Rural areas are the primary catchments where water is gathered for society. Despite increased attention on improving water availability for cropping, there has been less attention given in RDPs to address the more efficient use of water or reducing overall water use. Providing synergies through policy implementation can bring benefits to rural actors and ecosystems (in terms of improved access to water), alongside wider policy delivery, such as river basin management plans as part of the Water Framework Directive.

When discussing the specific sub-themes, a number of key challenges emerged, many of which were common to all sub-themes. The group felt that addressing these issues in relation to the three specific sub-themes was where the thematic group work throughout the year could add most value. The group identified three ‘gaps’ that were currently preventing the more efficient use of resources in the rural economy: (i) the motivation gap, (ii) the knowledge gap and (iii) the policy and implementation gap. These are explained below.
The ‘motivation gap’ refers to the lack of willingness and motivation of rural actors to address the resource efficiency challenge. The motivation gap was discussed in the group and it was found that it is a difficult issue to pin down. In most cases, being more resource efficient with soils, inputs and water will lead to benefits for rural actors. This may be in terms of reduced costs, increased productivity, as well as improved public image resulting from increased environmental benefits. Yet many rural actors have so far been reluctant to improve resource efficiency, such as the overuse of fertilisers that run off into watercourses, or inefficient use of water leading to depletion of aquifers and rivers. When trying to understand why this was the case, the group identified the following reasons:

- **Land ownership** – renting or contract management of land means that those undertaking the management of the land do not always see the long-term benefits of improved resource efficient management. This is particularly the case when initial activities lead to a short-term decrease in productivity and thus income.
• **Delayed impact** – managing soils and water inefficiently does not necessarily have a direct and tangible impact on aspects of rural businesses that would prompt change in the short term, such as incomes or productivity. There is a lack of understanding on how improvements to resource efficiency can benefit rural incomes and lead to increased resilience and sustainability of farming systems in the long term.

• **Legal obligations** – For soil the obligations on farmers to manage soils in a resource efficient way are weak, with no overarching EU legal framework and existing standards and requirements (usually via cross-compliance) are often limited in their ambition. Despite the existence of financial incentives within RDPs to address the management of soil, this does not appear to have led to changes in practice of the scale required to address the issues faced.

The ‘**knowledge gap**’ refers to the lack of understanding about what can and needs to be done to improve resource efficiency. It relates to both the understanding of the risks and benefits of improving resource efficiency (linked to the motivation gap) as well as awareness of the types of actions that could improve resource efficiency in different contexts.

Understanding when resource efficiency is an issue was highlighted as one challenge for rural actors. It is not always clear that what they are doing is resource inefficient or leading to issues elsewhere in the rural economy. Similarly, farmers can often be demonised for damaging practices rather than highlighting the potential positive impact they can have.

Understanding what to do to improve resource efficiency varies considerably. One point that came out strongly from the discussions is that many of the activities and actions to improve the resource efficient use of soils and water were well understood in research terms (particularly in relation to nutrient use), and even practiced in some areas. However, this knowledge is not always being put into practice and it is the exchange of knowledge and good practices that is often lacking. Some areas of the EU have a very good understanding and operational knowledge of resource efficient activities, such as water saving approaches in traditionally arid areas. This knowledge could be shared with those in other areas of the EU that are starting to experience these phenomena as a result of climate change.

The ‘**policy and implementation gap**’ refers to the lack of integration between different policies aiming to improve resource efficiency and the lack of efficient design and use of Rural Development Programmes.

The policy and implementation gap describes how existing policies addressing resource efficiency do not always appear to be joined up through their implementation. For example, the Water Framework Directive requires Member States to put in place river basin management plans to improve the use and management of water in river catchments.

RDPs are a key tool to implement some of the land management activities required to achieve these aims. Yet in many regions the two policies are not aligned (in objectives or timing), and thus the RDP measures are not tailored to the right issues or targeted to the
right areas. This can be addressed through more efficient design and use of measures within the RDP, including packages of measures where land management actions are combined with awareness raising and cooperative activities. Greater synergies between policies, including between implementation timetables and in development of action plans could also be beneficial.

## Members’ perspectives

### Sofia Björnsson (LRF, Federation of Swedish Farmers/ COPA-COGECA)

*What is the relevance of the ‘soil & nutrients’ theme for you / your organisation?*

For LRF, it is of high importance that agricultural production is sustainable in all senses. We often speak about sustainable sustainability. If we miss one part of the concept of sustainability, things will limp and production cannot be sustainable in the long run.

We need to find ways for farmers to be up to date with, adapt to and use innovations and new techniques in their production. New production methods can be more resource efficient so that farmers can lower their inputs and at the same time increase or maintain their output. Here, the RDP could be a tool. For example, to stimulate practices and to convey information about practices.

Farmers are part of the global challenge to make the world a better place. Let us help them to make it happen.

The thematic group brings together experts with knowledge and experience from different fields and make insights of needs, challenges and the way forward.

### Eija Hagelberg (Baltic Sea Action Group)

*Let’s make Carbon Farming the New Normal.*

Carbon farming has become a hot topic in the search of solutions to mitigate the climate change. It is challenging, not enough investigated and probably not sufficient alone. We still have to decrease the use of fossil fuels in industry and traffic. But the good news: by adding carbon to soil, we can get several benefits, and that’s why we should consider it as a multifunctional measure. It is not just about making the soils a carbon sink. By adding carbon, or more widely, organic matter to our soils, we can prevent the leaching of water, topsoil and nutrients from the fields to the waterways. And even that is not all: it has a remarkable positive effect on biological activity in the soil! In organic farming this has always been “the normal”, but we should make it “the new normal” also in conventional farming. No matter if organic or conventional: our soils require organic matter!

### Adding Common Reed

The project is testing methods of adding Common Reed (Phragmites australis) to the fields in order to enhance the soil quality. It can be a local win-win solution in the coastal areas with too much of Reed. Adding organic matter is crucial to many types of soils, especially the clay soils in our project area in Southwest Finland. But the challenges come with the economy and payments: how much it costs, who will pay, how big amounts are allowed, how do you measure it? Could result-based payment system work to measure the amount of carbon in the soils?
We need goal-oriented planning and we need to go experimental. We need the license to fail and try again, we need innovative thinking also in controlling and monitoring. CAP can offer suitable tools, if we can plan and use them in a sound way.

The main value of this Thematic Group is to push forward the message in the current Rural Development Programs around Europe but also for the preparations for the CAP 2021-. In this TG there seems to be a lot of know-how about this topic and the two other topics related to this: the water economy and soil & nutrients.

We don’t have time to mess this thing. We need serious collaboration between scientist, farmers, advisers and administration. In action, not in theory, not in speeches in big conferences. Let’s do our best to make this happen. This is mostly a question of communication. Maybe we need more professionals on communication to solve these things?

The efficient use of water is one of the targets set of the CAP and the definition of a range of standards related the use of water in a more efficient way is relevant. Quantitative targets of RDPs 2014-2020 have been defined for water management, (e.g. Priority 4 – Agricultural land under contract to improve water management (water use efficiency)), and a collection of examples of RDPs to monitor and measure the water availability or water use efficiency at local or national level can be an asset.

Moreover, the connection between specific environmental challenges and needs can represent an asset for our organisation. For example support for organic farming (supporting soil and water management) and Water Framework Directive and stakeholders perception.

Understanding the effective impact at farm level of RDPs implementation and the point of view of farmers can represents an important contribution for our organisation.

Clear understanding of processes, benefits and limitations of RDPs implementation are essential to convince farmers and other actors to give a step forward for maintaining agricultural land under contracts in a sustainable manner and to improve water management (other ecosystem services).

When results are not easily observed, transparent information is required for trusting the messages and the messengers, particularly on the evaluation of the net impact of the RDP measures supporting different public goods and in particular, soil and water. The general idea (adding values) of TG is to exchange experience between organisations, stakeholders and researchers on concrete example on the use of RDPs to better manage water resources.
Opportunities within the RDPs

The 1st TG meeting demonstrated that RDPs have a lot of unused potential that need to be exploited further. The Thematic Group:

- will identify examples of how RDP measures are used effectively for a resource efficient rural economy;
- will aim to highlight bottlenecks and opportunities for better using RDPs, building on the experience of members.

There are two RDP Priorities that particularly contribute to resource efficiency:

- **Priority 4**: restoring, preserving and enhancing ecosystems related to agriculture and forestry, and
- **Priority 5**: promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors.

The following graph shows the budget available at EU level for the measures that are programmed under Priorities 4 and 5 and are expected to have an impact on environment and climate change. Budget data indicated below only indicates possible RDP opportunities. Member States will have to seize these opportunities and decide to what extent these will foster a more resource efficient rural economy.

**Legend:**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>M01</td>
<td>Knowledge transfer</td>
</tr>
<tr>
<td>M02</td>
<td>Advisory services</td>
</tr>
<tr>
<td>M04</td>
<td>Investments in physical assets</td>
</tr>
<tr>
<td>M06</td>
<td>Farm &amp; business development</td>
</tr>
<tr>
<td>M07</td>
<td>Basic services &amp; village renewal</td>
</tr>
<tr>
<td>M08</td>
<td>Investments in forest areas</td>
</tr>
<tr>
<td>M10</td>
<td>Agri-environment-climate</td>
</tr>
<tr>
<td>M11</td>
<td>Organic farming</td>
</tr>
<tr>
<td>M12</td>
<td>Natura 2000 &amp; WFD</td>
</tr>
<tr>
<td>M13</td>
<td>Areas with constraints</td>
</tr>
<tr>
<td>M15</td>
<td>Forest-environment-climate</td>
</tr>
<tr>
<td>M16</td>
<td>Cooperation</td>
</tr>
</tbody>
</table>

*Figure 1 - EU level RDP total planned budget: Priorities 4 and 5. Aggregated data per Measure (Data at 27.10.2016)*
Priorities 4 and 5 however have a wide scope of action on environment and climate. Within these two Priorities the following RDP focus areas specifically relate to resource efficiency of soils and water:

- 4B - Improving water management, including fertiliser and pesticide management;
- 4C - Preventing soil erosion and improving soil management;
- 5A - Increasing efficiency in water use by agriculture;
- 5E - Fostering carbon conservation and sequestration in agriculture and forestry.

**With a view to future tools and outcomes**

During the meeting members expressed their ideas and expectations regarding possible outcomes and products of the Thematic Group. These include:

- **Case studies** from different Member States that bring forward stakeholders’ experiences and knowledge.
- **Ground research** through surveys to identify what RDP can support? What works well or not?
- How to learn from **failures** using them as a tool for identifying missed opportunities.
- In what way to best **align RDPs** with other strategies, policies, etc.
- The possibility to visit **on-going projects** from which useful lessons could be learnt.
- How to best tackle the existing knowledge gap, through dissemination of TG work results.

**Looking deeper into…**

- **Advisors** as key stakeholders.
- Option to focus on both **small or big farms**.
- The time needed before deciding on TG focus on and for whom.

**Considering…**

- Tailored outcomes per target group.
- User friendly factsheets easily readable on-screen.
- Stakeholders participatory video.

**Communicating…**

**Menu of ENRD Tools**

- **RDP screening and in-depth analysis**
- **Good practice examples and case studies**
- **Rural Review (ENRD publication) and Projects Brochure**
- **Background research and survey**
- **Events for dissemination (e.g. seminar)**
- **Dissemination through relays (e.g. National Rural Networks and EU-level stakeholder organisations**

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3 Other Focus Areas such as 5B, 5C and 5D address resource efficiency objectives only indirectly for example with the use of M07 supporting basic services and village renewal.