



D4-1 - Identification of Regional & National policies on Circular Economy in CSR for the Wood and Furniture sector

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The ALLVIEW project is a new transnational cooperation platform that connects Centres of Vocational Excellence (CoVEs) within the wood and furniture sector. ALLVIEW has operational objectives on a regional, national and European level which aim at an innovative approach to modernise vocational education and training.

1

Introduction

1. Objective of the document

The objective of this document is to analyse the status of the Corporate Social Responsibility (CSR) in the Furniture and Wood sectors.

In this document, the partner consortium of the project **“ALLVIEW - Alliance of Centres of Vocational Excellence in the Furniture and Wood sector”**, analysed some legislative tools that regulate CSR in the various European countries. The research has been carried out taking into consideration the three pillars on which CSR is based. These three pillars are:

- Sustainability.
- Inclusivity.
- Accessibility.

Through this research the consortium wants to analyse the European, National and Regional policies related to the pillars mentioned above in order to identify the best practices and developing guidelines regarding CSR to spread within the furniture and wood sector.

This document is the basis for future discussions on the potential impact of CSR in:

- Supporting a sustainable management of the resources, increasing the use of the renewables.
- Connecting the enterprises to the idea of circular economy.
- Supporting the employability of specific target group to the addressed enterprises, linked with the national and European policies.
- Supporting the enterprises capacity to hire and involve people with lower opportunity, developing win-win strategies.
- Creating centres of vocational excellence, able to train people with a different starting position (or profile or competencies or ...).
- Identifying the weak points in regional and national policies about inclusion both in the field of job offers and in the environment of VET.
- Identifying the special needs that are not related to the (potential) job-tasks and develop networks for specific target groups through the links with the no-profit sector.

This report is a first part of a more elaborated full report, which consist of 3 specific reports which have CSR as guiding thread.

The first concerns the CSR in relation to waste prevention and the circular economy, the other two documents are based on the themes of migrants and refugees and on the inclusion of people with disabilities in labour market and in training and education.

This complete report is based upon a structure composed of the following sections:

- A general overview on CSR.
- Policies on resource Circular Economy and waste prevention.
- Policies on inclusion of migrants and refugees to the labour market and VET system.
- Policies on the accessibility of people with special needs in:
 - Education (VET) system.
 - Labour Market.
 - Work environment.
 - Work tasks.
- Conclusion.

Thanks to this research the partner consortium wants to enhance the awareness regarding the CSR at European level considering not only the aspects regarding sustainable environmental topics but also regarding inclusivity and accessibility, addressed to a wider range of people with fewer opportunities, such as migrants, disabled people and people with social disadvantages in general.

2

**Some information about
Corporate Social Responsibility
(CSR)**

2. CSR

Corporate Social Responsibility (CSR) aims to improve and regulate the implications of an ethical nature within the strategic vision of any company. Specifically, it is an expression of interest in managing the problems inherent to the social and ethical impact in large, small and medium enterprises and in the activities, they carry out.

CSR identifies behaviours and practices that companies voluntarily adopt, to obtain beneficial results both for itself and for the context in which they operate.

Corporate social responsibility is a topic that extends across several policy areas. It has a fundamental role in ensuring sustainable economic growth, while at the same time, mitigating the social and environmental impacts of companies in the European Union and worldwide.

Increasingly aware, consumers are buying products and services from socially responsible companies. Larger companies also cause changes in the operation of smaller companies (in the supply chain). Young people judge future employers by the effects of the organisation on society or on environment: the more socially responsible companies get better staff; the employees of such companies are also more satisfied and do more. Corporate social responsibility contributes to a greater reputation of the organisation. CSR is also considered in a broader and narrower sense. The broader meaning includes the notion of the general responsibility of companies towards the natural and social environment. In general, with the term "social", it is possible to define the responsibility as the obligation of humanity to achieve the common goals of society. Corporate Social responsibility is the direction that companies take to have the profits. These affect a positive attitude towards the environment, the company itself and the economic activities that influence it. The main goal of Corporate Social responsibility is to create all higher standards of living, while maintaining the company's profits and the benefits of people both outside and within the company's environment.

European system on CSR is based on the "Triple bottom line" theory also known as the 3 pillars theory. This concept was first introduced by the English sociologist and economist John Elkington. The theory is based on the concept that an enterprise to be sustainable should consider and be responsible for three important factors, linked to each other: Profit, Person and Planet. In the specific; an enterprises or organization should be economic, social and environmental responsible. This is an approach based on the threefold dimension of the economic activity of a company that underlies not only the achievement of profit, but also respect for the rights of workers and the community, as well as environmental protection.

The European Commission has defined the ***"Triple Approach" as the "conception according to which the overall performance of a company must be measured according to its combined contribution to prosperity, the quality of the environment and social capital"***¹.

¹https://ec.europa.eu/health/archive/ph_determinants/life_style/tobacco/documents/smoke_free_frep_en.pdf



Figure 1 triple bottom line theory

Focusing on the European lever, for the first time, CSR became part of the Agenda of the EU, thanks to the European Council in Lisbon² in March 2000. On this occasion, CSR has been considered as a strategic tool to create a more competitive and socially cohesive society capable of strengthening and modernising the European social model.

In the Green Book of the European Commission³, of 2001, CSR is defined as: ***"The voluntary integration of the social and environmental concerns of companies in their commercial operations and in relations with interested parties"***⁴.

After 10 years, on 25 October 2011, the European Commission re-examines and overcomes the notion expressed previously by a new definition of CSR: ***"The responsibility of enterprises for their impacts on society"***.⁵

Thanks to this last definition, there were significant changes to the previous approach that companies adopted about CSR. Specifically, this new definition requires greater adherence by companies to the principles promoted by following international organisations: OCSE⁶, ONU⁷ and ILO⁸.

In this regard, in September 2015, more than 150 international leaders met at the ONU to jointly develop a strategy aimed at contributing to global development, promoting human well-being and protecting the environment.

On that occasion, the 2030 Agenda for sustainable development was approved, consisting of 17 main and strategic goals⁹ (SDGs) for sustainable development and 169 sub-objectives, which aim to end poverty, fight against inequality and social development and cheap.

These SDGs have universal validity, meaning that all countries must contribute to achieve the standards set according to their capabilities.

²https://www.europarl.europa.eu/summits/lis1_en.htm - :text=The European Council held a of a knowledge-based economy

³https://www.jussempier.org/Resources/Corporate%20Activity/Resources/greenpaper_en.pdf

⁴https://www.jussempier.org/Resources/Corporate%20Activity/Resources/greenpaper_en.pdf

⁵[https://eur-](https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0681:FIN:EN:PDF#:~:text=The%20Commission%20puts%20of%20ward%20a,for%20their%20impacts%20on%20society%E2%80%9D.&text=%E2%80%93%20maximising%20the%20creation%20of%20shared,mitigating%20their%20possible%20adverse%20impacts)

[lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0681:FIN:EN:PDF#:~:text=The%20Commission%20puts%20of%20ward%20a,for%20their%20impacts%20on%20society%E2%80%9D.&text=%E2%80%93%20maximising%20the%20creation%20of%20shared,mitigating%20their%20possible%20adverse%20impacts](https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0681:FIN:EN:PDF#:~:text=The%20Commission%20puts%20of%20ward%20a,for%20their%20impacts%20on%20society%E2%80%9D.&text=%E2%80%93%20maximising%20the%20creation%20of%20shared,mitigating%20their%20possible%20adverse%20impacts)

⁶https://www.esteri.it/mae/it/politica_estera/organizzazioni_internazionali/ocse.html

⁷<https://unric.org/it/>

⁸<https://www.ilo.org/global/lang--en/index.htm>

⁹<https://sdgs.un.org/goals>

In particular, the objectives are related to the triple bottom line theory on which the European CSR is based and in detail:

- From the first to the fifth SDG and the sixteenth are related to the factor: People.
- The twelfth to the fifteenth SDG and the sixth are related to the factor: Planet.
- From the seventh to the tenth SDG are related to the factor: Profit.
- The eleventh and seventeenth SDG are related to the factor: Partnerships.

To better understand what these SDGs are about, they are listed below in the pictures:



Figure 2 The 17 Goals

Nowadays, there are, in general, two dimensions of CSR: one internal and one external to the company. The internal dimension has as its focal point: the management of human resources, health, safety at work, environmental organisation, management of environmental resources etc.; the external one, on the other hand, concerns the stakeholders along the entire production chain and environmental problems worldwide.

In addition to and in relation to the definition of CSR, some business management models have been created over the years related to ethics' topic, below a list of them:

- **STANDARD SA 8000¹⁰**

This legislation was issued by the Social Accountability International (SAI) and ensures that companies respect social responsibility, a correct supply of resources and a control process for the protection of workers. This standard is the most widespread worldwide and is applicable to any company in any sector.

¹⁰ http://www.inpa.it/certificazioni/SA8000%202014_ITA_finale.pdf



This standard establishes the minimum requirements in terms of human and social rights and includes eight specific requirements:

- To exclude child labour and forced labour.
- The recognition of working hours.
- Pay decent wages for the worker.
- Guarantee the freedom of trade union association.
- Guarantee the right of workers to be protected by collective bargaining.
- Guarantee safety in the workplace.
- Guarantee the healthiness of the workplace.
- Prevent any discrimination based on sex, race, political, sexual or religious orientation.

This legislation was issued in 1997 and was subsequently amended 4 times in 2001, 2008 and 2014 respectively.

- **STANDARD AA1000¹¹**

This standard has been created in 1999 by the Institute of Social and Ethical Accountability and it aims to evaluate the results that companies have in the field of ethical and social investment and sustainable development. Thanks to this standard, companies can demonstrate their commitment to respect the ethical values through objective, impartial and transparent tools.

- **STANDARD ISO 26000¹²**

In 2005, the second meeting of the ISO¹³ group on CSR took place in Bangkok. On this occasion the structure of the ISO 26000 standard published later in 2010 has been defined. In the definition of this standard, six categories of stakeholders were involved: companies, governments, workers, consumers, non-governmental organisations and others. The ISO 26000 standard is not certifiable; it is not possible to certify the compliance of a management system with the ISO 26000 standard. However, there are certification and responsible labelling schemes that incorporate the principles and recommendations of the standard and use them as a reference to evaluate the implementation of a management system based on social responsibility in any organisations.

¹¹ <https://www.economiamanagement.univr.it/documenti/OccorrenzaIns/matdid/matdid313627.pdf>

¹² https://iso26000.info/wp-content/uploads/2017/06/ISO-26000_2010_E_OBPpages.pdf

¹³ <https://www.iso.org/home.html>

Situation on CSR in the different EU countries

In the following part of the report, partners involved in the research phase of this first activities, explained in detail the situation on CSR in its own country. The Member states taken into account are: Spain, Italy, Slovenia, Poland, Germany and Belgium.

CSR in Spain

The debate on Social Responsibility began in Spain at the end of the 20th century. Since then, many steps have been taken. Nowadays, almost all large companies are accountable for non-financial aspects. It was the publication of the *Green Paper* which initiated a broad debate in 2001 on how the European Union and, therefore Spain, could promote Corporate Social Responsibility, hereinafter CSR. Indeed, the first steps began on this road with the approval of a regulatory framework and the creation of a Commission of Experts. This continued with the holding of meetings and Social Dialogue Roundtables that led to the creation of a State CSR Council.

Ten years later, in 2011, the first Sustainable Economy Law was passed. The text was born with a fundamental objective: to reorient economic activity towards sectors with long-term growth potential, generating employment and sustainable from an economic, social and environmental point of view. Shortly afterwards, in 2014, the first National CSR Plan was approved with the Spanish CSR Strategy, during the economic crisis.

In recent years, the Sustainable Development Goals (SDGs), the climate change and the need for transparency have continued to play a leading role in the progress and evolution of Social Responsibility in Spain. The main regulations, policies or royal decrees of Corporate Social Responsibility of companies that have been approved in Spain are listed below:

- Order TAS/955/2004, of 2 April, which establishes the regulatory bases for the **granting of subsidies for activities to promote the social economy, corporate social responsibility and self-employment**, and to cover the operating costs of associations of cooperatives, labour companies, self-employed workers and other entities representing the social economy at the state level and announces their granting for 2004.
- Royal Decree 221/2008, of 15 February, creating and regulating the State Council for Corporate Social Responsibility.
- Royal Decree 1469/2008, of 5 September, amending Royal Decree 221/2008, of 15 February, **creating and regulating the State Council for Corporate Social Responsibility.**
- Order ITC/404/2010, of 22 February, establishing the regulatory bases for the granting of public aid for the implementation and development of social responsibility in small and medium-sized enterprises: "RSE-PYME" initiative.

- Law 2/2011, of 4 March, on Sustainable Economy. CHAPTER VI. Corporate Social Responsibility. Article 39. **Promotion of corporate social responsibility.**
- Royal Decree Law 4/2013, on **Measures to Support Entrepreneurs and Stimulate Growth and Job Creation**, subsequently converted into Law 11/2013 of 26 July.
- Spanish corporate social responsibility strategy 2014-2020.
- Order ESS/1554/2016, of 29 September, regulating the procedure for the registration and publication of the social responsibility and sustainability reports of companies, organisations and public administrations.
- Order ESS/739/2017, of 26 July, establishing the regulatory bases for the **granting of subsidies for activities to promote self-employment, the social economy and corporate social responsibility** and to cover the operating costs of associations of self-employed workers, cooperatives, labour companies, insertion companies and other entities representing the social economy at the state level.

It is also fair to mention that the crisis we are going through as a consequence of the Covid-19 pandemic has further raised awareness of the need to meet these criteria at the regulatory level, highlighting among other issues the importance of non-financial risk management, where social issues are positioned as a priority. In this way, the current crisis has inevitably increased the level of responsibility required of companies in social and environmental matters.

According to the last version of the report Social Impact of Enterprises, edited by SERES Foundation and Deloitte Spain (2019), the 84% of the companies analysed include the SDGs in their CSR strategies. There is still progressed to be made, such as its generalisation in SMEs, a greater conviction on the part of top management, an adjustment of stakeholder reporting, not to mention more concrete aspects such as the much sought-after work-life balance, transparency, the promotion of responsible finance, etc.

Spain has accumulated more than two decades of commitment to CSR, but the challenges are still there, so the journey continues. In this sense, the second Spanish Strategy for Corporate Social Responsibility for the years 2021-2027 is currently under development and the autonomous communities or regions have to continue on the path.

CSR in Italy

From 2000 to the present day, many CSR initiatives have been carried out in Italy by numerous and diversified subjects, such as: institutions, companies and non-profit associations. Many conferences and awareness campaigns have led to the creation of associations dedicated to this topic, which bring together companies, CSR managers, professionals, academics involved in this front. Following this, national awards, initiatives and management standards projects were born. In addition, a national channel dedicated to CSR has been created. *Unioncamere*¹⁴ has promoted the creation of special counters to provide information on CSR at the provincial

¹⁴ <https://www.unioncamere.gov.it/>

Chambers of Commerce, while INAIL¹⁵ has introduced concessions for companies that invest in CSR.

Among the many objectives that the CSR highlights, there is an attention to the territory and local communities, with the reduction of the environmental impact but also great and growing attention to the involvement of employees and the support of corporate culture.

In Italy, in the companies where CSR practices are implemented, these in turn want to: "contribute to sustainable development" (35%), be "responsible towards future generations" (32%) and "improve relations with local communities" (29%). In this analysis, the commercial objective is missing, indeed only 21% set out to attract new customers with CSR actions¹⁶.

According to another research by the Roma Tre University, reported by Centromarca, 72% of consumer goods companies have implemented, in the environmental field, actions for the responsible procurement of raw materials; 69% for the containment of energy consumption and / or the use of renewable sources; 56% for the responsible use of water resources; 55% for the containment of waste; 50% for the reduction / recycling of packaging. In the most virtuous cases, all aspects of the business are involved, from production, to products, to packaging, logistics and suppliers.

If we focus on the wood and furniture sector, Italian companies choose to invest to reduce their impacts, thus considering corporate and social responsibility an essential priority.

In Italy, wood-furniture is a sector in which attention to the sustainability of production is represented by values that are similar if not superior to other sectors of the so-called "*Made in Italy*".

To date, in Italy, in the field of CSR, the tools that are used in the wood and furniture sector are linked to the "family" of certifications and certifiable standards that can concern the production process, a single product, the raw material. These can also be reporting tools that promote a strategic management of sustainability, beyond the single instrument.

Some of these tools are:

- certification of management and production systems (ISO14000 and EMAS);
- forest certifications (PEFC and FSC);
- product certifications (Ecolabel and EPD);
- integrated environmental, health and safety systems (OHSAS 18001);
- Green Public Procurement;
- social / environmental balance sheets.

¹⁵ <https://www.inail.it/cs/internet/home.html>

¹⁶ <https://www.symbola.net/approfondimento/green-cosi-lindustria-ribalta-le-proprie-strategie/>

In addition, in the IX Report on CSR in Italy, published by the *Osservatorio Socialis* in May 2020, shows the ambivalence of CSR topic, starting from a survey on a sample of 400 medium / large enterprises and non-profit organisations from different sectors, including businesses manufacturing.

While 8 out of 10 companies hypothesise that soon CSR can be implemented through activities organised within the company, the COVID-19 pandemic has slowed down direct investments: for 37% of companies, the figure that had planned to invest in the different areas of the CSR is less than that of 2019, with many budgets reduced, deleted or reconverted.

Looking at the actions undertaken, investments in the direction of environmental sustainability are growing, also thanks to the widespread social pressure on "green" issues, so much so that the first three places in the ranking on social responsibility actions activated in 2019¹⁷ are investments in:

- New technologies to limit pollution and improve waste disposal.
- Technologies and solutions for energy saving.
- Solutions to introduce or strengthen separate collection.

Cooperation initiatives with the world of universities, research or non-profit organisations are strengthened compared to previous surveys, also through the direct provision of resources and people. In this scenario, Direct donations of money or fundraising among employees are started together with payroll giving and initiatives where employees volunteer offer their days.

A few hints on the inclusion of people with disabilities and migrants: legislation still seems to guide these integration processes, rather than voluntary corporate strategies.

CSR in Slovenia

Fifteen EU Member States already have national strategies in place in the form of action plans for Corporate Social Responsibility. In many countries, these are further plans for existing strategies, while for some of these were the first draft such political documents. An additional five countries have national action plans for CSR and they are nearing to completion or having debated in parliament, and seven Member States (including Slovenia, including Greece, Croatia, Latvia, Portugal, Romania and Slovakia) are still developing such national action plans.

However, chambers of commerce, institutes in the field of CSR, professional-interest business and other organisations as representatives of the civil and the economy society that work in the field of CSR in Slovenia are increasingly active.

¹⁷ [IX Report sulla CSR in Italia – Osservatorio Socialis – page 15 \(https://www.osservatoriosocialis.it/rapporto-csr/\)](https://www.osservatoriosocialis.it/rapporto-csr/)

The Expert Council of the Institute for the Development of Corporate Social responsibility (IRDO) has therefore taken the initiative to prepare a National Strategy development of social responsibility. In 2012, a partnership for the preparation of a national strategy was formed, consisting of various experts in the field of social responsibility, representatives of organisations and institutions. In addition, other experts have been also involved as informal participants in the partnership.

The partnership is coordinated by the Network for Social Responsibility of Slovenia - Ekvilib Institute, and the IRDO Institute. This partnership prepared the concept of the Slovenian national strategy of social responsibility, with an emphasis on companies. The strategy follows the standard ISO26000: 2010, its areas and principles, and includes key stakeholder groups (government, business, civil society and the media).

Although Slovenia does not have an officially adopted national CSR strategy or action plan, this does not necessarily mean the absence of activities and initiatives related to corporate social responsibility. On the contrary, in the following text it is possible to have an overview of events which shows the great commitment of various stakeholders and the range of different activities carried out.

There are quite few organisations related to social responsibility in Slovenia, the common purpose of them is to promote and raise awareness and also to promote socially responsible behaviour.

The following organisations are trying to raise awareness, inform, and educate about CSR topic:

- **Institute for Development Social Responsibility (IRDO)**, which was established as a non-profit institution in 2004 with the aim of researching and promoting the development of social responsibility in Slovenia and in the world. It brings together all key actors in the field of CSR development (companies, government, civil society...) and it carries out joint activities and campaigns to raise society's awareness about the need and the importance of CSR in Slovenia.

Through its activities, the IRDO Institute contributes to the transfer and the adaptation of foreign knowledge and concepts to Slovenian conditions and needs, and at the same time it enables exchange of Slovenian knowledge and experience with foreign experts, companies and organisations¹⁸.

Since 2008, the IRDO Institute has brought together approximately 140 members and several partner organisations. Med Collective members are companies and organisations, members of the management and individual professional fields, members of management boards and presidents of major Slovenian companies; individual members are students, researchers, scientists, professionals, and anyone

¹⁸ IRDO, 2016

who is aware of the importance of CSR and therefore co-develops it. IRDO carries out its research and development and scientific work in a special organisational unit, named: “*Science and Research Center IRDO*”.

- **The Slovenian Public Relations Association (PRSS)**, which was founded in 1990 as a professional, non-profit, voluntary, and independent non-governmental umbrella national association of public relations and communication management experts, is also active in the field of awareness and education on CSR. It connects everyone who is or wants to be actively involved in public relations, organisational communication and communication management. Within the PRSS, there is a section for the promotion of Social Responsibility (SSDO), whose basic task is to raise the level of CSR in Slovenian companies and organizations, especially among PRSS members and public relation professions. This institution also wants to contribute to a better understanding of the concept of social responsibility in Slovenian companies and organisations and encourage them to behave in a socially responsible manner. In the section relate to CSR, the SSDO makes their members aware and encourage them to spread the concept of CSR in companies and organisations. It educates them and, above all, it presents to them the opportunities that CSR behaviour brings to companies and organisations.
- The **Ekvilib Institute** is a non-profit and independent organisation working in the field of social responsibility, human rights, and development cooperation. It is also actively involved in the field of social responsibility. As part of their work, Ekvilib Institute members strive for the integration of human beings’ rights as a principal key of all policies and strategies, and for structural change leading to fairer and more balanced global development. At the same time, they also strive for socially responsible conduct of all actors in society, with special emphasis on CSR and socially responsible human resource management.

To promote CSR, the Ekvilib Institute, in cooperation with 18 Slovenian companies and organisations, established the Slovenian Social Responsibility Network in 2011. It is a meeting point of companies and other organisations whose common purpose is to promote social responsibility, both within their companies and organisations and in the wider social space.

The key activities of the network are the exchange of knowledge, the introduction of innovations and good practices in the field of social responsibility and raising awareness of the benefits that this way of working brings, both at the level of the individual, company/organisation and the whole society. The mission of the network is to promote CSR and connect companies and other organisations that strive to include CSR in their operations. They understand CSR as caring for society and the natural environment through transparent and ethical action. The goal of the network is to inform and raising awareness about the importance of CSR, the importance of including socially



responsible strategies in the operation of companies and other organisations and the positive effects of this inclusion and good practices of CSR action.

- The **Slovenian branch of the United Nations Global Compact** (UN Global Compact), called the **Slovenian Association for Sustainable Development**, also operates in Slovenia in the field of CSR. The UN Global Compact is the largest global initiative for CSR and sustainable development of economic entities.

Founded in 2000 thanks to the initiative of the United Nations, the Global Compact brings together more than 5,000 companies and NGOs from 120 countries, which in their operations and strategic orientations respect the 10 universal principles of the UN Global Compact in the field of human rights, labour standards, environment, transparency and anti-corruption.

The Slovenian branch of the UN Global Compact has been established in 2007 on the initiative of the President and Dean of the IEDCBled School of Business. From 16 founding members, who represent the leading force of the Slovenian economy, the membership has expanded to 33 members of the association. The main goal of the UN Association for Sustainable Development is to help Slovenian companies to realise the strategic opportunities shown by practices of socially responsible companies and organisations that are aware of the importance of sustainable development and CSR and thus increase the competitiveness of Slovenian companies and the one of the Slovenian's economy.

In addition to these organisations, whose core business is dedicated to social responsibility, some other organizations of the supportive environment, as well as individual companies, are also involved in the field of CSR, these are: the **Chamber of Craft and Entrepreneurship of Slovenia**, the **Chamber of Commerce and Industry of Slovenia** and other similar associations. They have the task to inform and to educate their members and other interested parties about CSR.

Regarding the certificates in the field of CSR in Slovenia, they are the same of all Europe. The ISO 26000 standard is certainly one of the most important bases for assessing or judging socially responsible business. In addition to the ISO standard 26000 and the standard SA8000, also there are the standard ISO 14001: 2004 environmental management system, OHSAS 18001 system assessment of occupational health and safety of employees and others. To this must be added the internationally recognised guidelines "10 principles of the United Nations Global Compact United Nations Global Compact and others".

In addition, there is the Family-Friendly Company certificate, that is a socially responsible principle of cooperation with employees, and it is the only such certificate in Slovenia. It is based on the "European work & family audit" system developed by the German organisation "*Berufundfamilie*". The Family-Friendly Company certificate has brought positive changes to the Slovenian space, increased understanding of employers in the field of reconciling private

and professional life and become a recognisable system of systematic cooperation with employees.

In 2017, a draft of the National CSR Strategy for Slovenia was prepared but this document is still in the draft.

CSR in Poland

In the last decade, Corporate Social Responsibility (CSR) has become an idea of playing an increasingly important role in the activity of various enterprises, in Poland the implementation of the idea is still in progress.

The responsibility for the implementation of activities in individual areas concerns various departments of government administration due to the horizontal dimension of CSR. On May 8, 2009, the Polish Prime Minister established the Team for Corporate Social Responsibility¹⁹, serving as a pool of knowledge and forum for the exchanging of experiences and devising of solutions for the government administration that will intensify CSR promotion.

The main aim of the Team was:

- Proposing solutions for the coordination of activities of individual public administration organizations in the field of CSR.
- Analysing and using the good practices of other countries in the field of CSR.
- Creating an environment for better communication and dialogue between the administration, business, social partners and non-governmental organizations in matters related to CSR.

Over the years the council has changed its name and affiliation to the ministries. It also had short periods of inactivity. Nowadays it functions as the Team for Sustainable Development and Corporate Social Responsibility at the Ministry of Development Funds and Regional Policy divided into 5 specialized subgroups²⁰. It is composed of representatives of government administration, employers' organizations, trade unions, industry and sector associations, scientific and academic community and non-governmental organizations. In total, nearly 70 institutions and organizations participate in the work of the Team.

Selected tools of CSR in Poland²¹:

- **Activities for the local community** (i.e., projects for the environment in which the company operates). They take the form of activities consisting of supporting local

¹⁹ Order No. 38 of 8 May 2009

²⁰ Order of the Minister of Development Funds and Regional Policy, 21 January 2020, as amended.

²¹ <https://www.parp.gov.pl/csr#csr>



institutions and people, cooperation with local organizations, programs for children and youth, ecological activities, as well as investment activities (e.g., building roads).

- **Pro-ecological activities** (i.e., activities aimed at environmental protection, investments minimizing the impact on the environment). These include initiatives such as the implementation of environmental policy, sustainable management of raw materials, waste segregation, environmental education of employees and customers, as well as the implementation of ecological technological processes and ecological products and services.
- **Management systems** (i.e., introducing transparent and effective management systems): Quality Management System ISO 9000 (quality management system), Environmental Management System ISO 14000 (environmental management system), Social Accountability SA 8000 (social responsibility management).
- **Employee volunteering** - consists of voluntary work (e.g., performing specific work, allocating a certain number of working hours) of company employees to pro-social initiatives (institutions, organizations, campaigns).
- **Supply chain management** - applying the principles of corporate social responsibility at every stage of deliveries, implementing standards for contractors.
- **Product labelling** - includes eco-labelling and social labelling. It consists of informing the consumer about the ecological aspects of the product (environmental, health) and social aspects. Product labelling distinguishes them from those available on the market and allows consumers to make informed choices. At the same time, producers should provide reliable information about the composition of products and the content of individual ingredients.

Poland is the region where CSR is based mostly on the idea of sustainable development as well as the following points: the concept of the economy serving the society, inculcating environmental awareness at the individual and enterprise level, state policy supporting the idea of CSR, construction of infrastructure serving to create awareness promotion of CSR, honesty and competence of the government officials, efficiently functioning non-governmental organizations and responsible and reliable media promoting and supporting ethically acting companies. Therefore, the main issue now is to consider the determinant of an optimized engagement of the Polish state in the concept of CSR. Even more so since the requirement for a critical reflection of the politicians concerning the economy nowadays is necessary and obvious. It is a requirement deriving not only from the need to create the conditions for developing the concept of corporate social responsibility and the applicable standards and regulations in this area, but from something much more substantial, namely the need to reflect

upon the meaning of the axiological domain in the course of building awareness, market order, and finally a competitive advantage of the state. Besides, it is also about monitoring and presentation of the relationship between an economic and legal system, the culture and ethics and economic policy in the sphere of economic and management at the level of the enterprise²².

As a member state of the European Union, Poland is obligated to implement and transpose all legal solutions established by the EU institutions onto the national legislation. However, not without a critical assessment. Polish postulates submitted to the European Commission in September 2015 addressed four important issues:

- support for innovative initiatives;
- consideration of the service sector in the CE implementation;
- the enhanced flow of raw materials;
- an improvement of their quality utilising sustainable production and consumption.

In January 2016, Poland announced its position in which it supported shifting to CE, however, under certain conditions enabling the adjustment of goals to the capacity of individual member states. The formal state authority, responsible for the implementation of actions and preparation of Poland to the transformation of the Polish economy to CE is the Ministry of Development which, regarding the national legislation, appointed the Task Force for CE composed of the representatives of ministries involved in the economic transformation. The effect of works of the Task Force was publishing—as early as December 2016—of the draft concerning the Polish Circular Economy Roadmap. The direction of actions presented in the document is de facto compliant with the understanding of CE described above. As stated in the roadmap: “The concept of sustainable production is based, not only on the principle of increasing the resource productivity that is decreasing the volume of raw materials consumed for a unit of produced goods but also on anticipating the reduction of the negative environmental impact of the production processes, including, in particular, the context of reducing greenhouse gas emissions and volume of produced waste”²³.

The study of the Polish Institute for Research on Democracy and Private Enterprises²⁴ shows that companies applying the principles of CSR experience the following numerous benefits compared to other enterprises:

- **Economic benefits:** higher current liquidity; better use of fixed assets and human capital; higher return on sales; invest more per 1 employee.
- **Benefits of the social environment:** increasing the level of work culture and safety; reducing the negative impact of enterprises on the environment; achievement of social goals impossible to achieve without business support.
- **Environmental benefits:** best-practice behaviour for SMEs; rational management of natural resources and waste; engaging business partners in the chain of environmental

²² Wolska 2013

²³ Zaleski and Chawla 2020

²⁴ <https://iped.pl/index.html>

responsibility and initiating joint pro-ecological activities; popularizing pro-ecological ideas.

- **Benefits for employees:** timely payment of salary; high work culture and safety; constant professional development thanks to the availability of training; additional medical care; high-quality social facilities; equal opportunities for men and women in terms of positions and remuneration.

CSR in Germany

The history of corporate social responsibility (CSR) in Germany goes back to industrialization in the 19th century. Even today, CSR plays a central role in politics, business and society in order to cope with both national and international tasks in the area of climate protection as well as the fight against poverty and the protection of human rights. In this context, a special role is played by responsibly managed companies that represent and also implement corresponding basic values as well as the implementation of social and environmental standards, both at home and abroad.

To support companies in their social responsibility and to create incentives for its realization, the federal government in Germany is pursuing its political efforts in CSR. The global economic and financial crisis in 2007 strengthened the social desire for more responsibility in business. At the international level, various accidents in Western production facilities in developing countries have caused a rethink. In 2011, the OECD Guidelines for Multinational Enterprises were further developed, and the UN Guiding Principles on Business and Human Rights were adopted by the UN Human Rights Council, with the aim of encouraging companies to do more due diligence in meeting social, labour and environmental standards.²⁵

More and more companies are trying to implement corresponding concepts and guidelines for labour standards, human rights and environmental protection in their business activities. Under the leadership of the Federal Ministry of Labour and Social Affairs, the German government has been pursuing a systematic CSR policy since 2010. The content of this policy is shaped by the recommendations of the national CSR forum. This forum regularly brings together representatives of civil society, business, science, ministries and trade unions. One of the first substantive implementations of CSR policy in Germany was the adoption of the CSR Action Plan in 2010, in which the following goals were pursued and also successfully implemented²⁶:

- Anchoring CSR in companies and public administration
- To motivate small and medium-sized enterprises (SMEs) to implement CSR
- To make the concept of CSR widely visible
- To create optimized, political framework conditions for the establishment of CSR

²⁵ <https://www.csr-in-deutschland.de/DE/Was-ist-CSR/Grundlagen/Internationale-Rahmenwerke/internationale-rahmenwerke.html>

²⁶ <https://www.bundesregierung.de/resource/blob/975274/318158/c521116c6e6659b26d5ff286ff67408c/2010-12-07-aktionsplan-csr-data.pdf?download=1>

- To contribute to the social and ecological shaping of globalization.

In December 2016, the German government adopted the National Action Plan for Business and Human Rights, which provides a political and regulatory framework for respecting human rights in corporate activity.²⁷

Another important milestone in German CSR policy was the adoption of the "Berlin CSR Consensus on Corporate Responsibility in Supply and Value Chains" in June 2018, in which the national CSR Forum and the BMAS developed and defined framework conditions for the design of a sustainable supply chain. To this end, reference was made to important international standards to establish principles of responsible management in relation to supply and value chains.²⁸

At the European level, the CSR reporting and procurement guidelines provide the decisive framework conditions for the assumption of social responsibility by companies. They are intended to create more transparency in this area. In this context, Directive 2014/95/EU is applied to large companies with more than 500 employees and a certain public interest. As a result of the implementation of the directive in Germany, these companies have been required since 2017 to state and report on their concepts for safeguarding human rights within their company.²⁹

CSR in Belgium

Due to the large diversity of the Sustainable Development Goals (SDGs), which are interconnected, cooperation is required in different domains. Sustainable development is therefore, as written in the article 7bis of the Belgian Constitution, a common pursuit of all Belgian authorities.

Belgium is among the 193 countries that have ratified the SDGs and has been active in promoting the global goals.

So far, there is no specific legislation in Belgium that impose CSR as such. Of course, one must respect, for example, environmental legislation, human rights, money-laundering legislation, and other specific legal frameworks as a company and with all these policies and legislations, a lot of themes are (partly) covered. An overview of SDG-related policy-making in Belgium can be found on the following link, but there is no specific legislation with CSR as the main focus.

²⁷ <https://www.auswaertiges-amt.de/de/aussenpolitik/themen/aussenwirtschaft/wirtschaft-und-menschenrechte>

²⁸ <https://www.csr-in-deutschland.de/DE/Wirtschaft-Menschenrechte/Engagement-Bundesregierung/Aktivitaeten-der-Bundesregierung/Berliner-CSR-Konsens/berliner-csr-konsens.html>

²⁹ <https://www.csr-in-deutschland.de/DE/Politik/CSR-national/Strategie/strategie.html>



At the Federal level, at the Ministerial Council of 24 July 2015, a **memorandum** regarding the division of tasks for the preparation and follow-up of the Sustainable Development Goals (SDGs) was approved. Five lines of action were drawn up by the Federal Institute for Sustainable Development (FISD) in consultation with the Minister for Sustainable Development. These lines of action serve as a first structured step. However, these will be further expanded and modified in the coming 15 years.

It concerns the following five lines of action:

1. Make SDGs known to civil society.
2. Updating and integration of the SDGs in the existing structures of the federal strategy on sustainable development.
3. The implementation of the SDGs via the operation and the policy of the federal public services.
4. The improvement of the coherence between the different policy levels (nssd).
5. Establishing partnerships.

How CSR is integrated in the Flemish or Belgian **business community** can be deduced based upon the following studies, that were carried out by the same researchers since 2011.

These studies are:

- the 2015 CSR Barometer (summary of the report in Dutch)
- the 2018 SDG Barometer (summary of the report in Dutch)
- The 2020 SDG Barometer (downloadable report in English). In this Sustainable Development Report 2020, which summarises countries' current performance and trends in relation to the 17 SDGs, Belgium is at place 11 from 166 countries which are included in the data list.

To the surprise of many, there is not even a real "CSR label". There is ISO 14001, ISO 26000 (a real ISO CSR standard, but it is impossible to get a certificate for it), the FSC and PEFC as labels for wood, GOTS, as the European eco-label, one can become an SDG Pioneer and so on... But a label that certifies in a reliable, well-framed, verifiable way that a company has fully embraced CSR, does not exist.

And this also explain why there is no real CSR legislation nor labels but there is some evolution. When we look at the EU Green Deal, this has gained a lot of interest in a very short time. The EU plans to impose chain responsibility. There are more plans to come concerning circular economy. Europe is clearly taking the lead and the Member States should be starting to act accordingly.

Overall, several SDG initiatives, coordinated by different organizations, are taking place in Belgium to increase SDG awareness and adoption. More information on SDG initiatives in Belgium can be found on the following [link](#).

3

Policies on the circular Economy at European level

3. Legislative Policies

Circular Economy Action Plan

The first Circular Economy Action Plan has been drawn up in December 2015, this included a plan consisting of 54 different actions to accelerate Europe towards a Circular Economy.

The action plan promoted a systemic approach across entire value chains, integrating circular principles in the production and consumption of plastics, water management, food systems and the management of specific waste streams.

In the past years, the implementation of this plan with the introduction of the concept of Circular Economy has given rise to new models and developed new markets in Europe.

In this plan, the European Commission has established clear objectives by revisiting the issue of waste, its disposal and recycling. Some of the key elements of that plan were:

- The recycling of 65% of municipal waste by 2030.
- The recycling of 75% of packaging waste by 2030.
- Reduce landfills by up to 10% of municipal waste by 2030.
- Prohibition of landfilling of waste collected separately.
- Promote reuse and stimulate industrial symbiosis.
- Placing ecological products on the market and supporting recovery and recycling schemes.

The action plan includes a balanced mix of voluntary initiatives and regulatory actions along production, consumption, waste management and secondary raw materials. It also identifies five priority sectors: plastics, food waste, biomass and bio-based products, critical raw materials and construction and demolition.

Later, on 12 December 2019, the President of the European Parliament Ursula von der Leyen presented the new strategic plan on green topics, named: The Green Deal³⁰.

This document describes what actions Europe will take to be the first continent in the world with zero climate impact by 2050. This goal will be achieved through two fundamental actions:

- Promote the efficient use of resources by moving to a clean and Circular Economy.
- Restore biodiversity and reduce pollution.

To achieve this goal, it will also be necessary to involve all economic sectors.

³⁰ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

Last March 2020, the European Commission drafted, updated and adopted a new version of the Circular Economy Action Plan. This new action plan includes a series of initiatives throughout the life cycle of products, targeting and promoting processes of circular economy, sustainable consumption to ensure that the resources used are preserved in the EU economy for as long as possible.

The 2020 Circular Economy Action Plan includes the following actions:

- Make products sustainable.
- Empower consumers and buyers.
- Focus on sectors that use the most resources and where the potential for circularity is high.
- Guarantee less waste.
- Make circularity work for people, regions and cities.
- Directing global efforts on the circular economy.

As regards sustainable products, the Circular Economy Action Plan certifies that ***"80% of the environmental impacts of a product are determined in the design phase"***.

This phenomenon occurs for two main reasons: i) a consumption model that is linear and completed by supply chains that have not yet developed circular solutions; ii) by an extension of the responsibility of the producer of the object that still today is struggling to start and empower industries.

In this regard, in the document drawn up, the actions that the European Commission wants to undertake are linked to the tools suggested in the previous Action Plan for the Circular Economy:

- The Ecodesign Directive
- The Ecolabel
- Green Public Procurement (GPP EU)

These action right now, have not led companies and citizens towards more sustainable products and systems and in this regard, in the version of the 2020, the Commission intends to establish a legislative initiative for sustainable products based on the following principles:

- Improving the durability, reusability, upgradeability and repairability of the product, addressing the problem of the presence of hazardous chemicals in products and increasing energy efficiency and the use of resources.
- Increasing the recycled content of products, while ensuring performance and safety.
- Ensuring a high quality in remanufacturing and recycling.
- Reducing carbon dioxide and environmental emissions.
- Limitation of single use.

- introducing the ban on the destruction of unsold durable goods.
- Incentive of the "product as a service" model.
- implementing the digitalisation of product information, including solutions such as digital passports, tags and watermarks.
- Promoting products based on their different sustainability performances.

Furthermore, within the same document, the European Commission states that to generate increasingly sustainable products, it is also necessary to review the EU Directive 2019/771³¹ which regulates contracts between buyers and sellers of products.

A particular focus is also placed on repairability, the commitment of the European Commission is to establish the "Right to Repairability"³², that is a horizontal action in the consumer's rights that acts on the aspects of the right of availability of spare parts or to repair; in case of technological products to updating services.

Another focal point in the document is the circularity of industrial processes. Thanks to the Circular Economy, companies have been able to implement high-performance industrial processes that have significantly reduced production and treating waste as a raw material to be used.

The actions envisaged for this topic are many and listed below:

- Assess options to further promote circularity in industrial processes in the context of the revision of the Industrial Emissions Directive, including best practices to build upon.
- Facilitate industrial symbiosis by developing a sector-led reporting and certification system, allowing its implementation.
- Support the sustainable and circular bio-based sector through the implementation of the Action Plan for the bioeconomy.
- Promote the use of digital technologies to track and map resources.
- Promote the diffusion of green technologies through a verification system.

Through the Circular Economy action Plan, 2020, the European Commission focuses on some key products, to verify the success of the actions that will be implemented. These products are:

- Food, water and nutrients.
- Building and construction.
- Plastics.
- Fabrics.
- Packaging.
- Batteries and vehicles.

³¹ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.136.01.0028.01.ENG&toc=OJ:L:2019:136:TOC

³² <https://repair.eu/>

- Electronic and ICT products.

On the waste management front, Europe has been involved since the seventies and today this issue is the basis of the circular processes that require continuous work and updating.

In this regard, and to prevent waste, in the Circular Economy Action Plan, the European Commission proposes:

- To increase in recycled materials, promoting safer and non-contaminated waste flows, ensuring high quality recycling.
- To achieve a waste reduction targets as envisaged in the context of Directive 2008/98 / EC.
- To adopt the scheme for extended producer responsibility.
- To significantly reduce the total generation of waste and the amount non-recyclable or municipal waste by 2030.
- To harmonize the separate waste collection.
- To track and manage information on substances identified as dangerous.
- To encourage the use of secondary raw materials.
- To facilitate the reuse and the recycle of EU waste thanks to regulatory a review on waste transport.

Furthermore, on a global level, the Commission intends to lead international efforts to reach a global agreement on plastics. In addition, it establishes the Global Circular Economy Alliance to map the level of circularity, assess governance gaps and progress in the Circular Economy and also evaluate the drafting of an international agreement on the management of natural raw materials.

For more information regarding the directive please visit the [link](#).

WEEE Directive - Waste electrical and electronic equipment

As part of the research that the consortium of partners of the ALLVIEW project has conducted in the wood and furniture sector, it is also necessary to analyse the **WEEE - Waste electrical and electronic equipment directive**.

The waste of electrical and electronic equipment is a type of waste that the owner wants to get rid of because it is out of order or obsolete. The problems deriving from the disposal of these equipment are linked to the fact that they contain substances that are considered toxic to the environment or that these equipment are not biodegradable.

Nowadays, the use of such equipment is increasing, thus causing a danger to the environment. The disposal of these products is regulated by the differentiated recovery of the materials they



are made of. In this way it is possible to avoid the waste of resources and the consequent environmental pollution. This type of waste is regulated by the WEEE directive - Waste from electrical and electronic equipment. This directive entered into force in 2003 (Directive 2002/96 / EC) and was revised in 2012 (Directive 2012/19 / EU). It requires the establishment of collection schemes (free for consumers) to increase the WEEEs re-use and/or recycling.

Regarding furniture and wood sectors, containing electrical or electronic components, there is an open discussion about the scope described in Article 2 of the WEEE Directive, which determines that from 15th of August 2018, all EEE shall be classified within the categories set out in the Annex III of the Directive.

The collection of EEE waste is differentiated according to the type of production and subsequent use and above all according to the type of treatment to which they will be subjected. The collection is structured according to the following groups listed:

- R1 - (Cold and Climate): refrigerators, freezers, air conditioning appliances.
- R2 - (Great Whites): washing machines, dishwashers, microwave ovens, economical hobs, etc.
- R3 (TV and Monitor): CRT cathode tube screens, modern LED and Plasma screens, and new technologies.
- R4 (PED CE ITC and other): vacuum cleaners, sewing machines, irons, deep fryers, blenders, computers, printers, faxes, cell phones, video recorders, radios and ceiling lights.
- R5 (light sources): lamps containing gas, fluorescent neon tubes, energy saving lamps, mercury, sodium, iodide, or vacuum lamps.

This type of structure is not the same in all member states. Indeed, depending on the member states interpretation and their level of strictness, some products such as furniture and clothes, which contain electronic components may become an EEE, and therefore require a selective collection and treatment when they arrive at the end of their life cycle.

This definition is in line with the Guide for the application of the Machinery Directive 2006/42/EC Edition 2.2. - October 2019. In this case, the Machinery Directive considers that some type of electrically operated furniture, such as beds, chairs, tables, storage furniture, including kitchen furniture, etc., remain subject to the Machinery Directive, as they are not considered household electrical appliances.

For more information regarding the directive please visit the [link](#).

ROHS Directive – Restriction of hazardous substance in EEE

This legislation is closely linked to that of WEEE - Waste electrical and electronic equipment. The **ROHS - Restriction of hazardous substance in EEE** legislation regulates the use of certain substances defined as hazardous in the construction of different types of electrical and electronic products.

The Directive entered into force in 2003 (Directive 2002/95/EC), and it has been reviewed in 2011 (Directive 2011/65/EU). It has amended by the Directive (EU) 2017/2102, reviewing the scope for some group of products and facilitating to promote a circular economy in the Union by promoting the secondary market operations for EEE, which involve repair, replacement of spare parts, refurbishment and reuse, and retrofitting. The ROHS directive is applied not only to products manufactured in Europe but also to imported ones, but every member state must receive the directive and then implement based on this guide its own adoption of its own products.

The substances involved in this directive are different even if this directive has been created mainly to avoid the use of lead. The other substances are: mercury, cadmium, hexavalent chromium (chromium VI), polybrominated biphenyls (PBB), polybrominated diphenyl ether (PBDE), bis (2-ethylhexyl) phthalate (DEHP), benzybutyl phthalate (BBP), dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP).

By July 2021, the Commission shall evaluate the Directive and report on its results to the European Parliament and the Council. It does not apply directly to furniture products, but it should be considered when these products integrate electric/electronic equipment, such as motors, displays, LEDs, etc.

For more information regarding the directive please visit the [link](#).

Ecodesign Directive

With the adoption of the Kyoto Protocol³³, the European Union has committed to reducing CO₂ emissions by at least 20% by 2020. To achieve this goal, in 2005 the EU ratified the EuP Directive (Energy using Products Directive). In 2009 this has been renamed ErP Directive (Energy related Products Directive), normally called "Ecodesign", which refers to Directive 2009/125 / EC. This Directive is mandatory in the states of the European Union. Also, the ErP Regulation refers both to materials produced in the European community and to those imported. Products for export outside Europe are not affected by this directive. In it, the European Commission established some environmental requirements for some specific product family. Companies who want to put products on the EU market should follow this directive regulations (Declaration of Conformity) and they should include the "CE" label on them. The requirements established by

³³ https://unfccc.int/kyoto_protocol



the legislation are associated to the energy efficiency and the information to be provided about the product. Sometimes they include also some aspect related to the product's lifecycle.

In parallel to this legislation, the European Commission promote the use of energy labelling for energy-related products by the regulation (EU) 2017/1369. This regulation indicates which products must include the energy label and the type of information to be displayed on it. The product groups covered by regulations are: Air conditioners and comfort fans, Computers, external power suppliers, household washing machines, Local space heaters, Professional refrigerated storage cabinets, Solid fuel boilers and Vacuum cleaners.

Thanks to the Third Ecodesign Working Plan³⁴ for the period 2016-2019 the European Commission included new product groups, such as: building automation and control systems, electric kettles, hand dryers, lifts, solar panels and inverters, refrigerated containers, and high-pressure cleaners.

Concerning Circular Economy, this new Working Plan (2016-2019) puts more attention to resource efficiency, analysing the possible application of additional "product-specific" requirements on matters such as durability (e.g. minimum lifetime of products or critical components), reparability (e.g. availability of spare parts and repair manuals, design for repair), easiness of reuse and recycling (e.g. avoiding incompatible plastics) among others.

Nowadays, there is not a regulation, under the Ecodesign Directive, that directly affects the furniture products. Possible of their components would be affected. The Circular Economy Action Plan also includes a commitment to examine new options under the Ecodesign Directive, beyond energy-related products.

The European Commission states that thanks to the use of these regulations it will be possible to reduce the waste of both energy and economic resources.

For more information regarding the directive please visit the [link](#).

EPR Scheme

The **Extended Producer Responsibility (EPR)** is "an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle"³⁵

In the European Union, EPR is mandatory within the context of the following Directives:

- Directive 2012/19/EU on WEEE (Waste of Electrical and Electronic Equipment)
- Directive 2006/66/EC on Batteries
- Directive 2000/53/EC on End-of-life vehicles

³⁴ https://ec.europa.eu/energy/sites/ener/files/documents/com_2016_773.en_.pdf

³⁵ OECD definition



The EPR scheme ensures that through financial incentives manufacturers and designers are encouraged to design environmentally friendly products, while holding manufacturers responsible for the running costs of their products at the end of their life cycle.

The EPR scheme bases its principle on the fact that producers who have placed the product on the market are those who have the maximum responsibility for controlling the entire production chain. In turn, within the production chain they are those who have the maximum capacity and responsibility to reduce the toxicity, waste and in general the environmental impact of their products.

EPR may take the form of a reuse, buyback, or recycling programme. The producer may also choose to delegate this responsibility to a third party, a so-called producer responsibility organisation (PRO), which is paid by the producer for used-product management. In this way, EPR shifts the responsibility for waste management from government to private industry, obliging producers, importers and/or sellers to internalise waste management costs in their product prices and ensure the safe handling of their products³⁶. EPR has been implemented in many forms, which may be classified into three approaches: mandatory, negotiated and voluntary.

Also, the Packaging Waste Directive (94/62/EC) indirectly invokes the EPR principle by requiring Member States to take necessary measures to ensure that systems are set up for the collection and recycling of packaging waste.

The article 8 of the Waste Framework Directive 2008/98 identifies some standards for EU Member states related to the EPR implementation, providing a reference scheme for its implementation.

In 2014, DG Environment published the final report on "Development of Guidance on Extended Producer Responsibility (EPR)", developed by BIO, which analyses the status of different EPR schemes at EU level, and finally define the guiding principles and recommendations.

For more information regarding the directive please visit the [link](#).

REACH - Hazardous substances

At European level, one of the most relevant regulation related to hazardous substance at is the **REACH - Hazardous substances** Regulation (EC 1907/2006). It consists of XV Titles divided into 141 articles and 17 technical annexes and, being a regulation and not a directive, it does not require any act of receipt or implementation and it is immediately applied by states with different deadlines. This regulation aims to improve both the human health and the

³⁶ Hanisch, C. (2000). Is Extended Producer Responsibility Effective?. *Environ Sci Technol*, 34 (7), pp.170 A-175 A.



environment protection by identifying better and at an earlier stage the hazardous properties of chemical substances used in EU. Both manufacturers and importers have the responsibility to collect information on the specific and critical properties of chemical substances they use.

This regulation is based on four processes, which are:

1. Registration of substances.
2. Evaluation of substances' risk.
3. Authorisation to use under certain conditions, to ensure that substances of very high concern (SVHCs) are used safely.
4. Restriction for some chemicals imposing conditions on the manufacturing, placing on the market or use of substances.

The goal of this actions is to substitute chemical substances identified as the most dangerous once identified suitable alternatives. This process is coordinated by the European Chemicals Agency (ECHA).³⁷

In March 2018, a European Commission Communication made an evaluation of the progress made by the REACH Regulation. In this communication were highlighted some aspects that are slowing down the achievement of REACH objectives previously established. These aspects are:

- the lack of compliant information in the registration dossiers.
- the need of simplification of the authorization process.
- the need to ensure a level playing field with non-EU companies through effective restrictions and enforcement. The number of new restrictions has so far not met the original expectations.
- the need to clarify the interface between REACH and other pieces of EU legislation; with occupational safety and health (OSH) legislation and with waste legislation.

For more information regarding the directive please visit the [link](#).

Formaldehyde emissions

In Europe, the formaldehyde produced and imported is used in the following sectors:

Manufacturing resins: the main use of such resins is in the manufacturing of wood- based panels, as a bonding agent for wood particles. There are different typologies of these wood-based panels such as: plywood, particleboard, oriented strand board (OSB), medium density fibreboard (MDF), and other fibreboard (including hardboard and softboard).

³⁷ <https://echa.europa.eu/>

The production of a variety of products: paints for industrial use, mineral wool, textile and leather, and foams for insulation of buildings and cars.

Exposure to formaldehyde emissions is an important issue for consumers who are in contact with products and also for workers who come into contact during the production cycle of the product.

EN 13986 is the harmonised European standard for the determination of formaldehyde emission from wood-based panels. The reference test method is the EN 717-1 standard. These rules only classify products, but do not restrict the placing on the market of the worst class E2. At the European level there is no common law associated with these classes. Since 2007, members of the European Panel Federation (EPF) have entered into a voluntary agreement to produce panels. This agreement provides to produce class E1 panels only and not E2, to limit damage. Also, thanks to the REACH framework, there is a proposal, dated in January 2019, to restrict the placing on the market or the use of all articles releasing formaldehyde at concentrations greater than or equal to 0.124 mg/m³. Nowadays, there is a public consultation process underway.

For more information regarding the directive please visit the [link](#).

Waste Framework Directive 2008/98/EC

In the Article 6 of the Waste Framework Directive 2008/98/EC there is indicate that some specific waste shall stop to be considered normal waste if it has undergone through a recovery process and if it complies with specific criteria. The criteria are:

- The object is commonly used for specific purposes.
- There is an existing market or demand for it.
- The use is legally allowed.
- Its use will not cause any negative environmental or human health impacts.

To this date, the criteria have been established for the following materials:

- Scrap iron, steel and aluminium (Council Regulation (EU) No. 333/2011)
- Cullet (Commission Regulation (EU) No. 1179/2012)
- Copper scrap (Commission Regulation (EU) No. 715/2013)

Regarding the furniture sector, the wood waste stream may be in line with the principles of the aforementioned law, but it is not clear for all cases that their current management in the EU is through recycling, or that recycling is a priority over controlled energy recovery or landfill in suitable facilities.

For more information regarding the directive please visit the [link](#).

Flame retardants

In some sectors, especially in the furniture sector, flame retardants are used to meet the different flammability standards. Some of these standards require compliance with open flame tests, forcing the use of flame retardants, although this use is not required by any law.

In April 2004, the European Union (EU) published Regulation (EC) 850/2004, a comprehensive piece of legislation for the management of persistent organic pollutants (POPs) listed in the Protocol to the 1979 Convention on Transboundary Air Pollution to great distance on POPs and the Stockholm Convention on POPs. Some of these POPs are used as flame retardants (e.g., PBDE flame retardants).

On 25 June 2019 the EU published Regulation (EU) 2019/1021, which recast the POP Regulation. This new law contains several important changes. Even today, there is no legislation that regulates the specific use of flame retardants in the furniture sector, and the use of this type of chemicals is associated with the possible requirements set by the REACH Regulation and the POP Regulation.

For more information regarding the directive please visit the [link](#).

Renewable energy directive

As regards renewable energy, **Directive 2009/28 / EC** establishes a comprehensive policy for the production and promotion of energy from renewable sources in the EU. This aims for the EU to meet at least 20% of its total energy needs with renewable energy by 2020. Furthermore, all EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020. To monitor the situation, every two years, the EU countries produce a report highlighting the results obtained.

In addition, all EU countries must draw up ten-year energy and climate plans (NECPs) for the period from 2021 to 2030. In these plans they must outline how they will achieve the new 2030 targets for renewable energy and energy efficiency. The Renewable Energy Directive sets sustainability criteria for biofuels for all biofuels produced or consumed in the EU to ensure they are produced in a sustainable and environmentally friendly way. Companies can demonstrate

that they comply with sustainability criteria through national systems or so-called voluntary schemes recognised by the European Commission.

In this scenario, the fuel industry is analysing the use of raw materials for second generation biofuels in various waste streams, agricultural residues, and forest biomass.

For more information regarding the directive please visit the [link](#).

EUTR - EU Timber Regulation

In 2013, the **EU Timber Regulation** or EUTR enters into force. Regulation (EU) no. 995/2010 of the European Parliament and of the Council of 20 October 2010 defines the obligations of operators who sell or distribute timber and wood products. It is an important step for the EU to try to reduce deforestation and protect endangered tree species. EUTR is applied to a wide leg of lumber: solid wood products, flooring, plywood, pulp and paper. The regulation affects two types of stakeholders: operators and traders.

In addition to this law, in 2005 the EU also created and implemented a voluntary programme called the FLEGT action plan to ensure that timber imported into the EU is legally harvested in the countries participating in this programme.

Another scheme is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), signed in 1973. Its goal is to protect and not threaten a variety of more than 30,000 wild animals and plants with varying degrees of protection.

From 2019 to today, some of the priorities that the EU has highlighted in the field of timber are:

- Reduce EU wood consumption on land and encourage the consumption of products from deforestation-free supply chains in the EU.
- Work in partnership with producer countries to reduce pressures on forests.
- Strengthen international cooperation to stop deforestation and forest degradation by encouraging forest restoration.
- Redirect funding to support more sustainable land use practices.
- Support availability, quality and access to forest information and supply chains of raw materials and support research and innovation.

For more information regarding the directive please visit the [link](#)

4

Policies on the circular Economy at National/Regional level

4. Spain

Materials and Methods of the Spanish research



In Spain, in terms of environmental protection, the basic legislation corresponds to the Spanish State. To this end, the main sources of information on the topic are the Ministry for Ecological Transition and the Demographic Challenge³⁸ and, where necessary, the Official State Bulletin³⁹, which is the Spanish national official newspaper dedicated to the publication of certain laws, provisions and mandatory insertion acts. The rest is the responsibility of the Autonomous Communities that have it transferred, as is the case of Catalonia and the Region of Murcia. On the one hand, if we want to know how in practice the Circular Economy is being deployed in Catalonia, we must consult the regional legislation, which we will find perfectly ordered and classified on the websites of: i) Department of Territory and Sustainability⁴⁰ and ii) Department of Agriculture, Livestock, Fisheries and Food⁴¹.

In Catalonia there are two major strategies currently under development in terms of Circular Economy: 1) Circular Economy Roadmap in Catalonia⁴² (in Catalan: *Full de Ruta de l'Economia Circular a Catalunya*) and 2) Bioeconomy Strategy of Catalonia⁴³ (in Catalan: *Estratègia de Bioeconomia*). These two strategies, under development, will mark the future of Catalonia in terms of Circular Economy during the next 10 years. CENFIM, partner of ALLVIEW project, is participating in the definition of both strategies and in both cases, the initial stage has been an analysis of the state-of-the-art of the policies and strategies currently in force in Catalonia in Circular Economy, to consider, include and/or align them with the two new strategies under development. This state-of-the-art investigation has made it possible to identify the policies/strategies currently in force in Catalonia in Circular Economy (specifically, there are 6), which, in addition to the two new strategies under development, have been included in the tables of the following section and show a clear overview of the current and future situation of the Circular Economy in Catalonia.

On the other hand, if we wish to know how in practice the Circular Economy or Waste resources policies are being deployed in the Region of Murcia, we must consult the regional legislation. This legal information can be found in the Electronic site of The Official Newsletter of The Region of Murcia⁴⁴ or in the Regional Ministry of Tourism, Culture and Environment⁴⁵ whose main areas of work are Information and Environmental Awareness, production of

³⁸ <https://www.miteco.gob.es/es/calidad-y-evaluacion-ambiental/legislacion/>

³⁹ <https://www.boe.es>

⁴⁰ <https://territori.gencat.cat/es/inici/index.html>

⁴¹ <http://agricultura.gencat.cat/es/inici/index.html>

⁴² https://participa.gencat.cat/uploads/decidim/attachment/file/2216/Document_base_proces_participacio.pdf

⁴³ <https://portaldogc.gencat.cat/utillsEADOP/PDF/8o63/1783616.pdf>

⁴⁴ <https://www.borm.es/#/home>

⁴⁵ <https://www.carm.es/web/pagina?IDCONTENIDO=64&IDTIPO=14o&RASTRO=csm278o1>

environmental disclosure materials, environmental education and development of teaching materials.

Furthermore, some reports have been consulted because are associated with the area reached in this research:

- Corresponsables Fundación y DKV Salud y Bienestar (2018). 20 años de Responsabilidad Social En España. Los acontecimientos y las personas que han impulsado este concepto y modelo de gestión entre 1998 y 2018.
- [Deloitte y SEres \(2019\). VI Informe del Impacto social de las empresas.](#)

Background research and National/Regional policies

Circular Economy in Catalonia and Region of Murcia

In Catalonia, the current management of wood waste is approximately as follows: 1% reuse, 69% recycled and 30% energy recovery. Although these wastes are no longer deposited in landfills, reuse is not prioritised over other recovery strategies.

The management of this waste is done in accordance with European legislation - transposed into Spanish legislation and adapted to Catalan legislation - and in accordance with the objectives established in the current General Program for the Prevention and Management of Waste (in Catalan: *Programa General de Prevenció i Gestió de Residus*)⁴⁶.

We can say that there is no outstanding requirement or objective that applies to this waste stream, beyond the general objectives of reduction, separate collection and recovery imposed by Europe.

From the legal perspective, in addition to waste legislation, the provisions of REACH and EUTR apply to the furniture sector. In the voluntary sphere, the administration and the sector promote activities to deploy the following voluntary instruments: GPP, ecodesign, ecolabels, environmental management systems, chain of custody systems and alignment with sustainable building certifications (LEED, BREEAM, WELL).

The sector has been “rumoured” for a long time about the possible implementation in the future of a take-back scheme (EPR) for furniture, without currently having any processes or initiative formally initiated in this matter. The sector also follows with expectation how the deployment of the Green Deal and the new Circular Economy Action Plan and specifically the future “sustainable product policy initiative”, will affect the furniture sector.

⁴⁶ <https://portaldogc.gencat.cat/utillsEADOP/PDF/8o63/1783616.pdf>

On the side of the Region of Murcia, the concept of Circular Economy is almost new-born and there are hundreds of opportunities and challenges ahead. Indeed, there are already some initiatives in this regard in the city of Murcia, such as the VALUEWASTE project⁴⁷. The initiative is funded by Horizon 2020 and it is aligned with the main objectives of the Green Deal or European Green Pact. Likewise, it is one of the initiatives detected from the diagnosis of the state of the Circular Economy of the municipality of Murcia.

Moreover, this action is framed in the Urban Agenda Murcia 2030, specifically in sustainability that gives special importance to the transition towards a circular Murcia, as well as strategic objective number four on waste management and economy circular of the Spanish Urban Agenda.

Likewise, the town hall is currently immersed in the design of its Circular Economy strategy, a commitment that seeks an innovative and efficient municipality, low in emissions, looking to a prosperous future, but without giving up our roots. It should be remembered that the municipality is currently working on about thirty projects related to the main axes of the strategy, such as mobility, consumption, waste management, water management, the sustainability of urban spaces, mobility and transversality policies.

List of Policies in The Circular Economy sector in Spain

NO.1

NAME OF THE POLICY	Strategy to Promote the Green Economy and the Circular Economy (in Catalan: Estratègia d'Impuls a l'economia verda i a l'economia circular)
LEVEL	Regional (Catalonia)
YEAR	2015 (expected validity until: undefined or until the new Circular Economy Roadmap in Catalonia is published)
COUNTRY	Spain (Catalonia)
THEME	Circular Economy in general (all 10 topics can be considered under the umbrella of this strategy).
GENERAL DESCRIPTION	The strategy of boosting the green economy and the circular economy of the Government of Catalonia promotes sustainability as a strategic axis to achieve economic recovery, improve competitiveness, create employment and reduce environmental risks.
OBJECTIVES	1. Align the Government's strategy in terms of competitiveness in accordance with the lines of smart, sustainable and inclusive growth that the European Union and the leading countries in our environment postulate.

⁴⁷ <http://valuewaste.eu/>

2. Give coherence and visibility to the efforts that the Government is developing in terms of the green and circular economy based on its impulse from the different departments.
3. Establish priorities among future actions by the Government.
4. Increase business leadership and the ability to drive towards a green and circular economy for companies and society as a whole.

ACTIVITIES	<p>Generation of demand and creation of markets.</p> <p>Improved access to finance.</p> <p>Promotion of R + D + I.</p> <p>Promotion of internationalization.</p> <p>Promotion of employment and entrepreneurship</p>
RESULTS	<p>With this strategy, a significant number of plans, programs and actions have been launched (34 actions in demand generation, 5 in R + D + i and 9 in financing).</p> <p>In addition, this strategy has been the precursor of the new "Circular Economy Roadmap in Catalonia", which is currently under development.</p>
LINK	Link

NO.2

NAME OF THE POLICY	Catalan ecodesign strategy, for a circular and eco-innovative economy (in Catalan: Estratègia catalana d'ecodisseny, per a una economia circular i ecoinnovadora)
LEVEL	Regional (Catalonia)
YEAR	2014 (expected validity until: undefined)
COUNTRY	Spain (Catalonia)
THEME	Ecodesign
GENERAL DESCRIPTION	The Catalan Ecodesign Strategy (ecodiscat) is a tool that aims to promote a sustainable way of producing and consuming, encouraging the incorporation of ecological design in the production process, promoting the transversality of ecological design in universities and research centers and the transfer knowledge, and encourage the consumption of sustainable products and services.
OBJECTIVES	<p>This strategy has 3 main axes of action:</p> <ol style="list-style-type: none"> 1. Stimulation of the supply of sustainable products and services 2. Driving the demand for a sustainable market 3. Application of the Strategy
ACTIVITIES	<p>Action axis 1 is made up of 3 action lines: L1. Encourage manufacturers and designers to incorporate ecodesign; L2. Promote the transversality of ecodesign in universities, research centers and companies and L3. Streamline and coordinate the transfer of knowledge between the different actors.</p> <p>Action axis 2 is made up of 2 action lines: L4. Incentivize consumers and L5. Promote the greening of contracting.</p> <p>Action axis 3 is made up of 2 action lines: L6. Governance and L7. Communication</p>

RESULTS A total of 43 actions have been developed with this strategy (29 on axis 1, 9 on axis 2 and 5 on axis 3).
Overall, these are the expected results and benefits of the strategy:

- reduce the consumption of raw materials and energy;
- minimize waste and emissions generated;
- generate an adequate and favourable environment to give added and responsible value to the products and services produced and marketed in Catalonia;
- achieve greater eco-efficiency, both in terms of resources and energy consumption;
- greater competitiveness in the business world;
- greater social and environmental responsibility;
- evolve towards a circular economy that is sustainable for future generations.

LINK [Link](#)

NO.3

NAME OF THE POLICY	National Plan for Agenda 2030 (in Catalan: Pla Nacional per Agenda 2030)
LEVEL	Regional (Catalonia)
YEAR	2019 (expected validity until: 2030)
COUNTRY	Spain (Catalonia)
THEME	Circular Economy in general.
GENERAL DESCRIPTION	The report "The 2030 Agenda: transforming Catalonia, improving the world", published by the Advisory Council for Sustainable Development of Catalonia (CADS, September 2016), laid the foundations of the Plan. The text identifies the main challenges for the Government to achieve the SDGs, with contributions from experts, academic institutions and civil society organizations.
OBJECTIVES	The National Plan for the Implementation of the 2030 Agenda in Catalonia identifies the Government's commitments in relation to each of the United Nations Sustainable Development Goals (SDGs) and their respective goals. These commitments must be understood as programmatic objectives that allow progress in the achievement of the SDGs based on the set of public policies promoted and managed by the Government of Catalonia. The Plan also envisages contributing to the achievement of the SDGs on a global scale, thereby strengthening Catalonia's commitment to the international community.
ACTIVITIES	Directed both nationally and internationally, the Plan contains 696 unique commitments of the Government of the Generalitat that become 920 because some of them are included in several SDGs, reflecting the transversality of the 2030 Agenda and the Plan to contribute to reaching the 17 SDGs set by the 2030 Agenda. It is a Plan: <ul style="list-style-type: none"> - Transformative: set goals with measurable impact, to generate real change. - Integrated: involves the 13 government departments. - Coherent: allows aligning the public policies of the different departments. - Dynamic: it will be reviewed annually to keep it updated until 2030.

RESULTS There are 920 specific measures applicable at the national and international level distributed among the different SDGs. Among others, there are the following commitments related to the circular economy:

SDG 2: Zero hunger / Move towards a circular economy, promoting sustainable production models and responsible consumption.

SDG 8: Decent work and economic growth / Raise awareness and disseminate the concept of circular economy with specific campaigns focusing on the new consumption options that this trend implies.

SDG 9: Industry, innovation and infrastructure / Promote business projects that promote competitiveness using the circular economy as a lever for transformation.

SDG 12: Responsible consumption and production / Align circular economy initiatives by developing the CIRCULAR CATALONIA roadmap.

LINK [Link](#)

NO.4

NAME OF THE POLICY National Pact for Industry (in Catalan: Pacte Nacional per a la Indústria)

LEVEL Regional (Catalonia)

YEAR 2017 (expected validity until: 2020)

COUNTRY Spain (Catalonia)

THEME Industrial Development and Circular Economy.

GENERAL DESCRIPTION The National Pact for Industry (NPI 2017 to 2020) is a programmatic agreement for the planning of industrial development in Catalonia that has its origin in Resolution 251 / XI, of July 13, 2016, of the Parliament of Catalonia, which was presented jointly by all parliamentary groups. The Pact was signed in July 2017 by the Generalitat of Catalonia, CCOO, UGT, Fomento del Trabajo, PIMEC and FEPIE.

OBJECTIVES The National Pact for Industry is a roadmap that provides a framework of temporary stability to the industrial policy of the Generalitat of Catalonia to address the relaunch of the Catalan economy with an industrial vocation.

It is determined to promote the transformation of the country's industrial model through a process that is accompanied by the creation of stable and quality jobs.

"The main objective of the policies to support the industry and the company is to facilitate a competitive environment that encourages the growth of business activity. This environment will allow the increase in quality employment, promoting social cohesion and the sustainability of the welfare state. All this, with the objective set by the European Union in the Europe 2020 Strategy that, in that year, 75% of people between 20 and 64 years old are employed. "

ACTIVITIES The NPI is organized into six thematic areas (competitiveness and industrial employment; business dimension and financing; industry 4.0 and digitization; training; infrastructure and energy; sustainability and circular economy), it is made up of more than a hundred actions and has a higher budget to 1,800 million euros for the period 2017-2020, with which it is intended to mobilize more than 3,100 million euros during the same period.

The NPI is aligned with the industrial policy of the European Union and with those of its most industrialized regions, which tend to revolve around the same six thematic areas.

RESULTS Sustainability and the circular economy make up one of the 6 axes of the NPI. Within this framework, the following actions to be developed have been identified:

1. Map of companies, centers and entities that operate in the circular economy, both from the point of view of supply and demand.
2. Transversal impulse of public-private collaboration to place the circular economy in industrial culture.
3. Explore actions in the fields of training, awareness and dissemination.
4. To position Catalonia internationally as a benchmark in circular economy through missions, congresses and fairs (for example, SmartCity Expo and Circular Economy European Summit).
5. Promotion of circular economy business projects that promote business competitiveness.
6. Identify business and innovation opportunities in the circular economy and advise on their economic viability (for example, within the framework of RIS3CAT).
7. Promote R&D and innovation projects in the field of circular economy (collaboration projects and promotion of the actions of TECNIO agents and technology centers such as EURECAT).

LINK [Link](#)

NO.5

NAME OF THE POLICY National Pact for the Energy Transition (in Catalan: Pacte Nacional per a la Transició Energètica)

LEVEL Regional (Catalonia)

YEAR 2017 (expected validity until: 2050)

COUNTRY Spain (Catalonia)

THEME Energy efficiency

GENERAL DESCRIPTION "In the last 25 years, since the creation of the Catalan Energy Institute, we have made progress in many areas, but not with the desired intensity, especially in the implementation of renewable energies in our territory." To prepare this National Pact for the Energy Transition, it must be considered that the Government approved on April 15, 2014 a Government Agreement on the promotion of the National Pact for energy sovereignty, which entrusts the Department of Business and Employment to promote the preparation of the proposed National Pact for energy sovereignty.

OBJECTIVES "To bring together civil society, the different economic sectors of the country and the political parties in a stable, solid and permanent commitment to the future for a change in the energy model and the development of the strategic axes necessary to carry out this energy transition process. "

"The Government of Catalonia prepares a preliminary document with the challenges and objectives to be faced to achieve a 100% renewable model in 2050, while designing a process of consultation to build it with the maximum possible consensus. Thus, the Negotiation Table is born of the National Pact for the energy transition, which allows opening the debate to all sectors and collecting initiatives from associative, academic and professional fields. "

ACTIVITIES The NPET focuses on this phase and proposes the following actions:

- A1. Guarantee the fundamental right of access to energy and the defence of consumer rights;
- A2. Guarantee the energy supply of Catalonia and the quality and reliability of energy supplies;
- A3. Reaching the maximum level of energy saving and efficiency in the Catalan economy and

society; A4. Maximize the use of renewable energy sources, mainly indigenous ones; A5. Promote energy innovation as a vector of efficiency and creation of business activities; A6. Democratization of energy and participation of society in the definition of the new energy model; A7. Exercise the energy powers by the Catalan institutions within the framework of the EU.

RESULTS

The National Pact proposes to transform the current Catalan energy model into a model based 100% on renewable energies, desirably by the 2050 horizon, if technically, environmentally and economically possible.

Therefore, a new Catalan energy policy is necessary to maintain and guarantee future economic development and social well-being and serve to combat climate change, local pollution and other types of environmental impacts from the Catalan sphere, in coherence with the bets of the European Union, while reducing the levels of dependence on fossil hydrocarbons.

The mission of this new Catalan energy policy is for Catalonia to achieve an economy and a society of low intensity in the consumption of material resources, low energy intensity and low carbon emission, which makes compatible the objectives of sustainable development in its three aspects (economic sustainability, social and environmental) guaranteeing the security of energy supply and reducing its vulnerability to environmental impacts and greenhouse gas emissions, with a new innovative, competitive, decentralized and distributed energy model, participatory, democratic and socially inclusive to the environment and long term.

LINK [Link](#)

NO.6

NAME OF THE POLICY General Program for the Prevention and Management of Waste (in Catalan: Programa General de Prevenció i Gestió de Residus)

LEVEL Regional (Catalonia)

YEAR 2018 (expected validity until: 2020)

COUNTRY Spain (Catalonia)

THEME Ecodesign; Durability; Disassembly; Recycled materials; Reuse & upcycling

GENERAL DESCRIPTION

During the 2007-2012 period, waste management in Catalonia was carried out on the basis of three different management programs depending on the generation area: the Municipal Waste Management Program in Catalonia (PROGEMIC), the Management Program for Industrial Waste in Catalonia (PROGRIC) and the Program for the Management of Construction Waste in Catalonia (PROGROC).

In this context, prior to the beginning of the preparation of this PRECAT20 a balance of each of the previous programs was carried out, to evaluate the degree of achievement of the objectives that had been set and identify needs with a view to the new period programming 2013-2020.

OBJECTIVES

"Determine the action strategy of the Generalitat of Catalonia in the matter of prevention and waste management until the year 2020, from the perspective of contributing to the obtaining and efficient use of resources and favouring the development of a circular and low economy in carbon. "

ACTIVITIES	<p>The strategic objectives that will convey waste management in Catalonia during the 2013-2020 period proposed by PRECAT20 are the following:</p> <ul style="list-style-type: none"> - Promote the management of waste as resources. - Contribute, from a life cycle perspective, to the fight against climate change and other impacts associated with waste management and the use of resources. - Protect the soil as a basic environment and non-renewable resource. - Reduce the generation of waste, promoting prevention and particularly reuse. - Promote preparation for the reuse of waste. - Increase the recovery of all waste, particularly material recovery, from a low-carbon and circular economy perspective. - Progressively eliminate the disposal of recoverable waste. - Promote the Catalan waste sector as a technical, economic and legal reference. - Have a network of waste management infrastructures adapted to the territorial, economic and technical needs of Catalonia. - Make waste management transparent and economically sustainable.
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RESULTS	<p>Catalonia's waste management model is conceptually configured within the framework of the circular economy: with a vision of the use of resources and their reintroduction into society and the circular economy, the established hierarchy prioritizes the prevention of waste generation, promoting in the second instance its preparation for reuse, in the third instance its recycling or material use, followed by other types of recovery including energy, and finally the safe disposal or disposal, when the other options have not been possible</p> <p>The recovered waste must become true resources for the productive economy, so it is necessary to foresee the mechanisms so that the recovered materials meet the conditions required by the industry (physicochemical, technical and economic properties), and can be positioned preferentially compared to raw materials virgins.</p> <p>In relation to the circular economy, PRECAT20 presents the following objectives: Improve the quality of selectively collected waste to increase the quality and value of recycled materials, Adapt the currently existing municipal waste incineration facilities so that the current operation passes considered willingness to energy recovery ...</p>
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LINK	Link
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NO.7

NAME OF THE POLICY	Bioeconomy Strategy of Catalonia (in Catalan: Estratègia de Bioeconomia)
LEVEL	Regional (Catalonia)
YEAR	2021 (under development)
COUNTRY	Spain (Catalonia)
THEME	Biomaterials and innovative materials; Renewable and certified materials; Recycled materials; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	The bioeconomy is based on the use of renewable natural resources to produce goods and services in all economic sectors (food, energy, construction, pharmacy and green chemistry, textiles ...)

It aims to decarbonize the economy, mitigate climate change, promote the conservation of environmental services and biodiversity, promote the inclusiveness of rural areas (economic growth, employment) and all this with an important research and innovation component.

OBJECTIVES The BSC2030 focuses on the areas and activities of the bioeconomy that are less developed and that, therefore, need more institutional support through the implementation of specific measures and actions that facilitate their promotion and consolidation in the medium and long term.

The scope of the BSC does not include primary and agro-industrial production of food for human consumption, as it is considered that these sectors are already part of plans and strategies under development.

ACTIVITIES The BSC2030 includes sustainable biomass production practices that promote the efficient use of resources, such as the use of reclaimed water or the reuse of by-products as inputs for biomass production.

Some of the resources for obtaining bioproducts, bioconstruction, bio-packaging and bioenergy that are considered are the following:

- Forest biomass (primary, cleaning, protection strips, etc.)
- Residual biomass from agricultural crops (plant remains of herbaceous crops, pruning remains, food not collected for various reasons).
- Agricultural crops not intended for food (hemp, rapeseed, etc.)
- Livestock waste and by-products: livestock waste and parts of animals not intended for human consumption.
- Residues and by-products of the fishing industry.

RESULTS The destination markets for bio-products, bioconstruction, bio-packaging and bioenergy are multiple and diverse, the following being the most notable: construction, consumer goods, cosmetics, chemical industry, pharmaceutical industry, forestry sector, agricultural sector, fishing sector, etc.

The scope of the BSC covers the production of bioproducts, bioconstruction, bio-packaging and bioenergy from biomass, excluding biomass produced in the agricultural, forestry and fishing sectors that are food for human consumption.

The agricultural, forestry and fishing sector is considered within the scope as a consumer of bioproducts or bioenergy and as a producer of biomass destined for food.

LINK [Link](#)

NO.8

NAME OF THE POLICY	Circular Economy Roadmap in Catalonia (in Catalan: Full de Ruta de l'Economia Circular a Catalunya)
LEVEL	Regional (Catalonia)
YEAR	2021 (under development)
COUNTRY	Spain (Catalonia)
THEME	Circular Economy in general.

GENERAL DESCRIPTION Accelerate the transformation of Catalonia towards a circular economy that acts as a lever for economic recovery in a coherent political framework that, based on public-private collaboration, gathers synergies with transversal and sectoral policies and, at the same time, involves the entire citizenship.

OBJECTIVES Contribute to achieving climate neutrality. Total greenhouse gas (GHG) emissions equal to zero.
Decouple economic development from the consumption of materials. A sustainable, resilient and inclusive Catalonia that leaves no one behind.
Close the circle. Go from a linear model to a production and consumption model with network and circular value chains that allow to preserve resources within a continuous cycle.
Circular consciousness. Promote a circular culture in the entire Catalan society (Public Administrations, companies and citizens) to build a sustainable and resilient global system.

ACTIVITIES They have not yet been defined.

RESULTS They have not yet been achieved.

LINK [Link](#)

NO.9

NAME OF THE POLICY Royal Decree 117/2003 of 31 January 2003 on the limitation of emissions of volatile organic compounds due to the use of solvents in certain activities.

LEVEL National

YEAR 2003

COUNTRY Spain

THEME Reduction of pollution

GENERAL DESCRIPTION This Royal Decree Transposes Directive 1999/13/EC into national law and establishes the requirements to be met by new installations using certain quantities of solvents for the development of their activities.

OBJECTIVES This Royal Decree aims to prevent or, where this is not possible, to reduce the direct or indirect effects of emissions of volatile organic compounds on the environment and human health.

ACTIVITIES Apply any reduction scheme, specifically designed for its installation, provided that an equivalent emission reduction is ultimately achieved.
The operator shall submit an emission reduction plan.

RESULTS Avoid not exceeding the different emission limit values that are specified or reducing their emissions by other means, such as the use of products with low solvent content or exempt from them.

LINK [Link](#)

NO.10

NAME OF THE POLICY	Resolution of 20 January 2009, of the Secretary of State for Climate Change, publishing the Agreement of the Council of Ministers approving the National Integrated Waste Plan for the period 2008-2015.
LEVEL	National
YEAR	2009
COUNTRY	Spain
THEME	Reduction of pollution; Energy efficiency.
GENERAL DESCRIPTION	The purpose of the Plan is to promote an adequate policy in the management of waste, reducing its generation and promoting proper treatment of waste: prevention, reuse, recycling, valuation and elimination. Likewise, it seeks the involvement of all public administrations, consumers and users, in order that they assume their respective responsibility quotas, promoting the creation of infrastructures that guarantee this correct treatment and management of waste in the places closest to its generation.
OBJECTIVES	This Plan includes among its objectives the treatment of domestic and similar waste (urban waste of household origin), waste with specific legislation (hazardous waste, end-of-life vehicles and tyres, batteries and accumulators, electrical and electronic equipment, construction and demolition waste, and sewage sludge), contaminated soil and non-hazardous agricultural and industrial waste. It also provides for the reduction of landfills of biodegradable waste.
ACTIVITIES	<ul style="list-style-type: none"> - Modify the current trend of waste generation growth. - Eradicate illegal dumping. - Reduce landfilling and effectively promote: prevention and reuse, recycling of the recyclable fraction, as well as other forms of recovery of the non-recyclable waste fraction. - Complete treatment infrastructures and improve the operation of existing facilities. - Obtain reliable statistics on infrastructure, waste management companies and waste production and management. - Evaluate the economic and fiscal instruments that have been put in place to promote changes in existing management systems. To identify the advisability of their harmonised implementation in all the Autonomous Communities. - Consolidation of R&D&I programmes applied to the different aspects of waste management, including analysis of the efficiency of collection systems, optimisation of treatments and integrated evaluation of the complete management processes, from generation to disposal. - To reduce the contribution of waste to Climate Change by promoting the application of the measures with the greatest reduction potential.
RESULTS	<ul style="list-style-type: none"> - Integrated National Waste Plan (PNIR) for the period 2008-2015. - Autonomous waste plans drawn up by the Autonomous Communities.
LINK	Link

NO.11

NAME OF THE POLICY	Law 26/2007, of 23 October, on Environmental Responsibility.
LEVEL	National
YEAR	2007
COUNTRY	Spain
THEME	Reduction of pollution
GENERAL DESCRIPTION	This law regulates the responsibility of operators to prevent, avoid and remedy environmental damage, in accordance with Article 45 of the Constitution and the principles of prevention and "polluter pays".
OBJECTIVES	This regulation responds to the need for environmental legislation that implements new liability systems that effectively prevent environmental damage and, in cases where these do occur, ensure rapid and adequate repair.
ACTIVITIES	This law shall apply to environmental damage and imminent threats of such damage occurring, when caused by economic or professional activities listed in Annex III.
RESULTS	-
LINK	Link

NO.12

NAME OF THE POLICY	Law 22/2011, of 28 July, on waste and contaminated soils.
LEVEL	National
YEAR	2011
COUNTRY	Spain
THEME	Pollution reduction; Reuse and upcycling.
GENERAL DESCRIPTION	This Directive establishes the legal framework of the European Union for waste management, provides the instruments that allow dissociating the existing relationship between economic growth and waste production, with special emphasis on prevention, understood as the set of measures adopted before of a product becoming waste, to reduce both the amount and content of hazardous substances and the adverse impacts on human health and the environment of the waste generated. Thus, it incorporates the principle of hierarchy in the production and management of waste, which must focus on prevention, preparation for reuse, recycling or other forms of recovery, including energy recovery, and aims to transform the European Union into a "society recycling" and contribute to the fight against climate change.

OBJECTIVES The purpose of this Law is to establish the legal regime for the production and management of waste, as well as the provision of measures to prevent its generation and to avoid or reduce the adverse impacts on human health and the environment associated with its generation and management. Likewise, and as in the previous Waste Act, this Act also aims to regulate the legal regime for contaminated soils. Finally, the scope of application of the Law is delimited by a series of expressly mentioned exclusions.

ACTIVITIES This Law is applicable to all types of waste, with the following exclusions:

- a) Emissions to the atmosphere.
- b) Excavated uncontaminated soils and other natural materials excavated during construction activities.
- c) Radioactive waste.
- d) Declassified explosives.
- e) Fecal matter.

RESULTS Public administrations, producers and managers of waste have acquired much greater experience and training in this field than that existing at the time of approval of the previous standard and, on the other hand, waste prevention, production and management, and the principles that inspire it, have undergone an important evolution. On the other hand, the fight against climate change being a priority of environmental policy and although the contribution of waste to climate change is small in relation to the rest of the sectors, there is a significant potential for reducing greenhouse gas emissions, associated with the waste sector.

LINK [Link](#)

NO.13

NAME OF THE POLICY Law 5/2013 of 11 June 2013 amending Law 16/2002 of 1 July 2002 on integrated pollution prevention and control and Law 22/2011 of 28 July 2011 on waste and contaminated soils.

LEVEL National

YEAR 2013

COUNTRY Spain

THEME Pollution reduction; Reuse and upcycling.

GENERAL DESCRIPTION The law modifies, for the purposes of harmonisation with the new regulation of the Integrated Environmental Authorisation, the period of validity of the waste authorisations included in article 27 of Law 22/2011, of 28 July, on waste and contaminated soils, about facilities included in the scope of application of Law 16/2002, of 1 July.

OBJECTIVES The European Union drafts a new Directive on this matter, the Directive 2010/75 / EU, of the European Parliament and of the Council, of November 24, on industrial emissions, which has introduced various modifications in the integrated pollution prevention and control legislation, as well as in the rest of the legislation related to industrial activities, with the aim of responding to the need to obtain improvements in public health and the environment while ensuring profitability and fostering technical innovation.

ACTIVITIES This law will be applicable to the facilities of public or private ownership in which any of the industrial activities included in the categories listed in Annex 1 are carried out and which, where appropriate, reach the capacity thresholds established therein, except for the facilities or parts thereof used for research, development and experimentation of new products and processes.

RESULTS The result is a clearer and more coherent directive that, in general terms, reinforces the application of Best Available Techniques (BAT) in the European Union by requiring Member States that emission limit values be established in accordance with the conclusions regarding BAT, without prescribing the use of a specific technique or technology. Likewise, greater emphasis is placed on the justification of the conditions established in the permits, and stricter emission limit values are applied for some sectors, such as large combustion plants.

LINK [Link](#)

NO.14

NAME OF THE POLICY State Waste Prevention Programme 2014-2020

LEVEL National

YEAR 2013

COUNTRY Spain

THEME Ecodesign; Durability; Recycled materials; Reduction of pollution and Reuse and upcycling.

GENERAL DESCRIPTION The State Programme for Waste Prevention 2014-2020 develops waste prevention policy, in accordance with current legislation, to make progress towards meeting the target of reducing waste generated in 2020 by 10% compared to the weight of waste generated in 2010. The State Programme describes the current situation of waste prevention in Spain, analyses existing prevention measures and assesses their effectiveness.

OBJECTIVES This programme is built around four strategic lines aimed at addressing the key elements of waste prevention:

- reduction of the quantity of waste,
- reuse and extension of the useful life of products,
- reduction of the content of harmful substances in materials and products, and
- reduction of the adverse impacts of waste generated on human health and the environment.

ACTIVITIES Each strategic line identifies the products or sectors of activity on which priority action will be taken, proposing the prevention measures that have proven to be most effective in each of the areas, following the classification established in Annex IV of the Waste Framework Directive and the Waste Act (measures that affect the establishment of the framework conditions for waste generation (legal framework for regulations, planning and action by administrations), the design, production and distribution phase of products, and the consumption and use phase).

RESULTS Biennial evaluation of its performance through a set of indicators.

LINK [Link](#)

NO.15

NAME OF THE POLICY	State Framework Plan for Waste Management (PEMAR) 2016-2022
LEVEL	National
YEAR	2015
COUNTRY	Spain
THEME	Circular Economy
GENERAL DESCRIPTION	<p>The State Framework Plan is the instrument for guiding waste policy in Spain in the coming years, promoting the necessary measures to improve the deficiencies detected and promoting actions that provide a better environmental result and ensure that Spain complies with the legal objectives.</p> <p>It consists of 25 chapters, 15 of which are dedicated to waste streams with specific regulations. For all the waste streams included, the applicable regulations and objectives, the evolution of management in recent years and the current situation of waste management are described, and the objectives and strategic guidelines and lines of action to achieve them are established</p>
OBJECTIVES	<p>The goal of the Plan is to turn Spain into a resource-efficient society, moving towards a circular economy. In short, the aim is to replace a linear economy based on produce, consume and throw away, with a circular economy in which the materials contained in waste are reincorporated into the production process over and over again for the production of new products or raw materials.</p>
ACTIVITIES	<p>Coordination between all administrations involved especially through the Coordination Commission and its specific working groups to avoid barriers.</p> <p>Improving information and increasing transparency in the field of waste.</p> <p>In this respect, the implementation of the Waste Production and Management Register, a single, shared register for the whole of Spain, plays an essential role.</p> <p>Strengthen, increase and coordinate inspection, control and surveillance activities, especially to avoid market distortions associated with illegal waste management.</p> <p>Allocate more human and financial resources to the waste sector to, inter alia, improve knowledge on treatment and base decisions on technical criteria.</p> <p>More and better communication and awareness raising.</p> <p>Facilitate the reintroduction of waste materials into the market while ensuring the protection of human health and the environment.</p>
RESULTS	<p>The fundamental objective of the Plan is to meet the current objectives of preparation for reuse, recycling and recovery of waste, and to move from a situation in which landfill (disposal) represents 44% of the total volume of waste to a scenario in that this option is a minority.</p>
LINK	Link

NO.16

NAME OF THE POLICY	The Circular Economy Pact: the commitment of the economic and social partners 2018-2020
LEVEL	National
YEAR	2017
COUNTRY	Spain
THEME	Circular Economy
GENERAL DESCRIPTION	The Circular Economy Pact aims to foster collaboration and coordination between economic and social actors and public administrations to tackle today's environmental, economic and technological challenges together.
OBJECTIVES	1. To make progress in reducing the use of non-renewable natural resources, reusing the materials contained in waste as secondary raw materials in the production cycle, provided that the health of people and the protection of the environment are guaranteed. 2. To promote the analysis of the life cycle of products and the incorporation of eco-design criteria, reducing the introduction of harmful substances in their manufacture, facilitating the reparability of the goods produced, prolonging their useful life and enabling their recovery at the end of their useful life. 3. To favour the effective application of the principle of waste hierarchy, promoting the prevention of waste generation, encouraging reuse, strengthening recycling and favouring its traceability. 4. To promote guidelines that increase innovation and the overall efficiency of production processes, through the adoption of measures such as the implementation of environmental management systems. Promote innovative forms of sustainable consumption, including sustainable products and services, as well as the use of digital infrastructures and services. 6. Promote a model of responsible consumption, based on the transparency of information on the characteristics of goods and services, their durability and energy efficiency, using measures such as the use of the eco-label. 7. Facilitate and promote the creation of appropriate channels to facilitate the exchange of information and coordination with administrations, the scientific and technological community and economic and social agents, so as to create synergies that favour the transition. 8. To disseminate the importance of moving from a linear economy towards a circular economy, promoting the transparency of processes, awareness and sensitisation of the public. 9. Encourage the use of common, transparent and accessible indicators that make it possible to know the degree of implementation of the circular economy. 10. Promote the incorporation of indicators of the social and environmental impact derived from the operation of companies, to be able to evaluate beyond the economic benefits generated by them, as a consequence of their commitment to the circular economy.
ACTIVITIES	Since September 2017, with the celebration of the Spanish Circular Economy Strategy Debate Day, a total of 359 entities have joined the Pact.
RESULTS	Data collection template of the entities adhered to the pact. First summary of the circular economy indicators report.
LINK	Link

NO.17

NAME OF THE POLICY	Order APM/397/2018, of 9 April, determining when polyurethane foam offcuts used in the manufacture of composite foam are considered by-products in accordance with Law 22/2011, of 28 July, on waste and contaminated soils.
LEVEL	National
YEAR	2018
COUNTRY	Spain
THEME	Reuse and recycling
GENERAL DESCRIPTION	This order establishes the technical requirements for foams and the obligations of producers and users of this material. Accordingly, polyurethane foam offcuts intended for the manufacture of composite foams may be declared as by-products provided that the requirements laid down in this order are met.
OBJECTIVES	If these requirements are not met, the production waste from the manufacture of polyurethane foam may not be used for the manufacture of composite foams as a by-product, so they will have to be managed under the legal waste regime, with the in order to ensure its correct management and adequately protect human health and the environment.
ACTIVITIES	The polyurethane foam cuttings from the polyurethane foam production process used for the production of composite foam are considered by-products when the requirements established in this order, applicable throughout the national territory, are met. Polyurethane foam cuttings that do not meet the above requirements or are not intended for the manufacture of composite foams, will be subject to the legal waste regime established in Law 22/2011, of July 28, on waste and soils contaminated.
RESULTS	-
LINK	Link

NO.18

NAME OF THE POLICY	Spanish Circular Economy Strategy, Circular Spain 2030
LEVEL	National
YEAR	2020
COUNTRY	Spain
THEME	Circular Economy
GENERAL DESCRIPTION	The Spanish Circular Economy Strategy, Spain Circular 2030 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, in which waste generation is



minimised and those that cannot be avoided are used to the greatest extent possible. The Strategy thus contributes to Spain's efforts to achieve a sustainable, decarbonised, resource-efficient and competitive economy.

OBJECTIVES	<p>The Strategy establishes strategic guidelines in the form of a decalogue and sets a series of quantitative objectives to be achieved by 2030:</p> <ul style="list-style-type: none"> - A 30% reduction in the national consumption of materials in relation to GDP, taking 2010 as the reference 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. <p>Increase reuse and preparation for reuse to 10% of municipal waste generated.</p> <ul style="list-style-type: none"> - Improve water efficiency by 10%. - Reduce greenhouse gas emissions to below 10 million tonnes of CO₂ equivalent.
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ACTIVITIES	<p>On the other hand, the main lines of action on which the policies and instruments of the Circular Economy Strategy and its corresponding action plans will focus are eight. Five of them are related to closing the circle: production, consumption, waste management, secondary raw materials and water reuse. The remaining three are cross-cutting: Awareness-raising and participation, Research, innovation and competitiveness, and Employment and training.</p>
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RESULTS	Not available
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LINK	Link
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NO.19

NAME OF THE POLICY	Spanish Urban Agenda 2030
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LEVEL	National
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YEAR	2019
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COUNTRY	Spain
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THEME	Circular Economy
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GENERAL DESCRIPTION	<p>The Spanish Urban Agenda (AUE) is a strategic document, non-normative, and therefore of voluntary adherence, which, in accordance with the criteria established by the 2030 Agenda, the new United Nations Urban Agenda and the Urban Agenda for European Union pursues the achievement of sustainability in urban development policies. It also constitutes a working method and a process for all actors, public and private, that intervene in cities and that seek equitable, fair and sustainable development from their different fields of action.</p>
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After an intense work of elaboration and an extensive participatory process that has lasted almost a year, this integrated urban development strategy offers a Decalogue of Strategic Objectives that unfold, in turn, a total of 30 specific objectives, and 291 lines of action, making available to those interested in its implementation, a true "à la carte menu" so that they can develop their own Action Plans. All this from a broad vision that includes all towns and cities

regardless of their size and population, and under the triple prism of economic, social and environmental sustainability.

OBJECTIVES The Spanish Urban Agenda (AUE) responds to compliance with the international commitments adopted in accordance with the 2030 Agenda, the New Urban Agenda of the United Nations and the Urban Agenda for the European Union. The objectives of this Agenda, therefore, are broad and ambitious and its strategic framework responds to them, which is made up of a Decalogue of objectives to be achieved and a list of possible lines of action to be deployed by each of the actors who wish to commit. with the Agenda.
There are 10 strategic objectives and the one that is related to the aim of this project is SO4: Make a sustainable management of resources and promote the circular economy.

ACTIVITIES The Agenda is conceived as a strategic document, without a normative character, that tries to champion a new vision of Urbanism. It will be imperfect and will require improved versions as the different actors incorporate processes and mechanisms for effective implementation.
The Spanish Urban Agenda contains:

- A diagnosis of the urban and rural reality.
- A strategic framework structured in a Decalogue of Objectives with 30 specific objectives and their possible lines of action.
- A system of indicators that will allow the evaluation and monitoring of the fulfilment of the objectives.
- Some files that illustrate how the action plans for the implementation of the AUE and
- An Action Plan for the General State Administration with concrete proposals from the scope of state powers.

The objectives pursued by European policy for this sector, and which are included in the PEC (Circular Economy Package), are a good guide to guide the choice of actions, their prioritisation and their effective start-up. These objectives are the following:

- Achieve preparation rates for the reuse and recycling of municipal waste of 55% by 2025, 60% by 2030 and 65% by 2035.
- Reach mandatory recycling rates for all packaging of 70% by 2030, which will be distributed as follows: 55% for plastic packaging, 30% for wood, 80% for ferric metals, 60% in aluminium, 75% in glass and 85% in the case of paper and cardboard.
- Ban, by 2030, the dumping of recyclable waste.
- Require all plastic packaging to be recyclable by 2030.

RESULTS Not available

LINK [Link](#)
[Link](#)

NO.20

NAME OF THE POLICY Waste Plan for The Region of Murcia 2016-2020

LEVEL Regional

YEAR 2016

COUNTRY Spain (Region of Murcia)



THEME	Circular economy
GENERAL DESCRIPTION	This Plan provides an analysis of the situation of waste prevention and waste management, as well as an overview of measures to facilitate reuse, recycling, other types of recovery, recovery and recycling, as well as an overview of measures to facilitate reuse, recycling, other types of recovery, recovery and reuse and a presentation of measures to facilitate reuse, recycling, other types of recovery, including energy recovery and disposal, including energy recovery and waste disposal, which enable the fulfilment of the objectives set out in Law 22/2011, which objectives set out in Law 22/2011 of 28 July 2011, other waste legislation and other environmental legislation. other environmental regulations.
OBJECTIVES	INDUSTRIAL AND COMMERCIAL WASTE: includes the definitions and classifications related to this waste stream, the scope and actors responsible for the management the scope and agents responsible for waste management, the hazardous nature of the waste and the nature and composition of the materials that constitute it, the current situation of this waste stream in the Region the nature and composition of the materials that make up the waste, the current situation of this waste stream in the Region, a list of the waste considered key in the Region, a summary table of the types of waste management carried out in the Region, and a list of the types of waste that are managed in the Region. a summary table on the types of management carried out in the Region, a basic model that serves as a support and structure for a and structure for a series of actions to adapt and improve the system's operations and facilities, the main measures defined in the national waste prevention programme, the set of measures to prevent waste, the set of measures to prevent waste and the measures to prevent waste from being disposed of in the Region. waste prevention programme, the set of installations that can be used jointly in industrial waste management in the management of non-hazardous and hazardous industrial waste and waste assimilated to industrial waste, as well as the objectives and measures set out in the plan.
ACTIVITIES	The measures, as they are linked to the objectives, are also focused according to the waste hierarchy and measures have also been considered to help control and monitor the Plan. These measures can be classified into the following types: Coordination and participation; Information and Communication; Training; Promotion; R&D&I; Generation of knowledge; Infrastructures; Regulatory development; Monitoring and evaluation.
RESULTS	Study of alternatives for the collection and subsequent management operations of biowaste Guide for registration by means of authorisation or communication in the field of waste in the Region of Murcia Environmental Sustainability Report EAE20060798 Waste Plan for the Region of Murcia 2016-2020 [environmental report].
LINK	Link

NO.21

NAME OF THE POLICY	Agreement of the Governing Council approving the preparation of the Circular Economy Strategy of the Region of Murcia and the constitution of the Steering Committee
LEVEL	Regional
YEAR	2017
COUNTRY	Spain (Region of Murcia)
THEME	Circular economy
GENERAL DESCRIPTION	In this European and global context, and given the political, economic and social importance of the Region of Murcia, the existence of the Circular Economy Strategy of the Region of Murcia (ESECIRM) is necessary to establish the essential framework to facilitate and promote the transition towards the circular economy model by all agents involved, especially public administrations, producers and consumers of goods. In view of the above, the Governing Council, in its session of 20 September 2017, approved the "Start of the work of the Circular Economy Strategy of the Region of Murcia", the purpose of which will be to stimulate the transition from a linear economy to a circular economy.
OBJECTIVES	Start the process of preparing the Circular Economy Strategy for the Region of Murcia. Establish a Management Committee and Technical Table.
ACTIVITIES	<ul style="list-style-type: none"> - Lead the process of preparing the Strategy - Promote, propose actions and establish priorities for the development and completion of the Strategy. - Inform and serve as a link with the Governing Council. - Entrust the General Directorate of the Environment with the preparation of the Circular Economy Strategy, appointing its owner. - Coordinator of the Technical Table, who may incorporate to it representatives of other entities or organizations linked to the matter, reporting to the Steering Committee. - Establish the following guiding schedule for the process of preparing the Circular Economy Strategy for the Region of Murcia.
RESULTS	Circular Economy Strategy for The Region of Murcia 2017-2030 (index draft)
LINK	Link

NO.22

NAME OF THE POLICY	Circular Economy Strategy for The Region of Murcia 2030
LEVEL	Regional
YEAR	2018
COUNTRY	Spain (Region of Murcia)
THEME	Circular economy



GENERAL DESCRIPTION	<p>In 2015, the Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions, "Closing the loop: an EU action plan for the circular economy", COM (2015) 614 final, developed in 2016 with the package of new measures on the circular economy to boost competitiveness, create jobs and generate sustainable growth. In said communication it is stated that the Circular Economy will require development at the level of each Member State, Regions and also at the local level.</p> <p>About the State, a strategy is being developed, in line with the European strategy, called "Spain Circular 2030". Said strategy contains a first action plan with specific actions that lead Spain towards a circular economy model.</p> <p>At the Regional level, the Waste Plan for the Region of Murcia 2016-2020, aims to contribute, from the waste field, to sustainable development, the efficient use of resources and a circular economy that is competitive at the same time and generator of new activities. These objectives are in line with those of the European Union.</p> <p>In this European and global context, and given the political, economic and social importance of the Region of Murcia, the existence of the Circular Economy Strategy of the Region of Murcia (ESECI RM) is necessary, to establish the essential framework to facilitate and promote the transition towards the circular economy model by all agents involved, especially public administrations, producers and consumers of goods.</p>
OBJECTIVES	<p>For all the above, the Governing Council, in its session of September 20, 2017 approved the "Start of work on the Circular Economy Strategy of the Region of Murcia", the purpose of which will be to stimulate the transition from a linear economy to a circular economy.</p>
ACTIVITIES	<p>The Circular Economy Strategy of the Region of Murcia is being developed through a participatory process consisting of the following stages:</p> <p><u>Discussion phase</u></p> <ul style="list-style-type: none">- Steering Committee meetings: this includes the involved departments of the Regional Administration, plus business and trade union organisations. One meeting has been held.- Technical Committee meetings: this includes technology centres, universities, municipalities, associations and experts with the capacity to contribute to the drafting of the strategy. It has met on 3 occasions, plus bilateral meetings with interested representatives. <p><u>Public consultation phase</u></p> <p>To know the perception and opinion of citizens on different aspects of the circular economy and to collect their feedback.</p> <p>Documentary results: Once the consultation has been completed, a Citizen Contribution Report is drawn up and published, which includes the assessments and contributions obtained in the consultation.</p> <p><u>Return phase</u></p> <p>A Reasoned Decision Report is drawn up and published, in which the management centre responsible for the matter gives an account of the estimated or rejected citizen contributions, where appropriate, obtained in the public consultation phase. The estimated proposals will be considered in the elaboration of the Circular Economy Strategy of the Region of Murcia 2030.</p>
RESULTS	<p>Reasoned Decision Report. Circular Economy Strategy. 2018-04-DP</p> <p>Citizen Input Report. Public Consultation 2018-04-DP</p>
LINK	<p>Link</p>

Conclusion

In Spain, at this stage, there is no doubt that the commitment to a Circular Economy strategy is a necessary opportunity for companies to ensure their survival and future growth, as well as their adaptation to new international regulations and best practices but it is necessary to go a step further in which companies and their shareholders have to prepare and train themselves professionally to implement criteria that consumers and their employees are already demanding.

As has been aforementioned, the first Spanish policies or royal decrees avoiding waste prevention were mainly focused on the reduction of pollution and reuse and upcycling actions. Later, the society in general, open their mind to other related concepts and the scope of the following policies began to be associated with the term Circular Economy with brings together more options and opportunities, but also more responsibilities.

In Catalonia, the current management of wood waste is approximately as follows: 1% reuse, 69% recycled and 30% energy recovery. The management of this waste is done in accordance with European / Spanish / Catalan legislation and in accordance with the objectives established in the current General Program for the Prevention and Management of Waste⁴⁸. There are no notable requirements or objectives that apply to this waste stream.

The sector voluntarily applies different environmental tools (e.g., GPP, ecodesign, ecolabels, EMS, CoC, sustainable building, etc.). The sector has been “rumoured” for a long time about the possible implementation in the future of a take-back scheme (EPR) for furniture, without currently having any processes or initiative formally initiated in this matter.

In Catalonia there are two major strategies currently under development in terms of Circular Economy: 1) Circular Economy Roadmap in Catalonia⁴⁹ (in Catalan: Full de Ruta de l'Economia Circular a Catalunya) and 2) Bioeconomy Strategy of Catalonia⁵⁰ (in Catalan: Estratègia de Bioeconomia), in addition to 6 other initiatives in force and collected in the previous tables.

In the case of the Region of Murcia, the debate began years later if compared with other Spanish regions or territories. It was not until the year 2016 when it makes necessary to start the movement to achieve the Circular Economy Strategy of the Region of Murcia (ESECIRM), to establish the essential framework to facilitate and promote the transition towards the circular economy model by all the agents involved. Of course, these responds to previous actions and movement at national level (Circular Spain 2030) and European level (Closing the loop: an EU action plan for the circular economy and the new Gren Deal). Nevertheless, the state of the art of this legislation is still to come and therefore, to be passed and implemented. Without any kind of doubt, the first step has already been taken.

⁴⁸ <https://portaldogc.gencat.cat/utillsEADOP/PDF/8o63/1783616.pdf>

⁴⁹ https://participa.gencat.cat/uploads/decidim/attachment/file/2216/Document_base_procés_participació.pdf

⁵⁰ <https://portaldogc.gencat.cat/utillsEADOP/PDF/8o63/1783616.pdf>

5. Italy

Materials and Methods of the Italian research

Environmental legislation in Italy is mainly managed at national level when it comes to the implementation of the European regulations and the organization of the permit system. At regional level are allocated mainly the planning of the treatment plants and the issuing of authorisations. In 2006, all environmental legislation was incorporated into a single text which has since then been used as a single text designed to incorporate the transpositions of new European legislation. Attempts to simplify waste management from the point of view of the circular economy often clash against definitions that continue to be precautionary and to focus mainly on fighting illegality than on exploiting waste as a resource. However, the introduction of the definition of by-product, carried by Italy in the European legislation, has been useful, while it is difficult to have a versatile and efficient organisation about End of Waste criteria.

In the recent years many measures have been taken to integrate the circular economy into the Italian regulatory system, both from the point of view of incentives and from the point of view of objectives for sectors affected by extended responsibility. In the specific, on extended responsibility, the transposition of the directives of the “circular economy package” in 2020 has outlined a framework within which the Ministry of the Environment⁵¹, which has assumed the name of Ministry of Ecological Transition with the new government in office since February 2021, will be able to define perimeters and targets of new extended responsibility schemes dedicated to products not covered by these tools to date. In general, even the architecture imagined twenty years ago with the establishment of consortia for the recovery and recycling of packaging, which has worked very well especially in the wood sector, is undergoing variations that aim to make the waste market more competitive and competitive by facilitating the establishment of new collective systems in competition with each other.

On the other hand, the new schemes already provide for competition between several collective systems by design.

At regional level, several regulations are in place to facilitate the start-up of a circular economy, particularly from the point of view of financing innovative ideas or reconversion of production processes. From the authorization point of view, the criteria by which it can be defined that a waste ceases to be considered waste and can therefore be defined as a “good” that can enter the production cycles, are defined by the local authorities with the ex-post supervision of the national environmental protection agency ISPRA⁵² which monitors these measures to ensure uniform treatment on national territory.

⁵¹ <https://www.minambiente.it/>

⁵² <https://www.isprambiente.gov.it/it>



A special mention deserves the theme of Green Public Procurement (GPP)⁵³. In Italy, the procurement code has made it compulsory in every public tender to apply the minimum environmental criteria defined by the Ministry of the Environment for different categories, including furniture, buildings and urban furniture. This has led to the need for many companies, such as those in the office furniture sector, to adapt quickly and with great effort to the criteria defined by the Ministry to be able to continue to operate and sell to the public sector. This effort has greatly increased companies' awareness of the basic concepts of the circular economy and the importance of paying attention to the eco-design of their products. In this situation the research focused on the main national environmental law, plus a couple of in deep analysis on GPP organization and criteria, and regional waste planning.

To complete the view about wood waste, we decided to also include an industry standard, on wood recycling which is now undergoing the technical standardization route, and a mention to a European guideline on cascading use of biomass, which is crucial to maintain the very efficient sector of wood recycling, which could be endangered by an uncontrolled push towards biomass energy.

The Italian research was based on three different level of policies: European, national and regional, taking information not only from official website of the Italian government but also in the once of the regional ones. Also has been consulted some report listed in the references part of this document.

Background research and National/Regional policies

Circular Economy in Italy

The Circular Economy model is an answer to the crisis of the linear economic system, which relies exclusively on the exploitation of few resources to satisfy the needs of the consumers. Ambitious policies are needed to promote the transition from a linear to a circular model, supported by a clear legislative framework capable of giving the right signals to investors.

The most important document of the Italian environmental legislation is the legislative decree 152/2006⁵⁴. With this decree, also known as "*Testo Unico Ambientale*", the legislator has collected all the previous environmental legislation trying to give a univocal framework to all the aspects that regulate the protection of the environment, especially regarding the industry and productive part, the one more interested by circular economy. The consolidated environmental text was then updated several times over the years with the transposition of various European directives, including the so-called "circular economy package"⁵⁵ which were implemented in 2020 with decree 116/2020⁵⁶.

⁵³ <https://www.isprambiente.gov.it/it/attivita/certificazioni/jpp/gpp>

⁵⁴ https://www.bosettiegatti.eu/info/norme/statali/2006_0152.htm

⁵⁵ <https://ec.europa.eu/environment/circular-economy/>

⁵⁶ <https://www.gazzettaufficiale.it/eli/id/2020/09/11/20G00135/sg>

Alongside this regulatory framework, there are also several implementation measures that need specific decrees concerning the various measures envisaged, some of which have not yet been issued. Relevant aspects concerning the issue of the circular economy are certainly Article 178 of Decree 152/2006, which set the rules needed to establish extended producer responsibility systems and then delegates to the Ministry of the Environment the possibility of drawing up criteria and specific decrees for each product affected by extended producer responsibility.

Another article of great importance is 184-bis⁵⁷ which reports the definition of by-product, thanks to which many production residues can find a use without having to go through the definition of waste. The definition of end of waste (184-ter) and the related criteria also play a fundamental role in the implementation of a true circular economy but when it comes to End of Waste criteria, Italian legislation is still lagging behind.

The decrees establishing the end of waste criteria for certain waste are still very few, and the general rules through which the individual local authorities were used to issue the authorizations for recycling and recovery have been questioned and suspended between 2018 and 2019 due to an alleged problem about uniformity of treatment. Now the local authorities have once again been allowed to grant end-of-waste authorizations on a case-by-case basis, but a centralised verification and control mechanism has been introduced, run by the national environmental agency ISPRA⁵⁸.

Then there are also specific measures that go beyond the consolidated environmental text and which mainly concern the energy sector or the protection of the natural heritage which are not covered by d.lgs 152/2006.

For example, another important regulation on which the Italian legislation declines some principles in the field of circular economy is the "*Collegato Ambientale*"⁵⁹ (law 28 December 2015, n.221) which contains provisions on environmental legislation to promote green economy and sustainable development. It allowed the principles of the circular economy to become part of the Italian system. The document acts broadly on everything related to the environment, from waste management to sustainable mobility.

This standard also intervenes in the balance between recycling and energy recovery of wood waste by establishing limits on incentives for the combustion of these resources.

In this regard, to establish an approach that respects the hierarchy of use of bio-resources, ensuring compliance with the priority criteria that see human nutrition first, the "Italian strategy for the bioeconomy", updated in 2019, identifies the priorities for the Italian bioeconomy, in all sectors, with the greatest relevance and potential in terms of circularity and regeneration.

⁵⁷ <https://www.mondodiritto.it/codici/codice-dell-ambiente/art-184-bis-codice-dell-ambiente-sottoprodotto.html>

⁵⁸ <https://www.isprambiente.gov.it/it>

⁵⁹ <https://www.gazzettaufficiale.it/eli/id/2016/1/18/16G00006/sg>

At the national level, the 2020 budget law contains some first measures for the "Green new deal", with the establishment of a fund for public investments (4.24 billion euros for the years from 2020 to 2023), intended to support innovative projects and investment programmes with high environmental sustainability. In the context of public policies to support the transition to a circular economy, it is possible to note the redefinition of the Industry 4.0 Plan with greater attention to environmental sustainability and explicitly aimed - as a "Transition Plan 4.0" - also to encourage green investments by companies in the area of the circular economy; the expansion of the Revolving Fund for the support of businesses and investments in research whose resources can be allocated to support investment programs and operations in the field of decarbonisation of the economy, circular economy, urban regeneration, sustainable tourism, adaptation and mitigation of risks deriving from climate change. It is also worth the MISE (ministry of economic development)⁶⁰ decree concerning the procedures for the provision of subsidies related to innovative investments by small and medium-sized enterprises in less developed regions to facilitate their transition to the circular economy.

Regarding other tax measures, it should be noted that the conversion law of the "Growth" decree (2019)⁶¹ has provided for a series of incentives to encourage both the reuse and recycling of packaging, and the purchase of recycled and reused products.

An aspect to which Italy has devoted much importance is the development of environmental criteria for public procurement. Since 2017, compliance with the so-called minimum environmental criteria for public purchases of any amount is mandatory in Italy⁶². The furniture supply chain is affected both by the criteria for the purchase or rental of furniture and by criteria for urban outdoor furniture like bench and tables, and children playground toys. In the new edition of the minimum environmental criteria for furniture that will be published in 2021, the Ministry of the Environment wanted to include, alongside the traditional formula of the purchase of furniture and the already tested one of rental, also sets of criteria dedicated specifically to services for extending the useful life of products, such as repairs, and a set of criteria for services related to the end of life of the products which therefore is not limited to sending for recycling but provides for the possibility of assigning them to a new use using also the network of non-profit voluntary associations.

In 2021, the ministry of the environment issued a call for the presentation of research and development projects related to products not yet subject to extended liability regimes.

The new government, in office since February 2021, established the Ministry of Ecological Transition which brings together the competences of the Ministry of the Environment and those of energy that were previously attributed to the ministry of economic development and will chair the inter-ministerial committee for the coordination of ecological transition.

⁶⁰ <https://www.mise.gov.it/index.php/it/>

⁶¹ <https://www.gazzettaufficiale.it/eli/id/2020/07/11/20A03615/sg>

⁶² codice degli appalti, d.lgs 50/2016 art. 34

One sector in which Italy has distinguished itself over the years about the circularity of the wood furniture supply chain is certainly that of wood recycling. With the establishment of the consortium for the collection and recycling of wooden packaging, "Rilegno"⁶³, which took place in 1998, Italy focused on a system of shared responsibility which has allowed for the organisation of a very efficient system of collection and recycling of wooden packaging and bulky wood waste thanks to which it was possible to develop an industrial sector, namely the wood-based panels sector, that completed the transition started a few decades earlier from the use of virgin wood to the exclusive use of waste as raw material. Almost four millions of cubic meters of wood waste are used every year to produce chipboard panels in Italy. Thanks to this availability and to the technologies developed for the cleaning and recycling of wood waste, almost all the particleboard produced in Italy are made up of 100% recycled wood which makes it possible to certify these products with the FSC recycled and Pefc recycled label. The current recycling rate of wood packaging in Italy is already at a level more than double the targets set by the European Union for 2030.

Italian wood recyclers started in 2021 a process to transpose an industry self-commitment into a standard recognised by the national standardisation body to ensure the proper treatments and controls that need to be in place in order to produce a final product (particleboard) which is fully compliant with the sectorial standards.

List of Policies in The Circular Economy sector in Italy

NO.1

NAME OF THE POLICY	Testo Unico Ambientale (d.lgs 152/2006)
LEVEL	National
YEAR	2006
COUNTRY	Italy
THEME	Framework for the whole national environmental regulation
GENERAL DESCRIPTION	<p>The "Single Environmental Law" (or "Environmental Code") entered into force in its historical text on 29 April 2006 and contains the main rules governing the environmental regulations that were previously divided into numerous provisions. Over the years it has been modified many times and in 2020 (with the amendments made by Legislative Decree 116/2020) it also includes the transpositions of the directives of the Circular Economy package.</p> <p>The Law is divided into the following parts:</p> <ul style="list-style-type: none"> • General provisions • Authorizations

⁶³ <http://www.rilegno.org/>

- Water and soil defence
- Waste and remediation
- Emissions to atmosphere
- Provisions for particular installations
- Environmental damage responsibility

Discipline of sanctions for administrative and criminal offenses related to environmental protection. The Law asks for the implementation of a considerable number of "implementing decrees", to make the institutes and principles contained in Legislative Decree 152/06 operational and effective. Some of these have never been enacted.

OBJECTIVES	Transpose European environmental legislation and create the conditions for the development of the circular economy.
ACTIVITIES	The publication of end of waste decrees for various waste categories is expected. Decisions in the absence of national end-of-waste criteria are taken by the individual competent authorities.
RESULTS	When it comes to waste collection and recycling, results are higher than the European targets and are already beyond the 2030 target.
LINK	Link

NO.2

NAME OF THE POLICY	Decreto di recepimento Circular Economy Package (d.lgs 116/2020)
LEVEL	National
YEAR	2020
COUNTRY	Italy
THEME	Update on the Framework for the whole national environmental regulation
GENERAL DESCRIPTION	This decree has transposed the "circular Economy package" by amending The "Single Environmental Law" (or "Environmental Code")
OBJECTIVES	Transpose European environmental legislation on Circular Economy and create the conditions for the development of a transition to this new paradigm.
ACTIVITIES	Rules are provided for the establishment of extended responsibility systems, which must then be defined sector by sector with specific provisions. The possibility of establishing an extended responsibility scheme for mattress manufacturers is envisaged, which could also open the way to upholstered furniture and furniture in general.
RESULTS	To be assessed
LINK	Link

NO.3

NAME OF THE POLICY	Law 28 December 2015, n.221 (Collegato Ambientale)
LEVEL	National
YEAR	2015
COUNTRY	Italy
THEME	Waste and wood residues Hierarchy
GENERAL DESCRIPTION	The law contains provisions on environmental legislation to promote green economy and sustainable development. It allowed the principles of the circular economy to become part of the Italian system. The document acts broadly on everything related to the environment, from waste management to sustainable mobility. This standard also intervenes in the balance between recycling and energy recovery of wood waste by establishing limits on incentives for the combustion of these resources.
OBJECTIVES	Incentivise the material use of wood waste
ACTIVITIES	Discontinuation of incentives for certain kind of wood waste combustion
RESULTS	Change in the availability of wood waste were reported by the companies
LINK	Link

NO.4

NAME OF THE POLICY	Best Practice on wood recycling (industry commitment, to be adopted by Italian national standardization body in 2021)
LEVEL	National
YEAR	2021
COUNTRY	Italy
THEME	Recycling
GENERAL DESCRIPTION	<p>Back in the 1990s, the wood-based panel industry made a commitment to use as much recycled wood as possible to reduce the number of trees that had to be cut down.</p> <p>Over the years, significant experience has been gained on this front, leading to improved technologies and machinery for recovering and recycling wood such that, provided the protocol outlined in this document is complied with, the finished product is guaranteed to be:</p> <ul style="list-style-type: none"> • Safe for the consumer, including the most vulnerable sections of society, such as children, the elderly and the sick. The pollutant limits that are in place ensure finished products are not harmful to people's health, regardless of whether they are used in the home or work settings. Additionally, the manufacturing processes safeguard the health of the workers involved in manufacturing.

- The recycling of materials is environmentally safe. At the end of the life cycle of wood-based products or the items made with them, the waste generated is classified as non-hazardous and so it can be recycled safely. In other words, the product can be completely reused, meaning no environmental impact - and thus even more environmentally friendly - and a step in the direction of "Zero Waste to Landfill". The focus is thus shifted towards recycling and away from disposal or incineration.
- Complies with the waste hierarchy within the circular economy paradigm, cutting deforestation and sustainably sequestering large quantities of CO₂ (1.8 tonnes of CO₂ for every ton of recovered dry wood), rather than releasing this CO₂ through combustion.

OBJECTIVES	The purpose of the document is to define a standard for the use of pre-consumer and post-consumer recovered wood that can be utilised in the manufacture of wood-based panels.
ACTIVITIES	The voluntary protocol sets minimum requirement for wood waste suppliers checks on material, acceptance controls, analytical measures on supplied wood, controls to be performed during the process, and final check on the products, to build a chain of controls that ensure the quality of the final product, enhancing the role of cleaning and processing technology in order to be able to use several different kinds of wood waste.
RESULTS	Protocol is very recent. The expected result is to clarify the process that ensure the quality of the recycled products (panels) if there is no national or European regulation about this topic.
LINK	Link

NO.5

NAME OF THE POLICY	WOOD PACKAGING RECYCLING SYSTEM
LEVEL	National
YEAR	1998
COUNTRY	Italy
THEME	Wood Recycling

GENERAL DESCRIPTION	<p>Rilegno is the national consortium created in 1998 to organize the wood packaging collection and treatment. During the years, this system has helped an entire sector to rely on wood waste as a primary material source. In Italy we can speak of a real circular wood economy that has been operating for over 23 years.</p> <p>The numbers of wood recycling are so advanced that they meet the recycling targets set for 2030 by the EU Packaging Directive, recently transposed into national legislation (over 63% when the target is 30%).</p> <p>In 2019 the Rilegno system made it possible to collect and recycle 1,967,290 tons of wood (over 63%) and to regenerate 839,000 tons of packaging equal to over 60 million pallets, which</p>
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returned to the logistics circuit to be used again. A consistent part of the collected waste is furniture waste, so that the furniture sector could benefit of this collection system too.

Unlike what happens in other countries, where post-consumer wood is mainly "burned" to produce energy, in Italy there is a real "systemic" circular economy that involves citizens, municipalities, small and large companies.

95% of the wood is recycled to produce panels for furniture, without the need to consume virgin wood that Italy would buy abroad. In environmental terms, this allows a saving in CO₂ consumption of almost two million tons. This circular system has created a real new economy with respect for mankind and the environment. Overall, the economic impact on national production of the activities of the post-consumer wood recovery and recycling chain is about 2 billion euros, with over 11,000 jobs in Italy, as estimated by the research "A new economy" of the Politecnico University of Milano.

OBJECTIVES	European Recycling target to be met, foster an economy based on wood recycling
ACTIVITIES	Not available
RESULTS	63% of recycling in 2019 (against 30% target by 2030 according to the UE packaging directive)
LINK	Link

NO.6

NAME OF THE POLICY	GPP criteria for furniture (Decree January 11, 2017, under revision)
LEVEL	National
YEAR	2017 (amended in 2019)
COUNTRY	Italy
THEME	Criteria for more circular or environmentally friendly furniture to be purchased or utilized by Italian public authorities
GENERAL DESCRIPTION	GPP Criteria are mandatory in Italy for every public tender. There are several sets of criteria, for different kind of products. The criteria on furniture provide a lot of requirements on dangerous substances, sustainability of wood, VOC emissions, formaldehyde emissions, sustainability of leather, textiles and other material, minimum recycled content requirements for metals and plastics, requirements on packaging, and a separate set of criteria for lending services (product as a service). The current set of criteria is now under revision, the new one will be divided in different set. Criteria for purchasing furniture, for lending, for refurbishment services, and for end-of-life services. Publication of the new criteria is expected in 2021.
OBJECTIVES	Enhance the environmental quality of the furniture purchased by the public sector, helping the market to level up to a new "standard", foster the adoption of circular business models like renting and refurbishing.
ACTIVITIES	Rules to be used by any public purchaser in writing and controlling the tender and the products.

RESULTS Difficult to assess, but many office furniture companies had to work a lot in the past years to adapt their product and now they can offer these “greener” products to the private market too.

LINK [Link](#)

NO.7

NAME OF THE POLICY REGIONE FRIULI VENEZIA GIULIA - Regional law n.34/2017

LEVEL Regional

YEAR 2017

COUNTRY Italy

THEME Circular Economy

GENERAL DESCRIPTION The law reorganizes and updates the waste regulations by setting objectives in terms of prevention, reduction of production and dangerousness of waste.
Recycling targets are planned for urban waste by 2024:
70% separate collection, 70% preparation for the reuse of goods and material recycling compared to the waste produced by the fractions made up of paper, plastic, glass and metals; 20% reduction in per capita production of municipal waste compared to 2015 production.
A permanent working group for circular economy is also established, an internal structure in which the competent structures in the field of the environment, production activities, agricultural resources, health, social policies, work, training, education, research, volunteering participate to coordinate activities according to the objectives of the circular economy.

OBJECTIVES Waste reduction, recycling increase and preparation for reuse, urban waste collection increase

ACTIVITIES Financing of supply chain projects envisaged by law 3/2015 through the sharing of resources, activities and knowledge, the coordination and integration of phases of the production cycle and distribution actions, the development of integrated eco-innovation improvement, also with reference to prevention of waste production, reconversion of the work cycle and the use of renewable sources as well as industrial symbiosis projects and projects aimed at sustainable mobility and business networks.

RESULTS Not available

LINK [Link](#)

NO.8

NAME OF THE POLICY	REGIONE EMILIA ROMAGNA - Regional Law 5 ottobre 2015 n. 16
LEVEL	Regional
YEAR	2015
COUNTRY	Italy
THEME	Circular Economy
GENERAL DESCRIPTION	Measures aimed at reducing production and recovering waste through preparation for reuse, recycling or any other material recovery operation with priority over the use of waste as an energy source. The law focuses on the upstream part of the supply chain and no longer to the terminal one, through the progressive reduction of waste not sent for recycling and the industrialization of recycling.
OBJECTIVES	In compliance with the waste treatment hierarchy, the law supports the adoption of measures aimed at reducing the production and recovering waste by preparing for reuse, recycling or any other material recovery operation with priority over use of waste as a source of energy in compliance, minimizing the amount of urban waste not sent for recycling with the aim of reaching an annual amount per capita of less than 150 kilograms per inhabitant. The Region adopts the principle of the circular economy, which promotes a sustainable management of waste through which the same material can re-enter once recovered in the production cycle, allowing for the saving of new resources
ACTIVITIES	Not available
RESULTS	Not available
LINK	Link

NO.9

NAME OF THE POLICY	REGIONE UMBRIA - Regional Law 13 maggio 2009, n. 11
LEVEL	Regional
YEAR	2009
COUNTRY	Italy
THEME	Circular Economy
GENERAL DESCRIPTION	Priority measures aimed at achieving the integrated waste cycle [...]: Reduction at source of the quantity and dangerousness of waste produced, by:

- the development of clean technologies, which allow greater savings of natural resources;
- the technical development and placing on the market of products conceived not to contribute or contribute as little as possible for their manufacture, use or disposal, to increase the quantity or the harmfulness of waste and pollution risks;
- the development of appropriate techniques for the elimination of hazardous substances contained in waste destined for recovery [...].

OBJECTIVES	Organize the integrated management of waste, as well as the safety, remediation and environmental restoration of polluted sites, in order to ensure the safeguarding and protection of public health, natural, environmental and landscape values
ACTIVITIES	Not available
RESULTS	Not available
LINK	Link

NO.10

NAME OF THE POLICY	REGIONE MARCHE - Regional Law 17 luglio 2018, n. 25 "Impresa 4.0: Innovazione, ricerca e formazione")
LEVEL	Regional
YEAR	2018
COUNTRY	Italy
THEME	Circular Economy
GENERAL DESCRIPTION	It is recognized as a priority: <ul style="list-style-type: none"> • the application of design, engineering and industrialization systems based on methods of durability, disassembly, recyclability and reusability; • research, experimentation, development and activation of logistics and technological processes for the de-manufacturing, collection, selection and treatment of raw and secondary materials deriving from end-of-life products and waste production so that their residual value is maximized through appropriate reuse practices.

OBJECTIVES	With this law, the Region considers strategic the idea to combine the new forms of Business 4.0 with the circular economy and aims to abandon the linear concept of "producing, consuming and discarding" to encourage the circular concept "to reduce, reuse and recycle ", promoting a synergy between research and Innovation and the application of the methods and tools of the circular economy [...].
ACTIVITIES	Not available

RESULTS Not available

LINK [Link](#)

NO.11

NAME OF THE POLICY REGIONE BASILICATA - Regional Law 16 novembre 2018, n. 35

LEVEL Regional

YEAR 2018

COUNTRY Italy

THEME Circular Economy

GENERAL DESCRIPTION With this law, Basilicata assumes as its own the principle of the circular economy which promotes sustainable management of waste through which the same, once recovered, re-enter the production cycle, allowing the saving of new resources and sets the prevention of waste as a priority. waste from the circular economy.

OBJECTIVES The law aims at the regulatory reorganization on waste management, remediation of polluted sites and defence from the dangers deriving from the presence of asbestos

ACTIVITIES Not available

RESULTS Not available

LINK [Link](#)

NO.12

NAME OF THE POLICY REGIONE LOMBARDIA - D.G.R. n. 980 del 21/01/2020 Lombardia

LEVEL Regional

YEAR 2020

COUNTRY Italy

THEME Circular Economy

GENERAL DESCRIPTION In these guidelines it is assessed that the European directives constituting the "Circular economy package" introduce new objectives on waste management that must be implemented both in national legislation and in regional planning, moreover, based on the provisions of article 15, paragraph 1, letter b), of Law 117/2019, a specific program on the management of wastewater

purification sludge will be included in the Plan, also aimed at defining guidelines for the management of sludge with a view to diversifying destinies with the objective of transferring only high sludge to agriculture; a specific study on the presence of asbestos will be carried out within the regional plan, also in order to define the estimates on the quantities of materials to be removed and the consequent plant requirements. The scoping document has been prepared, as part of the procedure strategic environmental assessment, "Update of the regional waste management program including the regional remediation program of polluted areas, Regional Plan towards the circular economy".

OBJECTIVES	Not available
ACTIVITIES	Not available
RESULTS	Not available
LINK	Link

NO.13

NAME OF THE POLICY	REGIONE ABRUZZO - L.R. del 01/12/2020 Abruzzo
LEVEL	Regional
YEAR	2020
COUNTRY	Italy
THEME	Circular Economy
GENERAL DESCRIPTION	The Regional Council will initiate the procedure for updating the current PRGR, assuming the actions envisaged in the law itself and in compliance with national and European legislation as programmatic guidelines. Programme for the prevention and reduction of waste production and first measures for preparing for reuse; promotes sustainable management of waste aimed at bringing it back into the production cycle, allowing for a saving of new resources.
OBJECTIVES	Not available
ACTIVITIES	Not available
RESULTS	Not available
LINK	Link

Conclusion

Italy is facing the transition towards circular economy and towards decarbonisation with a regulatory system that was closely linked to the fight against illegality, and which is now moving step by step towards a new paradigm in which every waste must be considered as a new resource.

Italy is a country traditionally devoted to recycling due to the scarcity of raw materials in which, for example, wood recycling has been perhaps the most important training and the most excellent example of an entire industrial sector can be based on waste raw materials.

From the point of view of waste treatment, Italy has a poor equipment of waste-to-energy and this, which has always been considered a limit, at this time could be one less problem because the material valorisation of waste will not damage a sector like waste-to-energy, which in fact is very underdeveloped today. However, this concerns the issue of waste but not the issue of fuels. In fact, on the enhancement of woody biomass, competition can be positive if it pushes the enhancement of national forest resources but becomes negative if it affects a consolidated waste recovery and recycling system.

About this, Italian regions have a planning role as regards the plant and operational equipment as regards the authorization systems.

From the point of view of the measures taken to help the transition to the circular economy, Italy has invested heavily in green public procurement, including the mandatory compliance with the minimum environmental criteria for public procurement in all tenders and for all sectors for which they have been defined, including furnishings. This tool is now suitable for experimenting with innovative services and business models such as rental, repair, reuse, and end-of-life services. All services for which specific criteria have been defined and are in the process of publishing.

The use of EU Next Generation resources will also make available many resources that in the coming years will be tied to the development of projects oriented towards the circular economy.

6. Slovenia

Materials and Methods of the Slovenian research



Environmental protection has been one of the most burning topics in the world for many years, even decades. The basic purpose of environmental protection is to maintain long-term conditions for human health, well-being, and quality of life, and to preserve biodiversity. Environmental protection refers to the preservation or protection of natural heritage. While being protected around, it refers to managing natural resources in a way that meets (existing and future) the needs of animals, plants, and populations. For the best environmental assistance, contact the main area, such as waste, pollution, biodiversity loss, settlement of invasive species, use of structures, etc. Environmental protection is an area that is regulated by law.

For this purpose, the main sources of information for the Slovenian research on this topic were:

- The Ministry of the Environment and Spatial Planning - gp.mop@gov.si.
- The Agency of the Republic of Slovenia.
- The Environmental Agency of the Republic of Slovenia.
- The Inspectorate of the Republic of Slovenia for the Environment and Spatial Planning.
- The Surveying and Mapping Authority.
- The Nuclear Safety Administration of the Republic of Slovenia.
- The Water Directorate of the Republic of Slovenia.
- The Official Gazette of the Republic of Slovenia, which serves as the official newspaper, and the publication of laws, provisions, directives, and mandatory constitutional acts.

All waste legislations are listed on website of Ministry of the Environment and Spatial Planning⁶⁴.

Background research and National/Regional policies

Circular Economy in Slovenia

Slovenia is one of the most heavily forested countries in Europe. 1.18 million hectares of predominantly beech, fir/spruce and oak forests cover more than 58% of the country's area. 77% of the forests in Slovenia are privately owned, though the state and the municipalities own 23% of the Slovenian forests. According to the Slovenia Forest Service, the growing stock of Slovenian forests is 357 million m³ or 303 m³ per hectare. The share of coniferous wood stock is 45% and the share of deciduous trees is 55%. In the Slovenian forests, there is an annual increase of 8.8 million m³ or 7.5 m³ per hectare. In the past year, around 5.3 million m³ of trees

⁶⁴ <https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-okolje-in-prostor/zakonodaja-ministrstva-za-okolje-in-prostor/>

have been cut down in Slovenia, of which 63% were conifers and 37% were deciduous trees. In Slovenia, the wood and the forest, as the largest natural renewable resource, have a major strategic importance. Wood processing and the furniture sector (NACE Code C16 and C31) is one of the traditional production - and export - oriented activities of Slovenian Industry.

According to the annual financial reports, the 2019 Slovenian wood processing and furniture sector generated total revenue of EUR 1.570 million and employed almost 13.000 people. Currently, the business is showing a growth trend. The products range from biomass, wood-based panels, sawn wood and elements, timber wood, laminated wood and construction timber to wooden prefabricated houses and various furniture, the interior equipment of buildings and engineering. The Slovenian wood processing and furniture sector has traditionally been a net exporter with a significant surplus of exports over imports. Direct exports are around EUR 680 million, while imports are around EUR 330 million. 83% of the exports and 81% of the imports is realised with the EU countries.

Slovenia is a country with 2.1 million habitants. The amount of wood waste generated is relatively high compared to the amount of other waste generated. Wood is the only raw material that has been used in its entirety and in several life cycles (as a product, processing residues such as wood biomass, recycling and reuse). "Wood is one of the most abundant natural polymers, because it is biodegradable and can be processed into "useful industrial chemicals". Wood waste includes waste bark, remnants of wood panels, chipboard and wool, sawdust, wood dust, construction and furniture wood waste, impregnated wood (poles, sleepers, etc.), and wood packaging waste, contaminated or uncontaminated with hazardous substances.

In general, wood wastes are generated:

- in mechanical wood processing: saws
- in wood processing: carpentry and furniture production, wood shops, chipboard production, etc.
- in the manufacture and processing of pulp, paper, and paperboard
- in agriculture and forestry: waste vegetable tissues mainly from orchards and vineyards
- green garden cuttings for landscaping
- due to the use of wooden packaging, mainly from the production of goods and trade
- in construction: preparatory construction work, structural and civil engineering works, construction of buildings, and development and construction-related trade
- in the construction of buildings as mixed construction waste and in the demolition of buildings if they do not contain waste hazardous substances
- in the construction of infrastructure, e.g., railways, energy and telecommunications
- in the mechanical treatment of waste, e.g., sorting, crushing, pressing, pelleting, other than listed elsewhere
- in service activities

This waste is submitted to materials processes in the wood industry and in the paper and pulp industry. Sawdust as a by-product of the wood processing industry is used in composting, as a building material, as wood chips or pellets for energy production or as biomass for local and district heating.

The Slovenian law of environmental protection has its starting point in the hierarchically highest legal act - the Constitution of the Republic of Slovenia. Article 72 stipulates that everyone has the right to a healthy living environment. Care for a healthy living environment is left to the State and the local community (municipality).

Slovenian environmental legislation is characterised by heterogeneity, multiplicity and intertwining of regulations. Legislation comprises more than twenty laws and more than five hundred by-laws. The most important is the Environmental Protection Act. The Environmental Protection Act is an umbrella regulation governing environmental protection in Slovenia. The first law was adopted in 1993. It laid the new foundations for environmental protection in Slovenia, when until then the usual way of solving environmental problems by using technical solutions to limit pollution was replaced by the principles of ensuring sustainable development. The first Environmental Protection Act was in force until 2004, when the new Environmental Protection Act (ZVO-1) was adopted, which is still valid today with certain changes.

The ZVO-1⁶⁵ deals with the protection of the environment, namely the protection against pollution as a fundamental condition for sustainable development. In this context, it sets out the basic principles and measures for environmental protection and the methods and conditions for monitoring the state of the environment. It also sets out economic and financial instruments that contribute to the achievement of environmental protection objectives, as well as public services and other environmental issues.

ZVO-1 is divided into 13 chapters and has more than 200 articles.

The content is as follows:

1. Basic provisions
2. Environmental protection measures
3. Programs and plans in the field of environmental protection
4. Interventions in the environment
5. Monitoring of the state of the environment and information on the environment
6. Responsibility for the prevention or remediation of environmental damage
7. Economic and financial instruments of environmental protection
8. Compulsory public utility services for environmental protection
9. Organizations in the field of environmental protection
10. Inspection supervision

⁶⁵

<https://www.eui.eu/Projects/InternationalArtHeritageLaw/Documents/NationalLegislation/Slovenia/environmentprotectionact.pdf>

11. Criminal provisions
12. Special provisions and
13. Transitional and final provisions

ZVO-1 sets out the basic principles on which all activities and systems for achieving environmental protection goals are based. There are 13 principles:

The principle of sustainable development is defined as the principle according to which the state and the municipality, when adopting policies and plans, must promote the economic and social development of society, but also ensure the conditions for long-term preservation of the environment.

The principle of integrity derives from the inseparable connection in nature and its integrity. When adopting policies and plans, the State and the municipality must consider their impact on the environment by contributing to the achievement of environmental protection objectives. Human health, well-being and quality of life and survival, protection against environmental disasters and the health and well-being of other living organisms shall be considered as criteria.

The principle of cooperation requires:

- that the State and the municipality enable the participation of all actors, i.e., polluters, public service providers and other persons performing activities of environmental protection and the public, in the adoption of policies and plans related to environmental protection.
- The State must also cooperate with other States in resolving global and interstate issues of environmental protection.
- That municipalities are in solidarity with each other and cooperate in the implementation of environmental protection tasks.

The principle of prevention is that any intervention in the environment must be planned and carried out in such a way as to cause the least possible burden on the environment. The best techniques available on the market are used to implement this principle.

According to **the precautionary principle**, the introduction of new technologies and products is permissible only if considering the state of science and technology and possible protective measures, no unforeseen adverse effects on the environment and human health can be expected.

The principle of liability of the polluter of the environment requires that the polluters be held criminally and compensatory for these acts, and that they must also eliminate the source and consequence of the excessive burden.

The principle of payment for environmental pollution represents the implementation of the principle of "polluter pays principle", which is one of the fundamental pillar of modern

environmental protection policy. The polluter shall pay all costs of the prescribed measures for the prevention and reduction of pollution and environmental risks, the use of the environment and the elimination of the consequences of environmental pollution. The State may prescribe an environmental tax.

The principle of subsidiary action of the state or local community in the event of excessive pollution of the environment determines the holder of the action if the cause is unknown. The principle is based on a responsible State. In the case of illegally disposed waste, the responsibility for action is divided according to the type of waste. However, the cost of disposing of this waste must be borne by the landowner.

The principle of promotion follows the recognition that environmental issues cannot be successfully managed by prohibitions and orders alone but that incentive mechanisms must be put in place. The State and the municipality, in accordance with their competencies, promote environmental protection activities that prevent or reduce the burden on the environment and those interventions in it that reduce the consumption of substances and energy and put less burden on the environment. The State and the municipality also promote awareness, information and education on environmental protection.

The principle of publicity provides the public with the opportunity to participate in decision-making procedures in permitting environmental interference and the right to appeal. It is the law that guarantees the right of access to environmental data, which must, with exceptions, be public.

The principle of protection of rights encompasses the rights of the individual to protect his or her constitutional right to a healthy living environment from Article 72 of the Constitution of the Republic of Slovenia as one of the fundamental human rights by filing complaints and lawsuits.

The principle of the permissibility of interventions means that only those interventions that do not cause excessive burdens on the environment can be allowed. The law introduces a requirement to verify this principle within the framework of an environmental consent and / or an environmental permit.

The principle of the ecological function of property stipulates that the right of ownership is not absolute, but that the owner of the real estate must consider its ecological function when using this real estate. It must not take measures that would prevent the preservation and improvement of the quality of the environment at the same time.

In Slovenia, the comprehensive regulation of environmental protection was implemented in 1999, when the National Assembly of the Republic of Slovenia adopted the Nature Conservation Act. The legal regulation of nature conservation refers to the protection of natural values and the conservation of biological diversity. Nature is part of the environment. Natural values include all-natural heritage in the territory of the Republic of Slovenia. A natural value is,

in addition to a rare, valuable or famous natural phenomenon, another valuable phenomenon, a part of living or non-living nature, a natural area or part of a natural area, an ecosystem, a landscape or a formed nature. These are geological phenomena, minerals and fossils and their deposits, surface and underground karst phenomena, underground caves, gorges and narrow and other geomorphological phenomena, glaciers and forms of glacial activity, springs, waterfalls, rapids, lakes, bogs, streams and rivers with banks, seacoast, plant and animal species...

The Act also establishes a minimum of legal standard for the protection of wild species and the protection of endangered and internationally protected species and their habitats and ecosystems by designating ecologically important zoos. The protection of the most valuable parts of nature is ensured by the establishment of protected areas at the state and local level. Protected areas are intended for the protection of natural values, conservation of biodiversity and landscape diversity, and in these areas' sustainable development, spiritual relaxation and human enrichment are possible.

All waste legislation is listed on [website of Ministry of the Environment and Spatial Planning](#).

List of Policies in The Circular Economy sector in Slovenia

NO.1

NAME OF THE POLICY	Ustava Republike Slovenije - Constitution of the Republic of Slovenia
LEVEL	National
YEAR	1991
COUNTRY	Slovenia
THEME	General
GENERAL DESCRIPTION	<p>The Constitution of the Republic of Slovenia was ratified by the National Assembly at the Assembly in 1991. The Constitution is the basic and highest general legal act, and thus the act with the greatest legal force, which also contains elements of an ideological-political act. Compared to other European constitutions, it has rarely been amended, and its content has not significantly affected the constitutional structure and its orientation. It contains 176 articles, which are divided into ten sections that follow the preamble:</p> <ol style="list-style-type: none"> 1. General provisions 2. Human rights and fundamental freedoms 3. Economic and social relations 4. State regulation 5. Self-government 6. Public finance 7. Constitutionality and legality

8. Constitutional Court
9. Procedure for amending the Constitution
10. Transitional and final provisions

The Constitution of the Republic of Slovenia from 1991 is one of the most important documents in the history of the Slovenian nation. On the one hand, it means the consolidation and upgrading of Slovene state sovereignty, which was established on 25 June 1991 by the Slovene Assembly with the adoption of the Basic Constitutional Charter on the Independence and Autonomy of the Republic of Slovenia. On the other hand, it means securing the foundations of a democratic political system, with an emphasis on the protection of human rights and fundamental freedoms.

OBJECTIVES	The basic purpose of the constitution: to limit the unlimited intentions of the absolute ruler by the bourgeoisie. It is short and provides the necessary normative starting points for the parliamentary form of government. It contains a special chapter on human rights, but only the most basic and lasting rights of the Slovene nation are written down, they are self-determination, it has no program provisions, except in terms of basic economic and social relations.
ACTIVITIES	Not available
RESULTS	Rights and freedoms have arisen in very different circumstances and are the result of the diverse efforts of different groups.
LINK	Link

NO.2

NAME OF THE POLICY	Zakon o varovanju okolja - ZVO 1 - (Environmental Protection Act)
LEVEL	National
YEAR	2004
COUNTRY	Slovenia
THEME	Recycled materials; Reduction of pollutions; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	The law regulates the protection of the environment against pollution as a basic condition for sustainable development and in this context sets out the basic principles of environmental protection, environmental protection measures, environmental monitoring and environmental information, economic and financial instruments of environmental protection, public environmental protection services and others related issues.
OBJECTIVES	The purpose of environmental protection is to promote and direct such social development, which enables long-term conditions for human health, well-being and quality of life, as well as the preservation of biodiversity.
ACTIVITIES	<ul style="list-style-type: none"> • Encourages production and consumption, which contributes to reducing the burden on the environment,

- Encourage the development and use of technologies that prevent, eliminate or reduce environmental pollution; and
- pays for pollution and the use of natural resources.

RESULTS	<ul style="list-style-type: none"> • development and use of environmentally friendly technologies • reduction of environmental pollution • careful management of natural resources • abandonment of the use of harmful substances
LINK	Link
NO.3	
NAME OF THE POLICY	Zakon o varovanju okolja (ZVO-2)- Draft of Environmental Protection Act
LEVEL	National
YEAR	In public hearing 2021
COUNTRY	Slovenia
THEME	Recycled materials; Reduction of pollutions; Reuse and upcycling
GENERAL DESCRIPTION	(The law regulates the protection of the environment against pollution as a basic condition for sustainable development and in this context sets out the basic principles of environmental protection, environmental protection measures, environmental monitoring and environmental information, economic and financial instruments of protection.
OBJECTIVES	The purpose of environmental protection is to promote and guide such social development, which provides long-term conditions for human health, well-being and quality of life, as well as the preservation of biodiversity.
ACTIVITIES	<p>This law provides for the implementation of the protection of the environment and human health by preventing or reducing waste, the harmful effects of waste generation and management, and by reducing overall resource use in improving the efficiency of such use, which is essential for the transition to a circular economy.</p> <p>The following activities will be carried out to achieve the objectives:</p> <ul style="list-style-type: none"> • Encourages production and consumption, which contributes to reducing the burden on the environment, • achieving renewable growth and accelerating the transition to a circular economy, • encourages the development and use of technologies that prevent, eliminate or reduce environmental pollution, and pays for pollution and the use of natural resources.
RESULTS	Not available

LINK [Link](#)

NO.4

NAME OF THE POLICY	Zakon o ohranjanju narave ZNO - Nature Conservation Act ZNO
LEVEL	National
YEAR	1999
COUNTRY	Slovenia
THEME	Renewable and certified materials; Recycled materials; Reduction of pollution; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	This law sets out measures for the conservation of biodiversity and the system of protection of natural values in order to contribute to nature conservation. Biodiversity conservation measures are measures that regulate the protection of wild plant and animal species (hereinafter: plant and animal species), including their genetic material and habitats and ecosystems, and enable the sustainable use of components of biodiversity and ensure the conservation of natural balance.
OBJECTIVES	It regulates how and in what way it can use the natural environment and how we must take care of it.
ACTIVITIES	There are two possible approaches to protection. Value properties objects of protection can be maintained by maintenance existing situation, or vice versa, by tolerance or even by stimulating processes. In the first case it goes for the static conservation principle of protection, in the second for dynamic. In practice, a combination of both is also possible.
RESULTS	Contribution to nature conservation
LINK	Link

NO.5

NAME OF THE POLICY	Uredba 103/2011 (Ur. l. RS. št. 103/2011) - Regulation 103/2011
LEVEL	National
YEAR	2011
COUNTRY	Slovenia
THEME	Recycled materials; Reduction of pollutions; Reuse and upcycling
GENERAL DESCRIPTION	To protect the environment and protect human health, this Regulation lays down rules of conduct and other conditions for preventing or reducing the adverse effects of waste generation

and management and reducing the overall impact of natural resource use and improving the efficiency of natural resource use in accordance with Directive 2008/98 / EC. Of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives. This Regulation shall apply to all waste, unless otherwise specified by a specific regulation for a particular type or flow of waste.

OBJECTIVES It is a provision in principle that sets out the general environmental conditions. It lays down measures to reduce and prevent adverse effects on the environment and human health in waste storage and the planning of appropriate such measures within the framework of the waste management plan, and in the articles that determine the administrative procedures or the content of applications for obtaining an environmental permit or a certificate of entry in the relevant records. In accordance with Directive 2008/98 / EC, Slovenia is required to report once a year on the achievement of targets for the reuse, recycling and recovery of municipal and construction waste. Commission Decision 2011/753 / EU on the rules and methods of calculation to verify compliance with these targets shall be used to calculate the achievement of these targets.

ACTIVITIES This Regulation also establishes a classification list for waste in accordance with Commission Decision of 3 May 2000 replacing Decision 94/3 / EC establishing a list of waste pursuant to Article 1 (a) of Council Directive 75/442 / EEC on waste and Council Decision 94. / 904 / EC establishing a list of hazardous waste pursuant to Article 1 (4) of Council Directive 91/689 / EEC on hazardous waste.

The directive introduces a new approach to waste management that focuses on waste prevention and prevents the use of unavoidable waste as a resource. This should bring Slovenia closer to a recycling society that avoids waste generation as much as possible and uses waste as a resource, which is one of the long-term goals of the thematic strategy on waste prevention and recycling. However, the common goal of the European Union is a growing resource-efficient economy, working to break the link between environmental pressures and economic growth.

RESULTS Slovenia is expected to do more with the new regulation on waste closer to a recycling society.

LINK [Link](#)

NO.6

NAME OF THE POLICY Resolucija o Nacionalnem varstvu okolja za obdobje 2020-2030 (NPVO 2020-2030) - Resolution on the national environmental protection program 2020-2030 (NPVO 2020-2030)

LEVEL National

YEAR 2020

COUNTRY Slovenia

THEME Recycled materials; Reduction of pollutions; Reuse and upcycling

GENERAL DESCRIPTION The National Environmental Protection Program is a strategic document for environmental protection in the Republic of Slovenia, which contains long-term goals, guidelines, and tasks in the field of environmental protection for the future.

OBJECTIVES	<p>The implementation of the 2020-2030 NEAP will contribute to the achievement of the global Sustainable Development Goals as defined in the 2030 Agenda, as the environment is directly or indirectly included in most of the Sustainable Development Goals, and in particular in: The implementation of the 2020-2030 NEAP will contribute to the achievement of the global Sustainable Development Goals as defined in the 2030 Agenda, as the environment is directly or indirectly included in most of the Sustainable Development Goals, and in particular in:</p> <ul style="list-style-type: none"> • ensure that everyone has access to affordable, reliable, sustainable, and modern energy sources. • to promote sustainable, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. • build sustainable infrastructure, promote inclusive and sustainable industrialization and foster innovation. • provide open, safe, sustainable, and sustainable cities and settlements. • ensure sustainable production and consumption patterns. • take urgent action to combat climate change and its consequences, recognizing that the most important international intergovernmental framework for negotiating global climate change is the United Nations Framework Convention on Climate Change • to protect and restore terrestrial ecosystems and to promote their sustainable use, sustainable forest management, combating desertification, preventing land degradation, and reversing this phenomenon, and preventing the loss of biodiversity.
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ACTIVITIES	With an extremely high rate of 59% recycling of municipal waste, Slovenia ranks among the top in Europe.
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RESULTS	Implementation of NPVO 2020-2030 will contribute to the administration of international development and environmental commitments.
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LINK	Link
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NO.7

NAME OF THE POLICY	Program ravnanja z odpadki in program preprečevanja odpadkov - Waste Management Program in Prevention program Waste of the Republic of Slovenia
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LEVEL	National
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YEAR	2015
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COUNTRY	Slovenia
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THEME	Renewable and certified materials; Recycled materials; Reduction of pollution; Energy efficiency; Reuse and upcycling
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GENERAL DESCRIPTION	This document thus constitutes a measure to implement the obligations of Directive 2008/98 / EC with regard to the preparation of waste prevention programs. The document consists of the Waste Management Program and the Waste Prevention Program. Based on the analysis of the
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existing situation in the field of waste management, the waste management program determines the measures necessary for improvements in the field of environmentally friendly preparation for reuse, recycling, recovery and disposal of waste for the entire territory of Slovenia.

OBJECTIVES	The main goal of the program is prevention waste, the use of waste as a source, in the case of waste generation and treatment in accordance with hierarchy of waste management to the environmentally acceptable way in order to achieve environmental objectives (collection, recycling, recovery) in the field of waste management. In the document are listed general objectives and specific objectives. The general objectives include the prevention of waste and the prevention of illegal waste management, in particular dumping into the environment. Specific objectives and measures to achieve these objectives relate to municipal waste, industrial waste, and waste from other activities, as well as construction waste, excavations and mining waste
ACTIVITIES	Promotion of separate waste collection, sorting
RESULTS	Recycled materials; Reduction of pollution; Reuse and upcycling
LINK	Link

Conclusion

"Wood is the only raw material that has been used in its entirety and in several life cycles (as a product, processing residues such as wood biomass, recycling and reuse). "Wood is one of the most abundant natural polymers, because it is biodegradable and can be processed into "useful industrial chemicals". Wood waste includes waste bark, remnants of wood panels, chipboard and wool, sawdust, wood dust, construction and furniture wood waste, impregnated wood (poles, sleepers, etc.), and wood packaging waste, contaminated or uncontaminated with hazardous substances.

In 2020, 236,357 tons of waste from wood treatment and processing and production of paper, cardboard, fiber, boards and furniture were generated, which means 121.32 kg of wood waste per resident. Also, in 2020, 120 tons of hazardous waste were generated from the treatment and processing of wood and the production of paper, cardboard, fiber, boards and furniture, which is 0.06 kg per year per resident.

Furniture recycling and wood reuse are key to preserving nature and the environment. Wood is a strategic raw material and, in addition to water, is our only naturally renewable resource. There are a lot of it in Slovenia, so it offers sufficient quantity and quality support for the wood processing industry. Wood scraps and used furniture can be processed into new products. Through reuse and recycling, we reduce deforestation and promote habitat conservation.

Efficient waste management can make an important contribution to resource efficiency and is essential to meet the needs of human society and ensure its further development. Waste

management is carried out both in accordance with European/Slovenian legislation and with the objectives set out in the current Waste Management Program and the Waste Prevention Program. They are combined in one document into an operational programme, as a tool of the Government of the Republic of Slovenia for the fulfilment of waste prevention, ensuring prescribed waste management and achieving waste management goals for the period until 2020 or 2030.

The main purpose of the operational programme is that with the implementation of it, Slovenia follows the strategic orientations of European policies, which, while emphasising waste prevention, give priority to preparing waste for re-use and recycling before energy recovery of waste, and recovery of waste takes precedence over its disposal if and where this represents the best option from the point of view of environmental protection, taking into account technical feasibility and economic feasibility.

7. Poland

Materials and Methods of the Polish research

Materials for the research regarding Corporate Social Responsibility (CSR) and circular economy in Poland have been gathered through various website sources. The overall research began on the website of the Polish Parliament on the issue of waste legislation to obtain a comprehensive overview.

All the policies and standards currently in force in Poland, at the national and regional level, were analysed in-depth.

In particular, the main sources were:

1. Polish National Waste Act [Journal of Laws No. 0, item 21, as amended] from 2012;
2. Polish National Environmental Law [Journal of Laws of 2020, item 1219, as amended] from 2020.

Background research and National/Regional policies

Circular Economy in Poland

There has been intensive progress in Poland for waste management, however, there is a lack of empirical studies which discuss the profitability of adopting CE concepts for waste processing, especially in this part of Europe. One of the reasons for this is the limited access to actual market data used by the waste management companies, which is usually guarded as a business secret.

Polish wood industry is one of the fastest-growing sectors of the Polish economy:

- the sector is growing five times faster than in the rest of the EU;
- it has more than 65 thousand entities;
- it has about 256 thousand employees.

Moreover, Poland belongs to the group of countries characterised by the largest share of forested areas, covering 30% of the country's territory. The position of the wood industry in the national economy is strong (Fig. 3). It is observed:

- 3% of gross domestic product,
- 8% of the sold production of industry,
- 9% of the value of exports.

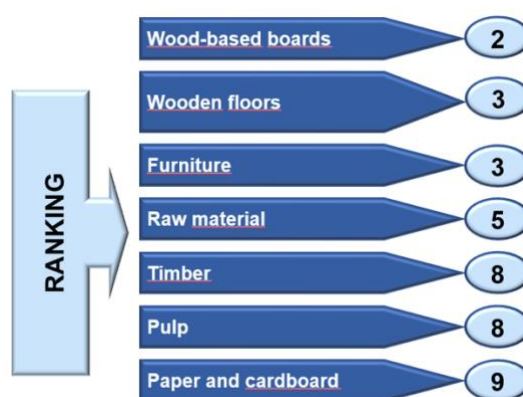


Figure 3 Poland's position in the EU-27 in the production of wood and wood products [GUS, EFP]

No separate legislative acts are in force in Poland or the European Union that would regulate waste wood issues directly. Under Directive 2008/98/EC⁶⁶ of the European Parliament and of the Council of 19 November 2008, "**waste is any substance or object which the holder discards or intends or is required to discard**"⁶⁷. This definition of waste has remained unchanged in the amended Waste Act in Poland⁶⁸. The classification of waste is based on the European List of Waste⁶⁹ and Annex III to Directive 2008/98/EC.

The priority task in waste management is waste prevention, followed by the preparation of waste for reuse, its recycling and finally other recovery methods, i.e., energy recovery or waste disposal. Given the above, energy recover, as well as the reprocessing of waste into materials to be used as fuel or for backfilling or landfilling operations, is not a form of recycling. Despite of these assumptions, legislative acts are in force that regulates actions aimed at increasing the use of waste wood for energy recovery purposes. Regulations promoting the use of waste wood for energy recovery purposes can also be found in Polish legislation. This situation results in

⁶⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=IT>

⁶⁷ OJL 312, 22.11.2008

⁶⁸ Journal of Laws No. 0, item 21

⁶⁹ Commission Decision 2000/532/EC

serious difficulties in the rational use of waste wood as one of the main sources of timber. It also leads to problems with estimating the quantity of waste wood and, consequently, prevents the correct assessment of its potential for use by particular sectors of the economy⁷⁰.

List of Policies in The Circular Economy sector in Poland

NO.1

NAME OF THE POLICY	Waste Act [Journal of Laws No. o, item 21, as amended]
LEVEL	National
YEAR	2012
COUNTRY	Poland
THEME	Biomaterials and innovative materials; Renewable and certified materials; Recycled materials; Reduction of pollutions; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	Points out that biodegradable waste, i.e., wood waste and post-consumer wood, if it is not classified as hazardous waste, may be subject to various forms of recovery
OBJECTIVES	<ul style="list-style-type: none"> • Prevention waste generation or reduce the amount of waste and its negative impact on the environment in the production of products, during and after their use. • Providing recovery in accordance with the principles of environmental protection if it has not been possible to prevent the generation of waste. • Esurance the disposal of waste, the production of which could not be prevented or recovered in accordance with the principles of environmental protection.
ACTIVITIES	Waste segregation; changing the model for communal waste management; establishing new rules for financing, collection and administration of communal waste from property owners.
RESULTS	Waste prevention, followed by the preparation of waste for reuse, its recycling and finally other recovery methods, i.e., energy recovery or waste disposal
LINK	Link

NO.2

⁷⁰ Kurowska 2015

NAME OF THE POLICY	Environmental Law [Journal of Laws of 2020, item 1219, as amended]
LEVEL	National
YEAR	2020
COUNTRY	Poland
THEME	Renewable and certified materials; Reduction of pollutions
GENERAL DESCRIPTION	The environment and its protection, public participation in environmental protection and environmental impact assessment
OBJECTIVES	The use of the environment which goes beyond the general use framework may be subject to the obligation to obtain a permit, specifying the scope and conditions for such use, issued by the competent environmental protection authority.
ACTIVITIES	Conditions for production and management of waste will be set forth in certain administrative decisions, including a waste production permit, an integrated permit, a waste processing permit, and a waste collection permit. The rules for waste production permits are set forth in their entirety, along with emissions permits
RESULTS	Updating the concept of national development, spatial development plans
LINK	Link

Conclusion

The growing environmental challenges and diminishing resources have led countries around the world to act in moving towards a CE. Polish legislation has been established to facilitate the movement from a linear economy to a CE. Waste management is one of the challenges faced by Poland, both for industrial waste and municipal waste. The basis for all regulations and activities in resource waste prevention and waste management is the Waste Act⁷¹.

The Waste Act defines the rules for dealing with waste in a way that protects human life and health and the environment following the principle of sustainable development, in particular the rules of preventing waste generation or reducing the amount of waste and its negative impact on the environment, as well as recovery or disposal of waste. According to Polish law, whoever undertakes activities causing or likely to generate waste should plan, design and conduct such activities to:

- 1) Prevent the waste generation or reduce the amount of waste and its negative impact on the environment in the production of products, during and after their use.
- 2) Provide recovery per the principles of environmental protection if it has not been possible to prevent the generation of waste.

⁷¹ Journal of Laws No. 0, item 21

- 3) Ensure the disposal of waste, the production of which could not be prevented or recovered by the principles of environmental protection.

Moreover, the following rules are applying:

- The holder of the waste is obliged to handle it in a manner consistent with the principles of waste management, environmental protection requirements and waste management plans.
- The holder of waste is obliged to recycle it in the first place, and if for technological reasons it is impossible or is not justified for ecological reasons or economic, the waste should be disposed of in a manner consistent with the requirements of environmental protection and waste management plans.
- Wastes that have not been recovered should be disposed of in such a way as to store only those waste, the neutralization of which would otherwise be impossible for technological reasons or unjustified for ecological or economic reasons.

8. Germany

Materials and Methods of the German research



The information for the German research has been gathered via various web sources. In the process, the general search began on the website of the Federal Environment Agency⁷² and the Federal Ministry⁷³ for the Environment on the topic of waste legislation to obtain a general overview.

Background research and National/Regional policies

Circular Economy in Germany

Resource conservation and the establishment of a sustainable recycling economy has become one of the most important political issues in recent decades. Materials should be reused as often as possible to avoid waste and save resources.

In Germany, the contents of the Waste Framework Directive led to the Recycling Management Act, “*Kreislaufwirtschaftsgesetz*”, (KrWG). This forms the basis for waste law in Germany and was enacted in 2012 and amended in 2020. The aim of this law is to promote the circular economy to conserve natural resources and to ensure the protection of people and the environment in the generation and management of waste.

⁷² <https://www.umweltbundesamt.de/themen/abfall-ressourcen/abfallwirtschaft/abfallrecht>

⁷³ <https://www.bmu.de/themen/wasser-abfalboden/abfallwirtschaft/abfallrecht/national/#c24292>

In June 2012, the Act to Promote Closed Substance Cycle Waste Management and to Ensure Environmentally Sound Waste Management⁷⁴ came into law. The KrWG, promulgated as Article 1 of the Act on the reorganisation of the Circular Economy and Waste Law, replaces the Circular Economy and Waste Law (KrW-/AbfG).

The term waste is also precisely defined in the Circular Economy Act. If a substance fulfils the following criteria, it is no longer to be assessed as waste: passing through a recovery process, specific recovery purpose, market demand exists, fulfilment of certain technical and legal requirements and the further use is harmless.

The Circular Economy Act anchors and establishes in § 6 the five-level waste hierarchy instead of the three-level hierarchy. This is defined as follows and ordered according to waste priority: Avoidance, preparation for reuse, recycling, energy recovery and backfilling and disposal. The waste management measures to be selected should primarily ensure the protection of the environment and society. The focus is on economic, technical and social priorities.

Material-specific waste directives are further specified in the Packaging Act (VerpackG), the End-of-Life Vehicles Directive (AltfahrzeugV), the Battery Act (BatterieG) and the Electrical and Electronic Equipment Act (ElektroG) and anchored in national law. In the following list, only the legal directives that specifically affect the furniture and wood industry sector are addressed.

List of Policies in The Circular Economy sector in Germany

NO.1

NAME OF THE POLICY	Waste prevention programme
LEVEL	National
YEAR	2013
COUNTRY	Germany
THEME	Ecodesign; Durability; Recycled materials; Pollution reduction; Reuse and upcycling
GENERAL DESCRIPTION	The waste prevention programme analyses different measures that can contribute to waste prevention. The entire life cycle of products is considered, such as production, product design, trade, commerce and the use of products. On the one hand, essential criteria of the potential of waste prevention are considered in the analysis. In addition, economic, social and legal criteria are also taken into focus. Based on these criteria, actions for waste prevention are proposed within the waste prevention programme.

⁷⁴ [Closed Substance Cycle Waste Management Act, KrWG](#)

OBJECTIVES	<p>The waste prevention programme aims to provide information and raise awareness of waste prevention among stakeholders. The programme is built around the following thematic areas:</p> <ul style="list-style-type: none"> • Active monitoring of European research on waste-saving criteria in the context of the EU Ecodesign Directive. • Organisational or financial promotion of structures for the reuse or multiple use of products and repair centres • Promotion of the concept of "using instead of owning": consumer goods should be used more efficiently, for a longer period and by more than one user. • Preparation of practical working aids for contracting authorities to take greater account of resource efficiency and waste avoidance aspects.
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ACTIVITIES	<p>A report is published at regular intervals. The waste prevention programme is structured as follows and contains the following contents:</p> <ol style="list-style-type: none"> 1) Introduction and basics on the topic of waste prevention. 2) Initiation, procedure and structure of the waste prevention programme 3) Status quo of waste generation in Germany and defined waste prevention targets 4) Waste prevention measures 5) Possible actions by the federal government to implement the waste prevention program 6) Annex: Waste prevention measures and their evaluation
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RESULTS	Ongoing exchange between key stakeholders to develop the best possible solutions.
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LINK	Link
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NO.2

NAME OF THE POLICY	Resource Efficiency Programme (ProgRes)
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LEVEL	National
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YEAR	2012
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COUNTRY	Germany
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THEME	Recycled materials; Pollution reduction; Reuse and upcycling
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GENERAL DESCRIPTION	<p>In order to promote resource efficiency in Germany as well, Germany adopted the Resource Efficiency Programme (ProgRes) in February 2012. This set out the goal, recommendations for action and guiding principles to stop the exploitation of natural resources in Germany. Every four years, the German Federal Government must report to the Bundestag on the development of resource conservation to continue the Resource Efficiency Programme. The programme was continued for the first time in March 2016 with the adoption of ProgRes II by the Federal Cabinet. A second continuation (ProgRes III) was adopted in June 2020.</p>
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OBJECTIVES The sustainable use of natural resources and how this can be shaped is the overarching goal of ProgRes. The motivation is to preserve the basis of life and the environment for future generations. The government focuses on the following points:

- establishing independence from economic growth and resource use and parallel reduction of environmental pollution
- Strengthening the competitiveness of enterprises and the economy
- Promote stable labour relations and strengthen the social stability of society
- establish incentives and voluntary measures for greater resource efficiency
- Accepting global responsibility for ecological and social problems

ACTIVITIES To increase resource efficiency along the value chain, the ProgRes specifies measures for this implementation. These range from the extraction of resources, the design of products, the production and use phase to implementation in a circular economy. The respective updates consider current problems to optimise the programme on an ongoing basis. Current, environmentally relevant, political challenges are considered in the current draft ProgRes III. These include the achievement of climate protection goals, the challenge of digitalisation, the issue of mobilisation and the prioritisation of measures in the context of resource efficiency.

RESULTS For the ongoing optimisation of ProgRes, regular consultations are held where different representatives and experts can comment on and add to the programme. Citizen participation is also an important element and is driven forward via local citizen dialogues and online dialogues. This is attached as a so-called citizens' advice.

LINK [Link](#)

NO.3

NAME OF THE POLICY Act on the Promotion of the Circular Economy and Ensuring the Environmentally Sound Management of Waste (KrWG)

LEVEL National

YEAR 2012

COUNTRY Germany

THEME Ecodesign; Durability; Recycled materials; Pollution reduction; Reuse and upcycling; Ensuring the environmentally sound management of waste

GENERAL DESCRIPTION The Circular Economy Act generally regulates the disposal of waste and is intended to ensure the introduction of a circular economy in the long term. These are to be avoided as far as possible, recycled for materials or energy if necessary, residues treated and then - reduced in volume - disposed of.

In doing so, it is divided into nine parts (general provisions, principles and obligations of producers and holders of waste as well as public waste management authorities, product responsibility, planning responsibility, sales promotion and waste counselling, monitoring, specialised waste management companies, company organisation, company waste officer and facilitations for audited company sites, final provisions) and four annexes (disposal methods, recovery methods, criteria for determining the state of the art, examples of waste prevention measures according to § 33).



The Circular Economy Act was amended in the wake of the amended Waste Framework Directive (Directive 2008/98/EC on waste, amended by Directive 2018/851/EU) and transposes it into national law.

Translated with www.DeepL.com/Translator (free version)

OBJECTIVES The aim of the law is to protect people and the environment in the long term by implementing a circular economy. The focus is on resource conservation and waste prevention and management.
As in the Waste Framework Directive, basic definitions of terms were introduced in the KrWG: "waste", "recycling" and "recovery". In addition, the new five-stage waste hierarchy ("prevention, preparation for reuse, recycling, other recovery, for example energy recovery, disposal") was introduced.
was introduced.
Furthermore, directives on the determination of by-products and the end of waste status were defined.

ACTIVITIES

1. integration or whereabouts of certain wastes
2. collection, treatment, permissibility of mixing as well as transport and storage of wastes are regulated
3. wastes suitable in a special way are determined according to §15 Abs.2 S.2
4. requirements for mineral wastes are specified.

RESULTS Generally applicable law whose contents are implemented by various directives.

LINK [Link](#)

NO.4

NAME OF THE POLICY Directive on Requirements for the Recovery and Disposal of Waste Wood (Waste Wood Directive)

LEVEL National

YEAR 2020

COUNTRY Germany

THEME Reuse and upcycling

GENERAL DESCRIPTION The Waste Wood Directive (AltholzV), which came into force for the first time in 2002, defines requirements on how waste wood is to be converted into energy or materials or disposed of. The directives are legally binding for producers, owners, operators of waste wood treatment plants, public waste management companies and third parties, associations and self-governing bodies of the economy, insofar as they have been assigned responsibilities for recycling.

OBJECTIVES With the help of the Waste Wood Directive, the disposal procedures for different categories of waste wood are defined. For this purpose, waste wood is classified into four categories depending on its pollutant load. Common waste wood assortments are also assigned to the respective categories. This will be continuously updated. This categorisation enables an exact allocation of the disposal methods to be chosen for the respective waste wood category. Only waste wood categories A I , A II and, to a limited extent, A III are considered for material recycling

and thus a return to the material cycle, provided that they do not contain any or only a low level of pollutants.

ACTIVITIES According to §§ 7 and 12 para. 1 KrW-/AbfG, the AltholzV is to lay down more detailed requirements for the recycling and energy recovery and disposal of waste wood. This is the central objective of the Directive. These requirements must also be coordinated with the following directives, which play an important role in the disposal of waste wood and its environmental compatibility: ChemVerbotsV, GefStoffV and the 1st, 4th, 13th and 17th Directives (BlmSchV) to the Federal Immission Control Act (BlmSchG).

RESULTS The aim is to reduce the pollutant load in waste wood and to increase recycling rates. Currently, 20% of the waste wood is recycled. The majority 75% is sent for energy recovery.

LINK [Link](#)

NO.5

NAME OF THE POLICY Act on the Placing on the Market, the Taking Back and the High-quality Recycling of Packaging (VerpackG)

LEVEL National

YEAR 2017

COUNTRY Germany

THEME Reduction of pollutions

GENERAL DESCRIPTION The Packaging Act aims to reduce the environmental impact of packaging waste in Germany. The law transposes the European Directive 94/62/EC on packaging and packaging waste into national law. Product responsibility is introduced in the Act to make producers and users more accountable. The law is directed at manufacturers, online retailers and companies that put recyclable packaging into circulation. Packaging should primarily be avoided. If possible, it should even be prepared for reuse or recycled.

OBJECTIVES It aims to prevent or reduce the impact of packaging waste on the environment. To achieve this objective, the law is to regulate the behaviour of obligated parties in such a way that packaging waste is avoided as a matter of priority and, in addition, an increase in reuse and recycling rates is achieved. In doing so, market participants are to be protected from unfair competition.

ACTIVITIES Wood: Recycling of the individual packaging materials at least 15 wt% (today)

RESULTS Wood:
Recycling of the individual packaging materials at least 15 wt% (today)
25 wt.% (until 31.12.2025)
30 wt.% (until 31.12.2030)

LINK [Link](#)

NO.6

NAME OF THE POLICY	Act on the Placing on the Market, the Taking Back and the Environmentally Sound Disposal of Electrical and Electronic Equipment - Electrical and Electronic Equipment Act - ElektroG)
LEVEL	National
YEAR	2017
COUNTRY	Germany
THEME	Durability; Disassembly; Recycled materials; Reduction of pollutions; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	The basis for the disposal of WEEE in Germany is the Act on the Marketing, Return and Environmentally Sound Disposal of Electrical and Electronic Equipment (Electrical and Electronic Equipment Act - ElektroG). The ElektroG transposes the European Directive 2012/19/EU on waste electrical and electronic equipment (so-called WEEE Directive) into national law, which replaced Directive 2002/96/EC.
OBJECTIVES	The ElektroG imposes specific obligations on manufacturers, distributors, and disposers of products for their disposal, and electrical appliances must be disposed of separately from municipal waste. According to the ElektroG, public disposal facilities are responsible for providing and operating free collection points for the disposal of corresponding appliances. Within the framework of product responsibility, manufacturers are obliged to take back their products. This includes in particular the collection of WEEE from municipal collection points and the subsequent proper disposal.
ACTIVITIES	The aim of the ElektroG is to protect the environment and health. It is also intended to help conserve natural resources. To this end, old appliances must be disposed of as professionally as possible and recycled efficiently.
RESULTS	Efficient recycling of old appliances to protect the environment.
LINK	Not available

NO.7

NAME OF THE POLICY	Electrical and Electronic Equipment Substances Directive – ElektroStoffV
LEVEL	National
YEAR	2013
COUNTRY	Germany
THEME	Reduction of pollutions
GENERAL DESCRIPTION	The Electrical and Electronic Equipment Substances Directive implements the so-called EU RoHS Directives on the restriction of the use of hazardous substances in electronic equipment.

The ElektroStoffV transposes the European Directive 2011/65/EU of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment into national law. It is a supplement to the ElektroG.

OBJECTIVES	The aim of the ElektroStoffV is to reduce the pollutant content in electrical and electronic equipment. It serves to protect health and the environment. WEEE should thus be recycled and disposed of in an environmentally sound manner.
ACTIVITIES	Once placed on the market, electrical and electronic equipment may only contain a maximum concentration of certain hazardous substances. This also includes cables and spare parts. For this purpose, the producer must draw up a corresponding EU declaration of conformity and affix a CE marking. This preserved conformity must be permanently ensured and is guaranteed by information and documentation obligations.
RESULTS	Restrictions on certain substances: 0.1 w% per homogeneous material: Lead, mercury, hexavalent chromium, polybrominated biphenyl (PBB), polybrominated diphenyl ether (PBDE), di(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) or diisobutyl phthalate (DIBP); or 0.01 w% cadmium per homogeneous material.
LINK	Link

NO.8

NAME OF THE POLICY	Battery Act (BattG)
LEVEL	National
YEAR	2009
COUNTRY	Germany
THEME	Reduction of pollutions; Energy efficiency; Reuse and upcycling
GENERAL DESCRIPTION	In 2009, the EU Battery Directive 2006/66/EC was transposed into national German law with the entry into force of the Battery Act (BattG) and replaced the Battery Directive that had been in force since 1998. The directive defines the terms portable batteries, automotive batteries and industrial batteries. It also defines the responsibilities and legal obligations of manufacturers, importers and distributors for these types of batteries.
OBJECTIVES	The law applies to manufacturers, intermediaries, distributors and end users of batteries and accumulators. Manufacturers and importers must register batteries with the Federal Environment Agency before placing them on the market. In addition, the organisation of approved take-back systems is required. These may already exist or must be set up and approved by the authorities themselves. End users are only obliged to collect their spent batteries separately and dispose of them at a suitable collection point.
ACTIVITIES	<ul style="list-style-type: none"> Producers, importers and distributors of batteries and accumulators may only place them on the market if they have registered this in the publicly maintained registration register.

- This includes a deposit of information on take-back and disposal.
- Protection of the environment from the input of harmful substances.
- Collection targets for portable batteries: at least 35% from 2012 and at least 45% from 2016.
- Introduction of a mercury ban (max. 0.0005%) and a cadmium ban (max. 0.002%) with a few exceptions.
- Compulsory labelling for all batteries
- Capacity specifications for rechargeable portable batteries.

RESULTS	Introduction of a circular system for recycling batteries. Protect the environment from the input of harmful substances. Collection targets for appliance batteries: 40-45% in 2019
LINK	Link
NO.9	
NAME OF THE POLICY	Commercial Waste Directive - GewAbfV
LEVEL	National
YEAR	2017
COUNTRY	Germany
THEME	Reduction of pollution
GENERAL DESCRIPTION	On 21 April 2017, the new Ordinance on the Management of Commercial Municipal Waste and of Certain Construction and Demolition Waste (Commercial Waste Ordinance - GewAbfV) was published and entered into force in parts on 1 August 2017. As of 1 January 2019, the provisions of Section 4(2) and Section 6(1) and (3) to (6) also came into force. These contain minimum standards for pre-treatment facilities, quotas and documentation requirements.
OBJECTIVES	The waste hierarchy of the Circular Economy Act is intended for all types of waste. To ensure legal certainty and investment security, concrete directives for some waste streams must, however, be initiated by further directives. The Commercial Waste Ordinance can provide this security. In the latest version, material recovery and thus recycling of commercial municipal waste is strengthened in terms of resource protection and preferred to energy recovery.
ACTIVITIES	Commercial municipal waste and certain construction and demolition waste are to be collected separately according to material flows. These shall primarily be fed into a recycling process or reuse. If 90% of a producer's commercial waste is collected separately according to material flows, the remaining 10% can be recovered energetically without additional pre-treatment. Otherwise, non-separated waste must be pre-treated. A sorting quota of 85% and a recycling quota of 30% must be achieved. The appropriate plant technology must be available for this purpose. Mineral waste must also be recycled to the highest possible quality in accordance with the waste hierarchy.

RESULTS Not available

LINK [Link](#)

NO.10

NAME OF THE POLICY Dismantling and reuse - Building Guidelines Recycling - (BFR)

LEVEL National

YEAR 2004

COUNTRY Germany

THEME Durability; Disassembly; Recycled materials; Reduction of pollutions

GENERAL DESCRIPTION The Construction Guidelines Recycling (BFR Recycling) apply to the handling of construction and demolition waste as well as the use of recycled construction materials in the context of new construction, conversion and demolition measures on federal properties in accordance with the Guidelines for the Implementation of Federal Construction Tasks (RBBau).

OBJECTIVES The aim of the construction guidelines is to describe the measures necessary for the handling of recycled building materials and construction and demolition waste during planning and execution and to set out the principles for material flows with regard to avoidance, recovery and disposal. In this context, material recovery is considered in more detail, i.e. the use of waste for the production of recycled building materials or for the preparation of reuse, supplemented by their possible applications

ACTIVITIES Examples: Paving stones, roof tiles, façade parts, steel structures (halls), wooden beam structures, windows, doors, sanitary objects, lighting systems, air-conditioning technology, heating

RESULTS Increase from 59% (as of 2004) to 67% renewal under construction by 2050

LINK [Link](#)

NO.11

NAME OF THE POLICY Federal Immission Control Act

LEVEL National

YEAR 1974

COUNTRY Germany

THEME Reduction of pollutions

GENERAL DESCRIPTION	At the national level, the Act on Protection against Harmful Effects on the Environment Caused by Air Pollution, Noise, Vibrations and Similar Processes (Federal Immission Control Act - BImSchG) forms the basic framework for the legal implementation of immission control law. It came into force as early as 1974 and has since been supplemented by several ordinances. These include numerous statutory directives (1st to 44th BImSchV) and two important administrative directives ("TA-Luft" and "TA-Lärm").
OBJECTIVES	<p>The aim of the BImSchG is to protect people and the environment (soil, atmosphere, water) from environmental pollution caused by emissions and immissions from industrial plants and to prevent or at least reduce such pollution. This should also enable a high level of environmental protection in waste management. It serves to protect and prevent harmful effects on the environment.</p> <p>§ 5 paragraph 1 number 3 of the Federal Immission Control Act¹² (BImSchG). Accordingly, installations requiring a permit must "be constructed and operated in such a way that, in order to ensure a high level of protection for the environment as a whole, waste is avoided, waste that cannot be avoided is recovered and waste that cannot be recovered is disposed of without detriment to the public good; waste is not to be avoided if avoidance is technically impossible or unreasonable; avoidance is not permissible if it leads to more detrimental environmental effects than recovery; waste is recovered and disposed of in accordance with the provisions of the Circular Economy Act and the other provisions applicable to waste".</p>
ACTIVITIES	<p>Installations-related immission control: Construction and operation of industrial installations (§§ 4 - 31a).</p> <p>product-related immission control: requirements for the manufacture and quality of certain products to protect against harmful effects on the environment (§§ 32 - 37f)</p> <p>traffic-related immission control: (§§ 38 - 43)</p> <p>area-related immission control: (§§ 44 - 47 and §§ 47a - 47f)</p>
RESULTS	Reduction of environmental pollution through emissions within the framework of the current state of technology.
LINK	Link

Conclusion

The listed laws and guidelines set important framework conditions for waste avoidance, implementation of a circular economy and cascade use of wood in the German furniture and wood industry. The material recycling of the respective waste wood is in the foreground, as far as possible. Of the 7 million tonnes of registered waste wood, 30% (2.2 million tonnes) is currently recycled in Germany. A large part of it is used in chipboard production. So, there is still an enormous potential and optimisation potential about sustainable recycling.

European legislation lays the foundation for the legal framework in Germany. Corresponding directives are transposed into national law. In particular, the Waste Framework Directive and its implementation into national law through the Circular Economy Act define the topic of waste prevention in Germany. These are the basis for the legal design of waste management.

In addition to the legal requirements, there are many voluntary measures to implement sustainable waste management and circular economy in industry. These include various environmental management systems (e.i. ISO14001, EMAS, etc.), the use of sustainable and ecological certificates (e.g., FSC) or the sustainable monitoring of the supply chain (chain of custody). The eco-design approach is also becoming an increasingly central issue, especially in the furniture industry.

Especially against the backdrop of the European Union's Green Deal, some legal changes are to be expected in the field of product design. The extended producer responsibility or product responsibility anchored in the KrWG lays the corresponding foundation for this. Like the electronics industry, the introduction of a take-back system or product classification according to criteria of the circular economy and life cycle assessment is to be expected in the medium term.

9. Belgium

Materials and Methods of the Belgian research



The information for the Belgian research was gathered through different sources. In this process, we started investigation the sectoral sources of the Belgian Federation for the Wood- and Furniture industry (Fedustria). Waste is a regionalised theme. For this, we examined the websites and studies of the Flemish Environmental services, "Vlaamse Milieu Maatschappij, VlaRem" and "Navem", for example for the environmental permits that companies and organisations need to exploit their business.

This same study was conducted for the Brussels region and the Walloon Region, thanks also the services on Health and Safety of Woodwise, the consortium of partners gathered further information on this specific theme of waste prevention.

There were also studied the different legislations concerning Waste prevention programs, directives for wood waste and for industrial packaging and the latest initiative concerning mattresses. Finally, we partners included some information of the study on Circular Economy in Belgium.

Following documents were analysed:

- Waste prevention programmes
- Environmental permit (demand formulars and conditions)
- Waste management legislation for the 3 regions (Flanders, Brussels, Wallonia)
- Directives for wood waste for the 3 regions (Flanders, Brussels, Wallonia)
- Directives for industrial packaging (ValuPack)
- Directives for take-back programs of mattresses (ValuMat)



Background research and National/Regional policies

Circular Economy in Belgium

Belgium does not have a dedicated national resource efficiency or circular economy strategy/action plan, mainly due to its constitutional set-up.

The issue of material resource efficiency and circular economy, as it is typically cross-cutting, involves several domains and policy levels. This means that the Belgian regions (Wallonia, Flanders and Brussels) and the federal level are all concerned, each taking care of its own competences.

The Belgian Federal State is competent for matters whose technical and economic indivisibility requires equal treatment at the national level. For instance, major environmental issues such as water, air quality, biodiversity, climate change, etc. are dealt with mainly by the regions.

The federal government is competent when it comes to acting on these issues through products or services including polluting product emissions, energy consumption, product design, chemical substances in products, labelling, and the provision of information on the product or service, etc. Product policy is therefore an exclusively federal responsibility.

Belgium is strongly dependent on other countries for its raw material supply. This has created supply insecurity and price instability as raw material scarcity increases. The circular economy provides opportunities to maintain and use materials longer, and thus be less dependent on third countries.

There is a long activity in the field of separate collection and recycling of waste. Thus, it continues to see the circular economy as an economic opportunity for the industry.

The critical raw materials, identified by the European Commission in 2017, play an important role within the Belgian industry, not so much in the production of final products, but within refining, recycling and transformation. Several Belgian companies are very active in their sourcing and distribution. Through innovation and research, the circular economy can bring about business opportunities and employment, in several areas such as repair, local activities and remanufacturing.

Economic potential of the circular economy in Belgium

In the study "Potential of circular economy in Belgium" (2019 - only available in French) it is possible to find the following:

"The circular economy is subject to an important attention due to the potential of economic development and growth, that comes with it. Indeed, according to experts and promoters of this new kind of activity, the transformation of our economy from a linear model [i.e. in which resources are exploited and consumed and are in fine transformed to waste] to a circular

model, which is more efficient in term of resources [i.e. which aims to maintain manufactured products, their components and the materials as long as possible within the system while ensuring the quality of their usage] allows to realize some economies, to generate economic activity and employments, while preserving and reducing the environmental impact for the society.”⁷⁵

From the economic theory's point of view, two mechanisms can explain the creation of added value and of employment through the circular economy. In one hand, the circular economy can be a source of cost reductions, as is the case for the procurement of raw materials and other inputs linked to the production, but also for waste management, etc. On the other hand, the circular economy can stimulate the development of new products, goods, and services; for example in the field of repair, recycling, economy of functionality, etc. In these dynamic, different sources have put forward some estimations regarding the economic potential of circular economy.

Among others, The MacArthur Foundation evaluates the economies potential worldwide at no less than \$1 billion per year. At European level, it would represent more than one million jobs that could be created by the circular economy. In this context, the assets that Belgium can rely on:

- The quality of its workforce, its technical expertise, its capacity to innovate, its central position in Europe, etc.
- Should allow it to fully participate to the movement, and to create economic activity and jobs in the scope of this new paradigm that is the circular economy.

The study brings a quantitative insight about this matter and considers three scenarios for the development of circular economy.

The first one (So) considering a constant evolution in the continuity of the existing circular economy without the undertaking of any specific initiatives or initiatives complementary to existing ones to enhance its development (Business as usual).

The second one (S1) taking into consideration some (moderate) initiatives to enhance the development of circular economy.

The third one (S2) taking into consideration voluntarist initiatives, destined to enhance the development of circular economy.

The evaluation and extrapolated results for BE could reach between EUR 1 and EUR 7 billion of added value at the horizon of 2030, whether we consider the scenario So or S2, respectively, and, according to the same scenarios, between 15,000 and around 100,000 jobs at the horizon of 2030. Even if these results should be interpreted with caution, the analysis shows however

⁷⁵ Potential of circular economy in Belgium, 2019

that circular economy can have a significant impact on the wealth creation (added value) and on the job creation⁷⁶.

List of Policies in The Circular Economy sector in Belgium

NO.1

NAME OF THE POLICY	ENVIRONMENTAL PERMIT
LEVEL	Regional - Flanders
YEAR	Renewed 2017
COUNTRY	Belgium
THEME	Environmental permission for companies, businesses, etc.
GENERAL DESCRIPTION	<p>For Flanders, the VLAREM legislation is applicable. The main purpose of VLAREM (Flemish regulations on environmental permits) is to prevent and limit nuisance, environmental pollution and safety risks from companies, businesses, etc.</p> <p>The standards for this are based on a list of activities considered to be a nuisance for the environment, such as:</p> <ul style="list-style-type: none"> • The storage of waste • The production of chemicals • The production of noise and/or odour • Combustion processes <p>Since February 23, 2017, the environmental permit has been introduced. It replaces and integrates:</p> <ul style="list-style-type: none"> • The former environmental permit. • The urban development permit. • The subdivision permit. • The permit for vegetation changes. <p>The applications are submitted to the (digital) Omgevingsloket. After the application, a public inquiry and an advisory round are organized. The competent authority reaches a decision, considering both urban planning and environmental aspects.</p> <p>Every classified establishment or activity operated in Flanders must have an environmental permit or a notification act. This depends on whether your company belongs to class 1, 2 or 3 of the Flemish regulations on environmental permits (VLAREM 1):</p> <ul style="list-style-type: none"> • Class 1: most annoying activities -> environmental permit • Class 2: less nuisance-causing activities -> environmental permit • Class 3: least nuisance-causing activities -> reporting act

⁷⁶ Eionet Report - ETC/WMGE 2019/4 – Belgium

OBJECTIVES To prevent and limit nuisance, environmental pollution and safety risks from companies, businesses, etc.

ACTIVITIES Not available

RESULTS Not available

LINK Not available

NO.2

NAME OF THE POLICY ENVIRONMENTAL PERMIT

LEVEL Regional - Brussels

YEAR Not available

COUNTRY Belgium

THEME Environmental permission for companies, businesses, etc.

GENERAL DESCRIPTION Bruxelles Environnement is responsible for granting and monitoring environmental permits in the Brussels-Capital Region. Anyone wishing to operate a classified establishment must apply for an environmental licence.
A 'classified establishment' means any activity, equipment or product that has a potential impact on the environment and the neighbourhood.
There are 6 types of establishment, according to the importance of the impact they may have: Class 1A - 1B - 1D - 2 - 1C - 3.
To determine the class of the permit to be applied for, we check which classified establishments are linked to the sector of activity and the class of each of these classified establishments.
It is possible to apply for an environmental certificate for class 1A and 1B establishments in advance. However, this does not imply any exemption from the obligation to obtain an environmental permit.

OBJECTIVES To prevent and limit nuisance, environmental pollution and safety risks from companies, businesses, etc.

ACTIVITIES Not available

RESULTS Not available

LINK Not available

NO.3

NAME OF THE POLICY	ENVIRONMENTAL PERMIT
LEVEL	Regional – Walloon region
YEAR	
COUNTRY	Belgium
THEME	Environmental permission for companies, businesses, etc.
GENERAL DESCRIPTION	<p>The Operational Directorate-General for Agriculture, Natural Resources and the Environment is responsible for granting and monitoring environmental permits in Wallonia. Environment is responsible for granting and monitoring environmental permits in Wallonia. For Wallonia, 3 categories of risk activities are distinguished:</p> <ul style="list-style-type: none"> • class 1 establishments: establishments with a major impact -> environmental permit • class 2 establishments: medium impact establishment -> environmental permit • class 3 establishments: establishments with a small impact -> reporting obligation <p>Additional class 1 or 2 establishments must be authorised. Other changes are noted in a register that is kept available for inspection. If the technical officer or the municipal council considers, based on the register, that the expansion will increase the nuisance, an environmental permit application may still be required.</p>
OBJECTIVES	To prevent and limit nuisance, environmental pollution and safety risks from companies, businesses, etc
ACTIVITIES	Not available
RESULTS	Not available
LINK	Not available

NO.4

NAME OF THE POLICY	THREE AUTHORITIES RESPONSIBLE FOR WASTE MANAGEMENT IN BELGIUM
LEVEL	Regional – valid for the three BE regions
YEAR	
COUNTRY	Belgium

THEME	Waste management for companies, businesses, etc
GENERAL DESCRIPTION	<p>FLANDERS: For Flanders, OVAM (Public Waste Agency of Flanders) is the official government body that ensures that waste, materials and soil are dealt with in a well-considered and environmentally conscious manner.</p> <p>BRUSSELS: The management of non-household waste is coordinated by the Brussels Institute for Management of the Environment (IBGE). This is the administration for environment and energy of the Brussels-Capital Region.</p> <p>WALLONIA: The Walloon Public Service Environment, Department of Soil and Waste organizes the waste policy</p>
OBJECTIVES	Regulating the non-residential waste streams / waste flows
ACTIVITIES	<p>OBLIGATIONS (valid for the 3 regions)</p> <p>Every company is obliged to sort its waste. It is impossible to deal with the current regulations regarding waste flows per region. Mainly, with slight differences per region, the following waste flows are defined (example Flanders):</p> <ol style="list-style-type: none"> 1. PMD waste 2. small hazardous waste (KGA) 3. glass waste 4. paper and cardboard waste 5. used animal and vegetable oils and fats 6. green waste 7. textile waste 8. waste electrical and electronic equipment 9. waste tyres 10. rubble 11. waste oil 12. hazardous waste (solvents, paints and varnishes, etc.) 13. waste containing asbestos cement 14. Discarded equipment and containers containing ozone-depleting substances or fluorinated greenhouse gases 15. Waste construction products 16. Batteries and accumulator's waste 17. Wood waste 18. metal waste <p>Since 01-06-2018</p> <ol style="list-style-type: none"> 19. plastic films 20. hard plastics 21. polystyrene <p>Since 01-01-2021</p> <ol style="list-style-type: none"> 22. Mattresses -> see Valumat 23. kitchen waste and food scraps -> specific conditions 24. food waste (packaged food products) -> specific conditions <p>Every company must sign a contract with a registered waste collector for its residual waste. The waste flows are registered and must be always demonstrable.</p> <p>The term 'residual waste' does not in any way mean that the raw material must be labelled as lost. For the wood sector, we have the following recovery examples in mind:</p>

- shavings that are processed into ground cover for small and middle-sized trees
- residual wood that is ground down for processing into panel materials (chipboard, OSB, MDF, etc.)
- processing of residual and packaged wood and wood dust into wood briquettes or pellets

RESULTS	Not available
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LINK	Not available
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NO.5

NAME OF THE POLICY	OWN WOOD WASTE RECOVERY
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LEVEL	Regional – valid for the three BE regions
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YEAR	
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COUNTRY	Belgium
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THEME	Wood waste as biofuel
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GENERAL DESCRIPTION	<p>Residual waste can also be recovered in-house by a company. A simple solution, depending on the activities, is that the (untreated!) wood waste is sold as classic firewood. It becomes slightly more complex when the wood waste itself is used in the company's heating system. A good example of this is wood briquettes or pellets that are processed in a separate unit immediately after the dust extraction system.</p> <p>The combustion of sawdust, wood chips and other wood waste must take place in such a way that it does not disturb the environment. For example, the smoke must be diverted via a (high) chimney or an effective extraction system.</p> <p>The combustion of treated wood, pressed or painted, with any synthetic material, is forbidden.</p>
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OBJECTIVES	Reduce and sort wood waste – preventing the burning of non-wood substances
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ACTIVITIES	Not available
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RESULTS	Not available
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LINK	Not available
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NO.6

NAME OF THE POLICY	PACKAGING WASTE - VALIPAC
LEVEL	Regional – valid for the three BE regions
YEAR	Since 1998
COUNTRY	Belgium
THEME	Packaging waste
GENERAL DESCRIPTION	<p>Not only own produced waste, but also waste that comes in from outside the company must be registered. Companies and the various authorities are already making serious efforts to produce less packaging waste, and to recycle used packaging as much as possible. We talk about the 'Extended Producer Responsibility' (EPR): producers and importers are responsible for the entire life cycle of their products.</p> <p>The EPR originated in the European Directive 94/62/EC and has been adopted by the 3 regions. It has been in force for companies since 1998.</p> <p>To comply with the directive, the three regions formed an Interregional Commission which in turn granted recognition to 2 organisations Fostplus (household packaging management) and VALIPAC (commercial packaging management).</p> <p>Valipac is the accredited organisation in charge of the Extended Producer Responsibility for industrial packaging.</p>
OBJECTIVES	<p>Reduce and sort packaging waste</p> <p>Valipac's ambition is to integrate industrial packaging into the circular economy. Find out below how Valipac encourages the actors of the value chain to reach this objective</p>
ACTIVITIES	<p>Belgian companies that fall under the terms of EPR can ensure in-house that they meet the standards of the Interregional Packaging Commission. Or they can become a member of VALIPAC. To encourage sorting, 4 types of premium are provided:</p> <ul style="list-style-type: none">• A one-off starter bonus for those who start sorting• A container premium to compensate part of the rent for extra containers• A recycling bonus for sorted wood and plastic packaging material• A bag premium if you buy special bags for sorting small quantities of foils, EPS and stretchers.

RESULTS



LINK [Link](#)

NO.7

NAME OF THE POLICY New regulation for mattresses VALUMAT

LEVEL Regional – valid for the three BE regions

YEAR 2021

COUNTRY Belgium

THEME Mattresses

GENERAL DESCRIPTION Who or what is Valumat? Because fulfilling extended producers' responsibility individually for manufacturers and importers is both organisationally and financially impossible, a number of mattress manufacturers and the sector federations Fedustria (textile, wood and furniture industry), Comeos (trade and services) and Navem (furniture trade) have established the management body Valumat vzw.

OBJECTIVES Valumat vzw is the management body for extended producers' responsibility, established and financed by the sector, with the mission of collecting all discarded mattresses (cost-) efficiently and processing them sustainably.

Via a working group "design for circularity", Valumat finances the search for collective solutions for the sector to achieve its mission.

Valumat works to this end in full transparency with all stakeholders (manufacturers and importers, collectors, processors, governments, local authorities and so on...).



Valumat wishes to keep the administrative burden to a minimum for all concerned.

Valumat ensures that its participants comply with extended producers' responsibility "discarded mattresses".

Valumat lets the free-market play and works together with collectors and dismantlers for the collection and processing of discarded mattresses.

Valumat wants as many manufacturers and importers of mattresses as possible to participate in the Valumat system (maximum market coverage).

Mission: it is Valumat's ambition to stimulate ecodesign so that in the long term all the materials from discarded mattresses get a new life to close the material cycle within the circular economy.

ACTIVITIES

What does Valumat do for you?

For manufacturers or importers

Valumat vzw collectively carries out the obligations related to extended producers responsibility on behalf of all manufacturers and importers. This means that a participant in the Valumat system no longer has to worry about their legal obligations. In exchange they pay a contribution in proportion to the number of mattresses they have brought onto the market in Belgium.

For final sellers, brokers and manufacturers/importers

Unlike most other waste streams, the final sellers of mattresses are not obliged to accept old mattresses from their customers. This is also the case for the brokers and manufacturers or importers who sell mattresses to a final seller.

This is because the sectors involved and Valumat have agreed this with the regional authorities and stipulated it in the regulations.

For final sellers

The final seller can voluntarily receive discarded mattresses for free when the consumer buys a new mattress. For this service, he receives a fee from Valumat. Valumat will publish the list of final sellers who voluntarily collect old mattresses on its website and provide these final sellers with the necessary communication material.

Final sellers of mattresses who do not collect old mattresses from their customers have a legal obligation to inform them where they can turn to for assistance with their old mattresses. Valumat will also design appropriate communication material for them.

For the consumer

Consumers can dispose of their discarded mattresses at the recycling centres for free. Valumat has made agreements with the intermunicipal associations and municipalities that operate the recycling centres for the financing of the storage, transport and processing of old mattresses.

They can also go free to final sellers who voluntarily collect old mattresses from customers who buy a new mattress from them.

For the professional market

For the professional market too, Valumat also provides compensation for mattresses collected by a collector homologated by Valumat. Valumat annually determines this fixed amount depending on the market conditions for collection, transport, and processing at that time.

For the circular economy

Valumat reserves a significant portion of the environmental contribution for investments in ecodesign to arrive at an easily dismantlable and recyclable mattress, without compromising on sleeping comfort.

RESULTS

LINK [Link](#)

Conclusion

Wood & Furniture Industry - the Belgian wood and furniture industry employs around 17.500 people (2019). The sector comprises five "subsectors": the furniture industry, panel materials, construction elements, packaging and others (including wooden toys, brushes, coffins, etc...).

Wood, trees, forests and the environment are inextricably linked. Forests are vital. Hundreds of millions of people worldwide depend on them for their livelihood. Forests are home to 80% of all plants and animals. Forests are a supplier of wood and paper. Moreover, forests are important for the climate.

(Sustainability) challenges - The challenges of the wood and furniture industry are manifold.

Materials: The woodworking industries have every interest in obtaining wood from sustainably managed forests. This means that the forests must be managed with respect for the ecological, economic and social pillars. Worldwide, there are two labels that make sustainable forest management demonstrable and transparent: FSC and PEFC.

It is important that not only the forests are certified, but also all the links further down the chain (operator, sawmill, trade, etc.).

There is also the challenge of reducing and optimising the use of both raw and auxiliary materials without loss of quality. Think of the use of glues, lacquers, packaging materials, etc.

Recycling: a great asset of the sector is also one of the most important challenges. Wood is a valuable raw material that is used to the highest possible degree and can be reused and



recycled. The challenge is to keep wood and wood residues in a closed loop for as long as possible.

Energy: rational energy consumption is another important challenge within the subsector. In a first phase, energy must be used as efficiently as possible so that the total energy consumption decreases without loss of production capacity, safety and comfort.

The possibilities for savings are situated, among others, in the areas of compressed air, lighting and heating. In a second phase, we can examine how the energy that is ultimately still consumed can be obtained from renewable sources. A classic example in the sector is the wood combustion plants, in which companies valorise their own wood residues energetically and thus generate their own useful heat.

Emissions: this sector still uses a lot of finishing products that contain solvents. The conversion to low-solvent or solvent-free products is a major challenge due to technical limitations. Another possibility in striving for reduced solvent use is to apply more efficient application techniques.

Products and services: by considering the environmental impact of a product at each stage of its life cycle (production, use, disposal) as early as the design phase, products can be designed according to the principle of life cycle thinking or eco-design.⁷⁷

⁷⁷ Fedustria



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Resources

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