SOCIAL GREEN DEAL – Role and prospects for industrial relations and social dialogue in green transition management of local economic systems

Comparative report

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1. Introduction

The aim of the project "Social green deal - role and perspectives of industrial relations and social dialog in managing the green transition of the local economy" is to understand the current and potential role of industrial relations and social dialog in managing the greening of the local economy.
After a series of environmental pollutions, the aggravation of climate change, the lack of resources (mainly due to the war in Ukraine) and the problems resulting from the pandemic COVID -19, it is necessary today to think about how to ensure development that does not have a negative impact on the environment and that is resilient and independent of the resources of others. It is necessary to transform the economy "from brown to green" and to orient industrial policies towards long-term social well-being. The European Union has set a goal of becoming a carbon-neutral continent by 2050, and the documents listed in this report provide an important framework for achieving this goal.
This document provides an overview of the situation in the countries involved in the project (Italy, Spain, Belgium, Croatia, Bulgaria) and of the projects analyzed from the perspective of green transition and ensuring sustainable development.

2. Description of the countries included in the project

2.1. Belgium

The Kingdom of Belgium is located in northwestern Europe, surrounded by the Netherlands to the north, Germany to the east, Luxembourg to the southeast, France to the southwest, and the North Sea to the northwest. The port of Antwerp, with access to the North Sea, plays a crucial role as the gateway to Europe. Brussels, the capital, is one of the top twenty cities in the world according to the Kearney 2022 Global Cities Report. Brussels is home to many of the European Union's major institutions as well as the headquarters of the North Atlantic Treaty Organization (NATO). The total area of the country, including water areas, is 30 528 km². Belgium consists of three main geographical regions: The coastal plain in the northwest and the central plateau both belong to the Anglo-Belgian Basin, and the Ardennes Highlands in the southeast belong to the Hercynian Orogenesis Belt. The Paris Basin reaches a small fourth area at the southernmost tip of Belgium, Belgian Lorraine.
Belgium (11.6 million inhabitants) has a complex institutional structure, characterized regionally and linguistically by the three largely autonomous regions of Flanders (6.7 million inhabitants), Wallonia (3.6 million inhabitants), and the Brussels-Capital Region (1.2 million inhabitants).
Slightly more than half of the 25-34 year-olds in Belgium have a tertiary education, placing Belgium in the upper half of OECD countries in this respect. While compulsory education begins at age 6 and ends at age 17, more than 90% of the population attends school between ages 3 and 17.

Belgium's highly globalized economy and transportation infrastructure are interconnected with the rest of Europe. Its location at the heart of a highly industrialized region has helped make the country the largest trading nation in the world. The economy is characterized by a highly productive labor force, a high GNP, and high per capita exports. Belgium imports mainly raw materials, machinery and equipment, chemicals, rough diamonds, pharmaceuticals, foodstuffs, transportation equipment, and petroleum products. The main exports are machinery and equipment, chemicals, finished diamonds, metals and metal products, and food products.
In 2022, real GDP per capita was EUR 36,860.

2.2. Bulgaria

Bulgaria lies on the eastern flank of the Balkans, bordering Romania to the north, Serbia and northern Macedonia to the west, Greece and Turkey to the south, and the Black Sea to the east. Bulgaria is one of the oldest states on the European continent. With an area of 110,994 km², Bulgaria is the sixteenth largest country in Europe. Sofia is the capital and largest city of the country; other important cities are Plovdiv, Varna and Burgas. According to the official government estimate for 2022, Bulgaria's population is 6,447,710. Bulgaria has experienced negative population growth since 1989, when the post-Cold War economic collapse triggered a prolonged wave of emigration. Bulgaria has one of the oldest populations in the world, with an average age of 43.
Public spending on education is also far below the European Union average. Bulgarian students were among the best students in the world in 2001, performing better than their Canadian and German peers; however, by 2006, scores in reading, mathematics and science had declined. Average basic literacy is 98.4%, with no significant differences between the sexes. Education in public primary and secondary schools is free and compulsory.
The labor force is 3.36 million people, of whom 6.8 % are employed in agriculture, 26.6 % in industry and 66.6 % in services. Bulgaria has an open market economy in the upper-middle income range, with the private sector accounting for more than 70 % of GDP. Major industries include extraction of metals and minerals, production of chemicals, engineering, steel, biotechnology, tobacco, food processing, and petroleum refining. Mining alone employs 24,000 people and accounts for about 5% of the country's GDP; the number of employees in all mining-related industries is 120,000. Bulgaria is the fifth largest coal producer in Europe. The local deposits of coal, iron, copper and lead are crucial for the manufacturing industry and the energy sector. In 2022. real GDP per capita was EUR 7,250.

2.3. Croatia

The Republic of Croatia is a European country in the southern part of Central Europe. It borders Slovenia and Hungary to the north, Serbia and Bosnia and Herzegovina to the east, Montenegro

to the south, and Italy to the west. With a land area of 56,542 km² and a sea coast of 31,067 km², Croatia is one of the medium-sized European countries. For many years, the country has faced a negative demographic trend due to negative natural growth and net migration. According to the 2021 census, Croatia was home to approximately 3.8 million people, of which 2.0 million were women and 1.8 million were men. Like the rest of Europe, Croatia is characterized by an old population, so that the average age in 2021 was 44.3 years. According to forecasts, Croatia's population will decrease to 3.4 million by 2050 and the average age of the population will increase to 51.3 years.

Despite the efforts made, Croatia continues to lag behind the EU average in terms of the share of highly educated population, which is 29.5% in the EU in 2021. According to Eurostat, this percentage is 21.8% in Croatia in the same year. Therefore, Croatia needs to take further measures to create a more effective, higher quality and more accessible education offer and to raise the awareness of the population about the importance of education.

In the period 2010-2021, movements in the labour market are reflected in an increase in the number of employed persons, especially right persons, and a further decrease in the number of unemployed persons. The number of employees in crafts and liberal professions, as well as the number of farmers, is decreasing. It is also noted that the share of female employees in the total number and place of employment is decreasing.

The main economic sectors in Croatia are determined by natural wealth, but also by technology and industry, and the most important are: Agriculture, food industry, textile, wood, metal, chemical, oil and electrical industries, construction, trade, shipbuilding, maritime and tourism. The development of gross domestic product (GDP) in Croatia is currently in the context of a long period of crisis, a somewhat more pronounced growth that followed in 2016 to fall again in 2020, but also a relatively poor position compared to the EU average. In 2022. real GDP per capita was EUR 14,540.

2.4. Italy

Italy is located in the center of the Mediterranean Sea and its climate is typical of this zone: in the north of the country there is a temperate, humid climate, while in the southern center there is a Mediterranean climate with dry summers. Due to its location in the heart of the Mediterranean, Italy acts as a link between Europe, Africa and the Middle East. Thank you to these aspects, Italy plays a central role in the development of new energy supply chains and renewable energy sources (especially in the field of solar energy). About 59 million people live in an area of about 302,000 square kilometers, with an average population density of 195 inhabitants per square kilometer.

The demographic pyramid of the Italian population shows a rather high average age and a distribution concentrated in the 40-69 age group. In Italy, 48% of the population has a primary or secondary school degree, almost 40% has a secondary school degree and just over 15% has a college degree. As for the labor market, the employment rate (the ratio of employed persons aged 15-64 to the total population) in 2021 in Italy is 58.2%, with differences between male and female employment rates of about 20% (67.1% and 49.4%, respectively).

In 2021, Italy's GDP at market prices is 1,678,489 million euros, higher than the previous year. Looking at the evolution of GDP and its main components, a negative trend can be observed for all the sectors considered, with the exception of exports and imports of goods and services. The curve that shows a strong downward trend is that of gross fixed capital formation, i.e. the indicator that describes the tendency of the economic system to build new production capacities. In 2022. real GDP per capita amounted to EUR 27,860.

2.5. Spain

The territory of Spain is located in southwestern Europe and northern Africa. On the European continent, it occupies most of the Iberian Peninsula and the Balearic Islands in the Mediterranean Sea. In Africa, it includes the Canary Islands in the Atlantic Ocean and the cities of Ceuta and Melilla. In total, Spain has an area of 505,944 km2, with the water area representing 1.04% of the mainland. It has 4,964 km of coastline and 1 million km2 of marine and territorial waters. Spain is thus in a strategic geographical position, being separated from Africa by the Atlantic Ocean. One of the educational challenges for Spain is to combat the school dropout rate. In 2021, it reached its lowest level since records began: 13.3% of 18-to 24-year-olds had not completed the second stage of secondary education (intermediate vocational training, basic vocational training, or high school diploma) and were not in education. At the same time, the number of people completing higher education is increasing. Almost half of the population aged 24-34 reached this level in 2021. The LFS shows that 48.7% of 25-34 year olds reached this level, 1.3 percentage points higher than the previous year and significantly higher than the European average in 2020 (40.5%). Women stand out in this category with a rate of 54.4%, well above that of men (43.1%). It is noteworthy that this rate has increased by 1.8 points for men in the last year.
In 2022, Spain had a population of about 47 million 433 thousand inhabitants. It is an aging population with 19.2% of people under the age of 20 and another 20% of the population aged 65 and older. The crude birth rate was 7.1 births per 1,000 inhabitants in 2021, the lowest level in at least 47 years.
The Spanish labor market is characterized by a high level of job insecurity, especially combined with a high share of temporary employment (25.1% in 2021, with a higher share for women). These figures have already started to decrease during 2022, as a result of Royal Decree-Law 32/2021. In 2021, just over 23.2 million people were employed, 53% of whom were women. The overall employment rate was 85.2%, although it was slightly lower for women (83.3%). Spain's GDP amounted to 1,206,842 million euros in 2021. The projection of the annual change in GDP in 2021 shows a growth of 5.5% in this period, slightly higher than the European average, which is 5.3% in the same year. As far as prices are concerned, inflation in 2021 is 3%, higher than the European average (2.9%), but significantly lower than inflation in the other countries of the region. In 2022, real GDP per capita was EUR 24,580.

3. The main document’s about green transition and sustainable development

3.1. Belgium

The Belgian Recovery and Resilience Plan is a response to the urgent need to foster a strong recovery and make Belgium fit for the future. The plan's reforms and investments will help Belgium become more sustainable and resilient, and better prepared to meet the challenges and opportunities of the green and digital transformation. The plan consists of 105 investments and 35 reforms. They will be supported by 5.9 billion euros in grants. 50% of the plan is in support of climate goals and 27% of the plan is in support of digital transformation. The reforms aim to remove bottlenecks to sustained and sustainable growth, while the investments are designed to accelerate the transition to a more sustainable, low-carbon and climate-resilient economy, maximize the benefits of digital transformation, and ensure social cohesion. The plan also aims to improve connectivity within the country, boost labor market performance and the economy's capacity for innovation, and make public spending more efficient and sustainable. All reforms and investments must be implemented within a tight timeframe, as the Recovery and Resilience Facility Regulation stipulates that they must be completed by August 2026.
The plan will promote economic growth and create jobs. It will increase Belgium's gross domestic product by 0.9% by 2026. This boost to the economy will put up to 16,000 citizens to work. Belgium will benefit significantly from the stimulus and resilience plans of other member states, for example through exports to these member states. These spill-over effects account for 0.5 percentage points of GDP in 2026. This does not take into account the positive effects of structural reforms, which can be substantial. This shows the added value of a joint and coordinated approach at European level. NextGen Belgium includes 119 investment projects and 40 reforms to be completed by the end of 2026. These are divided into 5 thematic axes corresponding to the major challenges Belgium will face in the coming decades:

1. Sustainability and Climate: according to an independent study, the plan is to become the second greenest country in the European Union! No less than 51% of the plan's spending will contribute to this goal, to better renovate, develop transition technologies and promote biodiversity. The environmental impact of all projects in the plan has been carefully analyzed and no project has a negative impact on the environment and climate.
2. Digital Transformation: the Covid 19 crisis has demonstrated more than ever the need to develop digital infrastructure and solutions and bridge the digital divide. About 27% of the plan's spending will go toward projects to strengthen cybersecurity capabilities, improve digital government services for citizens and businesses, and facilitate the rollout of high-capacity infrastructure (fiber, 5G, etc.) to the greatest number of people.
3. Mobility: to successfully tackle climate change, it is important to fundamentally rethinkthe modes of transport. Thank you to this plan, massive investments can be made in cycling infrastructure, rail transport and electrification of transport modes.
4. People and society: the pandemic has exposed or exacerbated certain inequalities, especially in education and healthcare. Therefore, this plan is also a social plan that

invests in education, housing for the less fortunate, and health care to ensure social cohesion and a more peaceful society.

5. Economy, productivity and innovation: if we want a dynamic and environmentally friendly economy for future generations, we must not only invest in education and innovation, but also rethink some of our production methods. The projects in the fifth axis of the plan will allow us to strengthen workers' skills, make our companies more innovative, and gradually orient them toward the circular economy.

Belgium's National Energy and Climate Plan sets out how the country will contribute to the long-term greenhouse gas emission reduction targets under the Paris Agreement. The goal is to transition to a more sustainable, reliable, and affordable energy system for the Belgium of tomorrow.
Belgium's Just Transition Plan grants the country a total of EUR 182.6 million from the Just Transition Fund to be invested in the development of a low-carbon, circular, and energy–efficient economy to ensure overall economic diversification and just climate change in the country.

3.2. Bulgaria

The Bulgarian Recovery Plan is a response to the urgent need to promote a strong recovery and make Bulgaria fit for the future. The plan's reforms and investments will help Bulgaria become more sustainable, resilient, and better prepared to meet the challenges and opportunities of the green and digital transformation. To this end, the plan includes 56 investments and 47 reforms. They will be supported by grants amounting to EUR 6.27 billion. 58.9% of the plan will support climate goals and 25.8% of the plan will support digital transformation. Funds from the Recovery and Resilience Facility – the core of NextGenerationEU – will support the implementation of key investment and reform measures until 2026, which Bulgaria has proposed to emerge stronger from the COVID -19 pandemic. Funding provided by the Recovery and Resilience Facility – the heart of NextGenerationEU – will support the implementation of key investment and reform measures through 2026 that Bulgaria has proposed to emerge stronger from the COVID -19 pandemic.
Bulgaria's National Development Program has identified three strategic objectives – accelerated economic development, demographic recovery and reduction of inequalities - whose implementation is envisaged through targeted policies and interventions, grouped into five interconnected and integrated development axes and 13 identified national priorities. The objective of the Strategy for the Development of the Energy Sector in Bulgaria is to continue to play a leading role in the production and export of electricity in the region. The document sets the following main strategic priorities for the development of the sector:

- Maintaining a safe, stable and reliable electricity system through sustainable use of existing and new local energy resources;

- Maintaining the key role of power generation in the Bulgarian economy with emphasis on foreign trade;
- Ensuring that Bulgaria continues to play a leading role in the generation, balancing and export of electricity in the region;
- Protecting national and energy security, including securing the electricity supply chain;
- Promoting clean and low-emission energy; and
- Increasing energy efficiency.

All of these documents include actions to transition to a greener and more sustainable society and economy.

In Bulgaria, the TPSP plans have been repeatedly discussed and revised. Currently, by the end of June 2023, Bulgaria has to submit its latest options to EC in order not to lose the FSP funds, which are earmarked for investments in a low-carbon economy and the creation of new jobs. The TPSP of the three coal regions - Stara Zagora, Pernik and Kyustendil - will allow our country to receive 70% of the funds from the Just Transition Fund (FTP).

3.3. Croatia

In Croatia, there are a large number of laws and regulations that relate to the national level and thus also affect the local level and are related to the green transition and sustainable development.

Within the Ministry of Economy and Sustainable Development, there are numerous laws related to environmental protection, such as the Environmental Protection Act, the Air Pollution Control Act and the Water Act, which comprehensively regulate all environmental issues. In addition to the laws, it is also worth mentioning the more important strategies that define the topic under study. For example, there is a National Development Strategy of the Republic of Croatia until 2030, which envisages an environmental and energy transition to climate neutrality as the eighth strategic goal and identifies two priority public actions: the protection of natural resources and the fight against climate change, the achievement of energy self-sufficiency and the transition to pure energy.

The Energy Development Strategy of the Republic of Croatia until 2030 with a reference to 2050 is in line with the main determinants of energy development in the EU. This document is a step towards the realization of the vision of energy with low energy consumption and represents the transition to a new period of energy policy to ensure affordable, secure and quality energy supply without additional burden on the state budget within the framework of state aid and incentives.

Integrated National Energy and Climate Plan of the Republic of Croatia for the period 2021-2030, aiming to achieve a share of over 36% energy from renewable sources in gross consumption. This plan builds on existing national strategies and plans.

Due to its size and economic strength, Croatia can only make a small contribution to the global reduction of greenhouse gas emissions, so adaptation to climate change is very important. By 2040, the Climate Change Strategy with a view to 2070 has become a document that will ensure adaptation of important sectors on which climate change will have a significant impact. The

strategy has the following objectives: Reduce the vulnerability of natural systems and society to the negative impacts of climate change, increase the capacity to recover from the impacts of climate change, and capitalize on potential positive impacts that may also be attributable to climate change. The adaptation strategy identifies priority measures and coordinated actions through short-term action plans and monitoring of the implementation of the measures. The European Commission has identified two counties in Croatia that need to adapt (Istria and Sisak Moslavina County). These counties have traditionally been involved in mining and fossil fuel-dependent industries, and these are the areas where greenhouse gas emission reductions could have the greatest impact. For this reason, a just transition plan was submitted to the European Commission.
Under the EU's Next Generation Instrument, a Recovery and Resilience Facility (RRF) has been established from which Member States, through their own National Recovery and Resilience Plans, can use grants and loans totaling €672 billion to finance reforms and related investments that accelerate economic recovery and increase the resilience of economies and societies. The Croatian National Recovery and Resilience Plan is anchored in a number of key program documents and contains ambitious but achievable targets for reforms and investments that are critical to accelerating Croatia's recovery and strengthening the country's ability to cope with adverse shocks and sudden crises with lower economic and social costs. One of the main objectives of the National Recovery and Resilience Plan is to contribute to accelerated economic growth.

3.4. Italy

The plans and strategies are embedded in a broad framework of European policies that have encouraged Italy to work continuously on environmental policies and to further tighten decarbonization targets in recent years (the introduction of Fit for 55 increased emission reduction targets from -40% to -55% by 2050 compared to 1990). It is clear that decarbonization will be the strongest driver for the development of the Italian and European economy in the coming years, and therefore the prior economic and employment impact assessment is an important tool to reduce the social consequences of the transition. Italy, in line with the European strategies to reduce emissions, decarbonize the economy and strengthen the energy system, has adopted three main instruments to respond to the challenges of the environmental and energy crisis. The national legal framework, targets and action strategies are set out in the:

1. Integrated National Energy and Climate Plan (PNIEC, 2019),
2. Italian Long-Term Strategy for the Reduction of Greenhouse Gas Emissions (2021) and
3. National Plan for Reconstruction and Resilience (PRRN, 2021).

Italy is among the countries that have benefited the most from the funds provided by the EU, which, if the Complementary Fund and the Development and Cohesion Fund are also taken into account, total 248 billion euros. The measure within the National Plan that has received the most funding is the green transition (68.6 billion), followed by digitalization (49 billion),

education (31.9 billion), infrastructure and sustainable mobility (31.5 billion), inclusion and cohesion (22.6 billion), and health (18.5 billion).
Clearly, one of the most important reforms for Italy's environmental transition is the simplification of permitting systems, which would give a new impetus to the use of renewable resources. The main objective is to significantly simplify the Environmental Impact Assessment (EIA) regulations, thus streamlining the procedures for the installation of renewable energy facilities.
In the area of employment policy, Mission 5 "Inclusion and Cohesion" provides for transversal management of all measures to promote the employment prospects of young people and, more generally, of workers affected by environmental change. Component 1 "Employment Policy" (6.01 billion) includes funds to promote the employability of workers through an expansion of active labor market policies and an overhaul of the governance of the vocational training system through the New Skills Fund. The fund, established on a trial basis in 2020, is tasked under the NRRP with enabling companies to support training activities based on detailed collective agreements with unions. The New Skills Fund partially finances training activities required in a specific company, sector or area. The fund can also be activated for companies that use wage top-up instruments (CIG) and when the supported training activities prove crucial in accompanying outplacement processes for the workforce (known as employment transition). Another important measure is related to the new National Guaranteed Workforce Employability Program (GOL), which on the one hand seeks to overcome regional gaps in active policies and on the other hand emphasizes the need for transition activities. The Integrated National Energy and Climate Change Plan (PNIEC), which preceded the Pandemic and Energy Crisis, comprehensively addresses energy system issues and includes five action areas:

- Decarbonization
- Energy efficiency
- Energy security
- Internal energy market
- Research, innovation and competitiveness

The Plan for the Ecological Transition (PET) was approved in March 2022. The Plan provides a general framework for the environmental transition strategy in Italy and also defines a conceptual framework for the actions planned by the PRRN. In particular, the plan is a unifying tool for policies related to:

1. the reduction of emissions
2. sustainable mobility,
3. combating hydrogeological instability,
4. water resources,
5. air quality,
6. the circular economy.

To achieve the European targets for 2030 and 2050, the PET stipulates that renewable energy should account for at least 72% of electricity generation in 2030 and of the total primary energy

mix in 2050. One focus of environmental policy is sustainable mobility, which, according to PET, should be based on greater use of rail transport, the use of fuels with a lower carbon footprint, and the electrification of motor vehicles. In addition, PET pays great attention to the processes of social inclusion, the employment dimension and the need for skills training and retraining of the workforce, and strongly appeals to the principles of just transition.

Regarding the national application of the Just Transition Fund Plan, the European Commission, on the instructions of the National Agency for Territorial Cohesion, has identified the territories of Taranto and Sulcis areas as one of the most affected by the transition to a carbon-neutral economy. The investment projects are detailed in the National JTF Program, managed by the same agency. Therefore, for each area, the corresponding territorial plans are being developed with funds amounting to 1.211 trillion euros.

Finally, under Heading 3 of the Structural Funds Agreement, environmental transition funds of approximately 500 million euros are earmarked for Italy. These funds will finance territorial strategies aimed at promoting an equitable and environmentally sustainable transition in the Taranto and Sulcis areas, within the framework of cohesion policy.

In order to better shape Italian policies for the development of a green economy, the circular economy strategy, the bioeconomy strategy and the 2030 biodiversity strategy should also be taken into account.

National Strategy for the Circular Economy is a policy document that sets out actions, objectives and measures to be pursued in defining institutional policies to ensure an effective transition to a circular economy. The strategy establishes new administrative and fiscal instruments to strengthen the market for secondary raw materials so that they are competitive with new raw materials in terms of availability, performance and cost.

Italian Strategy for the Bioeconomy aims to link the main sectors of the bioeconomy to create longer value chains anchored in the territories. The overall goal is to increase turnover (about 250 billion euros/year) and employment (about 1.7 million jobs) in the Italian bioeconomy by 50 billion euros and 350,000 new jobs, respectively, by 2030. The strategy aims to generate new knowledge, technologies and services, but also to build capacity, regulation and public awareness by promoting policy coordination and integration at international and local levels. The implementation of the strategy is mainly based on the development of research and National Biodiversity Strategy to 2030. – aims of this strategy is to strengthen the biodiversity element for combating climate change, improving health, and boosting the economy. Overall, the National Biodiversity Strategy to 2030 consists of two strategic goals divided into eight action areas:

- Strategic Goal A: Establish a coherent network of protected areas on land and in the sea, divided into one field of action;
- Strategic Goal B: Restore terrestrial and marine ecosystems, divided into seven fields of action.

3.5. Spain

The strategic framework is divided into three pillars aimed at decarbonizing the Spanish economy. First, the Climate Change Law, which sets a roadmap for efficiency improvements in the coming decades. It envisions the electricity system to be 100% renewable by 2050 and the entire economy to be greenhouse gas neutral.
Second, the National Integrated Energy and Climate Plan, which sets out steps for decarbonization in the 2021-2030 period, in line with the goal of emissions neutrality by 2050. This proposes to reduce greenhouse gas emissions by 23% from 1990 levels by 2030 and to achieve a 42% share of renewable energy in final energy consumption by that year. In the specific case of electricity generation, the share of renewables would be 74%. According to these targets, the country's energy efficiency would improve by 39.5% in the decade 2021-2030. This framework aims to mobilize economic resources from public, private, and mixed sources; reduce fossil fuel imports; create jobs, especially in manufacturing and construction; revitalize depopulated rural areas; and reduce health risks from pollution.
And third, the Just Transition Strategy, which is "a strategy of accompanying solidarity to ensure that people and territories make the most of the opportunities of this environmental transition without leaving anyone behind" In 2020, the Just Transition Institute was established to support green transition policies.
Despite the net gains the government expects for employment in this process, the energy transition has negative sectoral and territorial impacts: Loss of jobs in coal mining, loss of jobs in coal-fired power plants, or loss of jobs in nuclear power plants without a reactivation plan. For these short-term impacts, the Just Transition Strategy provides specific and immediately applicable measures under the Urgent Action Plan for Coal Regions and Decommissioned Power Plants.
Next generation funds have been transferred to Spain under the Spanish government's Reconstruction, Transformation and Resilience Plan, whose "leverage" III" includes the development of a decarbonized, competitive and efficient energy sector. The plan aims to mobilize significant private investment to harness the potential of renewable energy and existing value chains and strengthen competitiveness in domestic and export markets. It includes the following four components: the deployment and integration of renewable energy, the development of electricity infrastructure, the promotion of smart grids and the deployment of flexibility and storage, the development of a renewable hydrogen roadmap and its sectoral integration, and the strategy for a just transition.

4. Green transition in selected countries

4.1. Belgium

Flanders is the area that is considered vulnerable and where some changes need to be made. The region's economy is still characterized by a robust secondary sector, which includes industries such as oil and chemical products, metallurgy, plastics and food processing. This sector accounts for 26% of Flanders' gross value added and 21.4% of employment (direct and indirect). Its relatively greater importance in gross value added compared to employment implies higher labor productivity, due to international competition and greater capital investment. The most important industries within the secondary sector include "food and beverages," "chemicals" (mainly in terms of gross value added), and pharmaceuticals. In 2018, these industrial sectors accounted for 36.6% of the region's total GHG emissions, with 80% of the sector's emissions coming from energy-intensive industries subject to EU ETS. Flanders also has a rapidly developing tertiary sector that includes various services. The region has successfully developed an extensive service economy, particularly in logistics and transportation. However, the dependence of the service sector on business cycles is a potential challenge for the region. Real economic growth in Flemish GDP is estimated at 2.8% in 2022. Industries such as transport and communications, health and social services, business services, and equipment manufacturing played a crucial role in driving this growth. Private consumption experienced an upswing from 2021; however, complications related to the war in Ukraine and inflation hampered further recovery. As a result, real GDP growth in the Flemish region is projected at +1.3% in 2023, mainly due to a slowdown in consumption and less promising exports.

The transition to a climate-neutral economy and society poses major challenges for Flemish industry. The European Union Emissions Trading Scheme (EU ETS) sets a common emissions cap that applies to industry falling within its scope, including Flemish ETS companies. The Flemish Climate Strategy 2050 does not set a specific quantitative target for Flemish ETS companies, but emphasizes that they must comply with the annual tightening of the emissions cap at the EU level, which is expected to reach about -85% by 2050 compared to 2005 levels. Flemish industry faces several hurdles in moving to a carbon-neutral economy. The region's high population density, significant exports, relatively high energy consumption, and limited space for installing alternative systems contribute to its difficult position in terms of GHG emissions. In addition, Flemish industry is energy intensive and heavily dependent on fossil fuels.

For the reason of the Social Green Deal, we take out three projects. The first is Klimaatsprong. This is an industrial policy initiative that formulates a transition program for Flemish industry. The goal of Klimaatsprong is to define an industrial policy that supports Flemish industrial companies in meeting the challenges of climate change and the CO2 reduction targets set by the EU. The governance of the industrial policy initiative is based on a quadruple helix model, which means that both civil society organizations, employers, universities and the government are involved. This case was chosen because it is an example of trade union involvement in

industrial policy development that is unique to Flanders and could provide valuable insights and lessons to other countries and trade unions.
The second project is Climate Leap. This is the name of the policy initiative launched in 2020 with the aim of preparing a strategic industrial policy framework to facilitate and guide the decarbonization of Flemish heavy industry. Climate Leap is an example and the first attempt in Flanders of a quadruple helix collaboration between the Flemish government, the employers' association Essencia, environmental organizations and, of particular interest for our case study, trade unions. Initiated by two government departments, Climate Leap focuses on large emitters, mainly in the chemical sector. The planned strategic policy framework is to consist of a number of policy instruments. This is the first time that trade unions have been involved in policy preparation at the Flemish level – an excellent case to explore their potential role in influencing climate change/decarbonization policy.
The third project is the Chemea company. This is a U.S.-based global chemical company. The company manufactures a wide range of products for everyday use. Founded in the first half of the 20th century, the company now has 30 production sites worldwide and employs around 15,000 people. In Belgium, Chemea has a plant that also produces pesticides. This plant employs several hundred people. Challenges related to climate change are:

- the intensive production process using fossil fuels and
- the petroleum-based production of pesticides.

This reliance on fossil fuels as both a raw material and an energy source is challenging given the EU's 2030 and 2050 climate targets. Given Chemea‘s global footprint, the company has the opportunity to move production to other parts of the world. Faced with an energy crisis in Europe in the winter of 2022, Chemea has already moved parts of its production to the U.S. because energy costs are cheaper there. The recent opening of a production facility in the U.S. that runs on coal highlights the political and environmental differences between the EU and the U.S.

4.2. Bulgaria

Stara Zagora, Kyustendil and Pernik are the most affected by the transition to a carbon-neutral economy. This is because they are key areas where local coal mining and coal-fired power generation and the economic structure associated with these activities are concentrated, making the three areas the most affected by the transition. The poorest and most vulnerable region in Bulgaria is the Northwest, but since the introduction of the Green Deal provisions will not have a large impact there, we focus our analysis on the region where the impact will be large, namely the South-East region. This region includes the districts: Burgas, Sliven, Stara Zagora and Yambol with a total of 33 municipalities. The Stara Zagora region will be among the three regions most affected by the introduction of the Green Deal, especially if Bulgaria fulfills its commitment under the Recovery and Sustainability Plan (RSP) to reduce carbon emissions from the energy sector by 40% by 2026. In practice, this means closing 80% of lignite capacity, as there is no other way to reduce carbon emissions - unless projects and related reforms are

renegotiated under the PPU. The reason for looking at Stara Zagora in detail is that it is the largest coalfield in Bulgaria and fossil fuels are the main driver of the economy in the area. Lignite mining, coal-fired power generation and related services are the main economic sectors in the gross value added structure of the district. Other major industries in the region include a wide range of manufacturing and construction services, wholesale and retail trade, machinery manufacturing, food processing, and electronics manufacturing.

Gross domestic product per capita in the Stara Zagora region decreased in 2019, losing its second place. However, wages and incomes in the district continue to rise. Economic activity, while declining, remains relatively high and has consistently been above the national average in recent years. The data of the National Statistical Institute at the level of Stara Zagora region show that the coefficient of economic activity (15-64 completed years) is 74.5%. The employment rate (15-64 years) is 72.2%. The unemployment rate (15 - 64 years) is 3.1%. The number of businesses in the district is relatively low, but production is relatively high. The percentage of roads in good condition lags behind the average. Stara Zagora has a relatively low level of local taxes. The self-assessment of local governments regarding the development of e-government and the provision of one-stop administrative services is weak. In line with the national trend, natural growth in Stara Zagora has deteriorated in recent years. The percentage of school dropouts in primary and secondary education remains almost twice the national average. Stara Zagora's low environmental rating is mainly due to extremely high carbon dioxide emissions in the atmosphere.

Although the region has the lowest unemployment rate in Bulgaria for 2019 at 1.4%, more than 80% of the expected "directly affected" jobs in coal mining and power generation plants, or 40,000 jobs (direct or indirect) according to approximate estimates, could be lost as a result of the transition. It is important to take measures to support small and medium enterprises and start-ups in high value-added sectors that will allow the economic diversification of the area. The impact on the local labor market will be significant, as the mining and energy sector is a structural industry and employer.

The Stara Zagora region has been identified as most affected by the transition, as the four coal-fired thermal power plants and mines are located in its territory. The just transition to a carbon-neutral economy affects the entire territory of the Stara Zagora region, with the municipalities of Radnevo and Galabovo being the most affected, in addition to the main urban and economic center of Stara Zagora. It is important to emphasize that although the mentioned municipalities are the most affected, the other administrative districts - Sliven, Haskovo and Yambol - are also supplied by the "Maritsa East" energy complex. In 2020, the energy/mining companies will attract workers from the following areas: Stara Zagora - 8.2 thousand people; Haskovo - 1.5 thousand people; Sliven - 0.9 thousand people; Yambol - 0.6 thousand people; others - 0.1 thousand people.

Delaying territorial plans would reduce the industrial competitiveness and successful transformation of the largest coal region in the country. The Staro Zagora region has initiatives for the production of green hydrogen and has the prospect of being included among the nine hydrogen valleys of Europe. Stara Zagora has a well-developed educational infrastructure and regional capacity, which makes the region promising for research and development activities and innovations in the field of new clean technologies, as well as building a model of active participation of local stakeholders in the process of managing and implementing the transition.

However, the lack of good dialogue and cooperation between educational institutions and businesses is a major obstacle for the transformation of the regional economy in Stara Zagora. In universities and specialized high schools, it is necessary to introduce the study of low-carbon technologies, which will lead to the easier integration of graduated students and students when starting work in enterprises that focus on imposing green innovations.
Stara Zagora is already registered as a leading initiative for the "EU Hydrogen Hub" and as a hydrogen valley, which is a prerequisite for becoming part of the EU hydrogen centers, producing green hydrogen for thermal processes (heating, electricity production, industrial processes, etc.) .n.), for hydrogen cells or other devices.

4.3. Croatia

Istria County, the westernmost county in Croatia, covers most of the Istrian peninsula (2,813 of the 3,120 square kilometers of the Croatian part of Istria). The administrative seat of the county is Pazin, the political and economic center is Pula. It consists of 10 towns and 31 municipalities.
According to economic indicators, Istria County is one of the most successful counties in the Republic of Croatia. According to the latest available data from the State Statistical Office, the average GDP per inhabitant in Istria County in 2019 was 15,776 EUR, which is 17% higher than the average GDP per inhabitant in the Republic of Croatia. However, a comparison by county shows that Istria County is right behind the city of Zagreb in terms of GDP per capita, i.e. in second place. The registered unemployment rate in Istria County in 2021 was 3.2%, which is 57% lower than the average unemployment rate in the Republic of Croatia in 2021. Moreover, there were 11,785 entrepreneurs and 6,645 craftsmen working in Istria County in 2021. Entrepreneurs in Istria County make up 8.1% of all Croatian entrepreneurs.
Tourism and the hospitality industry are constantly growing, and the largest hotel companies in the Republic of Croatia are located in Istria County. Tourism is the carrier of the largest investments on the peninsula. It is followed by trade and the expansion and improvement of the offer, as well as significant investments in new facilities and centers. The sector IT is also on the rise and the headquarters of the largest and fastest growing company IT is located in Istria County. In addition, the manufacturing sector is very developed with traditional agriculture, fishing, construction and the production of building materials (lime, cement, brick and stone), trade and transport. The following table shows the main macroeconomic indicators for Istria County.
The European Commission's Croatia 2020 report identifies Istria County and Sisak-Moslavina County as priority regions for the transition process, as they are traditionally dominated by mining and fossil fuel-dependent industries, and the reduction of GHG emissions could have the greatest impact in these areas.
The manufacturing sector in Istria County is the most significant from the point of view of climate change, as it contributes the most to greenhouse gas emissions and accounts for about 25% of regional GDP and 20% of employment. The environmental problems in Istria County

are related to the production of cement and electricity from coal. The economic units are located in the eastern part of Istria, the so-called Labinština, which includes the municipality of Pićan and the area around the city of Pula, and represent a priority area where attention must be paid to the social, economic and territorial impact of the transition. The sphere of influence of the Plan for a Just Transition includes six local self-government units, namely the cities of Labin and Pula and the municipalities of Kršan, Sveta Nedelja, Pićan and Raša. The main economic units are located in these areas: HEP, TE Plomin, Holcim, Calucem and Rockwool Adriatic. The above companies employ about 850 people, of which 90% of the total workforce of the above companies is located in Istria County, which is particularly evident in Plomin, where 95% of the workforce is employed in the Labinština region. Some companies have prepared plans for the transition to clean technologies. Apart from these two companies, none of the other companies have clear plans to cease operations. However, there are plans to restructure operations to some extent in order to reduce greenhouse gas emissions and increase energy efficiency. Most of the plants in the region are planning to increase their production/capacity in the near future and are making investment plans that are in line with the new climate targets, focusing mainly on measures that will help reduce emissions and greenhouse gasses and reduce the carbon footprint. The heavy dependence of the Labinština area on the listed economic enterprises could have significant negative impacts in the event of the closure of economic enterprises or a decrease in their workforce. Any change in the employment structure within the economic entities will have a strong impact on the labor market. The economic importance of business enterprises is extremely large, and any change in their operations or future business plans will have a significant impact on local communities. In addition to the significant impact on employment in the narrower area of Labinština, the transition of the economic entities will also have an impact on the wider area, through suppliers and employees living outside the said area. In addition to the more than 2,800 directly affected jobs, it is estimated that another 1,000 jobs will be indirectly affected through the supply chains. The company's combined emissions represent 24.7% of total verified national emissions in 2019, indicating a large environmental footprint. Although revenue data is not available for Plomin, the other three business units together reach a revenue share of nearly 4% of the total revenue of all companies in Istria County and Holcim 80% of the revenue of all companies in the municipality of Raša, indicating that changes in the business units' operating or business plans have a significant impact on prominent local communities.

However, the transition itself will also bring positive developments. Investments in new technologies to reduce greenhouse gas emissions and the shift to environmentally friendly systems will create new jobs for technical professions as well as links to local SMEs. This will include the establishment of sustainable and green technology innovation centers focused on decarbonization and enabling circular business models in manufacturing. It will serve as a platform for collaboration that directly connects students, researchers, entrepreneurs, startups, SMEs and large manufacturing companies. In this sense, the activities financed by the Just Transition Fund will be supported by the implementation of the industrial transformation of the Adriatic region on the territory of Istria County.

This County will also support investments in entrepreneurial infrastructure, primarily focused on the green and digital economy, especially in the context of decarbonization, as well as investments in the research and development sector and encouraging SMEs to use innovations

in green and digital technologies in their businesses. To support the further development of Istrian agriculture, an Agribusiness Canter will be established as a support network for existing and new farmers. Measures that promote diversification of the regional economy will also support other sectors such as ICT, wood processing, automobiles, etc.
In the field of higher education, there is a need to improve the skills of students and invest in the design of study programs that better meet the needs of the market in Istria. Some initiatives in this sense are already emerging. However, there is also a need for measures to promote forward-looking, skills-based programs that include better linkages between businesses and educational institutions, as well as programs for retraining, upskilling, and a wider range of non-formal education to mitigate the effects of transition by preparing workers and the unemployed for the future labor market.
Further diversification opportunities in Istria County, traditionally focused on tourism, are seen in the revival, promotion and development of cultural and related products based on disused mining and industrial monuments, which could have a positive impact on the local economy of the area concerned.

4.4. Italy

In Italy, Sicily is a fragile region. The demographic dynamics in Sicily are significantly affected both by the progressive aging of the population and by migration flows to other areas of Italy and the EU. Relative poverty indicators (2019) are significantly higher than national ones: the relative poverty rate is 24.3% (compared to 11.4% in Italy). The main source of income (2019) is public transfers (47.5% in Sicily, 38.8% in Italy), followed by income from paid employment (41.2% vs. 45.7%) and finally income from self-employment (9.3% vs. 13.1%). The percentage of Sicilian households experiencing energy poverty (2020) was 18.1%. Sicily also recorded the highest electricity consumption among Italian regions.
Economic activity in Sicily is picking up in 2021 (regional GDP +5.7% 2021/2020). Manufacturing growth affected all major sectors and was strongest in industry and construction. Activity was impacted by rising energy prices and difficulties in sourcing inputs. Higher impacts lead to a higher share of energy-intensive sectors (15.9% of total manufacturing VA in 2019). The average size of companies is 2.7 employees, well below the national level. +Growth of Sicilian export volume by 45.4%, driven by the oil sector. Intensification of public investment spending thanks to NRP funds; the first allocations in Sicily were mainly in the social inclusion, public transport and health sectors.
The first sector where conversion will be required is the Priolo Augusta petrochemical center. This is one of the largest petrochemical centers in Europe, stretching almost 32 km along the east coast of the island: the crude oil processed there accounts for 23% to 26% of the national total. From the end of the 1970s, several factories began to close, which after some time led to a decline in employment. The social safety nets created by the oil industrial development model gradually disintegrated. The companies are highly interdependent: Refineries supply raw materials to chemical plants, which in turn account for most of the shipping traffic in the ports of Augusta and Syracuse. The share of manufacturing in the province of Syracuse is higher

than in any other Sicilian province (14.3% of total employment). The importance of manufacturing is even more evident in each local employment system: in the Augusta local system, 85.4% of the manufacturing workforce is employed in the municipalities of Augusta and Priolo Gargallo, where Polo companies operate.
The second case study is the Gigafactory of Catania. With the TANGO project, the "solar factory' built in Catania in 2010 is preparing to become Europe's largest factory for the production of double-sided high-performance photovoltaic modules (2024). The expansion of the factory will lead to a 15-fold increase in production capacity, from the current 200 MW to 3 GW per year. This will also lead to an increase in direct and indirect local employment: 1,000 jobs by 2024. The result of this project will boost the photovoltaic value chain in Europe and help reduce the continent's energy dependence.
The last example is the Roccavaldina Energy Community, an innovative project in the province of Messina that aims to promote renewable energy and environmental sustainability through the sharing and collective management of energy. The project was founded in 2016 by a group of local citizens, professionals and companies with the aim of promoting the development of renewable energy in the region. One of the goals of the Energy Community is to create a collective energy management model that involves citizens and local businesses, promotes participation, and shares the costs and benefits of renewable energy.

4.5. Spain

In Spain fragile region are: Asturias, Leon, Palenca, A Coruna, Teruel, Almeria, Cadiz and Cordoba as well as the area of Alucudia (Mallorca). Cmmon elements of affected arreas are:

- Closuer of coal – ired power plants and / or coal mines
- Impact on ancillary companies
- High level of unemployment
- Ageing population
- Excessive dependence on activities undergoing closure of transformation
- Need of training, re – skilling and lobour market integration

In this analysis was choosen Teruel region. This is rural province, with low business density and low population density. **Closure** of the thermal power plant located in the Andorra region (2018). Coal was an **central** activity and wealth, providing a higher per capita income. Significant socio-economic **impact**: 524 direct jobs, 306 subcontracted jobs and more than 2,000 jobs in the surrounding areas.

Picture 1. Location of the Teruel region

Selected projects are Enel – Endesa, Forgasa – Samca and Infrastructures for social services.

ENEL- ENDESA

- An industrial and technological project with 14 renewable projects: 7 hybridised solar projects with 7 wind projects, a battery storage plant, green hydrogen production, a synchronous compensator, and an electrolyser-manufacturing centre, located in 9 different municipalities.
- Complemented by a socio-economic plan, with small projects in other sectors and a training school

FORGASA- SAMCA

- It is a plant for creating fertilizers from leonardite. It is a natural coal. The company belongs to a big industrial group
- A research and development laboratory, which has been endowed with an important economic endowment, which continues to advance in the development of future products, and a commercial department, which mediates between the farmers and the laboratory. 37 people
- Corporate Social Responsibility. No emissions and creation of youth employment in low population areas

INFRASTRUCTURES FOR SOCIAL SERVICES

- Several infrastructures had been developed with public funds on nursing homes for elderly people or day care centres
- They have meath job creation while the construction phase
- Now, these infrastructures make possible to create good quality public jobs with services to be used by the public
- Capacity to fix population

Conclusion

In this document, the countries included in this project are presented in terms of their location, demographic trends, but also economic development. From the analysis, it is clear that the countries involved in this project are very diverse in terms of their distribution, size and population.

Since all countries involved in this project are also part of the European Union, they were required to produce many common documents related to green and just transition. Documents such as Just Transition Mechanism, Climate Strategy, Energy Strategy, Recovery and Resilience Facility were analyzed for each country. These documents analyze, among other things, how a just transition can be achieved and how this transition will be financed.

The final part of this report addresses specific regions that will be affected by the Just Transition program, as well as specific actions that certain businesses, associations, and societies will need to take in order to use clean energy, develop smart infrastructure, reduce greenhouse gas emissions, transition to clean industry and a circular economy, etc.

By achieving all these goals, the European Union will become a more equitable and resilient society based on sustainable development.

The green transition is the process of moving to a more sustainable, environmentally friendly society and economy. In designing the process of implementing the green transition, the challenges that social partners and policy makers might face need to be clearly identified. Identifying such challenges and providing possible solutions will lead to a successful implementation of the green transition. The first problem that actors in the transition process might face is the loss of jobs, the need for retraining and the promotion of new, better jobs. Many traditional fossil fuel-based industries can be converted to more sustainable alternatives. This could lead to the loss of existing jobs as the skills and abilities of workers are inadequate. In order to provide these people with new employment opportunities, it is necessary to retrain them and provide them with new skills that will enable them to work in green jobs. Areas where new jobs will be created include activities such as the installation and maintenance of new technologies related to sustainable energy sectors that use renewable energy sources (solar and wind energy, geothermal sources, hydropower). Skills related to ensuring energy efficiency in the construction industry will be in high demand. Jobs related to sustainable agriculture, organic farming and the management of ecosystems will be important in the future. In the transport sector, the increasing use of electric vehicles and other environmentally friendly vehicles will also require the employment of people with specific skills and competencies. In the waste management sector, it will be necessary to employ people with specific knowledge of recycling and ways to reduce and manage waste. Environmental consultants and sustainability experts, which many companies will need to employ, will also be very important. All of the above experts will need to have digital skills so that green technologies and initiatives can be introduced as successfully as possible. In addition, the employees who will be working in green workplaces will need to constantly improve and adapt to new requirements.

Furthermore, social partners must ensure that the green transition is carried out in a way that is fair to both workers and the communities most affected by the changes in the industry. Sufficient time must be allowed for all those affected to adapt to the new situation and the new

social rules. Those who cannot adapt to the new way of doing business should be offered adequate social protection. To achieve a better outcome in the green transition, an open social dialogue must be established between all parties concerned. In this way, a consensus can be reached on the direction and pace of the green transition itself.

In shaping industrial policy, care must be taken to ensure that the industry that pollutes and damages the environment is replaced by a new environmentally friendly solution. To this end, legislation must be amended and the use of new modern technologies promoted.

The biggest challenge in realizing the green transition is securing financial resources. All interested parties must work together to secure the resources to realize the green transition in the best possible way.