European Network for Rural Development

ENRD Thematic Group on Resource Efficient Rural Economy

Background Paper

Working Draft

Brussels, 14 October 2016

European Commission

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1. Introduction

This Scoping Paper was prepared to inform and outline the scope and context of the work of the Thematic Group on 'resource efficiency' throughout the year and as background to the 1st Thematic Group (TG) meeting under this heading.

An initial set of sub-themes are proposed in this paper (see below). With the aim of making the TG practical and relevant to those involved, these sub-themes are only indicative at this stage. The sub-themes to be covered by the TG will be narrowed down and determined by TG members in cooperation with the ENRD Contact Point.

The first meeting of the ENRD Thematic Group (TG) on Resource Efficient Rural Economy (26 October 2016) will bring together an experienced group of practitioners and policy officers to discuss resource efficiency in the context of soils and water. It will decide where the TG and the ENRD can contribute most to improving the resource efficient use of soils and water through the Rural Development Programmes.

Resource efficiency as a TG priority

Natural resources underpin the functioning of the European and global economy and our quality of life (COM(2011) 571) and have a special relevance for the rural economy. Resources such as soils and water (as well as biodiversity) are the building blocks of ecosystems, the services they provide and the agriculture and forestry sectors that they support. These sectors in turn give life to the rural economy providing jobs that can help manage the resources on which they rely.

Despite their importance, pressure on these natural resources is increasing and remains a central challenge in achieving sustainable development, both in the EU and globally. Consumption continues to increase and economic development remains coupled to resource use. Without action, the pressure on natural resources is likely to increase as a result of a growing population and evolving demand patterns. As a net exporter of food and drink the demands on EU's natural resources are global. Adding to this pressure are the impacts of climate change, which is already having an impact[1] on production patterns, water cycles and ecosystem functions. The recent State and Outlook of the Environment Report (SOER) from the European Environment Agency (EEA) highlights that despite progress in reducing environmental pressures, there is much that still needs to be done if we are to achieve a low carbon society, a green, circular economy and resilient ecosystems. Transforming key systems, such as energy and food production lies at the heart of long-term solutions (EEA, 2015a).

At its most basic level, **resource efficiency** captures the notion of 'doing more with less' and is essential to sustain socio-economic progress in a world of finite resources and ecosystem capacity (EEA, 2015a). This has to be linked with a reduction of our overall use of resources through demand reduction and alternative supply patterns[2]. This concept is at the heart of the 'green economy' (Fedrigo-Fazio and ten Brink, 2012).

Improving resource efficiency and reducing the pressure on natural resources is not just a case of addressing challenges, but also seizing opportunities. The more efficient use of resources can reduce

[1] Largely negative impacts, but with some positive changes in some regions.
[2] such as from rain-fed agricultural areas rather than those requiring irrigation

costs, enable production systems to become resilient to climate change as well as growth and jobs in the rural sector.

Rural Development Programmes are investing in activities that can support resource efficiency. At least 30 % of the EAFRD funding component of RDPs must be reserved for measures[3] contributing to the environment and climate. Specific RDP *focus areas* relate to resource efficiency in relation to soils and water and include focus areas 4b and 4c,as well as 5a and 5e. These are set out in more detail in section 2.3 of the paper.

During its 3rd contractual year (16 Jul 2016 – 15 July 2017), **the ENRD selected 'resource efficiency' as one of its two thematic priorities[4]**, based on the interest expressed by stakeholders. Within this thematic priority, a Thematic Group (TG) has been set up on 'Resource Efficient Rural Economy'.

The **overall objectives** of the TG is set in line with the main ENRD objectives to:

- Improve the quality of rural development programmes (RDPs),
- Increase the involvement of stakeholders in the implementation of rural development.

The specific objective of the TG is to support the integration of resource efficient activities and thinking relating to soils and water into the implementation of rural development programmes. The TG aims to bring together key rural development stakeholders with interest and experience in resource efficiency as it relates to soils and water, to consider ways of further improving the implementation of Rural Development Programmes. The TG is stakeholder-driven and its outcomes are expected to be developed based on a participative process.

Based on the outcomes of Year 2 thematic work on green economy, it has been decided that the TG can potentially focus on the resource efficiency of **'water and soils'** in the rural context. **An initial survey** of potential members of the ENRD Thematic Group and previous work on resource efficiency led to a potential list of sub-themes that the group could address as follows:

- Improving soil and water quality through efficient land and nutrient management;
- Improving the efficiency of water use to reduce the pressure on water systems and improve water availability; and
- Carbon conservation and sequestration;

A number of preliminary cross-cutting themes also emerged, such as:

- Communicating the economic benefits of actions to promote resource efficiency approaches;
- Knowledge transfer – sharing best practice through identifying demonstration cases, easy-to-access information, information networks, building on practical experiences and know-how;
- Digitisation - promoting technological development, use of smart technology, etc.; and
- Governance – ensuring join up within administration and between administrations and stakeholders at local, regional and national levels.

[3] These are limited to the following 7 measures: - M4 for environmental and climate investments; M8 for investments in forest area development and improvement of the viability of forests; M10 agri-environment-climate payments; M11for organic farming; M12 - Natura 2000 (except payments related to the water framework directive); M13 payments for Areas facing natural and specific constraints; and M15–Forest-environmental and climate services and forest conservation.

[4] The other thematic group is organised on 'Resource efficiency'. In addition there are ENRD activities with regard to 'social inclusion' theme (although there is no specific thematic group devoted to this).

2. Background and context

2.1 Resource efficiency – a global priority

The importance of improving the efficient use of resources is recognised at the global scale explicitly by the United Nations in the 17 sustainable development goals (SDGs) that form the 2030 agenda for sustainable development (UN, 2015). Five of these goals have specific relevance for this Thematic Group, by highlighting the use and management of soils and water in rural sectors in relation to food production, the availability and quality of fresh water, the protection of terrestrial ecosystems and the oceans, and combating climate change (Box 1).

Box 1: SDGs relating to the resource efficient use of soils and water

SDG 2 - to achieve food security and improved nutrition and sustainable agriculture

2.4 - By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

SDG 6 - Ensure availability and sustainable management of water and sanitation for all

6.3 - By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 - By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 - By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.6 - By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

SDG 12 – Ensure sustainable consumption and production patterns

12.2 - By 2030, achieve the sustainable management and efficient use of natural resources

SDG 13 - Take urgent action to combat climate change and its impacts

13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

SDG 15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

15.1 - By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 - By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 - By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

Source: (UN, 2015)

2.2 Resource efficiency – a strategic priority for Europe

The ambition to protect natural resources and utilise them more efficiently forms a significant element of the strategic approach the EU has taken towards sustainable development. The EU[5] and all 28 Member States are party to the international agreement on sustainable development and work towards the achievement of the SDGs. These commitments are transposed through a variety of EU instruments (Annex 1), including high-level strategies, such as the Europe 2020 strategy (European Commission, 2010) now taken forwards with the 10 Junker priorities[6], as well as more specific roadmaps and policies, such as the resource-efficiency roadmap, the 7th Environmental Action Programme (EAP) (European Parliament and European Council, 2013), as well as more sector specific mechanisms, such as the Common Agricultural Policy (CAP), Water Framework Directive (Directive 2000/60/EC), the Sustainable Use of Pesticides Directive (Directive 2009/128/EC), the Nitrates Directive (Council Directive 91/676/EEC) and proposals for a soil framework Directive under the soil thematic strategy. The proposals for the EU's 2030 climate and energy framework also have some bearing, particularly in relation to the management of soils.

Point 5 of the 2016 Cork Declaration[7] also reinforces the importance of managing natural resources sustainably. It states 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… There is a need to develop and mainstream innovative, science-based solutions that allow for producing more with less while ensuring that natural resources are at the disposal of future generations. Effective formats of knowledge exchange and advice should be developed and support provided for the adoption of well-designed land management schemes'*.

Using soil and water resources more efficiently will help achieve a number of Europe's strategic objectives. For the land using sectors, for example, resource efficiency brings with it greater resilience and adaptation potential. From a rural perspective, lightening the load on freshwater systems and reducing pressures on soils will allow ecosystems greater scope to adapt to changing climate and weather patterns, and in turn support the economic sectors that rely on the effective functioning of these systems, in both urban and rural areas.

However, the pressure on these resources is significant and despite improvements in their management and use, in many regions their condition continues to decline (see Box 3 and Box 2).

a. Soil

The observed trends in soil characteristics set out in various pan-European reports indicate that the pressures on soils are increasing and the overall condition of soils continue to decline (EEA, 2015b; Hart et al, 2013; Jones et al, 2012) (Box 2). The drivers of these changes are varied and include the encroachment of urban areas (soil sealing), pollution of land from industrial sites (air and water deposition) and their overuse in fragile areas. However, with around 80% of Europe's soils falling under

[5] As the only non-state participant

[6] http://ec.europa.eu/priorities/index_en

[7] http://ec.europa.eu/agriculture/events/2016/rural-development/cork-declaration-2-0_en.pdf

agriculture or forestry management, activities in these sectors are often associated with specific impacts and trends. In the JRC's publication on the state of Europe's soils, compaction, erosion, soil organic matter (SOM) decline, landslides and salinisation are all attributed to land use change or management decisions (Jones et al, 2012). The Joint Research Centre produced an overview of soil threats in the EU in April 2016 to inform the work of the DG Environment Soil Expert Group, consisting of experts from all Member States (JRC, 2016). This sets out the latest pan EU data on the state of soils in the EU, recognising that individual Member States may have more accurate national and regional data.

Box 2: State of soils in the EU-28

The following information describes the **general state of soils in Europe** based on pan EU data from EEA reports. In general the major threats to soils have remained similar for the past decade (Jones et al, 2012).

- Observed rates of soil sealing, erosion, contamination and decline in organic matter all reduce soil capability.
- Almost half of Europe's land area has very low levels of organic matter. This can be as much as 75 per cent of soils in southern Member States and some regions witness nearly complete organic matter depletion. Around 60 million hectares of soils with less than 3.4 per cent soil organic matter are under intensively cropped agricultural land and approximately half of these soils are under arable or permanent crop management (Nowicki et al, 2009).
- Organic carbon stocks in agricultural soil may have been overestimated by 25% (EEA, 2015b; Lugato et al, 2015; Lugato et al, 2014)
- On arable land (in the EU-27), local soil quality determines to a greater extent the variability of the biomass production potential than climate. Therefore in most regions, with the exception of Mediterranean areas, well-managed arable land that preserves the soil quality can compensate for climatic handicaps (Tóth et al, 2013).
- 130 million ha of agricultural land has been affected by water erosion in the EU-27 (2012) with average erosion rates tending to be higher in Mediterranean countries (EEA, 2012; Jones et al, 2012)
- Around 16 per cent of peatland is currently used for agricultural purposes, both cropland and grassland areas, much of which has been drained, and this can be as high as 70 per cent in some Member States (Hart et al, 2013).
- In 2007, emissions from cropland on peat soils were 37.5 $mtCO_{2e}$, corresponding to 88 per cent of total emissions from cropland.
- Compaction of soils from regular cultivation, and the use of heavy equipment, is also widespread (Jones et al, 2012).
- Salinisation of soils, making them unsuitable for plant growth, affects around 3.8mha of land in the EU (Jones et al, 2012).

There remains no overarching and integrated legal and policy framework for soil protection in Europe, with soils being the only key natural resource not protected through an integrated EU-wide approach. The 2006 Soils Thematic Strategy (European Commission, 2006a) set out the Commission's ambition in this area, including proposals for a soil framework Directive (European Commission, 2006b), however this was withdrawn by the European Commission largely due to Member State arguments focused on subsidiarity and administrative costs. At Member State level, individual soil threats are addressed mostly indirectly by different policy instruments, such as those relating to waste, planning,

agriculture, forestry, water, biodiversity, industrial emissions, or renewable energy. The CAP, particularly cross-compliance standards and RDPs are a critical means of supporting the appropriate use and management of soils in agricultural and forest areas. However, evidence has shown that existing measures more often seek to prevent or slow the effects of soil degradation, rather than actively working to reduce or reverse the impact (Glæsner et al, 2014). An informal soils expert group consisting of Member State representatives is coordinated by DG ENV to look at the way in which soils are addressed across the EU and to assess the potential for and the content of a future EU Soils Directive. On the technical front, however, work has progressed to improve and provide more consistent information on soils through the gathering of systematic and repeated top-soil sampling as part of LUCAS[8].

b. Water

The quality and availability of water varies considerably across Europe. In terms of water quality, the recent review of the implementation of the Water Framework Directive[9] showed that agriculture continues to be a significant source of diffuse pollution, specifically:

- Diffuse nitrate pollution in all 28 MS (90% of the river basin districts (RBDs);
- Diffuse phosphorus pollution in 26 MS (79% of the RBDs);
- Diffuse source pesticide pollution in 25 Member States (65% of RBDs).

In terms of water availability, seasonal and geographical variations in supply and demand of water are one of the main drivers of water scarcity, but these can be exacerbated or mitigated in the way water is used and the water system is managed. Over 60 per cent of water used in the EU is for agriculture (European Commission, 2012b) and unlike many other uses, such as for cooling or drinking water, only around 30 per cent of water used for agriculture is returned to the natural water system. Worryingly, under a 'business-as-usual' scenario, water withdrawals could increase by more than 40 per cent, exacerbated by climate change as a result of the more frequent and severe droughts projected for many parts of Europe. Finding ways of making water use more efficient in other rural sectors, such as the processing sectors, is also critical to help ensure water resources are not depleted at a faster rate than they can be recharged. Selected water resource impacts can be found in Box 3.

Box 3: State of water resources in the EU-28

Water Quality:

- Despite improvements in some regions, diffuse pollution from agriculture remains a major cause of poor water quality and is the single largest source of freshwater pollution from rural land and includes nitrogen, phosphorous, and potassium (EEA, 2010b).
- The level of diffuse pollution varies across the EU, tending to be higher in EU-15 Member States, particularly those in the north and west. The extent, speed and pathways by which pollutants are transported from agricultural land to freshwater bodies also vary and depend on a range of factors, including rainfall, slope, soils and vegetation. It should be noted that forestry operations can have a significant impact on water quality. However, these impacts are often more localised in nature, and less widespread than those from agriculture (Hart et al, 2013).

[8] The Land Use Cover Aerial frame Survey (LUCAS), coordinated by Eurostat - http://ec.europa.eu/eurostat/statistics-explained/index.php/LUCAS_-_Land_use_and_land_cover_survey

[9] (SWD(2015) 50 final)

Water Availability:

- Water use is decreasing for most sectors and in most regions, but agricultural water use, in particular in Southern Europe, remains a problem (EEA, 2015a).
- Water scarcity and droughts have affected 17 per cent of the EU territory in the past 30 years. In recent years this has included 33 major river basins home to 16.5 per cent of the EU population.
- It is expected that by 2030 the number of river basins currently under stress all year round will almost double from 26 basins to 47. In addition, those river basins under water stress during the summer period (43) will increase by approximately one third to 63 (Anon, 2012).
- Over a longer time period, the proportion of European river basins suffering from severe water stress is likely to increase from 19 per cent today to 34-36 per cent by the 2070s (European Commission, 2012b).
- Overexploitation of water for agricultural use has resulted in aquifer water levels falling by several tens of meters, salt-water intrusion, and the drying up of wetlands (EEA, 2010b).
- In contrast to water shortages, the over the past ten years Europe has suffered more than 175 major floods (EEA, 2010a).
- Flood events are increasing both in severity and frequency with the majority of observed flood events in Europe attributed to urbanisation in flood-prone areas and to land-use changes, such as deforestation and loss of wetlands and natural floodplain storage (EEA, 2010b), resulting, for example, from the drainage of agricultural fields.

A more holistic approach to EU water policy was introduced in 2000 with the **Water Framework Directive (WFD)**, which has set goals of no deterioration and the achievement of good status for all surface and groundwater bodies by 2015. This includes the quality and availability of water and the good functioning of freshwater ecosystems. Member States are required to develop River Basin Management Plans to assess the situation in each river basin and identify Programmes of Measures (PoMs) to address the pressures identified. These consist of basic obligations as well as supplementary measures that can be funded via RDPs. In 2012, a Blueprint to Safeguard Europe's Water Resources[10] set out a range of specific actions to encourage better implementation of water legislation and integrate water policy objectives into other policies. These include recommendations on specific land management practices for agriculture, provision of guidance on water retention measures, and on establishing the necessary flow of water to maintain ecological processes (European Commission, 2012a). However, as highlighted above, the recent review of the implementation of the Water Framework Directive[11] demonstrated that major action was still needed to achieve 'good status', with the agricultural sector a priority area. To improve the relationship between water and agriculture policies and help make this action a reality, a joint initiative has been proposed by DG ENV and DG AGRI to bring together government officials and stakeholders responsible for both agriculture and water policies to discuss options and come up with recommendations and proposals for future actions for the more coherent implementation of water and agriculture policies.

[10] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0673

[11] (SWD(2015) 50 final)

2.3 Supporting resource efficiency through the EAFRD

Action to improve the resource efficient use of soils and water, as prioritised under the 7th Environmental Action Programme (7th EAP), can be achieved through a number of routes:

- **The implementation and enforcement of legislation** (WFD, SUPD, ND etc.);
- **Incentives to encourage action beyond those** required through legislation, and encouragement to make sure they are used to address the needs and priorities identified (e.g. RDPs or other innovative support or financing opportunities);
- **Knowledge sharing and capacity building** (e.g. via RDPs and initiatives to share good practice and innovative solutions – e.g. the EIP-AGRI, the ENRD CP as well as national, regional and local initiatives);
- **Monitoring to provide data** on the state of the resources in question and hence the identification of needs and priorities at the local and regional level;
- **Improved interaction between relevant Government departments** (e.g. environment and agriculture) and stakeholders.

The EAFRD plays an important role in many of these.

The following RDP *focus areas* relate to resource efficiency of soils and water.

- **Priority 4:** restoring, preserving and enhancing ecosystems related to agriculture and forestry, particularly:
    - Focus Area 4b: improving water management, including fertiliser and pesticide management; and
    - Focus Area 4c: preventing soil erosion and improving soil management.
- **Priority 5:** promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors, particularly
    - Focus Area 5a: Increasing efficiency in water use by agriculture; and
    - Focus Area 5e: Fostering carbon conservation and sequestration in agriculture and forestry.

Many RDP measures are relevant for improving water management (quality and quantity) and the sustainable use of soil resources, within the agricultural and forest sectors as well as in rural areas more generally, such as the improvement of drinking water and waste-water services. Some are explicitly identified as supporting action to improve the efficient use of these resources, while others can be used to support or complement these actions. The relevant measures are set out in Table 1 (below).

Table 1: EAFRD measures relevant for delivering water and soil priorities

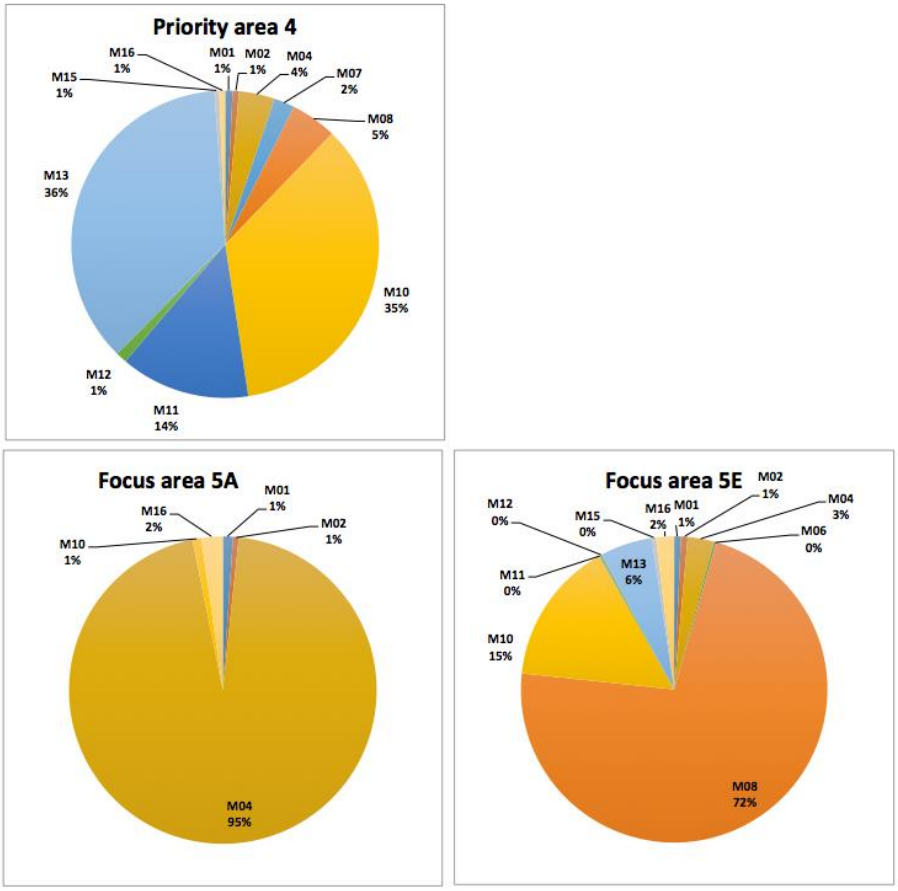
Measure	Sub-measure	Soils	Water
M1 Knowledge transfer and information actions	M1.1 Support for vocational training and skills acquisition actions	X	X
	M1.2 Support for demonstration activities and information actions	X	X
	M1.3 Support for short-term farm and forest management exchange as well as farm and forest visits	X	X
M2 Advisory services, farm management and farm relief services	M2.1 support to help benefiting from the use of advisory services	X	X
	M2.2 support for the setting up of farm management, farm relief and farm advisory services as well as forestry advisory services	X	X
	M2.3 support for training of advisors	X	X
M4 Investments in physical assets	M4.1 Support for investments in agricultural holdings		X
	M4.2 Support for investments in processing/marketing and/or development of agricultural products		X
	M4.3 Support for investments in infrastructure related to development, modernisation or adaptation of agriculture and forestry	X	X
	M4.4 Support for non-productive investments linked to the achievement of agri-environment-climate objectives	X	X
M07 Basic services and village renewal in rural areas	M7.1 Support for drawing up and updating of plans for the development of municipalities and villages in rural areas and their basic services and of protection and management plans relating to Natura 2000 sites and other areas of high nature value	X	X
	M7.2 Support for investments in the creation, improvement or expansion of all types of small scale infrastructure, including investments in renewable energy and energy saving		X
	M7.4 Support for investments in the setting-up, improvement or expansion of local basic services for the rural population including leisure and culture, and the related infrastructure		X
M08 Investments in forest area development and improvement of the viability of forests	M8.1 Support for afforestation/creation of woodland	X	X
	M8.2 Support for establishment and maintenance of agro- forestry systems	X	X
	M8.3 Support for prevention of damage to forests from forest fires and natural disasters and catastrophic events	X	X
	M8.5 Support for investments improving the resilience and environmental value of forest ecosystems	X	X
	M8.6 Support for investments in forestry technologies and in processing, mobilising and marketing of forest products		X
M10 Agri-environment-climate	M10.1 Payment for agri-environment-climate commitments	X	X
M11 Organic farming	M11.1 Payment to convert to organic farming practices and methods	X	X
	M11.2 Payment to maintain organic farming practices and methods	X	X
M12 Natura 2000 and Water Framework Directive payments	M12.3 Compensation payment for agricultural areas included in river basin management plans		X
M13 Payments to areas facing natural or other specific constraints	M13.1 Compensation payment in mountain areas	X	X
	M13.2 Compensation payment for other areas facing significant natural constraints	X	X
	M13.3 Compensation payment to other areas affected by specific constraints	X	X
M15 Forest-environmental and climate services and forest conservation	M15.1 Payment for forest-environmental and climate commitments	X	X
M16 Cooperation	M16.1 Support for the establishment and operation of operational groups of the EIP for agricultural productivity and sustainability	X	X
	M16.2 Support for pilot projects and for the development of new products, practices, processes and technologies	X	X
	M16.5 Support for joint action undertaken with a view to mitigating or adapting to climate change and for joint approaches to environmental projects and ongoing environmental practices	X	X
	M16.6 Support for cooperation among supply chain actors for sustainable provision of biomass for use in food and energy production and industrial processes	X	X
	M16.8 Support for drawing up of forest management plans or equivalent instruments	X	X
	M16.9 Support for diversification of farming activities into activities concerning health care, social integration, community-supported agriculture and education about the environment and food	X	X

Key: Blue – key measure / Grey – supporting measure

Of these, the key measures used currently to promote water and soil actions tend to be:

- ***Agri-environment climate measure*** (M10) largely for actions to reduce diffuse pollution from agriculture, create natural water treatment basins, restore and manage wetlands, create natural solutions to mitigate flooding events, prevent soil erosion, improve soil organic matter, maintain carbon stores;
- ***Organic farming*** (M11) as a system with reduced nutrient inputs and more attention given to sustainable soil management;
- ***Investments in physical assets*** (M4), including for investments in slurry, manure or silage storage to prevent excess nutrients reaching watercourses, improve irrigation efficiency, encourage water efficiency in the processing sectors, improve water storage and distribution between farmers, investments in machinery for low-till production;
- **Basic services and village renewal** in rural areas (M7) for improving waste/sewage water systems and drinking water infrastructure;
- ***Investments in forest area development and improvement of the viability of forests*** (M8)**;**
- ***Vocational skills and training*** (M1); and ***Advisory services*** (M2).

Figure 1: Planned EAFRD expenditure for each measure contributing to a specific priority or focus area



The target figures setting out commitments by Member States to deliver on EAFRD priorities 4 and 5 are set out in Figure 2 and Figure 3. The target figures identified vary to a very great extent between RDPs.

Figure 2: Priority 4 - Quantified targets for EU-28 2014-2020 RDPS

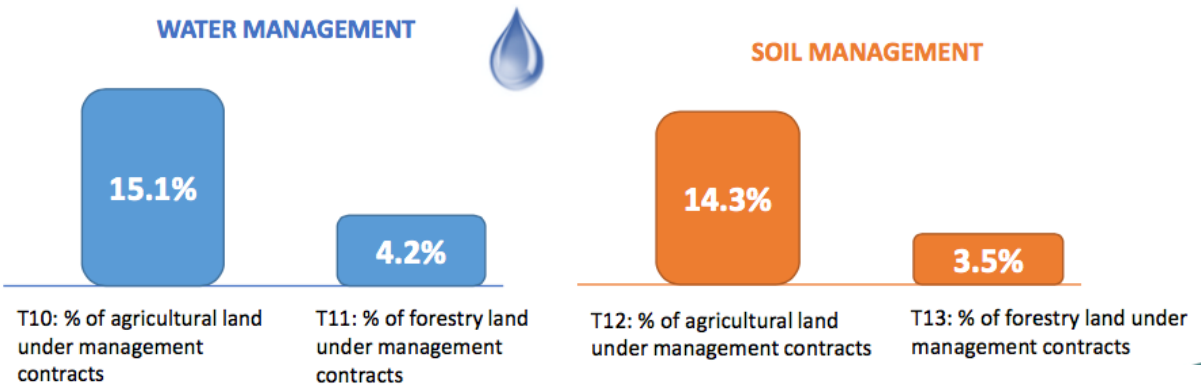
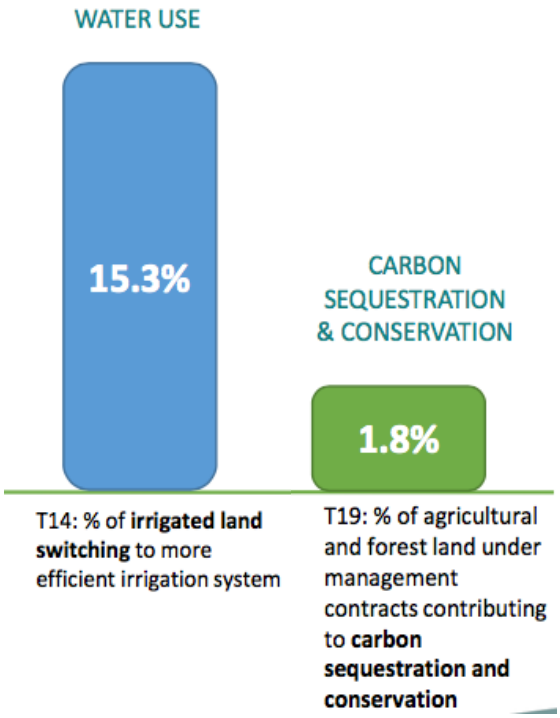


Figure 3: Priority 5 – Quantified targets for EU-28 2014-2020 RDPs



Note: For indicator T14, this only represents what is programmed under Focus Are 5A. Similar investments could also be programmed under Focus Area 2A.

3. Focus of the Thematic Group

3.1 Possible sub-themes to be addressed by the Thematic Group

As described above, in preparation for the Thematic Group, the ENRD CP carried out a survey among potential group members and other interested stakeholders in order to understand:

- The **most important issues and challenges** with regard to promoting the resource efficient use of soil and water;
- Ways in which **RDPs can most effectively support** improvements in resource efficiency in rural areas;
- **Practical challenges when using RDPs** for supporting the resource efficient use of soils and water and how to make RDPs more effective in this regard.

The survey and other background research/information informed the selection of possible themes for discussion as follows:

- Theme 1: Improving soil and water quality through efficient land and nutrient management
- Theme 2: Improving the efficiency of water use to reduce the pressure on water systems and improve water availability
- Theme 3: Carbon conservation and sequestration

A number of preliminary cross-cutting themes also emerged, such as:

- Communicating the economic benefits of actions to promote resource efficiency approaches
- Knowledge transfer – sharing best practice through identifying demonstration cases, easy-to-access information, information networks, building on practical experiences and know-how
- Digitisation (promoting technological development, use of smart technology, etc.)
- Governance – ensuring join up within administration and between administrations and stakeholders at local, regional and national levels.

In addition, other aspects for the improvement of RDPs have been identified, including improving flexibility and reduced administration, access to financing, and an environment that stimulates new business ideas and opportunities.

Some elements of resource efficiency in relation to soils and water have been explored through the European Innovation Partnership for Agriculture (EIP-AGRI) and will be used to inform and enhance the work under this Thematic Group (Box 4).

Box 4: Focus areas of the EIP-AGRI in relation to resource efficiency of soil and water

Relevant Focus Group work of EIP-AGRI

Research and innovation, convening of key stakeholders and advice and support are also important in addressing the challenges facing soil and water resources. For example, the European Innovation Partnership for Agricultural productivity and Sustainability (EIP-AGRI) was launched in 2012 as one of five EIPs under the Innovation Union[12]. It aims to foster a competitive and sustainable agriculture and forestry sector that "*achieves more from less*". It contributes to ensuring a steady supply of food, feed and biomaterials, and to the sustainable management of the essential natural resources on which farming and forestry depend, working in harmony with the environment. To achieve this aim, the EIP-AGRI brings together innovation actors (farmers, advisors, researchers, businesses, NGOs, etc.) and helps to build bridges between research and practice in the form of focus groups dedicated to specific topics. So far seven focus groups have operated in relation to resource efficiency.

Fertiliser efficiency (July 2016): https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_fertiliser_efficiency-horticulture_2016_en.pdf

Organic farming (May 2014): https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_organic_farming_2015.pdf

Precision farming (Nov 2015): https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_precision_farming_2015.pdf

Soil organic matter in Mediterranean regions: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_soil_organic_matter_2015.pdf

Soil-born diseases (Oct 2015): https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_soilborne_diseases_2015.pdf

Water and agriculture (Sept 2016): https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_factsheet_water_and_agriculture_2016_en.pdf

Nutrient recycling – Ongoing group

3.2 Theme 1: **Improving soil and water quality through efficient land and nutrient management**

Importance of the theme

Improving soil and water quality through efficient land and nutrient management can address some of the key threats to soils and water in Europe. This is especially important for soils as the EAFRD provides a framework within which soils priorities and needs can be addressed, given the absence of an overarching EU soils policy. Addressing soil and water quality will also contribute to objectives of the Water Framework Directive, helping to deliver some aspects of River Basin Management Plans (RBMPS), such as reducing diffuse and point source pollution events.

Improved soil and water quality through increased efficiency of input use has broader benefits. Reduced contamination of soils and eutrophication of water courses helps to reduce the cost and energy used to provide clean water to society, thus contributing towards Europe's health agenda.

[12] http://ec.europa.eu/research/innovation-union/index_en.cfm

Increased efficiency in the way land management inputs are used (e.g. fertilisers and pesticides) also helps to reduce costs to farmers, requiring fewer inputs, whilst maintaining yields. This in turn helps to reduce the demand and pressure placed on finite resources, such as phosphate, and can help to recover nutrients like phosphate from wastes and recycle them back into the land management sector through circular and bioeconomy initiatives, generating growth and employment in rural areas.

Several Focus Groups of EIP-AGRI are relevant in relation to this sub-theme, further highlighting the importance of this theme (Box 5).

Box 5: Findings of relevant EIP-AGRI focus groups to Theme 1

FG Fertiliser efficiency

This FG looked specifically at horticulture in open fields and raised the following common issues and recommendations.

Common issues:

- The need for the integration of different techniques
- The need for detailed information on nutrient dynamics and water uptake
- User-friendliness of the innovative techniques

Recommendations (including for operational groups) relevant to the TG theme:

- Making fertiliser advice more farmer friendly and sustainable
- Optimising the use of innovative organic sourced fertiliser
- Increasing nutrient efficiency with cover crops and optimal use of organic manure
- Developing decision support systems based on simulation models
- Developing advice based on a system approach, avoiding opposing information Improving knowledge exchange by including different experts
- Collect and share knowledge

FG Soil born diseases

This FG identified the following ideas for Operational groups relevant to resource efficiency of soils and water:

- On farm production of compost and compost quality indicators
- On farm implementation of green manure and biofumigation crops;
- On farm grafting techniques and testing resistance against local strains
- Recognition of symptoms, developing texting diagnostic tools together with farmers;
- Developing tools on soil quality management;
- Farmer networks applying solarisation, anaerobic soil disinfestation or inundation;
- Networking actions to optimise the introduction and use of biological control agents.

FG Soil organic matter and FG on Organic agriculture

See the information on this FG in Box 7

FG Water and agriculture

See the information on this FG in

Box 6

FG on precision farming

This FG identified the following ideas for Operational groups relevant to resource efficiency of soils and water:

- Co-creation of Precision Farming data analysis and management tools;
- Testing decision support tools in different real farm situations;
- Remote sensing applications for agriculture using combined imagery from unmanned vehicles (drones), manned aircraft and satellites.

Several respondents of the ENRD survey indicated improving soil and water quality as one of the key issues with regard to resource efficiency of soils and water. See the box below.

Respondents to the survey focussed on the issue of nutrient management and how this affects soils and water quality. Issues mentioned included: *reduction of nutrient and pesticide run-off from agricultural land; water quality issues related to land management; and water salinization issues.*

Positively, the issues with water and soil management were framed from a solutions perspective with respondents suggesting a focus on:

- *Managing fertilisers and soil quality*
- *Improving water management;*
- *Economic and sustainable recycling of nutrients;*
- *Integrated Nutrient Management, including recycling of nutrient waste streams, including those from urban areas;*
- *Adoption of precision farming and how this can be achieved across a range of farming and farm types;*
- *Reducing inputs*

Example of opportunities provided by the EAFRD

Water and soil quality area affected by both diffuse[13] and point[14] source pollution from nitrogen, phosphorous, pesticides and sedimentation. Nutrient surpluses often arise when the level of nutrient application is in excess of what is required by the forests, crops and grassland, but may also arise from the way in which nutrients are stored or lack of precision in application. Water and soils are also affected by the way in which land is managed, the choice of crops, how long soils are left exposed, the orientation of cultivation or time of year in which cultivation takes place, etc. RDP measures can help support activities to improve the resource efficient use of soils and water through improved land and nutrient management.

Examples include:

- **Support for investments under Measure 4** in new infrastructure, such as covered storage facilities for organic manures, slurries and silage will help with emissions to the atmosphere, help prevent run-off of silage effluent as well as allow the application of manures and slurries onto the land at the optimum point to avoid run-off into water courses;
- **Support to incentivise land management practices (e.g. M8, 10, 11)**. These may include the optimisation of the application of fertilisers, matching them to crop requirements as closely as possible; use of cover crops following the cereal harvest; cultivation of crops requiring less nutrient inputs; and avoidance of overgrazing and unsuitable supplementary feeding practices;

[13] where pollutants are being dispersed over a wide area
[14] Emanating from a specific, observable source.

- The use of **Measure 16** will be particularly important for **addressing water and soil management** in river catchments that extend beyond single farms and administrative boundaries.
- Support under a variety of measures aimed at improving knowledge (M1 and 2).

3.3 Theme 2: **Improving water use efficiency**

Importance of the theme

Water resources in Europe are becoming increasingly volatile for both rural and urban areas alike. These changes are exacerbated by climate change with prolonged droughts and higher temperatures in some areas and increased inundation and flood events in others. Rural areas are the primary locations where water is gathered for society, whether this is through catchments, reservoirs or the running of rivers. The management of the land in water catchments is therefore crucial to ensure that water remains available throughout the year, and that it is maintained in good quality (see Theme 1).

Rural areas are also significant users of water, particularly agriculture, with water abstraction from rivers and aquifers as well as draining and altering of water flow patterns (rivers, ground water drainage). Key to the sustainable management of water resources is to ensure that water abstraction is within sustainable levels so that aquifers are replenished naturally and not depleted over time. This is particularly an issue in arid areas, but also in areas not typically considered arid, but where rainfall is sporadic and long periods without rainfall are experienced. To achieve this efforts to minimise water consumption are important, for example through reducing irrigation, through the recycling and re-use of water and maintaining the water holding capacity of the land, avoiding unnecessary drainage operations. Also important is to avoid unnecessary water loss, for example through reducing flood risk after heavy rainfall events.

Water inefficiencies (such as leakages) can arise in rural areas, particularly in response to poor infrastructure, much of which needs upgrading in many areas. There is therefore an important role for rural sectors to conserve and maintain the water that falls on rural land (including through reduced water use), and to be more efficient in the way that water is used in the rural environment.

Several respondents of the ENRD survey indicated water availability as one of the key issues with regard to resource efficiency of soils and water. See the box below.

> Increasing efficiency in water use was highlighted by a broad range of respondents from across Europe including Belgium, Hungary and in Mediterranean areas of Spain, Italy and Portugal. Climate change adaptation was a common reason for raising water availability issues, including the *water and energy nexus*.
>
> Different perspectives on how to address water efficiency were evident, including *improving water retention in soils* through to the *development of irrigation networks and processes* and *coordination with Water Framework Directive* and other policies.

Several Focus Groups of EIP-AGRI are relevant in relation, further highlighting the importance of this theme (

Box 6).

Box 6: Findings of relevant EIP-AGRI focus groups to Theme 2

FG Water and agriculture

The FG experts classified farm-level adaptation strategies to cope with water shortages into three main categories:

- Practices to increase water availability for crops and livestock;
- The efficient use of water (including irrigation efficiency), and;
- Farm resilience under water scarcity.

They highlighted that many other factors than water affect productivity in both rainfed and irrigated commercial farms, and that these must be understood and dealt with. Based on their practical experience, the experts suggested 5 types of actions:

- Manage soil and residues to improve water availability: increasing soil organic matter, conservation agriculture, soil mulching, controlled traffic, sporadic subsoiling
- Choose improved well-adapted cultivars and introduce new drought-tolerant crops
- Use tools such as decision support systems to improve crop/farm management
- Use tools to improve irrigation scheduling: plant sensors, on line services for irrigation scheduling, regulated deficit irrigation, precision irrigation
- Manage water quality and salinity

To facilitate the adoption of best practices:

- Clearly identify economic and/or environmental benefits, in the short and long term
- Identify and solve any technical and operational problems through knowledge exchange among all concerned, such as farmers, equipment manufacturers, advisers, consumers and others
- Set up demonstration plots, preferably on real farms
- Provide clear user guides when promoting complex techniques.

Ideas for operational groups included:

- Adapt conservation agriculture to local conditions, emphasising permanent ground cover and proper tillage practice
- Develop improved crop rotation and crop diversification, including aromatic and medicinal plants Use spring-summer crops tolerant to low temperatures for earlier sowing
- Determine local benchmarks and use them as references for irrigation and crop performance
- Use soil/plant sensors for supplemental irrigation and/or regulated deficit irrigation and optimise irrigation to crop water balance
- Use precision irrigation aided by remote sensing
- Develop innovative solutions for using alternative water sources, maybe with poor water quality

Example of opportunities provided by the EAFRD

There is a range of actions that can help achieve improvements in water availability in rural areas. These include:

- **Investment in infrastructure to capture and store water** in times of high rainfall and to prevent flooding and inundation of rural and urban areas (**M4 and M7**).
- Investments to support **the modernisation of rural areas**, including water infrastructure and processes that use water (**M4 and M7**)
- **Cross cutting advice** on more water efficient management and use practices provided through **Measures 1 and 2**. Measure 2 is particularly important where large scale management, such as at the catchment scale, needs to be implemented.
- The **coordination and cooperation of different actors** to improve water management at catchment and the landscape scale, through **Measure 16**.
- Through **Measures 7, 8, 10, 12**:
    - The restoration of natural water features, such as floodplains, wetlands, and natural river courses;
    - Maintaining natural and semi-natural habitats as well as green infrastructure, such as wetlands and marshes, hedgerows and trees, can mitigate the effect of high rainfall events and maintain a more constant supply of water
    - Avoiding land drainage activities
    - Optimising crop patterns – for example changes of the crop cycle; choosing species or varieties of crop that are inherently drought tolerant
    - Increasing soil water retention – for example through tillage practices, mulching; application of soil conditioners; weed control; incorporating fallow land into the cropping system, maintaining or creating buffer strips; use of intermediate crops; modification of the soil surface; maintaining crop residues
    - Reducing crop water needs by optimal management of the leaf canopy
- **Measure 12** has specific relevance for this theme and is focussed on providing support to WFD areas including RBMP activities.

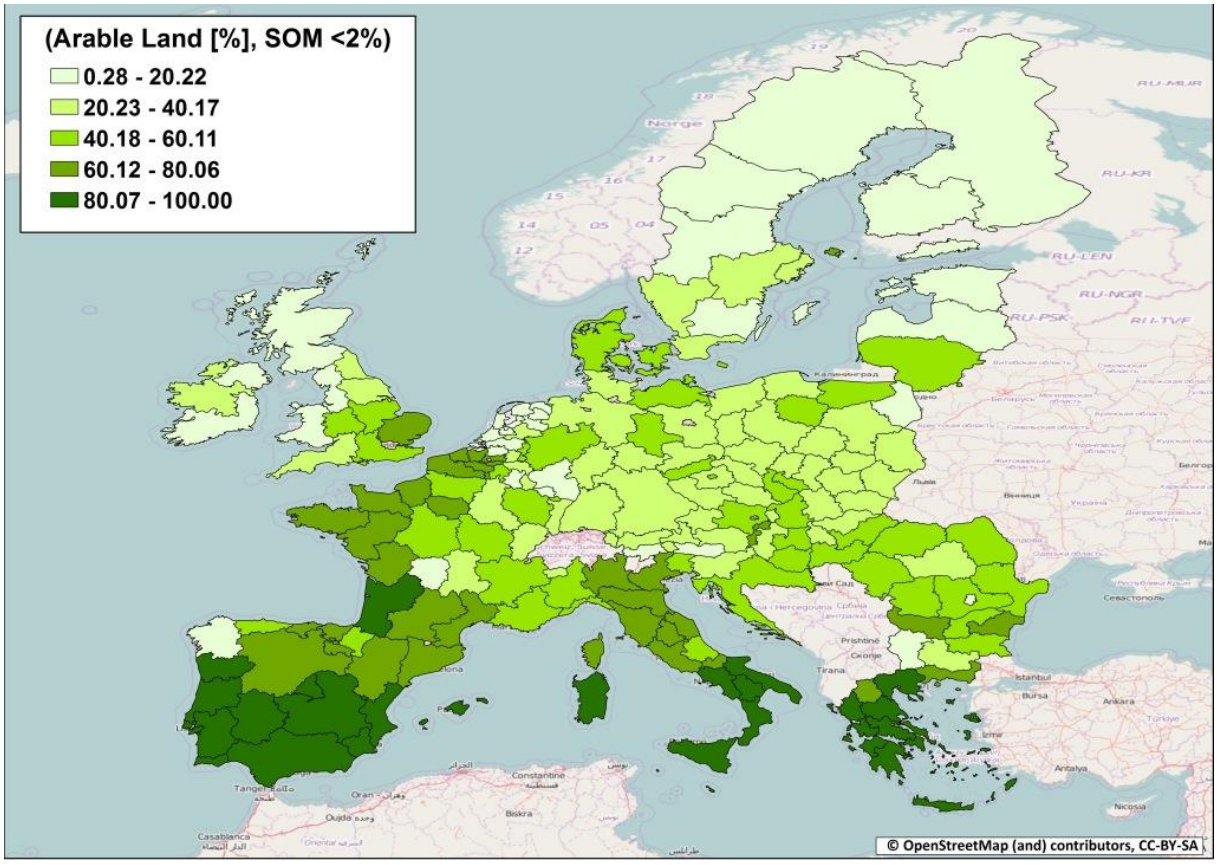
3.4 Theme 3: **Carbon conservation and sequestration**

Importance of the theme

Carbon **conservation** as part of Europe's low carbon transition is a key priority for all sectors in society to help in the mitigation of climate change. Unlike many other areas of society, rural sectors have the additional opportunity to contribute to carbon **sequestration** through the capture and storage of carbon in soils and biomass. This places them in a semi-unique position in the EU to take a leading role in the active removal of carbon from the atmosphere. This is particularly important under the new 2030 Climate and Energy package where the land use, land use change and forestry (LULUCF) sectors[15] will need to contribute to the greenhouse gas emission reduction targets like other sectors.

The opportunities provided by increased carbon conservation and sequestration to rural sectors are many and varied. Soil organic matter (soil organic carbon) levels vary between Member States (Figure 4) but are generally poor on arable land in Europe. Improved carbon conservation and sequestration in soils provides an important and necessary contribution to healthy soil function. This in turn is critical to maintain production of commodities, deliver other ecosystem services (such as water filtration and retention, and increasing soil biota) and provide a basis for rural economies.

Figure 4: Soil Organic Matter in the EU showing the % of arable land with SOM <2%



[15] Which includes forestry and some agricultural emissions except CO_2

Several respondents of the ENRD survey indicated carbon conservation and management as one of the key issues with regard to resource efficiency of soils and water. See the box below.

Respondents to the survey highlighted that carbon conservation and management were important issues to address when considering resource efficiency in rural areas. The responses focussed on two specific areas of carbon conservation.

- The first addresses the carbon beneficial management of soils to maintain the functionality of soils and *prevent loss of organic life within soils*. Issues mentioned include *reducing compaction* to enable improved soil functionality, *preventing soil erosion*, and *fostering carbon conservation and sequestration in agriculture and forestry*.
- The second area of interest addresses the broader use of carbon and how this provides an opportunity for the rural economy, particularly in relation to the *Circular Economy* and *Bioeconomy*. One respondent highlighted the *carbon dilemma* whereby there is an increased focus on improving conservation and sequestration of carbon within land management sectors, yet at the same time increased attention on using carbon resources to produce biomass for the bioeconomy. Other respondents identified the recycling and reuse of *agricultural, food industry and forestry wastes and residues as part of the Circular Economy*.

Several Focus Groups of EIP-AGRI are relevant in relation, further highlighting the importance of this theme (Box 7).

Box 7: Findings of relevant EIP-AGRI focus groups to Theme 3

FG SOM in Mediterranean regions

A comprehensive survey of techniques to build SOM content and soil functionality were clustered into 5 groups:

- Optimised use of resource of organic carbon
- Optimised soil management
- Optimised crop selection and management
- Possible use of bioeffectors and microbial inoculants
- Development of tools to properly assess the SOM content and soil quality, with a special focus on its biological component.

Across these topics, there was an overarching need to:

- Better define adequate indicators and reference values
- Improve knowledge sharing and dissemination, incliding education about the functions of SOM and soil biota;
- Develop a systems approach and long-term evaluation rather than single technical solutions with short-term efficiency.

FG Fertiliser efficiency

See the information on this FG in Box 5

FG Organic farming	**Ideas for Operational Groups**
This FG focused more on the issue of optimising arable yields under organic management. The FG identified the main causes of the gap for organic produces regards to quantity and quality, as: • Poor soil fertility management; • Inadequate nutrient supply • Insufficient weed management; • Pest and disease pressure; and • Variety choice (i.e. crop type).	• Information and decision support systems; • Farming techniques to increase soil microbial activity and biodiversity; • fine-tuning of composting techniques; • Structuring of joint purchase and use of machinery; • Selection of locally appropriate robust varieties; • Development of innovative tillage techniques; • Fostering the use of companion planting and cover crops; • Introduction of new crops and variety trials.

Example of opportunities provided by the EAFRD

- Support for investments under Measure 4.4 in low carbon technology and more efficient machinery such as direct drilling seed application to reduce soil oxidation.
- Measure 10 supporting agri-environment-climate commitments can help land managers to adopt practice to increase the sequestration and retention of carbon in soils. This may include the use of different cropping rotations, incorporation of crop residues to build organic matter, or conversion from arable land to grassland.
- The conversion to and maintenance of organic farming practices under Measure 11 can also help to rebuild soil functionality and soil organic matter.
- Cooperation support under Measure 16 to build new supply chains, such as where carbon in wastes or residues is retained in use as a new product.
- Cross cutting support for capacity building, advice and information dissemination, such as through Measures 1 and 2.

3.5 How the Thematic Group can add value?

Opportunities offered by the RDP

Preliminary analysis of RDPs for the 2014-2020 period shows that many RDPs are using a variety of measures to address the three themes/topics identified above. In the majority of cases the actions that are eligible for funding and the measures used are those that have been in place in the previous programming period, with an **emphasis on M10 (the agri-environment-climate-measure) and M4 (investments in physical assets).**

In some RDPs it is evident that efforts have been made to:

- **Find innovative ways** of addressing issues have been found – for example using M16 (cooperation) to find ways of getting farmers to work together, for example to use water resources more efficiently;
- **Improve the targeting of measures** – for example certain measures only being available in priority areas identified in River Basin Management Plans;
- **Use measures in combination** to deliver the desired outcomes – often M4.4 (non-productive investments) used with M10 (AECM) and sometimes also M16 (cooperation).

However, these examples are still the exception rather than the norm.

Lack of synergy between thematic strategies, Pilar 1 and RDPs

It is also noticeable that the targets identified for the indicators associated with the topics identified here are very variable and extremely low in some RDPs. In many cases **the priorities identified in thematic strategies and plans** at the national/regional/local level (e.g. River Basin Management Plans) **are not fully reflected in the priorities and measure design in RDPs**. And too often, measures under Pillar 1 of the CAP, such as the use of voluntary coupled support can work counter to the environmental objectives sought via RDPs.

Encouraging farmers to take action

In addition, to achieve real change in practice requires farmers to engage with the measures available and carry out the actions that are necessary. **But many farmers are reluctant to go too far in some of these areas** for fear of impacting upon crop yields, for example. How to encourage farmers to take action to achieve long term sustained changes in farming practices to improve resource efficiency therefore remains a challenge to be addressed.

Discussion points & issues for the Thematic Group

In this Thematic Group we want to explore these issues in more detail to come up with practical recommendations on how to ensure that RDPs can really add value and make a difference in improving water efficiency, carbon conservation and sequestration as well as the quality of soils and water resources.

Through working with key stakeholders in the TG and beyond, sharing best practice and developing our knowledge and understanding, the TG aims to:

- Collate **a library of inspiring examples of where and how RDPs are being used** to deliver carbon conservation and sequestration; improvements in soil and water quality; and increased water efficiency;
- Highlight **innovative approaches to scheme/measure design and delivery**, understand how these can improve outcomes (including targeting, eligibility criteria, collective approaches, multi-measure packages etc.) and identify how these could become more widespread;
- Identify any other **barriers to action**, both in terms of:
    - RDP measure use and design;

- any conflicts between measures funded under Pillar 1 of the CAP and the resource efficiency objectives in RDPs; and
- measure uptake by beneficiaries

- Come up with **proposals for how barriers can be overcome**. Where necessary this might entail changes to the rules within the EAFRD or its delegated and implementing acts.
- Examine what changes would be required at MS / regional level to ensure RDPs are developed to be more in line with the priorities and needs identified in other national and European strategic initiatives and related policies (such as the Water Framework Directive, the Floods Directive, Soil Action Plans, climate change targets etc.) – for example greater join up between Agriculture and Environment Ministries, increased engagement with stakeholders etc.
- **Understand better the motivations of farmers and other beneficiaries** for engaging with such measures and finding ways to communicate the economic benefits of actions to promote resource efficiency. Ultimately this should lead to the ability to design measures in a way that is more attractive and encourage greater uptake;
- Identify **opportunities offered by the Digital Agenda**[16] and how technology can improve the efficient use of resources in improving soil and water quality.

4. Thematic Group approach and method

There are a number of guiding principles/methodologies that will drive the thematic group work including:

1. Stakeholder-oriented and participative

The thematic work aims to rely on a **core group of stakeholders/ Thematic Group members** (including different types of stakeholder organisations) that are experienced, interested and willing to actively contribute to the thematic work. It is very important that the core group of stakeholders has an ownership of the thematic group content and process, i.e. they will strongly contribute to the identification of sub-themes and issues to be addressed, and will be the core targets of the thematic group meetings. One of the main advantages of the thematic group method is that it brings together different types of stakeholders and encourages the exchange of different views among them through networking.

2. Focused & Practical

The thematic work will aim to be **very focused and practical** in terms of the chosen sub-themes and methods. The early analysis and survey presented in this report aimed to identify specific sub-themes and challenges that can be most efficiently addressed at the European level, with the aim to improve RDP implementation. These preliminarily identified challenges will be explored further during the 1st Thematic Group meeting, with the aim to identify specific challenges and themes for further work of the TG.

[16] Digital Agenda for Europe - https://ec.europa.eu/digital-single-market/en/digital-agenda-europe-key-publications

3. Complementary & inspiring

The thematic work aims **to add value to existing work**. The initial analysis and survey has helped to identify specific challenges and sub-themes within the wider theme of 'resource efficient rural economy'. One of the main objectives of the thematic work is to inspire people to learn and experiment new ideas, methods and examples in their own working context. Both the working methods of the thematic group, as well as the examples identified and presented will aim to contribute to this.

4. Relevant to a wider audience

The thematic group will work with a core group of (committed) stakeholders (as specified above). However, it will also follow a **flexible and dynamic approach**, adjusting to the needs identified. For instance, the target groups of specific meetings may be wider than the core group depending on the specific issue/sub-theme. Interested stakeholders have the opportunity to get involved at different levels, from actively contributing to the process (core group) to follow closely the work of the group and be informed about main outcomes.

Dissemination and communication will be a crucial part of the work of the thematic group. Outcomes will need to be spread further than the core group in an easily accessible form to a wider interested audience.

5. Process & timeline

Thematic Group meetings will be the cornerstones of the thematic work on resource efficiency. However there are a number of activities (support tools) that the ENRD Contact Point can provide to support the work of the Thematic Group and prepare the thematic group meetings, these include:

- **Background research** on specific subjects of interest with regard to resource efficiency;
- **In-depth analysis of specific aspects of Rural Development Programmes**, including measures and calls for projects ('RDP screening);
- Development of **good practices and case studies** on practical and useful project examples and methodologies;
- **Publications** (including a Rural Review and a Project Brochure on 'resource efficient rural economy') and other communication products.

The chart below presents some of the core activities and an indicative timeline for the thematic work on 'resource efficiency rural economy.

Figure 2: Core activities & indicative timeline