GREEN RECOVERY TRACKER

EU RECOVERY: HOW GREEN IS RECOVERY SPENDING IN DIFFERENT SECTORS?

Taking Stock: Where are we on Green Recovery at the end of 2021?

The Green Recovery Tracker project analysed recovery plans and measures in 18 EU countries. Our analysis shows that €210bn out of the €716bn analysed is set to accelerate the green transition, while €54.2bn could in fact negatively impact the green transition.

This factsheet takes stock of EU recovery plans at the end of 2021, provides an overview of the assessed recovery spending across four key sectors: energy, buildings, industry and mobility and analyses how this sets us up for EU legislative processes and negotiations across key Fit-for-55 files in 2022.

Two urgent and all-encompassing political challenges unfolded simultaneously in 2020 and 2021: the need to respond to and recover from the COVID-19 crisis, and the need to realize the European Green Deal. Politicians and policy experts alike quickly agreed that an effective allocation of economic recovery spending would require the pursuit of a "green recovery": addressing the economic crisis as well as the climate and biodiversity crises.[1]

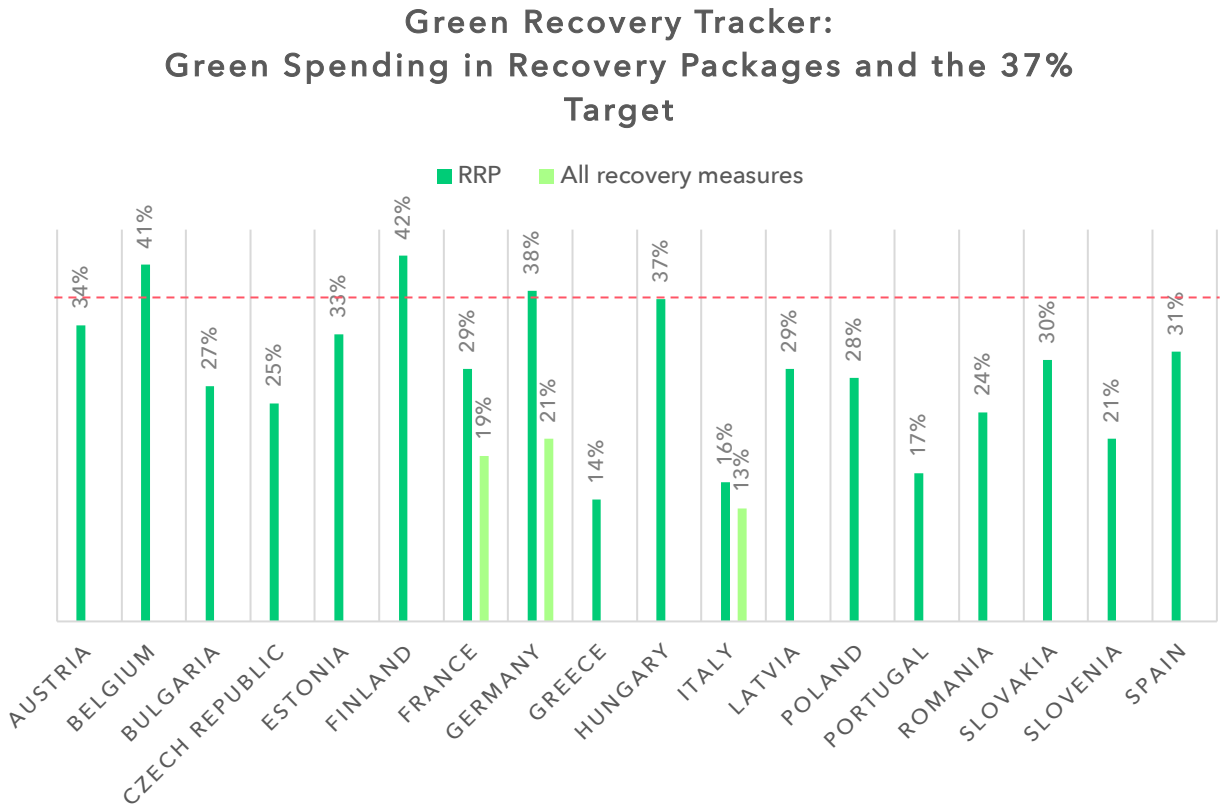
In Europe, national governments and the European Union were deploying large recovery packages to bring their economies back on track. This included a ground-breaking €750bn recovery package for the entire EU ("Next Generation EU"), with the €672.5bn Recovery and Resilience Facility (RRF) as its central element. The RRF was set up to enable recovery measures in all EU member states, based on Recovery and Resilience Plans (RRPs) prepared by national governments. European leaders agreed that the EU's recovery must be aligned with the green and digital transition. Thus, the RRF regulation demanded that at least 37% of the spending in National Recovery Plans support the green transition, with the remainder of the funding doing no harm to the transition.

The 37% target led to intense negotiations and discussions between EU member states and the Task Force created by the European Commission. The process of drafting and revising RRPs in coordination with the European Commission did significantly improve the quantity and quality of climate-spending in a number of member state plans.

Despite these improvements, however, our analysis showed that most final recovery plans are set to miss the 37% climate spending target. Moreover, we found significant risks that measures that

[1] Federal Environmental Agency (2020). The Green New Consensus: Study Shows Broad Consensus on Green Recovery Programmes and Structural Reforms

look green at first glance may end up supporting fossil fuels (e.g. measures that appear positive but when considered in the local context could end up being harmful, such as investments into "hydrogen" infrastructure in regions where it is unlikely that the infrastructure will be utilized for anything except fossil gas in the foreseeable future[2]) and that most recovery plans are not aligned with the EU's new 2030 climate target.



By the end of 2021, 22 EU member state recovery plans have been submitted[3] end endorsed by the European Commission. An overview of how the implementation of the Recovery and Resilience Facility and the national recovery and resilience plans is progressing can be found on the recently launched Scoreboard[4] by the European Commission. The endorsement allows a disbursement in pre-financing to the respective countries. The Commission will authorize further disbursements based on the satisfactory fulfilment of the milestones and targets outlined in the Council Implementing Decision, reflecting progress on the implementation of the investments and reforms.

[2] Also see CAN Europe (2021). EU Cash Awards

[3] **Bulgaria**: Plan is still under review;
Netherlands: Due to national elections followed by coalition negotiations, the Netherlands have not submitted a recovery and resilience plan so far.
Poland and Hungary: Plans submitted but not endorsed yet
Sweden: Plan was submitted, but the Government decided on 23 September 2021 on revisions to this plan.

[4] See https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html?lang=en

About our data

This factsheet is based on data gathered through the Green Recovery Tracker, a joint project between Wuppertal Institute and E3G, in collaboration with national experts. The data used is available on the website www.greenrecoverytracker.org. A full list of all countries covered, and the status of the documents on which this analysis is based for those countries, can be found in Annex 1.

Deviations between our numbers and official assessments by the European Commission[5] can be explained by methodological differences, including the fact that our methodology only considers climate mitigation and not adaptation effects. Moreover, we count 26% of all measures as having a likely climate effect but not assessable due to uncertainties[6], which are oftentimes assessed positively by the EU Commission. The official Climate Tracking Methodology outlined in Annex VI of the RRF Regulation is the necessary construct for a uniform assessment of measures across all countries. And yet it leaves loopholes in the precise evaluation of individual measures. Only the implementation phase will show how green certain measures are implemented. Thirdly, we distinguish between very positive measures for which we allocate 100% of the budget to support climate mitigation and positive measures which we count with 40%. Even though many member states have also discounted some measures not to contribute completely to climate mitigation, rates may differ in individual cases.

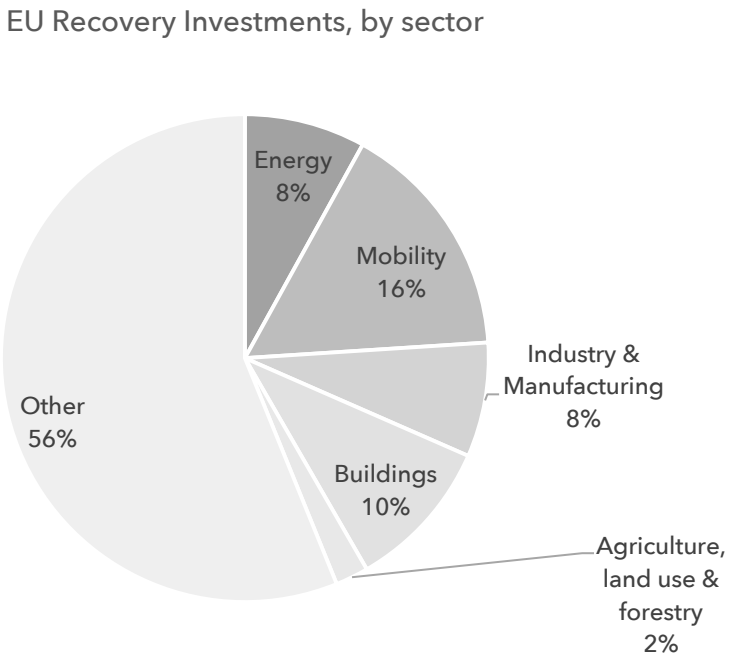
EU RECOVERY PLANS: SPENDING BY SECTOR

Spending by member states varied considerably across different sectors, with mobility receiving the largest share at 16% (€110bn), followed by buildings at 10%(€72bn), and finally energy (€56bn) and industry (€52bn) respectively at roughly 8% of funding allocated. Only 2% of investment measures detailed in member state recovery plans are set to go to agriculture, land use & forestry (€15bn). Given the limited scope of measures covered for agriculture, we, therefore, chose not to focus on this sector in detail in this briefing.

[5] https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#national-recovery-and-resilience-plans

[6] Measures combining positive and potentially harmful elements (e.g. support for efficiency measures alongside investments into new gas infrastructure), measures that could have a positive or negative impact depending on their design (e.g. some digitalization measures, general investment support for local governments), ...

The vast majority of investments (€392bn) included in member state plans could not be specifically assigned to a given sector (with sectors defined along a CO2 emissions inventory logic). Measures in the "other" category are either cross-sectoral (like VAT reductions) or focus on e.g. education, health, social and care systems. In this category almost two thirds of measure are likely to have no or only a small climate effect. For another 21% the climate effect is not assessable. Only 7% have a positive or very positive climate effect. While 6% have a negative climate impact.



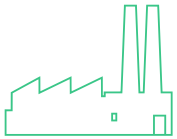
In the following section, we provide a factsheet covering the core results by sector. Subsequently, we unpack sector by sector - the quantity and quality of climate spending, highlighting opportunities and shortcomings that will be critical for the climate-neutral transition in each of these sectors in the coming years.

GREEN RECOVERY TRACKER

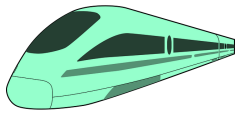
FACTSHEET: ENERGY, INDUSTRY, BUILDING & MOBILITY

The Recovery Facility's **impact on the supply of clean electricity will be smaller than its impact on the demand for it.** Regarding renewable electricity supply, which is already cost competitive in most areas of Europe, the bottleneck may be less about financial support and have more to do with **regulatory constraints.**

Most Member States plan to achieve **medium-depth renovation**, which was the minimum required by the RRF Regulation so that those measures count fully towards the 37% green transition target. They have some potential to accelerate the transition of the building stock in the EU, but **fall short of the ambition necessary** for the buildings sector.



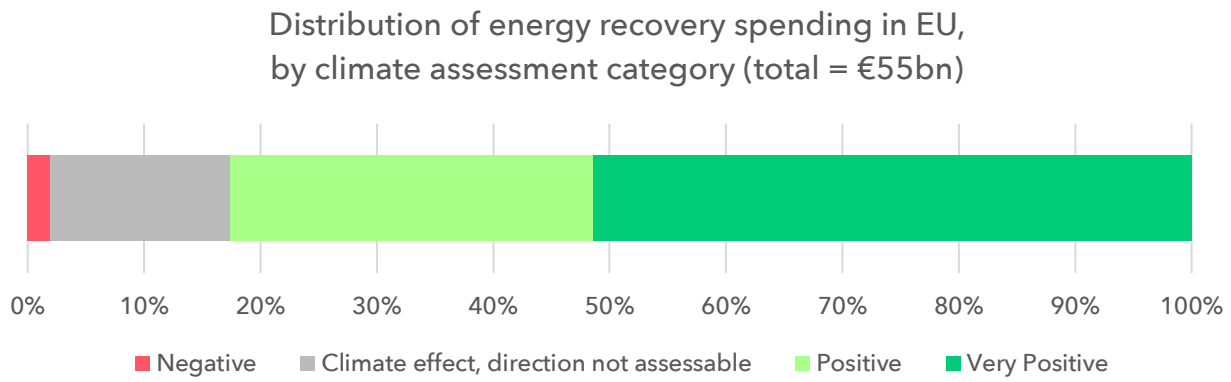
Member states are currently not required to develop plans for decarbonizing industrial sectors as part of the NECPS, though NECPs formed the basis for many member states recovery plans. **The lack of an existing framework, set of targets and measures** is illustrated in the RRPs by often **unrecognizable strategies** of measures regarding the decarbonization of industry.



As one-fifth of mobility-related recovery spending still goes to road transport infrastructure and in the form of subsidies to the automotive industry, **the transition to a truly sustainable mobility ecosystem** that prioritises public transport and active mobility over the use of private vehicles **will be hampered.**

SECTOR: ENERGY

Our assessment of recovery measures[7] shows that 8% of the total recovery investments are set to go to the energy sector, for example into electricity or gas infrastructure. 83% of the energy investments assessed are expected to make a positive or very positive contribution to the green transition. This includes measures that are set to improve electricity grids, scale up the production of green hydrogen, and increase renewable energy generation.
However, the climate impact of €8.5bn (16%) in investments could not yet be determined and will depend on how the recovery plans are implemented. This includes investments in gas-based technologies where it is not yet clear whether they will be fully based on renewable hydrogen or whether they risk creating fossil gas lock-ins. Lastly, we identified €1.1bn in energy recovery spending which could in fact be actively harmful to the green transition, including planned investments into what will most certainly be fossil gas infrastructure in Bulgaria[8] and Romania[9].



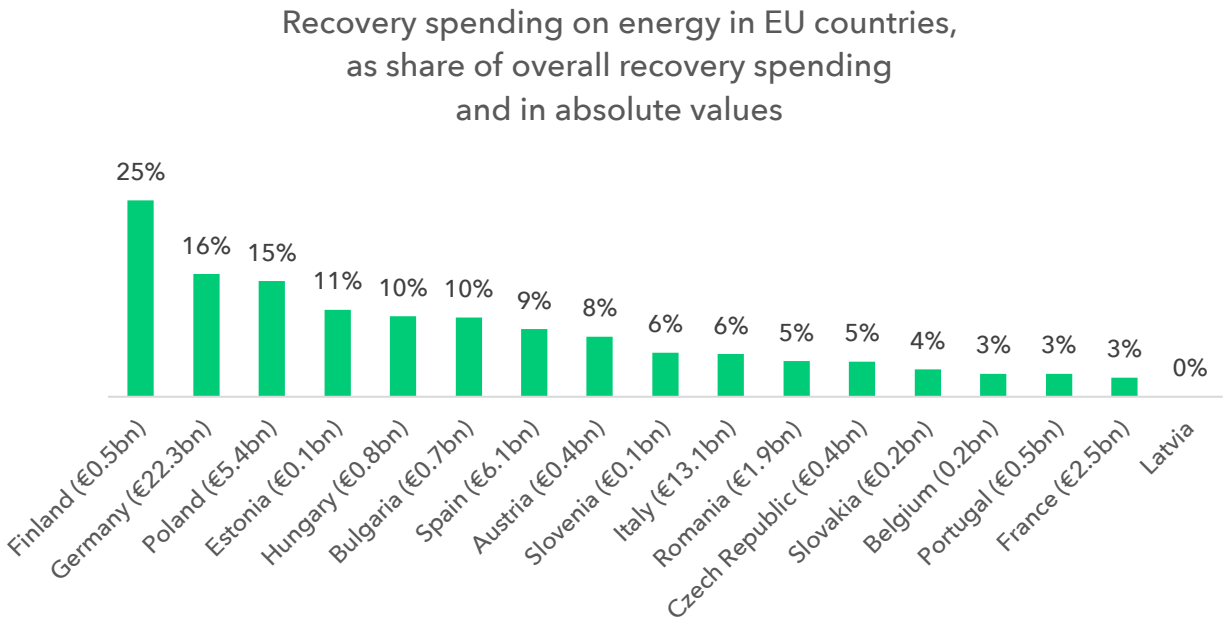
Furthermore, our data shows that different governments prioritized investments in the energy sector to different extents when developing their recovery plans. Finland achieved the highest share of energy-related spending by far. Germany plans to use the funding to lower its renewable energy surcharge, thereby making the use of electricity more competitive relative to fossil fuels such as oil and gas, and to enable large scale investments in hydrogen. Poland is offering significant opportunities to scale up the offshore wind power industry, though mostly through loans. Naturally, countries with access to more recovery funding were able to allocate higher

[7] See Annex 1, without Greece

[8] Bulgaria's recovery plan is still not approved by the European Commission. The final plan contains measures on gas turbines and gas pipelines which bare a high risk that they will most likely not used for hydrogen in the foreseeable future.

[9] A full assessment of the climate-related components of the Romanian NRRP can be found here: https://www.enpg.ro/wp-content/uploads/2021/11/EPG_Romanias-Post-COVID-19-Recovery-Report.pdf

absolute amounts to any single sector without necessarily having the highest share, as can be seen in the absolute numbers which are also included in the chart below.



KEY TAKEAWAYS FOR RECOVERY SPENDING ON ENERGY: PRIORITIES FOR EU LEGISLATIVE PROCESSES IN 2022

Based on our assessment of recovery spending for the energy sector, it looks very likely that EU recovery funds will create a demand pull for renewable electricity. Numerous measures are being introduced that are set to accelerate the rollout of electric end-use technologies such as heat pumps and electric vehicles. This has the potential to make a positive contribution to the green transition due to the ability of these devices to efficiently use clean electricity. However, the plans alone are not doing enough to fully secure these benefits, as investments in clean electricity infrastructure, both for generation and grids, are limited.

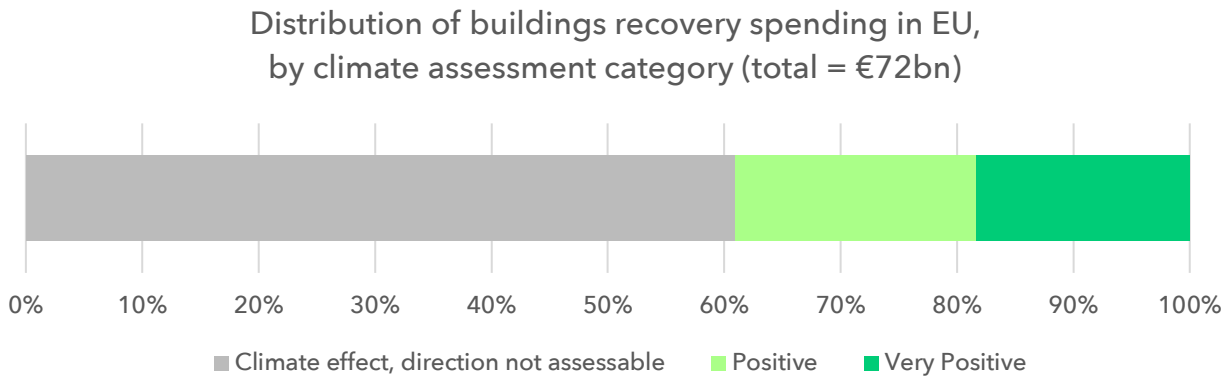
In summary, this could mean that the Recovery Facility's impact on the supply of clean electricity will be smaller than its impact on the demand for it. Consequently, it will be important to increase efforts in energy efficiency and thus limiting the expected growth of electricity demand. Regarding renewable electricity supply, which is already cost competitive in most areas of Europe, the bottleneck may be less about financial support and have more to do with regulatory constraints.

Legislative steps to unlock the potential of renewable energy generation are therefore urgently needed, also because they are a prerequisite for other green recovery measures to be able to make a positive impact. Such steps would also align well with the negotiations for the EU's Renewable Energy Directive and the upcoming revision of National Energy and Climate Plans.

Electricity grids, also need an urgent scale up of investments and the lack of focus on this in most recovery plans can be considered a missed opportunity. Furthermore, all these measures should be implemented alongside coherent and effective support schemes for a more efficient use of energy.

SECTOR: BUILDING

Our Green Recovery Tracker assessment of recovery measures shows that 10% of the total recovery investments are set to go to the building sector, for example into residential or public buildings. 39% of the investments in the building sector assessed are expected to make a positive or very positive contribution to the green transition, whereas €43.6 bn (61%) worth of investments could not be determined and will depend on how the recovery plans are implemented.



The deep dive assessment of the building energy renovation components of the plans conducted with the Renovate Europe National Partners[10] shows a significant investment to energy renovation. In most cases, Member States plan to achieve medium-depth renovation, which was the minimum required by the RRF Regulation so that those measures count fully towards the 37% green transition target. They have some potential to accelerate the transition of the building stock in the EU, but fall short of the ambition necessary for the buildings sector to meaningfully contribute to achieving climate neutrality goals.

Out of a total of €472bn foreseen to be disbursed to the 18 countries studied[11], €39.9bn is allocated to buildings energy renovation. Proposed investments in energy renovation are concentrated in the residential sector, which receives over €23bn (58%) of funding. At least 2%

[10] https://www.renovate-europe.eu/wp-content/uploads/2018/09/Renovate2Recover_Full-Study-1.pdf

[11] Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Poland, Romania, Slovakia, Slovenia and Spain

of it is explicitly targeting social housing as a sub-sector, driven by a €500m investment program in France. Public sector buildings are the second largest target for investment with close to €13bn (34%). The remaining funding is allocated to the industry/ commercial sector - €2.9bn (7%), with historic/heritage buildings and other funding including innovation and investment in skills attracting the remaining less than 3%. Residential sector funding dominates in all countries except for Belgium, France, Croatia and Slovenia, for which public sector funding receives a larger share.

The overall share of funding allocated to energy renovation across the 18 Member States is estimated at 8.4%, which is below the Commission's illustrative 12% of RRF funds overall being allocated to renovation. It differs between countries: ranging from approximately 3% of total in Austria to 16.4% in Belgium. Five countries have allocated less than 10% of their NRRP allocation to buildings energy renovation, with the remaining allocating between 11-14%.

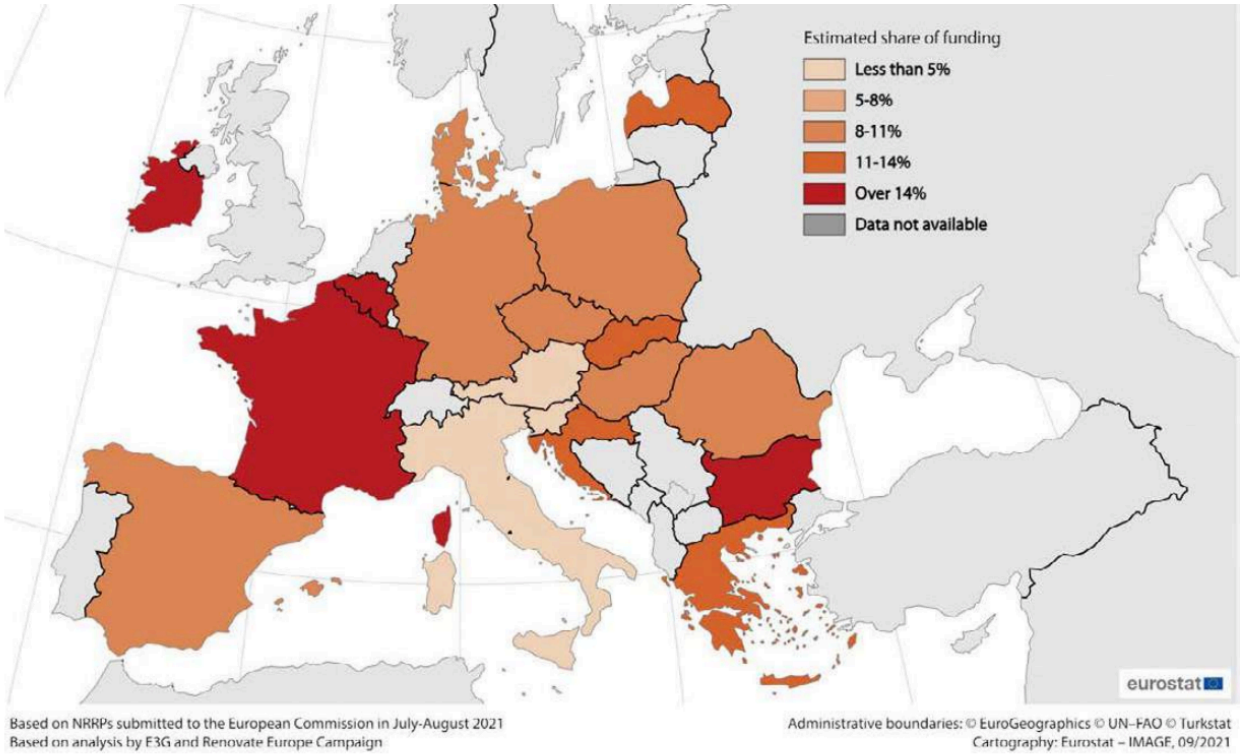


Figure 3. Share of funding allocated to energy renovation of buildings in NRRPs, in %

KEY TAKEAWAYS FOR RECOVERY SPENDING ON BUILDINGS: PRIORITIES FOR EU LEGISLATIVE PROCESSES IN 2022

The analysis of the recovery plans in this study demonstrate significant renovation activity is planned but in order to deliver transformational change, further steps are needed. This includes ensuring that funding delivers a step change towards realising deep (or staged deep)

renovations, going well beyond the 30% minimum energy saving recommendation set by the European Commission **and investing in the right enabling framework to create sustainable renovation markets including skills, certification, awareness raising and support for citizens through one stop shops and other support models and attracting private finance.**

UNDERPINNING A STRONG FIT-FOR-55 PACKAGE FOR BUILDINGS

The deep dive assessment of the building energy renovation components of the plans conducted with the Renovate Europe National Partners demonstrates significant interest in investing in building renovation, which can contribute to a strong outcome for the Fitfor-55 legislative proposals, all of which would enter into force while NRRP funding is being invested. New legislative proposals affecting buildings and renovation have already been tabled: these include a revision of the Energy Efficiency Directive (EED), Renewable Energy Directive (RED) and a new Emissions Trading Scheme for heating and transport fuels, and most recently the revised Energy Performance of Buildings Directive (EPBD).

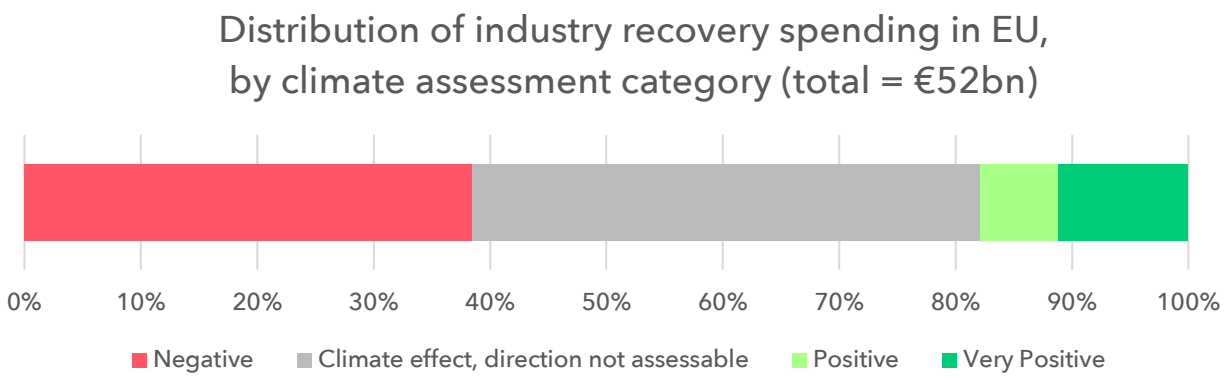
The strength of the overall package is critical for delivering on renovation, with individual elements playing pivotal roles. For example, the introduction of mandatory Minimum Energy Performance Standards (MEPS) under the EPBD can send a strong signal to the whole renovation value chain, from institutional investors to building users. The EPBD as presented by the European Commission sets a precedent at EU level by introducing MEPS for at least the worst performing buildings, representing 15% of the total EU building stock. This can be built upon and developed to send a wider signal for other parts of the building stock.

The EED sets new energy savings and increased efficiency targets for Member States (to be binding at least to some extent), buildings renovation will play a key role in their capacity to fulfill those targets. In terms of enabling framework, the proposal for equivalent requirements for certification and training for providers of energy efficiency services and energy audits, are a welcome step forward – and one that NRRP investments can help see adopted and delivered effectively. Ensuring that renovations are delivered by highly qualified and trusted professionals is necessary for a successful buildings transition.

Done right, NRRP investment can ease agreement on, and the implementation of, a more ambitious legislative package for buildings – a virtuous cycle between ambition and deliverability that can drive the creation, investment in, and sustained growth of renovation markets across the EU. To unlock this, it will be critical to establish a positive feedback loop between EU institutions (in supporting effective deployment of NRRP funds) and Member States (in backing a strong legislative outcome from Fit-for-55 negotiations) that delivers a significantly improved building stock for citizens.

SECTOR: INDUSTRY

We find that nearly 8% (about €52 bn) of the spending outlined in the 17 plans assessed[12] is set to flow to industrial sectors. Nearly 20% (€9.3 bn) of this spending will accelerate the green

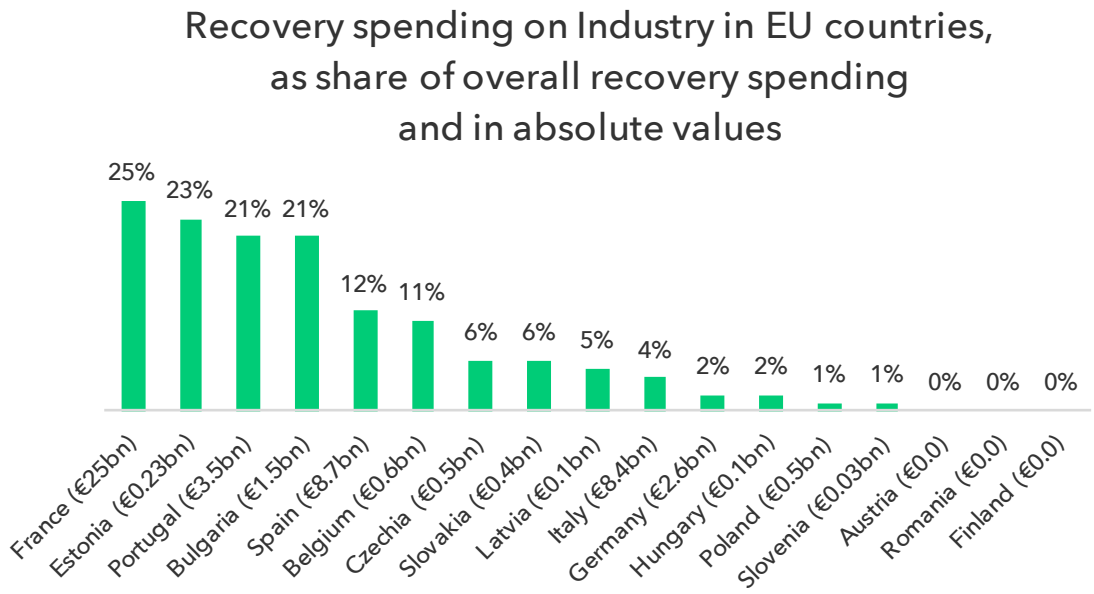


transition. Although some plans contained specific measures to promote industry decarbonization (6%) and circular economy (9.4%), these areas ultimately did not feature strongly in most member state recovery plans. However, the climate impact of €22.75bn (44%) worth of investments could not be determined and will depend on how the recovery plans are implemented. Lastly, we identified €20bn in industrial recovery spending which is likely to be harmful to the green transition. Critically, this amount is accounted for by just one measure: the reduction of the production tax in France.[13]

There was a considerable variation in how much different member states chose to invest in industrial sectors. France, Estonia, Portugal and Bulgaria set aside the highest share for industry-related spending. Belgium introduced measures to encourage companies to develop an industrial value chain for scaling up hydrogen use. Germany also focused on support for hydrogen use in industry. Germany proposes the establishment of an EU-wide integrated market of green hydrogen production and implemented a national hydrogen strategy[3]. Countries with access to more recovery funding were, of course, able to allocate higher absolute amounts to any single sector without necessarily having the highest share of spending, as can be seen in the absolute numbers which are also included in the chart below.

[12] See Annex 1, without Greece

[13] This measure was introduced without any links to climate targets of conditionality attached to the tax reduction that could lead to emissions reductions. As a result, we expect it to boost industrial production with a negative impact on overall emissions.



KEY TAKEAWAYS FOR RECOVERY SPENDING ON INDUSTRY: PRIORITIES FOR EU LEGISLATIVE PROCESSES IN 2022

One core problem regarding the industrial sectors is that member states are currently not required to develop plans for decarbonizing industrial sectors as part of the National Energy and Climate Plans (NECPs) planning and reporting framework, under the Energy Union Governance Regulation. NECPs formed the basis for many member states recovery plans. Without an existing framework, set of targets and measures for industrial decarbonization, member states will have found it more challenging to quickly pull together concrete and comprehensive investment plans for industrial sectors.

On the cusp of a decade in which a major wave of reinvestment in EU industrial assets is due, this was a missed opportunity. There are two main ways to rectify this going forward:

- Many of the milestones for member state recovery plans have already been set. However, where there is still space for revisions with plans still being drawn up, the European Commission should encourage member states to ensure a strong focus on industrial decarbonization.
- Ensuring comprehensive legislation on industrial decarbonization and funding for investments in the transition at EU level.

The European Commission has already made substantial progress on the second of these two levers. The Fit-for-55 package, released in July 2021, included a range of measures specifically aimed at accelerating industry decarbonization: additional support for early-stage

commercialization of innovative production processes via a stronger Innovation Fund and the provision of Carbon Contracts for Difference (CCFDs), a more robust anti-carbon leakage system in the form of the proposed Carbon Border Adjustment Mechanism (CBAMs) and targets to ensure green hydrogen uptake and prioritization for industry sectors.

As these proposals make their way through the legislative process over the course of 2022, it will be critical to ensure they are strengthened in such a way that they create strong enough incentives for industrial companies to shift to cleaner production processes. There is already a widespread perception backed up by numerous studies[14] that industry sectors have had a relatively free ride so far. To ensure that CBAMs and CCFDs do not contribute to that dynamic they will need to be accompanied by a strong ask from industrial sectors in return, effectively coming at the cost of some of the supports (e.g. free emissions allowances) they benefit from currently.

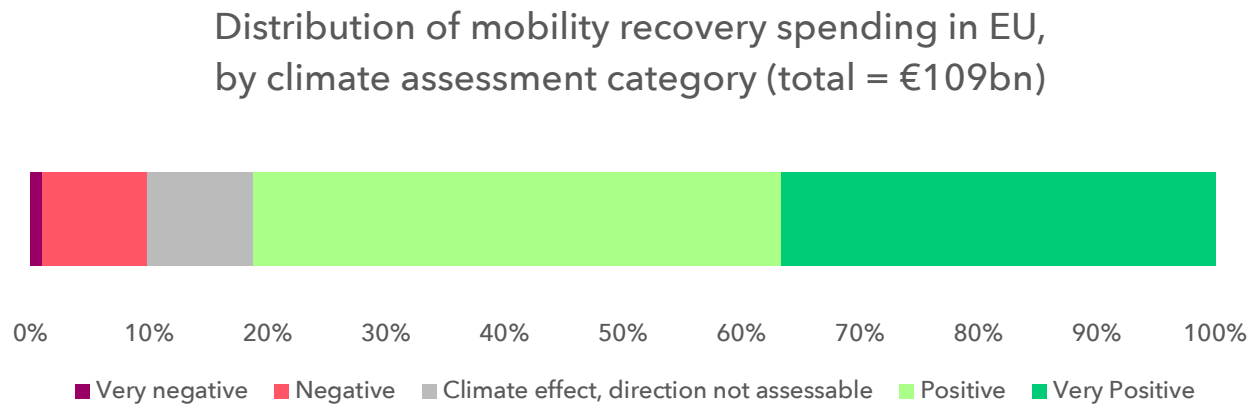
Ensuring sufficient and targeted investment at EU and member state level in industrial decarbonization is a key issue for the just transition and for Europe's economic cohesion. EU industrial sectors have faced considerable challenges since the global financial crisis 2008-09: structural declines in demand, increased international competition, volatile raw material prices and overcapacity in the global market. By supporting the shift to near-zero emissions industrial production processes and scaling up circular economy approaches, EU member states will be able to create a long-term future for these sectors in Europe, securing jobs throughout the industrial value chain. By doing so in a way that benefits all regions, EU recovery funding and an EU clean industry package can reduce the risk of fragmented national policies and start to bridge inequalities in the shift to a climate neutral economy.

SECTOR: MOBILITY

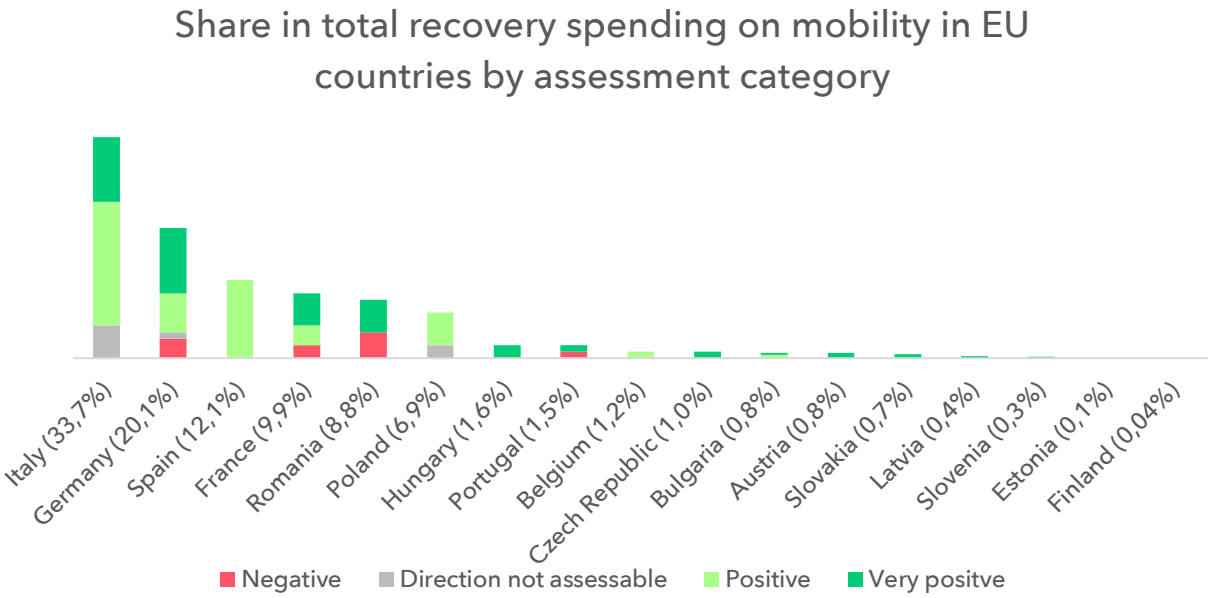
The assessment of recovery programmes in 17 EU member states[15] shows that 16% of the total recovery investments (€109bn out of €685bn) are spent in the mobility sector, significantly higher than the share for the industrial or energy sector.
We find that 82% (€89.2bn) of the mobility recovery spending in the EU is considered to make a positive or very positive contribution to the green transition. Typical measures that are rated "positive" or "very positive" are investments into the expansion and optimization of railway networks; investments into upgrading of urban transport systems and active mobility; investments into the renewal of public transport vehicle fleets and rolling stocks; or support programmes for the purchase of e-vehicles and charging infrastructure, targeted both at individuals and enterprises. On the other hand, 9% (€10.3bn) of the measures were considered problematic, comprising e.g. the extension of road networks, support programmes that also cover combustion vehicles, or support measures for the aviation sector. The impact of 9%

[14] https://carbonmarketwatch.org/wp-content/uploads/2021/05/Presentatie_AdditionalProfits7Junevs2.pdf
[15] See Annex 1, without Greece

(€9.6bn) of the total recovery investments can't be assessed yet and depends on the individual implementation of the recovery plans as some of the investments are e.g. envisaged in the national recovery plans rather nonspecific and labelled as "sustainable and safe transport" or "clean mobility", which makes a more accurate assessment impossible.



Member states show a wide variety of shares allocated to the transport sector: with about €37 bn (34%), Italy has by far the highest share of mobility-related spending, followed by Germany, which spends 20% of the total investment (€109bn), and Spain with a share of 12%. Other EU countries invest less than 1% of their programmes into mobility measures.



Furthermore, the measures can be divided into four key areas that have benefited most from these investments: Road transport and automotive industry (21%), long-distance public transport (58%), urban public transport (15%) and other forms of transport as aviation, water transport and alternative fuels production (6%).

One area of concern is that one-fifth of mobility-related recovery spending still goes to road transport infrastructure and in the form of subsidies to the automotive industry. While it is clear that electrifying vehicle fleets will be needed to achieve European and national climate targets in the short to mid-term, such investments perpetuate car-dependent mobility systems complicates the transition to a truly sustainable mobility ecosystem that prioritises public transport and active mobility over the use of private vehicles.

KEY TAKEAWAYS FOR RECOVERY SPENDING ON MOBILITY

A strong contribution of the transport and mobility sector is crucial to achieving the European 55% target by 2030. With its 'Sustainable and Smart Mobility Strategy', the European Commission is setting concrete milestones to ensure a smart, sustainable and resilient return from the COVID 19 crisis. For example, the installation of 3 million public charging stations by 2030 is intended to promote the spread of zero-emission cars on European roads. Doubling high-speed rail and expanding cycling infrastructure over the next decade will also make mobility between and within cities and towns healthier and more sustainable.

Given the ambitious target set by the European Union, the overall spending is unlikely to be sufficient, especially in view of the urgent need to cut emissions, improve air quality and health conditions in urban areas.

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CONCLUSION

IS THE GLASS HALF FULL OR HALF EMPTY?

The economic Covid recovery efforts of the EU member states are unprecedented both with respect to total budget and climate ambition: the €672.5bn budget of the Recovery and Resilience Facility (RRF) with a 37% share of green recovery has become a major investment component of the EU's Green Deal. The whole process of recovery plan development and approval by the European Commission has intensified the debate in all member states of how to "build back better" and use recovery funds to strategically support the transition to a zero carbon economy.
However, given the massive challenges and time pressure imposed by the necessity to become climate neutral by 2050, it becomes obvious that in the EU Recovery funds the full potential to explore synergies with climate mitigation has not been achieved. Although, at this point most national recovery plans are finalised and have been approved by the European Commission, there are lessons learned, which need to be considered in the upcoming climate mitigation related negotiations in the EU:

- A large share of the recovery budget may have a substantial climate impact, but still it is unclear whether this is in a positive or negative direction. It will be key to tune those programs to be in line with the 2030 and long-term climate targets of the EU: This means, on the one hand, that the **implementation phase** that now follows, the measures must be closely monitored[16] in order to strengthen the climate and, at the same time, to constantly implement the do-no-significant-harm principle. On the other hand, it is also essential **to critically assess the plans that have not been endorsed yet** in order to prevent measures that carry the risk of promoting infrastructure for fossil gas[17].
- Specifically, **energy efficiency** must be given a stronger emphasis. E.g. in the **buildings** sector the overall share of funding allocated to energy renovation across the 18 Member States is estimated only at 8.4%, which falls short of the Commission's illustrative 12% of RRF funds overall being allocated to renovation. Increasing this share seems not to be a feasible option anymore at this point. What is possible however, is

[16] In the endorsed RRP of Romania, there is an investment for the construction of a green hydrogen network included, though it is very unlikely that there will ever be any hydrogen in these pipelines. Find more details here: https://www.enpg.ro/wp-content/uploads/2021/11/EPG_Romanias-Post-COVID-19-Recovery-Report.pdf
[17] The final Bulgarian RRP (not endorsed yet), contains measures which are fostering fossil fuels by installing e.g. a network of gas pipelines which are unlikely to ever transport hydrogen.

to shift from medium-level renovation, which is dominant in many plans to deep renovation in line with the EU's climate neutrality target.

- The **energy** sector is the one with the highest share of climate positive and very positive measures in recovery plans. There is a strong support for renewables in the plans of many countries, which now would need to be backed with a reduction of regulatory constraints for higher renewable installation rates. Such steps would also align well with the negotiations for the EU's Renewable Energy Directive and the upcoming revision of National Energy and Climate Plans. Electricity grids, also need an urgent scale up of investments and the lack of focus on this in most recovery plans can be considered a missed opportunity.
- **Industry** is the sector in which alignment of recovery measures with climate mitigation was the weakest. We consider not even 20% of the recovery budget to support climate objectives. A large funding share went broadly into supporting industry at large without any incentives towards the necessary transformation. Against this background it will be necessary that Member States revise plans in order to support industrial decarbonisation. Furthermore, it will be key to ensure comprehensive legislation on industrial decarbonization and funding for investments in the transition at EU level. Additional support for early-stage commercialization of innovative production processes via a stronger Innovation Fund and the provision of Carbon Contracts for Difference (CCFDs), a more robust anti-carbon leakage system will be critical to ensure that strong incentives for industrial companies to shift to cleaner production processes are being created.
- Recovery measures in the **mobility** sector are torn between high shares of positive and very positive measure on the one hand and still a number of negative and very negative measures on the other hand. While investments in rail and bicycle infrastructure clearly aim at transforming the mobility sector, the measures relating to road transport clearly lack ambition. A faster shift towards zero carbon mobility needs to be addressed by combining the shift to electric mobility with stronger support for non-road based mobility and limiting the additional electricity demand, which this shift to e-mobility will imply.

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GREEN RECOVERY TRACKER

ANNEX 1: COUNTRIES AND MEASURES INCLUDED IN THE ANALYSIS

Country	Recovery plans and/or measures analyzed
Austria	Recovery and Resilience Plan (April 2021)
Belgium	Recovery and Resilience Plan (April 2021)
Bulgaria	Draft Recovery and Resilience Plan (February 2021)
Czech Republic	Recovery and Resilience Plan (May 2021)
Estonia	Programming for Recovery and Resilience Facility (May 2021)
Finland	Recovery and Resilience Plan (May 2021)
France	Domestic recovery package ("France Relance", September 2020) and Recovery and Resilience Plan (April 2021)
Germany	Domestic recovery package (June 2020) and Recovery and Resilience Plan (April 2021)
Greece	Recovery and Resilience Plan (July 2021)
Hungary	Recovery and Resilience Plan (May 2021)
Italy	Recovery and Resilience Plan (April 2021)
Latvia	Draft Recovery and Resilience Plan (January 2021)
Poland	Recovery and Resilience Plan (April 2021)
Portugal	Recovery and Resilience Plan (April 2021)
Romania	Draft Recovery and Resilience Plan (March 2021)
Slovakia	Draft Recovery and Resilience Plan (March 2021)
Slovenia	Recovery and Resilience Plan (April 2021)
Spain	Recovery and Resilience Plan (April 2021)