**Summary report on policy development**

**Introduction**

Development of policies related to bio-based circular economy depends on the situation in each partner country, and moreover, varies at a national and regional level. In Finland, Spain, Greece and France the legislation and policies are more advanced and the strategies, road maps, funding instruments (e.g. ERDF calls), etc. are developed mostly at both national and regional level. In Slovakia, the national strategy is in preparation and regional and national level cooperates in its development process within working groups and official regional meetings. The small-scaled projects related to bio-based circular economy are already implemented at the regional level. In Romania, there is no strategy at the national level at the moment; however, activities of bio-based circular economy are partly financed by agricultural funds. In all countries, there is communication between the national and regional level (working groups, networking, soft measures, etc.).

**Finland**

Finland is a pioneer in the bioeconomy, a circular economy and cleantech. The circular economy will be a new cornerstone for the Finnish economy. There are currently **three policy instruments** covering the issue of circular economy and circular bioeconomy at a national level.

**(1) Finland, a land of solutions (2016 – 2019)** is a strategic government programme that comments circular economy on a general level. It states that regulation must promote the circulation and sustainable use of raw materials, and different sectors should not issue mutually conflicting regulations. Circular economy is also mentioned in prioritising experiments related to the circular economy, artificial intelligence and employment. The “circularity” of bio-based resources is represented hereby **loop of nutrients** (e.g. reducing the amounts of nutrients leaching to the waters while enhancing the efficient use of nutrients in agriculture) and **bioeconomy** with the focus areas such as bio-energy and biofuels, forest industry, waste and wastewater resource circulation, food and agriculture.

**(2) The Finnish Roadmap to a Circular Economy (2016 – 2025)** was prepared jointly by the Finnish Innovation Fund Sitra, the relevant ministries and other stakeholders to respond to the opportunities offered by the circular economy. **Sustainable food systems** and **forest-based loops** and the related innovations have been identified as Finland’s best area of expertise in the circular economy.

**(3) Finnish Bioeconomy Strategy (2014)** not specifically defines the circularity, but it is mentioned as **sustainable use of renewable resources.** In a sustainable bioeconomy, wastes and industrial side streams will play an even more significant role as raw materials. The strategic goals of the Strategy are: competitive operating environment for the bioeconomy; new business from the bioeconomy; strong bioeconomy competence base; and accessibility and sustainability of biomasses.

**Finland – Päijät-Häme Region**

**Päijät-Häme Regional Strategy and Programme (2018 – 2021)** defines three focus areas in RIS3 Smart Specialization. One of them is circular economy and it mainly equals to material and energy efficiency and new solutions for bioeconomy. The main themes are the circulation of materials, bioeconomy, energy, new services and being a forerunner.Focus areas are **material and energy efficiency** and **new solutions for bioeconomy.** The rate of material and energy recovery is expected to be more than 98% by the year 2022.

The whole **Päijät-Häme Circular Economy Road Map 2018 – 2021** is about circular economy. Its five main goals are: (1) Closed loops of technical streams to create added value; (2) Sustainable food systems as a part of bio circular economy; (3) Towards energy self-sufficiency by sustainable transport and energy solutions; (4) Shared economy generates new consumption models and business opportunities; (5) Piloting and demonstrating innovative circular economy solutions. This road map contains the following specific actions to develop bio-based circular economy in the region: Closing of nutrient loops through the recycling of nutrients and reduction of losses at different phases; Support for new R&D innovations on, for example, wood-based bioproducts and bioenergy; Promotion of open databanks on biological side streams to boost their utilisation; and Awareness raising on consumer choices through, for example, a material footprint calculator or personal carbon trade.

**Spain**

**(1) Circular Spain 2030: Spanish strategy of circular economy** is not approved yet, however, it is expected that will be finished soon.This concept of circular economy is mentioned here as an own strategic topic.The concept of "circularity" is included by different expressions. Mainly, it is referred by the term "circular economy"; however, expressions such as "to reinvest in new ways of raw materials", "close the cycle" or circular practices are mentioned.Focus areas are research; development; innovation; investment and cooperation. The main focus areas of the Strategy in relation to circular economy are **bioeconomy** and **waste management.** Its targets are to (1) promote a proper waste management; (2) improve computer tools for the monitoring and control of waste generation and management; and (3) scrupulously respect the "hierarchy principle", according to which it will be necessary to develop new techniques that improve the collection and classification of waste, while maintaining transparency and profitability.

**(2) Spanish strategy of bioeconomy: Limits 2030** aimsto develop the circular economy in some value chains. The firsttarget is to enhance the competitiveness and internationalisation of Spanish companies operating in the realm of resources of biological origin, and to create new economic activities and new jobs. The second goal is to maintain the Spanish bioeconomy as an essential part of economic activity and set it as an area of knowledge-based strategic innovation among the leaders in an international context.The third goal is to assist in attaining all the bioeconomy’s development potential to a horizon of the coming 15 years in Spain, based on social and environmental sustainability and on technological, organisational and management innovation as a tool for resolving problems and to make the most of market openings.

**Spain – Castilla-La Mancha Region**

The concept of circular economy is being adopted in a **Law of Circular Economy**. In the focus area of **bioeconomy,** thepromotion of innovative projects will be supported. The regional administration has its own investment for **waste management** and it will set an environmental tax law in this field. The development of a circular economy will be based on the principle of the **reduction of greenhouse gasses** emissions. The Regional Deputy Ministry of Environment has proposed a change in the policy instrument to finance projects about circular economy, since this instrument does not currently include any reference about the term "circular economy".

**Slovakia**

Within the draft version ofthe **(1) Environmental Policy Strategy of Slovakia by 2030,** issues related to the circular economy focus on the increase of recycling and reuse of communal waste, waste material, waste production prevention, eco-design and introduction of innovative technologies for waste processing.Focus areas are: (1) political framework for adapting the circular economy; (2) public awareness; (3) investments into research and education; and (4) markets with secondary raw materials**.** The strategy will be targeted at developing a general political framework for the circular economy and environmental innovation and establishing a political framework that would allow the use of measures related to circular economy. It will support the development of the secondary raw materials markets; promote information awareness among the citizens for stimulating the demand for products of the circular economy; and adopt the principles of the circular economy and preserve them in all sectors of the economy.

In the **(2)** **Waste Management Programme of Slovak Republic 2016 – 2020,** the concept of "circularity" is included in waste recycling.Focus area is to limit the deposition of communal and industrial biodegradable waste to landfills. Its strategic goals are to significantly reduce the amount of communal biodegradable waste deposited in landfills and increase the waste material and energy recovery.

**(3) Operational Programme Quality of Environment for the period 2014 – 2020** focuses on waste prevention, support for sorted waste collection and recovery of waste.Focus areas are:(1) increasing the rate of the waste recovery for their reuse and prevention of the waste production and (2) increasing the share of the renewable energy resources on gross energy consumption in Slovakia.

**Slovakia – Nitra Self-Governing Region**

**Programme of the Economic and Social Development of the Nitra Self-Governing Region 2016 – 2022** is an umbrella document covering regional strategies such as Waste Management Programme of the Nitra Region, Strategy of Rural Development in Nitra region, Community-led Local Development (CLLD) Regional Strategy.The issue of “circularity” is involved through areas of sustainable growth and waste management. **Sustainable growth** means supporting the more ecological and competitive economy and effective using the resources. The targets of the **waste management** are to achieve increased waste recycling, particularly for municipal waste and construction waste; to apply best available techniques and environmental practices; and to minimize the negative effects of the generation and management of waste on human health and the environment.

**Waste Management Programme** **of the Nitra Self-Governing Region** is a programme document developed by the District Office of Nitra and its provisions shall apply in the Nitra region. Based on the previous negotiations of the Nitra region and the District Office it was found that the state of bio-waste management is insufficient. Since the objectives of BIOREGIO are in line with these issues, the Slovak University of Agriculture and the Nitra region negotiated with the District Office in order to include them into this document. Available objectives of BIOREGIO, therefore, represented an important input during the development of the Programme.

**Greece**

**National Plan for Waste Management (2015)** deals with the circularity under the topic of biodegradable household waste (or biowaste). This national plan includes the following focus areas: (1) establishment of separate collection schemes for biowaste; (2) Recovery of biowaste from pre-sorted waste flows in dedicated facilities; (3) Use of mechanical-biological treatment plants for the treatment of the residual biowaste. The quantitative goals for the diversion of biodegradable household waste from landfilling are 40% diversion until 2020; 3% diversion from landfilling due to decentralized composting (yard composting, etc.) until 2020 and 75% diversion from landfilling of edible oils until 2020. Plan also contains the exploitation of the utilization of secondary materials (compost) and the use of strict quality standards.

**Greece – Central Macedonia Region**

**The Operational Programme for the Region of Central Macedonia 2014 – 2020 (ROP-CM)** is an umbrella programme addressing the key regional strategies of Central Macedonia. The Programme promotes innovation, competitiveness and human resource development. The regional priorities set for waste management are partially addressed by the ROP-CM, but are mostly covered by the National Programme “Transport Infrastructure, Environment and Sustainable Development”.

An instrumental regional strategy is RIS3 – Research and Innovation Strategy for Smart Specialisation that shapes the policy agenda in the fields of Innovation and Entrepreneurship. At the moment, no reference is made to circular economy or other relevant terms in RIS3; the introduction of the circular economy concept in RIS3 is a critical step that could pave the way for relevant changes in the ROP priorities, especially in terms of the call for proposals under preparation and the relevant criteria for project selection. It is noted that the interventions of ROP-CM are confined within the geographical and administrative limits of the Region of Central Macedonia and affect other neighbouring regions, at least as regards its direct outputs and outcomes.

Focus areas of ROP-CM are upgrading the infrastructure concerning waste management in the region and promotion of eco-innovation and “green” investment.

The goal of the **Regional Waste Management Plan of Central Macedonia** in the field of biological waste is its diversion of 76.3% from landfilling comparing to 1997 production.

**Romania**

In the **Government Decision 870/2013 – National Waste Management Strategy 2014 – 2020,** the concept of circular economy is linked to the efficient use of resources**.** The Strategy defines the term circular economy. The focus areas are: biowaste prevention; reducing GHG emissions; resource efficiency. The strategy highlights the fact that over 50% of the domestic waste is organic and sets targets to reduce the amount by prevention and to separate the organic fraction and treat it by composting, anaerobic digestion etc. Landfilling organic waste has negative impacts on the environment (methane and other greenhouse gas emissions contributing to climate change) and on human health. Thus the waste directive includes a plan for reducing the amounts of landfilled biodegradable waste.

**Romania – South Muntenia Region**

The term “circular economy” exists in **The Smart Specialization Strategy of South Muntenia Region 2014 – 2020** related to bio-economy. Development of circular economy is a smart specialization field in South Muntenia region. Bioeconomy involves the production of bio-fuels, ecologic fertilization, plant biomass, plastics and bio-composites, mobile facilities for biomass processing, nutritional supplements, cosmetics, herbal medicines). The region has a high level of available resources, natural, human and entrepreneurial resources. This field appears not only as an opportunity in the region but as a necessity. Activities identified as having potential for development in the area are the following: production of biofuels from biomass, animal waste and other by-products; production of organic fertilizers; growing of biomass (willow, miscanthus, acacia, paulownia, energy grass); creation of protective strips to prevent desertification and efficient use of land; production of biomass products and by-products of biological processes; production of plastic biocomposites; production of smart mobile units that can process biomass on-site; and production of food supplements, cosmetics and herbal substances to treatments.

Targets are increasing the number of innovative businesses; CDI infrastructure development; creation and development of innovative clusters; creation and development of technology transfer entities; building partnerships and stimulating networking research.

**France**

In the **(1)** **Law relative to Energy Transition for Green Growth (2015),** the circular economy is mentioned as an own strategic topic under “Title IV: Fighting waste and promoting circular economy: from product design to recycling” (articles 69-103). The law recognizes circular economy as a national objective and as one of the pillars for sustainable development.Focus areas are the reduction of GHG emissions and of atmospheric polluters, and air quality in transport

The goal is to combat GHG emissions through, among others, circular economy in all sectors (decrease GHG emissions by 10% by 2020 and by 20% by 2025 as compared to 2010). The national energy agency (ADEME) will produce a report on the state of various action plans by the end of 2017.

**(2) Law on the New Territorial Organisation of the Republic** is the second policy document in France, according to whicheach region will have a programme favouring circular economy. That will allow waste management, recycling, and stocking of waste to be equally dispersed among different regions of France in order to ensure the principles of circular economy as defined by the Environmental Code.Each region will have a **programme for prevention and waste management**, according to its origin, nature, composition, and modes of their transportation. Among others, this law foresees the creation or adaptation of infrastructures in order to meet the national objectives in terms of waste management.

**France – Pays de la Loire Region**

Circular Economy is a core and only topic of the **Circular Economy Action Plan as part of the Regional Waste Management Programme (2019 – 2031).** Strategic axes of the plan contain a number of topics aimed at development of circular economy, such as: Ensure shared governance, develop networking of actors, accompany the economic actors; Integrate circular economy into vocational training, develop knowledge of resources and their potential for value creation; Integrate circular economy into public procurement to stimulate supply, make the general public aware of its role as a consumer; Integrate circular economy into construction, encourage the recycling of construction waste; Develop circular economy for agri-food flows; Develop and raise awareness of local circuits in a logic of environmental quality; Prevent bio-waste through the fight against food waste (from production to consumption); Create value by making the best use of bio-waste and by-products through recycling and anaerobic digestion; Develop circular economy within the maritime ecosystem; Make our waste a valuable creative resource; Develop reuse and repair; Develop waste recycling channels as a secondary raw material; Generate energy from local resources; Integrate circular economy into regional and territorial public policies.

**Summary**

Policies related to bio-based circular economy are still underdeveloped in CEE countries compared to e.g. Finland or Spain. However, the strategic documents are already being prepared in cooperation with stakeholders from the national and regional level. Regional activities related to bio-based circular economy are gradually supported using various funds and instruments.