

Regional project development assistance for the uptake of an Aragonese circular economy

D2.3 Guidelines for Legal and Regulatory sustainability Circular Economy Projects

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EXECUTIVE SUMMARY

RESOURCE is a 36-months project funded by the European Union Horizon Europe programme aiming at developing a methodology with individual services for pilot partners to increase private financing of circular economy projects in raising 20 million euros. This methodology is tested in the Aragon region, as a pilot case, and will be replicated in European countries.

The RESOURCE Guidelines for Legal and Regulatory sustainability Circular Economy Projects presented in this report are a compilation of the regulations and public policies carried out in the field of circular economy in the Autonomous Community of Aragon.

To this end, a territorial analysis is carried out, starting from the European Union Directives applicable to the material, to subsequently analyse the regulations and policies carried out in Spain, with special emphasis on the National Circular Economy Strategy. Finally, it contextualises the governmental action of the Autonomous Community of Aragon with focus on the subject, through the Aragon Circular Strategy.

On the other hand, a sectoral analysis of the regulations in the material is collected, focusing on the sectors of activity related to those of the pilot projects selected within the RESOURCE project.

Finally, an analysis of the circular economy is made from a positive and negative approach to its regulation.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
ABBREVIATIONS	4
INTRODUCTION AND OVERALL STRATEGY	4
1.1 Context and background	4
1.2 Expected results	5
2 REGULATORY CONTEXT OF THE EUROPEAN UNION.....	6
2.1 Green Deal: European Green Pact	6
2.2 Action Plan for a Circular Economy 2020.....	7
2.3 Applicable Community Directives	8
2.3.1 Waste Framework Directive	8
2.3.2 Packaging Framework Directive	9
2.3.3 Landfill Framework Directive.....	9
2.3.4 Plastics Framework Directive.....	10
3 STATE REGULATORY CONTEXT	11
3.1 Spain Circular 2030 National Strategy.....	11
3.2 Circular Economy Action Plan 2021-2023	12
3.3 Applicable law	13
3.3.1 Climate Change and Energy Transition Law	13
3.3.2 Waste and Contaminated Land Act.....	13
4 AUTONOMOUS CONTEXT	14
5 THE SECTORAL CONTEXT	14
5.1 Sectorial context in Aragon	14
5.1.1 Recycling and waste management sector	15
5.1.2 Agribusiness.....	16
5.2 Key directives to be implemented in Aragon to promote circular economy in Aragon.....	18
5.3 Next steps.....	18
6 POSITIVE AND NEGATIVE APPROACHES TO REGULATION	19
6.1 Barriers	19
6.2 Opportunities	19
6.3 Facilitating measures.....	20
7 KEY CONCEPTS IN THE REGULATORY LANDSCAPE	21
7.1 Categorisation of the sector.....	21
7.2 Circular, Sustainable and Green Economy	22
8 CONCLUSION	22

ABBREVIATIONS

AGE	General State Administration (Administración General del Estado)
CE	Circular Economy
EEEC	Estrategia Española de Economía Circular (Spanish Circular Economy Strategy)
EU	European Union
GIRA	Comprehensive Waste Management Plan (Plan de Gestión Integral de Residuos de Aragón)
GPD	Gross Domestic Product
ICT	Information and communication Technologies
PDA	Project Development Assistance
RAP	Extended Producer Responsibility
SODIAR	Society for Industrial Development of Aragón (Sociedad para el Desarrollo Industrial de Aragón)
SUPs	Single-ues plastic products

Introduction and overall strategy

1.1 Context and background

Circularity is an essential aspect of the industry transformation towards resource-efficiency, impact neutrality and long-term competitiveness.

The RESOURCE project assesses private funding opportunities for circular projects and facilitate their development. RESOURCE's overarching objective is to develop new Project Development Assistance (PDA) services to fund regional circular economy investment projects. More precisely RESOURCE will:

- build an integrated expertise pool to support regional circular economy pilots SMEs,
- develop innovative financing schemes and business models,
- launch concrete investments.

The RESOURCE project is designed to ensure a high degree of replicability of the PDA and related services. Results will be disseminated to maximize their impact in Aragón and beyond. Transitioning towards a more circular economy has a high priority for the Region of Aragón. The Region has launched a manifestation of interest and identified a portfolio of circular projects in need of funding. Nine of these projects serve as pilots in the RESOURCE project.

The methodology that will be developed for the RESOURCE project will ensure the sustainability of those circular economy projects by potentially completing their private funding with other sources of financing (European, national, and regional public funds).

The RESOURCE methodology consists of seven steps:

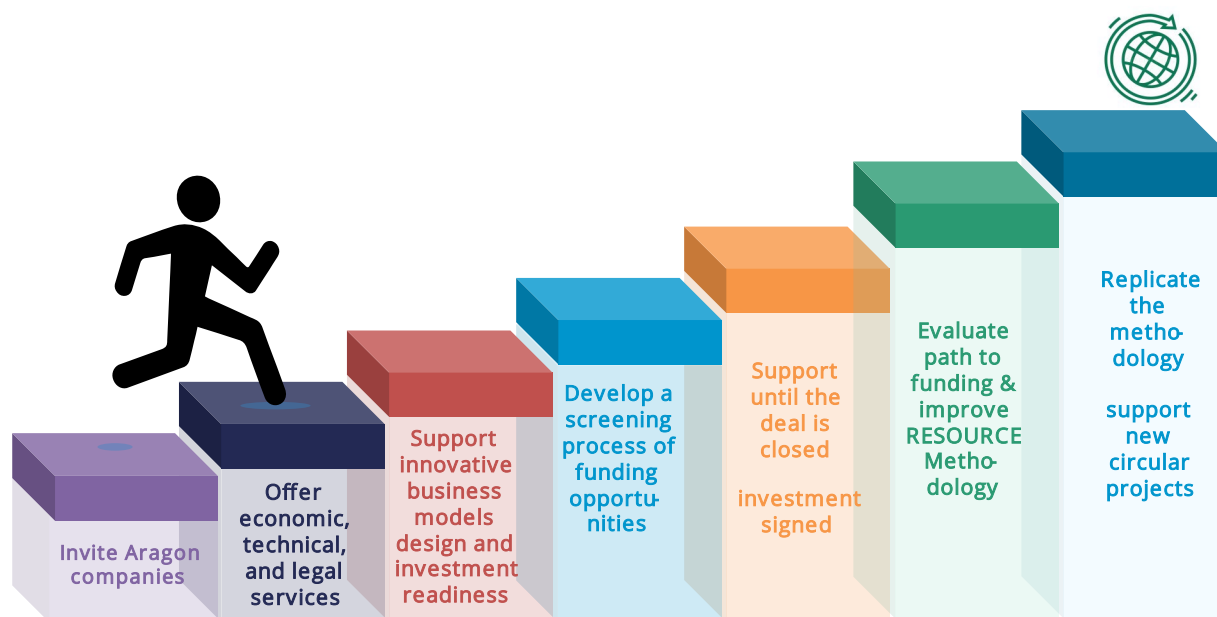


Figure 1 - The RESOURCE methodology in 7 steps

1.2 Expected results

The strong interest coming from Aragon companies to shift towards circular practices guarantees a sustainable pipeline of projects to test the RESOURCE methodology. The final and overall objective of the RESOURCE project through the creation of a portfolio of project development assistance services, is to accelerate the development of the circular economy in Aragon and to reach €20M direct private investment in circular projects over a period of 36 months, until end of June 2025.

To achieve this objective, impact maximisation activities, including communication and dissemination, it is strategically important to onboard feasible and strong stakeholders on time and keep them engaged throughout the whole project and beyond.

RESOURCE notably reaches out to partners and contributes to building a circular economy community to develop an innovative regional process and ecosystem to remove the technical, economic, legal, regulatory, and financial barriers circular projects face.

The innovative RESOURCE approach is co-created with public institutions, intermediary organisations, finance stakeholders and beneficiaries. A specific outreach and communication campaign is continuously conducted throughout the RESOURCE project to engage the largest possible number of regional stakeholders. A set of market intelligence and awareness-raising materials (factsheets, publications, informational videos, etc.) and knowledge and capacity-building activities (including online training webinars, exchange of good practices and peer experiences, etc.) is specifically developed.

A similar campaign is conducted to reach out to and engage with other circular economy ecosystems in the EU interested in replication. Another (similar and updated) set of market intelligence and awareness-raising materials and knowledge and capacity-building activities will also be developed.

Finally, communication and dissemination activities will target regional, national, and European policy makers, civil society, and the general public in a different yet adequate manner.

2 Regulatory context of the European Union

2.1 Green Deal: European Green Pact

The European Green Pact¹ is a package of policy initiatives aimed at setting the EU on the path towards a green transition, with the ultimate goal of achieving climate neutrality by 2050. It is the basis for the transformation of the EU into an equitable and prosperous society with a modern and competitive economy.

It underlines the need for a holistic and cross-sectoral approach in which all relevant policy areas contribute to the ultimate climate goal. The package includes initiatives covering climate, environment, energy, transport, industry, agriculture and sustainable finance, all of which are closely interlinked.

The Commission launched the European Green Pact in December 2019, and the European Council took note of the Pact at its December meeting.

Some of the most relevant measures of the European Green Pact are:

- **Target 55:** This is a set of measures that aims to review all climate, energy and transport related legislation and to make new legislative proposals to bring EU legislation in line with climate objectives.
- **European Climate Legislation:** The European Climate Legislation transforms the objectives of achieving climate neutrality by 2050 into a legal obligation for the EU.
- **EU climate change adaptation strategy:** this strategy sets out long-term measures to enable an EU adapted to the unavoidable effects of climate change by 2050.
- **EU Biodiversity Strategy:** aims to restore Europe's biodiversity by 2030.
- **Farm to Fork Strategy:** aims to achieve climate neutrality by 2050 by transforming the EU food system into a sustainable model.
- **European Industrial Strategy:** aims to support the industrial sector as a driver of change, growth and innovation.
- **Action Plan for the Circular Economy:** It proposes the adoption of circular production and consumption systems as the cornerstones of economic growth.

¹ All information on the European Green Pact can be found at <https://www.consilium.europa.eu/en/policies/green-deal/>.

- **Batteries and their waste:** a new regulation is issued to promote the circular economy and improve the functioning of the market for batteries and accumulators, covering all phases of the life cycle of batteries and accumulators, from their design to the treatment of their waste.
- **Just Transition:** The Just Transition Facility aims to provide support, both financial and technical, to the regions most affected by the transition to a low-carbon economy. The aim is for all Member States and regions to achieve climate neutrality by 2050.
- **Clean, affordable and secure energy:** the aim is to decarbonise the energy sector in order to reduce greenhouse gas emissions by supporting the development of clean energy.
- **EU Strategy for the sustainability of chemicals:** this Strategy sets out a long-term vision for EU chemicals policy, aiming to reduce the use of toxic substances, while making the protection of human health and the improvement of industry's competitiveness compatible.
- **Forest and Deforestation Strategy:** builds on the Biodiversity Strategy. It proposes sustainable forest management, the planting of new trees and the promotion of environmentally friendly practices, so as to increase the size and biodiversity of trees and reduce greenhouse gas emissions.

2.2 Action Plan for a Circular Economy 2020

The Circular Economy Action Plan 2020² is one of the main initiatives of the European Union in the framework of the European Green Pact.

Strengthening the decoupling economic growth from resource use and adopting circular systems of production and consumption are essential to achieve EU climate neutrality by 2050.

In March 2020, the Commission presented a new Circular Economy Action Plan. Thereafter, in December 2020 the Council adopted Conclusions on the Action Plan. The Conclusions highlight the role of the circular economy in ensuring a green recovery after COVID-19.

The main objectives of the measures are :

- Make sustainable products the norm in the EU.
- Empowering consumers and public purchasers.
- Focus on the sectors that use the most resources and where the potential for circularity is highest: electronics, ICT, batteries, vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients.
- Securing fewer resources.
- Making circularity work for people, regions and cities.
- Leading global efforts on the circular economy.

The Action Plan foresees more than 30 measures on sustainable product design, circularity of production processes and empowerment of consumers and public purchasers. It targets

² All information on the Circular Economy Action Plan can be found at https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en?etransnolive=1.

sectors such as electronics and information and communication technologies (ICT), batteries, packaging, plastics, textiles, construction and buildings, and food.

2.3 Applicable Community Directives

2.3.1 Waste Framework Directive

In the framework of the Circular Economy Action Plan, the European Union adopted Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste³.

This directive, which is part of a package of measures on the circular economy, sets minimum requirements for the functioning of extended producer responsibility schemes*. These may also include organisational responsibility, the responsibility to contribute to waste prevention and ensuring the re-usability and recyclability of products.

It also strengthens the rules on waste prevention. With regards to the generation of waste, EU Member States must adopt measures that:

- support sustainable production and consumption patterns,
- encourage the design, manufacture and use of products that are resource efficient, durable, repairable, reusable and upgradeable,
- target products containing critical raw materials in order to prevent these materials from becoming waste,
- encourage the availability of spare parts, instruction manuals, technical information or other means to enable products to be repaired and reused without compromising their quality and safety,
- reduce food waste generation as a contribution to the UN Sustainable Development Goals to reduce food waste per capita globally by 50% at retail and consumer level and reduce food losses along production and supply chains by 2030,
- promote the reduction of the content of hazardous substances in materials and products,
- to curb the generation of marine litter.

In addition, the Directive formulates new recycling targets for municipal waste: by 2025, a minimum of 55% of municipal waste by weight has to be recycled. This target will rise to 60% by 2030 and 65% by 2035.

Finally, the Directive also identifies examples of incentives to implement the waste hierarchy, such as landfill and incineration fees and pay-as-you-throw schemes.

³ All information on the Waste Framework Directive can be found at https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive_en

2.3.2 Packaging Framework Directive

As part of the package of measures stemming from the Circular Economy Action Plan, Directive (EU) 2018/852 is the latest amendment to Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste⁴. The new Directive contains updated measures designed to:

- prevent the production of packaging waste, and
- promoting reuse, recycling and other forms of recovery of packaging waste, rather than its final disposal, thus contributing to the transition towards a circular economy

The amended document requires EU countries to adopt measures, such as national programmes, incentives through extending producer responsibility schemes and other economic instruments, aimed at preventing the generation of packaging waste and minimising the environmental impact of waste.

EU countries should encourage an increase in the proportion of reusable packaging on the market and systems for reusing packaging in an environmentally friendly way that does not compromise food safety and consumer safety. Such schemes may include:

- deposit and return systems,
- specific objectives,
- economic incentives,
- minimum percentages of reusable packaging placed on the market for each packaging type, etc.

EU countries must also take the necessary measures to meet recycling targets, which vary depending on the packaging material, by applying the new calculation rules for reporting on new mandatory recycling targets for 2025 and 2030.

2.3.3 Landfill Framework Directive

To underpin the EU's transition to a circular economy, Directive (EU) 2018/850 amends Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste⁵.

Among the measures included in this directive, the following stand out:

- introducing landfill restrictions from 2030 on all waste suitable for recycling or other material or energy recovery,
- intending to limit the proportion of municipal waste deposited in landfills to 10% by 2035,

⁴ All information on the Packaging Waste Framework Directive can be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:01994L0062-20150526>

⁵ All information on the Landfill Framework Directive can be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01999L0031-20180704>

- introducing rules on the calculation of the achievement of municipal waste targets and requires EU countries to establish an effective quality control and traceability system for municipal waste deposited in landfills,
- calling on the European Commission, with the European Environment Agency, 3 years before each deadline, to produce early warning reports to identify shortcomings in the achievement of the targets and to recommend actions to be taken,
- allowing EU countries to use economic instruments and other measures to promote the implementation of the waste hierarchy introduced under Directive 2008/98/EC, the Waste Framework Directive.

2.3.4 Plastics Framework Directive

Finally, Directive (EU) 2019/904⁶ on reducing the impact of certain plastic products on the environment aims to prevent and reduce the environmental impact of certain plastic products. It promotes the transition to a circular economy across the European Union by introducing a combination of measures tailored to the products covered by the Directive. It does so particularly by ensuring that single-use plastic products (SUPs), for which more sustainable alternatives are available and affordable, cannot be placed on the market.

⁶ All information on the Plastics Framework Directive can be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019L0904>

3 State regulatory context

3.1 Spain Circular 2030 National Strategy

The Spanish Circular Economy Strategy, Spain Circular 2030⁷ lays the foundations for promoting a new model of production and consumption in which the value of products, materials and resources is retained in the economy for as long as possible. As a consequence, waste generation is minimised and those that cannot be avoided are used to the greatest possible extent. The Strategy thus contributes to Spain's efforts to achieve a sustainable, decarbonised, resource-efficient and competitive economy.

The Strategy has a long-term vision, Spain Circular 2030, which is intended to be achieved through successive three-year action plans to be developed. The action plans will incorporate the necessary adjustments to complete the transition by 2030.

In this context, the Strategy establishes strategic orientations and sets a series of quantitative objectives to be achieved by 2030:

- Reduce national material consumption in relation to Gross Domestic Product (GDP) by 30%, using 2010 as a baseline year.
- Reduce waste generation by 15% compared to 2010.
- Reduce food waste generation throughout the food chain: 50% reduction per capita at household and retail level and 20% reduction in production and supply chains from 2020 onwards.
- Increase reuse and preparation for reuse to 10% of municipal waste generated.
- Improve water use efficiency by 10%.
- Reduce greenhouse gas emissions to below 10 million tonnes of CO₂ equivalent

The Strategy identifies six priority sectors for circular economy activity: construction, agri-food, fisheries and forestry, industry, consumer goods, textiles and clothing.

On the other hand, it establishes eight main lines of action on which the policies and instruments of the Strategy will focus:

- Production.
- Consumption.
- Waste management.
- Secondary raw materials.
- Water reuse.
- Awareness-raising and participation.
- Research, innovation and competitiveness.
- Employment and training.

⁷ All the information on the Spain Circular 2030 Strategy can be found at the following link: https://www.miteco.gob.es/content/dam/mitesco/es/calidad-y-evaluacion-ambiental/temas/economia-circular/200714eeec_resumenejecutivo_en_tcm30-510578.pdf

3.2 Circular Economy Action Plan 2021-2023

The Spanish Circular Economy Strategy (EEEC) calls for the development of successive three-year action plans that specify and coordinate the measures of the General State Administration (AGE) for the promotion and inclusion of the Circular Economy (CE) in the different sectoral policies in order to move towards the adoption of an economically, socially and environmentally sustainable model.

Thus, the 1st Circular Economy Action Plan⁸ is an ordered instrument of the 116 measures set out by eleven ministries. It forms a coordinated and complementary response that reinforces each of the individual measures proposed to achieve the objectives defined for the year 2030 while maintaining coherence with the initiatives and policies undertaken at EU level.

Within the framework of the criteria set out in the EEEEC, which in turn takes as a reference the axes defined in the first Circular Economy Action Plan of the European Commission, the Plan is divided into 5 axes and 3 lines of action. At the same time, within each of the axes and lines, measures are grouped together to respond to the most shared concerns of the circular economy.

In summary, these are the main lines of action:

- **Production" line of action:** seeks to promote the redesign of processes and products to optimise the use of non-renewable natural resources in production, encouraging the incorporation of secondary raw materials and recycled materials and minimising the incorporation of harmful substances, with a view to obtaining products that are more easily recyclable and repairable, redirecting the economy towards more sustainable and efficient modes.
- **Consumption" action line:** aims to reduce the ecological footprint by changing consumption patterns towards more responsible consumption that avoids waste and non-renewable raw materials.
- **Waste management:** to effectively implement the principle of the waste hierarchy, substantially promoting waste prevention (reduction), preparation for re-use and recycling of waste.
- **Secondary raw materials" action line:** to ensure the protection of the environment and human health by reducing the use of non-renewable natural resources and reintroducing materials contained in waste as secondary raw materials into the production cycle.
- **Water reuse and purification" action line:** to promote an efficient use of water resources, making it possible to reconcile the protection of the quality and quantity of water bodies with a sustainable and innovative use of water.

⁸ All the information on the Circular Economy Action Plan 2021-2023 can be found at the following link (Spanish version only): https://www.miteco.gob.es/content/dam/miteco/es/calidad-y-evaluacion-ambiental/temas/economia-circular/plan_accion_eco_circular_def_nipo_tcm30-529618.pdf

- **Line of action "Research, innovation and competitiveness":** to foster the development and application of new knowledge and technologies to promote innovation in processes, products, services and business models, promoting public-private collaboration, training researchers and R&D&I personnel and encouraging business investment in R&D&I.
- **Participation and awareness-raising" action line:** to encourage the involvement of economic and social agents in general, and citizens in particular, in order to raise awareness of current environmental, economic and technological challenges, and of the need to generalise the application of the waste hierarchy principle.
- **Line of action "Employment and training":** to promote the creation of new jobs, and the improvement of existing ones, within the framework offered by the Circular Economy.

3.3 Applicable law

3.3.1 Climate Change and Energy Transition Law

Law 7/2021, of 20 May, on climate change and energy transition⁹, has among its main objectives, according to its first article, to facilitate the decarbonisation of the Spanish economy, its transition to a circular model, in such a way as to guarantee the rational and supportive use of resources.

Furthermore, in its fifth additional provision, under the heading "promotion of the Circular Economy", it contains a mandate to the Government to present a Draft Law on Waste and Contaminated Land. This includes as one of its main axes the promotion of the circular economy, in line with the Spanish Circular Economy Strategy, Spain Circular 2030, with the aim of contributing to achieving a sustainable, decarbonised, resource-efficient and competitive economy.

This provision adds that the Government, within the framework of the Spanish Circular Economy Strategy, will develop three-year Action Plans that will include measures and sectoral action plans aligned with the climate objectives agreed by the Paris Agreement, the lines of action of the Green New Deal, the objectives of the European Commission's strategy on circular economy and the objectives of the Spanish Strategy itself.

3.3.2 Waste and Contaminated Land Act

Law 7/2022 of 8 April on waste and contaminated land for a circular economy¹⁰ aims to prevent and reduce the generation of waste and the adverse impacts of its generation and management. It facilitates the reducing the overall impact of resource use and to improve the efficiency of such use in order to ultimately protect the environment and human health. Another aspect is the transition towards a more circular economy ensuring the efficient functioning of the internal market and the long-term competitiveness of Spain.

⁹ You can find this law at <https://boe.es/buscar/pdf/2021/BOE-A-2021-8447-consolidado.pdf>

¹⁰ You can find this law at <https://www.boe.es/buscar/pdf/2022/BOE-A-2022-5809-consolidado.pdf>

4 Autonomous Context

The Government of Aragon is committed to the circular economy. In recent years it has released and elaborated on different sectoral plans and strategies that intrinsically already contain the principles of the Circular Economy.

To this end, it consolidates this commitment with the launch of the Aragón Circular Strategy, aligned with the sustainable development objectives of the 2030 agenda. Its aim is the creation of the political, economic and social frameworks that will allow Aragón to transition towards an innovative circular economy, efficient in the use of resources, generating quality employment and structuring the territory.

Taking into account the strategic mission of ARAGÓN CIRCULAR, the challenges that Aragon must face in its transition to the circular economy, the inspiring principles on which it is built and the vision of Aragon as a benchmark in 2030 in the capacity for innovation and adaptation of Aragonese society, from co-responsibility to the great economic and social challenges for the coming years, the following strategic objectives are defined:

1. Encourage economic activity and the generation of employment in the circular economy in Aragon.
2. To promote the circular economy sector as a strategic economic sector in Aragon that is configured as a dynamic and driving force for the economic and social development of the autonomous community.
3. Promote entrepreneurship in new niches of activity derived from the circular economy, as well as intra-entrepreneurship in existing innovative companies.
4. Recognition and enhancement of the value of leading companies in the transition to the new economic model.
5. Positioning as a strategic sector in the economic panorama of Aragon.
6. Promoting specialisation in the sector

5 The sectoral context

5.1 Sectorial context in Aragon

Aragon has been developing its Aragon Circular strategy for years. The program is a regional initiative launched in 2020 with the goal of transforming Aragon's economy into one that is more innovative, competitive, and sustainable. The strategy aligns several higher-level strategies that link regional aids with national ones, as well as with the European Green Deal. The framework focuses on key areas for development. These include lowering environmental impact, promoting eco-design, and encouraging R&D&I in circular practices. It also aims to create jobs, address rural depopulation, and promote sustainable business practices throughout the production and consumption cycles.

One of the most prominent aspects of this program was the Aragon Circular Seal, which recognizes companies and local governments that demonstrate a commitment to circular economy practices. The seal was also required for selection into the RESOURCE project.

Because the majority of the companies chosen are involved in the recycling or waste management sectors (CERFO, EWN SOLUTIONS, FELTWOOD, THERMOWASTE, GREEN FOUNDRY, and RECICLA), it has been chosen as one of the most important to analyse at this point. The project also includes the air treatment sector (SMART MOSS and CADIUCO) and bioenergy (BIOGAS DT), which are primarily based on the national and European frameworks. Finally, Aragon is attempting to strengthen the agrifood industry (BUGGLE) by taking the first steps toward developing sector-specific programs, which will be explained in this phase.

Finally, it is important to note that the Aragon government is in the process of transitioning to a circular economy by implementing new programs, aids, and a new vision. As a result, the latest information about the legal framework, as well as an explanation of the next steps, were added in this point.

5.1.1 Recycling and waste management sector

The recycling sector, which is regulated by national legislation, and waste management share similar goals that are closely related to the three Rs (recycling, reuse, and reduction). Both sectors are becoming increasingly important in the circular economy, and they have a lot of potential. The current scope and market situation have created a significant opportunity to participate in the sector, which is why Aragon has focused on it.

Aragón has developed its own plan for waste management which is called GIRA (plan de Gestión Integral de Residuos de Aragon). In this sense the plan aims to promote the circular economy in the region to improve waste management, reduce the use of hazardous substances, improve the efficient use of the resource and promote green job creation.

In addition, GIRA has the following guiding principles:

- **Increased Recycling Rates:** The plan sets an ambitious goal of reaching 65% recycling rates by 2030. This represents a significant increase from current levels, stimulating growth in the recycling sector.
- **Focus on Diversification:** The GIRA Plan extends beyond traditional recyclables such as paper and glass. It promotes the recycling of various materials, such as plastics, metals, electronics, and organics. This creates opportunities for companies specializing in these specific sectors.
- **Innovation and Technology:** The plan promotes the use of efficient and innovative recycling technologies. This could lead to the development of new sorting methods and material recovery processes, thereby improving recycling efficiency and cost-effectiveness.
- **Infrastructure Investment:** The plan recognizes the need for significant infrastructure investment in sorting and processing facilities to handle the increased volume and variety of recyclables. This investment will provide opportunities for the construction and operation of these facilities.

The plan has 10 strategic objectives to be achieved for 2030 which are:

- Reducing waste generation by 30%.
- Increasing recycling rates to 65%.
- Diverting 80% of non-hazardous waste from landfill.

- Reducing the amount of hazardous waste generated.
- Improving the energy efficiency of waste treatment.
- Raising public awareness of waste management issues.

After giving a brief overview of this action plan of the Aragon region, it is essential to show how can affect to the companies in this sector:

Table 1 - Positive impacts of the GIRA plan

Impact	Consequences
Increased demand for services	The plan focuses on waste prevention, reuse, and recycling. This will increase demand for companies that specialize in recycling collection, composting facilities, and repair/refurbishment services.
Innovation and specialization	GIRA promotes waste treatment closer to its source and increases energy efficiency. This could open up opportunities for businesses in Aragon to develop new technologies and specialize in specific waste streams.
Standardized practices	The GIRA Plan establishes clear objectives and encourages a more structured approach to waste management. This can create a more stable and predictable business environment for waste management companies.
Potential for public – private partnerships	To achieve its objectives, the plan relies on collaboration between the government and the private sector. This could open up opportunities for companies to collaborate with the government on waste management projects.

Overall, the GIRA Plan is likely to have a positive long-term impact on Aragon's waste management sector. Companies that can adapt to the changing landscape and embrace new technologies and practices will benefit the most.

5.1.2 Agribusiness

Agri-business in Aragon thrives at the intersection of tradition, innovation, and a supportive regulatory framework. The framework key aspects are:

- **Sustainability:** Regulations encourage environmentally friendly practices such as water conservation, soil management, and integrated pest management. This guarantees long-term agricultural sustainability and environmental protection.
- **Food Safety & Quality:** Aragon follows strict national and EU regulations for food safety and quality control. This ensures that consumers receive high-quality, ethically produced products.
- **Animal Welfare:** Regulations prioritize animal welfare throughout the production chain to ensure humane treatment of livestock.
- **Traceability:** Aragon prioritizes traceability throughout the food chain, allowing consumers to track the origin of their food and fostering trust in the agri-business sector.

- **Government Incentives:** The Aragonese government offers financial aid, subsidies, and tax breaks to support farmers, particularly those embracing sustainable practices and innovation.

The Department of Agriculture, Livestock, and Food is responsible for directing, planning, and supervising Aragon's agricultural product industrialization. For that purpose, the government of Aragon are proposing the following aids

5.1.2.1. Aid and subsidies to the agri-food industry:

The subsidies have the main objectives of:

- Improve the use of Aragonese agricultural raw materials in production and marketing, particularly through exports.
- Emphasize the importance of adding value to agricultural products as a strategic sector for rural sustainability and territorial planning, including job creation and sectoral structuring.
- Encourage innovation in agri-food products through the use of new technologies and processes to meet market demand and increase market share.

Table 2 - Benefits of the subsidies

BENEFITS	Increased competitiveness in the Aragonese agri-food sector through innovation and modernization.
	Rural job creation, depopulation mitigation, and agricultural production valuation.
	Promotion of a sustainable and efficient production model in the use of resources.

5.1.2.2. Financing for Aragonese agri-food companies:

This financial tool is a collaboration Agreement between the Department of Rural Development and Sustainability and the Society for Industrial Development of Aragon (SODIAR) for the creation and endowment of the "Support Fund for Aragonese Agri-food Companies".

In this program can participate all Aragonese agri-food companies, existing or newly created, with registered office in Aragon, but they have to satisfy the following requirements:

- Undertake or execute business projects or initiatives that allow the good progress of circular economy
- Create and maintain jobs in rural areas.
- Develop and innovate in agricultural and food production products and processes.

The Department of Agriculture, Livestock and Food of Aragon is committed to promoting the regional agri-food industry, boosting its competitiveness, sustainability and job creation in rural areas.

As a summary, here are explained the specifics that are in the Aragon region, for those sectors that are no mentioned into this point, they are under national regulations. Furthermore, as the GoA is into a transition processes adaptations, change o new programs could be created.

5.2 Key directives to be implemented in Aragon to promote circular economy in Aragon

The true challenge is to implement plans and actions that promote logistical integration in its entirety, such as incorporating all circular principles into economic, industrial, and environmental policies, as well as conducting periodic updates and market monitoring.

To accomplish this, industry, market, and institutional relations must be the first point of interest. Therefore, the following actions must be reviewed before introducing improvements:

- Encourage collaboration, complementary work, and interdisciplinary exchange.
- Fiscal measures to promote circular goods and services include.
- Creating competitiveness for recycled materials.
- Promoting the shift from product to service models.
- Implementing Extended Producer Responsibility (RAP) systems for new products
- Improving the role of industry symbioses.
- Simplify complex regulatory processes.
- Improve consumer knowledge and awareness to help them make informed decisions.

5.3 Next steps

To accomplish all the expectations, and the market/sector trends of the new directives of Aragon have been working to develop different programs which will be launched in the following months. The new programs will help:

- **Continuation of the policy of aid to the circular economy:** the Government of Aragon will continue to grant, annually, aid and subsidies to promote the circular economy in Aragon. These supports will be directed, on the one hand, to the investment of companies to transform their production processes into processes that comply with circularity parameters. On the other hand, R&D projects in the circular economy will continue to be subsidized.
- **Young entrepreneur awards in circular economy:** The Government of Aragon is going to hold a call for awards to recognize innovative circular economy projects carried out by young people in Aragon. These prizes will also have a financial award.
- **Reformulation of the Aragón Circular strategy:** The Government of Aragón is going to carry out a reformulation of the Aragón Circular strategy, including the Aragón Circular Seal. This strategy aims to promote the Social Responsibility of companies, from three points of view: financial, social and environmental, this third area being the one that will value the circularity of production processes. That is why the strategy will introduce, not only the concept of circularity, but the concept of "sustainability", as a global objective of all companies.

6 Positive and negative approaches to regulation

6.1 Barriers

As we have seen, there is great awareness at all institutional levels for the implementation and development of the circular economy model. However, despite the important measures adopted at European, national and regional level, there are still a number of barriers to overcome in order to achieve a full implementation of this model.

The Execyl Foundation¹¹ classifies these obstacles into four groups:

1. **Political and regulatory barriers:** this group of obstacles is centred on the lack of support and incentives from governments, mainly through funding, training, tax incentives, etc., which makes it difficult to attract investment in this area. In terms of regulation, there is still a lack of harmonisation of standards and definitions that would serve as a basis for the development of the circular economy model in all types of industries.
2. **Cultural barriers:** there is still little knowledge about the circular economy sector. In addition, there is a lack of environmental awareness among both suppliers and consumers, which hinders the development of circular business models. It is necessary to raise awareness among customers, encouraging them to acquire consumption habits that prioritise sustainability criteria when choosing products. On the other hand, there is still little culture of product reuse, encouraging a consumer culture based on the purchase of new products and the disposal of used products.
3. **Economic and financial barriers:** the cost of implementing new production and business models is generally higher than that of models that are already in place. Therefore, it is important to promote the existence of financing, both public and private, to enable the development of circular businesses.
4. **Technological and infrastructural barriers:** this barrier is mainly based on the lack of knowledge and technical skills in the work factor. There is a training deficit, especially in SMEs, which makes it difficult for them to identify and put into practice measures to reduce their environmental impact or to implement circular production systems.

6.2 Opportunities

On the other hand, as has been developed throughout this presentation, there are a large number of factors that actively or passively facilitate new market opportunities in the framework of the circular economy.

In terms of active or positive measures, we find the different economic strategies, such as the European Union's Action Plan for the Circular Economy 2020, the Spanish Government's Circular Economy Action Plan 2021-2023, as well as the Aragón Circular Strategy, promoted by the Government of Aragón.

¹¹ <https://www.execyl.es/consejos-y-guias/la-economia-circular-y-las-cuatro-barreras-que-debe-superar/>

Among the measures implemented by the Government of Aragon, it is worth highlighting the different forms of support for the circular economy, such as the approval of subsidies for business projects that include experimental development and/or industrial research in circular economy, or the annual awarding of the Aragon Circular Seal, which is an honorary recognition to those companies that meet a series of circularity criteria and which allows them to obtain subsequent benefits in access to contracts or public funding.

On the other hand, there is another series of measures that passively encourage circularity, either in the form of bans or the imposition of more burdensome fiscal and tax measures on particularly polluting activities or products. By way of example, Article 56 of Law 7/2022 of 8 April on waste and contaminated soils establishes a ban on certain plastic products, and Article 108 establishes a system of infringements regarding the entry and exit of waste from national territory that does not comply with the prohibitions established in the relevant European regulations.

6.3 Facilitating measures

Finally, other facilitating measures to achieve the implementation of a circular economy model, such as dialogue forums, expert councils, projects, etc., are gradually being developed. In this regard, it is worth mentioning the International Forum on Circular Economy, led by the European Union, which seeks to implement this production model in other countries around the world. On the other hand, the development of different projects at European level can be highlighted as facilitating measures for the implementation of the circular economy model, RESOURCE being a clear example of this.

In Spain, it is worth highlighting the creation of the Circular Economy Council, provided for in the Circular Economy Action Plan 2021-2023, whose main mission is to collaborate in the implementation, monitoring, review and drafting of annual proposals within the framework of the Spanish Circular Economy Strategy. This Council will be made up of social agents, economic agents from the primary, secondary and tertiary sectors, waste managers and extended producer responsibility systems, as well as consumers and organisations and research centres that promote R+D+i.

The Executive Committee of the Interministerial Commission may also agree on the participation in the Council of independent experts, including from the academic world, with experience and recognition in the field of the circular economy, to formulate ideas, suggestions and proposals to guide the measures to be applied to face the environmental, economic and technological challenges faced by the implementation of the circular model, as well as to take advantage of the opportunities arising from this paradigm shift.

7 Key concepts in the regulatory landscape

7.1 Categorisation of the sector

The lack of a commonly accepted and inclusive definition and measurement methodology of circularity hinders the transition to a more circular economy. This obstructs the development and access to finance, credit risk assessment and the transferability and replicability of projects and investments across regions and jurisdictions. To overcome this, the European Commission's Expert Group on Financing the Circular Economy proposes a system of sectoral categorisation of the circular economy, defining different categories of activities that contribute substantially to a circular economy.

The proposed Circle Economy Categorisation system consists of 14 circular categories organised into 4 clusters or high-level category models. These groups are aligned with the Value Hill business model tool developed by Circle Economy. According to the categorisation¹² carried out by the European Commission's Expert Group on Financing the Circular Economy, the following four groups of categories are proposed:

- Group 1 - Circular design and production models:** Activities that contribute to circular design and production aim to increase resource efficiency through design innovation, process innovation and re-engineering and/or material innovation and substitution. While such interventions take place early in the product life cycle, their positive environmental impacts materialise in the use and post-use phases and through the reduced use of virgin materials.

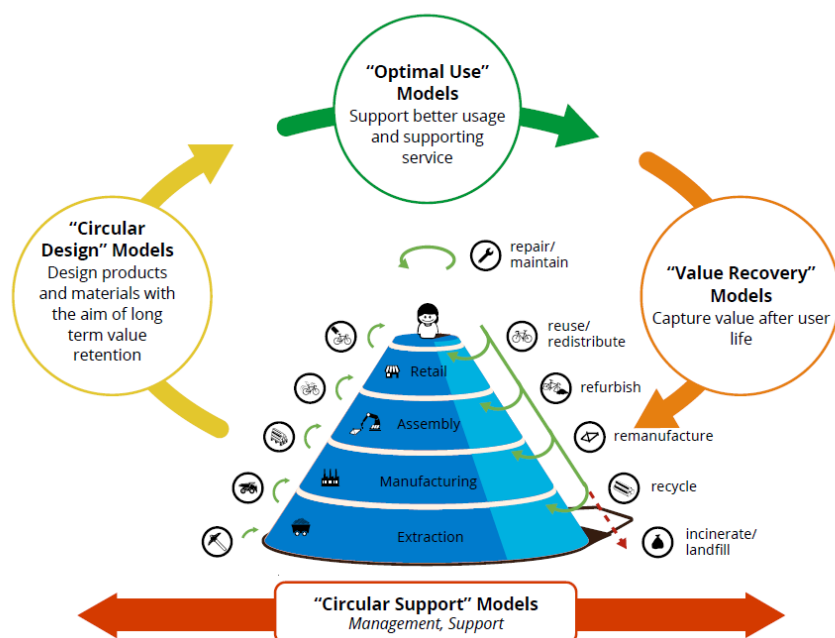


Figure 2 - Business Model Categories mapped on the Value Hill¹³

¹² <https://op.europa.eu/en/publication-detail/-/publication/ca9846a8-6289-11ea-b735-01aa75ed71a1/language-en/format-PDF/source-120460723>

¹³ [Elisa Achterberg, Jeroen Hinfelaar, Nancy Bocken, "The Value Hill Business Model Tool: identifying gaps and](#)

- **Group 2 - Circular use models:** Activities that contribute to circular use aim to increase resource efficiency through the extension of the life cycle of products and assets based on reuse, repair, repurposing, refurbishment or remanufacturing strategies and/or leasing and sharing models of products and assets that optimise the use of assets. Such interventions typically take place during or at the end of the product and asset use phase.
- **Group 3 - Circular value recovery models:** activities that contribute to circular value recovery aim to increase resource efficiency through the recovery of waste in preparation for reuse and recycling or other circular economy strategies. Such interventions typically take place during the post-use phase of products and assets.
- **Group 4 - Circular Support:** Circular support activities in the circular support category group aim to enable other circular activities/projects and thus indirectly contribute to increase resource efficiency.

7.2 Circular, Sustainable and Green Economy

Finally, it is important to differentiate between the circular economy, sustainable economy and green economy models. While they all have similarities in terms of common objectives, there are significant differences between them that mean that each follows its own rules.

Firstly, the green economy is one that focuses on economic development through the responsible use of resources, minimising environmental impact at all stages.

On the other hand, the sustainable economy focuses on using natural resources, which are limited, as efficiently as possible. This implies that the economy should be able to produce goods and services demanded by the population, but without compromising natural resources and the environment.

On the other hand, the circular economy includes part of the principles of these two models but changes their linear approach towards a circularity model based on reuse, keeping resources in use for as long as possible. Unlike the previous models, which are more focused solely on the efficient use of natural resources, the circular economy proposes the reuse of resources already used, extending the useful life of products and services, reducing waste and making the most of by-products.

8 Conclusion

In conclusion, the different institutional levels have been moving in recent years towards a circular economy model, developing public policies in this direction. At the European Union level, a large number of directives and regulations have been approved, which establish a dispersed regulatory regime. However, their implementation at national level in Spain and at regional level in Aragon has been progressive. In recent years, laws transposing European directives have been passed and various political strategies have been approved to implement a circular economy model, but there is still a long way to go to achieve this objective.

[opportunities in a circular network" \(2016\)](#) – found in The EIB Circular Economy Guide, Supporting the circular transition (page 4)