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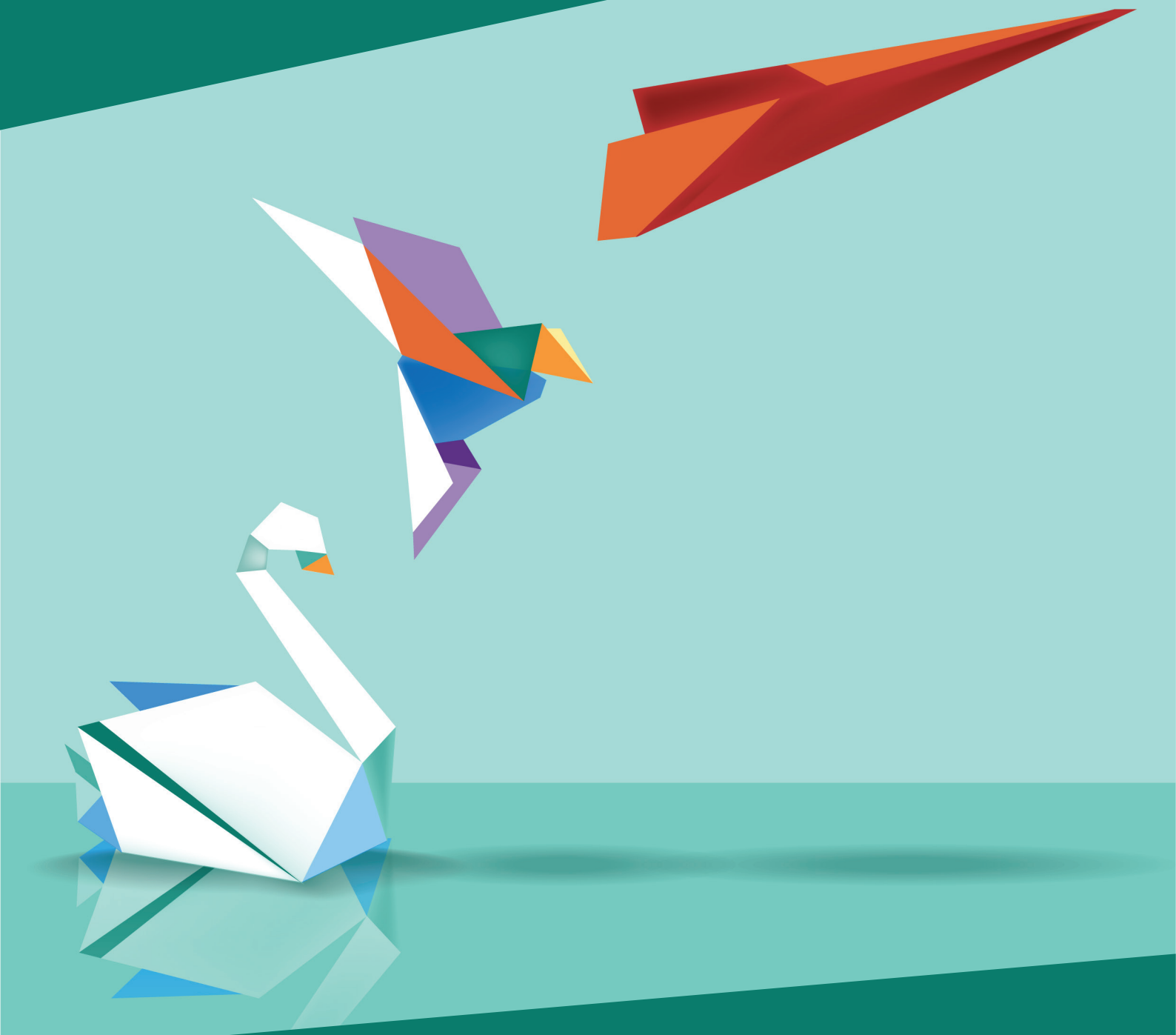

Just sustainability transitions

From concept to practice

EEA Report 12/2024

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Key messages

- As Europe strives to reduce greenhouse gas emissions and decouple economic growth from resource use, certain social groups and European regions will be disproportionately affected. It is therefore critical to ensure that transitions are fair. A failure to do so risks exacerbating existing inequalities or even creating new ones, potentially leading to social divisions, discontent and resistance to change.
- Delivering justice in sustainability transitions requires policymakers to:
    - identify and correct the regressive economic and social effects of climate and environment policies;
    - address the unequal burden of environmental risks across society;
    - ensure fair and inclusive participation in decision-making processes; and
    - recognise the different values, identities and capacities of groups across society and ensure their access to democratic processes.
- Several policy measures and initiatives, in particular the Just Transition Mechanism and the Social Climate Fund, have been put forward with the explicit aim to support those territories and groups of the population that are most vulnerable to negative impacts of the green transition. There is potential to learn from good practice and strengthen approaches and mechanisms to better address justice in sustainability transitions.
- Achieving justice in sustainability transitions also requires recognition of the interconnectedness and complexity of the systems at play. A comprehensive and holistic policy framework that brings green transition policies together with employment, training and social policies, and integrates and coordinates policy objectives across key economic sectors, can better support a just transition. At the same time, delivering transitions that are fair demands careful consideration of the specificities, inequalities and challenges of the local context, and its interplay with larger geographical scales.
- To effectively implement just transition policies, it is essential to strengthen mechanisms that support capacity building within a multi-level governance framework. This involves empowering decision-makers at different levels of governance to mobilize resources, as well as enabling citizens to help shape policy processes and engage in the transition. Special emphasis and resources should be allocated to capacity building aimed at involving vulnerable and marginalised groups in the policy process.
- Social justice is an integral part of sustainability. Fostering just transitions requires the proactive development of sustainable systems; this can be achieved by promoting alternative practices that are both sustainable and accessible to all. For a policy mix to enable a just transition, policy instruments should address both just phase-out and build-up.
- A continuous commitment to assessing progress and refining policies is integral to delivering justice. Robust systems for monitoring, evaluating and adjusting policy based on evolving societal needs are needed.

Executive summary

The EU aims to achieve climate neutrality by 2050 — an economy with net-zero greenhouse gas (GHG) emissions. This objective is at the heart of the European Green Deal (EGD) and aligns with the EU's commitment under the Paris Agreement to limit global warming to 1.5°C above pre-industrial levels. Simultaneously, Europe seeks to foster a more sustainable, fair and prosperous society that operates within planetary boundaries. Structural changes towards more sustainable systems of production and consumption across key sectors of the economy are key to achieving these ambitious targets. While decarbonisation presents challenges, it also offers opportunities for growth and competitiveness in Europe.

As Europe works to reduce GHG emissions and decouple economic growth from resource use, certain social groups and European regions will be disproportionately affected. These include individuals at risk of energy and transport poverty, regions reliant on fossil-fuel-based industries, the farming community adjusting to more sustainable agricultural practices and young people who will experience profound impacts from the climate crisis. It is critical to prioritise justice in addressing these disparities. Failing to do so risks exacerbating existing inequalities or even creating new ones, potentially leading to social divisions, discontent and resistance to change.

Sustainability transitions can be considered 'just' when processes of transformative change 'improve the quality of life of current and future generations, within ecological boundaries while eliminating injustices that are triggered or exacerbated by unsustainability and its underlying causes' (EEA, 2024b p. 4; Avelino et al., 2024). Injustices which need to be eliminated include uneven burdens of climate change impacts and risks to places and people in addition to the unequal impacts and effects of climate mitigation and adaptation action (ETC CA, 2023).

Policies and initiatives, such as the Just Transition Mechanism (JTM) and the Social Climate Fund (SCF), have been put in place to support the regions and populations most vulnerable to the negative impacts of sustainability transitions. These corrective measures should be combined with a broader integration of just transition considerations within EU policies (Sabato and Vanhille, 2024).

In exploring how the issue of justice is tackled in policies to promote sustainability transitions, the EEA assesses three dimensions of justice:

- distributional justice — the allocation of costs and benefits across society;
- procedural justice — equal access to and participation in decision-making;
- recognitional justice — respect for, engagement with and fair consideration of diverse cultures and perspectives (EEA, 2024b).

Delivering justice in sustainability transitions goes beyond addressing the regressive economic and social effects of climate and environmental policies and of policies aiming to decouple economic growth from resource use. It also requires inclusive and fair representation in decision-making institutions and in terms of procedures and practices, as well as recognition of the dignity, values, identities and capacities of individuals and social groups.

Additionally, the understanding of justice in sustainability transitions is strengthened by considering the intersectionality of vulnerabilities, the geographical scope and scale of policy implementation and temporal concerns, particularly intergenerational fairness and the need to secure a safe and healthy environment for future generations.

However, moving from concept to practice remains a challenge. This report offers guiding questions and key recommendations as tools for policy-makers to enhance their understanding and governance of just transitions. It draws on multidimensional analysis of how justice in sustainability transitions is addressed in key EU-level strategies and sectoral policies, along with lessons from case studies at the national, regional and city levels.

Achieving justice in sustainability transitions requires recognition of the interconnectedness and complexity of the systems involved; as such, it is necessary to adopt a holistic, cross-sectoral and coherent approach to promote a fair transition across all policies. At the same time, navigating the complexities of just transitions demands careful consideration of local contexts, balancing local stakeholder perspectives with broader sustainability and equity goals.

Capacity building and participation are integral to just transitions. Successful implementation of sustainability policies depends on robust mechanisms to enhance capacities across multi-level governance structures, empowering decision-makers at all levels of government to mobilise resources and ensuring that all citizens can participate in shaping policy processes and engage in the transition. Particular attention and resources must be directed towards building the capacity of vulnerable and marginalised groups to ensure that they are able to participate in policy processes.

Looking ahead, fostering just transitions requires the proactive development of sustainable systems; this can be achieved by promoting alternative practices that are both sustainable and accessible to all. Current supply-side policies must be complemented with ambitious demand-side measures to steer consumption in a sustainable direction.

Finally, sustainability transitions are complex and dynamic and, as such, a continuous commitment to assessing progress and refining policies is integral to delivering justice. To stay on course and uphold principles of justice, Europe must establish robust systems for monitoring, evaluating and adjusting policy based on evolving societal needs and new insights.

1 What are just sustainability transitions?

1.1 Introduction

The EGD (EC, 2019) sets out an ambitious vision for the European Union (EU) to become the first climate-neutral continent with a sustainable, fairer and more prosperous society that respects planetary boundaries ([1]). However, the fast-paced transformations required to achieve climate neutrality by 2050 may both exacerbate existing inequalities across Europe and create new ones. Therefore, the need for a fair transition is integral to the EGD, which stresses that no person and no place should be left behind.

As we strive to reduce GHG emissions and decouple economic growth from resource use, different social groups and territories face unequal challenges. Climate change is closely linked to structural inequalities, leading to cumulative pressures. Those who are the poorest, most vulnerable and marginalised suffer the most from the effects of climate change, even though they contribute the least to GHG emissions. They are also often disproportionately impacted by measures to address climate change.

This report considers how justice is tackled in the policies which are currently in place to deliver the EGD. It summarises the lessons learnt for policy-makers seeking to achieve a fair green transition, by moving from the concept of justice to the practice of embedding fairness in the design and implementation of policies.

In recent decades, the EU has reduced its net GHG emissions by almost one third while simultaneously fostering economic prosperity. However, to achieve the EU's climate goal of reducing emissions by at least 55% by 2030, the pace of annual reductions must more than double compared with the annual progress seen since 2005 (EEA, 2023e). This calls for urgent action to implement rapid and far-reaching transitions across all sectors and systems (IPCC, 2023).

In this context, sustainability transitions are defined as the processes involved in bringing about long-term structural change towards more sustainable systems of production and consumption — energy, mobility, food and the built environment. They include profound and large-scale changes in ways of doing, thinking and organising our economies and societies, as well as in underlying institutions and values. Because these processes of change inevitably create winners and losers, it is critical that equity considerations are central to their design and implementation (IPCC, 2022). The **Council recommendation on ensuring a fair transition towards climate neutrality** adopted in 2022 offers guidance to Member States on how to mitigate some of these negative impacts (Council of the European Union, 2022).

For the green transition to succeed, policy-makers need to monitor and anticipate the potential unequal effects of policies aimed at transitioning Europe towards sustainability. In practice, this means that:

([1]) The planetary boundary framework identifies nine processes that regulate the stability and resilience of the Earth system (see EEA, 2020 p. 43 for a discussion).

- The design and implementation of policies must account for the uneven allocation of costs and benefits to deliver **distributional justice**.

- Decision-making processes must enable broad participation to deliver **procedural justice**.

- Diverse cultures and perspectives must be engaged with and taken into consideration to deliver **recognitional justice**.

A failure to consider any of these three dimensions of justice risks exacerbating existing inequalities and may even create new ones; this would foster discontent, lead to perceptions of unfair treatment and neglect and ultimately generate resistance to change. This could prevent the EU from reaching its objectives (EEA, 2024b, 2022e).

There is a growing demand from citizens for fairness in the implementation of climate policies. Increasingly, young people have been calling for **intergenerational fairness** in relation to the climate crisis, as they bear a disproportionate burden which will impact their future. Young people are becoming more visible in their demands for change and for fair change. For example, the global youth movement known as Fridays for Future, which began in August 2018, encourages young people all over the world to organise school strikes, demanding climate reparations and justice and in September 2021, ahead of the United Nations (UN) COP26 summit in Glasgow, young people around the world took to the streets to demand urgent action to avert disastrous climate change; this was their largest protest since the start of the COVID-19 pandemic (Abnett, 2021).

Similarly, a series of protests has been led by farmers in Brussels and across European Member States since late 2023. Primarily (but not exclusively) these protests have been to voice disapproval and unhappiness about green policy initiatives that would directly affect the food value-chain and agricultural jobs and livelihoods. Likewise, in 2018, the yellow vests or 'gilets jaunes' protests in France were originally motivated by a projected increase in fuel taxes, particularly on diesel, to be introduced for environmental reasons (Rubin, 2018). As a result of the protests, the government scrapped the plan and dropped the measure from the budget (Willsher, 2018). These instances are emblematic of how mounting discontent can lead to the rollback of planned legislative initiatives (Grand Berthelsen, 2023).

These examples demonstrate the perception that climate and environmental commitments and regulations to halt environmental degradation represent another burden for key economic sectors and vulnerable citizens. This is paired with a fear of significant implications for jobs and regional cohesion and is leading to political backlash in the regions most affected by such changes (EEA, 2024d).

At the same time, EU citizens remain concerned about the environment. Around 78% agree that environmental issues directly affect their daily lives and health and 84% agree that EU legislation is necessary to protect the environment (EC, 2024b).

There are, however, other pressing issues concerning European citizens; these cannot and should not be ignored. In the context of the post-COVID-19 economic recovery and Russia's invasion of Ukraine, rising inflation and in particular, increases in energy prices have placed significant financial pressure on households at the middle and lower ends of the income scale. While many countries introduced measures to cushion the adverse social impacts, most were short-term responses. Generally, they did not attempt to address the deeper structural issues, such as the need to promote energy saving or the transition to renewable energy sources (Eurofound, 2022).

The vision of the EGD to 'leave no one behind', the commitment of the **European Pillar of Social Rights** (EPSR) to build a strong social Europe that is fair, inclusive and full of opportunity — with its related action plan with more than 70 initiatives — and the Council recommendation on ensuring a fair transition towards climate neutrality all provide guiding principles for just sustainability transitions. The EU fundamental rights framework, as set out in the EU Treaties and the EU Charter of Fundamental Rights, further informs the implementation of the EGD; it recognises that the goal of 'leaving no one behind' can only be achieved when people's fundamental rights are effectively fulfilled (FRA, forthcoming).

A key tool for addressing the unequal social and economic effects of the green transition is the **JTM** and associated funding in the context of the EU **Cohesion Policy**. The mechanism's objective is to support the regions, industries and workers most negatively affected by the transition to climate neutrality. The **SCF** is part of the Fit for 55 package, a set of legislative proposals and amendments to existing EU legislation that will help the EU cut its net GHG emissions and reach climate neutrality. It also aims to support measures and investment addressing some of the social and distributional challenges of the upcoming carbon pricing mechanism (ETS2) for buildings and road transport.

However, the corrective approach, in response to potentially regressive social consequences of the green transition, should be combined with more consistent mainstreaming of just transition considerations within EU policies (Sabato and Vanhille, 2024). The European Economic and Social Committee (EESC) opinion on advancing the EU's just transition policy framework (JTPF) was adopted in December 2023 and aims to reflect upon and advance recommendations for a legislative proposal on just transition and EU policy tools for the world of work; it builds upon the European Parliament's resolution of 23 November 2023 on *Job creation — the just transition and impact investments* (European Parliament, 2023a).

The EESC option stresses that a just transition should be enshrined in all EU institutions through a holistic, cross-sectoral and coherent approach. It also emphasises that the JTPF 'should be accompanied by EU policies that enable enterprises to become competitive in a fair way, sustainable, stronger and more resilient' (EESC, 2023). In this context, the EEA is consolidating its work to better understand the socio-economic dimensions of sustainability transitions. This work, initiated following the launch of the EGD, aims to support the new EU policy cycle and inform policy plans.

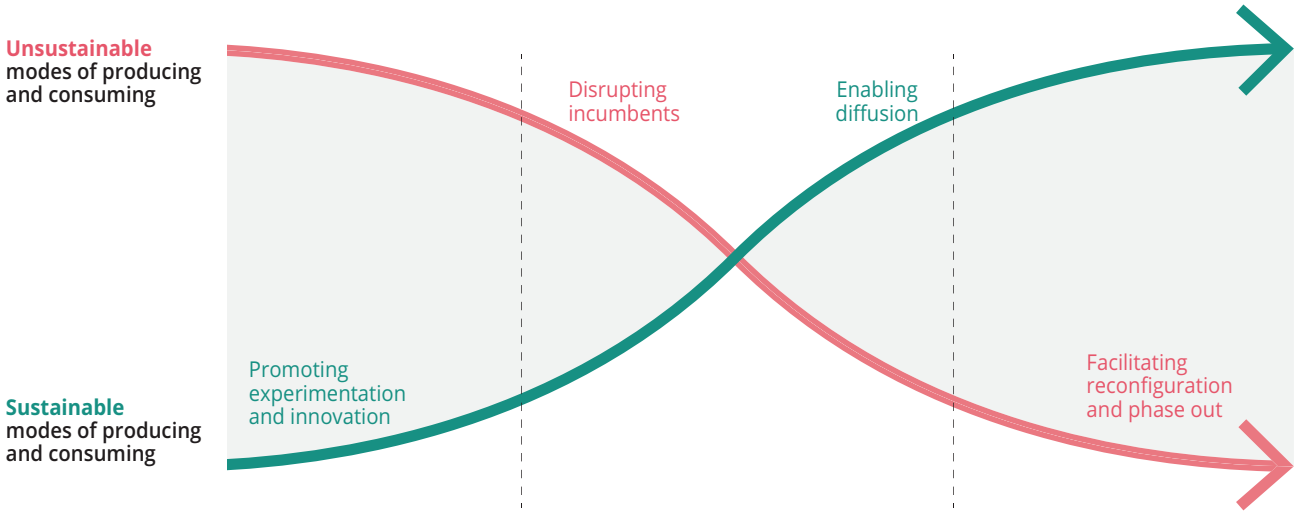
Building on the EEA's conceptualisation of justice in sustainability transitions (EEA, 2024b), this report discusses how justice in sustainability transitions can be understood; how the concept is supported by current EU policies; the strengths and gaps in the existing EU frameworks for just transition and how to strengthen the interactions between policies to enable just transitions. It considers how justice is treated in key EU-level strategies and sectoral policies, using examples of European cases at the national, regional and city levels to illustrate how the concept of justice is enacted in practice. The report ends by drawing lessons learnt, alongside guiding questions and recommendations for policy-makers who are steering sustainability transitions.

1.2 Processes of change: sustainability transitions

Sustainability is about meeting the world's needs, today and tomorrow, by creating systems that allow us to live well within the limits of our planet. Sustainability transitions are complex and long-term processes involving structural change; they enable economic and societal systems to become sustainable and include profound

changes in the dominant ways of producing and consuming across key systems that drive environmental and climate pressures — food, energy, mobility and the built environment (EEA, 2020). Sustainability also requires us to rethink technologies that can help us to address the challenges and it includes the involvement of key actors and institutions that can facilitate systematic changes. These complex economic and societal processes of change comprise interacting phases to build up and break down systems: in order to institutionalise a 'new' and sustainable system, the 'old' and unsustainable parts of the current system must be broken down (Hebinck et al., 2022). Figure 1.1 summarises these dynamics.

Figure 1.1 **The 'twin' dynamics of sustainability transitions, including the build-up and breakdown of unsustainable system components**



Source: EEA 2022f, based on Loorbach et al., 2017.

For sustainability transitions to progress in a just manner, questions of justice need to be reviewed in light of these 'twin dynamics', exploring how changes in societal and economic systems affect different groups of people and places. It is evident that certain social groups and European regions that rely heavily on carbon-intensive activities will be disproportionately affected in the transition to sustainability. For instance, it is widely recognised that regions with a relatively high share of employment in coal and fossil-fuel industries will be negatively affected by the phasing out of unsustainable systems and this will result in related risks, for instance in terms of job losses (Eurofound, 2023a) and the displacement of workers (Causa et al., 2024). While this points to the need to reskill and upskill the workforce, the flipside is that there are currently growing labour shortages in sectors crucial to the green transition (EC, 2023a). It is estimated that it will cost between EUR1.7 and 4.1 billion up to 2030 to retrain, reskill and upskill the workforce to manufacture strategic net-zero technologies (EC, 2023c). In May 2024, the Council adopted the Net-Zero Industry Act (NZIA), which aims to scale up Europe's capacity to manufacture technologies key to achieving the EU's climate goals (EC, 2023d). The act also stipulates that the EC shall support the launch of European net-zero industry academies, designed to address the development of a skilled workforce and the creation of quality jobs required for the net-zero industry in Europe.

From a socio-demographic perspective, sustainability transitions are likely to have a gender dimension. Job losses in carbon-intensive industries will primarily affect men though new jobs are likely to be created in sectors where men are overrepresented

(e.g. construction and waste management) (EC, 2023a). Women are also significantly less likely than men to move into green jobs out of unemployment (Causa et al., 2024), partially because of barriers to STEM fields of study. In this context, policies should enable women, as well as men, to benefit from the new opportunities arising from the green transition. More broadly, those facing multiple vulnerabilities are even less likely to benefit from sustainability transitions due to the cumulative effect of various characteristics, such as limited access to education and training, their age, their status as migrants, or due to disabilities (Akgüç and Arabadjieva, 2024). It is therefore essential to recognise and address the potential gender and other inequalities arising from the transition to a net-zero economy (EIGE, 2023).

Social groups also differ in their capacity to embrace clean technologies. In the context of the transition to a more sustainable energy system, low-income households struggle to access financial support to retrofit housing, despite being more likely to live in less energy-efficient homes; thus, they are more likely to face high energy bills and experience energy poverty. Other groups have also been found to be particularly vulnerable to energy poverty; for example Roma, immigrants and their descendants, ethnic minorities and people experiencing homelessness all face a higher risk of experiencing energy poverty compared to the general population (FRA, 2024).

Individuals at the lower end of the income distribution are also less likely to be able to afford electric vehicles (EVs), posing challenges for the shift towards cleaner transport modes. This can be problematic for households with no or limited access to public transport (EEA and Eurofound, 2021; Eurofound, 2021). Transport poverty can particularly affect individuals and households in rural, peripheral and less accessible areas or less developed regions or territories.

While the phasing out of unsustainable systems will pose challenges, the transformation towards climate neutrality has the potential to contribute to EU employment, industry and competitiveness. More broadly, it could offer a real opportunity to improve the lives of people living and working in the EU. Policies under the scope of the EGD are predicted to generate net aggregate employment gains (Cedefop, 2021; Asikainen et al., 2021; EC, 2020b). Moreover, additional jobs will also be created for the installation of key net-zero technologies (wind, solar, batteries, heat pumps, electrolysers) (EC, 2023b). However, because the gains and opportunities arising from phasing out unsustainable modes of producing and consuming are not always distributed fairly, it is of paramount importance that the green transition is not only environmentally sustainable but also socially and economically just.

Public policies and institutions play an essential role in triggering the twin dynamics of transition processes, facilitating the emergence and diffusion of niche innovations and actively destabilising existing systems to phase out unsustainable practices. Policies, such as market-based instruments, can be key drivers in phasing out such practices ([2]). They should be designed or coupled with measures to promote welfare, education and regional investment to help sectors and communities adapt to structural change and ensure a just transition; for example, they might offset inequalities and compensate those most negatively affected by changes.

Sustainability transitions also depend on coordinated governance at all levels, from global to local. The governance of sustainability transitions entails making decisions about the direction of change, steering change and managing the impacts of change across society. Such change processes are highly political as they include decisions about what change is desired, disrupt existing power structures and resource allocation

([2]) The European Union Emission Trading Scheme is an example of a market-based instrument to reduce greenhouse gas emissions. Other market-based instruments include for instance environmentally related taxes, charges and subsidies, deposit-refund systems, environmental labeling laws and others.

and generate winners and losers (Patterson et al., 2017). In order to be effective, governance for transitions requires participatory processes that enable a diverse set of stakeholders to identify shared visions and goals; it also requires credible pathways for reaching them (EEA, 2024b). Steering sustainability transitions requires contributions from diverse policy areas and across levels of governance; as such, it requires a coordinated and complementary set of policies and measures. The potential of a policy mix to achieve its objectives depends on coherent and consistent policy goals delivered through a comprehensive set of instruments (EEA, 2022f; Kaljonen et al., 2024).

Just sustainability transitions rely on the provision of relevant and timely up/reskilling of the workforce and learners; as such, skills governance is a central consideration of coordinated governance. The limitations of sporadic initiatives that hamper the creation of long-lasting feedback loops between vocational education and training (VET) and other skill policies can be addressed by involving all the relevant stakeholders, particularly social partners (employer organisations and trade unions) (Cedefop/Unesco-Unevoc, forthcoming).

1.3 Justice in sustainability transitions

Sustainability transitions can be considered 'just' when processes of transformative change 'improve the quality of life of current and future generations within ecological boundaries while eliminating injustices that are triggered or exacerbated by unsustainability and its underlying causes' (EEA, 2024b p. 4; Avelino et al., 2024). It is important to note that this statement explicitly recognises the elimination of injustices, such as uneven burdens of climate change impacts and risks for places and people, and the unequal impacts and effects of mitigation and adaptation action (ETC CA, 2023).

When looking at justice in sustainability transitions it is useful to examine three dimensions (EEA, 2024b):

- **Distributional justice** relates to how the costs and benefits of human activity, as well as policies to manage these activities, are allocated across our society and to other species in the natural environment; it also covers the values and principles according to which goods and services are allocated. For instance, measures that result in higher energy prices, such as carbon and energy taxes, often place a heavier financial burden on lower-income households. At the same time, climate-change mitigation policies may generate positive environmental co-benefits, such as enhanced air quality, which in turn can lead to improved health and well-being. Lower-income households and vulnerable groups often gain more from these benefits, contributing to a reduction in environmental inequalities (EEA and Eurofound, 2021; Eurofound, 2021). EEA materials on the unequal distribution of environmental risks to health across European societies are summarised in Box 1.1, while Box 1.2 discusses justice in the context of adaptation to climate change.

- **Procedural justice** relates to fairness in institutions, procedures and decision-making practices. It relates to the question of who participates in and benefits from the decision-making processes (from policy planning to implementation) and why, and considers how to define and deliver inclusive participation. As such, a key component of procedural justice is strengthening the capacities of varying groups to participate in decision-making. One aspect of this type of justice is the availability of and access to reliable information and the capacity to utilise it. Climate assemblies are a relevant example of participatory processes that bring together a diverse group of citizens selected by democratic lottery to deliberate and make recommendations on aspects of the climate crisis ([3]). Another example is the engagement of stakeholders in the

([3]) National and regional/local climate assemblies across Europe are mapped here.

United Nations Framework Convention on Climate Change (UNFCCC), the UN process for negotiating an agreement to limit dangerous climate change. This framework establishes partnerships such as the UNFCCC's regional collaboration centres, which support national climate action through capacity-building, technical assistance and strategic networking.

- **Recognitional justice** recognises underlying systemic injustices and supports the dignity, values and identities of humans, as well as of nature, regardless of the utility to humans. For instance, marginalised Roma communities often live in areas with poor environmental conditions, without access to basic services such as a drinking water supply, adequate sanitation and waste management. This can seriously impact their health and welfare (EEB, 2020, 2024). More than half of Roma households (52%) experience housing deprivation ([4]), a figure approximately three times higher than for the general population across the EU (17%) (FRA, 2022). The EU Roma strategic framework for equality, inclusion and participation is an example of a policy introduced in line with the concept of recognitional justice; it strengthens Europe's commitment to tackling persistent discrimination against Roma people and improving their inclusion in the areas of education, employment, health and housing. On 12 March 2021, the Council of the EU adopted a recommendation on Roma equality, inclusion and participation in all Member States.

Additionally, our understanding of justice in sustainability transitions is strengthened by considering the following aspects:

- intersectionality: how specific circumstances related to demographic characteristics and socio-economic and legal status intersect and how disadvantages can compound themselves;

- spatiality: the geographical coverage and levels at which policies and legislation are implemented;

- temporality: how temporal, inter- and intragenerational relations affect justice, e.g. the needs of future generations for a safe and healthy environment, and the responsibility of current generations to accelerate climate change mitigation actions and restore past environmental degradation (EEA, 2024b).

Climate change is an inherently intergenerational issue. Key aspects of social fairness include ensuring that decisions taken today do not harm future generations and that there is increased solidarity and engagement between people of different ages. As recognised by the UN, it is necessary to promote intergenerational solidarity in order to achieve sustainable development and a central facet of this is taking into account the needs of future generations (UN General Assembly, 2013). As of December 2023, intergenerational justice or related concepts were referenced in at least 38 national-level climate change laws and policies across 26 countries globally (Grantham Research Institute, 2023). As part of the commitment to ensure solidarity between generations, a new European Commissioner will be responsible for preparing a Strategy on Intergenerational Fairness ([5]).

([4]) Housing deprivation refers to poor amentities such as: accommodation is too dark, has problems with humidity, has no shower/bathroom inside the dwelling or has no (indoor) toilet.
([5]) See here the mission letter to the Commissioner-designate for Intergenerational Fairness, Youth, Culture and Sport.

Box 1.1

Environmental health inequalities in Europe

In transforming our systems, it is important that we address existing inequalities in the distribution of environmental risks to health resulting from polluting activities. Across Europe, socially deprived communities are exposed to a higher pollution burden (EEA, 2020). In many European countries and particularly in cities, lower socio-economic groups are disproportionally exposed to air pollution, noise and high temperatures. There are also pronounced regional differences in the levels of social vulnerability and exposure to environmental health hazards across Europe, with high temperatures and ozone pollution affecting the south of Europe and particulate matter pollution most concentrated in central and eastern Europe. In many regions, social vulnerability overlaps with high levels of environmental health hazards, resulting in negative health outcomes (EEA, 2024c, 2019a, 2019c).

In particular, air pollution poses the greatest environmental risk to health in Europe, with fine particulate matter ($PM_{2.5}$) causing more premature deaths in Europe than any other pollutant. Despite improving trends in air pollution for both the richest and poorest regions of the EU in the 2007-2020 period, inequalities remained; levels of $PM_{2.5}$ concentrations are consistently around a third higher in the poorest regions (EEA, 2023b).

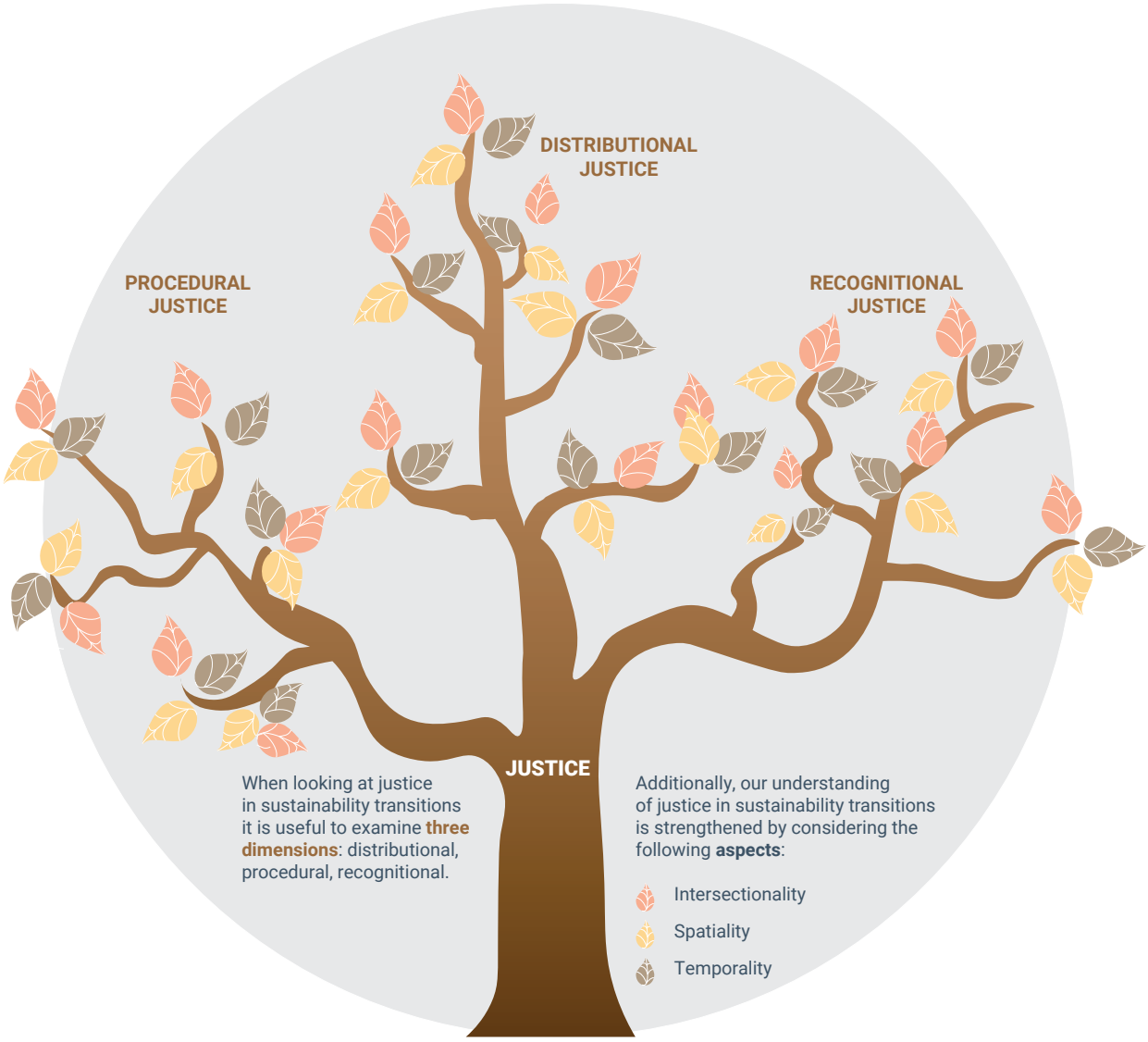
Exposure to such environmental risk factors is linked to chronic disease, including cardio-vascular disease (EEA, 2023a) and cancer (EEA, 2022d). Risk factors for chronic disease are also heavily influenced by socio-economic factors like low levels of income and education, unemployment or insecure employment, related psychosocial problems and unequal access to healthcare. In addition, certain groups are particularly sensitive to environmental stressors, including children, pregnant women, the elderly and those suffering from ill health.

The burden of disease in Europe could be significantly decreased by reducing pollution and adapting to climate change, coupled with efforts to tackle the socio-economic determinants of disease. As such, the unequal impact of environmental pollution and degradation on socially deprived communities and vulnerable groups needs to be systematically addressed in the context of transitions. Universal measures to deliver overall reductions in exposure to environmental stressors for the general population should be complemented by measures targeted at groups known to be vulnerable as a result of increased exposure, increased sensitivity or reduced resilience. People's vulnerability is further exacerbated by poor access to healthcare and prevention as well as limited knowledge of the consequences of postponing treatment. At the same time, it is crucial that we actively avoid the creation of new risks to health from new technologies and systems.

The polluter pays principle (PPP) is a key tenet underlying EU environmental policy; it requires that polluters bear the cost of measures taken to prevent, control and remedy pollution, including the social costs of pollution. Polluters are thereby incentivised to avoid environmental damage since they, and not the taxpayer, cover the cost of remediation. However, a report of the European Court of Auditors found that the PPP is applied in an incomplete way across EU environmental policies. It identified weaknesses in the application of the Environmental Liability Directive, whereby taxpayers pay for remediation costs when an operator causing environmental damage becomes insolvent (European Court of Auditors, 2021). The findings of the report suggest there is greater scope for using the PPP to address the social costs of pollution and, in particular, the unequal distribution of environmental risks to health in Europe.

Figure 1.2 presents a stylised conceptual framework for just sustainability transitions, based on the different dimensions and concepts of justices discussed above.

Figure 1.2 **Understanding justice in sustainability transitions**



Source: EEA, 2024b.

It is also acknowledged that past inequities continue to shape present conditions, and therefore shall be addressed. Restoring justice focuses on processes to compensate for past harm to humans and other species and ecosystems. These processes engage various stakeholders with different viewpoints and focus on recognizing harm and its victims, as well as the individuals, groups, and institutions responsible for that harm (EEA, 2024b). Outcomes can take for instance the form of financial compensation for losses, or the restoration of natural areas degraded through human activity. This may include operations to restore land and aquatic ecosystems while ensuring that remediation efforts do not have a negative impact on vulnerable communities (Forsyth et al., 2022).

One example of steps taken towards restorative justice in an EU country is the response to the detection of large-scale soil and groundwater pollution around a per- and polyfluoroalkyl substances (PFAS) production plant in Antwerp, Belgium operated by 3M (VITO, 2022). In July 2022, following several months of negotiation, 3M agreed to make a compensatory payment of EUR 571 million 'for the benefit of the local community and Flanders'. More recently nearby residents were offered to take blood tests to determine the extent to which they had been contaminated with PFAS; as a result, a court in Antwerp has ordered 3M to pay EUR 2,000 to the affected family, that lives within 1 km of the plant (VRT NWS, 2023).

Box 1.2

Just resilience in climate change adaptation

The EEA briefing 'Towards "just resilience": Leaving no one behind when adapting to climate change' 2022e) looks at how climate change affects vulnerable groups and how these impacts can be prevented or reduced through equitable adaptation actions. Climate adaptation measures currently in place do not benefit everyone in society to the same extent. For example, the most vulnerable groups tend to have less access to green space and are least able to pay for flood insurance or flood-proofing measures. Across policy sectors, the following groups are identified as particularly vulnerable: the young (infants and children), the elderly, poor or low-income households, people in poor health, people with poor social networks, immigrants and ethnic minorities. The first European Climate Risk Assessment (EUCRA) published in March 2024 by the EEA provides a comprehensive assessment of social justice across climate risks and adaptation actions (EEA, 2024d).

Without consideration for justice in adaptation, existing inequalities may be reinforced or new inequalities may arise. Although the EU and national climate policies draw attention to vulnerable groups and emphasise the need for just adaptation solutions, approaches that take into account social justice and equity in adaptation measures as a matter of course are still in their infancy (EC, 2023f). In particular, the practical implementation of such solutions remains scarce.

In July 2023, the EC adopted a set of guidelines to assist Member States in updating and implementing comprehensive national adaptation strategies, plans and policies; these call for the inclusion of just resilience at every step in the development of climate adaptation policy, planning and monitoring and ensure inclusive citizen and stakeholder participation.

A recent report by ETC on climate change adaptation and LULUCF contributes to operationalise the concept of just resilience; it involves stocktaking and structuring the knowledge on just resilience in climate adaptation, with a specific focus on providing relevant information for measuring progress on just resilience in the European context, including the identification of potential indicators (ETC CA, 2023)

Ensuring that no one is left behind requires a focus on justice at all stages of the adaptation policy cycle, including planning, implementation and monitoring; it also requires the meaningful engagement of vulnerable groups. This includes incorporating justice dimensions into vulnerability assessments and monitoring the social and economic effects of various adaptation options on different societal groups.

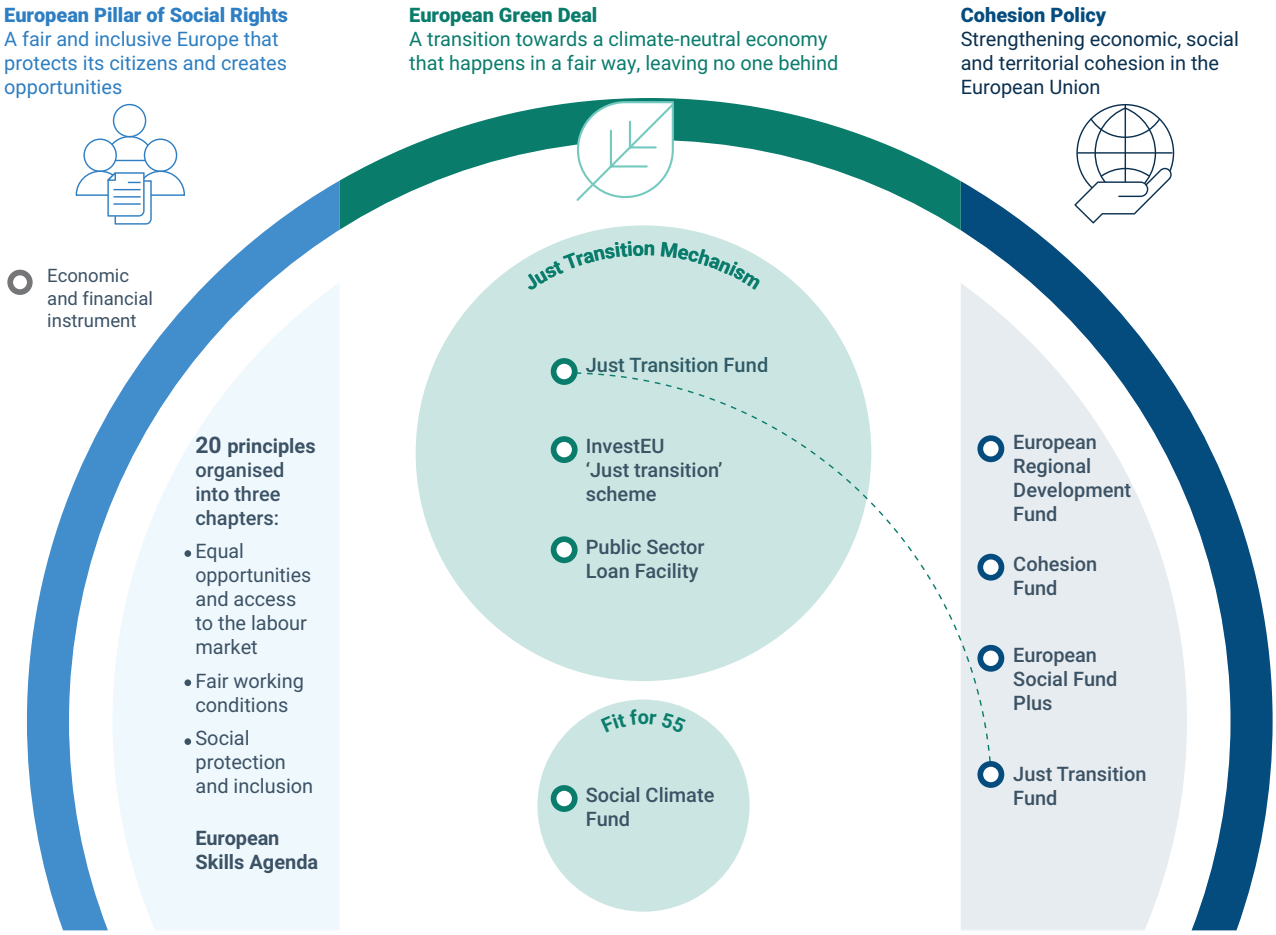
Appropriate guidance for decision-makers on just adaptation measures is urgently needed and it is also essential for effective examples and lessons learned to be shared. The EEA is developing a report on justice considerations in adaptation responses that will be published in 2025. It will identify key aspects of justice in a set of policy sectors and showcase inspiring adaptation actions that take justice into account. Where relevant it will also highlight how these policies and actions are interlinked with climate mitigation. Moreover, the report will provide an overview of the current status of policy-making and planning in the area of just resilience at the EU, Member State and local levels.

2 EU policies and just transitions

This chapter assesses how the different dimensions of distributional, recognitional and procedural justice are addressed in key EU policy frameworks.

Firstly, in section 2.1 the analysis examines three policy frameworks that explicitly target justice in sustainability transitions at the EU level, namely the European Green Deal (EGD), the European Pillar of Social Rights (EPSR) and EU Cohesion Policy. Figure 2.1 gives an overview of the policies reviewed in this section and how they interlink.

Figure 2.1 **Overview of key EU-level policies and funding targeting justice in sustainability transitions**



Source: Authors' compilation based on own analysis.

The EGD includes the **Just Transition Mechanism (JTM)**, a dedicated tool designed to ensure that the transition towards a climate-neutral economy is fair and inclusive, leaving no one behind; the EPSR is the European compass to make sure that the green and digital transitions are socially fair and just; and the Cohesion Policy aims to address imbalances between countries and regions and strengthen territorial cohesion. Despite their different emphases and terminology, all three policy frameworks address broader issues of social justice.

Secondly, in section 2.2 the chapter presents a more detailed analysis of how justice is embedded in sectoral policies related to energy, mobility and food systems and the built environment.

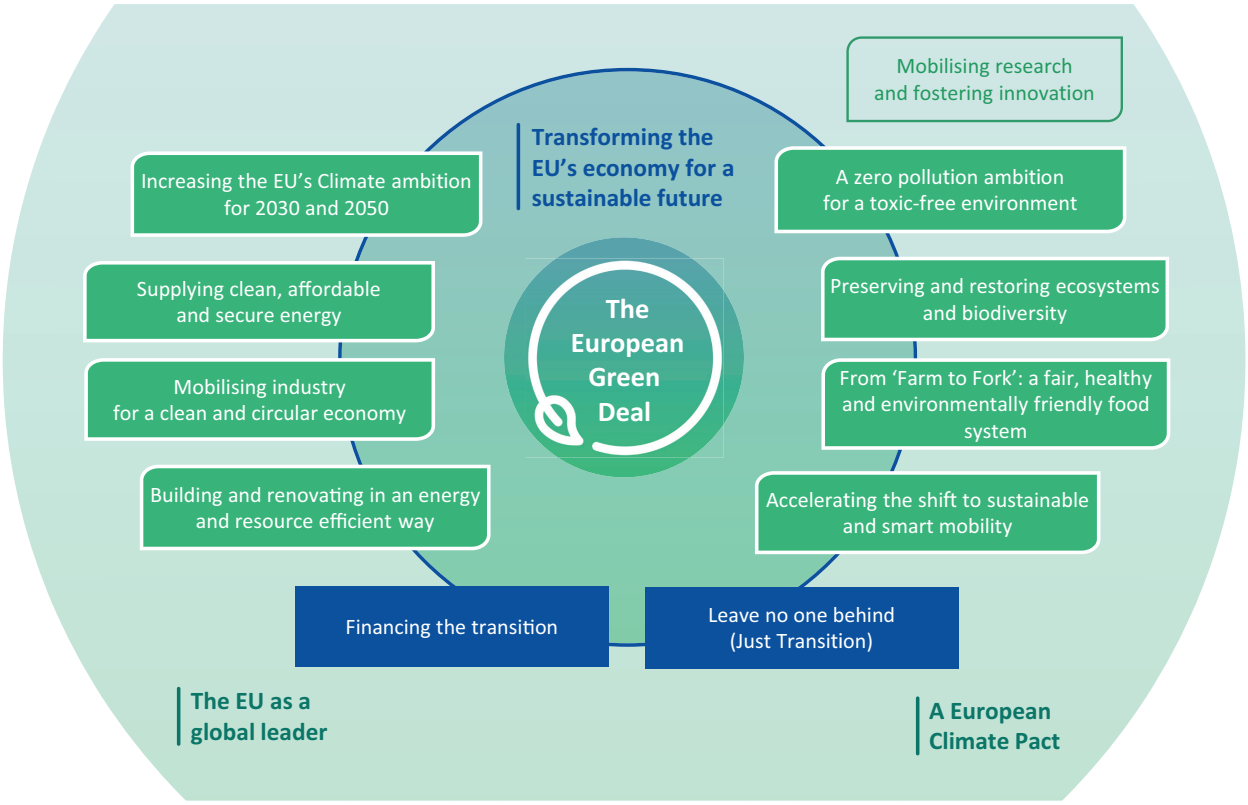
2.1 An overview of key EU-level policies

2.1.1 The European Green Deal

The EGD was introduced in December 2019 by the president of the European Commission as a 'new growth strategy' and a 'roadmap' to transform the EU into a climate-neutral economy by 2050. It builds on three main ambitions:

- achieving net-zero GHG emissions by 2050;
- decoupling economic growth from resource use;
- ensuring that no person and no place is left behind.

Figure 2.2 The European Green Deal



Source: EC, 2019.

The EGD is an ambitious step towards a more systemic approach to policy, embracing the need for a comprehensive policy response to deliver sustainability transitions. It recognises that, in many ways, the diverse domains in policy-making are interlinked and influence each other. It also firmly acknowledges that the fast-paced transformation required to achieve climate neutrality by 2050 may exacerbate existing inequalities and inevitably involves trade-offs, creating 'winners and losers'.

To achieve these ambitions, the EGD lays out a roadmap of key actions, including:

- legislative initiatives across various sectors — relating to, for example, efficient use of energy, circular use of resources, sustainable housing, sustainable food systems, a toxic-free environment and sustainable mobility — all of which are underpinned by the principle of leaving no one behind;
- a comprehensive finance strategy to deliver the EGD, ensuring that its ambitions are achieved in a fair and just manner.

A central tool for achieving this just transition is the JTM, which provides targeted support to regions most affected by the transition. Around EUR 55 billion has been earmarked over the period 2021-2027 for the most affected regions, to alleviate the socio-economic impact of the transition.

The **Just Transition Fund (JTF)** is the first pillar of the JTM and supports the economic diversification and reconversion of affected territories, including:

- upskilling and reskilling workers;
- investments in small and medium-sized enterprises (SMEs);
- fostering new businesses;
- promoting research and innovation;
- environmental rehabilitation;
- advancing clean energy;
- providing job-search assistance;
- transforming existing carbon-intensive installations.

Territorial just transition plans (TJTPs) define the strategy to address the social, employment, economic and environmental impacts of the transition towards the EU's 2030 targets for energy and climate and for a climate-neutral economy in the EU by 2050 for the territories where the JTF will be used.

The second pillar of the JTM is the **InvestEU 'Just Transition' scheme**; this finances both public and private investments in just transition objectives. Lastly, the third pillar, the **Public Sector Loan Facility**, combines EU budget grants financed with loans from the European Investment Bank (EIB) to mobilise public investment in just transitions.

Additionally, as part of the **Fit for 55** package ([6]), the **Social Climate Fund (SCF)** was established to mitigate the social and distributional impacts of the new ETS2 for buildings and road transport, providing targeted support to vulnerable groups, particularly households experiencing energy or transport poverty. At the country level, all the relevant measures and investments (related to energy efficiency and renovation of buildings, clean heating and cooling and integration of renewable energy, zero- and low-emission mobility solutions) will be detailed in national Social Climate Plans, to be submitted to the EC by June 2025. The SCF shall provide financial support to Member States for the measures and investments included in their Social Climate Plans.

The EGD underpins the **NextGenerationEU** recovery plan, which promotes investment in sectors that are key for the green and digital transition; the aims are to build resilience, create jobs and foster growth in a fair and inclusive society. At the heart of the plan is the Recovery and Resilience Facility (RRF), a temporary instrument designed to drive the EU's economic recovery from the COVID-19 crisis. Together with the EU's 2021-2027 budget, it aligns with the priority objectives of the EGD. A key principle of the RRF is the 'do no significant harm', within the meaning of Article 17 of Regulation (EU) 2020/852 of the European Parliament and of the Council (the 'Taxonomy Regulation'). This requires, as a fundamental principle for accessing RFF funding, that actions outlined in national recovery and resilience plans (NRRPs) may not cause any significant harm to the environment.

In line with the principles of the EGD, in 2022 the **Council** adopted a **recommendation on ensuring a fair transition towards climate neutrality** (Council of the EU, 2022). The recommendation offers guidance to Member States on concrete measures to achieve a fair green transition. These include measures that:

- provide active support to quality employment for a fair transition;
- ensure equal access to quality, affordable and inclusive education, training and life-long learning as well as equal opportunities, also with a view to strengthening gender equality;
- ensure the continued fairness of tax-benefit systems and social protection systems, including social inclusion policies;
- ensure access to affordable essential services and housing for people and households most affected by the green transition, in particular those in vulnerable situations and those in regions facing transition challenges.

([6]) The Fit for 55 package is a set of legislative proposals and amendments to existing EU legislation that will help the EU cut its net GHG emissions and reach climate neutrality, in line with the EGD ambitions. The Fit for 55 package was tabled in July 2021 in response to the requirements in the EU Climate Law. The European Climate Law makes it a legal obligation to reach the EU's climate goal of reducing EU emissions by at least 55% by 2030 (compared to 1990 levels).

Box 2.1

The Green Deal Industrial Plan and the future of industrial policy

The Green Deal Industrial Plan is a flagship initiative of the EGD; it aims to enhance the competitiveness of Europe's net-zero industry and accelerate the transition to climate neutrality. It is structured around four key pillars:

- a predictable and simplified regulatory environment;
- faster access to funding;
- enhancing skills;
- open trade for resilient supply chains.

The initiatives described below are part of the Green Deal Industrial Plan:

- The NZIA sets goals for expanding net-zero industrial capacity and establishes a regulatory framework to expedite its deployment.
- The Critical Raw Materials Act aims to ensure sufficient access to raw materials, like rare earths, that are vital for manufacturing key technologies.
- Reform of electricity market design helps consumers benefit from the lower costs of renewables.

Enhancing workforce skills in the net-zero technology industries is particularly important for ensuring just transitions. Indeed, scaling up the manufacturing capacity of clean technologies required to meet climate targets will create significant demand for skilled workers, requiring substantial investments in upskilling and reskilling, in addition to the investment cost of scaling up the manufacturing capacity in the first place. As part of the NZIA, dedicated training programmes will be established through Net-Zero Academies, each focused on specific net-zero industry technologies. This should contribute to the creation of quality jobs in line with the targets for employment and training outlined in the EPSR. The NZIA thereby seeks to complement a number of previous actions put forward by the EC to meet the skills needs stemming from the EU's green transition, such as the EU Pact for Skills, the EU Skills Agenda, the industrial transition pathways, and the 2023 European Year of Skills. It is crucial that newly created green jobs are also 'good jobs' in terms of contract type, social security, wages and working conditions in line with the EPSR and the International Labour Organization (ILO) decent work agenda (Akgüç et al., 2022).

Industrial policy and just transitions are deeply intertwined. Effective industrial policy can play a pivotal role in ensuring just digital and green transitions, notably when supporting the creation of quality jobs (Galgóczi, 2024). The revival of industrial policy has been a priority on the European agenda for several years. In May 2024 the Council adopted the conclusions on 'A competitive European industry driving our green, digital and resilient future'. The conclusions highlight the central role of innovation in enhancing European competitiveness and explore how to boost private and public finance instruments. Mobilising the necessary green investment is key if Europe wants to avoid losing ground in the development of clean technology, putting millions of jobs at stake. The conclusions call for a comprehensive European industrial policy that aligns with the green and digital priorities of the EU, emphasising 'the importance of a well-functioning simplified governance structure that brings stakeholders in industrial ecosystems together in order to facilitate the implementation of the European industrial strategy in an open, transparent, diverse and inclusive way and contribute to policy-making' (European Council, p. 8, 2024).

A proposal for a new industrial strategy for Europe is also at the core of the long-awaited report on the Future of European Competitiveness, published in September 2024 (EC, 2024f). The report highlights three main areas for action, including a joint plan for decarbonisation and competitiveness, spanning industries that produce energy and those that enable decarbonisation; these include clean tech and automotives. Importantly, the report also stresses the need to ensure that productivity growth and social inclusion go hand in hand.

2.1.2 The European Pillar of Social Rights

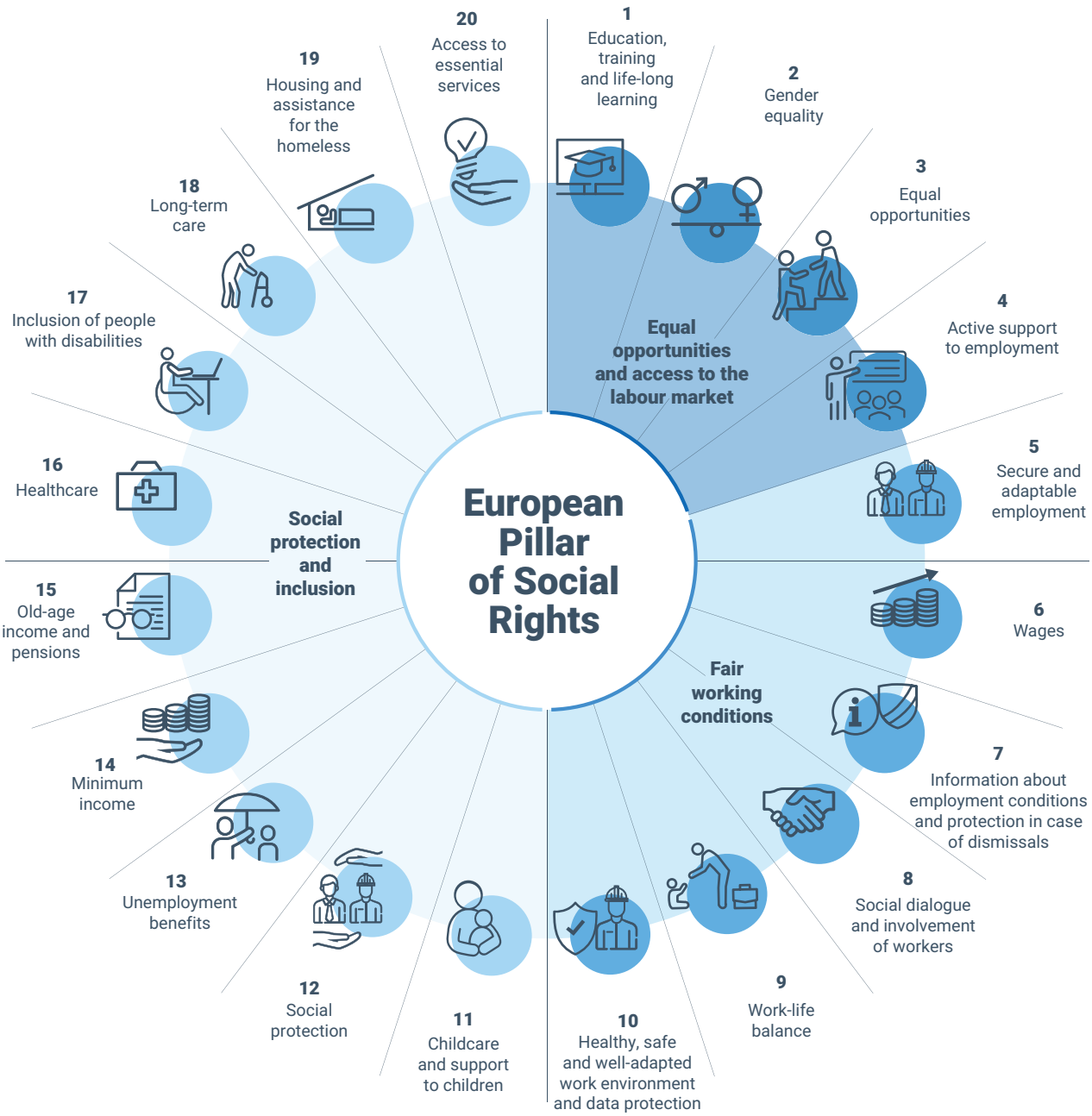
The EPSR was proclaimed by the European Parliament, the Council at the Commission Social Summit for Fair Jobs and Growth in 2017, with the aim of building a strong Social Europe striving for a sustainable and inclusive growth model that delivers the best for people and the planet (EC, 2017). The EPSR is the European compass ensuring that the green and digital transitions are socially fair and just. It is intended to make sure that economic progress and social welfare go hand in hand.

The EPSR outlines 20 key principles and rights designed to enable and support labour markets and social protection systems to be fair and function well. When followed, these principles will contribute to building more resilient economic structures and improving working and living conditions for EU citizens. The 20 principles are organised into three chapters:

- equal opportunities and access to the labour market;
- fair working conditions;
- social protection and inclusion.

The 20 principles of the EPSR serve as a framework for building a strong Social Europe and set out the vision for a new 'social rulebook'. Member States hold primary responsibility for implementing the principles, with the support of social partners and the EU. In this context, the EC plays a key role in providing direction, while considering the diverse contexts of Member States. The EPSR Action Plan sets out a series of EU actions that the EC has committed to undertaking up to the end of its mandate in 2024.

Figure 2.3 **The 20 principles of the European Pillar of Social Rights**



Source: EC, 2017.

The Porto Social Summit, organised in May 2021 by the Portuguese Council Presidency, renewed and reinforced at the highest political level the commitment to implement the EPSR Action Plan. Partners signed up to three EU headline targets to be achieved by the end of the decade in the areas of employment, skills and social protection; these are consistent with the UN sustainable development goals (SDGs). On 8 May, the members of the European Council adopted the Porto declaration (European Council, 2021) on social affairs, which reaffirms the importance of implementing the EPSR in order to strengthen the EU's drive towards a digital, green and fair transition.

The social scoreboard is the main quantitative tool for monitoring progress on the implementation of the EPSR principles. It is part of the well-established policy coordination framework in the context of the European Semester. By tracking

Member States' trends and performances, it contributes to the assessment of key employment, skills and social challenges.

Several concrete initiatives have been implemented to convert the principles of the EPSR into actions benefitting citizens (for a review see EC, 2024a). Among these, the Pact for Skills stands out in the context of this report. It supports public and private organisations in upskilling and reskilling their workforce, helping them navigate the green and digital transitions. To date, the Pact has provided training to 3.5 million workers. This is one of the flagship actions of the European Skills Agenda a 5-year plan to deliver on the EPSR; notably, it focuses on the first principle spelling out the right to quality and inclusive education, training and lifelong learning. The European Skills Agenda sets objectives to be achieved by 2025, based on well-established quantitative indicators. The EU is investing around EUR 65 billion in skills programmes, notably via the Recovery and Resilience Facility (RRF) and European Social Fund Plus (ESF+) (EC, 2024g).

The European sustainability competence framework (GreenComp) was published in 2022 as one of the measures to support the acquisition of skills for the green transition. Developing this framework was one of the policy actions set out in the EGD to promote learning on environmental sustainability in the EU (Bianchi et al., 2022). It accompanies a proposal for a Council recommendation on learning for environmental sustainability published by the EC in 2022.The GreenComp maps out the competences needed for the green transition, including critical thinking, initiative-taking, respecting nature and understanding the interconnections between the environment, society and the economy.

Box 2.2

Monitoring progress towards the EU's environment and climate goals: The EU 8th Environment Action Programme

The EEA briefing 'Towards "just resilience": Leaving no one behind when adapting to The EU's 8th Environment Action Programme (8th EAP) builds on the objectives of the EGD in line with the EU long-term vision to live in a well-being economy where nothing is wasted, within planetary boundaries, by 2050 at the latest. The 8th EAP entered into force on 2 May 2022, as the EU's legally agreed common agenda for environment policy until 2030. It forms the basis for attaining the environment and climate-related objectives defined under the UN 2030 Agenda and its SDGs (EC, 2022a).

The 2022/591 Decision of the European Parliament and of the Council on a General Union Environment Action Programme to 2030 highlights that action to achieve the EU's environmental and climate objectives needs to be carried out in line with the implementation of the EPSR. The 8th EAP focuses on distributive justice, in terms of delivering social well-being and prosperity, including moving beyond gross domestic product (GDP) towards using well-being as a compass for policy. There is also a focus on procedural justice, in terms of access to information, public participation in decision-making and access to justice in environmental matters as foreseen under the Aarhus Convention (see also Box 2.3).

In its communication on the European Green Deal (EC, 2019), the Commission announced that the 8th EAP would include a new monitoring mechanism to ensure that the Union remains on track to meet its environmental objectives. On 26 July 2022, the EC adopted a list of headline indicators to monitor progress towards the EU's environment and climate goals, as foreseen in the 8th EAP. The headline indicators follow the structure of the 8th EAP, building on the EGD. They represent key aspects of the 8th EAP and were outlined in the EC communication on the 8th EAP monitoring framework. The EEA assesses progress towards the 8th EAP objectives annually. The first monitoring report on progress was published in December 2023. As regards justice, the report focuses on environmental inequalities in exposure to air pollution and finds no progress so far in reducing inequalities and no dedicated policies to address these environmental inequalities (EEA, 2023c).

The 8th EAP calls for the active engagement of all stakeholders at all levels of governance, to ensure that EU climate and environment laws are implemented effectively. The EC selected the indicators and targets included in the 8th EAP after broad consultation with stakeholders, Member States and the EEA.

2.1.3 Cohesion Policy

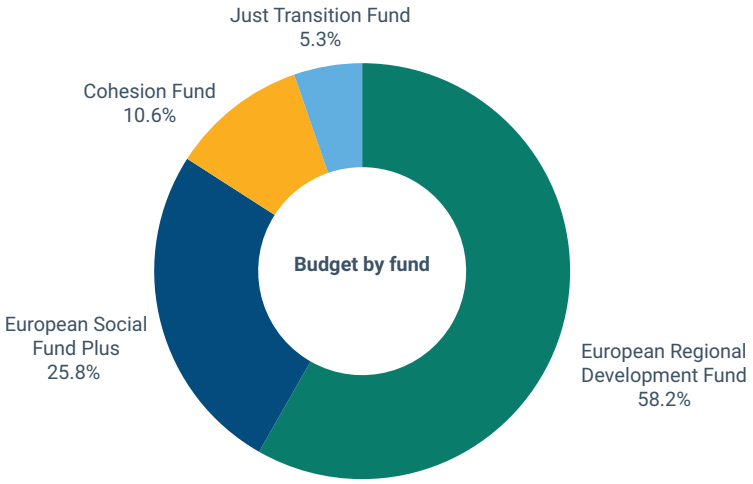
Cohesion Policy plays a vital role in reducing regional inequalities across Europe and developing territorial policy responses to sustainability transitions. The core objective of Cohesion Policy is to strengthen economic, social and territorial cohesion within the EU with the aim of addressing imbalances between countries and regions. EU Cohesion Policy is strongly aligned with the SDGs (Eurostat, 2023). Almost a third of the total EU budget has been set aside for Cohesion Policy for the period 2021-2027, making it the EU's main investment policy.

The policy is delivered through several EU Cohesion Policy funds:

- the **European Regional Development Fund (ERDF)**, which invests in the social and economic development of all EU regions and cities;
- the **Cohesion Fund (CF)**, which invests in environment and transport in less prosperous EU countries;
- the **European Social Fund Plus (ESF+)**, which supports jobs and creates a fair and socially inclusive society in EU countries;
- the **Just Transition fund (JTF)**, which supports the regions most affected by the transition towards climate neutrality.

For the 2021-2027 period, EUR 368,078,406,238 has been allocated to Member States under the 'Investment for Jobs and Growth' objective. As shown in Figure 2.4, the JTF accounts for 5.3% of the total Cohesion Policy budget, amounting to approximately EUR 19.7 billion.

Figure 2.4 Cohesion Policy budget by fund



Note: Data extracted on 29 August 2024.

Source: EC, 2024h.

The fact that the implementation of JTM and JTF are placed under the Cohesion policy puts special attention to procedural mechanisms that support regions in strengthening their economic, social and territorial cohesion. The Cohesion policy sets the general procedural rules for funding. The specific focus and scope of the funding are determined in the more detailed national and TJTPs and relevant programmes defined at the Member State or regional level. JTF funding is specified in regional or/ and national programmes.

The programming of JTF is planned together with regional authorities and relevant stakeholders in TJTPs, depending upon the institutional set-ups of the Member States. The European Commission gives support and feedback to the plans and programmes and monitors them over time with relevant stakeholders within the framework of the monitoring committees, annual review meetings and other monitoring tools. Sectors targeted in the TJTPs focus on either contracting or transforming fossil-fuel industries.

2.2 Justice in EU policy strategies to promote sustainability transitions

In this section, the EGD, EPSR and Cohesion Policy are reviewed in terms of how they address the three dimensions of justice: distributive, recognitional and procedural.

2.2.1 Distributional justice

All three policy frameworks describe their main objectives as relating to fairness in the distribution of the benefits and burdens of the green transition. In the EGD this is reflected in the commitment to ensuring that 'no one is left behind'; in the EPSR it means levelling playing fields that enhance access to the labour market and social protection systems; in Cohesion Policy the focus is on reducing regional socio-economic disparities.

The key instruments under these strategies are distributive funding instruments: addressing uneven burdens, levelling playing fields and supporting vulnerable regions and groups that are unfairly impacted by processes of change. Specific targets are set for the funds to be directed to reach European Green Deal targets on mitigating climate change, protecting biodiversity and the green transition. In Cohesion Policy several funding instruments are focused on lessening regional disparities and financial (investment) imbalances (ERDF, ESF+, CF, JTF).

The EPSR sets out minimum standards for social rights and protection to which each European citizen should be entitled. The related Action Plan delineates concrete initiatives to ensure the EPSR becomes a reality. It includes three EU-level targets to be met by 2030 in employment, training and poverty reduction; these targets will help to steer national policies and reforms. For example, by 2030, at least 60% of the adult population should take at least one training course per year, as part of the EU's aim to help people acquire the right skills, in particular those needed to drive the digital and green transition. Around EUR 65 billion has been allocated to support investment in skills, notably via the ESF+ and the Recovery and Resilience Facility (RRF).

2.2.2 Procedural justice

In the EU, access to environmental information, increasing public participation in decision-making and providing access to justice in environmental matters are laid out in the Aarhus Convention and described in Box 2.3.

The EGD emphasises that 'citizens are and should remain a driving force of the transition to sustainability' (EC, 2019 p. 22). This means that the conditions for empowering citizens and building effective forms of public participation need to be created (EEA, 2023d). Consultation is a key instrument in the EGD and the EPSR: both describe various consultation processes to give shape to and guide the overall strategies. For the EGD, one of the many examples of this is public consultation launched by the EC to gather stakeholders' views on the Carbon Border Adjustment Mechanism (CBAM). This public consultation targeted all stakeholders, namely national and sub-national administrations in the EU and in the rest of the world, businesses, trade associations, non-governmental organisations (NGOs), citizens, workers associations and trade unions, consultancies, think tanks, and research and academic institutions.

Similarly, the EPSR Action Plan draws on large-scale public consultation involving more than 1,000 contributions from citizens, EU institutions and bodies, Member States, regional and local authorities, social partners and civil-society organisations. In addition, the EC consulted over 1,500 key stakeholders — including the European Parliament and the EESC and the Committee of the Regions — with dedicated webinars. The results of the consultation are presented in the Staff Working Document accompanying the EC Communication on the European Pillar of Social Rights Action Plan.

Box 2.3

Delivering procedural justice in the EU

The EU and its 27 Member States are all parties to the Aarhus Convention — the UN Economic Commission for Europe (UNECE) convention on access to information, public participation in decision-making and access to justice in environmental matters.

The convention aims to ensure environmental democracy by laying down a set of basic procedural rights for the public, imposing obligations on public authorities to make these rights effective, increasing transparency and making governments more accountable to people. The Aarhus Convention is translated into EU law through several legislative acts.

The Access to Environmental Information Directive aims to ensure that environmental information is systematically made available to the public by the authorities, either actively or upon request. The Public Participation Directive 2003/35/EC provides for public participation when formulating certain plans and programmes relating to the environment. Provisions for public participation in environmental decision-making are also found in a number of environmental directives, such as the Environmental Impact Assessment Directive 85/337/EEC and the Strategic Environmental Assessment Directive 2001/42/EC.

In this context it is important to note that participation can take different forms, from informing citizens of their rights, responsibilities and options to citizens' power, when 'participants or residents can govern a program or an institution, be in full charge of policy and managerial aspects, and be able to negotiate the conditions under which "outsiders" may change them' (Arnstein, 1969). While consultation processes are a legitimate and important step towards full citizen participation, on their own they offer no assurance that citizens' concerns and ideas will be taken into account. Broader public participatory approaches, that might include citizens, are mostly a feature of the start of a policy process and to a lesser extent towards the end. A greater amount of space and time is currently dedicated to consulting more concrete stakeholder groups, such as sectors or regions, in the planning and shaping of policies. However, social dialogues are increasingly being employed to encourage broader participation; they allow for debate rather than simply being a

forum for sharing an opinion or concerns. Principle 8 of the EPSR highlights the need to promote social dialogue and the involvement of workers in social, economic and employment policies; it also encourages collective bargaining.

Importantly, the Cohesion Policy recognises procedural measures as key means for delivering distributional and recognitional justice. The partnership principle is fundamental to the implementation of European Cohesion Policy. It builds on a multi-level governance approach ensuring close cooperation between the EC, the authorities at national, regional and local level in the Member States and other governmental and NGOs and bodies, and also applies at the different stages of the implementation cycle for Structural Funds.

The same principle of partnership guides the delivery and implementation of the JTF. Regulation (EU) 2021/1056, establishing the JTF, requires Member States to prepare TJTPs together with the relevant local and regional authorities of the territories concerned (Article 11). The regulation stipulates that 'Member States should prepare … [these plans] in social dialogue and cooperation with the relevant stakeholders, in accordance with the relevant provision of Regulation (EU) 2021/1060 on partnership' (recital 18). To date, the actors receiving the most participatory space in planning TJTPs have been the sectors that are most influenced by decoupling the economy, such as the fossil fuel industries (Heffron and McCauley, 2022; Mandelli, 2022a). A review of the involvement of social partners in the governance structure of the TJTPs suggests that this mainly refer to peak-level organisations (such as country institutions) and sectoral social partners, especially those active in sectors directly affected by the green transition, such as coal and energy (Eurofound, 2023b). Despite the regional character of the plans, such partnership opportunities were not always available to social partners at the regional level.

The experiences gained from planning TJTPs and implementing JTFs vary across regions and Member States. Hence, it is vital to learn from them for the future development of multi-level governance enabling just transitions. While some Member States stuck to a minimalistic interpretation of the partnership principle, others used the TJTP to involve partners more fully than before and to build a governance model around the transition in specific territories. This now needs to continue during implementation, for instance through the creation of JTF subcommittees alongside or as part of monitoring committees.

The Just Transition Platform was established in 2020 (JTP) ([7]) to enable peer exchange, capacity building and training to support the implementation of the JTF. Further nurturing of such capacities across diverse levels is crucial in order to identify the challenges faced when translating just transition policies into practice. The experiences with the JTF will inform the similar process of preparing social climate plans for allocation of the SCF among the Member States by the EU.

([7]) The aim is to ensure all stakeholders have the guidance, information and knowledge they need to support a just transition to a climate-neutral economy. The work of the JTP is detailed below:

- JTP conferences are held twice a year to exchange knowledge, good practices and information on inspiring projects among all stakeholders.
- New JTP working groups were created in 2024, focused on stakeholder engagement and equal opportunities (including the JTP Youth Force).
- The JTP website is an EC single online access point for relevant information, knowledge and support.
- The JTP e-library contains a depository for knowledge products which allows for the development of a repository for studies, reports and examples of good practice.
- JTP Groundwork offers technical support on the ground including capacity building in relation to advice on projects, dedicated workshops and several events with a needs-based focus on JTF implementation.
- JTPeers is a just transition expert and expert missions to the JTF regions database (e.g. targeted advice, peer-to-peer review, job-mentoring or inter-regional pairings).

2.2.3 Recognitional justice

The EGD recognises the need for the transition to be just and inclusive, by putting people first and paying attention to the regions, industries and workers who will face the greatest challenges. However, the EDG takes a weak stand on gender equality (EIGE, 2023). Indeed, while it puts forward ambitions to integrate gender and intersecting inequality goals into the green transition, there is potential for enhancing specific gender measures and implementing systematic gender mainstreaming.

The EPSR identifies diverse vulnerable groups, what injustices impact their lives and recognises the mechanisms that shape these injustices. The Cohesion Policy recognises that regions have different capacities and needs with respect to the green transition, requiring territorial approaches and stakeholder engagement. While all the EU regions benefit from the Cohesion Policy, the main financial focus is on supporting the capacities and needs of less developed regions (ERDF), vulnerable groups (ESF+) and territories and workers facing serious socio-economic challenges due to the climate transition (JTF).

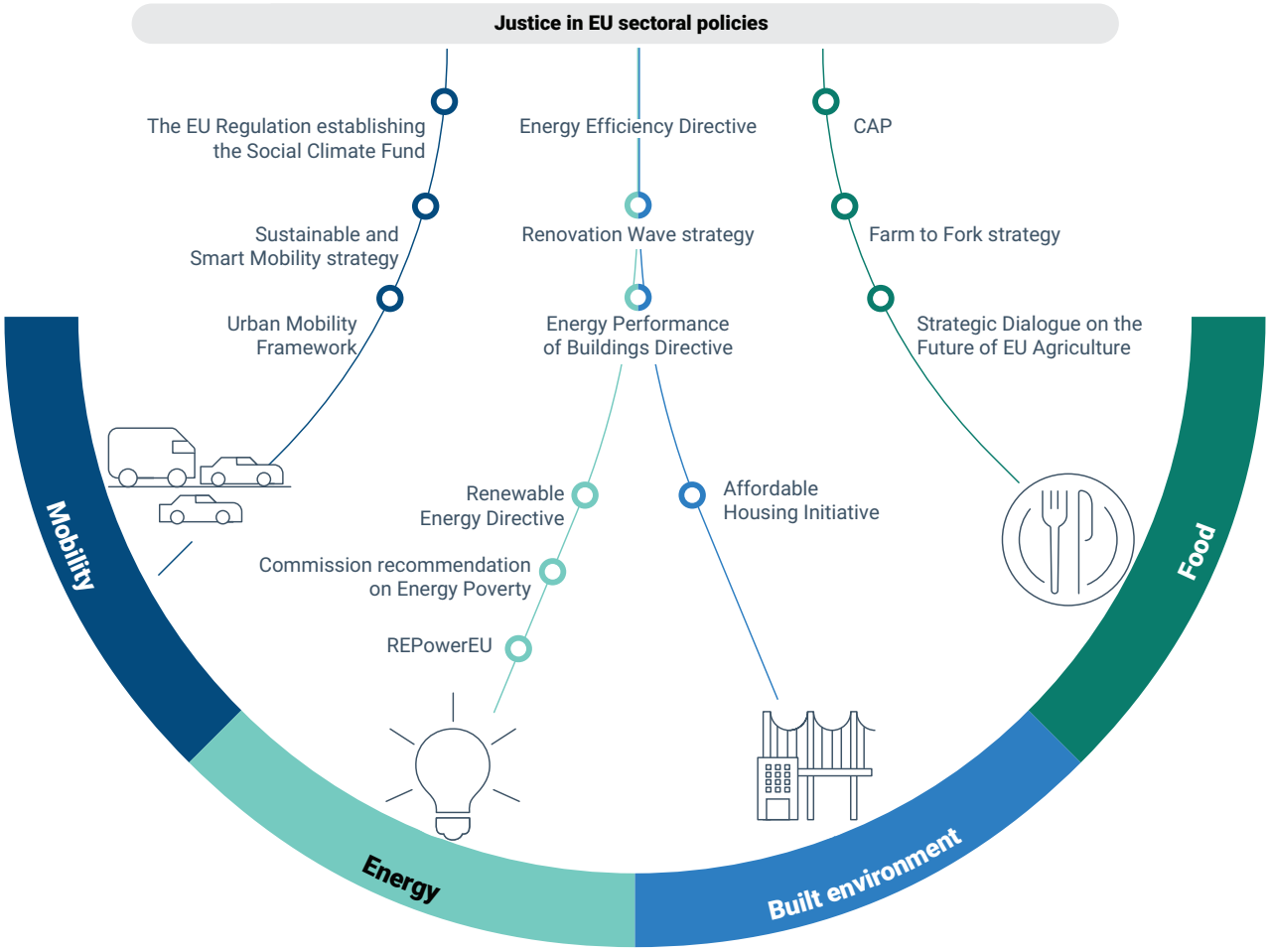
The JTF recognises cumulative and intersectional impacts by identifying specific vulnerable groups who will need support in the affected territories, including for instance jobseekers, citizens at risk of energy poverty, women and workers with disabilities. The regulation establishing the JTF identifies types of investments that the JTF is permitted to fund.

For the 2021-2027 period, all Cohesion Policy funds are subject to rules regarding fundamental rights, also known as 'enabling conditions'. This means there is an explicit requirement for effective mechanisms to implement the obligations under the UN Convention on the Rights of Persons with Disabilities (CRPD) and to ensure that the programmes governed by these funds comply with the Charter of Fundamental Rights of the European Union (the Charter) (FRA, 2023).

2.3 Justice in EU sectoral policies: A system perspective

This section reviews how justice is addressed in EU sectoral policies from a system perspective. Relevant sectoral policies and instruments, reviewed across the energy, built environment, mobility and food systems, are presented in Figure 2.5. The objective of transitioning these key systems towards sustainability is coupled with the need to ensure that changes unfold in a just manner or in the context of concrete measures to facilitate just transitions. The following sub-sections provide an initial assessment of the extent to which the three dimensions of justice are considered in sectoral policies. This is followed by a more detailed system-level analysis.

Figure 2.5 **Reviewed EU sectoral policies, strategies and instruments that address justice for the energy, built environment, mobility and food systems**



Source: Authors' compilation based on own analysis.

2.3.1 Distributional justice

The assessment primarily focuses on distributional justice, as sectoral policies are largely aimed at mitigating the distributive impacts of achieving the targets set by the European Green Deal. With respect to distributive impacts of meeting emission targets, the issue of energy poverty is particularly prominent, and to some extent also the affordability of mobility. Several measures have been introduced to redistribute the unfair burdens stemming from sustainability transitions, such as ensuring equal access to financing for energy renovations. In comparison to energy and mobility, food policies place greater emphasis on addressing existing injustices related to farmers' income, their economic position, and access to healthy and sustainable food.

Many sectoral policies also discuss or introduce taxes, emission trading or charges as proposals to incentivise green transition. The PPP is incorporated into the revised Energy Taxation Directive (ETD). Similarly, taxation is discussed in the Sustainable and Smart Mobility strategy. Likewise, in the Farm to Fork strategy, the EC proposes the introduction of tax incentives, such as a more strategic use of value added tax (VAT) rates, to reflect the true cost of food, including any potential negative environmental impacts, in its pricing. The policies recognise the need to consider the social impacts of energy taxation, for example, and propose potential compensatory measures in this regard.

2.3.2 Procedural justice

More explicit attention to vulnerabilities requires the introduction of procedural mechanisms that foster a deeper understanding of the needs and positions of specific groups. However, procedural justice has received insufficient attention in sectoral policy domains to date and the diverse participatory measures that have been introduced are limited. Across the sectoral policies, actions to ensure procedural justice are offered largely as part of existing regulatory requirements. While capacity-building measures have been introduced to support sectoral policy initiatives, they are rarely targeted specifically at vulnerable groups.

Energy renovation policies are an exception but these largely concentrate on improving access to information. Similarly, the Strategic Dialogue on the Future of EU Agriculture offered a crucial opportunity to hear the perspectives, ambitions, concerns and solutions of farmers and other key stakeholders across the agri-food chain, with the goal of finding common ground and solutions for the next phase of the green transition (EC 2024e). However, more diverse participatory mechanisms are needed to support just transition across sectoral policies. The lack of inclusion of civil society in the design of key policies may lead to inefficiencies or/and risk certain groups or regions being overlooked. It is also important to recognise the tension between the time required to ensure procedural justice and the urgency of addressing climate change and its impacts.

2.3.3 Recognitional justice

In addition to addressing the distributive impacts of the green transition, sectoral policies go some way towards recognising the specific needs and positions of vulnerable segments of society. However, this recognition varies greatly across policy domains. Specific vulnerabilities receive most explicit attention in the energy system and in policies relating to clean energy transition; these include measures targeting energy-poor households. These vulnerable groups, however, may differ across Member States. Procedural mechanisms to enhance our understanding of the specific needs and positions of these groups are required in order to address vulnerabilities effectively.

In the mobility sector, the range of vulnerable groups identified is more diverse, including low-income individuals, people with reduced mobility or disabilities, vulnerable transport workers and those living in rural or remote areas. Meanwhile, the new common agricultural policy (CAP) has less focus on specific groups and regions affected by the green transition, instead seeking to enhance efforts to support viable farm incomes, ensuring fairer distribution to small farms and reducing income disparities within the food system. The reformed CAP does however explicitly mention the importance of including the participation of women in farming, as well as supporting a generational renewal by attracting and sustaining young farmers. Moreover, the Farm to Fork strategy proposes to empower consumers to make healthier and more sustainable choices, and it broadens its focus beyond income to ensure decent living standards for food-chain workers.

Across all sectors, though, cumulative and intersectional impacts are recognised only in passing. Sectoral policies mainly deal with vulnerabilities relevant to their own sector.

2.3.4 Just transition and energy-related policies

Households are directly and unevenly impacted by energy-related climate mitigation policies in different ways. Energy transition policies, such as carbon pricing mechanisms and low carbon legal obligations, have direct effects on prices, household budgets and quality of life from both economic and environmental perspectives. The

scale and direction of these impacts depends on socio-demographic factors, including income level, location, employment situation and age. Measures that increase energy prices, such as carbon and energy taxes, tend to disproportionately affect lower-income households, potentially resulting in regressive social impacts, increasing inequalities and exacerbating energy poverty (EEA and Eurofound, 2021).

The concept of energy poverty has only recently been garnering more political attention, particularly in terms of recognitional justice for vulnerable social groups. The revised Energy Efficiency Directive defines energy poverty as 'a household's lack of access to essential energy services, where such services provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes' (page 31).

Data collected between 2019 and 2022 by the Fundamental Rights Agency from different surveys on hard-to-reach populations — while not directly comparable — show that immigrants, descendants of immigrants and Roma and Travellers have a considerably higher-than-average risk of experiencing energy poverty (measured as an inability to keep their house warm) in the EU-27 (FRA, 2024).

The definition of energy poverty links energy usage directly to social rights, health and well-being. Many countries in Europe are working to reduce the regressive effects of climate policy instruments, such as carbon taxes, by implementing measures that support the most vulnerable groups (EEA and Eurofound, 2021). However, it remains a significant policy challenge to operationalise the concept of energy poverty across the diverse contexts of Member States.

Box 2.4

A greater focus on energy poverty in EU energy policies

The EPSR, jointly proclaimed by the European Parliament, the Council and the Commission on 17 November 2017, includes energy among the essential services that everyone is entitled to access. The EC recommendation of 14 October 2020 on energy poverty states that 'support for access to such services must be available for those in need'.

Energy poverty is a key concept consolidated in the legislative package entitled 'Clean Energy for All Europeans'. Adopted in 2019, it provides the legislative framework to transform Europe's energy system in line with the commitments of the EU's Paris Agreement. The package sets out to '[e]nsure that the transition to a clean energy system will benefit all Europeans. All consumers — not forgetting the vulnerable or energy poor — should feel involved and reap the tangible benefits of access to more secure, clean and competitive energy' (EC, 2016, p. 3). The legislative package with its respective directives and regulations (including the Renewable Energy Directive (RED), EED and the EPBD) frames justice as aiming to ensure that clean energy is accessible and affordable to all citizens while promoting sustainable energy sources and reducing GHG emissions. In particular, the RED Recast to 2030 (RED II) highlights the need to 'facilitate a just transition of carbon-intensive regions towards increased shares of renewable energy' (EU, 2018, p. 105).

The legislative package Fit for 55 contains new or updated legislation in the areas of climate and environment, energy and transport. This package underlines the issue of just transition by proposing measures to identify key drivers of energy-poverty risks for consumers, such as energy prices that are too high, low household income and poor energy efficiency of buildings and appliances; it also considers structural solutions to vulnerabilities and underlying inequalities. As part of the Fit for 55 package, in July 2021 the Commission put forward a proposal for a revision of the EED. The 2023 revised EED significantly raises the EU's ambition with regard to energy efficiency, and places a stronger focus on alleviating energy poverty and empowering consumers.

The 2021 proposal for a revision of the EED was further enhanced as part of the REPowerEU plan, presented by the EC in May 2022, to dramatically accelerate the deployment of clean energy and reduce fossil-fuel dependence. In addition to accelerated transition, the REPowerEU plan calls for a just transition by highlighting the need for 'targeted measures to minimize volatility, keep prices in check and protect the individuals in or at risk of (energy) poverty in order to ensure a fair transition for all' (EC, 2022f, p. 12).

In addition to reducing GHG emissions, low-carbon energy policies may also generate positive environmental co-benefits, such as improved air quality, with positive outcomes in terms of health and well-being. Although evidence is limited, lower income households and vulnerable groups tend to benefit more from these improvements, helping to reduce environmental inequalities. This is because low-income households are generally more exposed to health and environmental risks, such as air pollution.

While evidence on the distributional effects of energy, carbon taxes and subsidies is abundant, there are much fewer data on the distributional effects of other policies. There is even less knowledge about the distribution of the environmental co-benefits of mitigation policies — through effects on health and well-being — and their outcomes in terms of environmental inequalities (EEA and Eurofound, 2021; Eurofound, 2021).

Finally, empowering individuals and communities in the energy transition — for instance, by enabling them to produce and consume their own renewable energy, thereby becoming prosumers — has the potential to benefit vulnerable consumers

and reduce the risk of energy poverty. High energy prices, energy intensive equipment and housing and low incomes are the main causes of energy poverty. When energy-poor households become prosumers, their energy bills may stabilise, and they may be better protected against increasing electricity prices. However, socially inclusive measures are necessary to help low-income households become prosumers and capture the benefits of this opportunity. Prosumerism also aligns with principles of procedural justice by promoting greater participation, autonomy and empowerment in decision-making processes (EEA, 2022c).

2.3.5 Just transition in building renovation and sustainable cooling strategies

Improving the sustainability of the building sector is critical for meeting both EU climate mitigation and adaptation targets. Achieving climate neutrality and resilience requires an unprecedented acceleration in energy renovation of the EU building stock.

Enhancing energy efficiency in buildings has the potential to offer significant benefits, both in terms of reducing GHG emissions as well as contributing to reducing social inequalities, thereby offering win-win solutions. Energy-efficient improvements can lead to substantial savings on energy bills over the medium to long term, potentially generating progressive income effects. In particular, building retrofits can improve the health and well-being of vulnerable groups, the elderly, children, pregnant women, individuals with illnesses, low-income workers, single parents, migrants and people with disabilities. The associated environmental and health co-benefits, such as improved outdoor air quality, extend to all, not just those able to access investment subsidies.

Energy poverty is a key concern in several policies relevant for the building sector (e.g. EED, EPBD, Renovation Wave, Affordable Housing Initiative), which are directing actions towards a clean energy transition. According to these policies and initiatives, the EU and Member States should provide clear guidelines, targeted actions and measures to promote equal access to financing for energy efficiency investments, including for the most vulnerable in society. Addressing energy poverty sustainably requires long-term strategies that consider the specific needs of energy-poor households.

Besides references to energy poverty in the revised EED discussed above, the EPBD encourages Member States to develop clear guidelines and measurable targeted actions to alleviate different aspects of energy poverty through the proposed long-term renovation strategies. The Renovation Wave strategy and the European Parliament's building renovation recommendation approach justice in terms of providing affordable energy services and alleviating the burden of households and social groups vulnerable to energy poverty. The guiding aim is to leverage building renovations to improve housing quality and tackle broader justice challenges related to areas such as social and health issues.

The Affordable Housing Initiative, announced in the EC Renovation Wave strategy, aims to ensure that social and affordable housing facilities also gain from the renovation wave. This includes piloting 100 lighthouse districts, that is 'integrated district renovation projects which go the extra mile in terms of technology, people centred approaches, and co-creation and engagement practices' (European Affordable Housing Consortium, 2021, p. 2). Lighthouse renovation and construction districts supported by the Affordable Housing Initiative use a smart neighbourhood approach that emphasizes energy efficiency, liveability, and innovation, while also offering blueprints for replication to support other projects throughout Europe.

Cohesion Policy funds (ERDF, CF, JTF) contribute to the promotion of energy efficiency renovations of private and public housing stock with a combined allocation of EUR 6.5 billion for the 2021-2027 period (EUR 9 billion total resources including cofinancing). By the end of 2029, Cohesion Policy funds will have contributed to the energy efficiency renovation of more than 720,000 dwellings.

While decarbonising heating remains the primary focus, the need to cool buildings sustainably is increasingly relevant due to rising temperatures, more frequent heatwaves and an ageing population, making European populations more vulnerable to heat. From 2012 to 2021 the total number of person-days of heatwave exposure increased by 97% compared with the period 2000-2009. This rise in person-days is due to both an increase in at-risk populations and more frequent heatwaves (van Daalen et al., 2024).

One of the sustainability challenges confronting the EU is finding ways to adapt its building stock to protect citizens from the effects of rising temperatures, while still meeting the EU's goals of enhancing energy efficiency, achieving energy independence, and pursuing climate neutrality in an equitable and socially just manner (EEA, 2022b). From that perspective, policies promoting deep energy renovation of buildings can can enhance the resilience of buildings, reducing energy consumption for cooling and decreasing GHG emissions. Pairing this kind of policy with a focus on vulnerable groups would also minimise the health impacts of climate change, reduce inequalities and help alleviate summer energy poverty (EEA, 2022b).

The need for cooling in low-quality housing occupied by the poorest households poses a challenge for achieving a fair transition to a climate-neutral economy. While active cooling solutions like air conditioning can be affordable, they often come with additional running and maintenance costs. If electricity prices rise, these expenses could result in summer energy poverty for the lowest-income households (EEA, 2022b).

The EU strategy on adaptation to climate change (EU adaptation strategy) recognises the negative impacts of heatwaves on the economy and on the health and well-being of Europeans; it also promotes the implementation of physical solutions in response. Although the strategy does not specifically mention space cooling, it highlights the importance of just resilience, ensuring that the benefits of climate adaptation are shared equitably across society.

2.3.6 Sustainable mobility and transport poverty

The EGD sets out an ambitious target to reduce transport-related GHG emissions by 90% by 2050. The Sustainable and Smart Mobility strategy put forward by the EC in 2020 aims to contribute to meeting this target by laying the foundation for how the EU transport system can achieve its green and digital transformation and become more resilient to future crises. The strategy identifies a total of 82 initiatives in 10 key areas for action (called 'flagships'), each with concrete measures detailed in the accompanying mobility strategy action plan. While the Sustainable and Smart Mobility strategy provides a vision for the European transport system and transport policies, it is not legally binding.

The strategy and the related mobility strategy action plan emphasise the importance of making mobility fair and accessible for all, particularly in terms of affordability and accessibility. Those in rural and remote regions, as well as people with reduced mobility and persons with disabilities, are recognised as important target groups due to the disadvantages they experience. Strong emphasis is also placed on just transition for transport workers, and the need for the transport sector to offer good social conditions, reskilling opportunities and to provide attractive jobs. Additionally, the strategy promotes gender equality by highlighting the need to increase the number of women in transport professions.

The mobility strategy action plan acknowledges the limited progress to date in achieving fair and efficient transport pricing despite longstanding policy commitments, and the need to implement without delay the 'polluter pays' and 'user pays' principles in all transport mode. To address this 'emission trading, infrastructure charges, energy and vehicle taxes must come together in a mutually compatible, complementary and coherent policy' (EC, 2020c ,p. 12).

Indeed, mitigation policies aimed at reducing transport-related GHGs have strong distributional effects. Examples of the progressive effects of public investments include those related to mobility, such as investments intended to encourage the use of public transport, to encourage cycling and walking or to enlarge the EV charging network on motorways and major roads (Eurofound, 2021). Similarly, there is limited evidence on the effects of public transport subsidies but the information that is available indicates that these policies are potentially generally progressive, as lower-income households are the primary users of public transport (EEA and Eurofound, 2021). Public transport subsidies can take different forms, such as reduced fees for certain age groups or differentiated fees based on income levels. On the other hand, subsidies for EVs tend to be regressive, as lower-income households are often unable to afford these environmentally friendly but expensive cars.

Transport fuel taxes are generally less regressive than taxes on residential heating and electricity, as middle-income households are more affected by these measures. While low-income households are less likely to own a private vehicle, middle-income household often depend heavily on private transportation to commute to work and access essential services. Households in rural areas are disproportionately affected when no alternative transportation options are available. While it is reasonable to expect that a significant rise in fuel prices could lead some people to switch to other modes of transport, this transition relies on the availability of alternative essential infrastructure, such as bike lanes, safe pedestrian areas, and public transport. Moving away from private motorized transport could also limit individuals' access to services and social or recreational activities (EEA and Eurofound, 2021).

Both energy and transport poverty are expected to worsen with the revision of the EU ETS Directive. In this context, the SCF was created to address challenges linked to energy poverty for vulnerable households and micro-enterprises and support vulnerable transport users (see Box 2.5). The Council recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality foresees that transport poverty could become an even more pressing issue and result in diminished access to essential socio-economic activities and services such as employment, education or healthcare, in particular for vulnerable individuals and households (Council of the EU, 2022).

The regulation establishing the SCF introduces a formal definition of 'transport poverty' for the first time at the EU level. The definition is as follows: '"Transport poverty" means individuals' and households' inability or difficulty to meet the costs of private or public transport, or their lack of or limited access to transport needed for their access to essential socio-economic services and activities, taking into account the national and spatial context' (European Parliament, 2023b, p. 10).

The EU regulation also acknowledges specific underlying factors (and their combined effect), which can lead to transport poverty, including for instance low income, high fuel expenditures or a lack of affordable or accessible private or public transport. Moreover, it is recognised that 'Transport poverty can particularly affect individuals and households in rural, insular, peripheral, mountainous, remote and less accessible areas or less developed regions or territories, including less developed peri-urban areas and the outermost regions' (European Parliament, 2023b, p. 3). This acknowledgement is in line with elements of recognitional justice.

Box 2.5

The Social Climate Fund

One of the 2023 revisions to the ETS involved the creation of a new emissions trading system named ETS2. ETS2 will cover and address the CO_2 emissions from fuel combustion in buildings, road transport and other sectors, particularly small industry, not covered by the existing EU ETS. The system is scheduled to become fully operational in 2027.

To accompany ETS2, the SCF was created to provide Member States with dedicated financial support for vulnerable groups, such as households facing energy or transport poverty, ensuring they are not left behind in the green transition (EU, 2023). The SCF is a part of the Fit for 55 package and is aimed at funding investments in the energy efficiency of buildings, decarbonisation of heating and cooling of buildings (renewable energy) and improved access to zero- and low-emission mobility including public transport. Proposed measures include temporary direct income support, subsidies, vouchers and zero-interest loans.

When operational, between 2026 and 2032, the SCF will be financed by revenue generated from auctioning allowances on the ETS2 market, as well as 50 million allowances from the existing EU ETS. Thus, the SCF is a mechanism by which to redistribute funds directly collected from polluters in the building and mobility systems to the vulnerable in respect of mobility and buildings. The allocation of SCF funds to Member States follows the approach of the JTF, requiring Member States to submit social climate plans, developed through public consultations, for EC approval by June 2025. The EC will assess the plans and disburse payments to the Member States only if the milestones and targets set in the plans are achieved.

Overall, while the vulnerable groups recognised across sectoral policies in the mobility domain are quite diverse, as discussed above, justice frameworks often undervalue active modes of mobility (e.g. walking or cycling). Municipalities are often responsible for the development of infrastructure for these modes and their financial resources are often insufficient. The new Urban Mobility Framework encourages the development of safe, accessible, inclusive, smart, resilient and zero-emission urban mobility, by providing guidance on local actions and offering cities a toolbox for promoting sustainable mobility; this includes making walking and cycling more accessible and attractive as key components of active mobility.

2.3.7 Enabling just sustainability transition in the food system

The just transition of the food system has only recently started to attract political and academic attention (Hebinck et al., 2021b; Kaljonen et al., 2023). As well as generating diverse benefits, Europe's food system is also associated with major inequities that must be addressed as part of a just transition. These include inequalities in the distribution of income, wealth and power; in exposure to harmful externalities; and, most strikingly, in access to sufficient, good and healthy nutrition (Hebinck et al., 2021a; FAO et al., 2022). Food poverty and malnutrition are growing concerns in the EU and poverty is strongly linked to the rising prevalence of obesity and non-communicable diseases, as unhealthy foods are generally more affordable than healthier options (Salmasi and Celidoni, 2017; Gracia-Arnaiz et al., 2022).

Recent reforms to the CAP have shifted its focus towards supporting farmers and rural areas in the transition to sustainable food systems, either by incentivising innovation and adaptation or by supporting rural livelihoods more generally and ensuring a 'fair income for farmers'. However, the CAP lacks instruments to address the potentially uneven social repercussions resulting from sustainability transitions. Although the reformed CAP promotes recognitional justice by explicitly

identifying specific groups (e.g. young and female farmers) and processes (social inclusion in local development) that need support, there is little reference, implicit or explicit, to procedural justice. As a result, vulnerable groups or regions may be overlooked (EEA, 2022f).

Recent research shows that CAP-related subsidies have been 'biased towards larger farms' (Burkitbayeva and Swinnen, 2018; Scown et al., 2020); thus, subsidies based on the area farmed have been central in driving increasing farm sizes (Clough et al., 2020). However, the new CAP, adopted in 2021, takes steps towards distributing income support more fairly, with a stronger focus on directing assistance to small and medium-sized farms. The actual implementation of the CAP was postponed until 2023 to allow EU Member States sufficient time to develop and submit CAP strategic plans. These plans were designed to align with the new CAP objectives, such as promoting fairer income distribution and enhancing environmental sustainability. They also incorporate elements of procedural justice, as Member States had to conduct public consultations during the preparatory phase and provide explanations of the outcomes (EC, 2022d).

Similarly, the Farm to Fork strategy represented a major step forward in adopting a more integrated and systemic approach to creating sustainable food systems within the EU. Its objectives are to make food systems fair, healthy and environmentally friendly, reflecting a shift towards a more holistic understanding. The strategy acknowledges the interconnectedness of various elements within the food supply chain and aims to address them comprehensively. By positioning the objective of a just transition at the centre of its strategic goals, the Farm to Fork Strategy calls for a more reflexive and critical approach to how changes may impact different regions and social groups in varying ways.

While concrete instruments for achieving a just transition are underdeveloped, the Farm to Fork strategy incorporates elements demonstrating a multidimensional understanding of justice. For example, it seeks to empower consumers to make healthier and more sustainable choices by enhancing awareness of how food is produced and provided, through measures such as front-of-pack nutrition labelling and sustainable food labelling. Additionally, the strategy broadens its focus beyond income to ensure decent living standards for food-chain workers. It also acknowledges the need for better-targeted interventions to direct support where it is most needed. These examples represent deliberate efforts to address the unequal distribution of power, income and agency in the current EU food system (EEA, 2022f).

The Farm to Fork strategy sets out proposals for ambitious legislative actions, including:

- a legislative framework for sustainable food systems, aiming to make the EU food system sustainable, integrating sustainability into all food-related policies and laying down general principles and objectives, together with the requirements and responsibilities of all actors in the EU food system;

- a new Regulation on the Sustainable Use of Plant Protection Products, including EU-wide targets to reduce the use and risk of chemical pesticides by 50% by 2030.

These legislative proposals have subsequently been scrapped following political developments including concerns over food security in response to the war in Ukraine, major protests from farmers across Europe and intensive lobbying from the agricultural industry (Euobserver, 2024). The pesticide proposal was withdrawn by the EC in February 2024 following a lack of support from the European Parliament (Euroactiv, 2024), while the legislative framework for sustainable food systems was dropped from the EC's workplan.

In terms of procedural justice, recent discussions on the future of the EU's farming and food system have benefitted from a more participatory and consensual approach. The Strategic Dialogue on the future of EU agriculture was launched in January 2024 by the EC; its aim is to address the challenges and opportunities related to transitions to a sustainable food system in the EU. This new forum brought together 29 major stakeholders from across the whole agri-food chain, including farmers, co-operatives, agri-food businesses and rural communities as well as NGOs and civil-society representatives, financial institutions and academia. This marks a significant step toward a more inclusive and transparent approach to policy development, ensuring broader stakeholder involvement.

Published on 4 September 2024, the final report of the Strategic Dialogue on the future of EU agriculture presents a shared prospect on the future for farming and food in Europe. It acknowledges that 'the transition must be designed in such a way that it leads to agri-food systems that are more resilient, sustainable, competitive, profitable, and just' and that 'to this end, trust and cooperation between all stakeholders is more important than ever before' (EC, 2024e, p. 9). In addition, it emphasises that the CAP should provide income support to active farmers in a more targeted manner to prevent farm abandonment and ensure that farmers, particularly those most in need such as small and mixed farms as well as young farmers, can achieve a decent income (EC, 2024e, p. 11). There is a particular emphasis on the inclusion and meaningful participation of rural youth and young farmers in policy-making and governance for agriculture, food and rural communities; the aim of this is to respect the principle of intergenerational fairness.

3 Governing just transitions in practice

3.1 Introduction

Member States, regions and cities are taking steps to ensure that transitions towards sustainability are just, either supported by EU funds or through their own domestic initiatives. In this context, public authorities across Europe are at different stages in their planning and implementation of just transition measures and policies. As such, there are numerous examples of initiatives from which Member States, regions and cities can learn. These can provide examples of inspirational good practice, identify new approaches aimed at delivering justice, offer insights into their effectiveness and highlight the challenges and dilemmas encountered in their implementation.

This section presents selected cases illustrating how countries, regions and cities have integrated justice into their policies to steer sustainability transitions. For each case, we consider how justice issues are addressed and operationalised. We focus on distributional, procedural and recognitional dimensions of justice and the specific challenges encountered in implementing initiatives.

In particular, this assessment highlights challenges related to the complexities of balancing economic development with environmental and social justice concerns. It points to risks associated with failing to consider local contexts and stakeholder perspectives carefully and failing to compare local priorities with the broader goals of sustainability and equity. Two case studies were selected for each level of governance — national, regional and local (see Table 3.1 for an overview). Although, the case studies are not balanced geographically, they nevertheless encompass the EU's diverse environments, cultures and economies and inform our understanding of different dimensions of justice.

Table 3.1 Case studies to illustrate the enactment of just transition policies across Europe

Level	Place	Focal point
National	Spain	Decarbonising industry and the energy sector with Just Transition Agreements
	Finland	Strengthening procedural justice in climate policy
Regional	Ida-Virumaa, Estonia	Phasing out oil shale and diversifying the economy in a socio-culturally complex region
	Taranto, Italy	Transforming the steel industry
City	Brussels, Belgium	Reducing the city's carbon footprint through food and housing
	Barcelona, Spain	Addressing climate and justice challenges in the urban domain

Analysis for the case study element of this report relied primarily on desk research based on existing data and available information. Academic papers as well as grey literature such as reports, newspaper articles, policy documents, policy communication, parliamentary discussions and press releases were reviewed. In addition, for each case study, one or two interviews were conducted with key stakeholders. These interviews served one of two functions. They either helped to gain an overview of the case and validate the first insights, or they provided additional insights especially relating to lessons learned and issues encountered in the implementation of policies.

3.2 Spain: decarbonising industry and the energy sector with Just Transition Agreements

3.2.1 Key policy instruments

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Spain can be considered a front runner in implementing just transition policies, having addressed issues of justice in sustainability well before the topic was picked up at EU level. The Strategic Energy and Climate Framework (El Marco Estratégico de Energía y Clima), approved by the Spanish government in February 2019, is the overarching legal framework defining Spain's strategic ambition for addressing climate change and changing its economic model to contribute to climate goals. It consists of three pillars:

- the Law on Climate Change and Energy Transition (Law 7/2021);
- the Integrated National Energy and Climate Plan (resolution of March 25 2021);
- the Just Transition Strategy (launched in February 2019) (see Table 3.2).

These regulatory packages were introduced as part of the same framework and designed to be highly interconnected. The first two pillars define Spain's climate goals, focusing on decarbonising the country's economy. The third addresses the social costs and gains of the environmental transition (Government of Spain, 2020). The Law on Climate Change and Energy Transition incorporates the obligation to approve just transition strategies every five years to deal with the ongoing effects of decarbonisation. It is the only law in the world that includes obligations of this scale (Government of Spain, 2023).

The justice challenges faced by Spain in the area of environmental sustainability transitions have territorial and socio-economic dimensions and they are also closely connected to each other. In its environmental and climate efforts, Spain has a focus on decarbonising its energy sector and industry. This specifically refers to phasing out coal extraction, closing coal-fired power plants and dealing with the knock-on social and economic impacts (unemployment, depopulation in rural regions). Spain shut down most of its coal mines in 2018, in addition to a process of closure of all coal-fired thermal power plants. All the coal-fired power plants in the country have now either been closed, are in the process of closure or are subject to short-term closure plans. Total coal closure is expected around 2025 (Government of Spain, 2023). The country also aims to move away from industry dependent on fossil fuel and other electro-intensive industries, especially the automotive sector, which makes up a significant proportion of the country's industry.

The Just Transition Strategy is a national-level instrument which provides measures to mitigate the effects of the coal phase out and its impacts on affected industries, regions, and workers. The objectives of the strategy include:

- making use of the new opportunities generated by the environmental transition;
- ensuring equal opportunities for vulnerable social groups and rural areas;
- providing information and capacities to support different stakeholders;
- initiating support policies (Government of Spain, 2020).

Just Transition Agreements represent the main tool for implementing the strategy; these are described as a 'co-governance tool to guarantee the commitment and coordination of public administrations — national, regional and local — and to propose support instruments to ensure the reactivation of the territories' (Government of Spain, 2023 p. 6). The agreements follow the just transition guidelines developed by the ILO, which build on social dialogue and tripartite consultation, social protection, rights at work and employment (ILO, 2015). The agreements target regions affected by climate and energy transition actions, namely the closure of coal mines and coal power plants and to a lesser extent, nuclear power plants. At the time of writing there were 17 agreements in total, in the autonomous communities of Andalusia, Aragon, Asturias, Castilla la Mancha, Castilla y Leon, Castilla y León-País Vasco, Galicia and Illes Balears.

The main objectives of the Just Transition Agreements are:

- creating employment opportunities to cover employment loss;
- maintaining population rates in rural areas;
- seeking diversification of the economy and specialisation in the regions based on their socio-economic context.

The agreements are reached between the national government (i.e. the Ministry for the Ecological Transition and Demographic Challenge (MITECO) in collaboration with the Ministry of Labour, Migrations and Social Security and the Ministry of Industry, Tourism and Trade) and other public authorities at all levels of government (general state administration, autonomous communities, provinces and municipalities). An open public consultation was launched and several other tools were employed to feed into the underlying socio-economic assessment (described in Section 5.2 of the Just Transition Strategy, Government of Spain, 2020).

The Just Transition Agreements include regional action plans for securing and developing economic activity and employment, accompanied by technical measures (e.g. guaranteeing capacity in terms of electricity transmission), policy support (e.g. relating to tenders for specific renewables) and financial support for their implementation (e.g. priority access to financial aid, funds, state investment and technical support to access EU investments).

To respond to a situation of urgent vulnerability and address the short-term impacts related to the closure of coal mines, coal-fired plants and nuclear power plants without reconversion plans, the Just Transition Strategy established the so-called Urgent Action Plan, which was approved for the period 2019-2021 (Government of Spain, 2018). This was still being implemented in 2023 due, among other things, to difficulties and new problems related to the COVID-19 crisis (Government of Spain, 2023).

In 2019, the Just Transition Institute (JTI) was set up within the MITECO as part of the Just Transition Strategy in order to manage national funding for just transition. The JTI also acts as an intermediate body for the EU JTF, manging part of the budget which is overseen by the Ministry of Finance. In addition, the JTI is responsible for the sectorial coordination of the JTM in Spain.

Spain also receives European Union's support via the JTM. The country has received EUR 869 million from the JTF to support the implementation of its TJTP (EC, 2022e). The JTF and TJTP complement Spain's national just transition efforts, and they align with the country's existing Just Transition Agreements, which were in place before the introduction of the EU measures. Spain's TJTP was approved by the EC on 21 December 2022. The following territories are eligible for JTF support: Asturias, León-Palencia (in Castilla y León), A Coruña (Galicia), Almería-Córdoba-Cádiz (in Andalucía), Teruel (in Aragón) and Alcúdia (in Illes Balears). The fund will be used until 2029.

To date, Spain has been exemplary in making use of European recovery funds to support areas affected by coal closures. Importantly, the Spanish government has also incorporated a specific just transition component into its Recovery, Transformation and Resilience Plan (RTRP). This plan is being funded by EUR 300 million from NextGeneration Funds and has four specific targets for areas affected by closures, in addition to the deployment of domestic funds.

Table 3.2 Key policy instruments for sustainability transitions in Spain

Policy name [in Spanish]	Policy goal
Strategic Energy and Climate Framework [El Marco Estratégico de Energía y Clima]	Defining Spain's strategic ambition to address climate change and alter its economic model to contribute to the climate goals.
The Law on Climate Change and Energy Transition [Ley de Cambio Climático y Transición Energética]	Setting the goal for the country's economy to reach climate neutrality by 2050 at the latest.
National Integrated Energy and Climate Plan (NIECP) [Plan Nacional Integrado de Energía y Clima]	Providing measures to reach the goals presented in the Climate Law.
Just Transition Strategy [Estrategia de Transición Justa]	Providing measures to support the achievements of goals to mitigate the effects of the coal phase-out and its impacts on affected industries, regions and workers (i.e. optimising employment opportunities).
Just Transition Agreements [Convenios de Transición Justa]	Implementing the Just Transition Strategy in the regions affected by the coal phase-out.
Urgent Action Plan 2019-2021 for Coal Regions [Plan de Acción Urgente para comarcas de carbón y centrales en cierre]	Addressing the urgent impacts in the regions affected by the closure of coal mines and coal-fired power plants.
Just Transition Institute [Instituto para la Transición Justa]	Leading, facilitating and supporting the development of the Just Transition Agreements.

3.2.2 Dimensions of justice

Overall, Spain's approach to just transition is strongly focused on overcoming the challenge of job losses linked to its closure of coal mines and power plants. It aims to support people to find new employment opportunities and to reskill. While the distributive dimension is the most pronounced, procedural and recognitional justice are important supportive dimensions to achieve the main goal.

There is a strong regional approach in both developing and implementing the policies, resulting in tailored measures to address the territorial disparities resulting from the country's transition from a coal-dependent to a green economy. The closure of coal mines, coal-fired power plants and nuclear power plants impacts specific regions — mostly rural areas that have already suffered socio-economic decline due to job losses, depopulation and an ageing population. Adapting to and mitigating the social and economic impacts of the environmental transition is crucial for these regions. The Just Transition Strategy calls for targeted actions to support job creation and attract new businesses and investments to the transition regions.

The Just Transition Strategy acknowledges and addresses the job losses in coal mining, coal-fired power plants and nuclear power plants. The long-term strategy aims to cover these job losses with new green employment opportunities (e.g. in building renovation, storage development for renewables, electrical mobility, biomethane and hydrogen) and green vocational training. To address the short-term/immediate impacts of job losses, the strategy provides guaranteed economic benefits and compensation for the affected workforce — either in the form of early retirement or severance pay. In addition, a JTI job bank has been set up to support re-employment for workers affected by the closures of the coal-fired power plants. At the time of writing 55% of affected workers had already registered and over 80% of those registered had found new employment.

The Climate Law and Just Transition Strategy also recognise that the environmental impact of climate change on soil, natural heritage, water and landscapes increases the vulnerability of certain territories in Spain and poses challenges for the major economic sectors in rural areas. In this context, the policies link the revitalisation of local economic opportunities and climate change mitigation with the need to stabilise population levels in rural areas. The Just Transition Agreements aim to

ensure that the regions can succeed in maintaining their employment and population levels after the transition process (Government of Spain, 2020, 2021).

In terms of procedural justice, both the Just Transition Strategy and Just Transition Agreements were designed following an extensive public participation process; local actors provided input and socio-economic impacts and opportunities were assessed at the local level. A whole range of stakeholders was involved, including companies, universities, local action groups, citizens and NGOs. Social dialogue is also a key feature of a just transition. The Just Transition Strategy and its Urgent Action Plan employed social dialogue to guide a tripartite consultation, resulting in signed agreements between key stakeholders involved in the closures — the government, unions and companies (Government of Spain, 2020, 2023).

Proposals for bringing new employers and economic actors to the regions were developed and included within agreements based on an analysis of the regional contexts and in consultation with municipalities. Such initiatives are currently implemented via JTI's programmes, which provide measures and mobilise funds to support local companies and SMEs and the development of municipal infrastructure in the transition regions (Government of Spain, 2020).

At the regional level, the just transition is also implemented in collaboration with private companies, for example, by developing synergies with their just transition initiatives. Under the Just Transition Agreements companies are required to develop their own just transition plans; these must include self-assessment of the potential impacts of environmental policies for their activity alongside their needs in terms of employees and skills etc. The Just Transition Agreements also include commitments to bring private investment into transition regions, in the areas of renewable energy and other green sectors.

With regard to recognitional justice, the Just Transition Strategy and Just Transition Agreements mostly target workers in the industries being phased out. In this context, people who are at risk of losing or have already lost their employment in coal mines, power plants and coal-dependent industries can be defined as 'vulnerable groups' but so too can local communities and businesses dependent on thermal plants and mines. Employment in the sectors in transition has been strongly male-dominated, especially coal mining but also coal and nuclear power plants (Government of Spain, 2020). In negotiating and implementing the policies, these groups are formally represented by the workers' unions. The unions were the key formal stakeholder in building the Just Transition Strategy and Just Transitions Agreements (Government of Spain, 2020; Instituto para la Transición Justa, 2022).

The other social groups recognised in Spain's approach to justice in the Spanish instruments discussed above include women, people with disabilities, youth, long-term unemployed and others at risk of exclusion. The difficulties of engaging the vulnerable social groups, however, pose an important challenge for the implementation. The JTI has identified youth as a hard-to-reach group due to the depopulation of youth in transition regions.

Additionally, the JTI focuses particular attention on the challenges and opportunities relating to women's employment and well-being in areas where Just Transition Agreements are developed. A number of initiatives are therefore being introduced to reduce inequality between men and women in affected territories. Collaboration between the JTI and the Naturgy Foundation has resulted in a detailed analysis of how women are accessing employment opportunities created by the new energy investments in different sectors (e.g. renewable energy, green hydrogen and energy efficiency) (Government of Spain, 2023). The analysis provides information about the gaps in gender equality, in terms of access to green jobs, salaries, working hours and other working conditions. The results have the potential to inform and guide the implementation of just transition policies.

Box 3.1

Spatiality and temporality in the context of just transitions

Since the JTF budget is mainly administered by the autonomous communities, there has been a shift in responsibility in implementing the TJTP in the drive towards just transition; budget management and decision-making power are no longer the purview of central government but of the regional governments instead. This is a recent change, so the implications of this change are currently uncertain. The differences between the transition regions in terms of their environmental, social and economic contexts represent the main challenge in implementing the just transition measures. These contextual factors can be considered as the cards that the region has to play with. The regions can make use of their strengths and environment to identify new economic opportunities. There are however inequalities between the regions.

The timings of different elements of the transition also pose challenges for implementing appropriate initiatives. The coal sector has been transitioning for the past 40 years and the closure of coal mines has been a relatively long-term and gradual process. In contrast, the closure of coal-fired and nuclear power plants has happened very quickly, over the past few years. This can be a challenge for retaining population; in the rapidly transitioning areas, new employment opportunities to replace the closures are not emerging fast enough. In addition, during the 2008 economic crisis Spain boosted employment and energy security by exploiting domestic coal (Royal Decree 1221/2010 on energy supply) and the switch in priorities towards decarbonisation has affected the public's perception of the new Just Transition Agreements (Sanz-Hernández et al., 2020).

Looking ahead, it is likely that there will be an ongoing focus on coal mines and coal- and nuclear power plants due to the need to deal with the aftermath of the closures and ongoing work in the transition regions adapting to the new economy. However, the country's current approach to just transition also has the potential to be applied to the automotive industry which is currently going through a similar transformation to the energy industry. It is an important sector for the country (accounting for 10% of GDP) and there is a lot of pressure to decarbonise it (Government of Spain, 2020). The context in which these structural transformations are taking place in Spain involves persistent labour market vulnerabilities in relation to youth unemployment and challenges in delivering social protection and inclusion (EC, 2024d).

3.3 Finland: strengthening procedural justice in climate policy

3.3.1 Key policy instruments

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In 2019, Finland adopted the ambitious aim to become the world's first carbon-neutral welfare state by 2035. Justice is a core objective of this transition towards a carbon-neutral society (Finnish Government, 2019). The government further committed to reducing emissions 'in a way that is fair from a social and regional perspective and that involves all sectors in society' (Finnish Government, 2019, p. 36) meaning that just transition is a priority.

This report scrutinises three of several policies guiding climate mitigation and adaptation; the goals of these three policies explicitly target just transition. They are the Finnish Climate Act, the Medium-term Climate Change Policy Plan and projects funded by the EU JTF. In addition, efforts which preceded but fed into the formulation of policy instruments are also considered. These three policies and the preceding efforts are presented in Table 3.3.

The revised version of the Finnish Climate Act (423/2022) sets out the national emission reduction targets for 2030, 2040 and 2050; it also delineates provisions on climate change policy planning and monitoring and the obligations of authorities.

The Medium-term Climate Change Policy Plan is based on the Climate Act and it outlines measures necessary to achieve the EU emissions reduction obligation for 2030 as well as the national goal of achieving carbon neutrality by 2035. The plan explores measures to reduce emissions from transport, agriculture, individual heating of buildings, machinery, waste management and F-gases and some emissions from industry and energy consumption outside the ETS. The plan was agreed in 2022 and is currently being updated by the government.

Under the JTF, Finland was allocated EUR 466 million for 2021-2027 to offset the adverse socio-economic and environmental impacts caused by halving the use of peat for energy production by 2030. The funding will benefit 14 regions. They include peat-producing regions, as well as other regions that could be impacted by the adverse effects of reducing the use of peat. Measures are detailed in 14 regional just transition plans; these were drawn up by regional councils and Centres for Economic Development, Transport and the Environment ([8]). They aim to renew economic structures and the diversity of regional industry, boost employment, reskill people who have lost or are at the risk of losing their jobs, particularly young people, and restore peatlands.

In addition, Finland prioritised justice in the transition towards a low-carbon economy prior to the formulation of policy instruments. These policy approaches have been complemented at the national level by a number of permanent and temporary participatory fora and consultation processes on climate policies; these were organised to better understand justice in the transition towards a carbon-neutral society and involve groups vulnerable to climate change impacts in policy development.

Table 3.3 Key policy instruments to support sustainability transitions in Finland

Policy name [in Finnish]	Policy goal
(Revised) Climate Act (423/2022) [Ilmastolaki)]	To ensure Finland reaches climate neutrality by 2035 and to guide the planning of Finland's climate policy and the monitoring of its implementation.
Medium-term Climate Change Policy Plan [Keskipitkän aikavälin ilmastopolitiikan suunnitelma (KAISU)]	To outline measures needed to achieve climate neutrality by 2035 and Finland's emissions reduction obligation for 2030 proposed by the EC.
Regional just transition plans [Alueellista oikeudenmukaista siirtymää koskevat suunnitelmat]	To halve the use of peat for energy production by 2030 and to compensate for the consequent socio-economic and environmental effects.
Justice efforts that preceded the formulation of policy instruments [in Finnish]	**Goal**
The Finnish Climate Change Panel [Ilmastopaneeli], Climate Policy Roundtable [Ilmastopolitiikan pyöreä pöytä], Citizens' Jury on Climate Action [Ilmastotoimia arvioiva kansalaisraati], impact assessments and reports and consultation procedures	To ensure that varied understandings of a fair transition and the needs, views and experiences of different groups are considered.

3.3.2 Dimensions of justice

Besides laying down climate objectives, the Finnish Climate Act contains an additional justice objective: 'In addition, the objective of the Act and the climate policy planning system based on it is to: 1) contribute to ensuring sustainable development and justice of the climate measures (...).' 423/2022, 2 §.) (Ministry of Environment Finland, 2022a, p. 2).

The government's legislative proposal for the revised Climate Act (HE 27/2022) specifies what is meant by 'justice of the climate measures'. 'Just transition' is presented as an objective of justice and is understood as the effort to minimise the negative effects of preparing and implementing climate policy on, for example, employment, participation and regions and to mitigate increasing inequality and income differences (Kivimaa et al., 2023). Besides mitigating distributional and procedural injustices, the act also prioritises the need to recognise the effects

([8]) The JTF supports regions in renewing their economic structure and boosting employment (Finnish Government, 2022).

of the transition from the viewpoint of different actors as well as the rights of future generations.

Notably, the revised Climate Act recognises the Sámi people as a group vulnerable to the adverse impacts of climate change and notes that they must be able to access climate policy decision-making processes as a precondition for maintaining and developing their culture and livelihood. The act enshrined in law the requirement for the Finnish government to negotiate with the Sámi Parliament when preparing climate change policy plans (423/2022, 14 §.). It also established the Sámi Climate Council (Saamelainen ilmastoneuvosto) (423/2022, 21 §.) to support the preparation of the climate policy plans, thereby recognising the value of scientific and traditional knowledge for climate mitigation and adaptation: 'members of the Sámi Climate Council shall include persons in possession of traditional Sámi knowledge and persons representing the key fields of science' (423/2022, 21 §.) (Ministry of Environment Finland, 2022a, p. 12). The establishment of the Sámi Climate Council strengthened the recognition of the rights of the indigenous people in climate policy. This body complements the work of the Finnish Climate Panel, established in 2012, which supports the preparation and implementation of climate policy and legislation in Finland.

The revised Climate Act also encourages municipalities to draw up municipal climate plans that detail measures to lower their carbon footprints. Compared to national authorities, municipal authorities are closer to citizens and local companies, better understand local climate mitigation and adaptation challenges and are in a better position to assess the local, place-based justice impacts of the transition towards a carbon-neutral society. The municipal climate plans ensure that all municipalities contribute to tackling climate change and bear the costs of the transition to carbon neutrality, at the same time as capturing local needs and interests in the transition.

The Medium-term Climate Change Policy Plan sets out measures necessary to achieve the EU emissions reduction obligation for 2030, as well as the national goal of achieving carbon neutrality by 2035 in the most cost-effective and fair way possible (Ministry of Environment, 2022b). The emission reduction measures proposed in the plan were assessed in terms of perceived fairness. This included a broad consultation process on the effects of measures on income distribution and on the regional equity of citizens, Sámi people, children and young people, old and disabled people and other stakeholders (Ministry of Environment, 2022). The Medium-term Climate Change Policy Plan includes measures to mitigate the unequal distribution of costs across individuals and social groups. For example, it includes a financial support system for replacing oil heating; this mainly benefits elderly people and people living in rural areas. This measure is a good example of how the intersection of vulnerabilities is addressed to avoid distributional injustice.

Mitigating distributional impacts caused by phasing out the use of peat for energy is also central to Finland's TJTPs. JTF funds are used to offset the costs of phasing out the peat sector to regions' economies; in particular, they benefit people whose livelihoods depend on peat production and young people who will need to find alternative employment (Finnish Government, 2022). By financing reskilling and training, as well as new business opportunities, the JTF funds alleviate the risk of unemployment and of young people leaving the region due to a lack of job opportunities.

While Finnish climate policy captures all three dimensions of justice, the emphasis on procedural justice has been particularly strong; notable processes have been established to facilitate the participation of diverse stakeholders in developing and implementing policy, in particular groups vulnerable to the adverse impacts of climate change (see Box 3.2).

Box 3.2

Procedural justice efforts that preceded the formulation of policy instruments

Between 2019 and 2023 the Finnish government introduced several approaches to support procedural justice in climate policy decision-making at the national level. The Climate Policy Roundtable was set up in 2020 to support the formulation of climate policies. It brought together representatives of trade unions, municipalities, scientists, industrial sectors, interest groups, young people and NGOs to 'ensure that our [Finland's] climate actions are in the best interests of society and have broad approval from the public' (Finnish Government, 2019, p. 36). The roundtable did not have decision-making power but rather offered a forum for stakeholders to discuss policy initiatives under preparation.

In 2021, the first nationwide Citizens' Jury on Climate Actions was organised. The group was designed to be demographically representative. During three online meetings, 33 randomly selected citizens assessed the fairness and effectiveness of measures to be included in the Medium-term Climate Change Policy Plan (Kulha et al., 2022). They produced a statement highlighting the importance of taking socio-economic and regional differences into account, emphasising the responsibility of all sectors to reduce emissions and acknowledging citizens' concerns regarding how climate measures might affect them economically (Kulha et al., 2022). The statement was discussed by the Climate Policy Roundtable (Ministry of the Environment Finland, 2021) and fed into the Medium-term Climate Change Policy Plan (Ministry of Environment Finland, 2022b).

The Ministry of Environment and Climate Change facilitated consultations on key climate policy instruments, including the Climate Act and the Medium-term Climate Change Policy Plan, with a focus on involving groups vulnerable to climate change, including children and young people, the Sámi people and old and disabled people (Ministry of Environment, 2022b). The approach to engaging children and young people is particularly noteworthy; they were given the opportunity to express their views on climate change mitigation through legislative means at a roundtable discussion with ministers and at an event titled 'Children take over the Government', through social media surveys and an extensive online survey. Consultations were organised at schools, summer camps and NGO events in order to facilitate the participation of children under 18 years old who are not yet active in politics. During consultations, children, young people and NGOs called for the establishment of a Youth Group on Climate and Nature Issues (Nuorten ilmasto- ja luontoryhmän). The members of the group were elected at the beginning of 2023 to ensure that policy measures are fair from the point of view of future generations. The group's term began in April 2023 and lasts for two years.

3.4 Ida-Virumaa: Phasing out oil shale and diversifying the economy in a socio-culturally complex region

3.4.1 Key policy instruments

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Estonia has a relatively carbon-intensive economy due to oil shale, which plays a central role in the country's energy supply (OECD, 2022) The government is currently phasing out the oil shale industry as part of Estonia's climate commitments, with oil shale electricity production due to cease by 2035. Shale oil is due to be phased out completely in the energy sector by 2040 with no additional investment in the fossil-fuel industry (EC, 2022b).

The oil shale industry is largely concentrated in the north-eastern corner of Estonia in the Ida-Virumaa mining region where most of the deposits are located. As such, the phase-out of the industry will have a significant economic and social impact on the Ida-Viru region. The government aims to mitigate these socio-economic challenges with targeted labour market policies, income support and regional development policies to incentivise and support new businesses (Michelson et al., 2020; Murula, 2021).

The policy instruments supporting the green transition in Ida-Virumaa build upon the national strategy Estonia 2035 and the national energy and climate plan for 2030. The regional transition process is guided by the TJTP, which is based on the Ida-Viru County Development Strategy 2019-2030+, Ida-Virumaa Action Plan 2015-2030 and other local and national strategies. The Green Plan of Ida-Viru County proposes actions to realise the vision set out in the Ida-Viru County Development Strategy. Approved by the EC in 2022, the Estonian TJTP focuses on diversifying the economy and addressing socio-economic impacts in the Ida-Virumaa region.

The Ida-Viru Regional JTP was founded in February 2020 by the council of the Association of Local Authorities of Ida-Viru County. It encompasses 52 stakeholder organisations, including local authorities, oil-shale enterprises, labour unions, environmental associations, ministries, NGOs and business representatives. It offers a forum for supporting green and just transition on the local scale. In addition, the Ida-Viru Science Council was founded in February 2020 by the Board of the Association of Local Authorities of the Ida-Viru County to support research and innovation (R&I) activities.

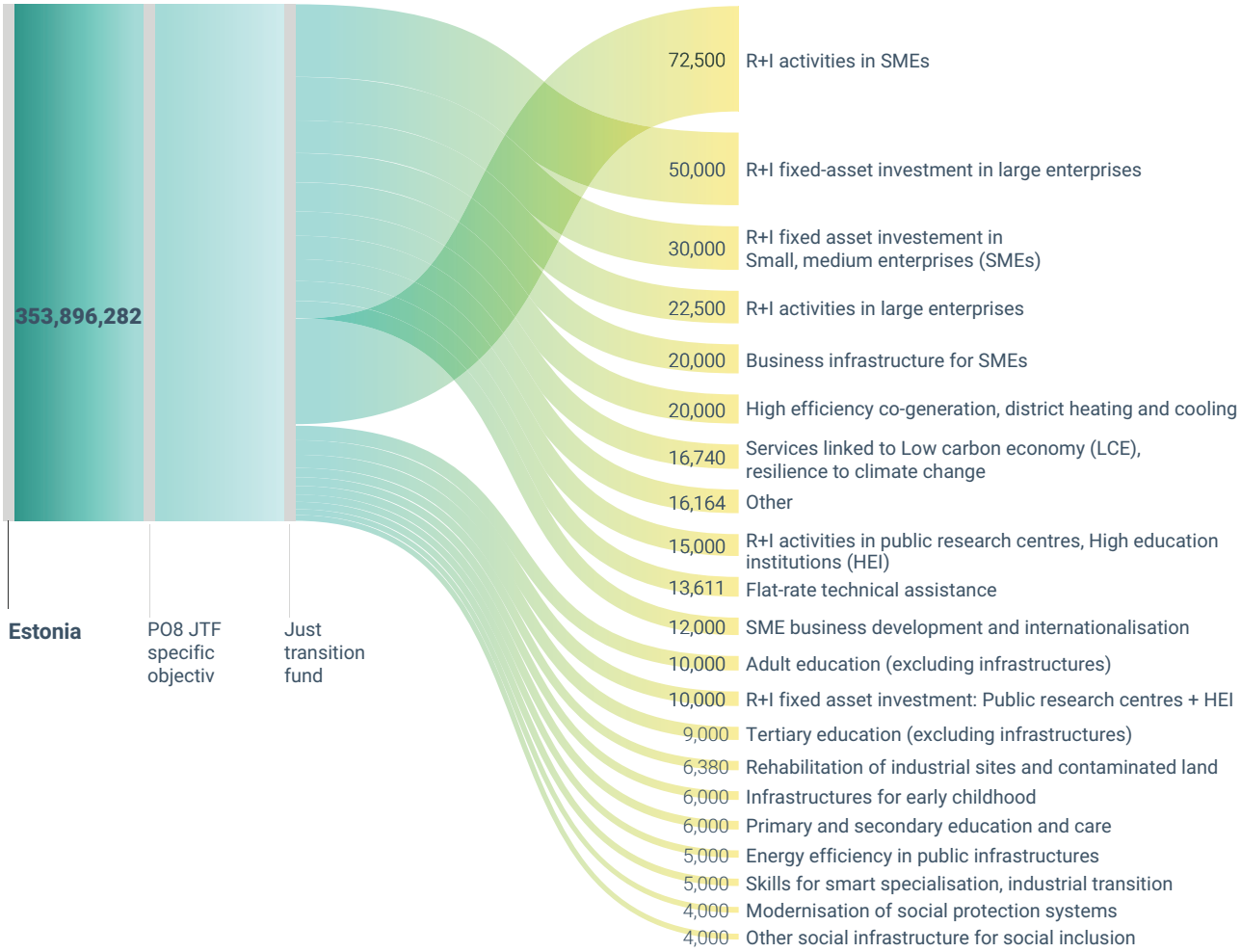
The Estonian TJTP outlines strategies for economic development, environmental improvement and social advancement. It recognises that the ageing population, lack of job opportunities and poor health and social care represent barriers to achieving a just transition in Ida-Virumaa (Government of Estonia, 2022). The Estonian TJTP addresses the challenges based on a transition from the oil-shale sector to a greener economy. The two main aims are (1) to restructure and diversify the local economy and workforce and (2) to address the social, environmental and community aspects of the transition. The measures outlined in the TJTP aim to:

- phase out oil shale in energy production and support green energy production;
- improve the energy efficiency of infrastructure;
- create new businesses by diversifying the economy in Ida-Viru through investment in SMEs;
- support workers and local communities by creating at least 1,100 direct jobs;
- retrain and reskill the workforce, including reskilling 11,000 oil-shale workers to encourage mobility to new high-value-added green jobs;
- modernise cultural and tourist facilities;
- invest in research and development (R&D);
- improve healthcare, by improving the quality and accessibility of social and health services in the region (Government of Estonia, 2022; EC, 2024c).

The Estonian TJTP also specifically focuses on increasing the participation of women, youth and vulnerable people in the labour force (Stapper, 2023).

In total, EUR 354 million will be invested in Ida-Virumaa by the EC to support a socially just green transition (EC, 2022b). The plan also seeks to mobilise EUR 170 million from private investments (EC, 2022b, 2022c). Figure 3.1 provides an overview of how the funds are allocated across the different measures. Investments in R&D and support for SMEs and large businesses are prioritised, with 69% of the budget allocated to economic development. The government aims to foster industrial diversity in Ida-Virumaa by supporting the establishment of new companies in different branches of the manufacturing industry. As an example, the fund is supporting the construction of a factory producing rare earth magnets with an EU grant of EUR 18.75 million (EC, 2023b).

Figure 3.1 Planned EU financing for Estonia based on JTF themes



Note: Figures are from 29 March 2024.

Source: EC, 2024c.

It is estimated that by 2030 around 3,700 jobs will be lost due to the phase-out of the oil-shale sector. Meanwhile 6,335 new jobs are likely to have been created under the Estonian TJTP (Stapper, 2023). The Fund to Cover the Loss of Wages has a budget of 1.5 million euros was established under the TJTP of Ida-Virumaa to channel financial support to workers from the oil shale sector who are switching to new employment in different, less carbon-intensive industries, with benefits attributed in addition to regular unemployment benefits. The aim of the fund is to simplify job-to-job movement and enable the re-skilling of employees (Ida-Virumaa Omavalitsuste Liit, 2022; OECD 2022). Former oil-shale workers will be paid about 30% of their old salary, and not more than EUR 1,000 per month. The payouts are available for different timeframes depending on the worker's seniority in the industry (Ida-Virumaa Omavalitsuste Liit, 2022).

3.4.2 Dimensions of justice

Social tensions have arisen in the Ida-Virumaa region of Estonia due to the negative impacts of oil-shale mining and industry on the health and well-being of local people. Additionally, Ida-Virumaa sits on Estonia's border with Russia and the population is largely

Russian-speaking. There has been weak integration of the Russian-speaking community and despite decades of integration efforts, a socio-cultural divide persists. This has impacted regional development (Pedaja, 2022). The unemployment rate in Ida-Virumaa is above the Estonian average, higher amongst Russian-speakers than Estonian-speakers, and the gender wage gap of 27.9% is the largest in Estonia (Stapper, 2023).

The Estonian TJTP focuses on distributive justice. It aims to even out the development between Ida-Virumaa and the rest of Estonia by making Ida-Virumaa more entrepreneurial and innovative and creating new opportunities for employment. Approximately 49% of the entire workforce needs to be (re)trained to achieve the proposed transition (Stapper, 2023) and Estonian national funds will provide most of the financing for this. The need for large-scale retraining is complicated by a relatively poor command of the Estonian language among the Russian-speaking target community. This is a potential contextual barrier that has not received recognition in the TJTP.

During the planning of the Estonian TJTP, stakeholders emphasised the need to empower locals and encourage existing residents to remain in Ida-Virumaa, as well as attracting new professionals to the region (Pedaja, 2022). To achieve this, additional loan guarantees and tax incentives, large-scale renovation programmes, targeted support schemes and support for community energy projects were built into the TJTP, recognising the importance of building local support to drive the transition (Government of Estonia, 2022). For example, a comprehensive modernisation plan for the housing stock in Ida-Viru County is under development.

The region is further challenged by environmental risks. The health and well-being of local people are negatively impacted by ground-water and air pollution, as well as waste generation from the mining and industrial sectors (Orru et al., 2021). This results in poorer health and more chronic diseases, including asthma in children, than in the rest of Estonia, and overall lower life expectancy and fewer healthy life years ([9]). The TJTP is allocating EUR 12.1 million to improve the quality and accessibility of social and health services in the region in an attempt to address this discrepancy. The funding will be spent on measures such as the development of nursing homes and welfare centres in Ida-Virumaa. Nevertheless, the region finds it hard to attract qualified people from other areas of Estonia to fill positions in the health and social-care sector, though a grant is now in place to attract new workers in the sector to the region (EC, 2024c).

In terms of procedural justice, the decision-making process for allocating funds has been relatively participatory in Estonia, involving national as well as local stakeholders. Academics from the University of Tartu are currently training municipal staff on stakeholder involvement to enable an inclusive roll-out of the plans.

([9]) https://ut.ee/en/content/monitoring-just-transition-processes-ida-viru-county-has-started

3.5 Taranto: transforming the steel industry

3.5.1 Key policy instruments

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The Italian TJTP is integrated with Italy's National Energy and Climate Plan, which provides guidelines for decarbonising the economy and reaching climate neutrality by 2050. The plan addresses challenges in three key areas:

- energy and the environment;
- economic diversification;
- social and employment impacts.

As such, the scope of the TJTP extends across multiple policy domains, encompassing energy, the environment, the economy and social welfare. It targets stakeholders involved in the transition process, including government agencies, industry representatives, academia, civil-society organisations and local communities. By fostering collaborative partnerships and participatory processes, the government aims to ensure that its interventions are contextually relevant and aligned with local priorities and needs (industriAll and Syndex, 2021).

The provinces of Taranto in Apulia and Sulcis Iglesiente in Sardinia are the two areas identified to benefit from the JTF, as the two most vulnerable areas in the context of the transition to a carbon-neutral economy. Situated in southern Italy, Taranto's steel plant, once a pillar of economic growth, has faced increasing scrutiny due to its significant environmental impact and adverse effects on the health of residents. The steel plant was established in the 1960s and quickly became a vital component of Italy's industrial infrastructure. In climate terms, it is responsible for roughly half of carbon emissions in the region.

The steel production activities have led to environmental degradation, especially air and water pollution, and associated health concerns among residents. Indeed, the area has elevated rates of respiratory illnesses, cancer and other health complications (Vagliasindi and Gerstetter, 2015). A recent World Health Organization (WHO) assessment attributed up to 27 deaths per year to pollution arising from the facility (WHO, 2023). In recent years, the steel plant has been significantly restructured in response to legal interventions in an attempt to address environmental violations and respond to the demand for regulatory compliance. However, legal battles and ownership changes have now culminated in bankruptcy and governmental administration.

The JTF is supporting Italy's efforts to address the climate and social impacts of the Taranto steelworks, with Italy receiving EUR 1,030 billion from the EC (industriAll and Syndex, 2021). Under the Italian TJTP, the Taranto area has been allocated just over EUR 795 million (including both EU and national co-financing). This is more than twice the amount allocated to Sulcis-Iglesiente, which is also recognised as a vulnerable area. The priorities and actions focus on the economic dimension of the transition, with nearly half of the funding going to economic diversification and support for the private sector. Other priorities include the social dimension of the transition; 31% of the total fund has been allocated to training and re-training and a smaller portion (4%) to social services and care. By contrast, 19% of the funds is earmarked for addressing environmental issues with a focus on energy.

Green Belt Taranto is an example of a project which the JTF may fund going forward; it is anchored in the municipality's Economic, Ecological and Energy Transition Plan 'Ecosistema Taranto', as well as in the Regional Strategic Plan 'Taranto Futuro Prossimo' (City of Taranto, 2020). It was launched in 2020 by the Municipality of Taranto and aims to green public spaces and mitigate pollution across the city of Taranto with a specific focus on green areas, parks, wetlands and urban forests. Most recently, extensive tree planting has taken place in two areas of the city (Comune di Taranto, 2023).

Other initiatives launched at the local level by the Municipality of Taranto include the Sea Hub to strengthen the seafood supply chain, the Mediterranean Biennial for the creative sector and the Ionic Research Campus for innovation and to counteract the brain drain effect (Regione Puglia, 2023). However, it is important to specify that at the time of writing the projects had not yet been selected and thus they are not currently funded by the JTF programme.

Table 3.4 Priorities, actions and funding allocated to the Taranto area under the TJTP

Priority	Action	Funding allocated
Counteracting the effects of the transition by increasing the share of energy produced from renewable sources for businesses and people and by intervening in situations of environmental impairment.	2.1 Supporting the production and storage of energy produced from renewable sources and energy efficiency of production processes.	EUR 46 million
	2.2 Supporting research projects and the development of the green hydrogen supply chain.	EUR 37.95 million
	2.3 Supporting innovative projects to further the ecological transition and protect natural resources.	EUR 65.8 million
Promoting the diversification of the local production system geared towards countering the effects of the transition.	2.4 Supporting the transition and diversification of the local economy, including through research projects	EUR 205.9 million
	2.5 Strengthening technical support capacity for innovation processes and economic diversification of the territory.	EUR 23 million
	2.6 Supporting entrepreneurial development, business creation and productive investment.	EUR 137 million
Mitigating the social and employment effects of the transition.	2.7 Supporting the creation of retraining courses for at-risk and transition-affected workers and training pathways for economic diversification; strengthening job search services.	EUR 245 million
	2.8 Provision of care and social services.	EUR 35 million
		EUR 795.6 million

Note: Adapted from Agenzia per la Coesione Territoriale (2022). Author's translation.

Source: Agenzia per la Coesione Territoriale (2022).

3.5.2 Dimensions of justice

The Italian TJTP actions in Taranto serve a dual purpose: to mitigate the existing deep environmental injustices in the area while also supporting socio-economic transition in the region. As such, the focus is on distributive and procedural justice.

Distributive justice is addressed through the equitable distribution of resources and opportunities, particularly in the form of job creation and economic diversification measures. Great emphasis is also placed on mitigating the social and employment effects of the transition, notably through the creation of retraining courses for at-risk workers and training pathways for economic diversification, as well as strengthening job search services.

Procedural justice was delivered through participatory decision-making processes, ensuring that local stakeholders have a voice in shaping the transition strategy. There has been doubt, however, about the extent to which these justice dimensions, especially procedural justice, have shaped reality. The Italian TJTP was developed by the consultancy PwC, which carried out interviews with local stakeholders (Generation Climate Europe and CEE Bankwatch Network, 2022). However, there have been concerns that civil-society representatives were not targeted as part of this process. The Agency for Territorial Cohesion also issued an online call for proposals;

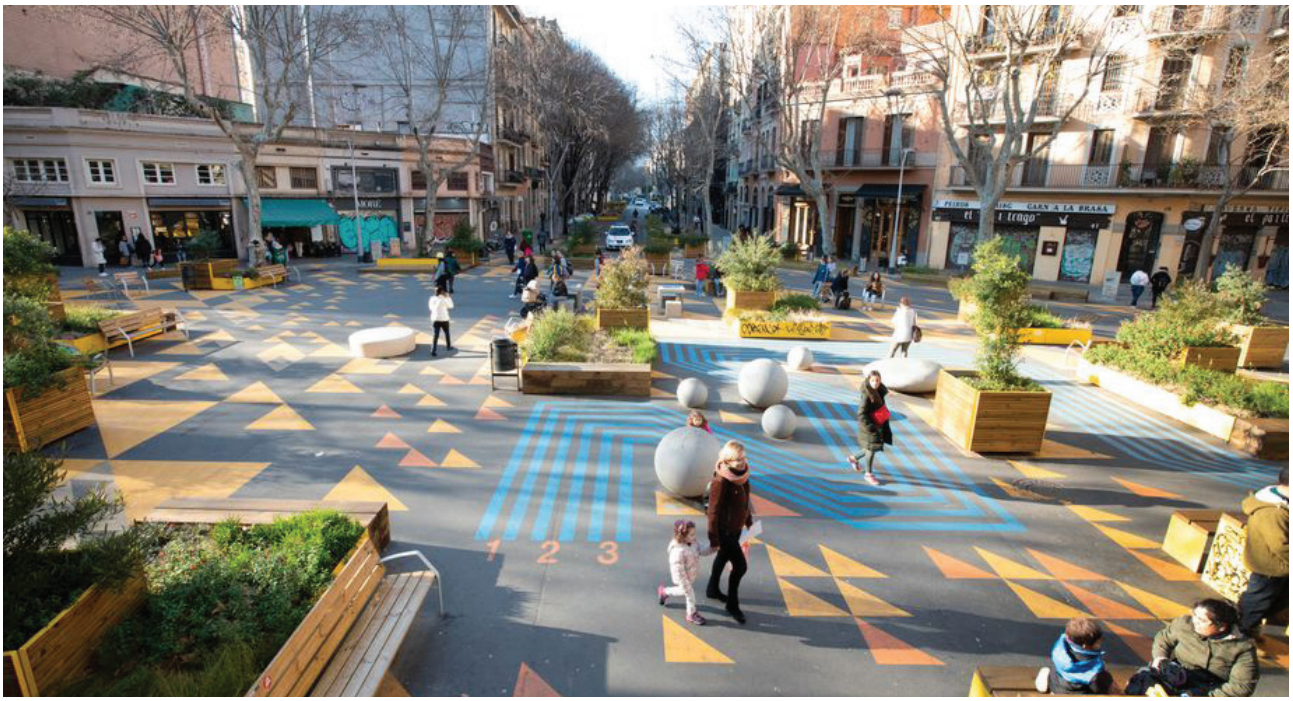
68 proposals were submitted, primarily from business (49) and local authorities (10), with only 9 received from trade unions or NGOs.

The TJTP did consider a set of initiatives launched by the Apulia region and the municipality of Taranto (i.e. Piano energetico ambientale della Regione Puglia (PEAR) 2015-2030, Piano Taranto futuro prossimo, Strategia Ecosistema Taranto, etc); however, it did not build on an existing grassroots effort**,** the citizen-led Taranto Plan initiative, as described in the EEA's recent Just Transition briefing (EEA, 2024b). This grassroots initiative aimed to transform the local economy away from steel manufacturing towards a regenerative economy. Trade unions were able to make their voices heard, both initiating environmental measures on the grounds of worker health and holding public authorities to account (Buccolini and Di Paola, 2023). However, the unions did not support ambitious transformation efforts but rather sought to preserve the steelworks and its jobs.

These kinds of concerns around processes raise questions related to recognitional justice, namely whose perspective is considered, valued and integrated, and distributive justice in terms of how funding is distributed and to whom.

3.6 Barcelona: addressing climate and justice challenges in the urban domain

3.6.1 Key policy instruments



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Barcelona has had a focus on climate and sustainability for over two decades and can be considered a front runner in integrating social justice and environmental sustainability policies. Barcelona's climate efforts prioritise:

- climate justice ([10]), including a fairer distribution of responsibilities, benefits and harms linked to climate change locally and globally;

- citizen action, including the involvement of both citizens and stakeholders.

The city's strategies and plans identify numerous challenges linked to justice; the most prominent of these relate to social inequalities and exclusion linked to poverty, unemployment, job insecurity and a lack of decent and affordable housing (Ajuntament de Barcelona, 2021a). In spatial terms, these problems are distributed unevenly; Barcelona's districts vary in terms of socio-economic conditions relating to income, access to green spaces, water, energy, life expectancy and health. Barcelona also faces environmental risks to health, including air pollution, noise and extreme heat, which impact people's health and well-being.

In 2020, the city ramped up its climate ambition with a Climate Emergency Declaration, which stated the urgency of climate change and called for strengthened actions. Developed as a collaboration between Barcelona city council, the metropolitan government and the regional government of Catalonia, the Climate Emergency Action Plan for 2030 collated and strengthened Barcelona's new and existing strategies and actions with the aim of meeting the more ambitious climate goals set out by the Climate Emergency Declaration. The overall goal is to make Barcelona 'a pioneering city that not only takes responsibility for its contribution to climate change (by reducing emissions) but which is also preparing itself to be less vulnerable to those effects (by adapting) as well as fairer and more participatory (by promoting climate justice and citizen action)' (Ajuntament de Barcelona, 2021a, p. 12). The plan recognises the city's social, economic, gender, territorial and cultural diversity in its actions to achieve climate neutrality.

In addition, the Strategy on Inclusion and the Reduction of Social Inequality in Barcelona 2017-2027 aims to make Barcelona: 'a socially just city by 2027' (Ajuntament de Barcelona, 2018b). The strategy was developed collaboratively by Barcelona city council and civil-society organisations and sets out a roadmap for addressing socio-economic disparities and safeguarding the rights of all residents. From fostering a socially fair and intercultural city to promoting gender equality and environmental sustainability, it sets forth an ambitious vision for a more inclusive and equitable Barcelona by 2027.

Two other important implementation instruments support the city's just and sustainable transition: the Superblock initiative and the Decidim platform. Established in 2016, the Superblock programme aims at making Barcelona a more habitable place for everyone, by regenerating the city while keeping its identity. It is an opportunity for removing cars and, therefore, reducing greenhouse gas emissions while reclaiming and extending public and green spaces in the city, and "filling the streets with life" (Ajuntament de Barcelona, 2016; Ajuntament de Barcelona, 2021b). The project aims to address consequences of the fact that the city is a high-density urban environment, with limited green space, high levels of air and noise pollution and a lack of social inclusion and community life in public spaces (Ajuntament de Barcelona, 2021b). Under this initiative, city blocks were defined and roads transformed into public spaces for pedestrians and cyclists, with green spaces introduced for recreation and relaxation. Building on the success of pilot projects, the 2021 strategy for Superblocks aims to transform entire neighbourhoods into interconnected hubs of green space and social activity. The strategy underscores

([10]) In the context of Barcelona's climate efforts, climate justice refers to 'the need to put the most vulnerable people.

Table 3.5 Key policy instruments supporting sustainability transitions in Barcelona

Policy name [in Catalan]	Policy goal
Climate Emergency Action Plan for 2030 (CEAP) [Pla d'acció per l'emergència climàtica 2030]	Updating the Climate Plan 2018 to meet the more ambitious climate goals set by the Climate Emergency Declaration.
Climate Emergency Declaration [Declaració d'emergència climàtica de Barcelona]	Stating the urgency of climate change based on research and calling for strengthened actions; reducing the city's GHG emissions by 50% compared to 1992, to reach carbon neutrality by 2050 as planned.
Climate Plan 2018-2030 [Pla Clima 2018-2030]	Integrating existing actions and proposing new ones to achieve the climate goals set in Barcelona's Commitment to the Climate, at COP21 in Paris.
Strategy on Inclusion and the Reduction of Social Inequality in Barcelona 2017-2027 [Estratègia d'Inclusió i de reducció de les desigualtats socials de Barcelona 2017-2027]	Reducing socio-economic inequalities and protecting the social rights of the city's inhabitants.
Superblock Barcelona as a government measure to regenerate Barcelona and its neighbourhoods [Mesura de govern Superilla Barcelona per regenerar Barcelona i els seus barris]	Increasing the amount of green space, reducing air and noise pollution and strengthening social inclusion and community life in public spaces.
Decidim Barcelona	Providing a digital platform for democratic participation where citizens can debate, respond and submit proposals.

Barcelona's commitment to social justice, with an emphasis on the equitable distribution of resources and opportunities across diverse communities. It recognises how the physical shape of public and private urban spaces reflects inequalities in our societies and aims to address these inequalities through urban regeneration (Ajuntament de Barcelona, 2021b).

Under the Climate Emergency Action Plan, Superblocks are a tool for urban transformation; they aim to increase the coverage of and access to green space, remove vehicles to create public space and create safe spaces for children in the urban environment. One of the plan's planned actions is to increase the coverage of the Superblocks (Ajuntament de Barcelona, 2021b).

Decidim Barcelona is a digital platform for democratic citizen participation, developed by the Barcelona city council in 2016 in response to growing demands for greater transparency and accountability in governance. Through Decidim, residents can participate in a wide range of civic activities, including policy consultations, budget allocations and community-driven initiatives.

3.6.2 Dimensions of justice

At the heart of Barcelona's policies are a strong and recognised tradition in urban planning also at supra municipal level as well as a commitment to both environmental and climate justice. Considerations related to diverse justice dimensions are high on the city's agenda, whether articulated through an integration of environmental sustainability with social equity as seen in the Strategy on Inclusion and the Reduction of Social Inequality or the emphasis on mitigating pollution and enhancing green spaces as seen in the Superblocks.

Barcelona's policies embrace distributive justice by prioritising interventions in vulnerable and underserved communities and addressing systemic inequities in resource allocation. This is apparent in the spatial targeting of Superblocks and the equitable distribution of funds. These examples demonstrate how Barcelona endeavours to redress disparities and promote fairer outcomes across the urban landscape.

In the Climate Emergency Action Plan, the first line of action is titled 'Taking care of everyone' and it refers to redistributive policies, for example relating to energy and renovations. The city council and its urban regeneration programme provide renovation grants for the most vulnerable households to allow them to improve the energy efficiency, habitability and accessibility of their homes — for people to have 'a decent home to live in'. The programme covers the full cost of renovations (Ajuntament de Barcelona, 2021a).

Vulnerable social groups are well recognised in policy instruments. The Climate Emergency Declaration and the Climate Emergency Action Plan have a focus on putting the most vulnerable people at the centre of the climate emergency and sustainability transitions. As such, Barcelona's policies enable recognitional justice; they acknowledge and address the unique vulnerabilities of marginalised groups in the face of climate change, particularly women, low-income individuals, the elderly and children. The Climate Emergency Action Plan also acknowledges, and to some extent addresses, intergenerational justice — recognising the concerns of future generations — and the vulnerability of other species.

There is a special emphasis on addressing the vulnerability of women to climate change. This is apparent in approaches to health — since women currently experience more heat-related deaths than men; gendered care — since care-givers are predominantly women; and income and energy poverty — which disproportionately affect woman (Ajuntament de Barcelona, 2018b, 2021a). The Strategy on Inclusion and the Reduction of Social Inequality aims to make Barcelona a 'feminist city, where gender fairness is a reality' (Ajuntament de Barcelona, 2018b, p. 7). By ensuring that gender considerations are a key element of climate policies and by fostering inclusive urban environments, Barcelona strives to rectify historical injustices and ensure equitable access to opportunities and resources.

Procedural justice is addressed in the development, content and implementation of Barcelona's policies. At its core, the Strategy on Inclusion and the Reduction of Social Inequality emphasises the importance of citizen engagement and partnership in driving meaningful social change. Through the Citizen Agreement for an Inclusive Barcelona and other collaborative frameworks, the strategy fosters dialogue, cooperation and collective action between the city government and civil-society stakeholders.

Barcelona's Decidim platform provides a tool for citizen engagement and is used to engage with the public about urban environmental planning. It provides a forum for ongoing dialogue and collaboration between residents, policy-makers and civil-society organisations. This helps to foster a culture of transparency, accountability and civic engagement. The platform was used to gather input from citizens as part of a broader consultation process for the city's Climate Emergency Declaration and the development of the Climate Plan. One of the most prominent features of Decidim is its use in participatory budgeting; this allows residents to have a direct say in how public funds are allocated to local projects and initiatives. In 2020-2023, the city allocated EUR 30 million from the municipal budget, approximately 2% of the overall budget, to projects prioritised by residents.

However, while Barcelona has invested significant resources in citizen engagement, participation is not currently representative of the whole population. The Citizen Climate Assembly has attempted to address this; it aims to enhance inclusivity and increase the diversity of representation in citizen engagement for the city's climate policies, with Barcelona being one of the first cities in Spain to launch a deliberative assembly on climate change at a local level.

3.7 Brussels: reducing the city's carbon footprint through food and housing

3.7.1 Key policy instruments

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The City of Brussels Climate Plan is the main policy strategy guiding the city's transition to climate neutrality across sectors and policy domains. Brussels' sustainability transitions are also guided by municipal and regional policy strategies. The municipal Climate Plan for Social Housing and the regional Good Food strategy 2, 2022-2030 are also considered to be important policies facilitating Brussels' low-carbon transitions in the built environment and food system.

Adopted in 2022, the City of Brussels Climate Plan sets out a comprehensive strategy to achieve significant reductions in GHG emissions and combat climate change impacts across various sectors. It includes quantified objectives and actions spanning energy, the built environment, mobility, waste management, water management, food, biodiversity, the economy, culture, sports and tourism. In addition to setting emission reduction targets, the plan incorporates measures to enhance public spaces, promote sustainable transportation and improve access to healthy food. Importantly, the plan emphasises the need for an inclusive transition that benefits all residents (Ville de Bruxelles, 2022). By integrating environmental and social objectives, the policy aims to create a more liveable and equitable city for all residents.

The City of Brussels Climate Plan explicitly frames the transition towards a more sustainable food system with regard to justice as follows: 'Access to healthy and good-quality food is essential for well-being and health. The transition towards a more sustainable and just food system must therefore address not only climatic and environmental issues but also social ones' [translated from French] (Ville de Bruxelles, 2022, p. 40). The plan aligns with regional climate targets and strategies, such as the Good Food strategy 2, 2022-2030, which guides the sustainability transition in the food system in the Brussels region. Besides climate mitigation and adaptation and biodiversity protection, the strategy aims to involve citizens, companies and actors from different policy domains in the sustainability transition.

It also has the objective to facilitate a diverse urban environment and ensuring that everyone has access to healthy and sustainable food and that fair prices are paid to food producers (Région de Bruxelles Capitale, 2022). The strategy envisages an environmentally sustainable and just food system that delivers on food security, guarantees a livelihood to food producers, recognises pluralism in food culture and values and considers the role of non-human animals and nature in the food system. To translate the vision into actions, the strategy puts forward a series of operational objectives, with an associated long list of concrete measures, and budget allocated to them.

Housing is another important sector of focus in Brussels. Housing accounts for a significant proportion of Brussels' carbon footprint as much of the housing stock is old and poorly insulated. Launched in 2019, the Climate Plan for Social Housing aims to renovate over 1,000 social housing units in three city districts to improve energy efficiency, ventilation and security. The plan has a triple objective: contributing to the fight against climate change, improving the living conditions of the residents and reducing their energy bills. The plan aims to benefit those who are most disadvantaged. Permits for the renovation of social housing units in the city of Brussels were granted in 2022 and the Climate Plan for Social Housing is now being implemented. The renovation works are scheduled to be completed by the end of 2025.

Table 3.6 Key policy instruments to support sustainability transitions in Brussels

Policy name [in French]	Policy goal
City of Brussels Climate Plan [Plan Climat du territoire de la Ville de Bruxelles]	Ensuring the city becomes carbon neutral by 2050 and adapts to climate change.
Climate Plan for Social Housing [Plan Climat du Longement Social]	Renovating 1,000 social housing units, thereby reducing emissions from housing as well as energy costs for tenants and adapting living conditions to the heating climate.
Good Food strategy 2, 2022-2030 [La stratégie Good Food 2, 2022-2030]	Ensuring all residents have access to food according to their needs, while also ensuring that fair prices are paid to food producers.

3.7.2 Dimensions of justice

The City of Brussels Climate Plan includes measures to address existing distributional injustices, such as unequal access to good, affordable food, exposure to heat and flooding risks, high energy prices due to poorly insulated homes and unequal access to public green and blue spaces.

The Good Food strategy 2 aims to deliver an inclusive food system and is committed to addressing existing inequalities in food security and nutrition. The strategy envisions the creation of food aid distribution channels to ensure equal access to ecologically sustainable and healthy food, and puts forwards concrete measures to achieve that (Région de Bruxelles Capitale, 2022). It also recognises that the food system should deliver welfare and livelihoods to people who make a living from food system activities and operate within the boundaries of environmental sustainability. The Good Food strategy 2 has facilitated the establishment of neighbourhood kitchens ('cuisines de quartier') with the participation of local supermarkets ([11]) in municipalities in the Brussels-Capital Region.

([11]) A neighbourhood kitchen is open to everyone and is a place where people can learn new recipes and eat healthy and sustainable food at an affordable price, while cooperative supermarkets allow citizens to be involved in deciding what products should be on sale and prices.

Equal respect for a plurality of food cultures and values is at the heart of the Good Food strategy 2; this promotes recognitional justice in the food system transition. The strategy envisions an approach at different levels (district, region, supra-regional) and multipolar (city center, Neerpede area, etc.) that responds to the diverse needs of Brussels' residents, taking into account diverse nutrition and food practices as well as the ecological, socio-economic and cultural specificities of different neighbourhoods. The strategy also recognises the role of both livestock and nature in the food system transition and calls for consideration of the natural environment across all food-system activities.

The Climate Plan for Social Housing addresses distributional justice in the housing sector, aiming to tackle inequalities by improving the living conditions of vulnerable groups with regard to fuel poverty and exposure to heat.

Moreover, recognitional and procedural justice are fostered through participatory processes in the Brussels region; these elevate marginalised voices, perspectives and knowledge systems, ensuring that decision-making reflects the plurality of experiences within the community. Broad participation processes fed into the development of the City of Brussels Climate Plan and the Good Food strategy 2 with the aim of ensuring that the transition to climate neutrality is inclusive of different needs, values and interests. The participatory processes in Brussels involved citizens and food system actors as equal partners in co-producing the strategies, thus moving beyond a simple consultation approach.

The City of Brussels Climate Plan includes measures to ensure procedural justice by involving citizens and young people in Brussels's low-carbon transitions. The plan established two participatory governance instruments, namely the Local Climate Assembly and the Council of Future Generations:

- The Local Climate Assembly builds on the involvement of citizens in designing the Climate Plan and ensures participation in the plan's implementation and evaluation phases. The assembly's task will be to formulate a roadmap, to monitor and evaluate the Climate Plan and to unite as many actors around climate action as possible, ensuring that they are from diverse backgrounds (Ville de Bruxelles, 2022).

- The Council of Future Generations (Conseil des générations futures) involves young people in climate policy-making, which will then feed into council policy recommendations and action proposals.

3.8 Looking at diverse European cases for insights to enable just transitions

Across these case studies several commonalities emerge, shedding light on shared challenges and approaches in different contexts. These common threads underscore fundamental dimensions of justice crucial for enabling a just transition.

Distributive justice has been the key focus in the implementation of the TJTPs and JTF. EU funding has been utilised to support fossil phase-out efforts in selected regions, emphasising support for employment and economic diversification. The TJTPs relevant to the cases presented in this chapter consistently prioritise economic diversification and job creation, highlighting a concerted effort to mitigate the socio-economic impacts of transitioning to a low-carbon economy. In the context of this source of funding, the regions have found it hardest to secure procedural justice. Taranto is an example of how technical and economic considerations largely drove the preparation of plans, with limited stakeholder participation and inclusion.

An analysis by Eurofound, which looks at TJTP implementation in its early stages, focused on case studies in eight Member States; it highlights that multi-stakeholder partnerships are essential for ensuring that the green transition is not only environmentally sound but also socially just. However, information sharing rather than a partnership approach characterised most of the participation processes with relevant groups (Eurofound, 2024).

In this context, the national case study for Spain stands out as good practice. Here the JTF and TJTP complement national just transition efforts and they align with the country's existing Just Transition Agreements, which include public consultation processes and tripartite consultation. They can be seen as a co-governance tool that allows better coordination at the national, regional and local levels. It is interesting to note that Italy and Spain are at opposite ends of the spectrum in terms of stakeholder participation in shaping territorial plans for a green just transition. This is despite the fact that similar industrial relations predominate — characterised by high collective bargaining coverage and centralised but uncoordinated collective bargaining processes and institutions (Eurofound, 2024).

The cases presented also highlight several novel approaches to developing procedural justice mechanisms. Mostly these positive examples are found in cities, as in the case studies on Barcelona and Brussels, but there have also been investments in procedural justice at the national level. This is notably the case for Finland, which has established several participatory fora and mechanisms that grant diverse stakeholders access to decision-making processes relating to the transition. Finland also demonstrates effective engagement with the scientific community, leveraging their expertise to inform policy decisions. While there are examples of good practice, further attention must be paid to strengthening stakeholders' capacity to engage on a just transition process in the future. Building the capacity for people to participate in decision-making is a key component of procedural justice. This capacity is dependent on the availability of and access to reliable information and the readiness to utilise it.

City-level efforts are also clearly better equipped to recognise various vulnerable groups in climate and social policies. City policies are closely aligned with the needs of citizens in the areas of housing (e.g. Barcelona), energy poverty (e.g. Brussels and Barcelona) and food (e.g. Brussels). While certain groups such as women, the elderly, youth and people with disabilities are commonly acknowledged across the different cases presented, some countries also highlight the relevance of considering the different needs, values and experiences of other local minorities when designing and implementing policy measures (e.g. Russian-speaking citizens in Ida-Virumaa or the Sámi in Finland). Recognising vulnerable groups in the planning phase is important in strengthening their capacity to participate in policy-making.

At the EU level, the Urban Agenda identifies priority themes for cities that are relevant for just transitions; these include the inclusion of migrants and refugees, urban poverty, sustainable use of land and nature-based solutions, jobs and skills in the local economy and climate adaptation. The EU Urban Agenda will help build up an urban-policy knowledge base and promote the exchange of good practices. Knowledge sharing within city networks is critical to learning and co-creating solutions to shared sustainability challenges (EEA, 2022g).

Overall, the cases highlight how just transition policy can succeed only if the characteristics of the local context are considered. According to the case studies analysed, both the TJTP and JTF suffer from systemic weaknesses in this respect. The regional case studies showcase powerfully how it requires careful consideration of local contexts, stakeholder perspectives and the broader goals of sustainability and equity in order to navigate the complexities of just transitions effectively. The JTF alone cannot accomplish this. Other actions to support justice in sustainability transitions should include more local solutions accompanied by other policy measures, which support regional and local networking with phasing out of current unsustainable systems and the build-up of sustainable ones.

An integrated and coordinated multisectoral approach to just transitions is needed in order to allow countries to step up their decarbonisation efforts across different key economic sectors. For instance, while Spain is a front runner in European just transition policies, for now it is pursuing a rather traditional approach focused on decarbonising high polluting industries in the energy sector. As previous research has shown, not only are integrated and coordinated policies more effective, they are also better at avoiding any undesired socio-economic effects of climate policies and the green transition (Eurofound, 2021). As such, local experiences in cities like Brussels are highly relevant to developing a comprehensive strategy to achieve significant reductions in GHG emissions and combat climate change impacts across various sectors.

4 Reflections and recommendations for policy-makers

The policy analysis and the case studies presented in the previous chapters indicate how delivering justice in sustainability transitions relates not only to distributive outcomes but also who participates in the decision-making processes and whose concerns are recognised and addressed when setting objectives in the initial phases. If procedural and recognitional justice are not actively addressed and mainstreamed within EU transitions polices, there is the risk of primarily having to rely on measures to correct unequal distribution. This is for instance the case of key EU just transition initiatives, such as the Just Transition Fund (JTF) and the Social Climate Fund (SCF), which are both primarily aimed at correcting the potentially regressive social, economic and environmental consequences of climate change mitigation policies.

While justice is increasingly promoted as a guiding principle in academic and policy discussions on sustainability transitions, it is often applied loosely, poorly understood and frequently conflated with concepts like inequality or inclusion. Moreover, there is a scarcity of conceptual frameworks to effectively integrate justice into the planning and evaluation of transitions (Kaljonen et al., 2024). Importantly, justice frameworks should function as decision-making tools that address climate change and environmental issues as well as social justice goals, making policy-makers more 'justice aware' (Della Valle et al., 2023).

The EEA's conceptualisation of justice in sustainability transitions offers a valuable foundation; it defines justice in sustainability transitions and offers a clear analytical approach, moving beyond the traditional concept of justice as distributional to encompass procedural and recognitional justice. While it is useful to distinguish between these dimensions of justice for analytical purposes, it is important to recognise that in practice, they are highly interconnected and often overlap (Kivimaa et al., 2023; Schlosberg, 2007). Developing a 'policy useful' justice framework requires a careful balance between simplifying complex concepts and preserving their nuanced meanings.

However, moving from concept to practice is often challenging and may have to involve some level of simplification. Designing and implementing policies that promote environmental sustainability while phasing out unsustainable practices is already a complex task. Doing so in ways that also address justice can be seen as an additional burden. Nonetheless, policy-makers are increasingly committed to tackling this dual challenge.

A useful starting point for operationalising the EEA's conceptual framework of justice is developing a set of key guiding questions for policy-makers to consider when designing sustainability policies. These questions should serve as a reflective tool rather than a rigid template, encouraging deeper self-reflection on the understanding and application of justice. Policy-makers should ask critical questions about the distribution of benefits and burdens across different groups of people; the recognition of human dignity, values, identities and capacities of people as individuals and social groups; and inclusivity and fair representation within decision-making institutions, procedures and practices. Additionally, spatial and temporal scales, as well as how vulnerabilities intersect, influence the different dimensions of justice and should be considered by policy-makers.

Table 4.1 presents a set of reflective questions that policy-makers can use when engaging with the concept of justice in sustainability policies. It offers a practical tool to support policy development, implementation and evaluation from a justice-oriented perspective.

Table 4.1 Guiding questions for integrating justice in sustainability policies

Distributive justice — Distribution of benefits and burdens between different groups of people
• How will costs and benefits resulting from planned policy measures be distributed across society?
• What are the cumulative impacts on groups with multiple vulnerabilities?
• How can existing distributive injustices be lessened through planned policy measures?
• What compensation measures can be used to minimise the unfair burdens caused by the transition?
Recognitional justice — Recognition of human dignity, values, identities and capacities of people as individuals and as distinct social groups
• Who are the relevant stakeholders? Are they all adequately recognised and their identity, dignity and capacities valued in policy preparation, decisions and implementation?
• How and to what extent do socio-economic characteristics influence which social group's values and priorities define policy outcomes?
• How can policy measures improve the recognition and capacities of vulnerable or marginalised groups?
Procedural justice — Extent of inclusivity and fair representation in the institutions, procedures and practices of decision-making
• Do key target groups have the chance to participate in the planning, decision-making and implementation of the policy?
• Are diverse participatory measures introduced into procedures to gather knowledge, prioritise outcomes and take decisions?
• Are all those participating in the planning, decision-making and implementation of the policy guaranteed the availability of and access to reliable information?
• How and to what extent do choices around what knowledge is used to underpin decisions (e.g. disciplinary scientific knowledge vs indigenous knowledge) affect the outcomes of decision-making? What knowledge is excluded and who generates that knowledge?
• What measures are introduced to build capacities to participate in decision-making?
Cross-cutting questions on spatial, temporal scales and the intersectionality of vulnerability
• Which spaces are included or excluded when assessing justice and at which geographic and government scales is justice addressed? How does the spatial reach of the policies affect the delivery of justice?
• How do policies address temporal issues of justice, for example the needs of future generations for a safe and healthy environment and the responsibility of current generations to restore past environmental degradation?
• How do socio-economic characteristics, such as gender, class, sexual orientation, level of education, ethnicity, nationality and legal status, interact and interconnect in the generation of injustice?

While these guiding questions can help policy-makers reflect on the different dimensions of justice, in practice, from a governance perspective, it remains a highly complex process to implement sustainability policies. Building on the analysis presented in the previous chapters, we offer recommendations for governing just sustainability transitions across stages of the policy cycle, from agenda setting and policy design, to implementation, evaluation and adaptation. These recommendations are illustrated in Figure 4.1.

Figure 4.1 Key recommendations for the governance of just sustainability transitions

Source: Authors' own analysis.

4.1 Adopting a systems perspective to change

Current justice concerns in EU policies focus primarily on specific regions and sectors, particularly those that are heavily dependent on fossil fuels for energy or GHG-intensive industries. They also consider socio-economic issues, such as quality jobs, workforce re-skilling and up-skilling, energy and transport poverty. Other intersecting vulnerabilities, such as those related to gender or disabilities for instance, have received less attention. Achieving justice in sustainability policies requires a comprehensive system perspective. This involves looking beyond single vulnerabilities, in terms of geography, industry or demography, and recognising how interconnected and complex the systems involved are. It means 'setting up a comprehensive and holistic policy framework where climate, economic (fiscal, taxation), industrial, labour market and social policies build a coherent system' (Galgóczi, 2024, p. 7). It also means addressing policy fragmentation and complexity across various funding mechanisms.

The Council recommendation on ensuring a fair transition towards climate neutrality provides an example of comprehensive policy guidance to Member States. It invites Member States 'to adopt and implement, in close cooperation with social partners as relevant, comprehensive and coherent policy packages, addressing the employment and social aspects to promote a fair transition across all policies, notably climate, energy and environmental policies' (Council of the EU, 2022, p. 43). In December 2023 the EC published its EU-wide assessment of the draft updated NECPs, stressing the need for Member States to adopt more comprehensive just transition strategies.

In its opinion on advancing the EU's just transition policy framework, the EESC reiterated the need for just transition to be embedded in all EU institutions based on a holistic, cross-sectoral and coherent approach. The EESC underscored the potential of the just transition policy framework to safeguard and further enhance the European social model (EESC, 2023). Gradual steps towards this goal could include adopting a more integrated 'eco-social approach' ([12]), which would strengthen the links and synergies between transition policies and welfare policies, particularly in relation to social protection and inclusion systems (Sabato and Vanhille, 2024). The EC review of the EPSR Action Plan (forthcoming in 2025) could represent an opportunity to strengthen the socio-ecological dimension.

([12]) For a discussion on 'eco-social policy mix', see Mandelli (2022b) and Petmesidou and Guillén (2022).

EU industrial policy should also play its part in ensuring a just transition by promoting competitiveness in a fair and sustainable manner, while enabling businesses to become stronger and more resilient. However, despite their deep interconnection, there is currently no clear link between industrial policy and just transitions (Galgóczi, 2024). It cannot be assumed that actions undertaken in the private sector alone will be adequate to ensure a just transition. EU institutions and Member States should actively encourage and support businesses to develop and implement just transition plans at the company level, ensuring proper consultation with and participation of workers.

The Directive on Corporate Sustainability Due Diligence, formally adopted by the Council in May 2024, aims to promote sustainable and responsible corporate behaviour within companies throughout their global value chains. The directive introduces mandatory human rights and environmental due diligence obligations across various stages of a supply chain. It requires large companies to develop and implement a transition plan for climate change mitigation aligned with the 2050 climate neutrality objective of the Paris Agreement as well as intermediate targets under the European Climate Law.

4.2 Considering local context and its interplay with larger geographical scales

The case studies underscore that just transition policies can only be effective if they recognise and address the specificities, inequalities and challenges of local contexts. Successfully navigating the complexities of just transitions requires careful consideration of local realities, involving the perspectives of local stakeholders balanced against broader sustainability and equity goals. For sustainability transition policies to be truly inclusive, they must be complemented by local context-sensitive measures that ensure the recognition and inclusion of all vulnerable groups in the region of transition.

Place-based policy-making enables a deeper understanding of constraints and opportunities that are place-specific; it fosters collaborative efforts that create positive impacts at the local level (Barca et al., 2012). The JTF is an example of a strengthened place-based approach (identifying transition pathways for affected territories and groups and tailoring measures to meet regional needs). Similarly, the Smart Specialisation Strategies, a key instrument of EU Cohesion Policy, emphasise a place-based approach by fostering regional innovation ecosystems that respond to unique local opportunities and challenges.

It is also vital to recognise the interplay between local contexts and larger geographical scales within sustainable development policy and practice. Effective policies must be designed to operate at the appropriate scale, accounting for both local contexts and broader systemic implications across sectors and regions. A thorough analysis of scale ensures that policies are aligned with overarching sustainability and justice goals, maximising their potential to create meaningful impact at multiple levels.

4.3 Capacity building and participation are integral to just transitions

In recent years, it has become increasingly apparent that there is a need for deeper engagement with communities potentially affected by the transitions outlined in the EGD (EEA, 2024d). A just and green transition can only succeed if it garners broad support from workers, employers, individuals and civil society at large. People must be actively involved in both the design and implementation of just transitions (EEA, 2023d, 2024e), making procedural justice essential to achieving these goals.

Successful implementation of just transition policies requires robust mechanisms to build and strengthen capacities across multi-level governance structures. This includes empowering decision-makers at various levels of government to mobilise the necessary resources and empowering citizens to participate in shaping policy processes and engaging in the transition itself. In other words, the capacities needed to engage in social dialogues and collective decision-making need to be nurtured across society to facilitate participation in policy-making and the implementation of just transitions. The case studies offer good examples of citizen engagement in the green transition, including participatory budgeting, citizens' assemblies and youth councils. These experiences could be leveraged more widely to inspire similar efforts elsewhere. Moreover, the concept of unlearning unsustainable practices is an emerging area of interest among transition scholars, highlighting another critical form of capacity building (e.g. Ghosh et al., 2021; van Oers et al., 2023).

Particular attention and resources must be directed towards building the capacity of vulnerable and marginalised groups to participate in the policy process. Until now, most measures aimed at supporting vulnerable groups or citizens have focused primarily on direct financial compensation or information sharing. However, it is essential to recognise the needs of these groups during the planning phase in order to ensure the fairness and acceptability of policy measures. Additionally, it is crucial to give young people a platform to express their views and concerns about the environment and climate change in order to address intergenerational justice, ensuring that policy measures are fair from the perspective of future generations.

The political guidelines for the next EC include plans to organise Youth Policy Dialogues within the first 100 days of the mandate; these will be repeated annually. Scoping and identifying resilient policy options rely on acknowledging different perspectives and varied ways of framing problems; they also rely on defining the knowledge base that should inform them (EEA 2024e).

Groups and communities differ in their capacities to engage in the policy process, respond to change, mitigate risks and take advantage of potential opportunities — both in terms of resources and knowledge. Excluding civil society from policy design and development can lead to inefficiencies and mean that the concerns and priorities of certain groups or regions are overlooked, thereby creating tensions. As such, broad and meaningful participation is essential to ensure that sustainability transition policies are not only environmentally sound but also socially just and resilient.

Public authorities at the regional and local levels are also important actors but they often lack the institutional capacity to plan, prepare, fund, manage, implement and monitor investments necessary for a just transition. Cohesion Policy addresses this by supporting capacity-building through investments combined with technical assistance. It allows Member States to allocate a portion of the available funding to strengthening institutional capacities, while also providing targeted technical support to specific territories through instruments such as the JTP.

4.4 Effective multi-level governance is essential for enabling just transitions

The EU governance model is characterised by multi-level dynamics, involving interactions and decision-making processes across various levels of governance. Guided by the principles of 'subsidiarity' 'proportionality' and 'partnership', the model firmly acknowledges the interactions between these different scales, with the aim of ensuring that appropriate, place-based decisions are made. In the context of just transition policies, the EC and EU policies provide guidance on designing transitions and monitoring progress and facilitating the sharing of experiences across regions; this guidance supports Member States and regions to attain their goals.

Perceptions of justice are shaped by diverse historical, cultural, political and socio-economic factors. Effective multi-level governance allows universal concepts of justice to be adapted to specific local contexts, making it indispensable for achieving a just transition (Krawchenko and Gordon, 2021). Transitions are reliant to a very large degree on policy decisions and activities at the Member State, regional or local levels. Therefore it is important to achieve effective multi-level and multi-actor governance, with policy actions at each level complementing and reinforcing each other (EEA, 2019b). A coordinated and coherent approach across different territorial levels and areas of intervention is crucial. The Council recommendation on ensuring a fair transition towards climate neutrality refers to the importance of a whole-of-society approach, emphasising the need for coordinated policy-making and strengthened operational capacities at all levels, with an active role for regional and local authorities (Council of the EU, 2022).

4.5 Balance just phase-out with just build-up

Sustainability transitions involve interacting processes to phase out unsustainable systems while building up more sustainable ones. For a new sustainable system to emerge, the unsustainable parts of the existing system must be actively phased out. The current EU just transition policy mix largely focuses on the phase-out and transformation of fossil-fuel-based industries and addressing the distribution of costs and benefits. Notably, the JTM supports economic diversification and reconversion of regions that rely heavily on carbon-intensive activities, focusing on areas such as upskilling and reskilling workers, SME investments, fostering new businesses and providing job-search assistance. For a policy mix to enable a just transition, however, policies must address both the equitable phase-out of current unsustainable systems and the build-up of sustainable ones. This requires a shift from reactive to more anticipatory and emancipatory just transition policies (Turnheim, 2022).

Moving forward, the focus should also include fostering a just transition through the proactive development of the desired sustainable systems by incentivising alternative practices that are both sustainable and accessible to all (Pianta and Lucchese, 2020; Jenkins et al., 2020; Stevis and Felli, 2020). Demand-side measures are equally important in this kind of deliberate and emancipatory policy mix for just transition. As highlighted by the International Resource Panel (IRP), inequality both results from and drives unsustainable consumption and production patterns (IRP, 2024). In this context, many recent EU policy initiatives have acknowledged and acted on the need for more sustainable and circular consumption; notable examples include the EU new circular economy action plan published in 2020 and subsequent sector- or product-specific policies such as the EU strategy on sustainable and circular textiles published in 2022 and the Ecodesign for Sustainable Products Regulation, which enters into force on 18 July 2024.

Circularity in consumption involves maximising the value of resources, materials and products by extending their use through practices such as reuse, refurbishment and recycling, while minimising waste generation (EC, 2020a). It can be achieved by consuming less (for instance by extending the life spans of products or promoting the use of sharing models that reduce the number of products in circulation) and by consuming differently by shifting to alternatives (for example through the use of circular products with lower environmental impacts or the use of renewable or recycled materials) (EEA, 2024a). Implementing the Ecodesign for Sustainable Products Regulation effectively, particularly its product-specific circularity criteria, is crucial to mainstreaming sustainable products across the European market; as part of this, product design must play a central role in extending product life cycles, enhancing energy and resource efficiency and ensuring the safe recycling of raw materials.

Even with circular economy approaches to consumption, the ultimate goal of reducing overall material consumption must remain front and centre. Existing policies that target supply and production must be complemented with ambitious demand-side measures to steer consumption in a sustainable direction (EEA, 2024a). Demand-side measures combined with adjustments in infrastructure have the potential to reduce global GHG emissions in end-use sectors (buildings, land transport, food) by 40-70% by 2050 (IPCC, 2023).

Efforts to avoid overconsumption, shift towards more sustainable alternatives and enhance efficiency should all feed into sustainable consumption strategies (Lorek et al., 2021b). Notably, structurally lowering resource-intensive demand in the context of high consumption plays a key role in achieving sustainability transitions, as highlighted by the IRP (UNEP, 2024).

The 10% of households with the highest per capita emissions are responsible for 34-45% of global consumption-based household GHG emissions (IPCC, 2023). Although income is the most significant factor influencing an individual's carbon footprint (Hubacek et al., 2017), there is only limited research examining the lifestyles and associated GHG emissions of the super-rich. Instead, climate mitigation efforts are often aimed at the world's poorest populations, with a focus on issues such as food and energy security (Otto et al., 2019). Given the significant potential for climate change mitigation within high-income groups, the lack of policy attention directed at this population raises concerns about justice and fairness (Lorek et al., 2021a).

The concept of sufficiency is important in this context. It focuses on limiting unnecessary demand and supply to levels that do not harm the environment ([13]). While efficiency seeks to reduce relative environmental impacts, such as the impact per product or unit of consumption, primarily through technological improvements without necessarily reducing demand, sufficiency aims to reduce demand at an absolute level (Spengler, 2016). A growing body of research is investigating the concept of living well within planetary boundaries (see e.g. Fanning et al., 2020; Fanning et al., 2022; O'Neill et al., 2018) and sufficiency is a key idea within such perspective.

To operationalise sufficiency, it is essential to move beyond a focus on technological change and engage with a diverse range of societal actors, including citizens, on the social and behavioural shifts needed to alter established habits and lifestyles. Such behavioural shifts are often propelled by social innovations, which tend to offer more radical approaches to reshaping systems of production and consumption. Unlike technological or business model innovation, however, social innovation seeks to achieve 'social ends by social means'. Hence the link between social innovation and sufficiency lies in their common goal of tackling social and environmental challenges by reducing resource use and promoting sustainable practices. Social innovation can only be fostered by exploring new ways to facilitate dialogue and deliberation, bringing people together around a shared agenda for change and shaping transitions across a wide range of actors (EEA, 2024c).

([13]) In its sixth assessment report, the Intergovernmental Panel on Climate Change (IPCC) describes sufficiency as 'a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human wellbeing for all within planetary boundaries'.

4.6 Monitoring, evaluating and adjusting policies

Sustainability transitions are dynamic, non-linear and continuously evolving processes. To ensure Europe remains on course and upholds principles of justice, it is crucial to implement robust systems to monitor, evaluate and adjust policy based on changing societal needs and new insights. Delivering justice requires a continuous commitment to assessing progress and refining policies. Policy-makers cannot always anticipate the negative impacts of policies, such as inadvertently creating new injustices or exacerbating existing ones. Therefore, it is essential to embed evaluation processes into policy and monitor progress to identify distributional, procedural and recognitional injustices and to enable policies to be adapted to mitigate these impacts.

There are also lessons to be learned from cities that have successfully implemented just transitions. Approaching just transitions at the city-level provides opportunities to explore wider social dynamics and potentially go beyond the economic frame that dominates the EU understanding of just transitions. Measures planned and implemented at the local scale play a particularly important role in ensuring a fair distribution of benefits and reducing burdens for the most vulnerable groups (EEA, 2023f).

It is crucial that we develop indicators encompassing both the environmental and social dimensions of justice. Some proposals suggest that measures to monitor the progress of the EGD should not rely solely on environmental indicators but also include metrics related to the EPSR (McCauley and Pettigrew, 2022). Just transitions could be monitored more broadly if there are up-to-date and accessible data on the EGD action areas and performance in the area of social justice.

The work by ETC CA (2023) provides an overview of existing indicators, frameworks and methodological developments that could be used to measure, monitor and report progress towards just resilience. Although there is no comprehensive dataset or framework specifically designed to monitor and evaluate justice in climate adaptation, the study suggests several approaches that could be adopted at EU level to inform progress.

In its recent opinion on advancing the EU's just transitions monitoring framework, the EESC (2023) proposed that a social dimension should be introduced to the work of Climate Observatories, such as the European Climate and Health Observatory; additionally, it proposed the establishment of an EU Just Transition Observatory. The EC plans to launch a European Fair Transition Observatory in 2025 with a focus on social and employment issues.

The EC also presents an annual assessment of the state of economic, social and territorial cohesion in the EU. The 9th Cohesion Report, published in March 2024, takes stock of Cohesion Policy achievements and draws lessons for the future.

List of abbreviations

Abbreviation	Name
8th EAP	8th Environment Action Programme
CAP	Common agricultural policy
CBAM	Carbon Border Adjustment Mechanism
CEAP	Climate Emergency Action Plan
Cedefop	European Centre for the Development of Vocational Training
CF	Cohesion Fund
COP26	26th Conference of the Parties
CRPD	Convention on the Rights of Persons with Disabilities
DG CLIMA	Directorate-General for Climate Action
DG EMPL	Directorate-General for Employment, Social Affairs and Inclusion
DG ENV	Directorate-General for Environment
DG REGIO	Directorate-General for Regional and Urban Policy
DG RTD	Directorate-General for Research and Innovation
EC	European Commission
EEA	European Environment Agency
EEB	European Environmental Bureau
EED	Energy Efficiency Directive
EESC	European Economic and Social Committee
EGD	European Green Deal
EIB	European Investment Bank
EIGE	European Gender Equality Institute
EPBD	Energy Performance of Buildings Directive
EPSR	European Pillar of Social Rights
ERDF	European Regional Development Fund
ESF+	European Social Fund Plus
ETC CA	ETC on Climate Change Adaptation and LULUCF
ETC CE	ETC on Circular Economy and Resource Use
ETC ST	European Topic Centre on Sustainability Transitions
ETD	energy taxation directive
ETS	Emissions Trading System
ETS2	Emissions Trading System 2
ETUI	European Trade Union Institute
EU	European Union
EUCRA	European Climate Risk Assessment
Eurofound	European Foundation for the Improvement of Living and Working Conditions

Abbreviation	Name
EV	electric vehicle
FAO	Food and Agriculture Organisation
FRA	European Union Agency for Fundamental Rights
GDP	gross domestic product
GHG	greenhouse gas
GreenComp	European sustainability competence framework
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IRP	International Resource Panel
JRC	Joint Research Centre
JTF	Just Transition Fund
JTI	Just Transition Institute
JTM	Just Transition Mechanism
JTP	Just Transition Platform
JTPF	just transition policy framework
KAISU	Keskipitkän aikavälin ilmastopolitiikan suunnitelma
LULUCF	Land use, land use change and forestry
MITECO	Ministry for the Ecological Transition and Demographic Challenge
NECP	national energy and climate plan
NGO	non-governmental organisation
NIECP	National Integrated Energy and Climate Plan
NZIA	Net-Zero Industry Act
PFAS	per- and polyfluoroalkyl substances
PPP	polluter pays principle
R&D	research and development
R&I	research and innovation
RED	Renewable Energy Directive
RRF	Recovery and Resilience Facility
RTRP	Recovery, Transformation and Resilience Plan
SCF	Social Climate Fund
SDGs	sustainable development goals
SME	small and medium-sized enterprise
TJTP	territorial just transition plan
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	value added tax
VET	vocational education and training
WHO	World Health Organization

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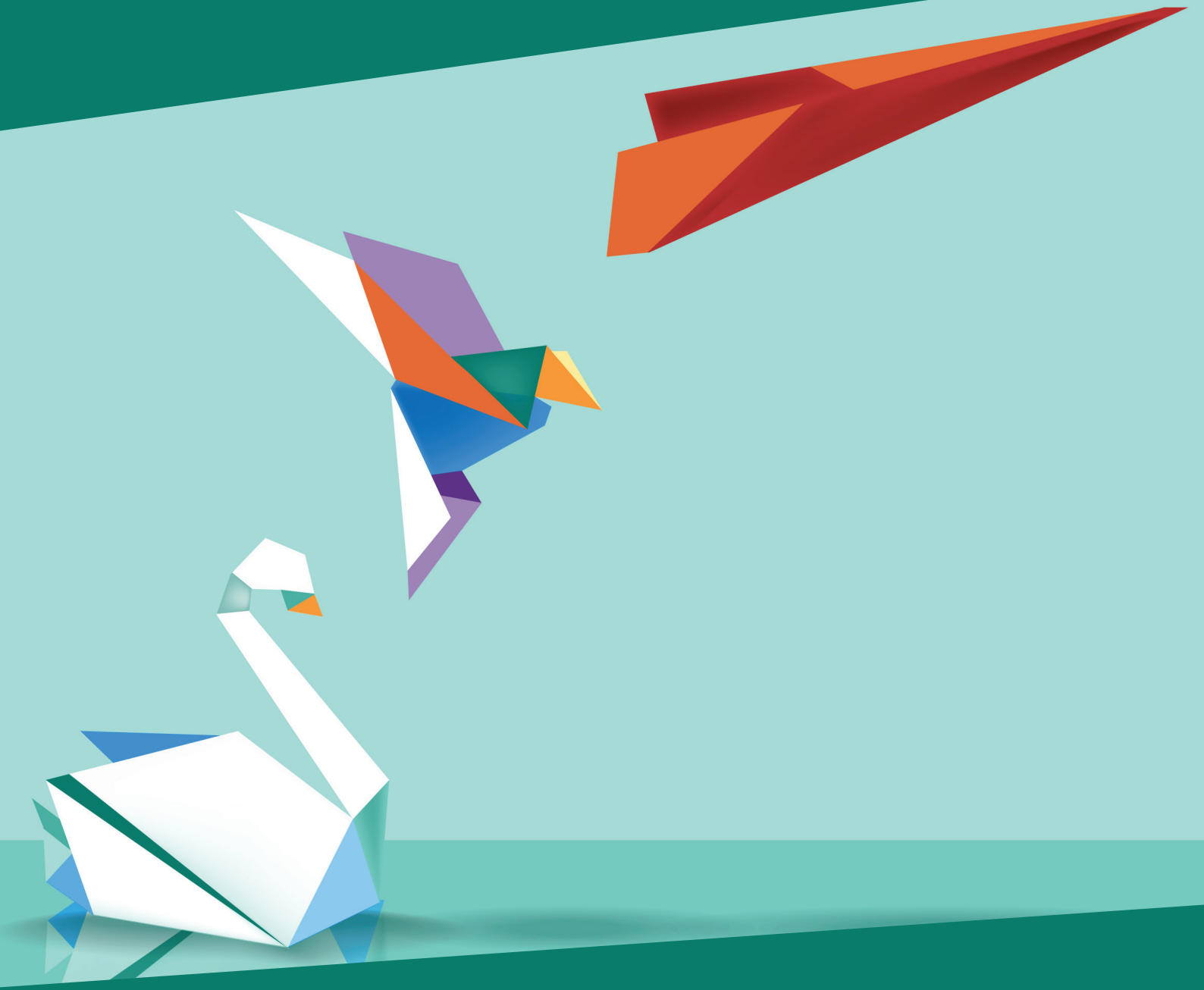

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