



# EUROPEAN RECOVERY AND RESILIENCE MECHANISMS - CHALLENGES IN SYSTEMIC APPROACHES IN SD

SUSTAINABILITY TRANSITIONS AND SYSTEMS  
CHANGE

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## Introduction

The 2030 Agenda for Sustainable Development calls on governments and other stakeholders to achieve 17 SDGs and 169 associated targets, bringing together economic, social and environmental considerations in ways that mutually reinforce each other. It is obvious that isolated actions and policies, focused on individual goals and targets, cannot make a decisive contribution to successfully facing the whole complex web of global challenges. These global and interconnected challenges is one reason the ESDN and the Slovenian Ministry for the Environment and Spatial Planning chose the topic of “European Recovery and Resilience Mechanisms – Challenges in Systemic Approaches in Sustainable Development” for the ESDN Conference 2021. The following chapters of the Discussion Paper seek to provide a framework and basis for further presentations and discussions that will take place during the Conference on 30 November and 01 December. The ESDN Conference 2021 will bring together over 100 participants from all over Europe to listen, learn, and exchange on a myriad of topics relating to European resilience and recovery.

However, recent reports at various levels alert that several SDGs are not being achieved. The sixth Global Environment Outlook (GEO, UNEP, 2020), for example, concludes that the overall condition of the global environment has continued to deteriorate since the first edition of GEO (in 1997), despite environmental policy efforts across all countries and regions: “Environmental policy efforts are being hindered by a variety of factors, in particular unsustainable production and consumption patterns in most countries and climate change. GEO-6 concludes that unsustainable human activities globally have degraded the Earth’s ecosystems, endangering the ecological foundations of society.” Similarly, the European environmental report SOER 2020 (EEA, 2019) sums up that Europe continues to consume more resources and contribute more to environmental degradation than other world regions.

Despite growing adoption of the SDGs and other policies that strive to increase well-being without sacrificing the environment, measuring the Ecological Footprint and Human Development Index reveals that very few countries come close to achieving sustainable development. The combination of these two synthetic indicators shows the present development trend in which a higher development level (higher HDI) is accompanied by a higher Ecological Footprint. Development, therefore, occurs without adequate consideration for the environmental capacities of the planet. This finding is also valid for the EU Member States. (ReNPVO20-30)

Similarly, the latest report on the European environment (SOER 2020 by EEA, 2019) acknowledges that the long-term outlook is not as positive as recent trends may imply, due to interdependences with global developments and systemic characteristics of environmental challenges. The SOER 2020 also resumes results of analyses of (studies on) SDG interactions: the relationship between SDGs 12–15, crucial for environmental protection and climate action, and other SDGs (such as SDGs 1 and 7–11) potentially involve trade-offs (pp. 341–343).

The SDG framework reveals many synergies, however, the relationship between SDGs 12–15, crucial for environmental protection and climate action, and other SDGs (such as SDGs 1 and 7–11) potentially involve trade-offs. The main reason is that increased income (SDG 1), better access to energy (SDG 7), more economic growth (SDG 8), and industrial and infrastructure investments (SDG 9) tend to increase overall consumption and natural resource extraction. They, therefore, make it harder to achieve targets on efficient use of natural resources (target 12.2), better management of chemicals and waste (target 12.4), climate mitigation (target 13.2) and protection of terrestrial ecosystems and biodiversity (targets 15.1 and 15.5). Acknowledging these tensions more explicitly reinforces the call for alternative pathways for sustainable development.

Perhaps the most important factor underlying Europe's persistent environmental and sustainability challenges is that they are inextricably linked to economic activities and lifestyles, in particular the societal systems that provide Europeans with necessities, such as food, energy and mobility. As a result, society's resource use and pollution are tied in complex ways to jobs and earnings across the value chain; to major investments in infrastructure, machinery, skills and knowledge; to behaviours and ways of living; and to public policies and institutions. The many interlinkages within, and between, societal systems mean that there are often major barriers to achieving the rapid and far-reaching change that is needed to achieve Europe's long-term sustainability objectives.

For example:

- Production-consumption systems are characterised by lock-ins and path dependency, linked to the fact that system elements — technologies, infrastructures, knowledge and so on — have often developed together over decades. This means that radically altering these systems is likely to disrupt investments, jobs, behaviours and values, provoking resistance from affected industries, regions or consumers.
- Interlinkages and feedbacks within systems mean that change often produces unintended outcomes or surprises. For example, technology-driven gains may be undermined by lifestyle changes, partly because of 'rebound effects' when efficiency improvements result in cost savings that enable increased consumption.
- Production-consumption systems are also linked directly and indirectly, for example through their reliance on a shared natural capital base to provide resources and absorb wastes and emissions. This 'resource nexus' means that addressing problems in one area can produce unintended harm elsewhere, for example deforestation and increases in food prices due to biofuel production. The systemic character of Europe's environmental challenges helps explain the limitations of established environmental governance approaches in delivering needed change. Although signs of progress have been observed across the food, energy and mobility systems, environmental impacts remain high and current trends are not in accordance with long-term environmental and sustainability goals.

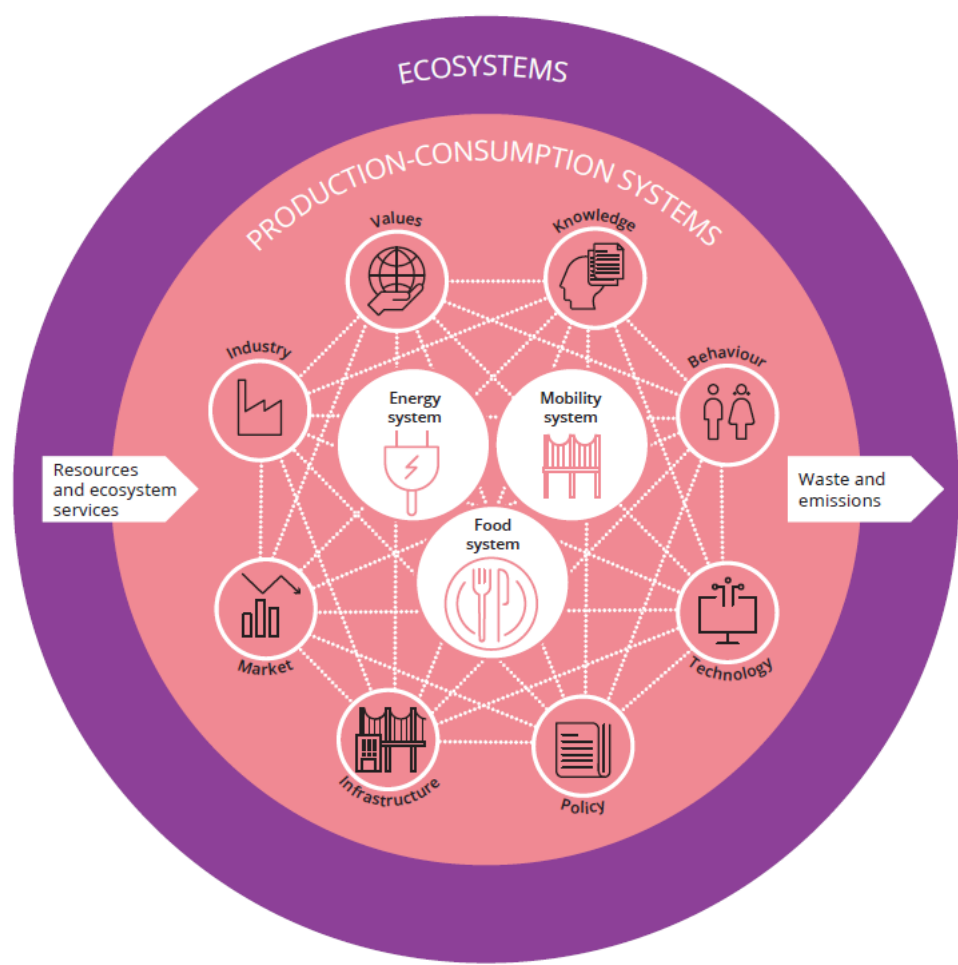
The implementation of the European environmental vision ("Living well, within the limits of our planet", see the 7<sup>th</sup> EAP) necessitates a systemic change of the development model, namely placement of fundamental socio-economic systems within the boundaries of ecosystems (ecosystem-based approaches) – Figure 15.2<sup>1</sup>.

In the last chapter of the Discussion Paper (Chapter 6), participants can find brief introductions to many of the keynote speeches and topics that will be presented during the Conference.

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<sup>1</sup> Number of figures and tables are the same as in the original source (SOER 2020).

FIGURE 15.2 Ecosystems and production-consumption systems



## Chapter 1: Achieving the EU's 2050 sustainability vision is still possible

Therefore, to achieve the SDGs, fundamental transformations of societal systems (energy, transport, food and material use systems), that are at the root cause of environmental and climate pressures, are urgently needed – i.e., through profound changes in dominant structures, practices, technologies, policies, lifestyles, and thinking (EEA, 2019).

Responding to the persistent and emerging challenges facing Europe will require transitions in the production-consumption systems driving impacts on the environment and health. Sustainability transitions are highly complex and uncertain processes. Governments cannot simply plan and implement them. Yet, public policies and institutions are essential to catalyse and orient systemic changes in cooperation with businesses and civil society. Progress towards sustainability transitions is hindered by a variety of systemic challenges. The complex nature of the sustainability challenges requires a new policy response with the multi-level perspective on transitions and catalysing innovation and system change (transitions involve the emergence and upscaling of diverse innovations). To achieve sustainable outcomes, there is a need for policies to embrace systems' interconnectedness and links between economic, social and environmental goals. Enabling sustainability transitions will, among others, require a transformation of the knowledge system supporting governance, public engagement in defining visions and pathways, coherence across policy domains and scales, and use of foresight and adaptive approaches to navigate risks. Ecosystem-based approaches can help manage cross-system interactions within environmental boundaries.

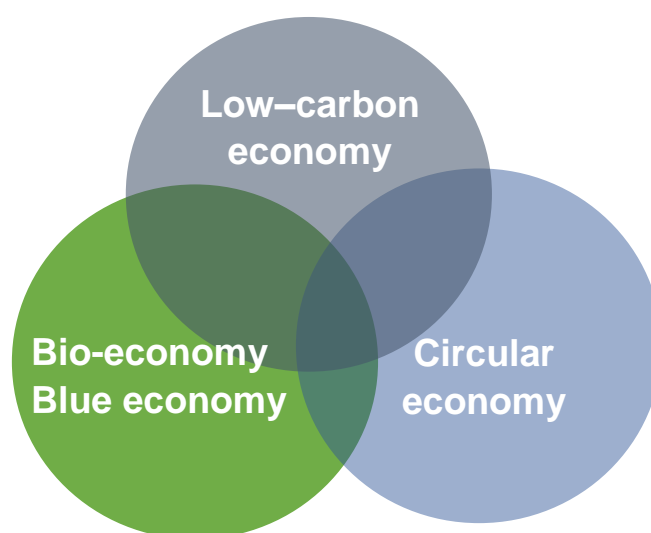
Achieving the EU's 2050 sustainability vision is still possible, but it will require a shift in the character and ambition of actions. That means both strengthening established policy tools and building on them with innovative new approaches to governance. SOER 2020 identifies a variety of important areas where action is needed to enable transitions. These areas are addressed under seven broad policy guidelines:

1. Strengthening policy implementation, integration and coherence;
2. Developing more systemic, long-term policy frameworks and binding targets;
3. Leading international action towards sustainability;
4. Fostering innovation throughout society;
5. Scaling up investments and reorienting finance;
6. Managing risks and ensuring a socially fair transition; and
7. Linking knowledge with action.

Europe has a unique window of opportunity to lead the global response to sustainability challenges. By embracing transitions, demonstrating solutions and seizing related opportunities, Europe can lead the global effort for change.

## Chapter 2: Sustainability Transitions for Systemic Change

Sustainability transitions are non-linear, society-wide processes built on innovation and knowledge creation. During the last two decades, the concepts of ‘sustainability transitions’ and ‘transformations’ have become increasingly prominent in the academic literature (Kohler et al., 2019)<sup>2</sup>. Since 2015, this trend has been matched by a growing uptake of the language and logic of sustainability transitions in European policy frameworks. As noted in Chapter 15 of SOER 2020, the EU’s long-term strategy for a climate-neutral Europe and the European Commission’s reflection paper on the 2030 Agenda for Sustainable Development (EC, 2018b, 2019d) adopt the language of transitions systematically. Similarly, EU strategies, such as the circular economy action plan, the Energy Union strategy and the ‘Europe on the move’ agenda, embrace a systemic rather than a sectoral focus, emphasising economic transformation towards long-term targets (EC, 2015a, 2015b, 2017a). They are characterised by multidimensional goals, addressing themes such as jobs, competitiveness, fair access to resources and sustainability; a focus on diverse societal actors and creating stakeholder platforms; and increasing adoption of system transitions approaches, including particular emphasis on innovation.



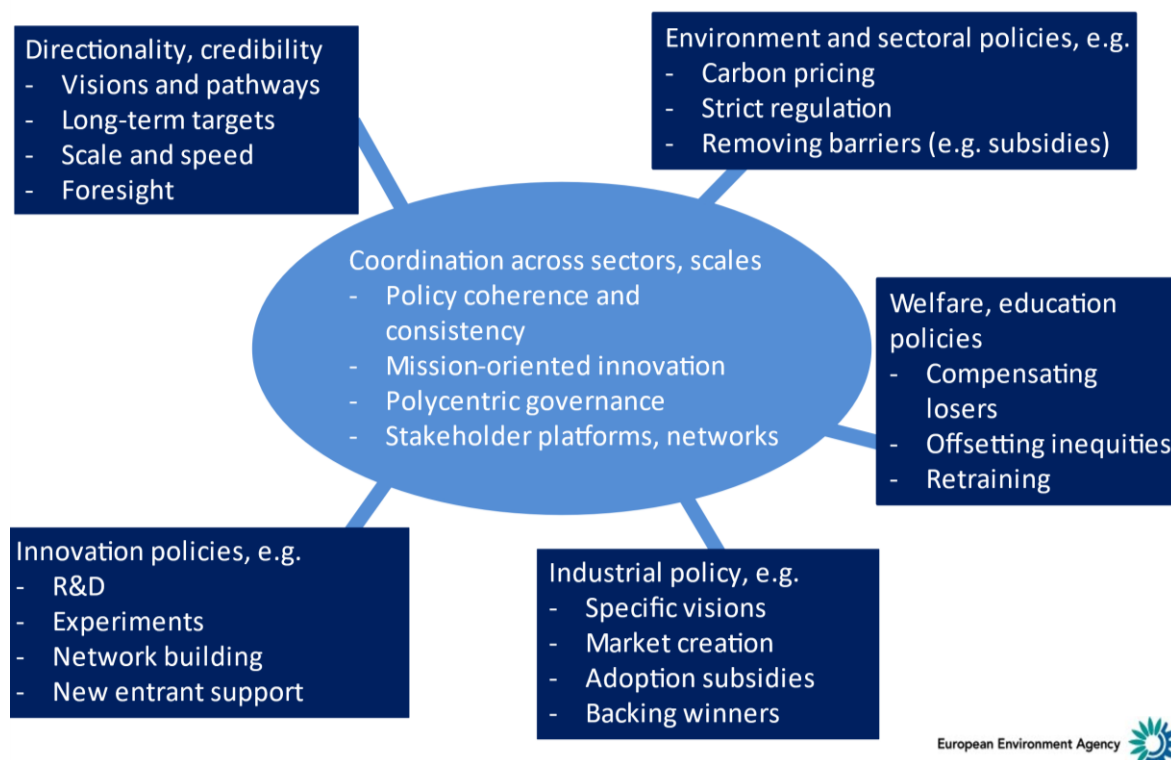
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<sup>2</sup> This chapter includes excerpts and summaries from SOER 2020 where primary sources are cited. We do not repeat them in the present ESDN Discussion Paper.



The growing set of strategic policies addressing key systems (e.g., energy and mobility) and promoting the transformation to a low-carbon and circular economy are important tools for stimulating and guiding coherent action across society. However, the coverage of long-term policy frameworks needs to be extended to other important systems and issues, such as food, chemicals and land use. Comparable cross-cutting strategies are also needed at other governance levels, including countries, regions and cities. Engaging stakeholders in developing transformative visions and pathways is important to reflect the diverse realities across Europe and to maximise environmental, social and economic co-benefits. (Guideline 2: Developing more systemic, long-term policy frameworks and binding targets)

**Figure: Policy mixes for systemic change (EEA, 2018)**



A growing body of research and practice provides insights into how fundamental systemic change can be achieved. Such transitions are long-term processes that depend critically on the emergence and spread of diverse forms of innovation that trigger alternative ways of thinking and living — new social practices, technologies, business models, nature-based solutions, and so on.

It is impossible to know in advance precisely what innovations will emerge, whether or how they will be integrated into lifestyles, and how they will affect sustainability outcomes. Transitions, therefore, involve numerous uncertainties, conflicts and trade-offs. This understanding of systemic change has important implications for governance. First, the perceived role of government shifts from acting as a ‘pilot’, with the knowledge and tools to steer society towards sustainability, to a role as an enabler of society-wide innovation and transformation. Top-down planning still has a role in some contexts.

In addition, governments also need to find ways to leverage the powers of citizens, communities and businesses. Achieving this requires contributions across policy areas and levels of government towards common goals. Environmental policy tools remain essential. However, enabling systemic change will require a much broader policy mix to promote innovation and experimentation, to enable new ideas and approaches to spread, and to ensure

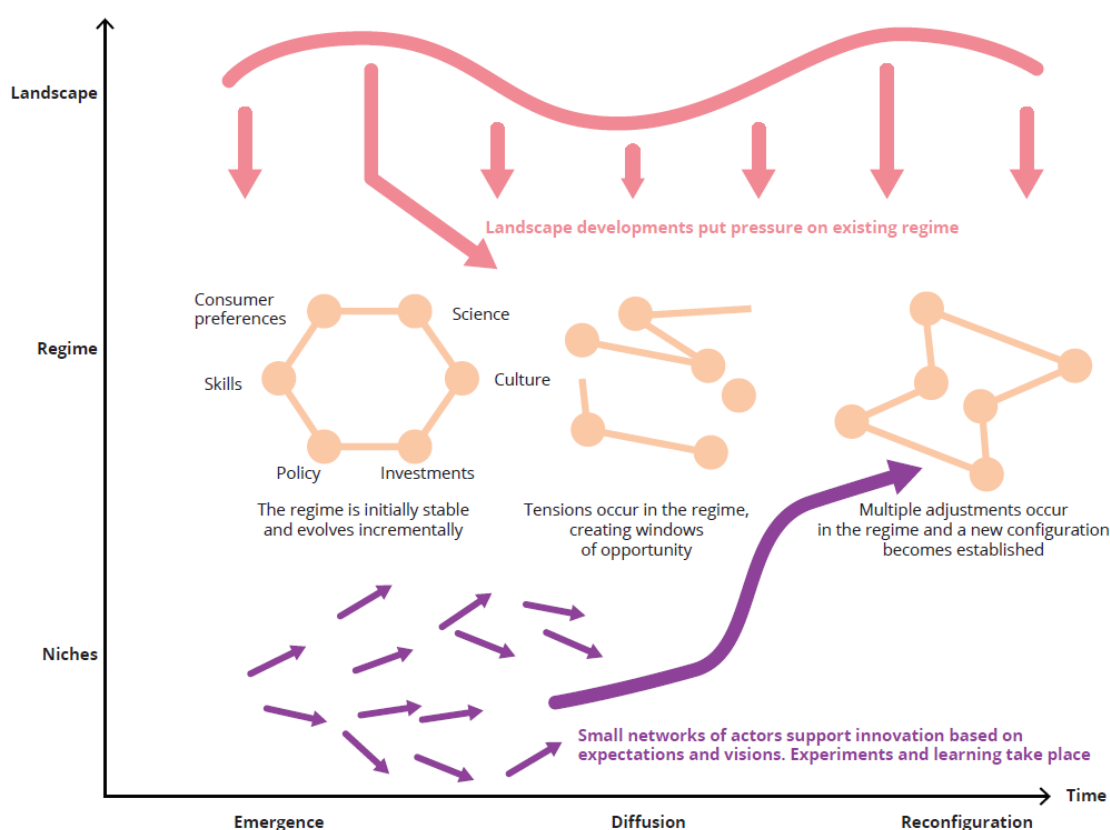
that structural economic change produces beneficial and fair outcomes. The complexity and uncertainty of transition processes means that governments will also need to find ways to coordinate and steer actions across society towards long-term sustainability goals and to manage the risks and unintended consequences that inevitably accompany systemic change.

## Chapter 3: Understanding sustainability transitions: The multi-level perspective on transitions

The growing body of research into sustainability transitions and transformations has its roots in diverse research fields. Disciplines, such as ecology, evolutionary economics, innovation theory and political economy each focus on different kinds of change processes and scales of activity.

Yet, this diversity is increasingly coalescing into a broadly shared understanding of sustainability challenges, which emphasises the barriers to transforming complex systems and the role of drivers of change at the macro and micro levels in enabling the emergence of new ways of living, working and thinking (EEA, 2018). The ‘multi-level perspective’ on transitions (Figure 17.1) is a useful model for understanding how these interactions shape the dynamics of change in production-consumption systems (Smith et al., 2010; Markard et al., 2012; Geels et al., 2017)<sup>3</sup>. It describes transition processes as arising from the interplay of developments at three levels: regime, niche and landscape.

FIGURE 17.1 The multilevel perspective on sustainability transitions



Source: Based on Geels (2002).

The regime comprises the diverse factors that structure existing modes of producing and consuming. As discussed in Section 16.5 (SOER 2020), these include technologies, regulations, infrastructures, behaviours and cultural norms, which have co-evolved in ways that hinder the emergence of alternative technologies, business models and social practices. In terms of price and performance, for example, novel innovations are likely to struggle against established approaches that have benefited from decades of incremental improvements and investments.

<sup>3</sup> This chapter includes excerpts and summaries from SOER 2020 where primary sources are cited. We do not repeat them in the present ESDN Discussion Paper.

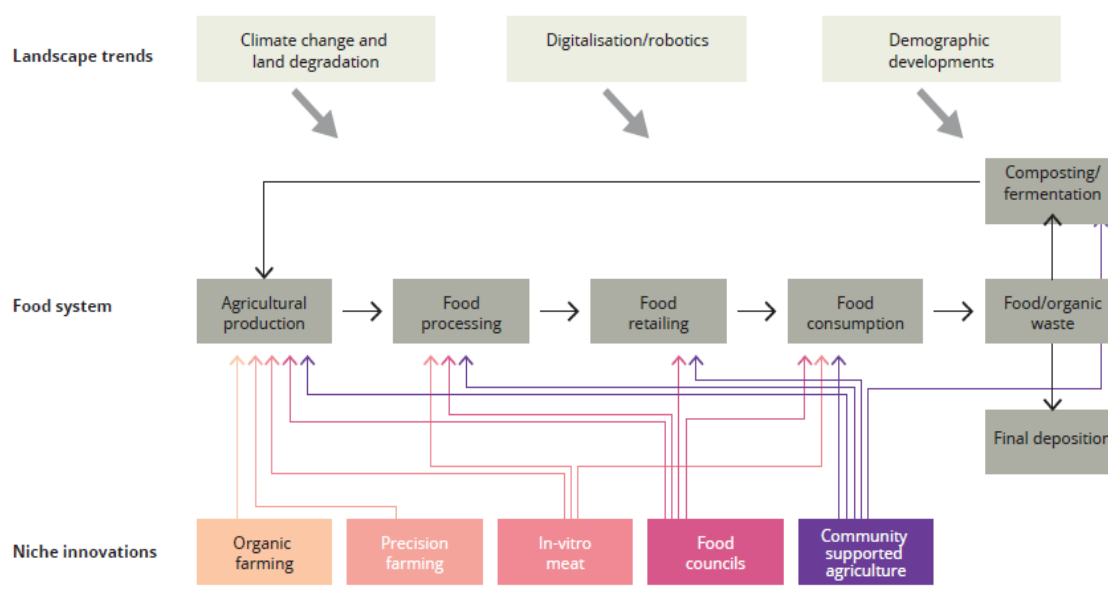
For innovations to alter the dominant system, three things are needed: niches, landscape developments, and cracks in existing regimes (Kemp et al., 1998). Niches are protected spaces, such as R&D (research and development) labs or demonstration projects, where entrepreneurs can experiment and develop radical innovations without direct exposure to market forces, consumer preferences, and so on (Smith and Raven, 2012). Landscape developments include long-term megatrends (e.g., social, economic, environmental) as described in Chapter 1, or more sudden shocks (e.g., a nuclear accident or COVID-19 pandemic), which disrupt the regime. Cracks in existing regimes may arise from internal problems, external landscape pressures or bottom-up pressure from niche innovations (Turnheim and Geels, 2012). Collectively, this implies that transitions occur through dynamic, multi-level interactions between diverse actors, including businesses, users, researchers, policymakers, social movements and interest groups.

Figure 17.1 distinguishes three phases within transition processes: the emergence of novel practices or technologies; their diffusion and uptake across society; and the disruption and reconfiguration of established systems. At each phase, innovations face major barriers, including inadequate funding, uncertainty about technical viability and consumer responses, incompatibility with established regulations or cultural norms, and active resistance from incumbent businesses.

Transitions are thus fundamentally uncertain processes, typified by setbacks and accelerations, surprises and unintended consequences. This makes it impossible to know in advance precisely what innovations will emerge, whether or how they will be integrated into lifestyles, and how they will affect sustainable outcomes.

Figure 17.2 presents an application of the multi-level perspective to the food system, including illustrative examples of landscape trends and important technological, social and organisational innovations. The multi-level perspective also provides a framework for integrating ideas from a range of transition perspectives (e.g., Smith, 2012; Gopel, 2016). These include insights into how social practices change; the role of communities and cities in enabling more polycentric forms of governance, founded on bottom-up action by communities and other groups; the potential impacts of systemic change on society and the environment; and the importance of practices, values, worldviews and paradigms (EEA, 2018).

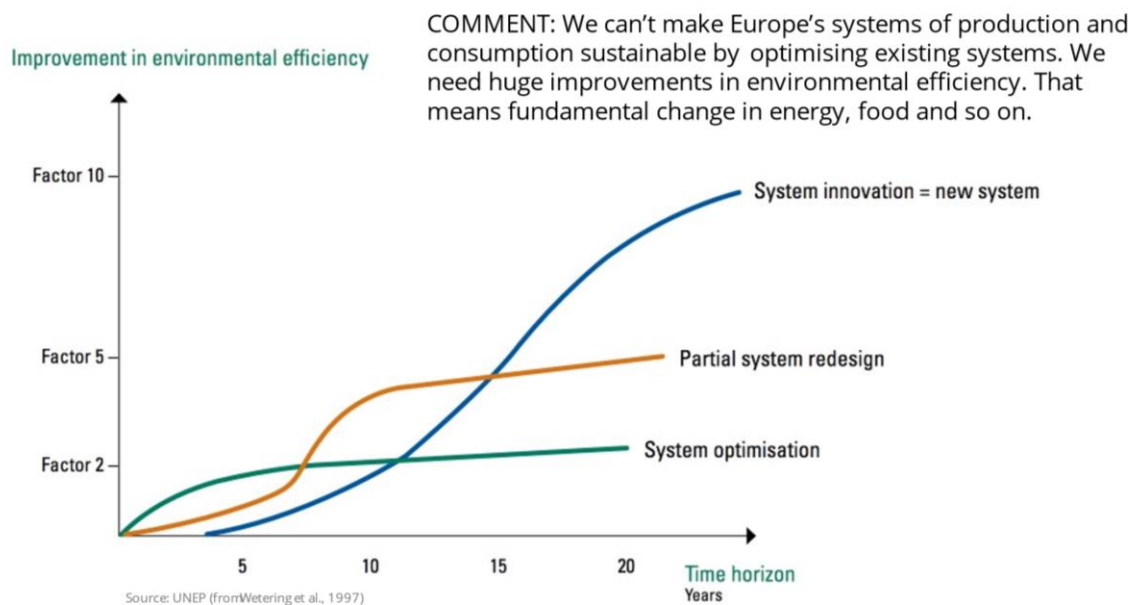
**FIGURE 17.2** Applying the multi-level perspective to the food system



## Chapter 4: More on Innovation and Knowledge Creation for Sustainability Transitions

Changing trajectory will depend critically on the emergence and spread of diverse forms of innovation that can trigger new ways of thinking and living.

**Figure: Achieving needed change requires system innovation (EEA, 2018)**



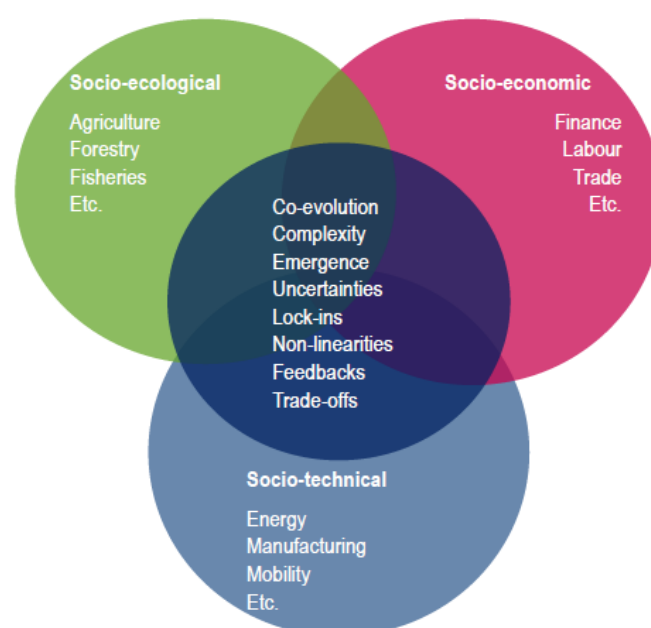
The seeds for this shift already exist. More and more businesses, entrepreneurs, researchers, city administrations and local communities are experimenting with different ways of producing and consuming. In practice, however, innovations often encounter major barriers. Public policies and institutions therefore have a vital role in enabling systemic change. Environmental policies remain essential, but system innovation requires coherent contributions from diverse policy areas, ranging from research, innovation, sectoral and industrial policies to education, welfare, trade and employment. (Guideline 4: Fostering innovation throughout society)

**TABLE 17.1 Examples of sustainability innovations in the mobility, food and energy domains**

	<b>Mobility</b>	<b>Food</b>	<b>Energy</b>
Incremental technical innovation	Fuel-efficient petrol or diesel cars	Precision farming, food waste valorisation, integrated pest management	Insulation, energy-efficient appliances, efficient gas or coal-fired power plants
Radical technical innovation	Battery electric vehicles, electric bikes, alternative fuels, autonomous vehicles	Permaculture, no-tillage farming, plant-based meat and dairy products, genetic modification	Renewable electricity, heat pumps, passive houses, whole-house retrofitting, smart meters
Social or behavioural innovation	Car sharing, modal shift, teleconferencing, teleworking, internet retail	Alternative food networks, organic food, dietary change, urban farming, food councils	Decentralised energy production ('prosumers'), community energy, energy cafes
Business model innovation	Mobility services, car sharing, remanufacturing vehicles, bike sharing	Alternative food networks, organic food	Energy service companies, back-up capacity, vehicle-to-grid electricity provision
Infrastructural innovation	Intermodal transport systems, compact cities, integrated transport and land use planning	Reforms to distribution systems, storage provision and better food waste management	District heating systems, smart grids, bio-methane in reconfigured gas grid

Achieving sustainability transitions will require diverse new knowledge, drawing on multiple disciplines and types of knowledge production. This includes evidence about the systems driving environmental pressures, pathways to sustainability, promising initiatives and barriers to change. Foresight methods are an important way of engaging people in participatory processes to explore possible futures, outcomes and risks or opportunities. Generating, sharing and using relevant evidence to the fullest may require changes in the knowledge system linking science with policy and action, including developing new skills and institutional structures.

**Figure: Transitions knowledge base: Linking knowledge with action (EEA, 2018)**



Source: Loorbach (2015)

## Chapter 5: SDGs and Sustainability Transitions: Further Reports by EEA

The 2020 EEA report Sustainable Development Goals and the environment in Europe: a cross-country analysis and 39 country profiles revealed varied focus of environmental action and prioritisation in Eionet countries<sup>4</sup>:

- Due to national priorities and context, there is **some overall divergence** in where countries put their SDG efforts.
- Approximately 90 % of Eionet countries have some form of **focused action** related to SDG 6 (water and sanitation), SDG 7 (affordable and clean energy), SDG 11 (sustainable cities and communities), SDG 13 (climate action) and SDG 15 (life on land).
- For some SDGs, there is **convergence** in the types of action within the individual SDGs adopted in Eionet countries. For example, in SDG 7, the type of action includes energy efficiency in 77 % of EEA and cooperating countries, whereas in SDG 15, 87 % of countries reported action related to the preservation of biodiversity or halting its loss.
- Other SDGs show a greater **divergence** in actions undertaken by countries, which is likely to reflect the influence of different contexts (e.g. geography and climate influencing water availability) and policy priorities on countries' choices about what to focus on.
- **Multi-level governance** is commonly used for SDG actions in Eionet countries, with almost 70 % of countries adopting an approach that combines at least two spatial levels of governance<sup>5</sup>.
- **Interministerial bodies, advisory councils, commissions or working groups** to coordinate SDG actions have been established in almost 75 % of Eionet countries<sup>6</sup>, and **dialogue with stakeholders** and their participation in prioritisation, decision-making and SDG actions can be seen in more than 80 % of countries.
- Based on current reporting, 95 % of Eionet countries already have or are developing national SDG indicator sets to monitor SDG progress, and by the end of 2020 all Eionet countries have submitted at least one VNR to the UN.
- Based on an analysis by the UN SDSN<sup>7</sup>, **the top 10 countries** in terms of progress towards the SDGs are all Eionet countries. **Eionet countries also represent 20 of the top 25 countries** globally progressing towards the SDGs.

A vast majority of the European Environment Agency's 39 member and cooperating countries are putting in action key United Nation's Sustainability Development Goals, including those focused on climate action, water and sanitation, and affordable and clean energy.

The EEA report Knowledge for Action - Empowering the transition to a sustainable Europe, published in October 2021, builds on findings and knowledge presented in SOER 2020. Messages, important from the perspective of the ESDN 2021 Conference, have been summarized:

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<sup>4</sup> The European Environment Information and Observation Network (Eionet) is a partnership network of the European Environment Agency (EEA) and its 38 member and cooperating countries. For more information, please see [European Environment Information and Observation Network — Eionet Portal \(europa.eu\)](https://eionet.europa.eu/).

<sup>5</sup> 27 out of 39 countries (69 %) have adopted an approach that combines at least two spatial levels of governance. Of these 27 countries, 15 (38 %) combine national, regional and local levels of governance; 10 (26 %) combine national and local governance scales; and 2 (5 %) national and regional levels. A national approach has been adopted by 12 countries (31 %).

<sup>6</sup> EEA member countries: Albania, Austria, Belgium, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Sweden, Switzerland and Turkey. EEA cooperating countries: Albania and Serbia.

<sup>7</sup> The 2021 report by UN SDSN is available on: <https://dashboards.sdindex.org/>.

The European Green Deal (EGD) and its associated strategies, as well as the complementary proposal for an 8th Environment Action Programme (8th EAP) reflect the need for systemic change described in previous chapters of the ESDN Concept Note. The EGD puts sustainability at the heart of EU policy-making.

In this context, Chapters 2 to 6 of the EEA 2021 report summarise Europe's progress to date on key environment and climate goals and give a concise overview of the main ambitions in five key policy areas: Biodiversity and ecosystems, Climate change mitigation and adaptation, Circular Economy and resource use, Human health and the environment, Sustainability trends, prospects and responses. For each, an initial assessment is provided of how current policy ambitions respond to the need for systemic transformations, plus reflections on how knowledge can better support action to achieve change.

At the level of strategic ambitions and aspirations, under the EGD, the current policy landscape responds well to the need for systemic transformations in all five policy areas. Compared to previous policy packages, under the EGD, the strategies and initiatives mainly take a broader system perspective, including links to the global dimension, reflecting a new understanding of sustainability challenges and responses that embrace the need to address the root causes of unsustainability. At least at the ambition level, a clear departure from silo-based approaches towards a much stronger alignment and integration across different policy domains can be observed. This trend towards a more integrated and holistic approach is also reflected in a stronger integration of environmental, social and economic objectives, including aspirations regarding financial investments (e.g. for biodiversity), social justice (e.g. for climate adaptation) and behavioural change (e.g. for mobility).

While the new policy landscape provides an initial roadmap, more detailed policy responses continue to be developed, translating short-, medium- and long-term ambitions into actions where implementation is underway. Currently, the degree to which ambitions have been translated into more defined or quantitative targets varies. For example, while quantitative mid-term and longer-term targets have been defined for climate change mitigation, the policy framework for the Circular Economy and resource use still lacks concrete targets that go beyond waste management.

This creates new demands and opportunities for knowledge — knowledge for action towards systemic transformation. There is a need to develop, integrate and use different types of knowledge. This includes better knowledge and understanding regarding key environmental and climate challenges.

There is also a strong need to invest in developing solutions-oriented knowledge. Particular attention is required regarding policy effectiveness and coherence, and understanding the interlinkages, synergies and trade-offs within and between policy domains and responses. The use of tools and approaches that are available to support policy alignment, is vital, which also means that knowledge supporting action must integrate the environmental, economic, social, behavioural and governance aspects of sustainability.

Beyond the focus on what knowledge is required, there is also a need to better understand how to strengthen knowledge development, uptake and use. Consideration of the whole knowledge system that links science with policy and action is required. Among others, collaborative, co-creation and partnership approaches to knowledge development are crucial in this context.

In the context of sustainability ambitions that aim for transformational change in society, a knowledge system that supports the capacity for wise, informed decision-making is essential. This means going beyond creating knowledge about the world to rapidly creating the wisdom about how to act appropriately. Development of a European knowledge strategy is suggested.



## Chapter 6: ESDN Conference Keynotes and Topics

This chapter provides short summaries of many keynote speeches and Conference topics.

### Session 1: Resilience and Building Forward Better – The European Perspective

Session 1 seeks to frame the Conference and begins with providing a general European perspective on resilience, recovery and building forward better, which addresses many themes and topics of sustainable development.

#### EU Resilience and Recovery / Building Forward Better Mechanisms for Sustainable Development

#### Putting the European Green Deal to work: the governance challenge in systemic transitions - keynote address

The change towards climate neutrality, or net zero emissions by 2050 will require fundamental systemic transitions in the core systems of our societies, including the energy, the food, the mobility, and the built environment systems. With the European Green Deal, the European Union is framing a science-based policy agenda with the ambition to drive economic, technological, and investment decision, and also social policy in this direction. It looks at 2030 targets as a stepping stone towards climate neutrality ambitions by 2050. This keynote will explore the European Green Deal agenda from a paradigmatic systemic change perspective, as well as from a concrete governance perspective

#### Enhancing Resilience and Building a Coherent Response for a Sustainable Post-Covid-19 Recovery in Europe from a Global Perspective

This keynote presentation will present the key features of the OECD COVID-19 Recovery Dashboard. This measurement tool was welcomed at the 2021 Meeting of the OECD Council at Ministerial Level to help countries monitor the strength and quality of recovery by simultaneously looking at four dimensions: strong, inclusive, green and resilient. A devoted effort was made to ensure that the Recovery Dashboard is aligned to SDGs, reflecting the notion that the recovery needs to set the world on course for mid- and long-term agendas. For example, in order to deepen the understanding of linkages between social and environmental sustainability issues for selected groups of the population, the Recovery Dashboard builds on the OECD Inequalities-Environmental Nexus: Towards a people-centred green transition.

This keynote will illustrate some of the outstanding issues concerning timeliness, granularity, and thematic areas that would need further attention in measuring progress beyond GDP. The Recovery Dashboard recognises the importance of timely data, for example by incorporating near-real time data on economic activity from the OECD Weekly Tracker, an OECD tool applying a machine learning algorithm to Google Trends data to estimate weekly GDP developments. The dashboard also features data from the Gallup World Poll, a private survey provider that delivers timely insights on important aspects of well-being. In the near future, the Dashboard will incorporate nowcasted estimates on income inequality and GHG emissions to bridge the lag time of these statistics. In response to the lessons learnt from this crisis, the OECD will continue to work with national statistical offices and other

stakeholders to strive for more timely official statistics in areas that are important for the economy, for people and for the environment.

## Session 2: Aspects of Resilience for Sustainable Development in practice

Session 2 focuses on different aspects that are necessary for resilience and sustainable development. This session will look at policy coherence for sustainable development, which is necessary in making systemic changes that go across sectors. Another aspect will look at the national implementation of integrating the SDG into national recovery plans as a way to build in more resilience. The session will close with a contribution from Youth Representatives from the 2<sup>nd</sup> ESDN Youth Camp and Workshop, who will present a Youth Manifesto outlining issues that the Youth see as most pressing.

### Policy Coherence for Sustainable Development – Practices in some Member States

PCSD is an underestimated or even ignored, but very crucial part, of achieving the 2030 Agenda worldwide. The 2030 Agenda is interlinked and integrated by nature, where the objectives cannot be achieved in an isolated manner. Actions on one objective can cause negative or positive impacts on other environmental and/or social challenges. There are many examples where domestic policies have negative impacts on the Global South, thus undermining their efforts to achieve the SDGs. With strong PCSD mechanisms and a mandate to adjust incoherent policies an effective decision making will be much more aligned with Sustainable Development. The role for civil society organizations is key, as they have much more knowledge on what is happening in the field, both in Europe as abroad. The session on PCSD will inform you about current practices on PCSD, based on research recently done, and give concrete recommendations for MS.

### Integrating the SDGs into National Recovery and Resilience Plans

After nearly two years of crisis and emergency it is time to confront a scenario in which the climate crisis is accelerating and it is necessary to **deliver a recovery that is both fair for the people and sustainable for the environment**. The solution is within our reach and it is contained in the 17 SDGs and 169 targets of the 2030 Agenda, the only thing left to do is to apply it. The European Union has pledged an **unprecedented economic firepower under NextGenerationEU** to be delivered in a relatively short time span of six years. This plan is meant to build a more sustainable, resilient and fairer Europe for the next generation of Europeans. At present, 19 National Recovery and Resilience plans have been approved by the European Commission and the European Council and are already in motion. We cannot miss the opportunity to take advantage of the SDGs as an overarching framework for sustainable recovery to ensure the success of these plans in every city and in every region and to meet present challenges without compromising the ability of future generations to realize their full potential.

### ESDN Youth Workshop Manifesto

At the ESDN Youth Workshop, 17 young delegates from all over Europe met to discuss, exchange experiences and together develop a manifesto with demands to the ESDN and European policymakers. They are United Nations Youth Delegates selected by their government to represent their country's youth to the UN, as well as representatives of national youth councils or other youth organisations.

At the ESDN Youth Workshop, the participants decided to work on three topics: climate justice, responsible consumption and production, and youth involvement in sustainable development. On the topic of climate justice, the manifesto discusses the responsibility of rich polluting countries towards more vulnerable countries and communities. It also promotes the World Youth for Climate Action Campaign, which seeks an Advisory Opinion on Climate Justice from the International Court of Justice. Regarding Responsible Consumption and Production the manifesto criticises the current economic system, which is unsustainable for people and planet. It tackles questions of responsible consumerism and a sustainable recovery from the Covid-19 pandemic. Thirdly, the manifesto clearly states that it is crucial to involve young people more effectively into decision-making processes that will affect their future. This includes not only listening to youth but to take their considerations into account and to create institutional frameworks that guarantee youth a seat at the table.

## **Session 3: Panel Discussion on Fostering Resilience in Sustainable Development Policy-Making - Integrating Perspectives**

Session 3 will feature different branches of resilience and sustainable development. The panelists will introduce their individual topics and relate them in a systemic manner to the other resilience perspectives.

### **Environmental and Ecological Resilience**

### **Societal Resilience**

### **Economic Resilience**

Based on the work that has been done in Finland, under the National Commission, as part of Finland's national work on the 2030 Agenda roadmap, is the topic of sustainable economy. Finland has organised several workshops where it has tried to make sense of sustainable economy; what it means and how to attain it.

The main "finding" has been that as we speak of economy, we need to make the difference between flows and assets. The aim of (sustainable) economic activity in a society should be to secure and increase the assets (or capital), and specifically two types of capital: Natural capital and human capital. This is very much in line with the key idea of Dasgupta review.

Additionally, it has been identified that circular economy and the economy of wellbeing, as key models of economic flows, that, if managed well, contribute to maintenance and strengthening of assets – natural and human.

So what should be done at national level, is to turn focus on natural and human capital, and to develop ways to measure them.

At the same time, we would need to strengthen circular economy, because it is a way to decrease the use of natural resources (both at national and global level), and thus increases natural capital. Economy of wellbeing focuses also on flows, on the relationship between the wellbeing of people, and the wellbeing of economy. The ultimate aim of wellbeing economy is to increase human capital.

## Financial Resilience

Financial resilience can be broadly understood as the ability to weather financial shocks. Nevertheless, it seems that the link between environmental, social, financial and policy resilience is coming closer in recent years as the ESG standards evolved. From an economic perspective, financial resilience can be zoomed in from different angles. In a very narrow sense, economic agents – sovereigns, companies and households - are financially resilient if they possess substantial buffers to counteract shocks. But the practice showed that, first, they can do this in a more or less sustainable ways. And second, that their actions are interlinked. Therefore, international investors focus more and more on sustainable ways of funding, while households also seem to be increasingly aware of this important issue. Finally, as the panel will show, strong alignment of perceptions will be needed among agents to steer and understand better what kind of implications sustainable financial resilience has for the future policy making.

## Policy Resilience

Question 1: How to ensure that the realization of the European Recovery Plan will make a significant contribution to systemic approaches in SD? And vice-versa: How can systemic approaches in SD contribute to a more efficient implementation of the European Recovery and Resilience Mechanisms? Regarding Policy Resilience, the Department of Sustainable Development (Romania) has set up some priorities:

1. Coherent inter-institutional framework for a successful implementation of both 2030 Agenda and Romania's Sustainable Development Strategy 2030.
2. Leaders and professional civil servants prepared at each and every institution level in their field of activity related with sustainable development.
3. Coherent and efficient way of communication with different stakeholders and civil society for a movement that can create critical mass with changed, improved mentalities in the sustainability field.

## Session 4: Exchange Spaces on Resilience and National Level Good Practices on Recovery

Session 4 provides the space for participants to attend three rounds of presentations and discussions on specific topics in resilience. Brief descriptions of the topics are provided for several of the Exchange Spaces.

### Topic 1: Climate Adaptation

The COVID-19 pandemic has revealed how vulnerable our society is to unexpected risks. But the short- and medium-term consequences of the pandemic are not the only ones, which need to be addressed. Climate change is real and its adverse effects already impact our economy, society and environment. Therefore, systemic approaches are needed to achieve sustainability and fulfill the Sustainable Development Goals. The transition to a climate-neutral and climate-resilient society is essential. It is both an urgent challenge and an opportunity to build a better future. Now, that we enter the phase of recovery, the European Union and its Member States have a tremendous opportunity to 'build back better' and make their Recovery and Resilience Plans as green and sustainable as possible. This includes both measures to increase climate action to reduce GHG emissions, as well as measures to increase the resilience towards climate change impacts.

The session on Climate Change Adaptation will particularly focus on the EU and national context by exploring the relevant EU policies (European Climate Law, European Adaptation Strategy, EU Recovery and Resilience Facility) and their mainstreaming to national policies (national adaptation strategies and action plans, national recovery, and resilience plans). The adaptation support tool, assisting policymakers on the national level in developing, implementing, monitoring and evaluating climate change adaptation strategies and plans will be presented. In our discussion we will focus on several areas with a significant potential in the post-COVID Recovery and Resilience:

- climate-proofing investments and climate resilient infrastructures,
- regional and local adaptation, and the synergies with the renovation wave,
- social and health aspects of adaptation, just resilience,
- nature-based solutions.

We will identify main challenges, gaps and needs in climate change adaptation. Furthermore, we would like to invite you to present a few examples of good adaptation practices, serving as a basis of mutual inspiration, and demonstrating transferable lessons learned. In the session we will use the interactive MURAL board to capture our ideas.

## Topic 2: R&I for a Green Recovery

Sustainable development underlines the preservation of resources for the future generations without jeopardizing present development. In order to achieve this goal, efficient technologies must be found, developed, and implemented in the world's economies. The EU is at the forefront of new technologies implementation wherein research and innovation is paramount.

The presentation is focusing on selected examples of technologies that are contributing to improving the overall energy impact on climate change and on shifting the use of present resources to more efficient and to new ones such that to aim at a medium-term goal of zero emissions and maintaining the development trend.

The following topics are presented through examples of technologies: i) equipment – SMR's; ii) system support technologies for energy storage; iii) big data evaluation of climate change risks with a view to an insurance policy, circular economy and smart cities and aggregated indicators for development; iv) models for energy systems evolution including emissions and waste fuel treatment.

The technologies presented represent just examples of the increasing importance of research and innovation as acknowledged in the EU Commission's specific strategy as well as in the UN strategy for Sustainable Development.

## Topic 3: Digitalization Supporting Transformations

## Topic 4: Circular Economy

Current production and consumption processes are still wasteful, predominantly based on linear business models. If we are to achieve the decoupling of the environmental impacts from generating well-being in the societies, we need to utilise fully the potential offered by the circular economy. Namely, there will be no climate neutrality without circularity since the decarbonisation itself requires ample resources. Additionally, the pandemic showed the vulnerability of various global supply chains and the recent energy and construction materials prices surge, etc. are providing clear signals that post

covid-19 recovery strategies need to integrate circularity principles into their core. Since both, the decarbonisation and transition to circularity are complex challenges and since we do not have much time left for serious action, we need to start addressing them at the systemic level.

During the session we will be giving an overview on how Slovenia intends to address this challenge by implementing the Deep Demonstration Project of a Circular, Regenerative and Low-Carbon Economy. The project consists of 17 intrinsically linked programmes designed in a way that enables systemic innovation. With it we intend to tackle material production and waste flows across key economic systems and value chains; work on training, education and capacity-building to create change agents and foster life-long learning as well as widely disseminate insights and good practices, while policy initiatives and experiments will ensure enabling conditions. Ongoing monitoring, learning and evaluation as well as sense-making is underpinning the entire approach and a core element of all programmes.

Participants of the session will have opportunity to share their insights and knowledge on how their respective countries are addressing the systemic challenge of transition to low carbon, circular economy and how this approach and principles are integrated in their recovery and resilience plans and/or strategies.

## **Topic 5: Governance for Sustainable Development**

## **Topic 6: Transformative Education for Sustainable Development**

The session will include a brief presentation of the lessons learned and practices from implementation of the Bridge 47 project, created to bring people together to share and learn from each other and to mobilise civil society around the world to contribute to a transformation towards a fairer and more sustainable world through Global Citizenship Education. The presentation will offer insights into how Bridge 47 coordinated efforts in responding to the challenges and opportunities of Agenda 2030, and more specifically to Target 4.7, which seeks to ensure that all learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality and Global Citizenship.

The session will provide the space for conversation around the relevance of lifelong, systemic, transformative learning to achieve sustainable development objectives, offering perhaps a new knowledge base and the key to responding to the disconnection between policymaking, research and practice.

## **Topic 7: Policy Coherence for Sustainable Development: Lessons learned**

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session on PCSD will inform you about current practices on PCSD, based on research recently done, and give concrete recommendations for MS.

## **Topic 8: Wellbeing Economy/ Economy within Planetary boundaries**

The idea that European economies and societies need to develop within environmental limits is at the heart of EU policy. The EU's flagship strategic roadmap, the European Green Deal, sets out an ambitious agenda for transforming Europe's systems of production and consumption so that they can deliver continued economic growth while protecting ecosystems.

The European Green Deal's focus on promoting economic growth is easy to understand. Societies rely on growth to sustain employment levels, increase living standards and generate the tax revenues to finance the welfare state, public debt and the investments needed to achieve sustainability transitions. Nevertheless, there are doubts about whether unending economic growth is possible, given nature's finite capacity to provide resources and absorb pollution. Globally, economic activities are already causing extensive environmental damage, necessitating an unprecedented decoupling of economic growth from environmental pressures. Whether decoupling at this scale is achievable is not certain. In addition, Europe faces other downward pressures on economic growth in coming decades, ranging from population ageing to growing risks of pandemics and climate change impacts.

These uncertainties do not mean that Europe should abandon its green growth approach. The European Green Deal's transformative agenda is essential, and it is important to make it the greatest possible success. But in building on the European Green Deal and promoting resilience, Europe should also seek to transform its economy in ways that enable it to secure society's well-being even if GDP is contracting.

Necessary actions include changes to fiscal systems, as well as more far-reaching measures to reorient economic activity at all scales, from local innovators up to multinational corporations. Rewiring of financial flows will be essential, as well as new knowledge systems that enable thinking and action at the pace and scale needed. The seeds for this transformation are already emerging in policy and practice, for example in the EU's sustainable finance agenda. Europe needs to build on these foundations and take them much further and faster.

## **Topic 9: Technological Innovations for the Sustainability Transitions from COP26 Perspective**

New technologies have long been at the centre of discussion about the transition to low carbon economy and sustainable development in general and were also a highlighted topic at the climate summit COP26 (including side-events) in Glasgow. Systematic transformations towards SD require a transdisciplinary and trans-sectoral approach, smart integration of these technologies not only with technologies for transition to circular, bio- and blue-economy, including nature-based solutions but also with socio-economic dimension and innovations. Policymakers for sustainability transitions need to follow the development of promising emerging technologies (e.g., for the 2050 goal of net-zero GHG emissions), such as hydrogen technologies, and support processes for new potentially breakthrough innovations. On the other hand, we have to deal with the complex governance processes of supporting technologies that have already become commercially competitive and represent the main opportunity to reduce carbon emissions in the coming decade or two.

Materials and products for energy efficiency in buildings have already played a role in halving the carbon footprint of the housing sector in Slovenia since the year 2000. In the last decade, we have seen a breakthrough also in electric mobility and solar power generation. Electric cars are rapidly increasing

the energy efficiency of transport and solar power is both enabling and driving the phase-out of coal in Europe. The rate of emission reduction by 2030 will largely depend on the enabling regulatory framework and infrastructure for these technologies. This includes clear medium to long term approach to regulation of solar power and electric cars, also in terms of mitigating possible negative side effects such as the expected increase in personal traffic due to lower cost of kilometre driven by electric car compared to fossil fuel car, or the ability of the electricity transmission networks do support the distributed generation. This will require novel and innovative solutions, such as closely linking the charging of car batteries with solar panels during the day in parking lots and at commercial buildings, and enabling active management of car batteries by the network operators to make best use of the increasing storage capacity in cars. Such regulations may speed up the uptake and effects of the new technologies. However, it requires proactive approach by the governments and policy coordination within the EU as a whole.



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