

D2.2 Policy frameworks for sustainability transitions: Mapping approaches in the European Union and the Global South

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Authors

Mi Ah Schoyen – Team leader and researcher, OSLOMET

Jacopo Cammeo – Researcher of the SPES Project, University of Florence

Sylvain Eloi Dessy – Researcher of the SPES Project, PEP

Mona Gjerstad – Assistant researcher of the SPES Project, OSLOMET

Sandra Allen – Assistant researcher of the SPES Project, OSLOMET

Therese Dokken – Researcher of the SPES Project, OSLOMET

Luca Lodi – Researcher of the SPES Project, University of Florence

Contributors and peer reviewers:

Mario Biggeri, University of Florence; Jorge Elías Dávalos Chacón, PEP – Partnership for Economic Policy; Andrea Ferrannini, University of Florence; Albert Ferrari, European University Institute; Luca Lodi, University of Florence; Katja Reuter, Social Platform.

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Disclaimer

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1. Introduction

The European Union (EU) is an unequivocal supporter of the 2030 Agenda and the Sustainable Development Goals (SDGs). In fact, the European Commission (2016) has described the 2030 Agenda as the 'blueprint for global sustainable development' and explicitly committed to 'being a frontrunner in implementing the 2030 Agenda and the SDGs, together with its Member States [...]'. Sustainability and processes of transition – or what we may refer to as sustainability transitions – are part and parcel of this agenda (see Biggeri et al., 2023).

Against this background, the general objective of this report is to map – quantitatively and qualitatively – the main existing policy frameworks and strategies for sustainable development (SD) and sustainability transitions (ST) in the EU. In other words, the main research question that we address in this regard is how the EU policies integrate and articulate the notion of sustainability transition. Furthermore, we give a brief overview of regional challenges and transition policy frameworks in the Global South. We do this in recognition of the fact that the 2030 Agenda is global in scope, and sustainability transitions are crucial in the Global South and Global North regions alike.

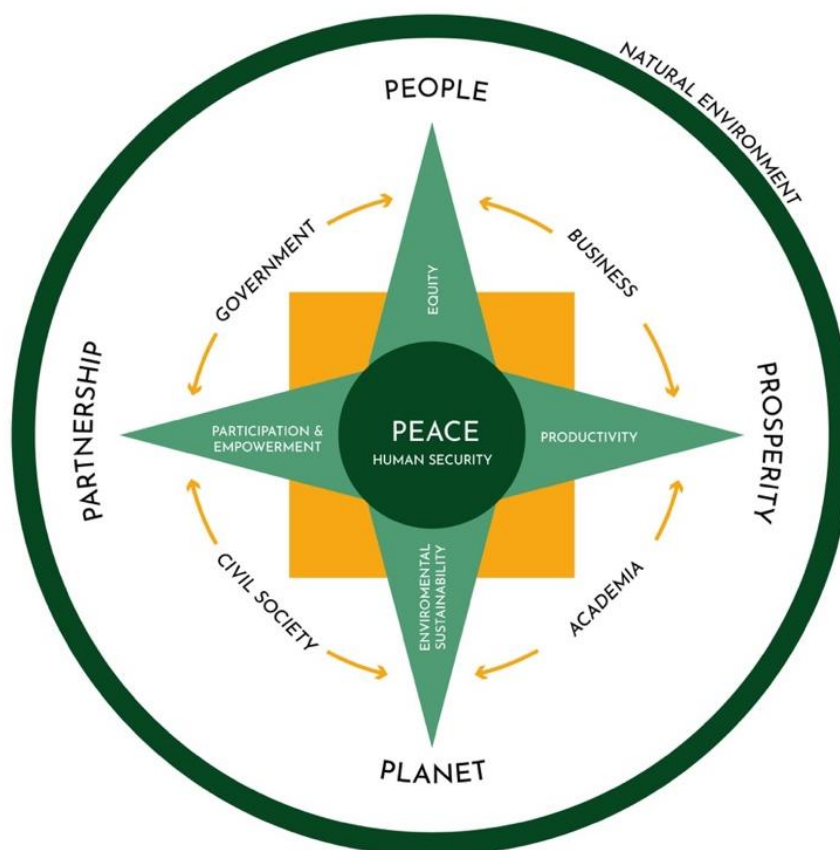
Nevertheless, as this report will demonstrate, there are some significant differences in the development and transition challenges and policy perspectives of low- and middle-income regions in the Global South when compared with the internal sustainability transition agenda of the EU. Furthermore, in the EU transition policy agenda, the global perspective generally sits in the backseat. That is, the EU perspective is mainly inward-looking with a focus on how to foster a fair green and digital transition in the EU and future European competitiveness, an idea sometimes summarised by referring to the notion of 'competitive sustainability' (European Commission, 2023b). However, a core underlying argument of the SPES project and its analytical framework, in line with the 2030 Agenda and the Paris Climate Agreement, is that the challenges of the Global South give Europe and the rest of the Global North a strong moral imperative to contribute to global economic progress and prosperity and carry the main burden of climate action. Ultimately, the strength and efficacy of sustainability transition efforts in the Global North may constrain or facilitate Global South regions' ability to successfully address the five pillars of Sustainable Human Development (SHD).

This is so, not least because of the important global political recognition that countries across the globe have 'common but differentiated responsibilities and respective capabilities' to take climate action' (UNFCCC, 1992). Importantly, regions, countries, and communities across the world differ with respect to the incidence of poverty, the vulnerability to the harmful effects of climate change, the degree of economic dependency on fossil fuel extractions, and the responsibility for global warming. Therefore, in a global perspective and in line with the mentioned principle of common but differentiated responsibility for climate action, Europe, consisting almost exclusively of high-income countries, should assume a considerable share of the costs to address global warming together with the rest of the Global North. Thus, the EU works hard to decouple the traditionally strong link between greenhouse gas emissions and economic growth. In other words, the sustainability transition within Europe centres on the desire to find ways to maintain prosperity while transitioning to a low-carbon economy, and European countries have already intensified efforts to cut greenhouse gas emissions and reduce its ecological footprint. In this report, by outlining the challenges and overarching policy frameworks of three large but structurally diverse regions in the Global South (Africa, Latin America and the Caribbean and South Asia), we place the EU's efforts to foster a transition to a sustainable social and economic model within Europe, in a wider global context. Such knowledge is an important prerequisite for an informed policy debate about European policy solutions and how to produce outcomes that are fair not only from a pan-European perspective but also vis-à-vis the low- and middle-income countries of the Global South.

Underpinned by a normative position on capitalism and structural change, as well as on objectives and factors shaping transition processes, the overarching ambition of the SPES project is to contribute to shape a new sustainability model for the future of our societies. Its normative starting point is that the lives of human beings – as agents, beneficiaries and adjudicators of progress (Sen, 1990) – and the sustainability of our societies – in terms of Planet, People, Prosperity, Peace and Partnership (Sachs, 2015; United Nations, 2015) should be the ultimate concern for any government intervention at all levels.

Therefore, the project suggests that the Sustainable Human Development (SHD) paradigm offers a clear integrated vision for sustainability transition processes and help identify their constituent pillars within which action is required, their driving actors and triggering factors. Following this logic, sustainability transitions are about the reconciliation of potential contradictions between economic, social and environmental spheres.

Figure 1. The SPES Framework



Source: Figure 12 in Biggeri et al., 2023

In short, the novel SPES analytical framework (see Biggeri et al., 2023) – visually presented in Figure 1 – is built as follows:

In short, the novel SPES analytical framework (see Biggeri et al., 2023) is built as follows:

We refer to the 5 Ps of the 2030 Agenda – People, Prosperity, Planet, Partnership, and Peace – as the main critical areas of action, thus referring to sustainable development as overarching policy framework at global level.

We identify the corresponding objectives – productivity, equity, environmental sustainability, participation & empowerment, human security – reinterpreting the original formulation of the pillars of the human development paradigm to better link them to the 5 Ps, thus fully embracing a Sustainable Human Development vision.

We rely on the Quintuple Helix model to introduce the constellation of actors – government, business, academia, civil society, natural environment – potentially driving the transition towards Sustainable Human Development, assigning them a dynamic role for all pillars.

We stress the importance of inner transformation and reflexivity as transformative elements allowing to trigger the transition towards Sustainable Human Development by shaping different means of implementation.

In this way, the SPES conceptual framework is both theoretically grounded and policy-oriented, offering a useful and integral guiding vision for policymakers, based on ecological sustainability and human development for all. Importantly, the framework includes material and immaterial dimensions of life and well-being.

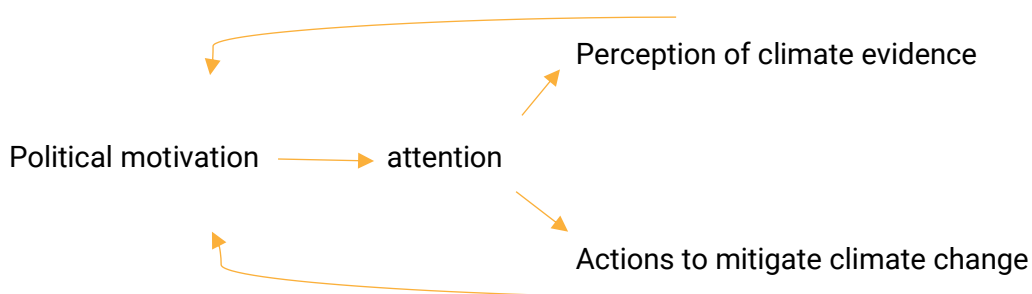
Building on the SPES framework, the purpose of the report is twofold. First, it aims to help policymakers and scholars navigate a very extensive and highly cross-cutting policy landscape that consist of many layers of goals, actors, and measures. Furthermore, the report serves to situate the SPES project within this landscape. As such, it feeds into other SPES work packages by offering a basis for the identification of specific areas in which the implementation of SPES research activities may inform policy debates and achieve policy impact.

In the next section we briefly describe the main issues at stake in the context of global and European debates on sustainability. Related to this, we introduce the concepts of sustainable development and sustainability transition. In section 3, we measure quantitatively the prominence of the notions of sustainable development and sustainability transition in EU policy. Moreover, based on a structural topic modelling exercise, we identify the main themes that addressed in the EU publications that are classified under the sustainable development heading. Section 4 presents a qualitative mapping and assessment of thirteen strategies or policy initiatives that reflect current EU policy efforts to foster the transition to an economic and societal model that is consistent with the five pillars of the Sustainable Human Development paradigm and the SPES framework. In section 5 we switch the geographical perspective from the European continent to the Global South to give evidence to the claim that low- and middle-income regions. Finally, section 6 offers briefly reviews the findings in light of the SPES framework and makes a set of recommendations for future policy development. The report relies mainly on information from official EU policy documents and secondary policy and academic literature. Moreover, the analyses in sections 3 and 4 also draws on insights obtained in a set of semi-structured interviews with officials from eight different Directorates-General (DGs) of the European Commission, conducted by a team from the University of Florence between July and September 2023. To safeguard the anonymity of the interviewees we do not report any verbatim statements or associate with specific DGs the pieces of information or opinions that we refer to.

2. Sustainability in a global and European perspective

Over the last decade, awareness of the importance of sustainability issues has grown (Sachs et al., 2021), thanks to the mutual reinforcement that institutions and academia on the one hand and civil society on the other have given each other (Drews & Van den Bergh, 2016). The trend is also driven by the experience of climate-related shocks happening with increased intensity and frequency. Movements such as “*Fridays for Future*” have quite successfully presented the climate crisis as an issue of intergenerational equity and thereby received considerable public attention. Generally, as conceptualised in Figure 2, the pressure of environmental movements has indeed resulted in a push towards more climate-justice oriented policies (Huxster, 2022).

Figure 2. Motivation to mitigate climate change

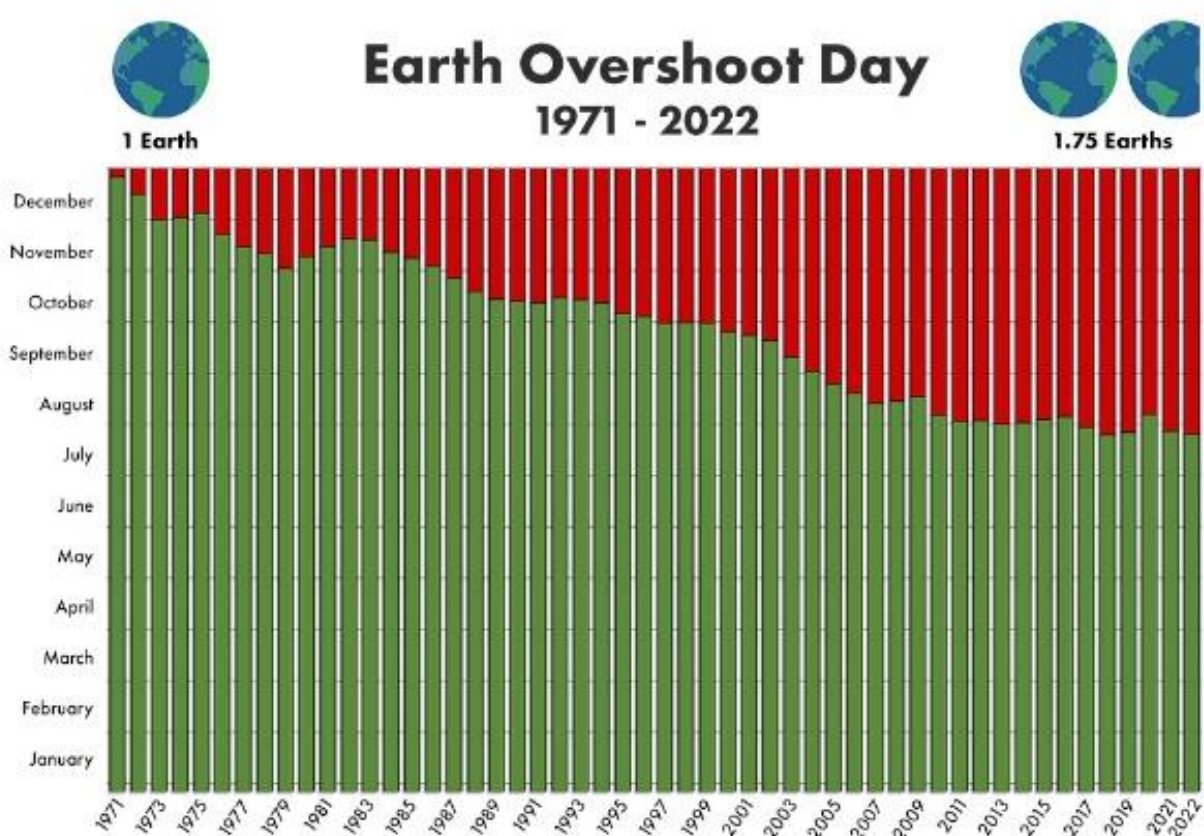


Source: Huxster, 2022

The widespread consensus on the critical nature of the current climate crisis and the threats posed by its economic and social consequences is supported by evidence almost universally recognized by the scientific community. From the Intergovernmental Panel on Climate Change (IPCC), the United Nations agency responsible for assessing the effects of climate change, to independent think tanks like the Global Footprint Network, there are many examples of research confirming the seriousness of the situation and the need for countermeasures. Figure 3, for instance, pertains to the Earth Overshoot Day. This is the day of the year when humanity's demand for natural resources and ecological services exceeds the Earth's capacity to regenerate those resources within that same year. The fact that the precise date of the Earth Overshoot Day has moved forward by several months between 1971 and 2022 reflects humanity's increasingly unsustainable consumption of natural resources and the associated negative impact on the planet's health. The general trend is driven by factors like population growth, the extraction of non-renewable resources and related greenhouse gas emissions. However, it is worth noting that if we move to the country level, the calculated dates of the Country Overshoot Days differ tremendously. In 2022, at opposite ends of the year, Qatar and Luxembourg recorded Country Overshoot Days in February while Jamaica, Ecuador and Indonesia

reached the Country Overshoot Day only in December, suggesting that these countries' biocapacity almost matches their ecological footprints.¹

Figure 3. Earth Overshoot Day 1971-2022



Source: Global Footprint Network, 2022

Together with the 2030 Agenda the 2015 Paris Agreement on Climate Change (PACC) forms the main global policy backdrop. These global agreements define the post-2015 developmental objectives for 2030 and beyond for all countries across the world. As opposed to the Millennium Development Goals (MDGs), incorporated in the Millennium Declaration from year 2000 (UN General Assembly, 2000), the 17 Sustainable Development Goals and 169 related targets which replaced the MDGs, are global in their outreach. That is, they are not only about actions to foster development and progress in the worlds' poorest nations. Instead, also countries in the Global North, including the member states of the EU, are expected to work towards implementing the 2030 Agenda at home.

The SDGs provide an agenda for development from 2015 to the 2030s, covering all aspects of development, including health and education, energy, climate change, and partnerships (Curran et

¹ Country Overshoot Days 2022, available at: https://www.overshootday.org/content/uploads/2022/01/Country_Overshoot_Days_2022.pdf (accessed 5 November 2023).

al., 2018). At the country level, national governments are expected to 'proactively mainstream the 2030 Agenda into [their] national planning instruments, policies, strategies and financial frameworks' (UN General Assembly, 2019). This means that domestically actions to promote the 17 SDGs centre on developing national strategies or plans which should contribute to reaching measurable and achievable national targets.

In parallel, the Paris Agreement on climate change – a legally binding international treaty ratified by 196 parties at the UN Climate Change Conference of the Parties (COP21) in December 2015– requires that countries submit their national climate action plans, known as Nationally Determined Contribution (NDC), highlighting economic and social changes underlying their long-term strategies to reduce greenhouse gas emissions.² In recognition that Global North and Global South countries needs differ and has to be treated differently, with the former shouldering the largest cost of setting the world on a more ecologically sustainable path, a guiding principle of the PACC is one of equity and common but differentiated responsibilities and respective capabilities to take climate action. Together the two agreements represent the main global policy frameworks within which countries, as a region, sub-region, or individual nations, adopt and implement public policies with a view to meeting present needs without compromising future generations' ability to meet their own.

Historically, sustainable development (SD) as a concept and as a policy agenda originates in the 1980s with the work of the World Commission on Environment and Development. With the publication in 1987 of the report 'Our Common Future' (also known as the 'Brundtland Report'), SD gained significant attention. The Brundtland report presents the famous definition of SD as "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (United Nations, 1987). It is a multidisciplinary concept that emerged in response to the growing recognition that human activities, especially economic and industrial processes, were exerting unsustainable pressures on the environment and natural resources (Daly, 2006). SD strives to create a harmonious and resilient society where economic prosperity, social equity, and environmental conservation are interconnected and mutually reinforce each other (see also Biggeri et al., 2023).

SD is a dynamic and evolving field that has gained increasing importance in policy, business, and academia. It has led to the development of multiple tools, indicators, and frameworks for assessing sustainability and guiding decision-making processes. As highlighted above, global efforts to promote sustainability are spearheaded by the 2030 Agenda and United Nations' Sustainable Development Goals (SDGs) (United Nations, 2015). At the theoretical level, the Sustainable Human Development (SHD) approach advanced by Haq (1995) is one of the most important derivations of the SD framework; it proposes a holistic perspective according to which environmental protection and economic prosperity must be accompanied by equitable society and people's participation and empowerment (Biggeri & Mauro, 2018). The SPES project embraces this perspective as a theoretical and analytical lens that should guide the overall research design and interpretations of empirical evidence emerging from project activities.

A sustainability transition (ST) is another concept that has become important in the last two decades (Köhler et al., 2019). It refers to a systemic shift in societal practices, behaviours, and structures towards more sustainable and environmentally responsible modes of operation. In academia, ST is defined as a "*long-term, multi-dimensional, and fundamental transformation process through which established socio-technical systems shift to more sustainable modes of production and consumption*" (Markard et al., 2012, p. 956). It is then important to underline that ST involves a

² See The United Nations, The Paris Agreement, at <https://unfccc.int/process-and-meetings/the-paris-agreement> (accessed 23 September 2023).

fundamental transformation in various aspects of society, including the economy, technology, culture, and governance, to address pressing environmental and social challenges (Loorbach & Rotmans, 2006).

As they both revolve around the main objective of attaining a more sustainable and environmentally responsible future, SD and ST are concepts that are closely related. SD and ST share the common goal of addressing environmental, social, and economic challenges simultaneously. Conceptually, they are interdependent with dynamic and adaptive related strategies. At the same time, SD and ST are different in terms of temporal perspective and scope: SD takes a broader and longer-term perspective and encompasses a wide range of activities and strategies, whereas ST focuses on specific, transformative changes that are necessary to shift society onto a more sustainable path (Markard et al., 2012). Nonetheless, the two concepts are strongly connected since ST are particular and frequently transformative activities or processes that advance the larger objective of SD (European Environment Agency, 2016).

Considering the European context, SD is a core principle of the Treaty on EU and a priority objective for the EU's internal and external policies. ST, namely, how to ensure that the ecological transition is fair and inclusive, is a further concept that assumes a politically highly salient position at the European level. Since the turn of the millennium, the EU has been actively engaged in promoting SD and ST through several initiatives (European Commission, 2023a). These publications and laws aim to provide guidance, strategies, and policies to foster economic growth, social inclusion, and environmental protection (Borchardt et al., 2023). We can highlight some key documents and policies during this period. One of the first examples is the initiative called "A Sustainable Europe for a Better World: A EU Strategy for Sustainable Development". This strategy proposed in 2001 laid the foundation for the EU's sustainable development efforts, emphasizing the integration of environmental, economic, and social dimensions across EU policies. On the environmental side, the EU Emissions Trading Scheme (EU ETS) was introduced in 2005; it is a cornerstone of the EU climate policies, establishing a cap-and-trade system for greenhouse gas emissions, covering several sectors including power generation, industry, and aviation (Verde & Borghesi, 2022).

In 2006, the "EU Sustainable Development Strategy" presented a comprehensive framework for SD, setting long-term objectives and identifying key actions in areas such as climate change, energy, transport, and sustainable consumption and production. It was followed in 2010 by the "Europe 2020 Strategy", which was the overarching EU strategy focused on smart, sustainable, and inclusive growth, aiming to promote SD by setting targets in areas like employment, education, poverty reduction, energy efficiency, and greenhouse gas emissions.

The alignment with the United Nations' Sustainable Development Goals (SDGs) and the related "2030 Agenda for Sustainable Development" is another milestone of the European policies on SD, considering that the EU adopted this agenda in 2015 to guide its SD efforts until 2030 (Borchardt et al., 2023). In the same year, the EU implemented a Circular Economy Action Plan to promote the transition to a circular economy, aiming to reduce waste generation, increase recycling rates, and improve resource efficiency. The plan included measures to promote eco-design, encourage recycling and reuse, and address the issue of planned obsolescence. The European institutions also played a crucial role in negotiating the Paris Agreement 2015 (UNFCCC, 2016), which aims to limit global temperature rise well below 2 degrees Celsius. At the same time, the EU committed to reducing its greenhouse gas emissions by at least 40% by 2030 compared to 1990 levels.

The social dimension is central to the initiative called the "European Pillar of Social Rights" (EPSR), which is a set of principles and rights proclaimed by the European Parliament, the Council, and the Commission in 2017 at the Gothenburg Summit. It promotes fair and well-functioning welfare systems in the EU with the aim to create a more cohesive and inclusive society. The EPSR consists

of 20 key principles organized into targeting equal opportunities and access to the labour market, fair working conditions, and social protection and inclusion. To deliver on the Pillar the EU has subsequently adopted the EPSR Action Plan that turns the principles of the Pillar into actions. Importantly, the Action Plan endorsed three EU headline targets on employment, skills and poverty reduction to be achieved by 2030. The EPSR follows a series of not legally bindings strategies and policies in the social domain before the EPSR. Just to mention a few of them, the European Employment Strategy (EES) introduced in 1997, the European Commission Recommendation on active inclusion of people excluded from the labour market published in 2008, the commitment of all member states to ensure employment for young people called Youth Guarantee, and, in 2010-2011, the Social Investment Package designed to support citizens with a high risk of poverty and social exclusion.

Another landmark initiative is the "European Green Deal", launched in 2019, whose purpose is to make the EU the world's first climate-neutral continent by 2050. It sets out a comprehensive plan to transform Europe's economy, industries, agriculture, and transport sectors to achieve sustainable and inclusive growth. Among its key objectives, we can mention achieving climate neutrality, promoting clean energy such as offshore wind energy, encouraging sustainable mobility, emphasizing the transition to a circular economy, seeking to protect and restore biodiversity, and supporting sustainable farming (European Commission, 2019a). We return to the European Pillar of Social Rights Action Plan and the European Green Deal in section 4.

3. Sustainable development and sustainability transition in EU policy

In this section of the report, we perform a quantitative mapping of how prominent the notions of sustainable development and sustainability transition have been in EU policy documents since 2000s. The purpose of this exercise is to gain insights into how the EU is embracing sustainable development and sustainability transition in its policies and strategies.

3.1. Sustainable development and sustainability transition over the last 20 years of EU publications and laws

If the relevance of the concepts of SD and ST in European policy mechanisms has increased (Biggeri & Ferrannini, 2020), we should find a strengthened presence of these notions in publications and legislative initiatives over the last twenty years. To confirm this hypothesis, we performed a search on the official EU database called Publications Office of the EU in August 2023. The search engine was selected after careful review and consideration. The screening of the existing publications was based on a general search of the titles, abstracts and keywords of using the bigram "*sustainab* develop**"; then a similar exercise was replicated for the term "*sustainab* transition*".

For both searches, the sample was selected through the following criteria:

- first by Collection, using what the database calls "EU Publication" and, for the second analysis, "EU Law";
- secondly, by Language, selecting English;
- finally, by Authors, including all EU Publications published by a number of institutions.³

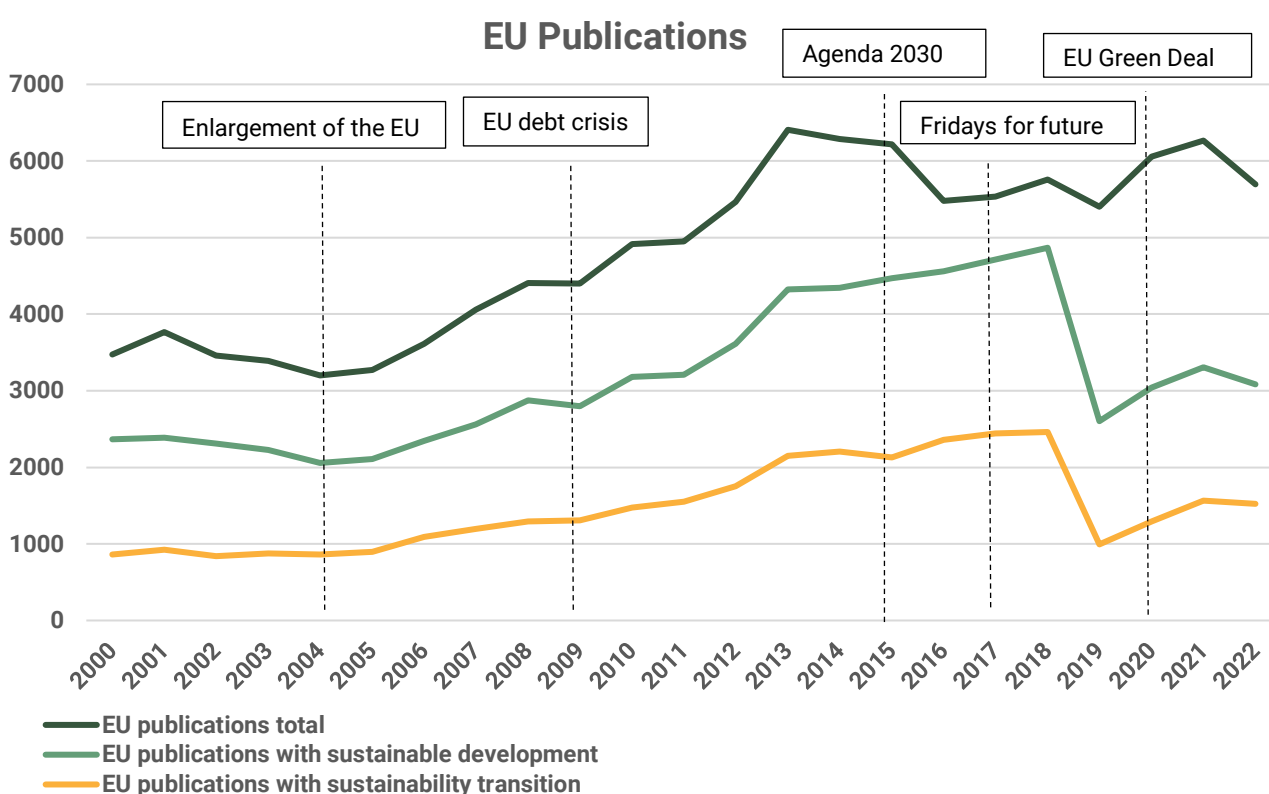
The time period included in the analysis was 2000 to 2022.

Figure 4 shows that both SD and ST are keywords frequently used in EU publications. The frequency is increasing until 2018. From 2018 to 2019 there is a significant decline in the presence of these concepts. The main conceivable reason is related to a change in narrative that roughly coincides with entering office of Ursula von der Leyen as President of the European Commission in 2019. Since then, the European institutions have considered sustainability issues in terms of strategies and initiatives centred on notions like green transition, Green Deal, and Just Transition. Relatedly, this trend might also suggest that since the Paris Agreement and the endorsement of the SDGs, which represent a global development agenda and not only the world's poorest nations, the internal

³ European Parliament, European Council, Council of the European Union, European Commission, Court of Justice of the European Union, European Central Bank, European Court of Auditors, European External Action Service, European Economic and Social Committee, European Committee of the Regions, European Investment Bank, European Ombudsman, European Data Protection Supervisor, Publications Office of the European Union, European Personnel Selection Office, European Union, EU body or agency, Representations and Delegations, and a general category identified in the database as Other organisations.

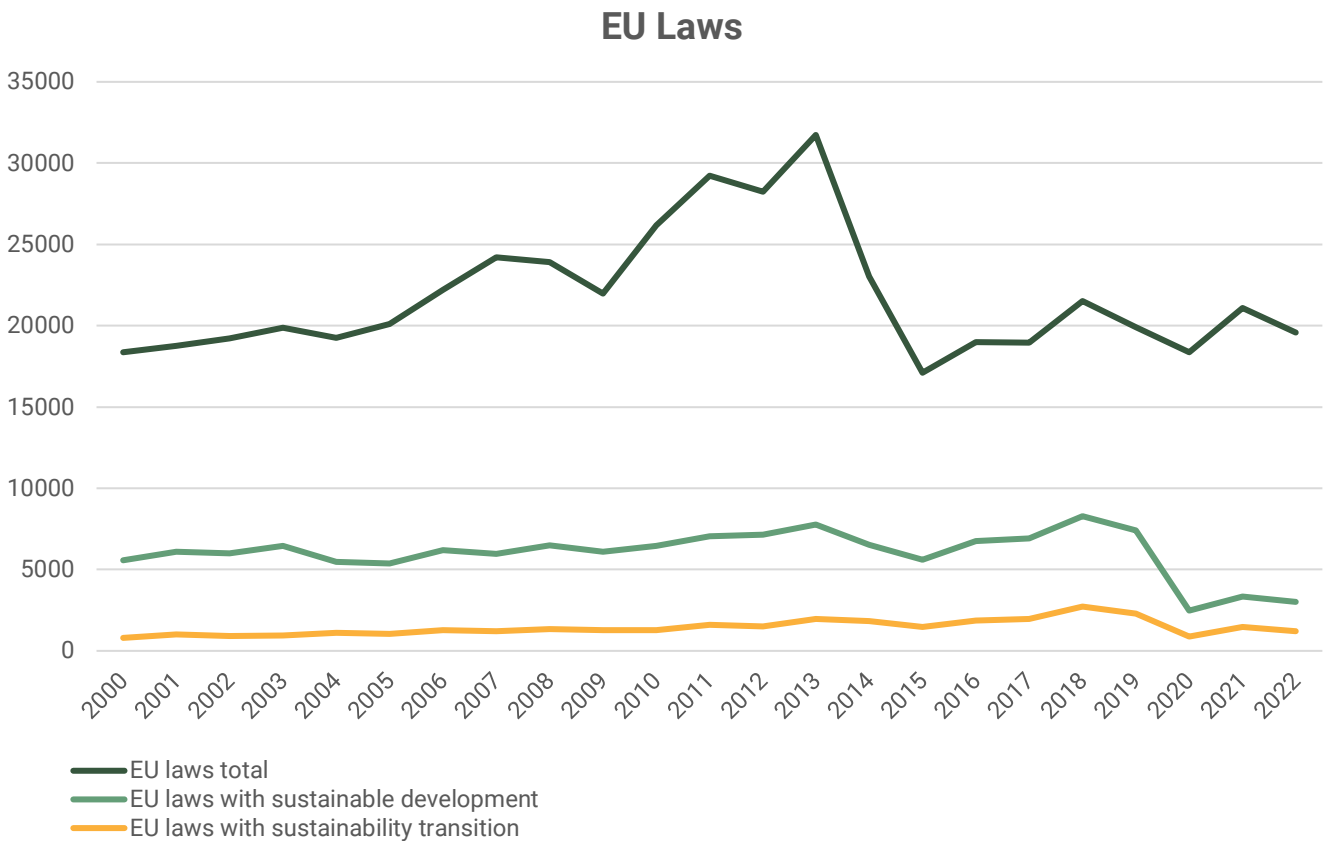
European transition has gradually risen on national political agendas across the EU and to some extent been integrated into EU internal policy programmes. As a result, explicit references to the external (or global) perspective and more generic references to ‘sustainable development’ or ‘sustainability transition’ may have moved somewhat to the background. It is likely that the need for deep structural changes and sector-specific actions draws political attention to intra-European and domestic approaches to sustainability transitions and generate more daily debate than questions of how to support sustainability transitions globally (see section 4).

Figure 4. EU publications on Sustainable development (SD) and Sustainability Transition (ST)



Source: Authors (based on Publications Office of the European Union, 2023)

Figure 5. EU laws on Sustainable Development and Sustainability Transition (ST)



The second search was on all kinds of EU legal acts in the Publications Office of the European Union database (Figure 5), covering the same two terms and the same period as in Figure 4. As illustrated in Figure 5, there is a similar trend although the presence of the two topics is less common than in institutional publications. Notably, from 2019 to 2020, there was a sharp drop in the number (and share) of both terms. Possible interpretations for such a trend could include changes in Commission and member states’ priorities, shifts in public or political sentiment, or variations in the emphasis placed on sustainability in different policy areas. It is certainly likely that our keywords have been replaced or supplemented by other terms or phrases in EU publications, especially as language evolves, different concepts gain prominence and efforts to develop a low-carbon and skills-based European economy intensify. Terms like “twin transition”, “green strategies,” “bioeconomy,” or “beyond growth” represent only a few examples of notions that are closely related to sustainability and are often used to describe specific aspects or approaches within the broader concept of sustainability. To get a more accurate understanding of this trend we decided to perform a further analysis on the portal of the Publications Office of the European Union.

The portal offers the possibility to group searches by themes. Therefore, we checked the content of selected documents of European institutions related to sustainable development. We opted to study the content of all executive summaries in the sustainable development thematic category, focusing the investigation on the period 2011-2023. The total number of documents analysed over the chosen time period is 799 executive summaries.

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The first examination is a textual analysis performed in R® software, resulting in three different tag clouds (also known as word clouds) for three selected years; 2011, 2016 and 2021 (Figure 6). The tag clouds show the most frequently used words for each chosen year.

Figure 6. Sustainable development tag cloud, 2011 (N=30), 2016 (N=48), 2021 (N=130)



Source: Authors' elaboration (based on Publications Office of the European Union, 2023)

From this initial analysis, it appears that while certain words (e.g., policy, European, environmental) are constantly present, there are themes that have only emerged in the last period, such as “stakeholders”, “social”, “local”. In the later years, the tag clouds appear more complex and varied, both quantitatively and qualitatively. However, they do not seem to demonstrate a greater relevance of the social dimension of sustainability.

The number of executive summaries differed for each of the years analysed, increasing from 30 in 2011 to 130 in 2021. This may have influenced the increasing complexity of the tag clouds from one year to another. Thus, we decided to proceed with a more in-depth investigation of the recurring topics in the selected sample of publications.

3.2. Structural topic modelling

To analyse the sample of texts, we conducted a structural topic modelling (STM) using the methods of Roberts et al. (2019). STM is a statistical analysis of textual data based on a natural language processing technique that identifies and extracts underlying topics or themes from a collection of text documents according to their metadata.

Given the substantial volume of documents at our disposal, we employ a statistical methodology to categorize words into coherent groups, taking into account specific attributes of the documents. We limit our scope to the year of publication, which yields the most interpretable results, to discern the predominant themes within these reports. Each group of semantically similar words is indicative of a distinct topic. We discerned thirteen distinct topics, each representing a relevant discussion theme in these documents considering the publication year of each report to trace the evolving narrative of sustainable development within EU institutions⁴.

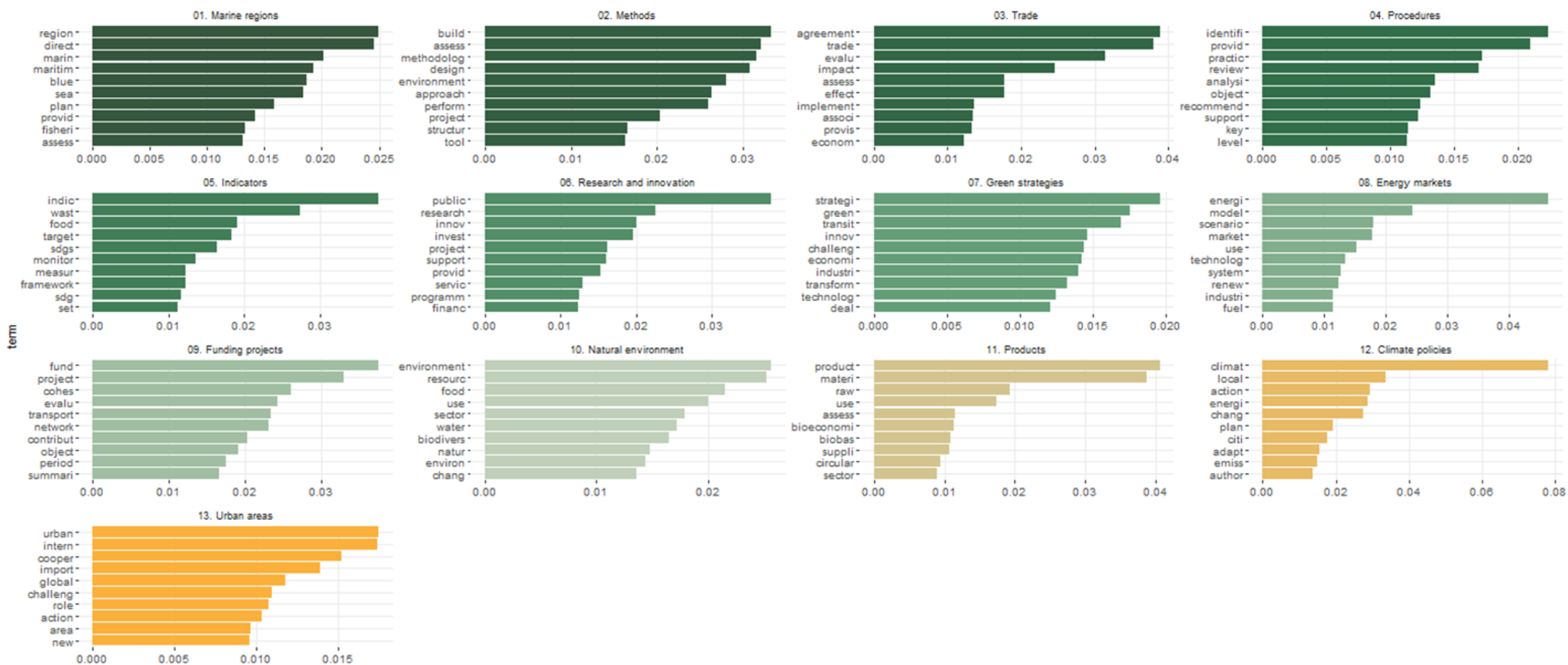
We have assigned a descriptive label to each topic based on the most frequently occurring words. For example, topic number "01" illustrated in Figure 7 encompasses terms such as "maritim," "sea," "fisheri," "plan," and "region." We named this "Marine Regions," meaning that a significant portion of the dialogue in the documents pertains to the management and conservation of marine-related natural resources in EU territories.⁵ The same criteria of labelling extends to all identified topics.

Figure 7 presents a visualization of the most probable terms for each topic, with each encompassing a lexicon that exceeds ten words. However, it is important to note that terms with lower probability scores are considered marginal and thus are deemed less consequential to the overarching themes discussed in our corpus of analysed publications. Then, Figure 8 shows the simple word frequencies for each year of publishing to enrich and validate outcomes produced by the structural topic modelling. And in Figure 9, we present the topic's prevalence for every year between 2010 and 2023 to describe the evolution of the narratives during this period.

⁴ In alignment with the methodology proposed by Roberts et al. (2019), This determination of topics strikes a balance between Semantic Coherence and Exclusivity, two pivotal criteria in topic modelling. Semantic Coherence, a concept grounded in the framework of Roberts et al. (2019), correlates strongly with the measure of pointwise mutual information. The principle, as characterized by Mimno et al. (2011), reaches its zenith when the most probable terms within a topic frequently co-occur. Exclusivity, as informed by the same authors' later work, is quantified using the FREX metric, which gauges a word's rank in terms of both its exclusivity and frequency (Bischof and Airoldi, 2012; Airoldi and Bischof, 2016).

⁵ For a comprehensive list of EU marine regions, refer to the European Environmental Agency website at <https://www.eea.europa.eu/data-and-maps/figures/biogeographical-and-marine-regions-in>

Figure 7. Results from Structural Topic Modelling: Top 10 words for each of the 13 topics in executive summaries published 2011-2023 (N=799)



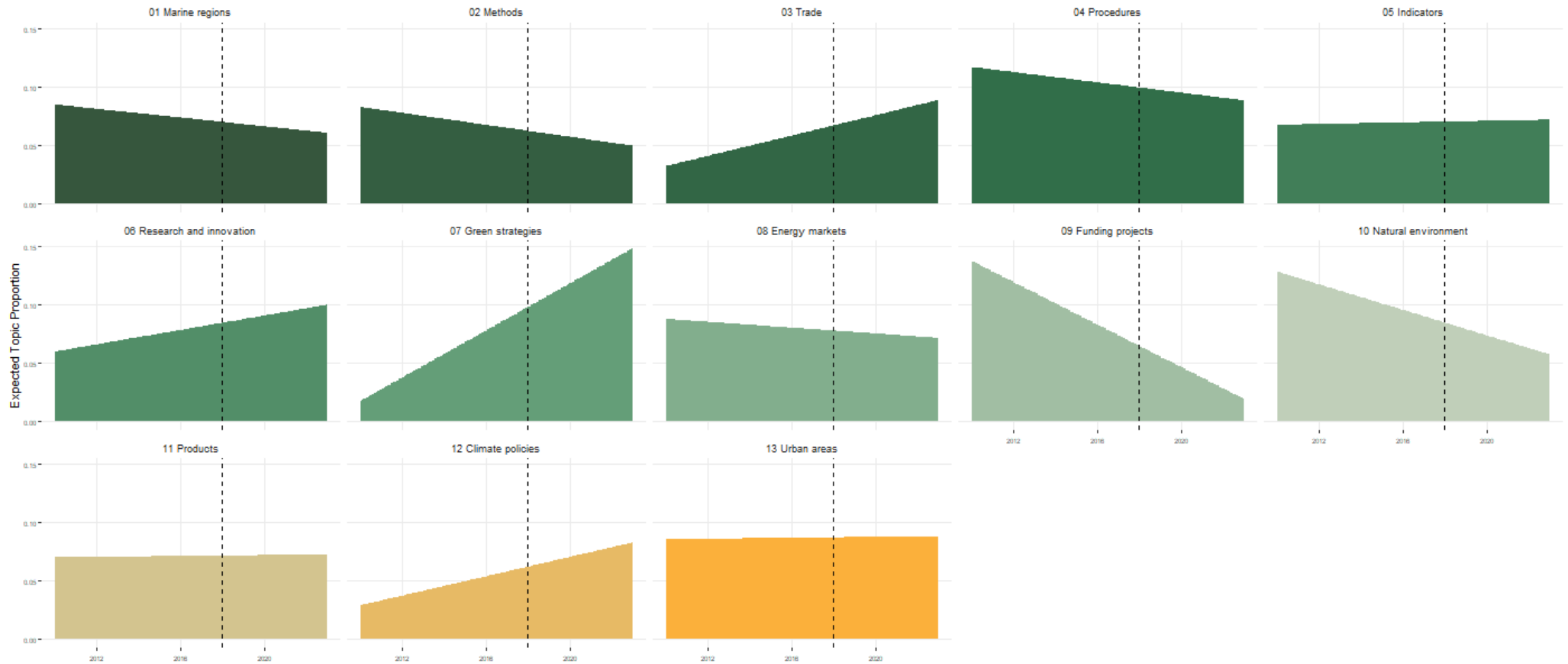
Source: Authors' elaboration (based on Publications Office of the EU, 2023)

Figure 8. Top 10 words by frequencies per year (N=799)



Source: Authors' elaboration (based on Publications Office of the European Union, 2023)

Figure 9. Results from Structural Topic Modelling: The expected topic proportions by year (N= 799)



Source: Authors' elaboration (based on Publications Office of the European Union (2023))

Figure 7 shows the main terms for each topic (top ten words), ranked by the (logarithm of) the probability of finding each word conditional on the topic. This represents the content of each topic, and these are the elements by which we named each topic. The thirteen topics identified are named as follow: 1- Marine regions, 2- Methods, 3- Trade; 4- Procedures; 5- Indicators; 6- Research and innovation; 7-Green strategies; 8- Energy markets; 9- Funding projects; 10- Natural environment; 11- Products; 12- Climate policies; 13- Urban areas.

Figure 8 illustrates the occurrence in terms of absolute frequencies of the top ten words for each year of publication of the reports. In this case, *environment* and *product* topics, as well as *fund* topics, are among the most relevant, whereas *climate* assumes a predominant position since 2019. The importance of climate in EU summaries is coherent with what we discussed at the beginning of the report, when we stated that the pressure of public opinion thanks to the growing of movements like “Fridays for future” (among others) pushed sustainability into the policy debate. Similarly, we can interpret the temporary shelving of this issue in the year 2021 as a result of the global health emergency.

Figure 9 exhibits the expected topic proportions by year. For instance, Topic 11- *Products* and 13- *Urban areas* show a constant prevalence across time, while Topic 10- *Natural Environment* had its peak in 2010 and in relation to the other topics its prevalence decreases over time.

Among the 13 topics identified, 6 registered a negative relative trend, 5 positives, and 2 stable over time. Amidst those that increase or decrease, we have trends of different magnitudes. The topic having to do with the *sea* drops not too noticeably, as do those of *methods*, and *procedures*. The topics *funding projects* related to the funding mechanisms and *natural environment* go into a nosedive. Regarding the first, we can assume that it is a process of embeddedness of the financing mechanisms within the European strategies. The topic of *natural environment* seems instead to have been replaced over time by more pragmatic *green strategies* and *climate policies*, which are in fact fast-growing topics. Further growing topics concern *trade*, *indicators*, *research* and *innovation*. The positive slope of the topic *trade* curve is potentially related to the potential role of trade in increasing the amount of CO2 emissions through carbon leakage, understood as the risk that the companies based in the EU could move carbon intensive production abroad to take advantage of lacked environmental standards (Grubb et al., 2022).

So, the structural topic modelling provides some noteworthy results. The topics that are most representative of the content of the executive summaries of EU publications relate mainly to the environmental and economic dimensions of sustainability, with some procedural and methodological elements in addition. At the aggregate level, the issue of climate policies seems to be becoming increasingly central, especially since the 2015 Paris agreements and enhanced environmental and social grassroots mobilisation due to the increasing climate disasters. Together with the previous research focused on EU publications and laws, our findings confirm an increasing inclusion of SD and ST issues in European policies, while the “human” element appears to be less central in sustainability-related publications. We find fewer explicit references to the social dimension. This is not surprising considering that both the pivotal strategies for including the social dimension into the transition process in a holistic way, namely the European Pillars of Social Rights and the European Green Deal (and its related Just Transition Mechanism), are relatively young. In comparison to the previous policies, those strategies assume a strong social perspective and appears to change the framework within which European publications and laws deal with the transition to a more sustainable economic model in Europe.

Other potential reasons at play are the high priority given to climate-change topics in the European Green Deal, conceiving climate neutrality as the most relevant ambition of our times for the EU. In other words, we may argue that the social dimension of sustainability is surely present (and strongly supported by related policies and strategies) but less apparent in the debates on sustainability as a cross-cutting theme at EU level. Rather, typically 'social' topics at EU level, like poverty, unemployment or social protection, tend to be discussed as an area of internal policy in its own right. Arguably, this suggests that there is potential to articulate more explicitly issues of social justice and fairness in transition processes in the European sustainability narrative. Put differently, when crafting its sustainability transition and sustainable development agendas, the EU could do a better job in demonstrating to citizens and stakeholders that sustainability policies and efforts are not designed and implemented at the detriment of people's wellbeing. To get across this point is essential not least to prevent political polarisation and ensure popular acceptance of the structural reforms needed to bring the European economy closer to climate neutrality. Thus, social concerns related to issues such as (re)distribution, fairness and equity should be more clearly visible in a more holistic perspective where *planet*, *people* and *prosperity* represent inextricably related areas of action, in line with the 2030 Agenda.

4. The sustainability transition in the EU: A qualitative policy mapping

In this section we provide more detail on EU policy efforts to move towards a sustainable economic model. We ask a similar question to the one addressed in section 3: How is the concept of sustainability transition translated and embedded in relevant EU policy frameworks and initiatives? While the question is almost the same, the research method adopted for this section and, consequently, the associated results are very different from the automated approach we used to screen hundreds of EU policy documents in the quantitative mapping described above.

More specifically, in this section we present the results of a manual review of a small number of recent EU strategies and policy initiatives. We look at aspects such as objectives and nature of the strategies in terms of legal status, overarching policy coordination mechanisms, funding aspects and scope for monitoring and control. Furthermore, we draw more extensively on the semi-structured expert interviews with Commission representatives than in the previous section. In the qualitative mapping, the policies considered were published from December 2021 onwards. That is, the starting point was the landmark European Green Deal policy package.

The quantitative approach employed in section was suited to analyse a large number of documents to indicate recurrent underlying themes as well as potential thematic gaps and neglected areas in EU publications referring explicitly to the notion of sustainability transitions or sustainable development. By contrast, the qualitative approaches adopted in this section are better suited to situate policy efforts in the larger landscape of related policies, evaluate policy objectives and describe the substance of a policy framework or measure in a more comprehensive and precise manner.

4.1. Background

The general global and European sustainability transition and sustainable development context has already been described above. Yet, a little more than two decades into the new millennium, Europe is facing complex challenges on several fronts. Thus, it is useful to briefly outline the existing main internal challenges and policy responses seen from a European perspective. As the Commission points out, Europe has been going through “an era of permacrisis and polycrisis, with a conjunction of increasing effects of climate change and environmental challenges, the COVID-19 pandemic, and the Russian war of aggression against Ukraine” (European Commission, 2023b, p. 7). Domestically, European countries are experiencing growing economic inequalities, which puts more people at risk of poverty and social exclusion. ‘Non-standard’ or insecure forms of employment are a reality for a considerable share of the working age population with in-work poverty as one potential consequence (Eurofound, 2017). Inflationary pressures following the major disruptions to economic markets and important supply chains, created by the COVID-19 pandemic and Russia’s war against the Ukraine, has exacerbated this trend of uncertainty and hardship for workers, households and businesses (Muench et al., 2022). Moreover, in the future, climate change might directly affect inflationary dynamics through further pressure on food and energy prices. Such developments come with a risk of intensified social inequalities since low-income households are less able to absorb price hikes by reducing consumption of essential goods and services like electricity, heating, food and transport

(European Commission, 2023b). As examples of other potential future threats, the European Commission highlight “new conflicts and the escalation of the existing ones, mass displacements, financial crises, or pandemics [...]” (European Commission, 2023b, p. 7). In sum, the present context is characterised by considerable uncertainty; economically, socially and politically. Therefore, policy frameworks to promote sustainability across the EU and the region as a whole, must be suited to handle several sources of pressure and layers of diversity while fulfilling international agreements, maintaining political legitimacy of policies, and ensuring social justice within planetary boundaries.

The EU’s overarching approach to sustainability is firmly anchored in the 2015 Paris Agreement on Climate Change (PACC), the UN 2030 Agenda, and the related Sustainable Development Goals. With a view to initiate an informed debate within in the EU and among European stakeholders, in 2019 the Commission published the reflection paper “Towards a sustainable Europe by 2030” on how to implement the EU’s commitment to the Paris Agreement, going from visions to concrete actions to implement a sustainability transition (European Commission, 2019b). Shortly after taking office, the von der Leyen Commission took a further step by presenting the European Green Deal (EGD) on 11 December 2019. The EGD can be described as the overarching policy framework that guides the ST in the EU has led to an increased attention to the development of policies to advance a sustainability transition in Europe. The European Green Deal will be detailed below.

4.2. Qualitative policy mapping: Policy selection

The EU articulate high ambitions when it comes to promoting sustainable development and a sustainability transition. The wide extension of relevant policy frameworks is reflected in the range of EU strategies and polices that aspire to tackle issues of sustainability, with a particular emphasis on the green and digital transitions, aka twin transition (Muench et al., 2022). For this qualitative mapping, we selected thirteen recent EU strategies and policy initiatives of core strategic importance for the Union’s work to promote sustainability and implement transitions in key areas. The policies were chosen for their thematic relevance and explicit connection to the 2030 Agenda and the EGD. In addition, it was important that the overall sample of documents cut across a broad range of policy sectors to provide a reasonable general picture of how the EU addresses the social, economic and ecological dimensions of sustainability. All policies were published between 2019-2023. It is worth being open about the fact that the list of selected policies is not exhaustive in any way, and the composition of the sample was far from self-evident. Given the breadth and cross-cutting nature of the sustainability theme, also policies that target more narrowly a specific policy sector or goals could be of relevance as pieces in the larger puzzle to promote the transition to a sustainable European social and economic model.

The following policy packages, instruments and initiatives were included in our review:

- Reflection paper “Towards a sustainable Europe by 2030” (European Commission, 2019b)
- European Green Deal (European Commission, 2019a)
- Farm to Fork Strategy (European Commission, 2020c)
- EU Biodiversity Strategy for 2030 (European Commission, 2020b)
- Energy Poverty recommendation (European Commission, 2020a)
- Recovery and Resilience Facility (European Union, 2021c)
- European Social Rights Action Plan (European Commission, 2021c)
- Just Transition Fund (European Union, 2021b)

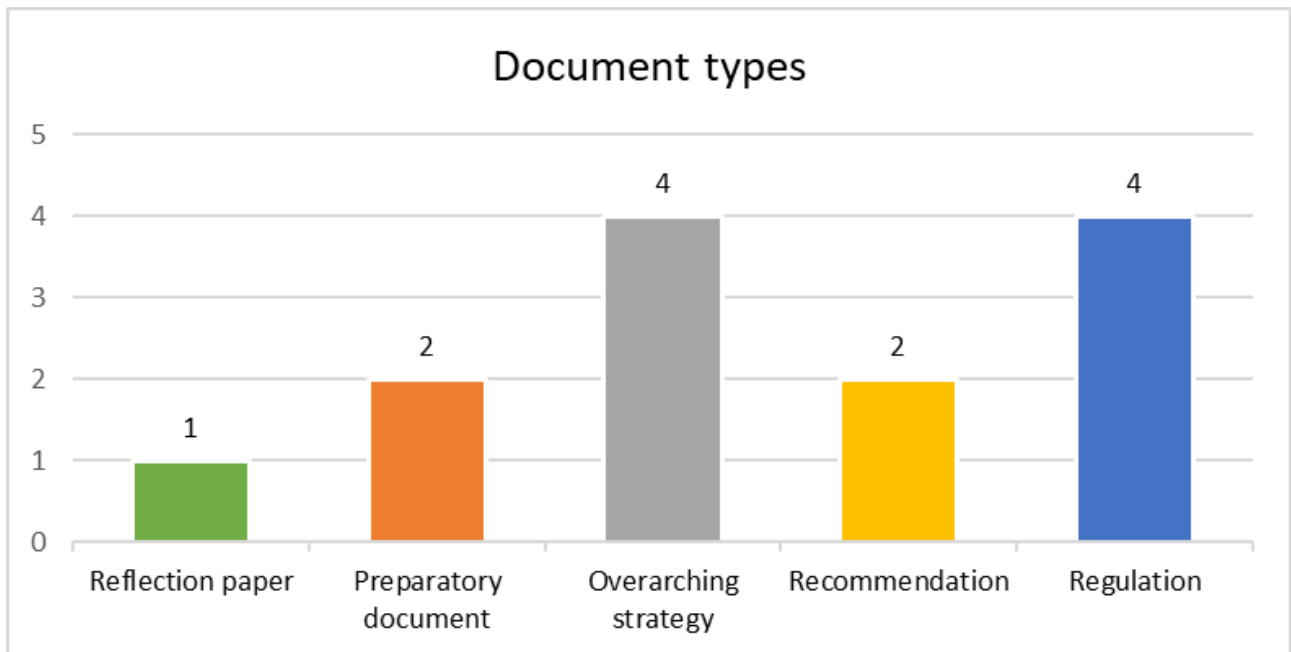
- European Climate Law (European Union, 2021a)
- Fit for 55 (European Commission, 2021d)
- Council Recommendation on Ensuring a Fair Transition towards Climate Neutrality (European Commission, 2021a)
- RePowerEU (European Commission, 2022)
- Social Climate Fund (European Union, 2023)

Figure 10 and Figure 11 show, respectively, the timing of the selected policy initiatives and an overview of nature of the policy document that launched the different policies. The mapped policies cover different types of initiatives, including a reflection paper, preparatory documents, overarching strategies, recommendations, and regulations.

Figure 10. Timeline of selected EU documents



Figure 11. Document types included in the qualitative policy mapping



We used a template or ‘analytical grid’ to perform a systematic descriptive and qualitative review of each document individually, focusing on the areas of policy design and content, financial and distributional dimensions, governance and coordination. As a part of the document analysis, we also mapped how the policy under scrutiny was connected to the SDGs. That is, through a manual reading and interpretation of the documents, we identified the SDGs addressed by the strategy or policy instrument in question. In a next step we also compared our qualitative assessment to the results generated by the automated mapping program provided by the Joint Research Centre (JRC) (Borchardt et al., 2023).

4.3 Policy snapshots: Main themes and objectives

REFLECTION PAPER: “TOWARDS A SUSTAINABLE EUROPE BY 2030” (2019)

The Reflection paper served to prepare the ground for the EU’s Strategic Agenda 2019-2024 and the priority setting of the European Commission of Ursula von der Leyen and the long-term implementation of the SDGs.

At the core of the paper are three scenarios on how to deliver on the UN 2030 Agenda and the SDGs:

Scenario 1: An overarching SDGs strategy to guide all actions by the EU and its Member States.

Scenario 2: Continued mainstreaming of the SDGs in all relevant EU policies by the Commission, but not enforcing member states’ action.

Scenario 3: Putting enhanced focus on external action while consolidating current sustainability.

EUROPEAN GREEN DEAL (2019)

The European Green Deal (EGD) identifies climate and environmental-related challenges as “this generation’s defining task”. The EGD represents the EU’s response to these challenges. It is a new growth strategy for the EU, consisting of a whole package of policy initiatives, intervening in the economy as a whole and in particular transport, energy, agriculture, buildings and other resource and energy-intensive industries (e.g., steel, cement, chemicals, ICT, electronics and textiles).

The EGD is one of the six main priorities in the political guidelines of the European Commission for the years 2019-2024. The aim is to transform the EU into a “fair and prosperous society, with a modern, resource-efficient and competitive economy” where

- there are *no net emissions of greenhouse gases in 2050*,
- *economic growth is decoupled from resource use* and
- the transition is just and inclusive, leaving no person or place behind.

An underlying idea is that “[m]aking Europe climate neutral and protecting our natural habitat will be good for people, planet and economy”.

All EGD actions and all other EU initiatives should “achieve their objectives in the most effective and least burdensome way” and “live up to a green oath to ‘do no harm’”.

The EGD is presented as a strategy to implement the 2030 Agenda and the SDGs.

FARM TO FORK STRATEGY (2020)

The Farm to Fork Strategy is part of the EGD and is about accelerating the transition to a *sustainable food system*, whilst ensuring the integrity of the single market and promoting a global transition based on common objectives and sustainability criteria.

Farm to Fork aims to

- optimize the entire food system, including production, distribution, consumption and waste management,
- ensure coherence with all EU food related policies (e.g., agriculture, fisheries and aquaculture) in terms of sustainability objectives, including biodiversity and climate objectives.
- ensure a favourable food environment that makes it easier to choose healthy and sustainable diets, providing benefits for consumers' health and contributing to the reduction of the environmental footprint of the food system as well as attracting investments into sustainable production methods.

EU BIODIVERSITY STRATEGY FOR 2030 (2020)

The Biodiversity Strategy for 2030 is another policy under the umbrella of the EGD. It centres on the protection of land and sea areas and the reversal of ecosystem degradation and biodiversity loss. More concretely, it commits to

- the legal protection of a minimum of 30% of the EU's land area and 30% of the EU sea area and integrate ecological corridors, as part of a Trans-European Nature Network.
- strict protection of at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests.
- the implementation of effective management for all protected areas, defining clear conservation objectives and measures, and appropriate monitoring.

COMMISSION RECOMMENDATION ON ENERGY POVERTY (2020)

The Commission recommendation on energy poverty stresses that

"adequate warmth, cooling, lighting, and energy to power appliances are essential services that underpin a decent standard of living and health. Access to energy services is essential for social inclusion".

The purpose of the recommendation on energy poverty is to assist Member States in

- developing a systematic approach to the liberalization of energy markets, and assessment of energy poverty levels.
- evaluating distributional effects of the energy transition and use of EU funding. Just transition is a key objective
- developing integrated energy and social policy that reduces energy poverty and social inequality

The recommendation provides guidance to Member States on indicators to measure energy poverty, promotes knowledge sharing between Member States and identifies EU funding programs that target vulnerable groups.

RECOVERY AND RESILIENCE FACILITY (2021)

The Recovery and Resilience Facility (RRF) is described as the “centrepiece of NextGenerationEU” that runs in parallel to the long-term EU budget (known as the multiannual financial framework, MFF) for the period 2021-2027 (European Commission Directorate-General for Budget, 2021). The RRF is a huge temporary funding measure consisting of a combination of grants and loans to member states. It is designed to promote economic, social and territorial cohesion in the EU by providing loans and grants to help member states implement the necessary reforms and investments to recover from the COVID-19 consequences and foster the green transition. The purpose is to

- improve Member States’ resilience, crisis-preparedness, adjustment capacity and growth potential; mitigate the social and economic impact of the COVID-19 crisis, particularly on women;
- contribute to the implementation of the European Pillar of Social Rights support the green transition and helping to achieve the 2030 climate targets and 2050 climate neutrality objective; encourage the digital transition.

The RRF is structured around six thematic pillars:

- 1) green transition;
- 2) digital transformation;
- 3) smart, sustainable and inclusive growth;
- 4) social and territorial cohesion;
- 5) health and economic, social and institutional resilience; and
- 6) policies for the next generation

Member States have to submit National Recovery and Resilience Plans (NRRPs) that set out the reforms and investments to be funded with the RRF.

THE EUROPEAN SOCIAL RIGHTS ACTION PLAN (2021)

The European Pillar of Social Rights (EPSR) Action Plan puts forward policy with a view to implement the 20 principles of the EPSR adopted in 2017. The Pillar is divided into three themes: equal opportunities and access to the labour market, fair working conditions, and social protection and inclusion.

The Action Plan defines three EU-level headline targets in the areas of employment, skills and poverty reduction to be achieved by 2030:

- 78% of the population aged 20-64 in employment by 2030
- 60% of all adults participating in education or training each year and
- reduce the number of people at risk of poverty or social exclusion by minimum 15 million by 2030.

These contribute to the implementation of the Sustainable Development Goals.

The EPSR Action Plan calls on Member States to set their own targets as national contributions to achieving the EU headline targets and encourage an active involvement of social partners and civil society.

The European Social Fund+, as part of the Multiannual Financial Framework 2021-2027, is the main financial instrument for the implementation of the EPSR, although also the RRF, the European Regional Development Fund, the Just Transition Fund and some other sources are available in support of the Pillar.

The Action Plan included a concrete proposal to revise of the Social Scoreboard, a monitoring instrument used in the European Semester to track member states’ progress towards the principles of the Pillar. The updated Scoreboard makes explicit links to the SDGs 1, 3, 4, 5, 8 and 10.

THE JUST TRANSITION FUND (2021)

The Just Transition Fund (JTF) is a financial tool under the EGD and is set up to offer extra support to “the people, economies and environment of territories which face serious socio-economic challenges deriving from the transition process towards the Union’s 2030 targets for energy and climate [...]”.

The JTF is the first pillar of the Just Transition Mechanism. Resources from the fund are allocated to NUTS level 3 regions based on priorities and activities detailed in territorial just transition plans. These have to be approved by the Commission. The JTF has a € 17.5 billion budget (2018 prices), financed by funds from the 2021-2027 long-term EU budget as well as the NextGenerationEU programme.

EUROPEAN CLIMATE LAW (2021)

The main objective of the European Climate Law (ECL) is to provide a framework for achieving progress on the path towards carbon neutrality, ensuring a gradual reduction in greenhouse gas emissions according to international agreements and EU law.

Translating into law the goal agreed on as part of the EGD, the ECL imposes a binding objective to become climate neutral by 2050, i.e., the economy should have reached net-zero emissions.

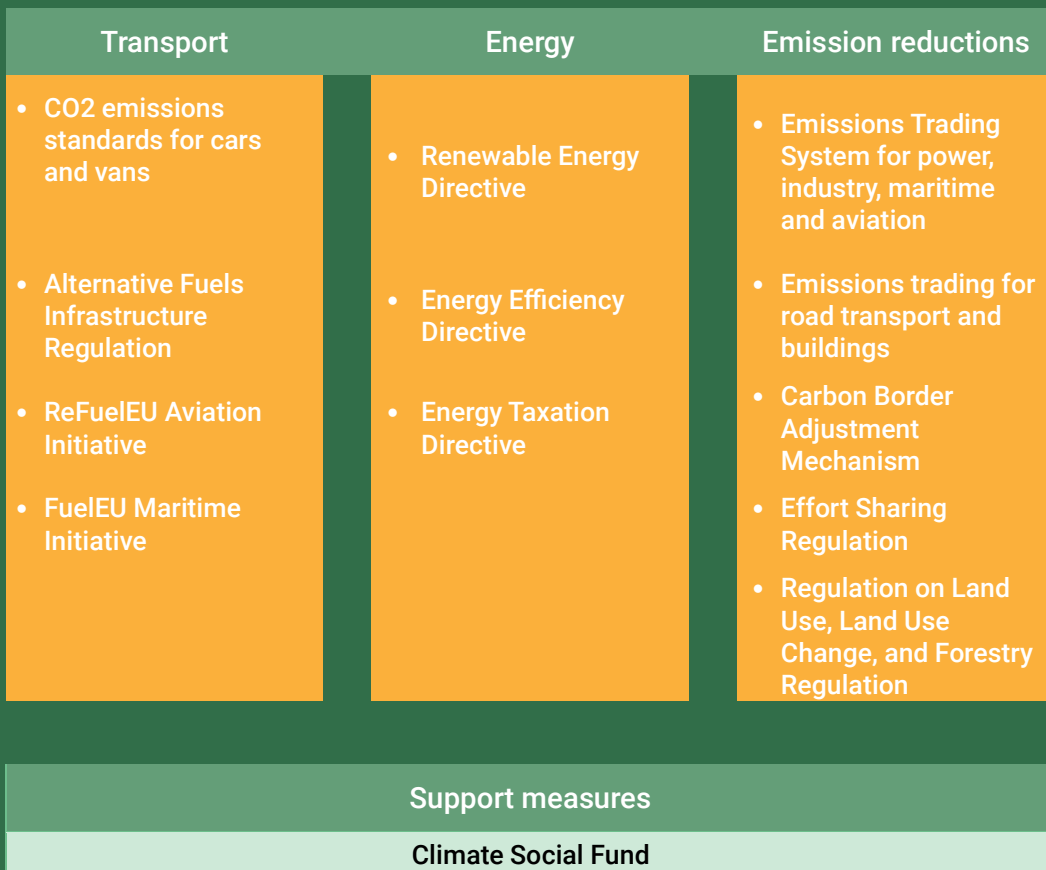
The law establishes the intermediate target of cutting net emissions from 1990 levels by at least 55% by 2030.

To implement this goal, the European Union (EU) puts into effect a number of related climate-related rules and regulations that make up the 'Fit for 55' package.

FIT FOR 55 (2021)

Fit for 55 is an interconnected and comprehensive set of proposals with a view to deliver the European Green Deal and the EU’s climate target for 2030 as defined in the European Climate Law. The Fit for 55 policy package cuts across most sectors of the economy to provide the regulatory basis for reaching the EU’s climate targets “in a fair, cost-efficient and competitive way”. It consolidated eight existing pieces of legislation and presented five new policies, covering areas such as climate, energy, fuels, transport, buildings, land use and forestry. These represent a mix of different kinds of policy instruments: pricing, targets, standards and support measures.

Through a focus on energy taxation and an expansion of emissions trading to new sectors (most notably road transport and fuel combustion in buildings as well as maritime transport), the Fit for 55 package internalizes the *polluter-pays-principle* to a stronger degree than before.



THE COUNCIL RECOMMENDATION ON ENSURING A FAIR TRANSITION TOWARDS CLIMATE NEUTRALITY (2022)

The Council Recommendation on ensuring a fair transition towards climate neutrality is underpinned by the principles of the EGD and the EPSR and

“aims to ensure that the Union’s transition towards a climate-neutral and environmentally sustainable economy by 2050 is fair and leaves nobody behind”.

The Recommendation invites member states to take a coordinated and cross-sectoral approach to the adoption and implementation of coherent policy measures that address employment, skills and social aspects of climate, energy, transport and other green transition policies.

A key purpose of the Recommendation is to encourage actions in support of individuals and households in vulnerable situations, i.e., those most affected by the green transition, by making inclusive provisions in areas such as education and training, taxation and social protection and essential services to mitigate negative social impacts of the green transition.

REPOWEREU (2022)

In response to global energy market disruptions, energy security concerns and the hardship associated with high energy prices caused by Russia’s aggressive invasion in the Ukraine, the RePowerEU plan aims to rapidly reduce Europe’s dependence on Russian fossil fuels, by achieving a structural transformation of the energy system. This to secure a better long-term sustainability, cost-effectiveness and reliable energy supply.

RePowerEU devises a set of actions that will:

- Save energy
- Diversify supplies
- Quickly substitute fossil fuels by accelerating Europe’s clean energy transition
- Smartly combine investments and reforms

THE SOCIAL CLIMATE FUND (2023)

The Social Climate Fund represents the social branch of the Fit-for-55 package and establishes a financial instrument to support *vulnerable households, micro-enterprises* and *transport users*.

It puts forward as a general objective to contribute to a socially fair transition towards climate neutrality by addressing the social impacts of the introduction of the emissions trading system for greenhouse gas emissions from buildings and road transport (ETS2).

The Social Climate Fund will operate in the period 2026 to 2032 and provide up to €65 billion in financial support to member states to implement the measures and investments included in their Social Climate Plans. The SCF will be financed mainly by revenues from the newly created ETS2, a separate EU emissions trading system that will cover buildings, road transport and additional sectors.

4.4 The European Commission as a hub in the EU sustainability transition

Through its responsibility for the planning, preparation and proposal of EU law, the European Commission (EC or Commission) may be described as a hub or an engine in the development of EU's sustainability transition strategies and policies. Beyond policy development, it also monitors and reports on EU and member state performances related to SD and ST. For instance, in the social domain, the Social Scoreboard, which tracks progress towards the objectives of the EPSR, can be seen as a tool in the EU's efforts to implement the UN 2030 Agenda (MacNaughton et al., 2022). With the revision of the Social Scoreboard, the connection to the UN 2030 Agenda were made explicit, further integrating EU social policy domain in the EUs sustainability transition framework.

When asked about their work in relation to the sustainability transition and sustainable development, the role of the European Semester was recurrently highlighted in the expert interviews we carried out by officials from the European Commission. Importantly, the Commission plays a fundamental role in the management of the European Semester, which is the main governance tool for the coordination of economic and social policy in the EU. As part of the Semester cycle, each year the Commission is responsible for drafting the Annual Sustainable Growth Survey (ASGS) where it outlines the EU's economic and social priorities for the coming year. The ASGS used to be called the Annual Growth Survey, but the von der Leyen Commission changed its name when it came into office in 2019 to signal an enhanced focus on the climate crisis. Another sign of the gradual but increasingly strong integration of the SDGs into the European Semester as well as the Commission's pivotal role in the process can be found in the annual Country Reports prepared by the Commission staff as part of the European Semester cycle. All Country Reports now include an assessment of progress on the SDGs. Especially with reference to the European Green Deal and the European Semester process through strengthened visibility and emphasis on the SDGs in the Semester cycle, a general sense of a significant shift in the way the EU approaches sustainability emerged from several of the interviews with Commission officials from different DGs.

In general, our interviews confirmed that there is a strong commitment to sustainable development and an urge to develop policies that support the implementation of the 2030 Agenda, above all through the European Green Deal, across the Directorates-General (DGs) of the Commission that is currently in office. Beyond the European Semester, there are several arenas of collaboration between different DGs. For instance, the implementation of the RRF requires joint efforts across the Commission. The Recovery and Resilience Task Force (RECOVER) was established in August 2020 to, among other things, support the member states in the development of their National Recovery and Resilience Plans and monitor progress. For the work with the NRRPs, RECOVER coordinates 27 country teams, one for each member state, with members from all relevant DGs since in all the plans there are policies in the environmental and climate as well as social domains.

One factor of uncertainty and potential challenge in the sustainability transition highlighted both in the interviews and in the 2023 Strategic Foresight report (European Commission, 2023b) was the political landscape with reference to the global geopolitical dimension as well as internally in the EU. The former has to do with issues such as key strategic risks that have become visible due to international factors such as the Covid-19 pandemic, wars in the Ukraine and elsewhere, and strategic industrial policy choices in the United States and China. Such changes have brought attention to the need to strengthen European autonomy in domains such as energy, food and health security.

With regard to the internal EU dimension, in several of the interviews there were statements of concern relating to the perceived costs of the green transition for European citizens and how this creates political challenges. That is, the speed at which Europe moves forward in the transition is less a technical question than about political choices. At one level, this has to do with the distribution of costs in paying for the global sustainability transition and is, hence, also connected to the external context mentioned above. It is difficult to adopt policy that advances the transition if there is strong popular opinion opposing the measures, even if there may be benefits for all in the long-run. If global partners are perceived to take less responsibility than Europe that may play into the hands of national political actors who oppose an ambitious European transition agenda. One interviewee referred to the risk of a populist narrative about declining European prosperity while other regions race ahead, and that Europe makes sacrifices even if China is the big polluter. Thus, in the present Commission there is strong awareness of social aspects and the repercussions transition efforts may have on the lives of citizens, for instance through pressures on labour markets and household costs. There is some degree of uncertainty about the future direction when looking towards the coming European Parliament elections and a new composition of the College of Commissioners in 2025. Relatedly there is a fear of political and popular backlash against the Commission's approach in recent years if they do not manage to reconcile the trade-off between climate action, on the one hand, and economic and social impact, on the other.

A further interesting point which emerged, relating to the question of how to keep citizens onboard in the large European sustainability transition project, was about the importance of popular involvement in the design and implementation of transition policy. Within the framework of the RRF, the Commission strongly encourages the member states to ensure a broad consultation process through the involvement citizens, civil society and regional and local authorities in the drafting and implementation of national plans. There is great variation in the extent to which member states commits to public consultations. Thus, in some countries, popular ownership of the plans is weak, going against the idea that the national recovery and resilience plans should be owned by the countries and not the governments.

4.5 An assessment of the current ST framework on the EU's path to sustainable development

As outlined above, the aim of this work is to describe and assess to how the EU embraces a sustainable development perspective through a mapping of relevant ST policies and strategies currently implemented at EU level. Embedded in the EGD, the EU sustainability transition framework sets out to transform the region into a just, prosperous society, with a resource efficient and competitive economy decoupled from resource use and with no net emissions of greenhouse gases. That is, at least at the discursive level, the policy framework is ambitious in the sense that the EU wishes to be both a progressive initiator of global partnerships and a progressive ST driving force at home, i.e., vis-à-vis the EU member states.

The total corpus of ST and SD related policy documents, exemplified in this report by the thirteen policies that we examined more closely, shows a trend from visions and reflection papers on ST towards diversified strategies, laws and specified action plans equipped with targeted economic policy packages. The focus is primarily on the long-term objectives of 2030, 2040 and 2050, as framed by the Paris Agreement, the 2030 Agenda and the EGD. Overall, there are traces of thematic

connections in EU policy to all 17 SDGs, albeit with varying relevance and depth, indicating comprehensive engagement and generally agreement with objectives of the 2030 Agenda.

Nevertheless, there is a certain level of ambiguity in terms of the monitoring and implementation of various ST goals. The consolidation of indicators and EU rules relating to economic governance and agricultural innovation as well as some of the social branches of the ST appear less strong than in areas where there is a clearer delegation of competence to the supranational level. As confirmed also in the expert interviews, this is hardly surprising because the EU has limited legislative power in areas such as social protection and labour market policy, which remain primarily the competence of the member states.

Moreover, it is interesting to note that our manually performed qualitative mapping produced different results compared with the ones generated via the SDG mapper provided by the Joint Research Centre (JRC). This is a tool that makes it possible to perform an automated scan of policy documents, relying on text mining and natural language processing techniques to screen for SDG-related keywords. On most occasions, the automated method identified references spread widely across the SDGs, with an especially high frequency of links to SDG 13. This is not surprising since climate action is a central theme in policy initiatives explicitly linked to the EGD.

By contrast, in the manual qualitative scrutiny of the ST policies, we sometimes elicited thematic links to different or fewer SDGs (see Table 1). That is, while the reviewed policy initiatives referred explicitly to several SDGs, there was sometimes a mismatch in that it was unclear if and how the content of the policy actually contributed to the implementation of the SDGs that were identified by the JRC SDG mapping tool. On some occasions, the automatic mapper may also miss relevant SDGs. This would be the case if a policy document does not explicitly refer to any of the pre-defined keywords associated with a particular SDG. In the qualitative assessment we were able to include such cases. In general, the automated text mining approach does not capture financial or monitoring mechanisms, and it cannot properly uncover nuances of commitments to actual implementation. Conversely, reviewing the full documents manually allowed us to consider the text as a whole to evaluate more precisely the extent to which the substance of the policy was relevant to promote any of the SDGs.

Table 1. Links between qualitatively mapped policies and SDGs

POLICY	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS
Towards a Sustainable Europe by 2030	x	x	1	X	x	x	x	x	x	x	x	x	x	x	x	x	1
European Green Deal			x				x	1	x		x	x	1		x	x	x
Farm to Fork			x						x			1	x				
EU Biodiversity Strategy for 2030			1					1	x		x		x	x	x		x
Energy Poverty	x						1			1	x						
RRF Recovery and Resilience Facility				X				1	1	x			x				
European Pillar of Social Rights – Action Plan	x		x	1	x			1	x	1						x	x
Just Transition Fund							x	1	x	x	1		x			x	x
European Climate Law								x	x	x			1				x
Fit for 55							x	1	1				1				x
Ensuring a fair transition towards climate neutrality	x						x	x	x				1				
REPowerEU							1		1								
Social Climate Fund							x	1	x	1			x			x	

1= primary target of policy

x= secondary target of policy

Source: Authors' elaboration

To give a concrete example of the differences between our qualitative assessment and the SDG mapper from the JRC, we can look at the European Climate Law (European Union, 2021a) . The automated mapping produces a frequency rate of 78.2 with reference to SDG 13. Both SDG 7 and SDG 15 emerge with a frequency rate of 4.6 percent, while the remaining SDGs appear even less relevant. By contrast, our qualitative assessment identified SDG 13 as the primary goal. However, based on a review of the objectives of the European Climate Law, we would also suggest that it thematically addresses also SDGs 8, 9, 10 and 17.

Funding mechanisms

The main funding instruments for the implementation of ongoing sustainable transition initiatives in the EU are budget lines covered in the multiannual financial framework 2021-2027, i.e., the long-term budget, and the financial mechanisms under the NextGenerationEU umbrella combination. In addition, many policies require co-funding from national sources in the member states. Moreover, the EGD emphasises the need to mobilise also the private sector to engage in sustainable investments to finance the green transition. To unlock private investments, the Strategy for Financing the Transition to a Sustainable Economy is an important EU tool (European Commission, 2021e).

The European Semester for economic policy coordination identifies reform and investment priorities. During the Semester cycle the Commission makes reform recommendations, including on how to spend EU funds. However, the exact details on how these resources are actually employed are defined at member state level in their national operational programmes. In the implementation of ST policy measures member states can often draw on a variety of funding sources. For instance, the implementation of the EPSR Action Plan (European Commission, 2021c) is supported by investments defined in the national recovery and resilience plans under the RRF as well as their ESF+ and European Regional Development Fund (ERDF) operational programmes.

The Social Climate Fund (SCF) (European Union, 2023), and partially also the RePowerEU (European Commission, 2022), is funded by the Emissions Trading System and auctioning of carbon emissions allowances. A more direct “polluter pays” taxation policy system is hereby implemented. In addition, the MS should contribute at least 25 % of the estimated total costs of their national plans for the SCF programme. Furthermore, the Social Climate Fund is set out to finance Fit for 55 along with national MS funding and funding through the ESF+. For the Fit for 55 programme, the European Commission also calls on MS to add more of their income from carbon emission allowance trading. This is to strengthen the social dimension in the EU sustainability transition further.

The Recovery and Resilience Facility (RRF) is funded by the Union budget, member state national investment strategies and private investment incentives (European Union, 2021c). The RRF is extended to be a funding source for other EU programmes, notably linked to the current energy crisis and the RePower EU program (European Commission, 2022) along with the Connection Europe Facility funding program for trans-European energy policy. Member states can allocate 12,5% of funds from the cohesion policy to the RRF by adding a 7,5% transfer possibility for RePowerEU objectives (European Commission, 2022). By contrast, the implementation of the Recommendation on Energy Poverty on the other hand relies mainly on national funding (European Commission, 2020a).

Access and conditionality

To qualify for funding there is a general EU regime of conditionality for the protection of the Union budget, as well as to ensure that member states spend the resources in line with agreed priorities and objectives. In addition, several of the EU policies on ST have specific funding access criteria.

Delivering on the EPSR is considered a “shared political commitment and responsibility of the EU institutions, national, regional and local authorities, social partners and civil society” (European Commission, 2021c). The RRF explicitly states that member states must fulfil criteria contributing to the EPSR in order to access funding. For the Social Climate Fund (European Union, 2023) more general formulation is used, in line with the ‘green oath’ embedded in the Commission’s European Green Deal communication to ‘do no harm’. Social Climate Plans, which are required to access resources from the Social Climate Fund, must comply with the principle of “do no significant harm” . This principle has been further defined in other documents and it is important to note that it refers to significant harm to environmental objectives, which are specified to include (European Union, 2020):

- climate change mitigation
- climate change adaptation
- the sustainable use and protection of water and marine resources
- the transition to a circular economy
- pollution prevention and control
- the protection and restoration of biodiversity and ecosystems.

Criteria for access to funding is not consistent throughout the ST policy framework and linked to operational commitments on the various funding programmes. To mention only a few examples, the Just Transition Fund (European Union, 2021b) requires beneficiaries to address the objective of a climate neutral Union by 2050, as well as a series of other related secondary objectives in order to access more than 50% of the national financial allocation from the Just Transition Fund. Fit for 55 (European Commission, 2021d) requires compliance with the EU Carbon Border Adjustment Mechanism to access funding, in combination with separate financial access criteria in various policy toolboxes in the program. For the Social Climate Fund (European Union, 2023) payments are made conditional upon the achievement of milestones and targets.

Monitoring and control mechanisms

As highlighted above, the Commission plays a key role in the monitoring and controlling of policy goal achievements in the EU sustainability transition framework. The Commission conducts regular reviews on the extent adopted policies are put into action, monitor policy goal achievements and necessary law enforcement. However, it is important to note that the sustainability transition policies are dominated by soft law in the form of recommendations and benchmarking. At the operational level, the implementation of strategies and goals are dependent on national priorities and plans outlined by each member state. For instance, the following programmes and legislations all require individual national plans: European Climate Law (European Union, 2021a), the Recovery and Resilience Facility (European Union, 2021c), the Social Climate Fund (European Union, 2023), the

Just Transition Fund (European Union, 2021b) and the Energy Poverty Commission Recommendation (European Commission, 2020a)). Both the Just Transition Fund and European Climate Law requires planning through the National Energy and Climate Plans (NECPs), enabling an integrated approach. On the other hand, some policies that seems closely related to existing reporting systems, like the RePowerEU requires reporting in a separate system (European Commission, 2022).

The European Commission has the overarching responsibility for monitoring and measuring achievements on these plans, and regularly reports to the European Parliament and the Council of the EU. The national specifications and review regimes incorporated in these plans will naturally vary.

Some policies like the Farm to Fork strategy have highly specified policy goals and monitoring systems (European Commission, 2020c). In the Farm to Fork strategy goals for the use of pesticides, antibiotics, fertilizers, increase in organic farming, reducing food waste and installing broadband in rural areas are presented with concrete targets and timelines, in addition to the general goal on reducing GHG emissions by 50-55% by 2030. Data collection and comprehensive assessments are described. For the Energy Poverty Commission Recommendation, the EU has developed statistical tools to help individual member states to monitor the multi-dimensional aspects of energy poverty, and harmonized EU data collections allow monitoring of the energy poverty situation EU-wide (European Commission, 2020a).

Compared to economic and ecological goals, social policy control mechanisms are weaker. However, there are significant ongoing efforts to monitor and compare social progress across the EU. The Social Scoreboard, used in the European Semester and closely linked to the principles laid down in the EPSR, is the key instrument in this regard. The Regulation on the Integrated European Social Statistics sets out to improve the social statistics measures and timelines. The European Pillar of Social Rights Action Plan has a policy goal set to improve and develop internationally comparable indicators for measuring and monitoring social wellbeing (European Commission, 2021c).

For investors, civil society organisations, consumers and other stakeholders, the Corporate Sustainability Reporting Directive (CSRD) modernises and strengthens the rules concerning the social and environmental information that companies have to report (European Union, 2022). A broader set of large companies, as well as listed small and medium-sized enterprises (SMEs), are required to report on sustainability. On 31 July 2023 the Commission adopted the European Sustainability Reporting Standards (ESRS) for use by all companies subject to CSRD. The standards cover the full range of environmental, social, and governance issues, including climate change, biodiversity and human rights. The ESRS are at the core of the EU's sustainability agenda, intended to boost the transparency and comparability of corporate sustainability reporting. Many of the reporting areas initially proposed to be mandatory were changed to voluntary before being adopted. The European Commission said the goal of that change was to strike a balance between limiting the reporting burden on companies while enabling them to show their efforts within the sustainability transition.

Further concerns regarding the EU ST policy framework

The EU originated as an economic trade union, and still has a strong focus on macroeconomic, fiscal, industrial and employment policies. However, the EU has developed into a supranational union, with relatively deep political, economic and social integration between the Member States. The European internal market legislations facilitate international mercantile collaboration. The European Green Deal is a sustainable growth strategy, with policy goals on continued economic growth decoupled from resource use and the ecological footprint.

“To deliver the European Green Deal, there is a need to rethink policies for clean energy supply across the economy, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation and social benefits.” (European Commission, 2019a, p. 4).

The EGD compared to the later EU ST policies seems to have a narrower focus on just transition and social policy. Green renewal of jobs, re-skilling to new industries, adjustments in social benefits systems and energy efficiency of housing are key elements. With the EPSR Action Plan and the establishment of the Just Transition Fund, the EU social policy and just transition becomes broader, addressing in addition health, access to resources, demographic and environmental impacts, aiming for a high social and environmental standard for all. This includes avoiding environmental degradation, especially for those regions and workers most affected by the transition process. For social policies except those that are labour-market related, ST policy goals and measurements are vaguer than those found for economic and environmental policy. This is likely due to the organization of Union competences, as well as the complexity and multidimensional nature of social factors. The development of social policies is mainly situated at member state level. The EU system leaves little opportunity to collectively implement or enforce social policy. Country-specific just transition policy is necessary and advantageous to ensure that measures take account of local circumstances. At the same time, it is useful to look out for unwanted social inequalities across the EU. In general, there also seems to be a need to further develop indicators and tools for controlling and monitoring the social aspects of the sustainability transition. Improving social policy assessment tools seems useful on both overarching and national level.

5. The Current Sustainability Transition Framework in The Global South

While the previous parts of this report focused on the EU's policy efforts to address the sustainability transition on the European continent, we turn below to a brief overview of perspectives in the Global South. The purpose is to give an overview of similarities and differences in the sustainability challenges facing different Global South regions. The section serves as a reminder that even when the main question is on how to develop policies for a fair, inclusive and ecologically sustainable transition in Europe, part of the process should also be to ask what consequences European choices might have in poorer regions of the world. To address this question the first step is to have some knowledge of the transition policy frameworks and challenges that exist in these regions, and the below discussion offers a contribution to this end.

5.1. Overview

In September 2023, the 78th UN General Assembly took place in New York to deliver a half-time report on the completion of UN Agenda 2030. At the core of this multilateral meeting is the tension between eliminating poverty and protecting the planet's life-support system in a context of significant disparities across global regions, countries, and sectors. For countries in the Global South it is feared that their compliance with the global mandate to leave these fossil fuel reserves untapped may adversely impact poverty alleviation. Signatory parties to the Paris Agreement agree that this unequal distribution of the burden of mitigating global warming calls for a global partnership to institutionalize a 'just sustainability transition'—i.e., one that relies on the principle of common but differentiated responsibilities in resolving the tension between eradicating poverty everywhere for everyone and protecting the planet's life support system based on considerations of justice, equity, and inclusion at all levels (Roy et al., 2018).

For instance, one way to reduce carbon emissions is by implementing environmental taxes, such as a carbon tax. Recycling the tax revenues from such environmental taxes and use the revenues either to reduce distortive taxes or on social policy measures is commonly referred to as double dividend (see e.g. Goulder, 1995). This could be in the form of taxing carbon-intensive activities in the Global North, and distributing the revenues in the Global South. Yet, is the current sustainability transition framework in the Global South reflective of this global partnership? In other words, can current sustainability transition frameworks in the Global South deliver on the promise of double-dividend climate action? And what are the main impediments to the realization of this double dividend? We address these issues next.

5.2. Sustainability transition in the Global South: A review of the current framework

The Global South is the home of low- and middle-income countries (LMICs). A common characteristic across these countries is that agriculture remains the primary livelihood source for many households, while informality persists as a predominant feature of rural and urban economic activities (Gollin et al., 2016). Furthermore, these countries are bearing the brunt of the effects of climate change, such as prolonged droughts and record-breaking heat waves leading to crop failure (Huq & Adow, 2022, May 11). The socioeconomic consequences of these devastating climate change effects include growing food insecurity, deteriorating sanitation, deterioration of the water reservoirs, severe energy poverty, and reversals of decades of gains in human capital accumulation. Furthermore, owing to LMICs' weak social safety nets, the populations of the Global South are forced to resort to informal climate-change coping mechanisms leading to increased competition over natural resources such as land and water, with the potential increase in violent conflicts (Brock, 2011). These unique structural challenges, combined with high susceptibility to political instability, calls for context-specific sustainability transition approaches rather than importing approaches tailored to developed countries.

Sustainable development generally includes concerns for development, equity, and the environment. Turning these concerns into a practical roadmap to achieving these goals is behind mainstreaming the concept of sustainability transition. Parris and Kates (2003) conceptualize the sustainability transition as a collective choice about how to meet the needs of the present without compromising future generations' ability to meet their own. More specifically, it is a choice about what goals to achieve (e.g., SDGs) and when and how to achieve them (e.g., UN Agenda, 2030). Such a framework articulates and institutionalizes a small set of indicators representative of the agreed-upon goals, the targets these indicators must reach, and the actions and interventions needed to accelerate or decelerate their specific trends (Parris & Kates, 2003). However, given structural differences between sub-regions and countries, there is a consensus among international stakeholders that an effective sustainability transition framework for the Global South must depart from a "one-size-fits-all" approach to account for these structural disparities. This sub-section reviews sub-regional differences in the sustainability transition framework, highlighting similarities and differences. Given this report's limited space, we focus exclusively on the three sub-regions of Africa, Latin America and the Caribbean (LAC), and South Asia.

5.3. Africa's Sustainability Transition Framework: Challenges and Implementation

In addition to suffering from extreme poverty, food insecurity, and security crises, extreme weather events are on the rise in Africa, including recurrent episodes of droughts, floods, and locust invasions, endangering the prospects of economic growth and undermining efforts to reduce poverty and social exclusion (Juju et al., 2020). Clearly, the sustainability transition in such a context has to reconcile climate mitigation with the elimination of hunger and extreme poverty by 2030.

However, to what extent is a reduction of the carbon footprint a reasonable aspiration and likely achievement in a continent that bears little responsibility for climate change?

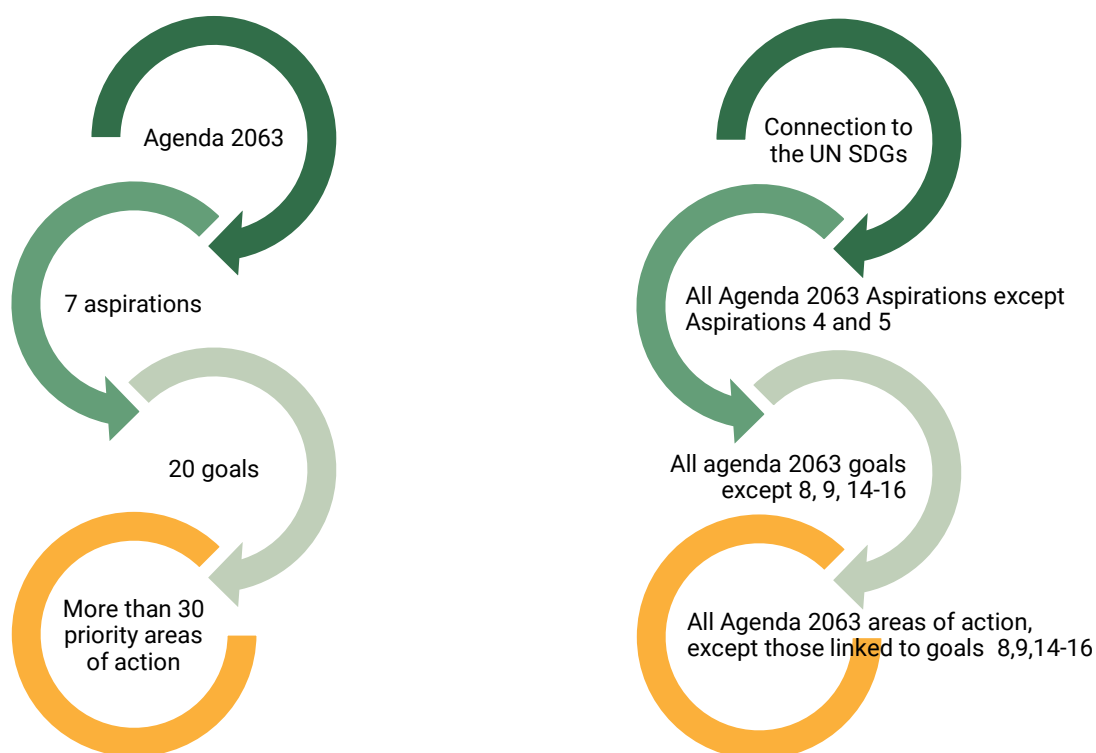
There is a consensus that addressing these issues is paramount to drafting an effective sustainability transition framework for the African sub-region. Here, we review the current framework, distinguishing between goals, indicators, targets, trends, and driving forces. This subsection builds on the idea that a sustainability transition framework (STF) highlights social choices about what to develop, what to sustain, and for how long (Parris & Kates, 2003).

The OAU's Agenda 2063: An Africa-Specific Sustainability Transition Framework

To address the specificity of Africa, African heads of state and governments launched Agenda 2063 in May 2013 during the Jubilee celebrations of the formation of the Organization for African Unity (OAU). In a nutshell, *Agenda 2063* is the concrete manifestation of how the OAU intends to achieve its vision of attaining sustainable development and building an *integrated, prosperous, and peaceful Africa* within a 50-year period from 2013 to 2063 (African Union, 2015). This vision is encapsulated in 7 aspirations:

1. A prosperous Africa based on inclusive growth and sustainable development.
2. An integrated continent, politically united and based on the ideals of Pan-Africanism and the vision of Africa's Renaissance.
3. An Africa of good governance, democracy, respect for human rights, justice, and the rule of law.
4. A peaceful and secure Africa.
5. An Africa with a strong cultural identity, common heritage, shared values, and ethics.
6. An Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children.
7. Africa as a strong, united, resilient, and influential global player and partner.

Figure 12. Africa's Sustainability Transition Framework



Source: Author's own elaboration using SDGs and Agenda 2063 available online at <https://au.int/agenda2063/sdgs>

Based on these seven aspirations, a just sustainability transition for Africa can be defined as one that affirms the continent's right to development and industrialization following the PACC's principles of equity and 'common but differentiated responsibilities and respective capabilities, in the light of different national circumstances' (UNFCCC, 2016). As indicated in Figure 12, each aspiration is articulated in a small set of goals with strong connections to the SDGs, allowing the design of projects aimed at attaining them by the year 2063. Among these 7 aspirations for Africa, only *Aspirations 4 and 5* are unconnected to the UN SDGs, while the remaining 5 have a strong connection. Indeed, whereas Western countries and many others in Asia, and Latin America and the Caribbean have institutionalized democracy as the foundation of internal peace and stability, Africa, by contrast, remains a continent mired in violent conflicts that undermine the normal functioning of their respective economies (Fang et al., 2020). As peace and stability are fundamental pillars of sustainable development, *Aspirations 4 and 5* of the Agenda 2063 are relevant features of Africa's sustainability transition framework (African Union, 2023). They reflect the specificity of its roadmap to sustainable development and the desire of African countries to institutionalize a strong and stable political infrastructure at the country level.

Moreover, though connected to the SDGs, *Aspiration 1* also includes a goal specific to Africa in that: (i) it reflects the view that the continent bears little responsibility for climate change; (ii) therefore, the contribution of its member states to protecting the planet's life support system may consist mainly in building their adaptive capacity to climate change. This feature of Africa's sustainability transition framework is consistent with the PACC "principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances" (McCauley et al., 2023).

In order to articulate programs and projects aimed at attaining the aspirations of its member states, the OAU selected a set of targets with their associated indicators, whose trends are to be accelerated or decelerated. These targets include, among others (African Union, 2015):

- **Increase per capita income by at least 10 times the 2013 level by 2063.** From 2016 to 2020, Africa sustained solid economic growth, surpassed only by Asia and the Pacific for the period 2012 – 2020 (ILO, 2020). However, unlike other regions of the Global South, Africa's economic growth continues to rely more heavily on low-value-added sectors, including oil, mining, and commodity exports (ILO, 2020). Another important determinant of growth in Africa is its fast-growing population. Structural transformation and enhanced productivity has, so far, played little to no role in this growth process and employment in agriculture still dominates. A large majority of rural women work in the agricultural, largely informal, sector, where the use of traditional farming methods makes them vulnerable to weather shocks due to climate change. Unless more is done to provide alternative livelihoods and transform farming practices, reaching the target of a tenfold increase in per capita income 2063 is unlikely.
- **Reduce the rural unemployment rate by 50 percent by 2030 and eliminate it by 2050.** While this target may be commendable, its relevance to rural Africa does not seem consistent with the fact that rural underemployment (holding non-decent jobs) is a more pressing problem than unemployment (ILO, 2020), as most rural dwellers are smallholder farmers with quasi-subsistence livelihoods (Gollin, 2014).
- **Ensure 90 percent of rural women have access to productive assets, including land, credit, inputs, and financial services by 2025.** This target is consistent with a growth process led by a sustainable increase in productivity, particularly in agriculture. It is also consistent with a growth process that is inclusive and can be seen as reinforcing the policy coherence of achieving the target of increasing per capita income by 2063.
- **Raise the share of renewable energy in total energy production to 50 percent by 2063.** As Africa is endowed with an enormous potential for renewable sources of energy, this target is among the most feasible of all but faces a potential trade-off with the pressing target of increasing the employment level among a predominantly uneducated population to reduce poverty.

Distinct features of Africa's sustainability transition framework

Because of its strong connection to the UN SDGs, Africa's sustainability transition framework rests on measurable and achievable targets. As such, this framework allows for comparisons with other sub-regions and their member countries concerning the pace and the level of completion. However, this framework also departs from the SDGs and the PACC blueprint in several important ways.

- **It has a longer completion deadline.** Since its completion date is 20 years after the deadline for the SDGs, this framework also conveys the message that a just sustainability transition for Africa is one that considers cross-country disparities in factors influencing the pace of the transition to sustainable development.
- **It prioritizes adaptation over mitigation.** By choosing adaptation over mitigation as its institutionalized climate action plan, OAU Agenda 2063 is, therefore, an expression of the reality that Africa's roadmap to sustainable development is different from that of the Global North. As such, it may involve continued dependence on carbon-intensive goods and services to fight poverty everywhere and for everyone. In so doing, it pushes back on growing international pressures to abandon carbon-intensive goods and services. This pushback is motivated by fears that leapfrogging to green-intensive alternatives may have long-term detrimental effects on fossil fuel-dependent African economies (African Development Bank, 2023). Thus, it draws attention to the fact that not prioritizing climate change mitigation is merely reflective of the urgency of building climate change adaptation and resilience mechanisms in a continent that is bearing the brunt of its devastating effects.
- **It prioritizes the present over future generations.** In resolving the tension between meeting the present needs and preserving future generations' ability to meet their own, Africa's sustainability transition framework puts a heavier weight on the former, highlighting the fact that poverty elimination in today's Global North would not have been possible without reliance on carbon-intensive goods and services (African Development Bank, 2023).
- **It harnesses African unity as a pillar of sustainable development.** *Aspirations 4* and *5* recognize that climate shocks create negative externalities across neighbouring countries, providing a channel through which climate change can peg back adaptation and resilience efforts at the regional level. By leveraging unity to build common infrastructures, institutionalize free trade, and allow for the free flow of people across member countries, Africa's sustainability transition framework recognizes that national efforts alone will not suffice to implement a just climate change adaptation transition if cross-country negative externalities cannot be internalized through a collective action plan at the regional level. At the centre of this African unity is the African Development Bank (AfDB), whose role is to mobilize the funds each member country needs to finance a just climate-resilient development, one that is based not on leapfrogging to green energy, but instead in a pragmatic approach that fits the continent's specific circumstances.

Agenda 2063 is conceptualized as a general framework, which should be implemented at the National Level through successive 10-year plans to achieve a set of targets with built-in flexibilities to address the diversities of development trajectories across Member States (African Union, 2015). However, the drawback of this sustainability transition process is that it keeps the baseline information national rather than continental, making it virtually impossible to track the progress of each member state to measure best practices. Furthermore, Agenda 2063 contains no workable plan to address old challenges, such as the lack of ownership of the agenda by the ordinary people and national-level public and private institutions, diverse and sometimes conflicting interests among Member States, and limited accountability, which threatens the realization of this ambitious long-term sustainable development planning (Addaney, 2018; Ndizera & Muzee, 2018).

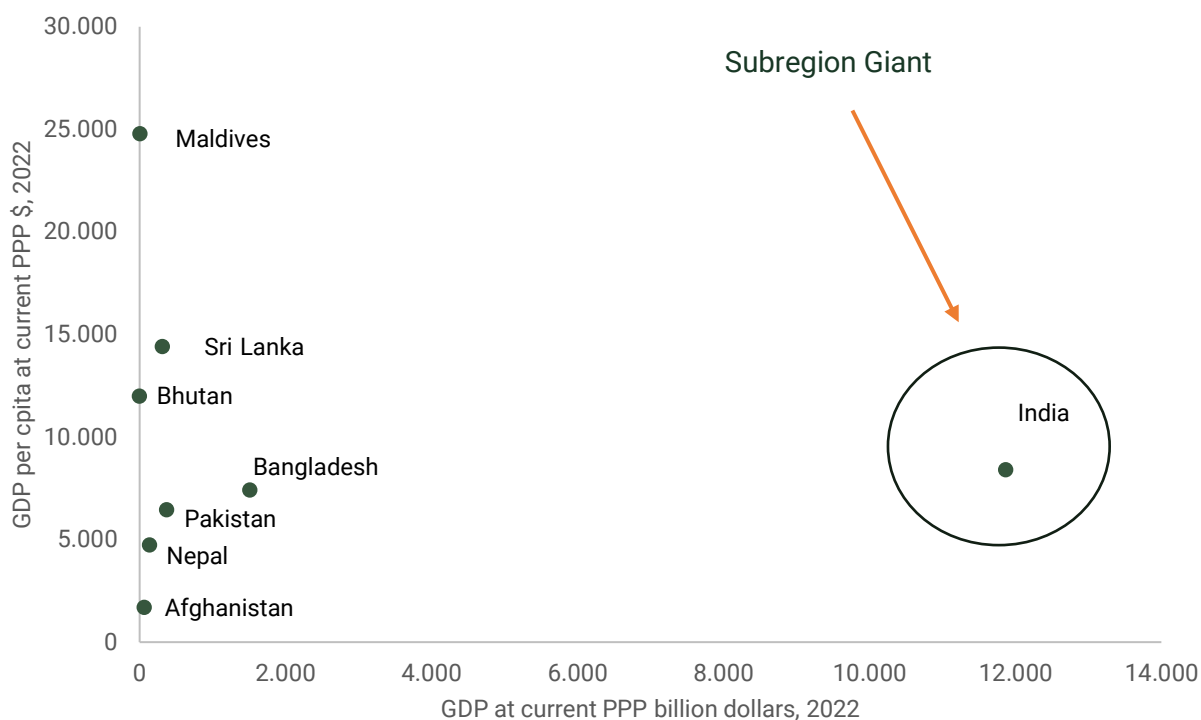
5.4. Sustainability Transition in South Asia

This subsection discusses the current sustainability transition framework in South Asia, highlighting the mapping of policies to sustainable development goals and Nationally Determined Contributions (NDCs) consistent with the PACC.

Overview

According to a 2020 report by Sustainable Energy for All (SEforALL), South Asia—a subregion of Asia comprised of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka—account for one-fourth of the world’s population. Recent World Bank data show that in almost two decades, the region reduced its headcount index by nearly four times, from 39.8% in 2002 to 10.9% in 2021. Over the same period, maternal mortality decreased by 67%. Likewise, in 2020, nearly 80% of children in the relevant age group completed lower secondary education, a growth of 63% in 20 years, with girls faring relatively better than boys (World Bank, 2023c). Thus, South Asia performed relatively well during the Millennium Development Goals (MDGs) era and made good strides towards achieving the SDGs (SEforALL, 2020).

Figure 13. Size and level of development of South Asian economies, 2022



Sources: Author's elaboration using *The World Development Indicators (WDI)* accessed online on October 22, 2023, at <https://datacatalog.worldbank.org/search/dataset/0037712>.

During the MDG years, South Asia pursued policies aimed at achieving national food self-sufficiency through the development of agriculture. A review of the literature by Rasul (2016) documenting economic growth in this subregion reveals two important facts. First, policies to achieve food self-sufficiency in this subregion consisted of heavy subsidization of water and energy, contributing to increased food production. These policies accelerated the degradation of natural resources, including land, soil, and water, resulting in groundwater depletion. Second, India—the subregion giant—with a total GDP of more than ten times that of each of the remaining member countries (Figure 13), drove this trade-off between poverty reduction and environmental degradation and powered the rising energy consumption in the subregion. Indeed, the steady increase in its economy's energy consumption resulted in the share of renewable energy in total energy consumption falling by nearly 34 percent, (World Bank, 2023b) a clear indication of a worsening trade-off between poverty reduction and environmental protection. While CO2 emissions in India increased from 0.9 metric tons per capita in 2000 to 1.6 metric tons per capita in 2020, poverty was reduced by nearly 70 percent, from 40 percent of the population in 2004 to 12 percent in 2020 (World Bank, 2023b).

Harnessing COVID-19 Recovery Action Plans to Update the Subregion's NDCs

Following the outbreak of the COVID-19 pandemic in early 2020, the subregion struggled to recover, as a significant proportion of the population saw their livelihoods severely threatened by the negative shock caused by the implementation at the global scale of containment measures (SEforALL, 2020). The measures led to the near collapse of international trade, impacting the subregion's exports, with small and medium-sized enterprises bearing the brunt of this negative shock, pushing many in the already crowded informal sector (SEforALL, 2020). As a result, South Asia's economy contracted by about 2.7 percent, threatening the livelihoods of many and halting progress in some dimensions of SDGs made in pre-COVID years (UNESCAP, 2020).

However, despite the setbacks due to COVID-19, South Asia is recognized as a dynamic subregion with diverse business and industry sectors, including textile industries in Bangladesh, tourism in the Maldives and Nepal, and a vast untapped energy efficiency and renewable energy potential. As shown in Figure 13, the subregion is led by India, the fifth largest economy in the world. As a lower middle-income country faced with the challenge of ensuring food, agriculture, energy, and water security (Rasul, 2016), India will drive the outcome of the global effort to end poverty without undermining future generations, making South Asia a critical player in the race for the timely completion of UN Agenda 2030. Indeed, in this context of high needs and vast clean energy potential, the SDGs provide the subregion's leaders with a real opportunity and a blueprint to turn this potential into reality by making industries more competitive, providing faster electricity access for productive use, as well as creating new value chains and jobs (SEforALL, 2020). Not only must policies be put in place to secure the triple security of food, energy, and water, but they must also be mutually coherent to ensure that poverty reduction (SDG 1) is driven by the uptake of renewable solutions to cooking and electricity (SDG 7) and sustainable management of water resources (SDGs 14 and 15). Given the urgent need to recover from COVID-19's shock, South Asia leaders can take this opportunity to translate their recovery actions into updated Nationally Determined Contributions (NDCs) under the Paris Agreement (SEforALL, 2020).

Policy priorities in South Asia and their link to SDGs: opportunities and challenges

The recovery from COVID-19 setbacks depends on South Asia leaders' commitment to hold fast to the agreement reached during the 18th South Asian Association for Regional Cooperation Summit, held in Kathmandu, Nepal in 2014, where they identified several key development issues for South Asia, including poverty alleviation, jobs for youth, agriculture and food security, health and education, women and children and social protection, energy, environment, and blue economy. This agreement was articulated in the following seven strategic policy priorities:

1. **Create jobs using a balanced economic transformation approach through sustainable industrialization** (SDG1; SDG 8; SDG 9). At the global scale, the energy transition is pressing ahead, with renewable energy sources increasingly replacing fossil sources as the driver of

sustainable industrialization. Therefore, surfing through the wind of these new energy-saving technologies offers South Asian countries an opportunity to modernize their economies. Indeed, according to a recent World Bank report on South Asia, modernizing the subregion's economies and increasing their energy efficiency is key to a sustainable structural transformation (World Bank, 2023a). Policies that create jobs while promoting private-sector investment in renewable energies are key to sustainable industrialization in South Asia. The main challenge to implementing such policies stems from the limited scope for government support due to high public debt. Unfortunately, all South Asian countries are plagued with persistently large fiscal deficits in a context where the high prevalence of informal activities weakens revenue collection (World Bank, 2023a).

2. **Provide essential basic services to all and accelerate sustainable infrastructure development** (SDG 6; SDG 7; SDG 9). The COVID-19 stimulus packages for the energy sector could be brought to bear on the need to close the wide gaps in clean cooking energy and access to electricity. Again, high public debt may be a constraint. High public debt is a factor limiting private investment and reducing states' spending power on critical infrastructure and skill development (World Bank, 2023a). The main challenge to implementing this policy pertains to the capacity and political will to restore fiscal sustainability.
3. **Provide universal access to education and health to harness South Asia's youth bulge** (SDG 3; SDG 4). In South Asia, the share of youth in the total population is around 15 to 22 percent. At the same time, the subregion's youth population is predicted to peak in 2025 before declining. Nevertheless, its population will still be the youngest in the world until 2040. Yet, the subregion is still characterized by an inadequate supply of skilled workers, meaning job vacancies are not converted to jobs (Ernst & Young India, 2019). The reason for this predicament is low completion rates at the secondary education level. Unless leaders of South Asia invest sufficiently in skill development, the vast renewable energy potential in this subregion will remain largely untapped, threatening the timely completion of SDGs, among which SDGs 1 and 7. However, just like in the case of the above-mentioned policy priorities, the main implementation challenge here is how to strengthen the capacity of South Asian countries' governments to restore fiscal sustainability.
4. **Provide universal social protection and financial inclusion** (SDG 1; SDG 10). Most South Asian economies have seen economic growth over the last five years, but this has not been accompanied by sufficient job creation to absorb the young people entering the job market. Vulnerable employment continues to be high among women and youth (Ernst & Young India, 2019). Furthermore, South Asia also suffers from an inclusion gap when it comes to youth entrepreneurship. Less than 20 percent of new businesses are started by young entrepreneurs (understood to be those aged 18-24), while less than 15 percent of youth are self-employed (Ernst & Young India, 2019). Limited financial literacy and lack of access to finance are the main causes of these inclusion gaps. Given the limited fiscal space afforded to South Asian countries, the main challenge to the implementation of this policy pertains to the capacity to raise the revenue needed to finance initiatives aimed at promoting youth and women's entrepreneurship.
5. **Address food security and hunger with sustainable agricultural productivity improvements** (SDG 2). One-third of developing Asia's workers are still employed in agriculture. Despite progress, the sector is still beset by low productivity, resulting in undernourishment in a large share of the population (ADB, 2021). This means that raising productivity in the sector is critical to completing SDG 2—no hunger. Unfavourable weather events are becoming common occurrences in South Asia due to climate change (World Bank, 2023a), threatening

agricultural productivity through a reduction in water available for irrigation and soil degradation. Therefore, adaptation and resilience to climate change call for agricultural innovations that preserve soil quality and put less stress on water resources while raising agricultural productivity. From an employment point of view, South Asian leaders can leverage adaptation and resilience strategies made necessary by climate change to include youth and women in the agricultural value chain by incentivizing the uptake of low-carbon technological solutions to agricultural transformation (Mishra et al., 2021).

6. **Promote gender equality and women's entrepreneurship** (SDG 5). In most of South Asia, low participation of women in skill development remains a structural problem. As adequate training is a precondition for a high uptake of technological innovation in small and medium-sized enterprises, women may become marginalized if nothing is done. Furthermore, the gender vulnerability gap in employment is very high in most South Asian countries (ILOSTAT, 2023).
7. **Enhancing environmental sustainability through low-carbon climate-resilient pathways** (SDG 13). According to the World Bank, in nearly all countries of South Asia, pollution-intensive jobs outnumber green jobs, accounting for 6–11 percent of all jobs in the subregion. Moreover, these pollution-intensive jobs tend to be concentrated in the informal sector and in sectors intensive in the use of lower-skilled workers (World Bank, 2023a). Despite this, India and Pakistan rank among the world's five emerging market and development economies with the largest public investment in renewable. To support the adoption of energy-saving and low-emission technologies, governments in this subregion need to ensure the availability of financing, incentivizing private sector firms to shift toward green energy. They can do so by removing fossil-fuel subsidies, introducing carbon taxes, introducing market-based regulation, and improving access to information about the availability, cost-effectiveness, and competitiveness of low-carbon energy (World Bank, 2023a). The benefit could be the emergence of a green energy sector that can enable the structural transformation of the labor force through the creation of green jobs, most of which are intensive in the use of high-skilled workers. However, a challenge to the uptake of this opportunity is how to ensure policy coherence across sectors, as inadequate public investment in human capital development may constrain the emergence of green, high-skill job-creating value chains to drive the low-carbon energy transition in the subregion. Unfortunately, here again, high public debt across the sub-region may be a mitigating factor.

5.5. Latin America and the Caribbean's Sustainability Transition Framework

Latin America and the Caribbean (LAC) region is made up of 33 countries, most of which are upper-middle-income countries. The region has experienced high economic growth over the past two decades. Unlike the sub-Saharan Africa and the South Asia regions, whose economic growth was driven primarily by the expansion of activities and population growth, economic growth in the LAC region resulted from structural transformation and productivity growth. This growth pattern enabled the LAC region to cut its incidence of poverty by 66 percent from 2000 to 2021 (World Bank, 2023d). Going forward, these MDG period's achievements provide a platform for the LAC sustainability transition process to exhibit a lesser tension between caring for the needs of the present generation and enabling future generations to take care of theirs, compared to both the African Union and South Asia regions.

During its period of rapid growth, from 2002 to 2013, the LAC region registered a steady increase in CO₂ emissions (World Bank, 2023d). However, after 2013, during the pre-COVID-19 period, the LAC region started to reduce its CO₂ emissions per capita by raising the share of renewable electricity. Compared to the other two regions of the Global South, the LAC is endowed with a vast reservoir of hydro-power capacity. This rich endowment of hydro resources gives it an enviable potential to become a world leader in the decarbonization of economic activity by accelerating the carbon neutrality of its electricity systems, improving the sustainability of the sector, and generating green jobs.

With such a huge energy potential, combined with the region's exposure to the frequent occurrences of climate shocks, it is not surprising that the LAC region was a major protagonist of the PACC and the UN Agenda 2030 that define the post-2015 developmental objectives for 2030. Indeed, not only are the SDGs firmly articulated in member countries' sustainability transition frameworks but also in the region's own "REnewables in Latin America and the Caribbean (RELAC) " initiative. RELAC is a declaration of Principles, launched in 2019 and ratified by 15 member states in 2022 (OECD et al., 2022). Indeed, despite being diverse in their socioeconomic and political structures, member countries have all integrated UN Agenda 2030 as the guiding pillar for their domestic policies (McCauley et al., 2023) to carve a pathway to a development process that includes eliminating hunger, reducing inequalities, and protecting the planet's life support system as its fundamental aspects. Likewise, RELAC sets a regional target of at least 70 percent renewable energy penetration in LAC by 2030 (SDGs 7 and 13) and provides a framework for shifting the focus of member countries' sustainability transition frameworks towards institutionalizing an environmental sustainability transition that prioritizes adopting climate change adaptation and mitigation policies (OECD et al., 2022).

The pillars of an energy sustainability transition in LAC

Consistent with their commitment to the PACC, LAC has developed plans to expand renewable energy to meet their growing electricity demands. The five priority areas emerging from this sustainability transition framework are the following (McCauley et al., 2023):

- **Enhance the transformation of the region's energy mix** away from fossil fuels and towards decarbonization and electrification across all sectors.
- **Design fiscal policies that are sustainable and compatible with just green transitions** and the phasing-out of environmentally harmful subsidies while leveraging the potential of environmentally related taxes. This includes enhancing innovation-driven financial development and adopting regulatory tools such as standards and taxonomies to support the green transition.
- **Promote industrialization** through policies to transform LAC's economic structures and create more and better jobs. Such policies must promote investment in new technologies and skills and retraining of workforces to seize emerging opportunities. These policies must be accompanied by active labour market policies and the design of better-targeted social protection systems to support workers negatively affected by the green transition.
- **Strengthen national institutions** to foster a consensus on the social and policy choices needed to enhance a just green transition.
- **Promote international partnerships** to harness the continent's rich array of biodiversity in international climate negotiations, to attract mutually beneficial trade agreements with key negotiating partners.

LAC member countries' commitments to these priority areas translated into policies that increased the region's renewable capacity by 33% from 2015 to 2020 (Yepez, 2022). Yet there is a consensus that without significant commitment from all member countries to transform the current energy mixes to accelerate the transition to green energy, LAC countries will fall short of net-zero emissions by 2050. Echoing these concerns, in August 2022, LAC countries signed the RELAC initiative establishing their individual commitment to contribute to the regional target of 70% renewable energy by 2030 (Yepez, 2022). Therefore, although the road toward complete decarbonization is long, the region plans to reduce reliance on carbon by an average of 5.4% each year. Most of this reduction will come from an expected increase in solar power capacity and wind power (Yepez, 2022).

Post-COVID-19 Recovery in LAC: opportunity for and challenges to energy sustainability transition

The LAC region hosts over 40% of the planet's biodiversity, with a high share of natural forest (Food and Agriculture Organization, 2015). Furthermore, owing to its abundant hydropower, the region has the potential to become a global leader in renewable energy. Yet, gas-powered electricity generation is the most significant source after hydropower, accounting for 25% of power generation (Balza et al., 2016). Moreover, the region's high vulnerability to adverse effects of climate change threatens the sustainability of its large water reservoir (Hampl, 2022). Indeed, rising temperatures, extreme weather events, and the high frequency of erratic rainfalls threaten to undermine hydropower generation in the region (McCauley et al., 2023), raising the prospects of a shift to fossil fuel-powered sources of energy to replace its deteriorating hydropower capacity. The credibility of this threat also stems from the fact that as urbanization accelerates in the region, electricity demand is projected to increase by 48% from 2020 to 2030 (Yepez, 2022). These pressures are, along with COVID-19 setbacks, the main challenges to the region's commitment to shift the focus of its sustainability transition frameworks towards prioritizing the adoption of climate change adaptation and mitigation policies.

The progress towards the Goals and targets was drastically hampered by the outbreak of the COVID-19 pandemic. For LAC countries, unprepared for such a heavy shock, one of the outcomes was reversed progress in critical social objectives such as employment, poverty, and social protection due to the loss of jobs in the informal sector, which affected women disproportionately, thereby reinforcing gender inequalities, while also exacerbating the region's long-standing structural problems (ECLAC, 2023). One of these structural problems pertains to the region's fiscal position. Indeed, before the inception of containment measures triggered by the COVID-19 pandemic in 2020, LAC countries' fiscal position was already weak, resulting from persistent and high global deficits and burgeoning central government debt. This was compounded in the Caribbean countries, which suffered several successive climate shocks resulting in natural disasters (ECLAC, 2023). A key concern for the region, therefore, is its low level of public investment, given its unenviable position as the region with the lowest public investment rates in the world (ECLAC, 2023), which hampered social protection, and reversed gains made in the pre-COVID-19 period on such dimensions as gender inequality (SDG 8), poverty reduction (SDG 1), health and well-being (SDG 3), affordable and clean energy for all (SDG 7), and inequality (SDG 10). Unless LAC countries can solve their public investment problem and consolidate their fiscal position, the sustainability of their energy transition could be compromised by the increasing tension between caring for the needs of the present generation and protecting the environment.

Another important challenge to the implementation of LAC's green sustainability transition policies is how to resolve the cross-country differential impact of the energy transition from fossil fuels to modern renewable energy within the region (Román-Collado & Morales-Carrión, 2018). To illustrate, the RELAC initiative mentioned above was only ratified by 15 out of 33 member countries, implying that more than half of the member countries did not see the benefit of following suit. For example, while Argentina and Uruguay have made significant progress on adding renewable energy sources to their power generation mixes, other members, by contrast, are still lagging, indicating the need for a just energy sustainability transition framework—one built around the goal of strengthening regulatory harmonization and market design to foster regional integration of energy markets (Levy et al., 2023).

6. Final remarks: Summing up and key messages

This report has examined quantitatively and qualitatively how the EU approaches the sustainability transition and sustainable development in their overarching strategies and policy statements. Furthermore, an important aspect of the SPES project design is to take onboard the global scope of the UN 2030 agenda and fully recognise the social, ecological and economic interconnectedness of global regions. In other words, it is fundamental to remember that the outcomes of transition and development policies in Europe are intrinsically linked to and affected by policy choices and successful (or failed) achievements in other parts of the world. International violent conflicts and other humanitarian, ecological and economic crises, regional or national industrial and trade policy choices and other regions' willingness to contribute to climate action are only some examples of external factors that will influence the intra-European political processes.

Motivated by these considerations, this report included also a non-European perspective by providing brief overviews of sustainability transition frameworks in Africa, Latin America and the Caribbean as well as South Asia, which are regions considered part of the Global South. While not going in-depth, we still get useful insights into the different perspectives and main priorities of these regions. A key message emerging from the Global South perspective is the challenge of addressing a particularly sharp trade-off between poverty alleviation and environmental protection. Several countries in these regions still face problems with extreme poverty and even hunger. Consequently, in terms of global social justice, this gives rise to a particularly important question of what fairness in transitions processes requires and how burdens should be shared between the low- and middle-income countries of the Global South on the one hand and the mainly high-income countries of the Global North. In response to this question, we have emphasised the relevance of the principle of "common but differentiated responsibilities and respective capabilities", which has underpinned international climate agreements within the UN Framework Convention on Climate Change since the 1990s.

Turning more concretely to the European ST policy framework studied in this report, the quantitative mapping and structural topic modelling analyses of EU publications suggested less integration of the social dimension compared with economic and environmental elements in publications and legal texts. More specifically, the topics identified as most representative of the content of EU publications related mainly to the environmental and economic dimensions of sustainability. At the aggregate level, the climate related policies were found to take a gradually more central position, particularly since the 2015 Paris agreements and enhanced environmental and social grassroots mobilisation due to the increasing climate disasters.

The qualitative mapping of recent policies nuanced the picture of a 'missing' social focus in the EU's approach to ST as it evidenced a tighter integration across policies in recent years and especially since the adoption of the EGD and NextGenerationEU with the important RRF as the main instrument. There is broad awareness of the potential transition costs on the lives of people, i.e., individuals and households. This is reflected in a strong focus on ensuring a fair transition, which is operationalised, among other things through the integration of the EPSR as an integral part of the EGD and instruments such JTM and Climate Social Fund.

As far as vertical links between the EU internal transition framework and ST and SD in a global perspective is concerned, the policies highlighted in this report has been mainly concerned with intra-

European actions. Nonetheless, in terms of stated policies and especially with the incumbent Commission, increasingly also in practice, EU's ST policy framework rests firmly and explicitly on the 2030 Agenda. The European Green Deal is presented precisely as a strategy for the implementation of the SDGs. Furthermore, especially the expert interviews with Commission officials and also documents like the Strategic Foresight Report 2023 (European Commission, 2023b) revealed a high degree awareness of how European policy processes are situated in a larger global context and are affected by events elsewhere.

If we reflect on the evidence presented in this report and analyse the EU's approach to ST through the lens of the SPES project's conceptual framework we find strong connections and actions in relation to all the five Ps – People, Prosperity, Planet, Partnership and Peace and the corresponding objectives of equity, productivity, environmental sustainability, participation and empowerment, and human security.

People and the goal to promote equity go to the heart of the debate about a fair or just transition and the need to make sure that nobody is left behind, an ambition that is articulated in many of the EU's policy initiatives. The EPSR, Just Transition Mechanism and even the EGD itself are only a few examples of initiatives that centre on actions in support of those potentially most affected by the green transition in order to mitigate adverse social impacts.

Planet and the objective of environmental sustainability come most visibly to the fore through the principles of 'do no significant harm' and 'polluter pays' which both relate to the need to take measures to prevent environmental degradation and ecologically damaging actions and practices.

Concerns about *prosperity* accompanied by efforts to foster productivity manifest themselves, for instance, in initiatives that support education and skill enhancement to improve individual life chances and ensure a competent workforce that matches the needs of the green and digital economy.

Partnerships among actors operating at multiple levels of governance and the participation of citizens in developing and implementing transition are essential to knowledge-sharing and fostering an understanding of motivations for policy proposals, i.e., why they are necessary, and their potential consequences. This, in turn, is important for the popular legitimacy of transition processes. The attempt to encourage broad public consultations about the National Recovery and Resilience Plans was one example highlighted above.

Peace and the human security dimension appear particularly salient when writing in October 2023, with the escalation of armed conflict between Israel and Palestine and the still ongoing war in the Ukraine. It is of obvious relevance in the Global South, where political institutions are often more unstable than in the Global North and competition over natural resources may intensify violent conflicts, but concerns related to human security have entered also European policy discussions. The many contemporary geopolitical uncertainties were a recurrent theme in the expert interviews with Commission officials and are referred to in many of the EU's policy documents. The RePowerEU plan is perhaps the most evident example of external armed conflict leading to a shift in internal transition policy.

In other words, the 5 Ps and the pillars of SHD are all clearly relevant and interlinked dimensions of the European sustainability transition project. However, what arguably emerged as the most greatest challenge to the ambitions of the current European sustainability transition framework can be summarised with reference to a sixth P – that of politics. Political dynamics, relating factors such as geopolitical uncertainties, lack of support from citizens and fears of political backlash and polarisation, and relatedly, the composition of the European Parliament after the next elections and

the College of Commissioners from 2025, could prevent the sustainability transition from moving forward fast enough to reach current climate targets. In short, the task of ensuring a fair transition from a global as well as a national or subnational vantage is a considerable political challenge that the EU cannot solve alone. Instead, it relies on the cooperation of national governments within the EU as well as international partnerships with other global regions.

The political dimension is of course not disconnected to the pillars of SHD and the 5 Ps, but conceptually it may be fruitful to analyse it separately. The political context at multiple levels of governance – globally, at the supranational EU level and at national level – condition the priorities, policy output as well as policy outcomes regarding all the five Ps of the SPES conceptual framework (Biggeri et al., 2023). Thus, while multilevel governance may be seen as an asset and accelerator for the sustainability transition, multilevel *politics*, i.e., the politics of ST that takes place at different levels of governance within each global region may at the same time give rise to political stalemates and popular discontent, slowing down the pace of the transition. In fact, we echo the conclusion of Biggeri et al. (2023, p. 63), that “the lack and/or weakness of structured mechanism” referring to one or more of the principles of vertical integration between government institutions at various levels, horizontal integration within and between institutions at the same level, and interaction and coordination with and between non-state actors “strongly risks limiting the ability of all actors, from governments to companies and workers, to anticipate and manage the changes inherent in the sustainability transition process”.

Finally, we conclude with three key take-home messages for policymakers who work with the implementation of sustainability transition:

- It is instrumental to promote ownership of national operational plans to carry out transition policy and structural reform. Broad involvement of actors at different levels and sectors to foster a mutual understanding of *why* reforms are adopted is key to building a common consensus around these actions and to ensure that policies are stable and endure even if the government changes.
- At the level of policy communication, we recommend putting efforts into clearly identifying and articulating how citizens benefit in long-run to counter the idea that climate action comes at the expense of prosperity. There is potential to make the synergies across policy areas more visible.
- Pushing hard with high ambitions in one dimension, e.g., climate or energy, without concrete measures to mitigate negative social and employment outcomes, the reforms may come at a high price in the form of losses in political capital, potentially giving rise to populist political parties and backlash at the next national or European election.

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