INTRODUCTION

Starting in July 2018, the ENRD animated a Thematic Group (TG) on ‘Mainstreaming the bioeconomy’ with the overarching objective to ‘encourage the development of sustainable bioeconomy value chains in rural areas in order to promote employment, economic growth, and social inclusion, while preserving eco-systems.’

The TG was structured as an open group of interested stakeholders across Europe and involved among others Managing Authorities, researchers, farmers and representatives of environmental NGOs.

The TG’s work was rooted in the use of EU Common Agricultural Policy (CAP), and particularly Rural Development Programmes (RDPs), in support of its stated objectives. The TG identified the different element of rural value chains that can benefit from the development of the bioeconomy, how these benefits can be delivered in rural areas and how they can be made sustainable and self-supporting, particularly through the use of the European Agricultural Fund for Rural Development (EAFRD).

The TG has drawn a series of recommendations based on outcomes of the TG meetings, over 30 interviews with national and regional authorities, civil interest groups, support services and farmers, desk-based research on literature, policy and strategy documents and direct input from selected experts involved with the TG work.

This document summarises the recommendations developed by the TG on the use of RDPs to support rural bioeconomy. A more detailed version of the recommendations and the other documents produced by the TG are available for free download from the ENRD website.
The development of bioeconomy through the current CAP and the CAP Strategic Plans post-2020

These recommendations are organised according to four key elements of setting up sustainable rural bioeconomy value chains:

- the actions and support needed to launch the value chain, which involves bringing together key players and identifying opportunities;
- supporting and investing in the bioeconomy value chain from its inception through to its ongoing operation and improvement, involving investment and advisory support;
- making the rural bioeconomy value chain self-sustaining through advisory support, investments and promotion and dissemination, for it to thrive without ongoing subsidy;
- monitoring, evaluation and learning is key at all stages of the process to ensure that environmental and economic sustainability is realised.
LAUNCHING THE VALUE CHAIN

Need: Developing action plans, visions, strategies and initiatives.

How the RDP can help: Currently there is limited scope for RDPs to set out action plans and strategies that address the bioeconomy in rural areas. This is one area where future CAP Strategic Plans could add real value. However, RDP-related networks, such as Leader networks, may be a useful element in the process of (regional or national) strategy development, as they are able to root the discussion in the local contexts.

Other complementary measures: National or regional actions.

Need: Review of the resource base to understand the potential of an area/cluster.

How the RDP can help: To support new initiatives around an identified resource or ecosystem service. Relevant measures: M16.1 – EIP-Agri Operational Groups; M16.2 – Pilot projects.

Other complementary measures: Through LIFE+ and Horizon2020 research activities, pilot approaches can be tested to complement CAP supported initiatives.

Need: Understanding capacity to use bio-resources within an area.

How the RDP can help: To set up pilot studies or awareness-raising projects to identify resources (including human resources and skills) available and capacity to process, or offer related services, within a territory. Relevant measure: M19 – LEADER.

Other complementary measures: Maximise the use of available information through the use of available tools such as JRC/NOVA biomass mapping, Eurostat skills, education & demographics mapping, pools of good practices (Circular Economy Platform), DG Growth Self-Assessment Tool (SAT) on a region’s readiness for biomass-based sustainable chemical production.

Need: Planning bioeconomy value chains that tailor to the needs and resources of a local area.

How the RDP can help: To develop plans that address resource needs and integrate bioeconomy value chains at the territorial level. Relevant measures: M7.1 – Local development plans; M19 – LEADER.

Other complementary measures: ERDF funded projects can support the planning of the bioeconomy initiatives in rural areas.

Need: Start-up initiatives, bringing together different actors in an area and sharing knowledge, or the setting up of producer groups.

How the RDP can help: To enable actors within a value chain (e.g. producers or manufacturers) to work together. Relevant measures: M16.1 – EIP-Agri Operational Groups; M13 - Learning exchanges; M19 – LEADER; M9 – Setting up of producer groups.

Other complementary measures: European Territorial Cooperation (ETC) (Interreg programmes). Bringing together actors from different countries to share knowledge / setting up logistic value chains. Through LIFE+ and H2020 research activities, pilot approaches can be tested to complement CAP supported initiatives.
Need: Encouraging joint activities linked to the development of sustainable and resilient bioeconomy value chains that enable upscaling of initiatives and innovations, create business linkages and build strength in numbers.

How the RDP can help: To support actors across the value chain to work together and in synergy. Relevant measures: M16.5 – Joint action on climate and environment; M16.4 – Short supply chains; M16.6 – Cooperation for biomass provision.

By supporting infrastructure and co-operative working environments to encourage synergy and connect actors in the value chain. Relevant measure: M16 – Cooperation measures.

Other complementary measures: European Territorial Cooperation (ETC) (Interreg programmes). Bringing together actors from different countries to share knowledge / setting up logistic value chains. National actions; and ERDF. Different cluster approaches.

SUPPORTING AND INVESTING IN THE BIOECONOMY VALUE CHAIN

Need: Enabling access to existing quality schemes which have links to bioeconomy value chains.

How the RDP can help: To enable value chain actors to have access to quality schemes and thus access to market. Relevant measure: M3.1 – Quality schemes.

Other complementary measures: Use of National funds promoting regions through media and tourism information, as well as developing national standards and certificates, or more broadly a Bioeconomy label – certificate of triple sustainability.

Need: Support for new machinery or infrastructure to enable the use of biomass streams for bioeconomy initiatives and support sustainable value chains.

How the RDP can help: To provide value chain actors with the physical tools necessary to enable sustainable production. Relevant measures: M4.1 – Farm investments; M4.2 – Investments in processing/marketing; M4.3 – Investment in farm modernisation; M7.2 – Investments in resource efficiency; M7.3 – Support for broadband infrastructure; M7.4 – Investments in basic services; M6.4 – Investment in creation and development of non-agricultural activities.
Financial instruments, where applied to the RDP, can facilitate access to private funding.

**Other complementary measures:** ERDF Investments in machinery and tools not supported through EAFRD.

**Need:** Support for diversification of activities into new bioeconomy initiatives, including environmental services.

**How the RDP can help:** To enable the set-up of bioeconomy value chain initiatives that address both service-bioeconomy and product-based bioeconomy value chains. Relevant measures: M6.2 – Business start-up aid; M6.4 – Investment in non-agricultural activities.

**Other complementary measures:** ERDF planning activities.

**Need:** Support for new production systems and diversification of biomass streams.

**How the RDP can help:** To enable new production systems for farmers and foresters. Relevant measures: M8.1 – Afforestation; M8.2 – Investment in forestry technologies and processing.

**Other complementary measures:** National funds may be used to support afforestation in Member States where M8.1 and M8.2 are not available.

**Need:** Support for the utilisation of different biomass streams.

**How the RDP can help:** To enable the greater valorisation of side-streams in forest sectors leading to greater resource efficiency. Relevant measures: M8.6 – Investment in forestry technologies and processing.

**Other complementary measures:** European Territorial Cooperation (ETC) (Interreg programmes) enabling the setting up logistic value chains – although it was noted in the TG discussions that more flexible support for intra- and inter-territory and international cooperation is still needed.

**Need:** Enabling training workshops, practical sessions and supporting SMEs in bioeconomy value chain development.

**How the RDP can help:** To enable actors to have the knowledge and skills to make the most of bioeconomy opportunities and deliver innovation and new business models. Relevant measures: M1.1 – Training and skills; M1.2 – Demonstration and information activities; M19 – LEADER.

**Other complementary measures:** Knowledge sharing and development for how to implement policy and sharing ideas at the pan-EU level, through for example the operation of Thematic Groups run by EU networks and projects, and EIP-AGRI and the development of good practice examples translated into multiple languages.

**Need:** Enabling learning from others – sharing ideas and networking.

**How the RDP can help:** To ensure that knowledge and good practice is disseminated leading to more rapid and sustainable development of bioeconomy value chains. Relevant measures: M1.3 – Learning exchanges; M19 – LEADER.

**Other complementary measures:** NRN events are a possible platform for exchange and learning. See also the other complementary measures listed above, particularly through inter-regional exchanges and between countries and territories.

**Need:** Capacity building for advisors and managing authorities to advise on setting up new bioeconomy value chains.

**How the RDP can help:** To support advisors and decision makers in having the knowledge and skills enabling them to be drivers of change for new bioeconomy value chains. Relevant measures: M2.1 – Access to advisory services; M2.2 – Set-up of advisory services; M2.3 – Training of advisors.

**Other complementary measures:** See the two above recommendations. Engage R&I institutions to provide certified expertise for farmers and SMEs tailored to regional needs on, among others, digitisation, bio-engineering (biogas etc.), carbon farming/forestry, continuous cover forestry, shift to renewable energy, better food processing (more from less, better taste and with minimal waste) and circular use of regional biomass.
MAKING THE RURAL BIOECONOMY VALUE CHAIN SELF-SUSTAINING

Need: Communication and marketing strategy support to be able to promote products and services that have been or are being developed.

This can require specific skills and expertise linked to dissemination and public awareness raising of bioeconomy value chains and their benefits.

How the RDP can help: To support advisors and rural advisors gain the knowledge and skills enabling them to be drivers of change for new bioeconomy value chains. Relevant measures: M2.1 – Access to advisory services; M2.2 – Set-up of advisory services; M2.3 – Training of advisors; M3 and M16 – enabling the setting up of groups.

Other complementary measures: ERDF Support for added value of tourism, understanding and access to the forest environment; Horizon2020.

Need: Advice and support throughout the lifetime of the business / initiative and not just at the start-up phase.

This may include access to information on markets (areas in which to sell), technology updates (to improve efficiency and sustainability), legislative changes (which are not necessarily easy to access or understand from the available sources). Information and advice of this nature needs to be easy to understand and accessible to those in need of it. This could be facilitated through a local contact point or knowledge holder supporting farmers and businesses.

How the RDP can help: To provide up-to-date, adapted and flexible advice; of course, the advisors themselves have to be sufficiently informed. Relevant measures: M2.1 – Access to advisory services; M2.2 – Set-up of advisory services; M2.3 – Training of advisors.

To enable knowledge and good practice to be shared, leading to more rapid and sustainable development of bioeconomy value chains. Relevant measures: M1.3 – Learning exchanges; M19 – LEADER.

Other complementary measures: Setting up of training centres or platforms, groups at scale.

Need: Enabling access to existing sustainable value chains and markets.

How the RDP can help: To enable actors and value chains to benefit from participation in quality or certification schemes and thus access certain markets or ad-hoc promotional activities to support new value chains. Relevant measures: M3.1 – Quality schemes; M3.2 – Information and promotion by producer groups; M19 – LEADER.

Other complementary measures: EU Ecolabel, or other new certification and labelling schemes. COSME to enable market access, finance and development support needs in a coordinated way, to ensure the link from innovation to commercialisation.
Need: To link value-chains together to create value-webs or cascading chains where the products, wastes and residues for any aspect of a bioeconomy value chain can be valorised to make the whole chain/web more integrated and sustainable.

This could include the use of biomass in different ways as well as the integration of different actors, such as retailers, tourism operators and producers. This also supports the need for reaching a certain level of scale or organisation in order to enter and survive in the market.

How the RDP can help: To develop local initiatives in creating bioeconomy value-webs or linking existing value chains, set up Operational Groups or short supply chains. Relevant measures: M19 – LEADER; M16.1 – EIP-AGRI Operational Groups; M16.4 – setting up of short supply chains.

Other complementary measures: Horizon2020. It will be important to develop other tools to help promote producers in other, more value-added aspects of the value chain. Cluster approaches; tools provided by the European Cluster Collaboration Platform (ECCP).

MONITORING, EVALUATION AND LEARNING TO BE MORE SUSTAINABLE

Monitoring, evaluation and learning should be integrated throughout the entire development of bioeconomy value chains and should reflect the different local, regional and national contexts in which they operate. This would enable value chains to develop and improve through the adoption of good practice norms, as well as stimulate innovation in new areas. In effective evaluation, the needs and objectives of the bioeconomy need to be clear from the start and to be effective across different funding streams and initiatives (such as RDPs, H2020 support and other ESIF) to ensure that, overall, the collective approach to projects and funding moves towards ‘improvement’ for society.

Need: Checking new bioeconomy value chains are delivering added value and are sustainable in operation.

How the RDP can help: To support operational groups to test monitoring approaches or develop new ideas. Relevant measures: M16.1 – EIP-Agri Operational Groups.

Other complementary measures: H2020 and LIFE+. Research instruments to monitor improvements or change; projects to develop indicators and monitoring methods; projects to pilot new approaches.

Need: Improving existing bioeconomy value chains and developing new ones on the basis of experience.
There is a need to experiment with the bioeconomy, report where it does not work, identify and acknowledge good practices and promote them.

**How the RDP can help:** To set up pilot projects to develop new monitoring approaches or new approaches to projects integrating lessons learned. Relevant measures: M16.2 – Pilot projects.

**Other complementary measures:** Through LIFE+ and H2020 research activities, pilot approaches can be tested to complement CAP-supported initiatives.

**Areas for improvement:** At the moment there is a cycle of supporting good practices, but not a recognition that these should become the norm or mainstreamed as common approaches.

**Need:** Enabling actors to manage farm and forest land sustainably and to conserve and promote genetic diversity that contributes to the bioeconomy and its resilience.

**How the RDP can help:** To support actors with the investment needed to manage land in a sustainable way, to ensure that the production of biomass and the provision of bioeconomy services also benefit the wider environment. Relevant measures: M4.4 – Non-productive investment for agri-environment-climate objectives; M10.1 – Agri-environment-climate payments; M15.1 – Forest-environment-climate payments; M15.2 – Conservation of forests genetic resources.

RDP can also help enable increased genetic diversity and potential future bioeconomy value streams, as well as greater potential resilience and adaptation to future challenges (on farms). Relevant measures: M10.2 – Conservation of genetic resources.

**Other complementary measures:** Through LIFE+ and H2020 research activities, pilot approaches can be tested to complement CAP-supported initiatives.

**Need:** Conversion and maintenance of land management systems with potential access to new sustainability markets.

**How the RDP can help:** To establish bioeconomy value chains on the back of organic production systems. Relevant measures: M11 – Organic production.

**Other complementary measures:** Through LIFE+ and H2020 research activities, pilot approaches can be tested to complement CAP-supported initiatives.

**Need:** Support for more service-based bioeconomy value chains.

**How the RDP can help:** To support plans for diversification of activities towards sustainable tourism, for example. Relevant measures: M7 – Basic services and village renewal measures; M19 – LEADER.

**Other complementary measures:** ERDF Support for added value of tourism, understanding and access to the forest environment.