



Systemic change for a resilient Europe

Sustainable transformation
through the NRRPs

Imprint

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Executive Summary

The COVID-19 pandemic has been a wakeup call for societies around the world to see how vulnerable we all are to large-scale shocks, and in parallel this has exposed the weaknesses in our existing systems and structures to protect people and planet. There is an opportunity for responses to the pandemic to deliver a sustainable recovery and build a resilient future. However, our focus must be on building a prosperous, sustainable, resilient and just future and not on reconstructing the past.

Against this backdrop, it is vital that Member States not only tackle the short-term solutions that will solve problems today, but design policies, measures and reforms which create systemic change for sustainable and resilient societies that can adapt to or mitigate future crises. These solutions need to benefit people and economies while also protecting nature and biodiversity, as climate change and biodiversity loss are threatening the essential foundations to life.

Recognizing the importance of the environment in resilience-building, the European Commission set a requirement for 37% of funding to climate objectives and has set out a framework for excluding certain activities which lock in environmentally destructive measures through the “Do No Significant Harm” principle.

These principles and conditions present a new challenge for policymakers who will need to identify policies that achieve multiple objectives at once rather than siloed solutions. In addition, Member States should ensure that these policies facilitate a systemic shift towards a regenerative, distributive and resilient economy rather than stabilising the status quo. What is missing, however, is guidance on what policy measures are able to address this challenge and how to design them.

This policy brief aims to demonstrate how the conditions from the European Commission can be used to boost creativity and out-of-the-box thinking to design policies that support both people and nature in recovery; policies that contribute to climate objectives while also doing no significant harm to any of the above. This brief engages directly with guidance from the Commission by demonstrating how to utilise this guidance to deliver systemic change through the recovery process. We offer examples of ten interventions from Annex VI of the legislation of the RRF, the application of the DNSH principle and two examples of reforms which involve financial instruments to show how this approach can support a resilient recovery.

Introduction

“There is no world of yesterday to go back to, but a world of tomorrow to swiftly give birth to.”¹

The recovery process from the COVID-19 pandemic presents an opportunity to set Europe on a pathway towards sustainable prosperity. The Recovery and Resilience Facility (RRF) and the corresponding National Resilience and Recovery Plans (NRRPs) of each Member State facilitate large scale public investment into new measures and reforms which will guide us on a particular pathway into the future. This new mechanism is a once-in-a-generation opportunity for EU Member States to catalyse the type of systemic transformation necessary to mitigate the economic and social impacts of the pandemic in a way that also prepares communities for the challenges of the near and distant future such as climate change, digitisation, social polarisation or biodiversity loss.

The pandemic has shown that investing in the prevention of crises is not only a question of caring for vulnerability, human rights or fairness; it is also an important economic question. This lesson should inform how we deal with today’s environmental crises.

Take biodiversity: the recent Dasgupta Review highlights the accelerating speed of biodiversity loss and nature degradation.² The COVID-19 pandemic has exposed how this broken relationship with nature may endanger human health. If biodiversity loss continues in a business-as-usual scenario, the corresponding costs will amount to USD 10 trillion by 2050.³ The economic value of total global ecosystem services amounted to USD 125-140 trillion in 2011 which corresponds to well over one and a half times the size of the world’s gross domestic product (GDP) that year.⁴ In addition, the restoration economy is worth USD 25 billion per year and directly employs more than the coal, mining, logging and steel industries combined⁵, and at its broadest the environment is linked to around 21 million jobs in Europe⁶.

As the IPCC and IPBES show, these economic risks are accelerated with the earth climate system crossing dangerous tipping points, and we are on a pathway to more than 2 degrees of warming by 2050. The climate crisis already causes over 150,000 deaths per year, and between 2030 and 2050 this is expected to rise to 250,000 deaths per year. The costs of extreme weather events in Europe are expected to amount to EUR 120 billion per year for 2 degrees of warming and EUR 190 billion per year for 3 degrees of warming.⁷ The direct climate-related costs to health (i.e. excluding costs in health-determining sectors such as agriculture and water and sanitation), is estimated to be between USD 2-4 billion per year by 2030.⁸ A recent OECD report concludes that a pathway for recovery which prioritises investing in long-term wellbeing objectives will yield financial savings in the long term, as well as realising social and environmental objectives.⁹

The short term and the long term should start on the same day. Investing in systemic change is about early anticipation of these long-term impacts and challenges and designing this into NRRPs to build a long-term transformation out of a public health crisis which includes immediate response needs.

By attaching a variety of conditions to the NRRPs, the Commission took an essential step towards ensuring that the RRF addresses the challenge of long-term economic resilience in line with environmental and socio-economic priorities. The NRRPs must include a contribution of at least 37% of funding to climate objectives, and certain activities will be excluded from access to funding, in line with the “do no significant harm” (DNSH) principle of the European Green Deal. Additionally, the NRRPs should contribute to the seven European Flagships identified in the Communication on the 2021 Annual Sustainable Growth Strategy.

While these conditions pose a challenge to policymakers to identify solutions that achieve a multiplicity of objectives, they also provide opportunities. These conditions create a framework within which the NRRPs can set Europe on a pathway to a prosperous and resilient future when utilised to design and implement a more systemic transformation.

Achieving multiple objectives while delivering systemic change

What should European policymakers look for when designing measures that deliver systemic change?

Firstly, systemic change is about the width of change, meaning how many objectives are achieved through policy measures at the same time. In this sense, systemic change is about steering the transformational journey towards an ambitious European Green Deal. For policy reactions to be systemic, the reaction to any kind of challenge—be it from COVID-19, social polarisation, digitalisation, environmental degradation or demographic change—should contribute to the creation of a thriving Europe that is both sustainable and fair.

This means that new measures should not only serve economic recovery in the short-term. They should be evaluated against the question of whether they create long-term impact to a) the reduction of environmental risks such as climate change or biodiversity loss and b) to the promotion of a just transition. Social benefits are required to create the social support for the changes needed to achieve the environmental objectives. Only a pathway which considers wider societal goals, such as wellbeing, will allow us to reach climate targets and wellbeing goals and will require less investment in the long term.¹⁰

To deliver the kind of systemic transformation that will enable the EU to become more resilient through this crisis, policymakers need to ask in parallel:

- How does the NRRP facilitate a socially-just decarbonisation transition?
- How does the NRRP transition the economy to a circular approach to resource use?
- How does the NRRP care for the biodiverse and ecological foundation necessary to sustain our lives?

Secondly, systemic change is about the depth of change that is needed to achieve these objectives. Systemic policies are creative solutions to problems (such as biodiversity loss or social inequality) which change the underlying mechanisms and structures in a way that the symptoms no longer occur, **rather than fighting the symptoms themselves. In this sense, systemic change means “changing the formal and explicit (policies, practices, resource flows) as well as informal and semi-implicit (power**

dynamics, relationships and connections) and implicit (mental models) institutions of today’s economies.”¹¹

As outlined by Club of Rome in the System Change Compass Report, the EU needs to understand and address the root causes of the problems we face in order to solve them.¹² In addition, systemic policy measures cut across sectors and stakeholder groups to break existing path dependencies (e.g. carbon-intensive infrastructure or societal value systems) and instead shift towards an economy that is regenerative and distributive by design.

Thirdly, systemic policies focus interventions in different directions as they interact with and impact the status quo. A holistic set of systemic measures in Member States’ NRRPs would include policies that promote the mainstreaming of emerging sustainable and distributive social and economic practices (business models, consumption patterns, innovations). But just as change is about fostering the new, it is about letting go of the old. The Three Horizons Framework explains this concept well as we aim to move away from business as usual towards a better emerging future with disruptions that can be harnessed along the way.¹³ Accordingly, systemic NRRPs would also include measures that make harmful practices (like fossil-based technologies or excessive wealth accumulation) more difficult and contribute to their elimination.

Table 1. Understanding systemic change in NRRPs

Width <i>Focused on objectives</i>	Depth <i>Focused on characteristics</i>	Intervention Direction <i>Focused on interaction with status quo</i>
Policies address: <ul style="list-style-type: none"> o Environmental risks and the green transition o Social needs and the just transition o Need to be cross-cutting across different sectors o Short-term challenges 	Policies are: <ul style="list-style-type: none"> o Changing dynamics (<i>explicit changes</i>, such as legislation or reform) o Changing relations (<i>semi-explicit changes</i>, such as power dynamics) o Changing the stories (<i>implicit aspects</i> such as mindsets and values) o Breaking existing path dependencies and focus on long-term needs o Addressing root causes and building capacity for change 	Policies either: <ul style="list-style-type: none"> o Mainstream new emerging social and economic practices Or <ul style="list-style-type: none"> o Facilitate the elimination of harmful social and economic practices Or <ul style="list-style-type: none"> o Deliver both

Assessing the NRRPs through the lens of systemic change

Given the complexity at hand, governments around Europe have been struggling to come up with investment programmes and reforms that meet all criteria of the European Commission and set themselves on a transformative pathway for the long term. Consequently, to date, many of the NRRPs have built a pathway into the future based on a siloed and sectoral approach to economic development. The approach has remained that climate measures and funding are one semi-isolated section of the report, rather than an approach which builds an integrated approach to recovery. To promote long-term resilience, Member States need to consider more deeply what are the drivers and root-causes of the crises we are facing and what measures and reforms can address these. A systemic approach, which utilises the conditions and guidance from the European Commission to create coherence across policies instead of trade-offs, which works towards multiple societal objectives at the same time, and which develops resilience in communities, the economy, and nature, can have important implications for how the guidelines of the European Commission are applied.

In the NRRPs, taking into account the application of the climate tracker methodology and the DNSH principle, reform and investments should target root causes as well as new initiatives and activities which offer solutions. The RRF even incentivizes including reforms as part of their plans in their climate tracking methodology, and Member States should take advantage of this.¹⁴ NRRPs cannot leave out structural aspects of change. Including reforms in NRRPs is essential to re-orient our institutions, policies, governance and norms around a pathway which prioritises the wellbeing of people and nature.

Against this background, we offer guidance for policymakers to creatively design measures to navigate out of the current public health crisis in a way that leads the European economy towards wellbeing, social cohesion and ecological embeddedness. The brief is structured around three opportunities to use a systemic perspective. Firstly, we show what this means for the application of the DNSH principle by contrasting the case of gas investments with agricultural policy. Secondly, we apply a systemic approach to the design of investment policies based on the Climate Tracker methodology. Lastly, we propose two exemplary examples of reforms that highlight, how reforms can help breaking existing path dependencies.

A Systemic Approach to Assessing the Risks and Potentials for People and Nature in NRRPs

The ZOE Institute, in partnership with the New Economics Foundation, has developed a set of criteria for assessing NRRPs which builds an understanding of the extent to which NRRPs can create the kind of systemic change we need to build a sustainable future for Europe. These criteria are not only beneficial for assessing and analysing the NRRPs but are also relevant for designing their implementation. At time of publication, many of the measures in the NRRPs lack detail of how they will be implemented and do not yet engage with the DNSH principle. As we illustrate below, measures and reforms can be implemented in ways that are short-sighted and bring unintended negative consequences or in ways that drive holistic sustainability and prosperity. In short: details matter, and a systemic approach can help get those details right.

Application of Do No Significant Harm for Systemic Change

It is important to start this discussion by acknowledging the importance of the Do No Significant Harm (DNSH) principle and guidance. In the DNSH guidance, a framework is outlined for assessing all measures against their environmental impact, which is a step beyond what has been expected before for public investment. Though this is an important step towards developing NRRPs which minimise harm to the environment, it is clear from the draft plans available at time of writing that Member States are struggling to comply with and self-assess DNSH. The concept of “do no harm” has been around for decades in the context of climate change and the operationalisation and current guidance of “Do No Significant Harm” in the RRF is a significant step forward from the ambiguity and lack of accountability in the past. The principle in the context of the NRRPs can be a tool for greater policy coherence and for designing a systemic transformation, if applied and utilised accordingly.

The DNSH guidance outlines that each measure and reform in an NRRP must do no harm to the following environmental objectives: climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; and protection and restoration of biodiversity and ecosystems. Strengthened by a number of conditions such as assessing the full lifecycle and consideration of direct and indirect impacts, the process goes some of the way to ensure ecological considerations in recovery plans. However, the DNSH alone is not enough to ensure that a systemic, long-term, resilient recovery is designed and delivered. The operationalisation of this principle in the assessment and guidance of NRRPs currently allows for instruments, policies and projects which will indeed do significant harm to people and to planet.

Below we engage with two nuances of the DNSH: examples are explored as to how the DNSH can fall short, and how the DNSH can be utilised as an enabling framework for a holistic and transformative approach.

DNSH and Investment in Gas

The DNSH principle and the guidance provided by the Commission clearly allow for NRRPs to include new gas power infrastructure where it is replacing coal. This example represents the greatest weakness of the DNSH. Using our criteria for systemic change as the lens through which to examine this example illuminates why investing in gas is not only bad for realizing climate and biodiversity objectives, but also for people and the economy.

Investment in gas infrastructure is often motivated and justified by short-term goals and perspectives that do not facilitate a long term, systemic transformation. This measure creates a negative path dependency and focuses only on short-term needs without consideration for long-term risks. Many experts in the energy industry explain that any new gas infrastructure construction will end up as a stranded investment with long-term financial challenges.¹⁵ This point is substantiated by the rapid change in the cost of energy from different sources in recent decades.¹⁶ Considering the long investment cycles of such projects, there is a real risk that gas infrastructure becomes a burden more than a steppingstone to more sustainable energy sources by not addressing the root issue: dependence on fossil fuels. “A system that is up to 90% based on renewable energy could be cheaper than fossil alternatives, even considering storage requirements, in nearly every geography today, and a fully decarbonised power system is likely to be cost-competitive with a coal- or gas-based system by the 2030s.”¹⁷

Transitioning infrastructure often offers an important boost for jobs at a regional level, both in construction and in running and maintaining the infrastructure. Additionally, the renewable energy sector provides more jobs than gas sector; there are already more than oil, gas and coal combined, and jobs in renewable energy will triple by 2030.¹⁸ In addition, investing in something widely understood to be a bridge fuel is not just a bad economic or environmental investment in the long term, but it also poses additional challenges for people, communities and the transitioning workforce as it does not offer a structural transformation of the local economy. Investing in transitioning a workforce to support gas infrastructure sends a signal about where future employment lies; training and education will shift around this and regions will start to define themselves as hubs for certain types of careers. These signals are essential for shifting stories and shifting relations. Shifting this workforce is not just a financial investment in capacity building, but its also difficult for the community, invokes resistance, and can clash with existing identities and senses of place.

While gas infrastructure might reduce emissions compared to existing coal infrastructure, this does not mean that it does no harm in the fight against climate change and efforts to protect nature. Evidence has been emerging that the total greenhouse gas (GHG) emissions from gas have underestimated because the methane associated with production had not previously been accounted for.¹⁹ In particular, when comparing all GHG sources, liquified natural gas actually produces more GHG emissions than coal.²⁰ In addition to its contribution to climate change, gas infrastructure is harmful to the ecosystem around it, with air pollution, water contamination and chemical release harming both human communities and animal ecosystems around the sites.²¹

Investments in gas and related infrastructure may be passable in the DNSH assessment, but they should not be included in the NRRPs as this infrastructure will lock gas into **Member States’ energy** systems for years to come. Member States need to focus on breaking this existing path dependency for truly a resilient recovery.

DNSH and NRRPs Impact on Land Use

Current discussion around agriculture and land use is glaringly lacking in the guidance around what should be included in the NRRPs and what can be counted towards climate initiatives, in spite of the fact that many of the activities in NRRPs involve some level of interaction with land. The System Change Compass report from Club of Rome outlines just a few examples: “many strategies in the EGD [European Green Deal] documents explicitly or implicitly require land. The climate strategy requires carbon sinks such as forests; the biodiversity strategy aims to increase areas of protected land; the energy strategy needs land for crop-for-fuel production; and the mobility strategy will likely imply land use for new infrastructure.”²² Agriculture already accounts for 41% of total land use in Europe and when looking across all policy areas, concerns arise on whether there is enough land available in Europe to meet all these different needs.²³ We have only a finite amount of land, and when biomass energy is a climate initiative funded through the RRF, for example, and carbon sinks, agroforestry or regenerative agriculture are not, it signals about what is a priority for land use, which may not align with longer-term needs.

Utilising the DNSH principle in the context of the NRRPs can support building a more comprehensive picture of the demands on land use to enable better decision making, prioritisation and protection of land, ecosystems and nature. Infrastructure projects make demands on land use and have the potential to threaten ecosystems and nature. The DNSH assessment process can make the impact clearer

in order to mitigate this in the planning and implementation processes. Box 1 shows how nature protection can be integrated into infrastructure planning to not only protect biodiversity, but also to offer additional green measures as part of infrastructure projects.

Box 1. Example of Recovery Measure Designed for People and Nature: Integrated, Mixed-mode Transportation System Investment for “Secondary Cities”

What: Holistic redesign and development of regional (urban to peri-urban) transport system to include best practice mixed-mode integration planning (such as fluidity between modes from walking and cycling infrastructure to bus or tram routes, to scheduling integration with trains and convenient and incentivised car-share schemes) and incentives (such as changing costs around car ownership).

Why: Secondary cities are essential nodes in regional, national and international economies. While they are home to 3x the number of people than “primary cities” in Europe, they tend to struggle with slower urban development and investment, and they are essential places of transition in the move towards decarbonisation. Investment in transport infrastructure not only decarbonises mobility, but it also contributes to decarbonising trade and strengthens the regional and local economy.

Nature: This is nature-positive when it is designed in a way that is useable, integrated and incentivizes people to switch to more sustainable transport; when it integrates biodiversity protection and improvements into the design (such as green roofs on bus shelters); repurposing of existing infrastructure; or avoiding nature protection areas for the building of new infrastructure).

People: This contributes to a just transition as it strengthens regional economies (jobs, connectivity, regional hubs, etc.); participation of socially disadvantaged groups can be supported through discounted tickets.

System: This measure would be systemic when it shifts concepts of individual ownership in transport towards a collective public good, utilises a circular approach to the design and building of new infrastructure, and integrates climate risk assessments into planning.

The DNSH assessment can also support identifying trade-offs in land use if it is used in a way which incorporates land use change. For example, if land is being utilised as a protected area for biodiversity, a carbon sink for climate mitigation, or as a natural flood plain for climate adaptation, it is essential that this is valued and prioritised accordingly. Box 2 shows how protected areas can be used in a way that equally benefits people and the community and economy around them. The assessment needs to be used in a way that confronts us with the diversity of demands, and also includes demands from existing agricultural and land use policies.

Box 2. Example of Integration of Reforms and Interventions for Systemic Change: Community-led Ecosystem Restoration and Protection.

What: New spaces selected for ecosystem restoration schemes that are designed and implemented with community ownership models, to protect biodiversity, and have nature-based climate resilience integrated within. Such schemes would involve initiating and resourcing a community governance model for the restoration process, establishing community ownership, and selecting areas which are key to building climate resilience to ensure long-term viability and the transition of restoration areas to protected areas.

Why: Ecosystem restoration and protection ensures the stability and health of the ecological foundation upon which our lives depend. It is essential that we reverse ecosystem degradation and biodiversity loss in Europe and do so in a way that creates a successful and long-term governance of these commons through collective and community-based management and ownership.

Nature: Ecosystem health and restoration, and nature-based solutions to climate change (including carbon sinks and climate adaptation) are essential to developing resilience to cope with shocks and essential ecological functions (like fresh water, clean air, healthy soil).

People: The scheme would generate employment through afforestation and other ecosystem restoration practices, and ecotourism.

System: Collective ownership models ensure longer-term protection and prioritisation of protected areas, support the creation of a sense of place and contribute to community wellbeing and cohesion. This type of governance model requires trust but ensures longer-term sustainability as well as community and regional cohesion.

While the realization of DNSH related to land use can be very clearly seen in the case of protecting ecosystems, or ensuring biodiversity is maintained in relation to infrastructure, climate adaptation, or introducing new areas for carbon sinks, what is more complicated is the type of future harm that is caused when we allocate land for one use, without considering what other uses it diminishes. Without a systemic or holistic approach to land use, we cannot know whether land in a certain region is best used for new transport infrastructure, allocated as a protected area, used for new regenerative agriculture, to produce biofuels, or contributing towards carbon sinks.

Table 2. Utilising DNSH for Systemic Change		
Systemic Criteria	Fulfilled in land use hypothetical ²⁴	Not fulfilled in gas example
<i>Width</i>	<ul style="list-style-type: none"> o Addresses short term challenges and long-term needs o Designed to deliver environmental outcomes (climate mitigation, adaptation and biodiversity) o Meeting social needs through jobs and community engagement 	<ul style="list-style-type: none"> o May meet some short-term energy or employment needs o Grave threat to longer-term environmental objectives o Does not offer long-term social objectives as the industry is not future proofed in the energy transition.
<i>Depth</i>	<ul style="list-style-type: none"> o Sees land use as a cross-sectoral foundation 	<ul style="list-style-type: none"> o Maintained existing institutions, power and roles. o Does not deliver cross-sectoral impacts
<i>Direction</i>	<ul style="list-style-type: none"> o Prioritisation of land-use enables decrease of harmful practices and mainstreaming new sustainable practices 	<ul style="list-style-type: none"> o Does not mainstream new approaches and continues to support harmful practices.

Recommendations for Systemic Interventions in NRRPs

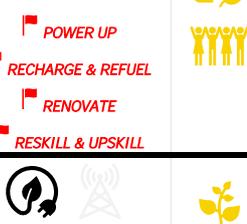
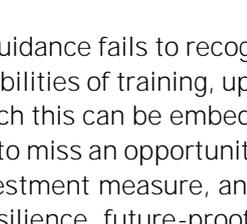
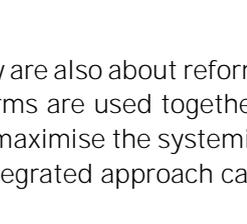
Based on the criteria explored above, the framework we have developed builds on existing DNSH. This framework helps to elaborate more concretely what a systemic approach to interventions could look like and can help to improve selected measures of the Rio Marker Methodology. Complementary measures can ensure that the measures have a systemic impact and that appropriate interactions between social and environmental goals are considered. The framework, developed based on these concepts, can be used to help inform plans and assess their ambition for a recovery which addresses social and environmental needs together, but also to inform operationalisation of these plans in implementation.

Annex VI of the legislation establishing the Recovery and Resilience Facility contains a selection of interventions and their contribution (full, partial or no impact) to the climate tracking methodology set out in the legislation, based on the Rio Marker Methodology. The table below represents a selection of these interventions which fully contribute to climate objectives according to this methodology, and which further correlate strongly with the Six Pillars that should underpin Member States' NRRPs as established by the Annual Sustainable Growth Strategy as well as the criteria that make up a Systemic Approach to Recovery and Resilience. The ten intervention fields below demonstrate how different types of interventions, if designed and implemented strategically and with long-term resilience in mind, can contribute to a people- and nature-positive recovery that delivers the systemic transformation we need for long-term resilience.

Six Pillars should underpin the NRRPs					
Green transition	Digital transformation	Smart, sustainable and inclusive growth	Social and territorial cohesion	Health, economic, social and institutional resilience	Policies for the next generation, children, youth

Criteria for a Systemic Approach to Recovery and Resilience					
Nature	Systemic change	Just transition	strong (3-5)	okay (1-2)	none (0)

Table 3. Interventions for Systemic Change			
Relevant Annex VI Measures	Description	6 Pillars + 7 Flagships ²⁵	Criteria
35, 36, 37	Adaptation to climate change measures and prevention and management of climate-related risks (e.g. floods, fires, storms, drought) including awareness-raising, civil protection, disaster management systems and infrastructures with emphasis on ecosystem-based approaches and nature-based solutions <i>To ensure recovery for people and nature, this measure needs to include community-led governance or ownership models and local employment and training opportunities to ensure economic and social benefits are paired with ecosystem protection</i>	 RESKILL & UPSKILL²⁶	
45 bis	Use of energy-efficient recycled materials in construction, manufacturing and other sectors to contribute to circular economy by reducing introduction of new materials and waste and taking responsibility for the full lifecycle of materials <i>To ensure recovery for people and nature, this measure needs to include work transition schemes and upskilling for a circular way of working in construction and manufacturing to ensure these skills are embedded for the future.</i>	 RENOVATE RESKILL & UPSKILL	
28, 29, 31, 32	Installation of and transition to renewable energy sources (wind; solar; marine; other, including geothermal) without disrupting local ecosystems and human settlements <i>To ensure recovery for people and nature, this measure would need to include community engagement, work transition schemes, in addition to new jobs, and incorporate community or cooperative ownership models.</i>	 POWER UP RESKILL & UPSKILL	
75	Construction, expansion and integration of cycling infrastructure coherent with local and regional transportation systems <i>To ensure recovery for people and nature, this measure needs to prioritise low-income areas, be paired with reform which strengthens rights and safety for cyclists and include cycling.</i>	 RESKILL & UPSKILL	
27	Provide economic and technical support to enterprises that provide services which contribute to the low carbon economy and to resilience to climate change, including awareness-raising measures <i>To ensure recovery for people and nature, this measure should focus on SMEs and include participation requirements such as GHG reduction, local job creation, re-training or work transition schemes.</i>	 RESKILL & UPSKILL	

25 bis, 26 bis	Renovation of existing housing stock, public infrastructure, health facilities and schools and education centres for energy efficiency with energy savings of at least 30% and direct or indirect GHG emissions of at least 30%	
<p><i>To ensure recovery for people and nature, this measure needs to incorporate circular economic principles in renovation works and include upskilling and work transition and training. All energy savings measures must also lead to GHG emissions reductions to avoid rebound effects of efficiency measures.</i></p>		 <p>RENOVATE</p> <p>RESKILL & UPSKILL</p>
33, 77	Construct or improve infrastructure, including production, transmission, distribution, transport and storage capabilities, for renewable alternatives to fossil fuels, build recharging points for electric transport vehicles, and construction of and transition to smart energy systems (including smart grids and ICT systems) and storage	
<p><i>To ensure recovery for people and nature, this measure needs to incorporate circular economic principles in renovation and construction works and include upskilling for new jobs to allow for work transition.</i></p>		 <p>POWER UP</p> <p>RECHARGE & REFUEL</p> <p>RENOVATE</p> <p>RESKILL & UPSKILL</p>
01	Contribution to green skills and jobs and the green economy through awareness raising, education and job creation	
<p><i>To ensure recovery for people and nature, this measure needs to focus specifically on re-training and upskilling, and have particular programmes earmarked for people transitioning away from fossil-fuel industries. It needs to be combined with education sector reforms which integrate sustainability into all curricula.</i></p>		 <p>RESKILL & UPSKILL</p>
64, 65, 67, 68	Contribution towards the TEN-T core and comprehensive networks with a focus on reconstructing and modernising existing railways with newly built lines being constructed where necessary to expand the network to its intended reach	
<p><i>To ensure recovery for people and nature, any newly constructed railways should be made without disturbance to local ecosystems, offer local employment opportunities, and be paired with an emphasis on mix-modal transport integration.</i></p>		 <p>RENOVATE</p>
50*	Nature and biodiversity protection, including natural heritage and resources, and development and integration of green and blue infrastructure	
<p><i>To ensure recovery for people and nature, nature-based solutions should be applied wherever possible in infrastructure and urban development to mitigate the pressures of climate change and create balance between urban and natural needs, and natural areas should be protected from development and resource extraction. Measures should include training and re-skilling in environmentally focussed jobs and for eco tourism.</i></p> <p><i>* While this intervention only partially contributes to the climate marker, it would contribute fully if part of larger reforms.</i></p>		 <p>RESKILL & UPSKILL</p>

One specific weakness of many of the Annex VI recommendations is that this guidance fails to recognise the interconnectedness of many of the investment measures and the possibilities of training, upskilling and employment. The table above tries to demonstrate the ways in which this can be embedded. As has also been highlighted in an OECD report: many countries are set up to miss an opportunity to realise social outcomes by embedding retraining and upskilling in every investment measure, and not just as an isolated project in itself.²⁷ This approach ensures community resilience, future-proofs skills, and offers employment opportunities.

The NRRPs are not just about interventions and initiatives that need finance, they are also about reform needed to guide Europe towards a prosperous future. It is essential that reforms are used together with interventions to overcome lock-ins from existing incentive structures and maximise the systemic potential of funding. Box 3 below shows an example of the way in which an integrated approach can be taken to delivering both investment and reform through an existing project.

Box 3. Example of Recovery Measure Designed for People and Nature: Green Roof and Building Programme in Malmö, Sweden

What: The project has greened the entire surface of the building using more than 60 different plant species. The green roof serves as a recreational space and has an orangery available to all tenants living in the building. Rainwater accumulates in small ponds and provides a water source to birds and insects.

Why: Greened buildings constitute a rare habitat for biodiversity in urban areas. At the same time, the green space allows for recreation at home. The intelligent natural water management reduces drought and flood risks. The greening as well as its maintenance generates green local jobs.

Nature: This project uses nature-based solutions to protect biodiversity, mitigate climate change and strengthen the cultural people-nature connection. Together with the utilisation of green waste compost and crushed bricks for the roof substrate, this represents a blueprint for policies that promote the incorporation of biomaterials, recycled materials and nature-based solutions for green facades and roofs.²⁸

People: The project generates green jobs, provides green spaces for residents while at the same time protecting them from drought and flood risks. However, for a truly just transition it is crucial that such projects are implemented in all neighbourhoods in order to guarantee universal access to its inherent benefits for everyone.

System: This measure would be systemic if it involves the greening and long-term maintenance of a large number of buildings in all neighbourhoods. Additionally, collective ownership supports community building and changes the people-nature connection.

Reform

A sustainable, resilient and just recovery does not only need investments that strengthen new business models, values and consumer patterns but will also heavily depend on the extent to which old and harmful business models, values and consumer patterns are weakened and their phase-out is enabled. Including reforms in the NRRPs is essential to re-orient our institutions, policies, governance and norms around a pathway which prioritises a cross-cutting systemic transformation. In this section we give two examples of reforms which involve financial instruments to support a resilient recovery.

Tax Reform

Mobilising new fiscal revenues for investments can help to avoid another wave of austerity and support positive social outcomes. A key opportunity of the NRRPs that is in line with the criteria of the assessment framework lies in tax reforms that are designed to provide multiple outcomes. This reform can create fiscal revenues in the short term to fight post-pandemic public debt, increase the resilience of tax revenues without hampering economic activity and at the same time reduce inequalities and benefit the environment.

The resilience of tax revenues can be improved by shifting taxes from monetary flows (income, consumption) to stocks (land, wealth, assets). To date public tax revenues heavily rely on consumption taxes, income taxes and social insurance.²⁹ This makes the tax base heavily dependent on economic activity, whereas stock flow is less prone to fluctuations. Land and property taxes are one option to reduce wealth inequalities while also shifting tax revenues away from links to economic activity. Tax reforms in this vein could change dynamics to make budgets more resilient to shocks while also offering new sources of revenue for public investment.

An example could be a land value tax, which increases when the value of land accrues in value due to community rather than individual effort.³⁰ It can either be implemented as part of a wider tax system or as the predominant tax in a new system that seeks to price the use of natural assets whose supply has hard boundaries. Land and property are taxed, for instance in the case of Stamp Duty when a property on a piece of land is sold, through Inheritance Tax or when inherited. However, the uplift in value, which often affords owners of land considerable income through charging rents or sale at a higher price

level, remains largely untaxed. “These increases in land value are a windfall for those who have benefited, especially because of the location of the land they own”³¹.

Proponents of Land Value Tax (LVT) have long argued that it can:

1. Help correct wealth inequalities by taxing windfall increases in land value and thereby decreasing power imbalances.
2. Help economic development in areas where land values are low, versus those where values are high.
3. Boost government tax receipts, which could assist with tackling major challenges such as ecological crises.³²

Another tax reform example is the gradual introduction of environmental taxes to support a green transition. Carbon pricing is already included into the EU Emissions Trading Scheme (ETS); however, there is a lack of consideration of economic activities that directly contribute to biodiversity loss such as meat production or deforestation. Fiscal revenues could be generated on the one hand by creating an investment initiative for plant-based food products and at the same time by gradually increasing taxes on the production of meat. Any similar sectoral transition would need to be complemented with reskilling of farmers whose business model relies on meat production for a just transition.

Subsidy Reform

A second type of reform which could support systemic change for a resilient and green recovery is subsidy reform. Reforming subsidies could generate revenue, promote green innovation and reduce environmentally harmful subsidies. Subsidies account for up to 5% of government expenditures across OECD countries with 4,4% of government expenditures directly supporting the economy.³³ Approaches for this have been developed by the OECD and policies for subsidy reform are widely supported by a number of international actors including the IMF.³⁴ “The fiscal, environmental and welfare gains from removing energy subsidies are substantial. At a global level, revenue gains in 2015 were estimated to be about USD 2.8 trillion (3.8 percent of global GDP) and USD 3.2 trillion (4 percent of global of global GDP) in 2017. These reforms can also generate substantial environmental benefits, such as reductions in CO2 emissions and premature deaths from air pollution.”³⁵

Subsidy reform is about promoting positive changes through subsidising innovation, technology and sectors we need to lean into for the future just as much as it is about eliminating negative practices by ending investment in industries that need to be phased out or that no longer need a price suppression mechanism.

Summary Recommendations

We are faced with a once-in-a-generation opportunity to **revitalise Europe’s communities, economy and nature** through the National Recovery and Resilience Plans, but in order to do this, Member States and the European Commission need to be enabling, enforcing, designing and implementing plans which are systemic and transformative, and which facilitate long-term thinking and resilience building. The assessment framework developed based on these criteria for systemic change can be used to help inform plans, but also, crucially, to inform operationalisation of these plans in implementation.

These plans must integrate reforms with investment measures to fully realise the potential this moment holds. They must also move away from a narrative wherein climate mitigation or nature protection is a co-benefit of creating jobs, or vice versa, but to integrate various outcomes into a cohesive and holistic vision for the future. They must integrate deep, wide, and multi-directional measures and reforms which set us on a pathway towards an aspirational future and not a return to the past.

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- ²⁵ Note: These indications refer to the flagships of Scale-up, power-up, renovate, recharge and refuel, connect, modernise, and reskill and upskill.

²⁶ The Flagship “reskill and upskill” refers to “the adaptation of education systems to support digital skills and educational and vocational training for all ages.” We have included interventions where vocational training and reskilling could be embedded even where digital skills are not involved.

²⁷ OECD. (2020). Making the green recovery work for jobs, income and growth. Retrieved from https://read.oecd-ilibrary.org/view/?ref=136_136201-ctwt8p7qs5&title=Making-the-Green-Recovery-Work-for-Jobs-Income-and-Growth

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³² Note: Because land is not frequently valued, there are few estimates of the revenue that could be raised from LVT.

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