



European Committee
of the Regions

Commission for
Economic Policy

ECON

The state of the regions, cities and villages in the areas of socio-economic policies



© European Union, 2022

Partial reproduction is permitted, provided that the source is explicitly mentioned.

More information on the European Union and the Committee of the Regions is available online at <http://www.europa.eu> and <http://www.cor.europa.eu> respectively.

QG-07-22-600-EN-N; ISBN: 978-92-895-1239-8; doi:10.2863/00247

**This report was written by
Kai Böhme, Marcela Mäder Furtado, Maria Toptsidou, Sebastian Hans,
Arndt Münch, Bernd Schuh, Manon Badouix, Clarissa Amichetti,
Alessandro Valenza, Elena Iacobucci & Anda Iacob
including inputs by Helene Gorny, Isabella Messinger, Reinhard Pichler &
Wolfgang Neugebauer**

**Language editing by Tim Wills
It does not represent the official views of the
European Committee of the Regions.**

Table of content

- ACRONYMS.....5**
- EXECUTIVE SUMMARY.....1**
- INTRODUCTION.....7**
- 1 IMPACTS OF COVID-19 AND THE WAR IN UKRAINE ON REGIONS AND CITIES.....9**
 - 1.1 COVID-19 IMPACTS ON REGIONS AND CITIES10
 - 1.2 TERRITORIAL IMPACTS OF THE WAR IN UKRAINE19
 - 1.3 CONCLUSIONS31
- 2 EFFECTS OF EU EMERGENCY, RECOVERY AND RESILIENCE MEASURES33**
 - 2.1 NRRP PROCEDURAL AND FINANCIAL PERFORMANCE.....34
 - 2.2 INVOLVEMENT OF LRAS IN THE NRRPS40
 - 2.3 MEASURES IMPLEMENTED UNDER COHESION POLICY PROGRAMMES58
 - 2.4 CONCLUSION63
- 3 CASE STUDIES ON IMPACTS AND POLICY RESPONSES65**
 - 3.1 SYNTHESIS OF CASE STUDY FINDINGS65
 - 3.2 BAVARIA, GERMANY67
 - 3.3 GOTHENBURG, SWEDEN.....71
 - 3.4 BRATISLAVA, SLOVAKIA.....73
 - 3.5 ANDALUSIA, SPAIN76
 - 3.6 EAST FLANDERS, BELGIUM79
 - 3.7 PRAGUE, CZECHIA82
 - 3.8 VORARLBERG, AUSTRIA.....85
 - 3.9 PARIS, FRANCE.....89
 - 3.10 AZORES, PORTUGAL93
- 4 CONCLUSIONS AND POLICY POINTERS.....97**
 - 4.1 POLICY CHALLENGES97
 - 4.2 POLICY POINTERS100
 - 4.3 POSSIBLE NEXT STEPS103
- REFERENCES.....107**
- ANNEX115**

Table of figure

Figure 2.1	Share of loans in total RRF allocation for selected member states.....	34
Figure 2.2	EU average allocations by policy area.....	36
Figure 2.3	Share of allocation by policy area and member state (%)	37
Figure 2.4	Number of milestones and targets reported as of 15 May 2022	39
Figure 2.5	Milestone and targets reported by pillars, average	39
Figure 2.6	Fund reallocation between TOs – ERDF/ESF/CF	59
Figure 2.7	Absorption by TOs in 2020/21 - ERDF/ESF/CF.....	60
Figure 2.8	Targets for COVID specific indicators 2022, EUR billion.....	61
Figure 2.9	Implementation of COVID-specific indicators, 2020.....	62
Figure 3.1	Number of unemployed persons and unemployment rates in Bavaria 2012-2022	68
Figure 3.2	Occupancy rates in Greater Gothenburg (beds in hotels, holiday villages and hostels) (Statistics Sweden 2022d)	72
Figure 3.3	Unemployment rate from 2001 to 2020 in the districts of the city of Bratislava	74
Figure 3.4	Number of passengers of the airport Bratislava.....	75
Figure 3.5	Bankruptcies in East-Flanders	80
Figure 3.6	Guests per year in the city of Prague (2012-2021)	83
Figure 3.7	Rental prices in Prague (2010-2021)	84
Figure 3.8	Registered job-seekers in Paris January 2019 to March 2022	90
Figure 3.9	Short work scheme in Paris.....	91
Figure 3.10	Unemployment rate Portugal and Azores (%)	94
Figure 3.11	Indicator of economic activity	94
Figure 3.12	Monthly overnight stays	94
Figure 4.1	Recovery funding seen from a local and regional perspective	99
Figure 4.2	Risk of declining involvement of local and regional authorities	99

Table of tables

Table 1.1	Exposure index.....	17
Table 1.2	Short term negative sensitivity – change in GVA	18
Table 1.3	Potential negative index	25
Table 1.4	Potential positive index.....	30
Table 2.1	State of procedural implementation of NRRPs as of 15 May 2022.....	38
Table 2.2	First Payment	40
Table 2.3	Scoring and assessment criteria on LRA involvement in NRRPs	41
Table 3.1	NRRP priorities in Flanders.....	82
Table 3.2	Overnight stays per island (2019-2021).....	95
Table 0.1	NRRP Allocations, billions of euros (current prices)	115
Table 0.2	Primary Pillars, percentages.....	116
Table 0.3	Secondary Pillars, percentages.....	117
Table 0.4	Pre-financing disbursement by MS.....	118
Table 0.5	COVID-19 specific indicators, targets.....	119
Table 0.6	COVID-19 specific indicators ERDF, implementation	120

Table of maps

Map 1.1	COVID-19 impacts 2020	15
Map 1.2	Regional sensitivities to the war in Ukraine – May 2022.....	21
Map 1.2	Potential positive regional sensitivities to the war in Ukraine – May 2022	29
Map 2.2	NRRP allocation as share of member state GDP.....	35

Acronyms

CF	Cohesion Fund
CoR	European Committee of the Regions
CRII	Coronavirus Response Investment Initiative
CRII+	Coronavirus Response Investment Initiative Plus
ERDF	European Regional Development Fund
ESF	European Social Fund
GDP	Gross Domestic Product
GVA	Gross Value Added
ILO	International Labour Organisation
IMF	International Monetary Fund
JRC	Joint Research Centre
LRA	Local and Regional Authority
M&E	Monitoring and Evaluation
MS	Member State
NRRP	National Recover and Resilience Plan
NUTS	Nomenclature of Units for Territorial Statistics
OP	Operational Programme
REACT-EU	Recovery Assistance for Cohesion and the Territories of Europe
RRF	Recovery and Resilience Facility
SME	Small and Medium-sized Enterprise

Executive Summary

The COVID-19 pandemic and Russia's war on Ukraine both affect local and regional development in the EU and increase regional disparities. This is despite swift responses by EU policy makers and substantial support measures. In many cases centrally designed support does not fully match vulnerabilities and needs at local and regional level.

While the pandemic has showcased the importance of nuanced territorial policy making, policies underpinning the recovery have largely weakened place-based decision making and involved local and regional players less. Overall, it seems, the active involvement of local and regional authorities in the design and implementation of EU is declining. Insights on local and regional diversities, needs, vulnerabilities and potential, as well as capacities to mobilise relevant players risk being side-lined to benefit faster decision making. This makes it more difficult to ensure that policies address Europe's territorial diversity in a meaningful way, make use of place specific potential and address place specific development challenges. More involvement of local and regional authorities in policy design and implementation would be beneficial.

Territorial impacts of the crises

Both the COVID-19 pandemic and the war in Ukraine affect regions in the EU differently and both risk increasing regional disparities and bringing challenges for cohesion in the EU.

The COVID-19 pandemic shows a rough North-South pattern which increases the disparities resulting from the 2008 financial crises. Looking at just the economic impact in 2020, Italy, large parts of Spain, many French regions, as well as regions in Greece, Portugal, and Austria faced the highest levels of restrictions and decline in regional gross value added (GVA).

The war in Ukraine on the other hand shows a rough East-West pattern. From Finland in the North to Greece in the South, almost all regions along the eastern border of the EU and in Czechia have high sensitivity, while only a few areas in the other countries do.

Both the pandemic and the war in Ukraine have led to disruptions of global supply chains leading to shortages of products and increasing prices. During the pandemic the most prominent examples were medical equipment. The war in Ukraine affects agricultural products, but also materials necessary for industrial production, such as palladium and neon (European Commission, 2022b).

However, in both cases a wide range of other goods have also experienced disrupted supply chains.

Going beyond these rough geographical patterns, in both cases people and households with low income or at risk of poverty are more affected than higher income groups. Furthermore, it also appears that the tourism industry and tourist destinations are taking a particular hit. For many tourist regions the war could mean the recovery and upswing expected for the 2022 summer season is at risk.

Both crises teach us the importance of resilience and capacity to act in the face of unexpected events. Differences in territorial capacity to absorb (mitigate), adapt and transform explain why some places are more resilient than others.

Case studies – adjustment of regional economies

Nine case studies illustrate the impact of the pandemic on local and regional economies.

Reduced consumer expenditure in the retail and the gastronomical sectors due to COVID-19 restrictions has normalised across the EU, though the closely associated tourism sector has not yet recovered. Several case study regions (e.g. the Azores, Andalusia and Prague) are strongly reliant on tourism for employment and income. Despite seeing strong recoveries, particularly in 2021, the number of tourists remains significantly lower than pre-COVID-19. Regions have begun to reduce their reliance on tourism with strategic new developments. For example, Andalusia has a new industrial policy to diversify from agricultural production and tourism, and in the Azores, the Azores Space Strategy seeks to promote the islands as an aeronautics hub.

Initially, the pandemic also meant supply chain disruptions leading to economic turbulence, particularly in globalised regions deeply embedded in manufacturing chains (such as Bavaria or Vorarlberg). These impacts seem to have persisted due to the war in Ukraine, with supply chain disruptions continuing to affect their economies. Tied to global supply chain disruptions are inflationary pressures, which are particularly strong in East-Flanders.

Unemployment persists as a pronounced impact of COVID-19 in the case study regions and cities. While unemployment rates appear to have decreased since 2020 across all these regions due to the stabilisation measures, some such as Gothenburg, see persistent unemployment especially among more disadvantaged groups. This mirrors findings of the previous case studies.

EU policy responses

The EU policy responses to the COVID-19 pandemic have been largely welcomed and appreciated, addressing immediate needs during the first phase of the pandemic and the recovery process.

However, their importance varies between countries. National Recovery and Resilience Plan (NRRP) allocations and, consequently, their impact on member state economies differs across the EU. Five member states - Bulgaria, Croatia, Italy, Greece, and Romania - will receive NRRP allocations of more than 10% of their GDP. Overall, member states have prioritised investments and reforms with primary objectives in two major policy areas: the green and digital transitions. The green transition is the most supported area in all member states, accounting for no less than 30% in all the plans. Digital transformation is the second most supported policy area in the vast majority of NRRPs. All but two plans allocate less than 10% to ‘social and territorial cohesion’ as a primary objective of investments, although the share is much higher (30% on average) if investments' secondary objectives are included. NRRP documents show that these priorities mostly envisage territorial investments, which require a strong involvement of local and regional authorities for their success.

However, the involvement of local and regional authorities in the preparation process has generally been low. It has mostly been a ‘ticking boxes’ exercise, rather than a consultative and preparatory framework to develop investments and reforms. This issue is confirmed by other studies. The lack of involvement of local and regional authorities risks undermining the effectiveness and efficiency of the Recovery and Resilience Facility (RRF) since most public investments in the EU are at local and regional level, especially for green investments.

In addition to the effectiveness of RRF implementation, a lack of involvement of local and regional authorities might harm the principles of partnership and subsidiarity. Indeed, in most NRRPs, local and regional authorities are considered final beneficiaries of investments and reforms but not fully engaged in elaborating, managing and monitoring implementation and procedures. This could lead to the ‘de-empowerment’ of local and regional authorities and to recentralisation.

Furthermore, many NRRP investments coincide with Cohesion Policy strategic objectives. Without appropriate multilevel governance and institutional coordination, the risk of overlapping and displacement is very high.

Finally, measures approved in the framework of the COVID Response Investment Initiatives (CRII/CRII+) involve a redistribution of resources from long-term

objectives, such as fighting climate change, to more short-term aims linked to the pandemic. This redistribution, coupled with the possible displacement of resources due to the RRF, could have a negative impact on the efficacy and relevance of Cohesion Policy, as well as on achievements of objectives for the 2021-2027 programming period.

Case studies – implementation of NRRPs

The nine case studies show generally low involvement of local and regional authorities in the design and implementation of NRRPs, with the exception of regions with broader legislative powers, such as Bavaria or Andalusia.

Generally, local and regional authorities in the case study regions or cities were informed about the NRRPs along with other stakeholders, and could comment on a first draft of the document (e.g. Bratislava, Paris, East-Flanders). This approach does not reflect the need for transparent communication channels expressed by the case studies in the previous report.

Some needs of the case study regions could be covered by the NRRP, e.g. digitalisation in the Bratislava region. However, measures to compensate structural difficulties in the health care sector were not included in the NRRP. The Azores had already anticipated the help of the RRF and is now implementing measures such as digitisation of the health sector and education. For Paris, none of the needs identified in the previous study (such as more resilient housing, security of food provision, etc.) are directly tackled by the NRRP in and around Paris.

The case studies also show that more independent local and regional authorities such as Bavaria, tend to have a stronger role in the implementation of NRRP funded projects. The region of Bratislava is also expected to take part in implementing some measures. Otherwise, the projects are more national and managed by the state or other national agencies, e.g. in Paris. However, a more devolved system does not necessarily coincide with a stronger role in NRRP planning and implementation, as the case of Vorarlberg illustrates.

Outlook

The analysis leads to three policy pointers:

- **Recovery funding and processes** need to be steered by strategic visions towards new development models, reflecting Europe's territorial diversity, taking into account local and regional knowledge, while supporting cooperation between players.

- **Increased resilience** of policy making requires strengthening short-term emergency instruments, as well as reviewing and overhauling the architecture of EU policy making to strengthen subsidiarity and place-based approaches.
- **Governance capacity** needs to be strengthened for the recovery and to increase resilience, this involves strengthening multi-level governance in European policy processes.

The conclusions of this study confirm the recommendations on specific actions by the European Commission and member states provided in the 2021 study (Böhme, Lürer, et al., 2021). Therefore, many are echoed by this study. However, the emphasis on individual recommendations varies:

- **Launch a public debate on more resilient EU policy making.** To become resilient to external shocks, EU policy making needs to be overhauled. This is a long-term mission needing a wider public debate, to ensure improvements can be introduced in the Multiannual Financial Framework post 2028. The Conference on the Future of Europe has laid a valuable ground to further explore public debates on EU policies, albeit with more specific focus so that results become more concrete and targeted. This includes broader public debates among EU, national, regional and local authorities concerning.
- **Strengthen the involvement of local and regional authorities.** This especially concerns the European semester, the implementation of NRRPs as well as a broader debate on the need for active subsidiarity in EU policy making.
- **Set up a platform for administrative capacity building.** Quality of government and administrative capacity are key ingredients for effective recovery policies and increased resilience.
- **Stimulate and encourage local and regional authorities to experiment,** learn from each other and collaborate. In particular, small municipalities and regions might benefit from additional support. Empowering local and regional authorities also depends on them becoming active and exploring their possibilities. While some larger and stronger local and regional authorities already do so, others might benefit from extra encouragement or stimulation.

If the European Commission, European Parliament, the European Investment Bank, as well as national, regional and local authorities strive to boost the resilience of EU policy making then active subsidiarity, empowered players, a review of the EU policy system and out of the box thinking (daring to experiment and fail) is possible.

Introduction

This report aims to analyse the effects of the COVID-19 pandemic on development and future perspectives for regions and cities in Europe. In light of the war in Ukraine, the study also offers first reflections on possible impacts the war may have on local and regional development in the EU. The report focuses on impacts and policy measures linked to these crises, as well as recovery measures and resilience to external shocks.

The report is a further development of the CoR studies on ‘potential impacts of COVID-19 on regions and cities of the EU’ carried out in the summers of 2020 and 2021. This time, a particular focus is on the actual impacts of COVID-19 and the subsequent policy measures. This includes an analysis of how EU emergency, recovery and resilience measures (especially the Recovery and Resilience Facility) affect regions and cities in the EU. Analysis of the impacts and effects of recovery and resilience measures is accompanied by a follow-up of the regional case studies conducted for the summer 2021 study.

Overall, the analysis confirms the key findings of the 2021 study on potential impacts. The pandemic and indeed Russia’s war on Ukraine risk increasing disparities and challenging cohesion in Europe. Furthermore, they demonstrate that European regions and cities are interwoven in tight networks of mutual interdependence. What happens in one place affects developments in other places.

Most importantly both crises highlight the importance of resilience and the capacity to act in the face of unexpected shocks. Territorial variations of vulnerabilities, sensitivities and in particular capacities to absorb (mitigate), adapt and transform are essential to understand why some places are more resilient than others.

Chapter 1 provides a picture of the impact of the pandemic on local and regional development and first considerations on the potential impacts of the war in Ukraine. In chapter 2, this is followed by an analysis of the effects of EU emergency, recovery and resilience measures, also looking at the role of local and regional authorities. Diving deeper into the local and regional dimension, chapter 3 presents nine case studies addressing local and regional impacts and policy responses. Finally, chapter 4 provides conclusions, possible future policy recommendations.

1 Impacts of COVID-19 and the war in Ukraine on regions and cities

Wildcards underline the uncertainty of future developments. Such low probability but high impact events cause sudden and fundamental changes. In recent years, local and regional development was affected by two wildcards.

First was the COVID-19 pandemic in early 2020. This had severe impacts on local and regional development, accelerating fragmentations between societal groups and between places. It risks reinforcing existing imbalances and inequalities in the EU.

Second is the war in Ukraine which started in February 2022. The war is expected to have fundamental impacts on globalisation and global value chains, energy security, the energy sector in Europe and the transition to carbon neutrality. It will also substantially affect a wide range of other sectors including agriculture and food processing, chemistry and manufacturing. Shortages in supply chains and rising prices for a range of products are just the first immediately visible impacts.

Both COVID-19 and the war in Ukraine change a wide range of future development perspectives and trends as well as their impacts on local and regional development which will affect cohesion in Europe. This raises the question of whether it is any longer possible and sensible to focus on impacts of the pandemic on cohesion, as this would ignore new realities.

Still, while it is unknown how long the war will last, how it will end and the resultant geopolitical situation, there is a considerable uncertainty about what the future will look like. Reviewing exposure and sensitivity to these wildcards helps to better understand their (potential) impacts on regional development.

Understanding exposure and sensitivity

Inspired by the Territorial Impact Assessment (Böhme & Besana, 2020; ESPON, 2013; Essig & Kaucic, 2017; Gaugitsch, Dallhammer, Hsiung, Holstein, Besana, Zillmer, Kruljac, & Uljed, 2020) the analysis methodology provides a rough snapshot of the exposure and sensitivity of European regions to COVID-19 policy responses. Exposure and sensitivity are understood as follows (Böhme, Lüer, & Holstein, 2020):

- **Exposure:** Reviewing different policy components, exposure is how much a region will be affected by the policy (positively or negatively)?
- **Sensitivity:** How much regional development will be affected due to specific regional characteristics and endowments?

1.1 COVID-19 impacts on regions and cities

The COVID-19 pandemic has affected local and regional development in many different ways. Regions experienced the pandemic differently as the impacts on the population's health and the restrictive measures varied substantially across Europe. Beyond the immediate effects are impacts on socio-economic developments and GDP. Taken together, negative impacts are expected in the short- and medium-term as we have shown in earlier studies for the European Committee of the Regions, the European Parliament and the European Commission (Böhme, Haarich, Toptsidou, Besana, Corbineau, & Hans, 2021; Böhme, Lür, Besana, Hans, Schuh, Münch, & Gorny, 2021; Böhme, Zillmer, Hans, Hrelja, Valenza Alessandro, & Mori, 2022).

In the short-term, local and regional development were most affected by severe restrictions and sensitive socio-economic structures. Regions potentially hit hardest are mainly in southern Europe. The pandemic also has social impacts on people's wellbeing and quality of life. In many regards, the economic disruption caused by COVID-19 threatens the most vulnerable groups of society more.

In the medium-term, the pandemic will affect local and regional development beyond the more obvious immediate effects. Medium-term impacts will be shaped by more durable effects on some sectors as well as structural elements, which affect how quickly an area can recover.

In general terms, the pandemic risks reinforcing existing imbalances and inequalities in the EU. Existing differences may also widen at lower geographical levels between places, groups of society and people in Europe. Convergence in the EU may be reversed. Also, at a societal level, the pandemic has brought underlying value conflicts to the surface.

Recovery outlooks also vary considerably. In particular regions heavily dependent on tourism might need several years to recover from the pandemic. This includes many mountainous, coastal and island regions. Also, more remote (and sparsely populated) rural areas might face lasting challenges such as increasing digitalisation pressure. Many cross-border regions were heavily affected at the beginning of the pandemic due to the closure of national borders. Although many of these are on the path to recovery, the sudden disruption of cross-border interdependencies left people unsettled.

1.1.1 Emerging regional typologies of COVID-19 impacts

As evidence and statistics on the socio-economic impacts of the pandemic grow, they are easier to analyse from a territorial perspective and identify types of region that are more or less affected.

In our previous studies we focused on sensitivities to expected consequences of the pandemic and this showed varied geographical synopses, which actually are not too far off the changes in GVA and GDP we are currently observing.

A first attempt to adjust this to types of geographical region (Böhme et al., 2022) revealed some differences between types. However, overall it showed that geographical characteristics are not enough to explain differences in the socio-economic impacts of the pandemic. A few findings include:

- Urban-rural differences seem to showcase that urban areas display much more mixed sensitivities, while rural areas are in the medium range for most sensitivity indicators. However, within these figures there are considerable variations. How much metropolitan areas are impacted by COVID-19 effects varies widely. Strongly impacted areas bounced back quickly due to their economic structures, so harsher impacts on urban areas are followed by a quicker recovery compared to many non-metropolitan areas.
- Very sparsely populated areas with less than 12.5 inhabitants per km² appear to have low sensitivity to most of the pandemic restrictions. Sparsely populated areas with 12.5 to 50 inhabitants per km² on the other hand show comparably high sensitivity to several factors including reliance on tourism, young people without an occupation, the share of people at risk of poverty and the share of microenterprises.
- Islands and coastal regions appear to be more sensitive to the COVID-19 restrictions than other types of regions. This is largely related to structural characteristics, such as a high reliance on tourism for many islands and coastal areas, which often goes hand in hand with high shares of people working in micro-enterprises and seasonal employment. In particular, the reliance on tourism seems to be crucial to understanding pandemic impacts on islands and coastal regions, as coastal and maritime tourism account for 42% of nights-spent in the EU.
- Outermost regions are an even more specific case. Their high sensitivity is partly due to the high share of people working in micro-enterprises, high shares of young people without an occupation and low-quality government. In addition, geographical distance, as well as flight connection and supply

chain disruptions are important factors. This concerned trade, but also caused significant problems for essential equipment, such as protective medical gear.

- Mountain regions are very diverse, and so are the pandemic's impacts on their development. The high levels of sensitivity of mountain regions embrace broad diversity with some of these regions heavily affected by the pandemic and others only mildly affected. Some examples concern the high reliance on tourism in mountain regions which often comes with strong seasonality, but also agriculture and food production has been affected by the pandemic.
- Border regions were in many regards at the forefront of areas affected by the political responses to the pandemic. Cross-border integration and cross-border functional areas were put into question during the first wave of infections in spring 2020, when some national borders were suddenly closed. This posed, among others, considerable difficulties for employees and employers relying on cross-border commuting. The effects of the pandemic in border regions did not vanish once the borders reopened. Some of the trust in seamless cross-border functional areas has been lost.

Going one step further, interim findings of a recent ESPON study point to types of regions with strong national patterns. The typology (ESPON, 2022) is based on unemployment, youth unemployment, at risk of poverty, territorial characteristics (predominantly urban, intermediate and predominantly rural regions), and border regions; and the number of COVID-19 deaths in 2020. The result is six clusters:

- The first cluster (regions with moderate consequences for at risk of poverty with relatively low death rates) comprises the vast majority of regions in France, Nordic countries (Southern Sweden and Finland), Mediterranean countries (Italy), and Northern regions of Romania. Metropolitan areas are also over-represented in this class, as are border regions, where mortality was lower than elsewhere.
- The second cluster (regions with moderate consequences for at risk of poverty and youth unemployment with moderate average death rates) includes the vast majority of regions in Portugal, Germany, Czechia, Poland, Austria, the Netherlands, Estonia and Denmark. The cluster also includes some regions in France, Ireland and Bulgaria. The majority of these are border regions as well. This indicates that exposure to the pandemic risk was higher in these regions. However, these regions have weathered the social crisis relatively well.

- The third cluster (regions with severe consequences for unemployment and at risk of poverty with high death rates) includes Spanish regions. These regions were very much affected by the pandemic, especially during the first wave. The result is a much higher unemployment rate than in other European regions. This may have led to more people living in poverty in the country. This cluster includes many Romanian regions, as well as regions in Bulgaria, Latvia and Lithuania. These regions have not been able to contain pandemic effects, particularly regarding poverty.
- The fourth cluster (regions with moderate socio-economic consequences and lower death rates) covers Southern Romania, Bulgaria, Croatia, Latvia, Lithuania, alongside some Polish and German regions. In these regions the social impacts have been moderate (particularly poverty rates and youth employment), even though mortality rates have been lower. If COVID-19 had been stronger in these regions, the effects on employment and poverty could have been very detrimental.
- The fifth cluster (regions with moderate consequences and low death rates) are other Spanish regions. These were very much affected by the pandemic, especially during the first wave. The result much higher unemployment, than in other European regions. This may have led to an increase in the number of people living in poverty in the country.
- The sixth cluster (regions severely affected by the pandemic) comprises regions with the highest death rates such as North Italian regions along with border regions in Slovenia.

1.1.2 GVA changes during the pandemic

While the above typologies are still preliminary and based on various assumptions about possible local and regional impacts, there are also first statistics that show the change in regional economic development during the pandemic.

Earlier in 2022, Eurostat published regional data on Gross Value Added (GVA) in 2020. This allows a comparative regional analysis of changes in the wake of the pandemic and not just on sensitivities and impacts in Europe.

In very rough terms and without controlling for other development factors, cross-analysing the change in GVA in 2020 with the stringency of COVID-19 related restrictions reveals short-term economic impacts of the pandemic.

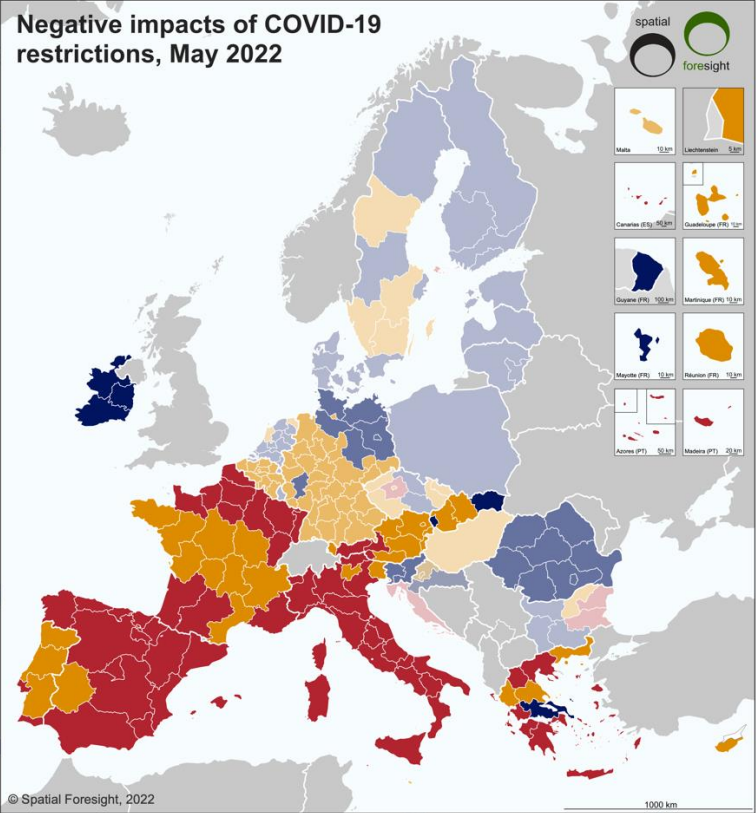
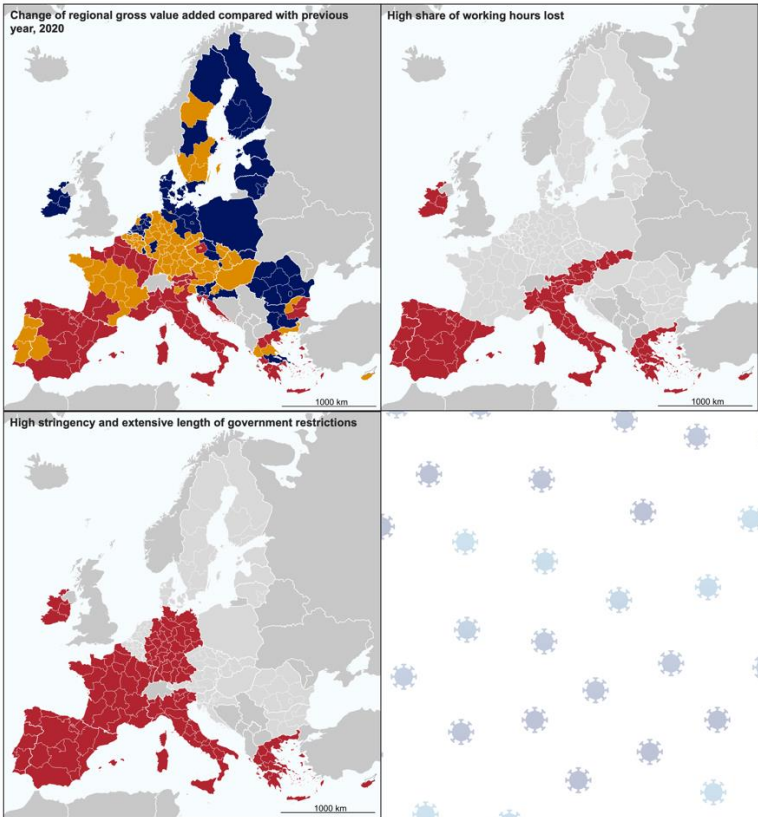
For 2020, Italy, large parts of Spain, many French regions, as well as regions in Greece, Portugal and Austria faced the most restrictions and decline in regional

GVA. This might be related to the important role of tourism in many of these regions. Tourism regions in Croatia and Bulgaria also faced considerable declines in GVA although they had comparably soft COVID-19 related restrictions in 2020.

The lowest levels of decline in GVA can be found around the Baltic Sea, as well as in the Netherlands, Ireland, Luxembourg, Romania and some regions in Bulgaria. In many cases this seems to go hand in hand with less COVID-19 related restrictions. Still, this data is for 2020 only. Changes in development during 2021 and early 2022 are not taken into account.

The following sections further detail the exposure and sensitivity analysis.

Map 1.1 COVID-19 impacts 2020



Administrative boundaries: Eurostat GISCO, NUTS 2 (2016)

Sensitivity and exposure assessment

Higher negative sensitivity	Medium negative sensitivity	Lower negative sensitivity
Lower exposure	Medium exposure	Higher exposure

Source: own elaboration based on the following data inputs

Sensitivity
Change of regional gross value added compared with previous year, 2020 (Eurostat), no regional values available for Poland and Hungary

Exposure
Stringency and length of government restrictions (Oxford COVID-19 government response tracker - Blavatnik School of Government); Share of working hours lost (Eurofund survey)

1.1.3 Exposure to restrictive measures

Places have been subject to different restrictions for different periods of time which affects the impacts on local and regional development. As pointed out by Sapir (2020), the strictness of lockdowns is one of three factors accounting for most of the differences in the shocks felt by EU countries. Furthermore, as pointed out by Böhme et al. (2020) the regional diversity of lockdown measures is essential to understand a region's structural sensitivities (see next section).

A European-wide comparative analysis of exposure can only capture some elements of regional exposure to restrictive measures which unfortunately do not capture the regional diversity of exposure within individual member states. Map 1.1 is based on comparable data sets addressing different types of exposure to COVID-19 restrictions:

- **Overall stringency.** The Coronavirus Government Response Tracker (Blavatnik School of Government, 2020) shows how the response of governments has varied daily, becoming stronger or weaker over the course of the outbreak. The 'stringency index' captures how much lockdowns restrict people's behaviour as well as economic production and consumption. The index covers: a) closing schools and universities; b) closing workplaces; c) cancelling public events; d) restrictions on private gatherings; e) closing public transport services; f) stay at home requirements; g) restrictions on internal movement; h) restrictions on international travel; i) public information campaigns. These are brought together in a single composite index. This is the most detailed and constantly updated information source on the rigidity of lockdowns across Europe. The length of these measures is an average over a fixed period. The composite index provides a systematic cross-national, cross-temporal measure to understand how government responses evolved from 1 March 2020 to 31 December 2020.
- **Working hours lost.** Lockdowns and related business disruptions, travel restrictions, school closures and other containment measures have had sudden and drastic impacts on workers and enterprises (International Labour Organisation, 2021). The working hours lost vary greatly between countries. Estimates in each country provide a first indication on the rigidity of lockdowns and how much they have varied between countries.

All this information has been brought together in an index for regions. The index is based on two indicators, explained in Table 1.1. The most stringent and long-lasting restrictions during 2020 were in Portugal, Spain, France, Greece and Ireland.

Table 1.1 Exposure index

Composition of the exposure index: short-term					
Topic	Exact indicator	Source	Year of publication	Scoring	Weight
Stringency and length of government restrictions, 2020	Average value of the stringency index of restrictive measures in the period 1 March 2020 – 31 December 2020.	Blavatnik school of Government at Oxford University	2020/2021	Each indicator has been divided into three categories based on the European average; Low, Medium, and High. Medium covers the interval between the EU average and +/- half the standard deviation:	1
Share of lost working hours in the first pandemic year, 2020	Percentage of lost working hours in the first pandemic year 2020, cumulated for all economic sectors.	International Labour Organisation (ILO)	2021	. Low is below the lower threshold: < High is above the upper threshold: >	1

1.1.4 Sensitivity

Restrictions and lockdowns in the wake of the COVID-19 pandemic have had negative effects on local and regional development throughout Europe. However, there are considerable regional variations for these impacts based on two factors. Firstly, the severity of restrictions varied, which has been captured in the exposure assessment (see above). Secondly, some economic sectors and social groups have been more heavily affected by the restrictions than others. So, structural characteristics affect how hard a region has been hit by the pandemic.

Focusing on the economic impacts, the Eurostat data on GVA in 2020, for the first time enables discussions of actual changes and instead of sensitivities at NUTS2 level. This is only a rough estimate, as it does not control for changes in GVA caused by non-pandemic factors. Furthermore, it does not take into account impacts not reflected in GVA, i.e. social aspects and long-term perspectives.

In any case, GVA changes during 2020 have been brought together in an index for regions, explained in the table below.

Table 1.2 Short term negative sensitivity – change in GVA

Composition of the <u>negative</u> sensitivity index: short-term					
Topic	Exact indicator	Source	Year of publication	Scoring	Weight
Real growth rate of regional GVA at basic prices by NUTS 2 region – percentage change on previous year	Percentage of change on previous year GVA	EUROSTAT NAMA_10R_2GVAGR	2020	Each indicator has three categories based on the European average; Low, Medium, and High. Medium covers the interval between the EU average and +/- half the standard deviation: . Low is below the lower threshold: < High is above the upper threshold: >	1

1.1.5 Conclusions

The picture of economic change during 2020, suggests that impacts of the pandemic are worst in Southern Europe, while large parts of Northern and Eastern were less affected.

These impacts are similar to the economic impacts of the 2008 financial crisis. This confirms earlier findings, that the pandemic risks reinforcing existing North-South imbalances and inequalities in the EU. Existing differences may also widen at lower geographical levels between places, groups of society and people. Convergence in the EU may be reversed.

Nevertheless, this strong economic focus risks ignoring social impacts of the pandemic. The pandemic also impacts people’s wellbeing and quality of life while the economic disruption inevitably threatens vulnerable groups of society more. The pandemic has brought underlying social value conflicts to the surface.

Furthermore, the pandemic will affect local and regional development beyond the more obvious immediate effects. Medium-term impacts will be shaped by more durable effects on some sectors and structural elements which affect how quickly an area can recover. Regions heavily dependent on tourism might need several years to recover from the pandemic, especially many mountainous, coastal and island regions.

1.2 Territorial impacts of the war in Ukraine

Increasingly the impacts of the pandemic are side-lined by the impact of the war in Ukraine. This will change a wide range of future development perspectives and trends. Its impacts on local and regional development will affect cohesion in Europe. This raises the question as to whether it is still possible and sensible to focus solely on the impacts of the pandemic on cohesion, as this would ignore new realities.

As long as it is unknown how long the war will last, how it will end and the geopolitical situation after the war is over, there is a considerable uncertainty about the future.

A first aggregated picture of regional sensitivities to the consequences of the war in Ukraine shows a clear East-West divide. Running from Finland in the North to Greece in the South, almost all regions in the countries along the eastern border of the EU and in Czechia are highly sensitive.

Regions with medium high sensitivities are mainly along the Mediterranean, including Cyprus, most of Italy, large parts of Spain and Portugal, but also in Germany.

This assessment presented in Map 1.2 provides a first input to the discussion on regionally diverse implications of the war in Ukraine. It is however affected by the limited availability of data at regional level (for most indicators only national data is available) and the weight given to individual indicators. The maps on the left side show single sensitivity indicators (see also section 1.2.2), and the map on the right side shows the aggregated picture.

The following sections specify in further detail the exposure and sensitivity analysis.

1.2.1 Exposure to the war in Ukraine

Places have been exposed to the war in various ways. Bordering Ukraine or Russia certainly means a different level of exposure than being in the far west of the EU. Being a former part of the Soviet Union implies a different level of exposure and risk as does being outside NATO. In short, various levels of exposure to the war in Ukraine can be discussed.

However, there is one single exposure factor which dominates over all others, an act of war on one's own territory or not.

Therefore, we run this first potential impact analysis of the war in Ukraine based on whether a country is involved in the war or not. This means only Ukraine is directly exposed, whereas all EU member states are indirectly exposed.

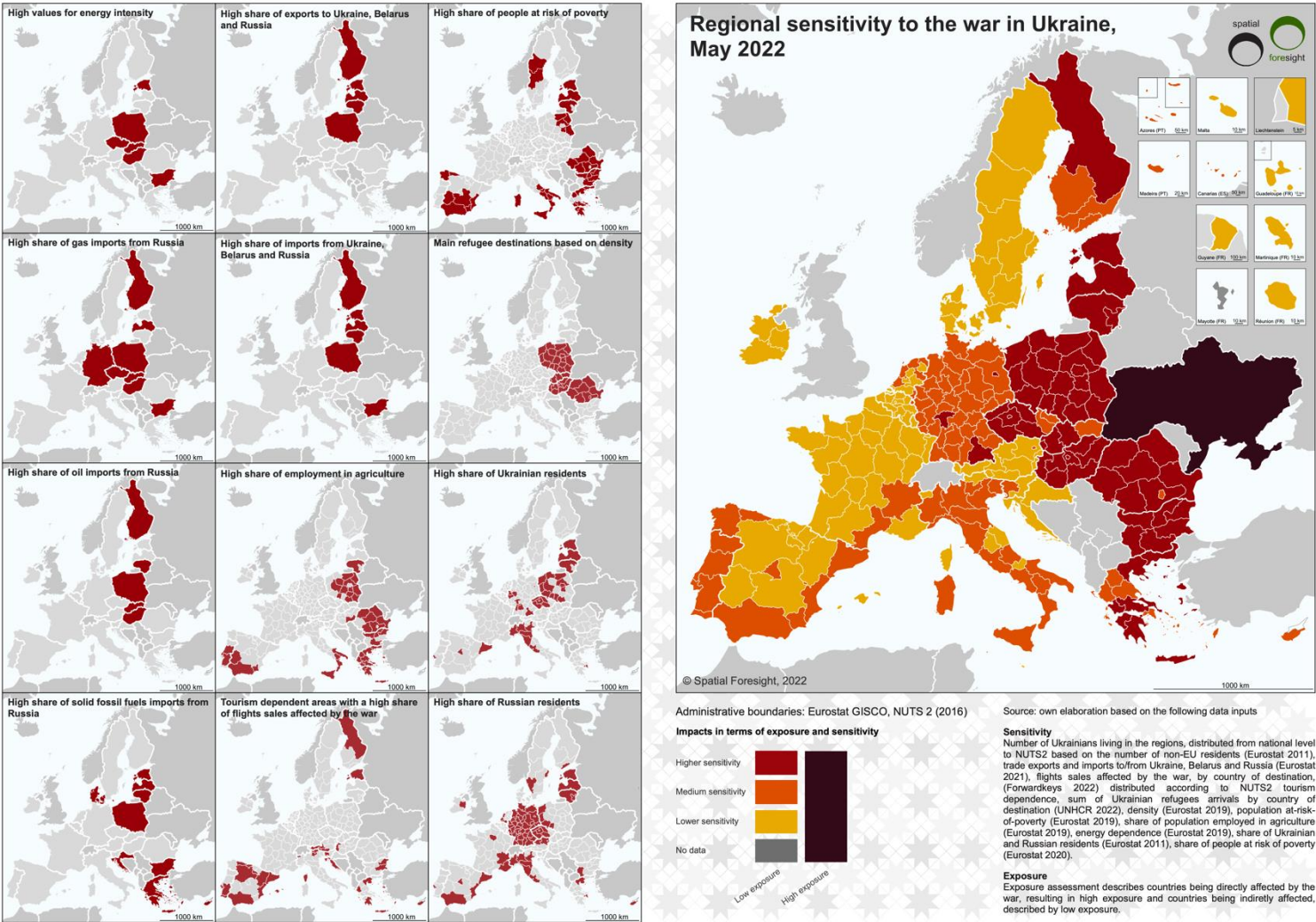
1.2.2 Potential negative sensitivities

A region's sensitivity to consequences of the war in Ukraine is extremely multifaceted and depends largely on its economic structure, socio-economic profile and its energy dependency. For each of these we selected a few sensitivity indicators to provide first insights:

Energy dependency. The war in the Ukraine has sent energy prices to new heights, which particularly affects energy intensive industries. Furthermore, the war illustrates Europe's dependency on energy imports from Russia, especially gas. This has been translated into four sensitivity indicators:

- **Energy intensity.** The amount of energy required to produce 1 EUR in added value varies across industries. Increasing energy prices and risks of energy shortage affect highly energy intensive industries, e.g. heavy industries. Estonia, Poland, Czechia, Hungary, Slovakia, Bulgaria and also in Malta have the highest energy intensity for industry. Given the importance of energy and the knock-on effects of increasing energy prices for the competitiveness of business and employment, this indicator has a weight of 2.0.
- **Gas imports from Russia.** Europe's dependency on imports of Russian gas is high. Two fifths of the gas that Europeans burned in 2021 came from Russia, making it a substantial player for EU's energy needs (Edmond, 2022). There is an urgency to finding replacements and discussions about stopping gas imports particularly affect countries where Russia supplies a substantial share of gas. Among these are Germany, Italy, Poland, Slovakia, Czechia, Latvia, Hungary, Bulgaria and Finland. As gas imports are more difficult to replace than oil or coal imports, this indicator has a weight of 1.0.

Map 1.2 Regional sensitivities to the war in Ukraine – May 2022



- **Oil imports from Russia.** Besides gas, Russia also exports considerable amounts of oil to the EU. Russia is the largest global oil exporter, and the EU is the largest buyer of Russian oil (McWilliams, Sgaravatti, Tagliapietra, & Zachmann, 2022). This brings additional pressure to diversify, an urgency to find replacements and a discussion about stopping import. The most affected countries are Finland, Hungary, Lithuania, Poland and Slovakia.

As oil imports are easier to replace than gas imports, this indicator has a weight of 0.50.

- **Solid fossil fuel imports from Russia.** Russia is also an exporter of coal and fossil fuels. Although the EU has taken steps towards phasing out solid fossil fuels, Russia is still the main coal exporter to the EU (McWilliams et al., 2022). In early April 2022, the EU decided to stop importing solid fossil fuels from Russia. This mainly affects countries with higher shares of coal imports coming from Russia, such as Bulgaria, Cyprus, Denmark, Estonia, Greece, Croatia, Lithuania, Latvia and Poland. As solid fossil fuels are easier to replace than gas and oil imports, this indicator has a weight of 0.25.

Economic structure. The war in Ukraine affects a wide range of economic operators. In particular those trading with partners in Ukraine, Russia and Belarus are affected since these value chains are very disrupted, either because of the war or because of sanctions. Furthermore, impacts of the war affect a range of economic sectors including agriculture and tourism. This has been translated into four sensitivity indicators:

- **Trade exports to Ukraine, Russia and Belarus.** Exports to these countries have been heavily affected by the war and sanctions. EU exports to Ukraine totalled more than EUR 24.2 billion in 2019, mainly machinery, transport equipment, chemicals and manufactured goods (European Commission. Trade, n.d.-c). Several countries export to Russia, Ukraine and Belarus, and the largest shares are for Lithuania and Latvia, with Finland, Estonia, Poland and Hungary following (Eurostat, 2022). This especially affects regions with high shares of exports to these countries in Estonia, Latvia, Lithuania, Finland and Poland.

Given the importance of export to regional economies and functioning value chains, this indicator has a weight of 1.0.

- **Trade imports from Ukraine, Russia and Belarus.** Imports from these countries have largely come to a halt either because of fighting in these countries or because of sanctions and trading restrictions. The EU is the largest trading partner for Ukraine, with more than 40% of its trade, mainly

raw material as iron, steel, mining, agricultural, chemical and agricultural products (European Commission. Trade, n.d.-c). In addition, EU's imports from Russia are substantial, particularly for fuel and mining products, but also for mineral fuels, wood, iron and steel, fertilisers (European Commission. Trade, n.d.-b). It is similar with Belarus, where the EU is its second trade partner (European Commission. Trade, n.d.-a). This affects regions with high shares of imports from these countries, as either final products or inputs to more complex value chains. This is the case in Bulgaria, Estonia, Finland, Lithuania, Latvia and Poland.

Given the importance of imports to regional economies and functioning value chains, this indicator has a weight of 1.0.

- **Share of employment in agriculture.** One sector which is particularly affected by the war is agriculture. This is not only relevant for global food supplies and imports, but also for the agricultural production in Europe, as the war has increased costs for fertilizer, animal feed and energy. As about 30% of the world's wheat comes from Ukraine and Russia, this puts agriculture at risk, threatening production, challenging farmers' employment and causing social unrest (Frost, 2022). This affects in particular regions in Bulgaria, Greece, Lithuanian, Italy, Poland and Romania. As with many other sectors the impacts are more granular for particular segments which cannot easily mapped at European level.

Given the importance of agriculture and the knock-on effects changes in this sector have on the rest of our economies and societies, this indicator has a weight of 1.0.

- **Tourism.** Just as tourism recovers from the COVID-19 pandemic, the war in Ukraine poses new challenges to many destinations. This concerns in particular those close to Ukraine, as well as destinations with traditionally high shares of Russian tourists. Tourists may avoid destinations close to or bordering Ukraine for safety and uncertainty reasons (Müller, 2022), while destinations in southern Europe, such as Italy and Cyprus have been a key Russian tourism destination (GlobalData, 2022) Changes in bookings as well as the importance of tourism for the regional economy particularly affect destinations in Austria, Bulgaria, Cyprus, Czech Republic, Estonia, Latvia, Lithuania, Greece, Spain, Finland, France, Hungary, Italy, Portugal and Slovenia.

Given the importance of tourism for some regions, and the knock-on effects on the rest of the economy and society, this indicator has a weight of 1.0.

Socio-economic profile. There are strong human and social impacts in the EU. This is especially the case for refugees coming to the EU, also affecting the cities and regions where they go. It also affects people living in the EU by increasing

inflation, which makes life more cumbersome for the less well-off. The social dimension has been translated into four sensitivity indicators:

- **People at risk of poverty.** Inflation affects all households and in particular people with limited financial resources. Inflation has hit a eurozone record of 7.5% after the outbreak of the war in Ukraine and sanctions on Russia (DW, 2022), affecting not only businesses, but primarily people. As a proxy for this the regional share of people at risk of poverty is an indication on where in Europe inflation affects regions more. This includes Belgium, Bulgaria, Greece, Italy, Lithuania, and Romania. Given the high importance of declining personal or household wealth to personal well-being and cohesion, this indicator has a weight of 2.0.
- **Ukrainian Refugees.** People fleeing from Ukraine need considerable support. It is said that more than 12 million people have fled their homes, with over six million leaving for neighbouring countries and the rest staying in Ukraine (BBC, 2022). Ensuring support requires extra efforts from administrations and people in the regions where they arrive first. Unfortunately, there is no comprehensive data on where Ukrainian refugees go. In most cases they are only registered in their first EU country of arrival. Accordingly, regions in Poland, Hungary, Romania and Slovakia are most affected. Outside the EU, Moldova is heavily affected. Given the direct relevance and urgency to support refugees of war, this indicator has a weight of 1.0.
- **Ukrainians living in the region.** Provided that Ukrainians living in the EU prior to the start of the war are particularly affected and many Ukrainian refugees are likely to ‘travel on’ to places where Ukrainians already live. The Ukrainian diaspora was over a million at the end of 2020, with people having residence permits (schengenvisa info news, 2022) mainly in cities in Czechia, Germany, Estonia, Italy, Latvia and Poland. Given the long-term impact these people may have on the areas, this indicator has a weight of 2.0.
- **Russians living in the region.** The EU has been home to a large number of Russian citizens (Statista, 2022). With the increasing sanctions on Russia and Russian citizens in the EU, and growing social tensions concerning Russians, places with higher shares of Russian people are more affected by the war. Such regions are in Estonia, Latvia, Lithuania, Austria, Czechia, Germany, Finland, Spain, Italy, the Netherlands, Poland and Sweden. As their relevance is considerably lower than the presence of Ukrainians, this indicator has a weight of 0.5.

These sensitivities have been translated into indicators for which EU-wide data is available and brought together in a combined negative sensitivity index. This index is displayed in Map 1.2 and shows accumulated negative sensitivity. The value is based on the sum of the twelve individual indicators. Table 1.1 provides the details.

Table 1.3 Potential negative index

Composition of the potential negative index: short-term					
Topic	Exact indicator	Source	Year of publication	Scoring	Weight
Energy Intensity	Energy intensity of GDP in chain linked volumes.	EUROSTAT nrg_ind_ei	2020	Each indicator has been divided into three categories based on the European average; Low, Medium, and High. Medium covers the interval between the EU average and +/- half the standard deviation: . Low is below the lower threshold: < High is above the upper threshold: >	2
Gas imports from Russia	Percentage of natural gas imported from Russia based on the total million cubic metres imported by each country and the million cubic metres imported from Russia	EUROSTAT nrg_ti_gas	2020		1
Oil imports from Russia	Percentage of oil and petroleum products imported from Russia based on the total tons imported by each country and the tons imported from Russia	EUROSTAT nrg_ti_oil	2020		0,25
Solid fossil fuels imports from Russia	Percentage of solid fossil fuels imported from Russia based on the tons imported by each country and the tons imported from Russia	EUROSTAT nrg_ti_sff	2020		0,25
Trade export to Ukraine, Russia and Belarus	Percentage of trade export to Ukraine, Russia and Belarus at national level, based on total exports and exports to Ukraine, Russia and Belarus.	EUROSTAT DS-645593	2021		1

Trade import from Ukraine, Russia and Belarus	Percentage of trade imports from Ukraine, Russia and Belarus at national level, based on the total imports and imports to Ukraine, Russia and Belarus.	EUROSTAT DS-645593	2021		1
Share of Employment in Agriculture	Percentage of persons employed in the agricultural sector at NUTS 2 level, based on total employed and people employed in agriculture.	EUROSTAT LFST_R_LFE2EN2	2019		1
Tourism	NUTS 2 regions dependent on tourism (JRC, 2020) and affected by decrease in air tickets issued between 24 February and 9 March. (ForwardKeys, 2022)	JRC, 2020 Share of employment in the tourism sector ¹ ForwardKeys, 2022 ²	JRC 2020 Forwarkdeys 2022		1
People at risk of poverty	Percentage of persons living at risk of poverty or social exclusion by NUTS region	EUROSTAT ilc_peps11	2020		2
Ukrainian Refugees	Main refugee destinations according to country of arrival (UNHCR 2022) and density (EUROSTAT 2019)	UNHCR 'Total Refugee influx from Ukraine in neighbouring countries' EUROSTAT demo_r_d3dens	UNHCR 2022 EUROSTAT 2019	This indicator has been divided into three categories based on quantiles; Low, Medium, and High. Low refers to 1/3 of the entries with the lowest values. Medium refers to 1/3 of the entries with values between the lowest and the highest. High refers to 1/3 of the entries with the highest values.	1

¹ See also Santos, Gonzales, Haegeman, & Rainoldi (2020)

² The impact of the Russia-Ukraine conflict on European tourism: Air Travel Perspective. Olivier Ponti, VP Insights, Mar 2022, European Travel Commission.

Ukrainians living in the region	Total number of Ukrainian (born) residents in a country according to the proportion of non-EU residents in a region.	EUROSTAT cens_11arco_r2 cens_11cob_n	2011	This indicator has been divided into three categories based on the European average; Low, Medium, and High. Medium covers the interval between the EU average and +/- half the standard deviation: . Low is below the lower threshold: < High is above the upper threshold: >	2
Russians living in the region	Total number of Russian (born) residents in a country according to the proportion of non-EU residents in a region.	EUROSTAT cens_11arco_r2 cens_11cob_n	2011	This indicator has been divided into three categories based on quantiles; Low, Medium, and High. Low refers to 1/3 of the entries with the lowest values. Medium refers to 1/3 of the entries with values between the lowest and the highest. High refers to 1/3 of the entries with the highest values.	0,5

1.2.3 Possible positive sensitivities

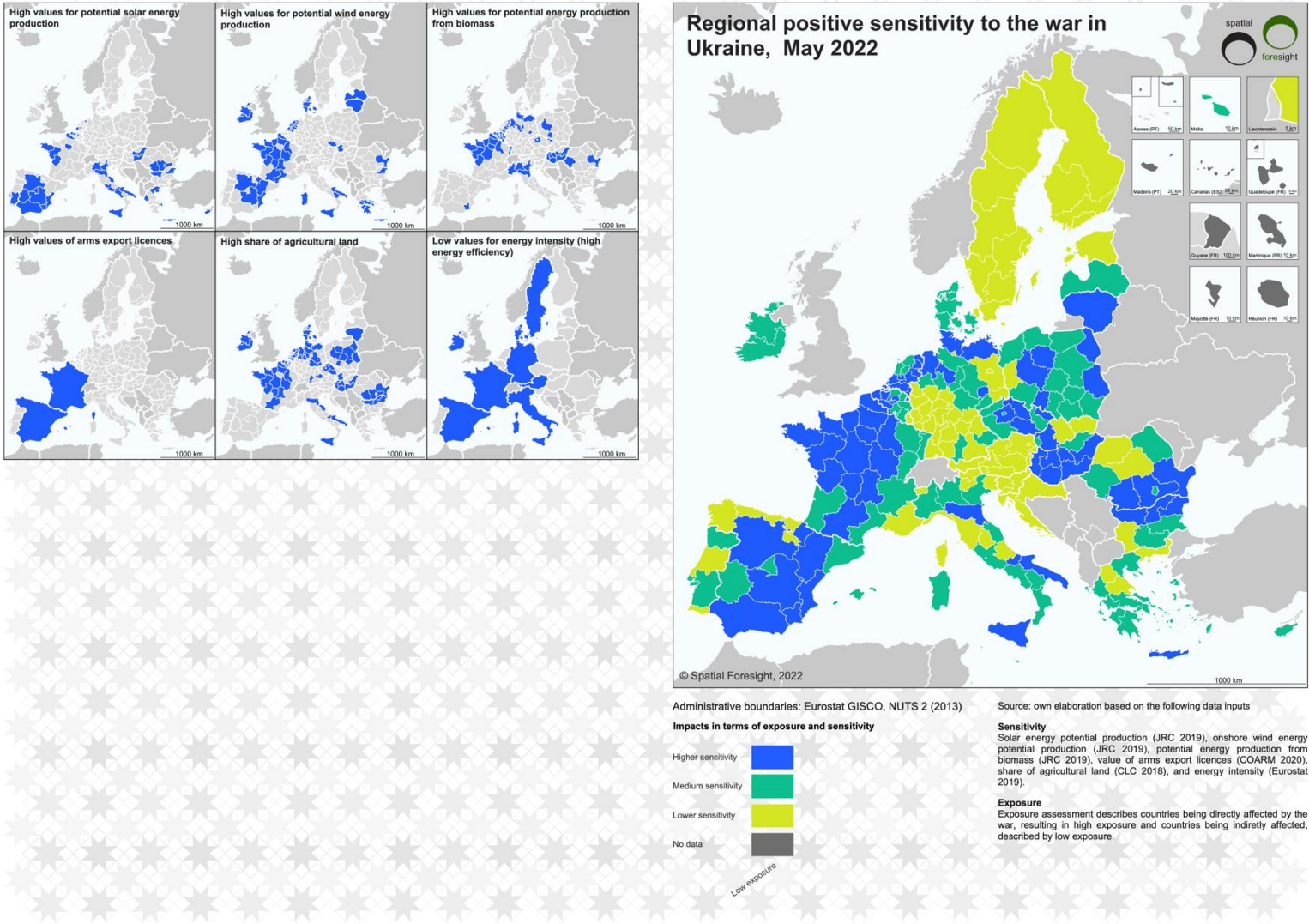
The war is first and foremost a human tragedy, causing immense harm for Ukraine and Ukrainians. Its impact on local and regional development in Ukraine is disastrous, and strongly negative also in the EU, though to a much lesser extent. At the same time, from a statistical and economic perspective, it is possible to detect potential positive sensitivities in some EU regions where the economy might benefit from this changed geopolitical context. These potential positive sensitivities are certainly not of the same magnitude as the negative ones mentioned above.

- **Military supply and weapon industry.** In the wake of the war, military expenditure is increasing in most MS benefitting the military supply and weapon industry. Military industries differ between big players, focusing on the development of vehicles and aircraft, while many small and medium-sized enterprises (SMEs) focus on weapons and ammunition production (Roth, 2017). Large military companies are mainly in Italy, France,

Germany, Poland, Sweden and Spain (SIPRI Databases, 2020). These countries also hold the majority of defence SMEs, in addition to Austria and Czech Republic (Roth, 2017). This in turn would provide growing economic activity and employment in regions with such industries.

- **Renewable energy and energy efficiency.** Renewable energy production as well as technologies for decentralised energy and increased energy efficiency experience see businesses opportunities due to increased energy prices. Regions with strong growth potential in these sectors may see a positive development. The RePowerEU initiative is another push factor in this direction, aiming to secure supply, ensure transition and balance energy prices (European Commission, 2022a).

Map 1.3 Potential positive regional sensitivities to the war in Ukraine – May 2022



- **Agricultural replacement.** Ukraine but also Russia have been important exporters of agricultural products to the EU. Imports from these countries have shrunk substantially due to the war. In Ukraine production fell and imports from Russia declined due to sanctions and export restrictions. This might give opportunities to farmers in the EU, who produce agricultural goods which were imported from Ukraine or Russia to expand production or achieve better prices. This regards cereals, mainly wheat, where regions in countries like France, Germany, Poland and Spain may reap the benefits first (Eurostat, 2021).
- **Other product replacement.** In the same way, we may also see other products which previously were imported from Ukraine or Russia being replaced by increased production in the EU.

Table 1.4 Potential positive index

Composition of the potential positive index: short-term					
Topic	Exact indicator	Source	Year of publication	Scoring	Weight
Energy Intensity	Energy intensity of GDP in chain linked volumes.	EUROSTAT nrg_ind_ei	2020	Each indicator has been divided into three categories based on the European average; Low, Medium, and High. Medium covers the interval between the EU average and +/- half the standard deviation: $\bar{X} - \frac{ST.DEV}{2}$; $\bar{X} + \frac{ST.DEV}{2}$. Low is below the lower threshold: $< \bar{X} - \frac{ST.DEV}{2}$ High is above the upper threshold: $> \bar{X} + \frac{ST.DEV}{2}$	1
Solar energy potential production	Potential production of solar energy, in GWh/km ² .	JRC “ENSPRESO - SOLAR - PV and CSP”	2019		1
Wind energy potential production (onshore)	Potential production of onshore wind energy, in GWh/km ² .	JRC “ENSPRESO - WIND - ONSHORE and OFFSHORE”	2019		1
Potential energy production from biomass	Potential production of energy from biomass, in GWh/km ² .	JRC “ENSPRESO - BIOMASS”	2019		0,3
Value of arms export licences	Value of arms export licences (in Euros) per EU member state of origin.	COARM b_ Value of export licences (Euros)	2020		1
Share of agricultural land	Percentage of land dedicated to use in agriculture, calculated based on each NUTS2's total land size, and the sum of the size of all land dedicated to agriculture in each NUTS2 region.	CORINE Land Cover (CLC) 2018	2018		1

1.3 Conclusions

Both the COVID-19 pandemic and the war in Ukraine affect regions in the EU differently, risking increased regional disparities and challenging EU cohesion. The COVID-19 pandemic shows a rough North-South pattern which increases the disparities left by the 2008 financial crisis. Looking just at the economic impact in 2020, Italy, large parts of Spain, many French regions, as well as regions in Greece, Portugal, and Austria faced the highest levels of restrictions and decline in regional GVA.

The war in Ukraine on the other hand shows a rough East-West pattern. From Finland in the North to Greece in the South, almost all regions in countries along the eastern border of the EU and in Czechia show high sensitivities. While only a few metropolitan areas mainly in Germany do, e.g. Berlin, Frankfurt and Munich.

The fact that most Greek regions are highly affected by both the pandemic and the war in Ukraine is striking. In particular as they already were highly affected by the 2008 financial crisis.

Both the pandemic and the war in Ukraine have led to disruptions to global supply chains leading to shortages of products and increasing prices. During the pandemic the most prominent examples related to medical equipment and for the war in Ukraine to agricultural products. In addition there are also deficiencies in materials needed for industrial production, such as palladium and neon (European Commission, 2022b). However, a wide range of other goods have also experienced disrupted supply chains.

Going beyond these rough geographical patterns, in both cases people and households with low income or at risk of poverty are more affected than higher income groups. Furthermore, it also appears that the tourism industry and subsequently, tourist destinations are also taking a particular hit. For many tourist regions the war in Ukraine the recovery and final upswing expected for the 2022 summer season may be at risk.

The war in Ukraine has once again presented the EU with a common enemy which strengthens solidarity between member states. This question remains whether this solidarity in times of crisis brings member states and people in the EU closer together or temporarily glosses over conflicts and divides. In the latter case, these divisions – e.g. on the rule of law and the path to carbon neutrality – risk returning and being much stronger when the immediate crisis is over. In this way, the impact of COVID-19 and the war in Ukraine might become fundamental to the EU.

Beyond the direct impact on the EU, both crises have global effects and some of these lead to secondary impacts on the EU. In the pandemic, congestions at ports in China delayed deliveries of goods to Europe. The war in Ukraine has led to rising food prices and shortages which are expected to affect food security in the Middle East and Africa, potentially leading to increased numbers of refugees fleeing to Europe.

Both crises have taught us the importance of resilience and the capacity to act in the face of unexpected events and wildcards. In this context territorial differences in capacities to absorb (mitigate), adapt and transform are essential.

These capacities are closely linked to resilience and the ability to deal with uncertainty. Resilience is the ability of a system to ‘bounce-back’ or return to its pre-shock position. However, in a foresight and future-oriented context, resilience concerns the ability to reorganise rather than to ‘bounce-back’, to avoid standing empty handed.³ This links to a debate about an ‘imaginary crisis’ and the need to move from ‘what is’ to ‘what if’, to create the future we want.

As we pointed out in last year’s input to the EU Barometer, knowledge, foresight and adaptive capacity only help if there is a willingness to transform. This goes together with a shared vision of a desirable future responding to changing circumstances. Overcoming societal inertia could result from a shock which would be an opportunity for long-term strategic change. (Böhme, Lüer, et al., 2021).

³ <https://steadyhq.com/en/spatialforesight/posts/75c41b20-24f2-4593-8b08-532d1c9fb857>

2 Effects of EU emergency, recovery and resilience measures

The two EU major policy responses to the COVID-19 crisis have been the RRF and additional flexibility given to Cohesion Policy.

On one hand, the majority of NRRPs have been assessed by the Commission and endorsed by the Council. The design and implementation of investments and reforms have started, as well as pre-financing and first disbursements.

Cohesion Policy Operational Programmes (OPs) have been updated since CRII and CRII+ packages were put in place, introducing exceptional measures modifying the implementation rules for European Regional Development Fund (ERDF), European Social Fund (ESF) and Cohesion Fund OPs.

Other measures, such as the temporary frameworks for State aid and public procurement, as well as the introduction of REACT-EU, have been adopted to support member states dealing with the socio-economic crisis triggered by the pandemic.

This chapter will assess the role of EU policy response measures in the economic recovery of EU regions by analysing:

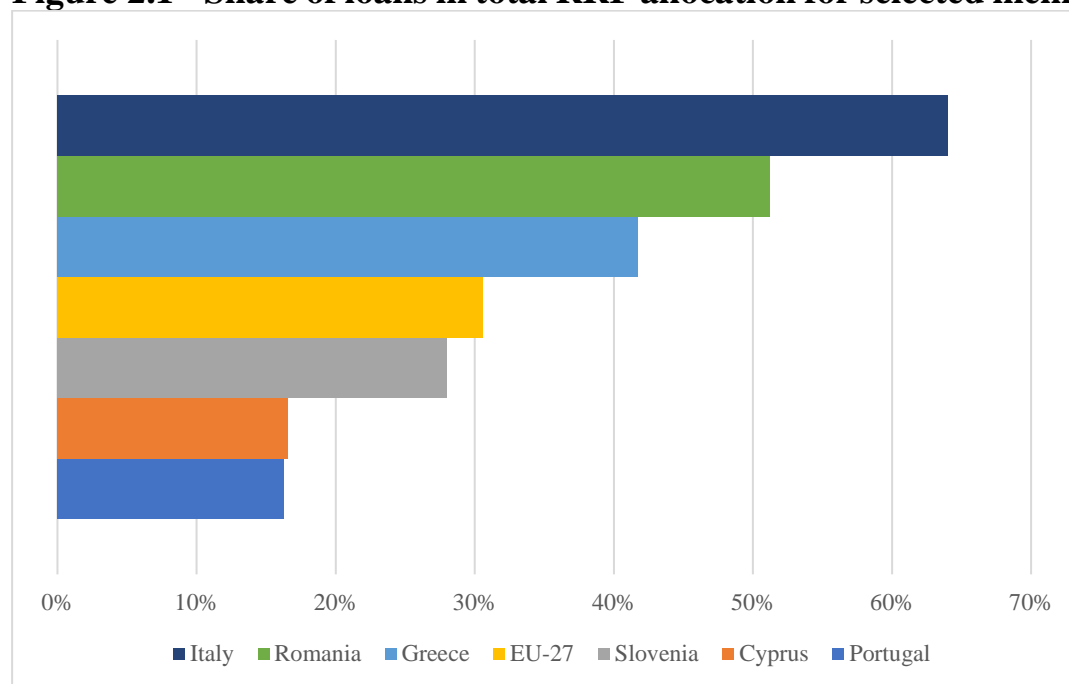
- The state of NRRP implementation in terms of procedural and financial performance. Moreover, the analysis will take into account the sectors where NRRP investments are concentrated to predict where the impacts will be most likely.
- The involvement of LRAs in preparing and implementing the NRRPs.
- The measures in response to the COVID-19 pandemic implemented by ERDF, ESF and Cohesion Fund OPs. These measures have a twofold aim: to fuel liquidity to the private sector (supporting SMEs) and to public authorities for health expenditure and to simplify adaptation of OPs to the emergency.

2.1 NRRP procedural and financial performance

According to articles 19 and 20 of the RFF regulation, each NRRP should be assessed by the EC considering relevance, efficiency, effectiveness, and coherence. Subsequently, on a proposal from the EC, the Council should approve the NRRP via an implementing decision.⁴

To date, 24 NRRPs have been approved by the Commission and adopted by the Council. These account for EUR 291 billion in grants and EUR 154 billion in loans.⁵ Only six plans have requested loans in addition to grants: Cyprus, Greece, Italy, Portugal, Romania and Slovenia. The figure below shows the share of requested loans on total allocations for these member states. Only two countries, Italy and Romania, have more loans than grants, 64% and 51% respectively.

Figure 2.1 Share of loans in total RRF allocation for selected member states



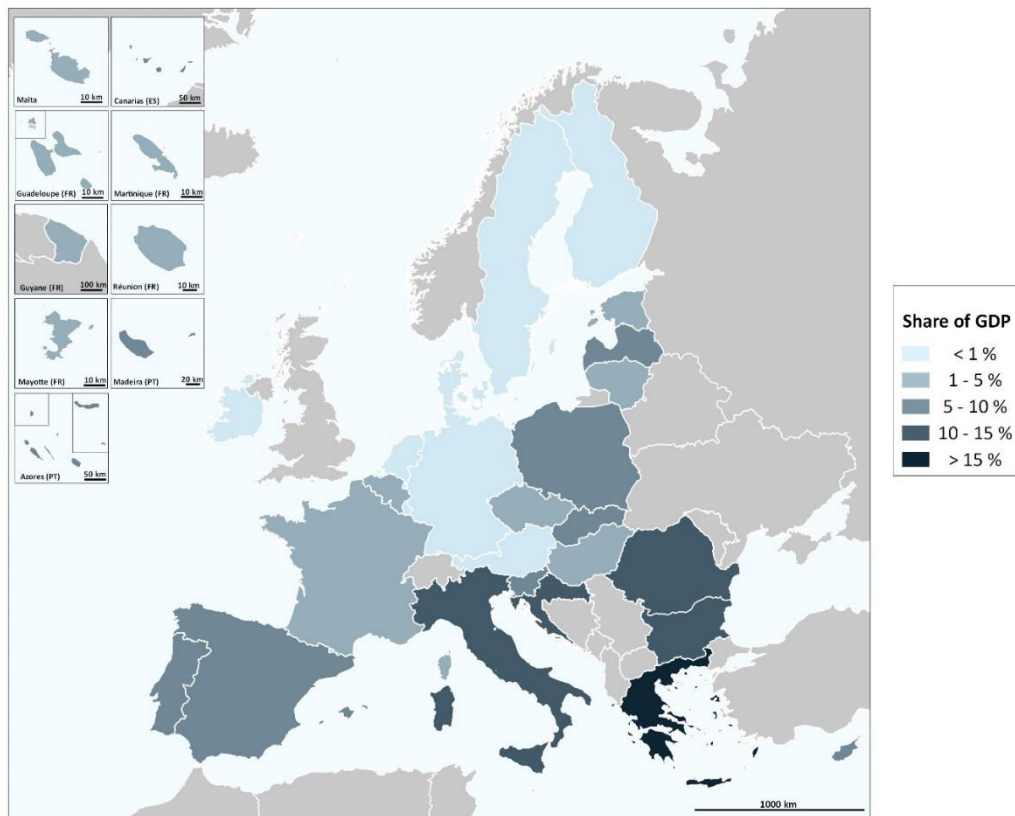
Source: Consortium elaboration from Recovery and Resilience Scoreboard data

There is also much variation in terms of size related to the Member States' economies, with the NRRP allocation as a share of GDP varying from less than 1% in Sweden, Germany, Luxembourg, Ireland, and Denmark, to more than 15% in Greece. Four other member states; Bulgaria, Croatia, Italy, and Romania; will receive an NRRP allocation of more than 10% of their GDP.

⁴ REGULATION (EU) 2021/241 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 12 February 2021 establishing the Recovery and Resilience Facility, arts. 19, 20.

⁵ The grant allocations will be revised by June 2022 based on the economic performance of the member states for 2020 and 2021. Table 1 in the annex presents all NRRP allocations as well as their share of member state GDPs.

Map 2.1 NRRP allocation as share of member state GDP



Source: Consortium elaboration from Recovery and Resilience Scoreboard data

According to article 3 of the RRF regulation, measures in each NRRP shall contribute to six policy pillars, namely:

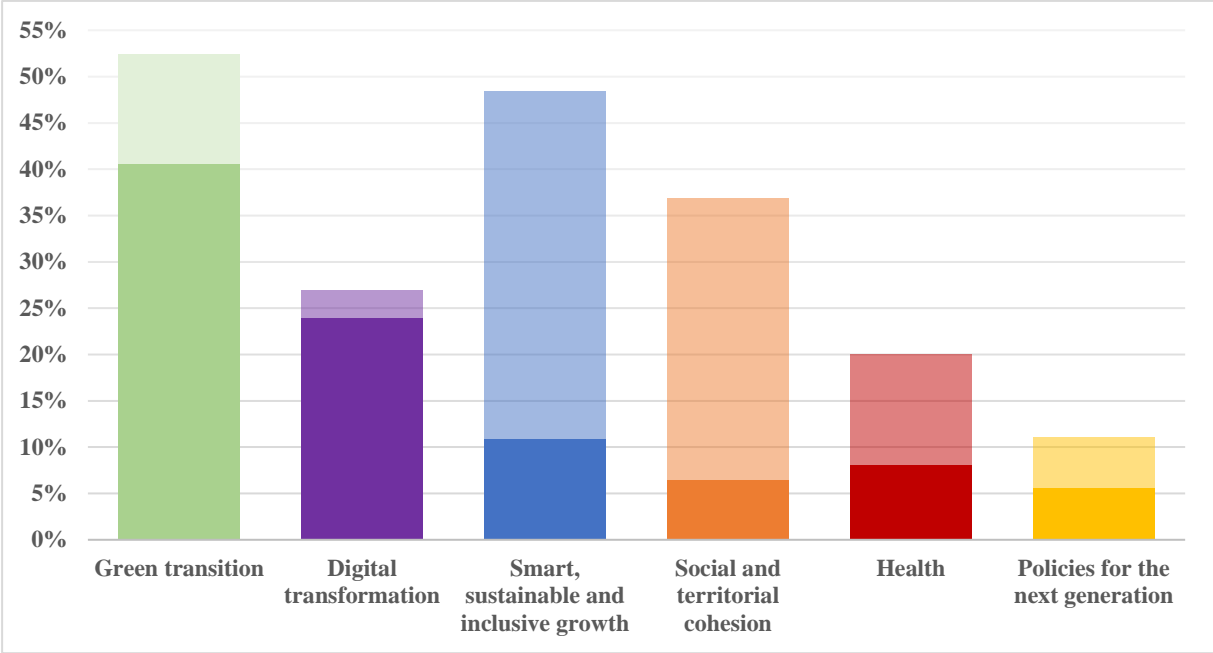
- green transition;
- digital transformation;
- smart, sustainable and inclusive growth, including economic cohesion, jobs, productivity, competitiveness, research, development and innovation, and a well-functioning internal market with strong SMEs;
- social and territorial cohesion;
- health, economic, social and institutional resilience to increase crisis preparedness and crisis response capacity;
- policies for the next generation, children and youth, such as education and skills.

The measures are further classified by the Commission as belonging to six policy areas in line with the policy pillars. A planned reform or investment can contribute to more than one pillar. The ongoing analysis illustrated in the *RRF Scoreboard*⁶

⁶ Recovery and Resilience Scoreboard, available at: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html.

distinguishes between the primary objective of each measure (‘primary pillars’) and subordinate one (‘secondary pillars’).

Figure 2.2 EU average allocations by policy area



Source: Consortium elaboration from the Recovery and Resilience Scoreboard, lighter colours represent secondary pillars, denser one’s primary pillars

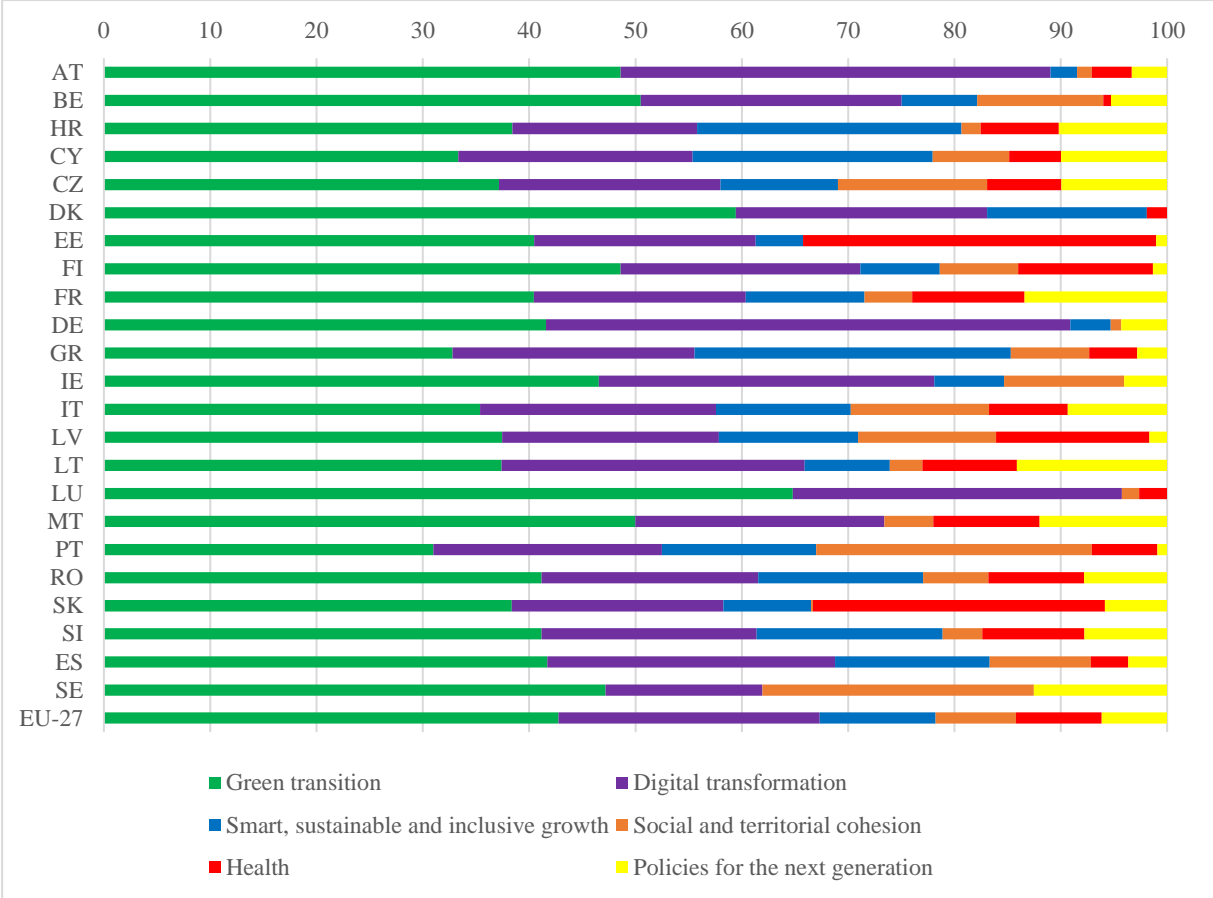
The figure above presents the share of allocations according to policy area. Since each measure contributes to two policy areas, the shares total 200%.⁷

Figure 2.3 presents the percentage of primary pillar allocations for each policy areas, per member state.

- The green transition is the most supported pillar in all member states, accounting for no less than 30% in all the plans. Belgium, Denmark and Luxembourg have allocated more than 50% of their RRF to the first pillar.
- Apart from Croatia, Estonia, Greece, Slovakia and Sweden, pillar 2 (digital transformation) is the second most supported policy area.
- Estonia and Slovakia distinguished themselves for the emphasis on health, where the first dedicates more than 30% and the second around 25%.
- Most plans have allocated less than 10% to pillar 4 (social and territorial cohesion) and pillar 6 (policies for the next generation). The exceptions are the Swedish and Portuguese plans that have both allocated more than 25%.
- From the analysis at EU-27 level many measures contribute, at least partially, to pillars 3 and 4.

⁷ A disaggregated analysis of these policy areas is presented in the RRF Scoreboard.

Figure 2.3 Share of allocation by policy area and member state (%)



Source: Consortium elaboration from the Recovery and Resilience Scoreboard data

Each member state needs to dedicate at least 37% of expenditure under its plan to measures contributing to climate objectives and at least 20% to digital objectives. On average, NRRPs devote around 40% of funds to the green transition and around 26% to digital transformation.⁸

The disbursement of RRF funds is conditional on implementation of the reforms and investments detailed in the plans⁹. Progress in achieving such implementation is captured by milestones and targets. A milestone is a qualitative measure, while a target illustrates quantitative achievements. The NRRPs have presented a total of 3,300 investment measures, and 1,900 reforms.

⁸ These data do not coincide with the percentages dedicated to ‘Green Transition’ and ‘Digital Transformation’ as the two are calculated differently. Each measure needed to be justified as contributing to the climate and/or digital objectives fully, in part or not at all. Details on the calculation of the two objectives are laid out in REGULATION (EU) 2021/241, annex VI and VII.

⁹ REGULATION (EU) 2021/241, article 24.

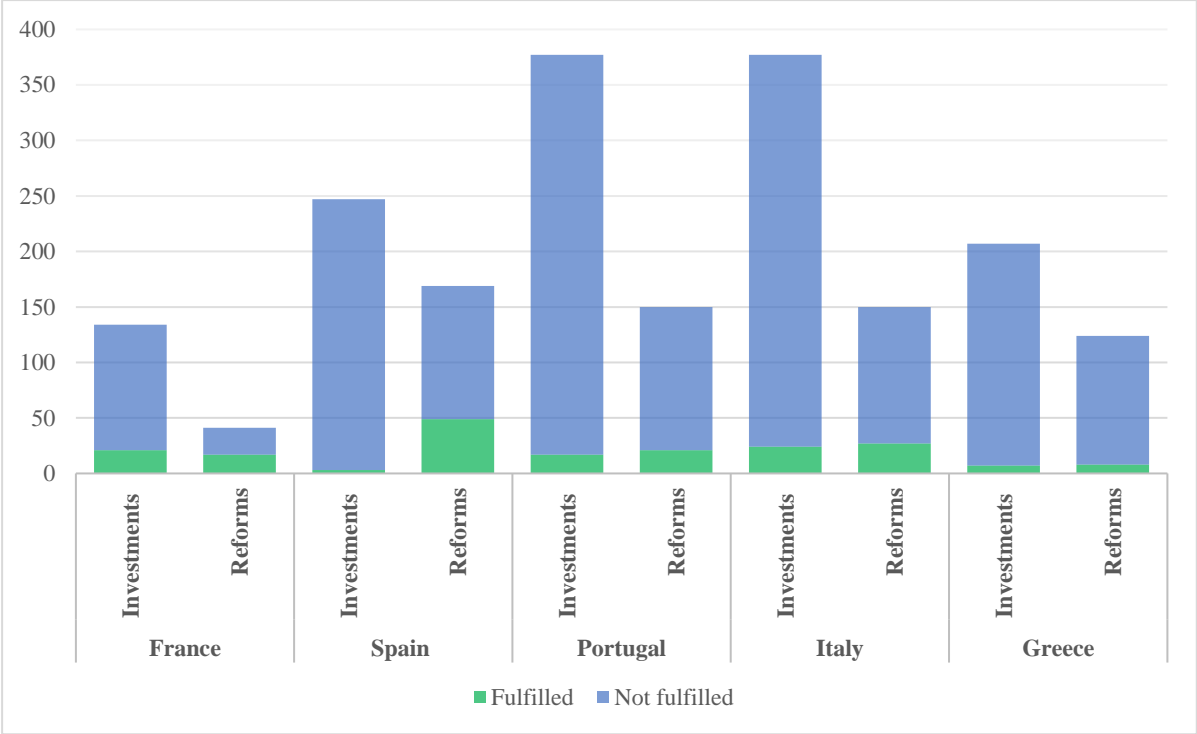
Table 2.1 State of procedural implementation of NRRPs as of 15 May 2022

	Submitted	Approved by the Commission	Adopted by the Council	Pre-financing	Payment request	Payment disbursement
Austria						
Belgium						
Bulgaria						
Croatia						
Cyprus						
Czechia						
Denmark						
Estonia						
Finland						
France						
Germany						
Greece						
Hungary						
Ireland						
Italy						
Latvia						
Lithuania						
Luxembourg						
Malta						
Netherlands						
Poland						
Portugal						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						

Source: Consortium elaboration from the Recovery and Resilience Scoreboard data

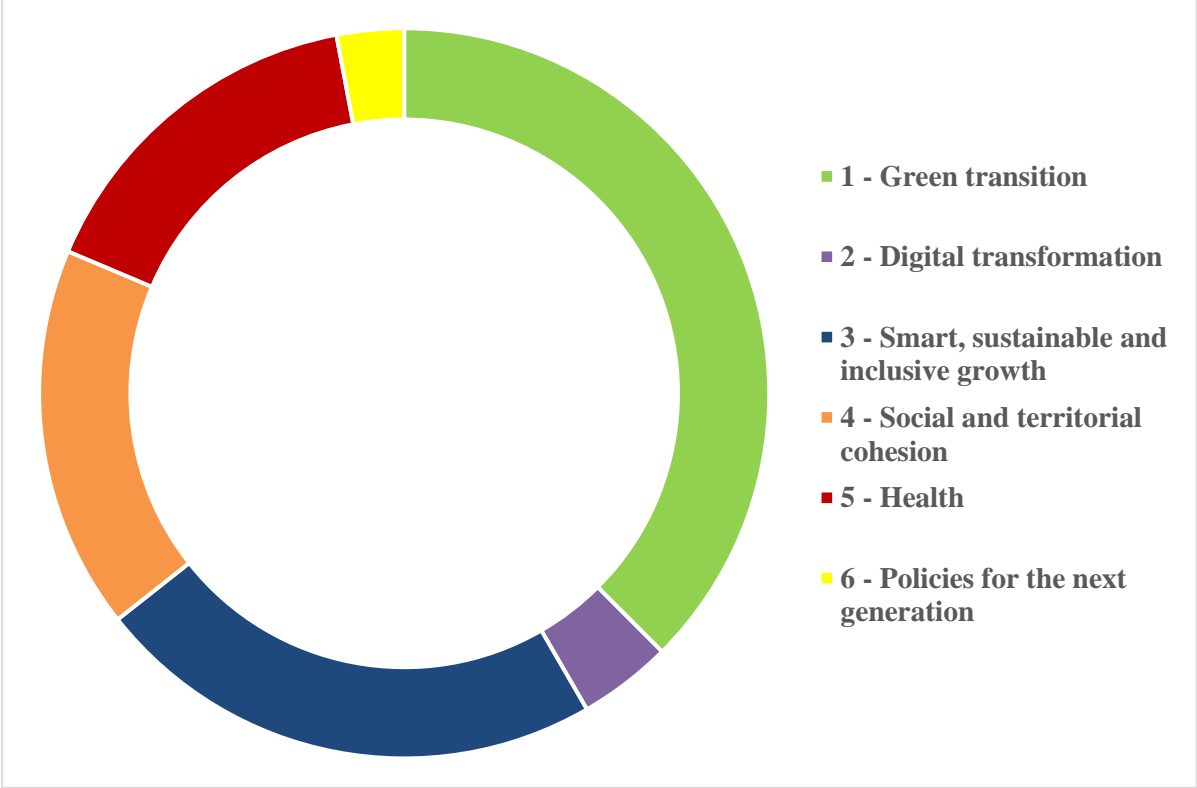
At the moment, 21 member states have received a pre-financing disbursement (Table 2.1) of around 13% of total allocation (the maximum allowed), with the exception of Germany and Slovenia where this accounts for 9% of total allocations. Five member states – France, Spain, Greece, Italy and Portugal - have received the first payment, having fulfilled milestones and targets that have been approved by the Commission. The following figures show the number of milestones and targets achieved by these countries in terms of investments and reforms as well as by pillars. Most of the investments and reforms reported belong to the first pillar – green transition – while very few are related to pillar 2 – digital transformation. This is partially due to the fact that both Greece and Italy did not report any achievements in the digital transformation area.

Figure 2.4 Number of milestones and targets reported as of 15 May 2022



Source: Consortium elaboration from Recovery and Resilience Scoreboard data

Figure 2.5 Milestone and targets reported by pillars, average



Source: Consortium elaboration from Recovery and Resilience Scoreboard data

The percentage of milestones and target fulfilled is still relatively low, especially regarding investments where only France has achieved around 15% of those planned. The overwhelming majority of Spanish milestones¹⁰ achieved regard reforms. The distribution between investments and reforms is more balanced in Italy, Greece and Portugal, but they have still only fulfilled less than 10% of investments and approved a higher percentage of the planned reforms.

The Commission has received other two payment requests from Spain and Slovakia both on 30 April 2022, which are still being assessed.

Table 2.2 First Payment

Member state	Grants (EUR billion)	Share of total	Date of disbursement
France	7.4	18.8%	07/03/2022
Spain	10.0	14.4%	27/12/2021
Greece	3.6	11.8%	08/04/2022
Italy	21.0	10.9%	13/04/2022
Portugal	1.2	6.9%	09/05/2022
Total EU	43.2		

Source: Recovery and Resilience Scoreboard

2.2 Involvement of LRAs in the NRRPs

Section 2.2 presents how much LRAs have been involved in elaborating NRRPs in each member state, as well as their role in investment and reform implementation and monitoring and evaluation (M&E).

As stated in the RRF Regulation, the NRRP should provide a summary of the consultation process with LRAs and other stakeholders (e.g., social partners, civil society and youth organisations), including who has been involved (scope), how (type of consultation) and when (timing). The plan should also indicate what emerged from this consultation process¹¹.

The analysis presented in this section is based on the methodology developed under the COR study ‘Regional and local authorities and the National Recovery and Resilience Plans’. The assessment envisages a scoring system as illustrated in Table 2.3. This scoring system measures the ‘intensity’ of LRA involvement.

The analysis is limited to NRRPs already assessed by the EC and approved by the Council, as detailed in section 2.1. For the Maltese and Irish plans, the consortium

¹⁰ Spain has reported only milestones and no targets achieved.

¹¹ Article 18(4)(q) of the RRF Regulation.

took into account not only the official plans, but also the Implementing decision of the Council and the EC Staff Working Document (SWD), as the published plans do not provide a detailed explanation of their governance architecture.

Table 2.3 Scoring and assessment criteria on LRA involvement in NRRPs

Sub-dimensions	Criteria	Score	Description
Involvement of LRAs in NRRPs	Role of LRAs in NRRP preparation	0	The NRRP does not mention LRA involvement in the preparation process.
		1	It mentions LRA involvement in the preparation process, but no specific detail.
		2	It illustrates how LRAs have been involved in preparation.
		3	It illustrates how LRAs have been involved in preparation, when and their specific contribution.
	Role of LRAs in implementation of the NRRP	0	It does not describe whether LRAs will be involved in implementation.
		1	It describes in general terms the LRA role in implementation.
		2	It details the LRA role in implementation.
		3	The role of LRAs is systematically described across policy fields.
	Role of LRAs in M&E of the NRRP	0	It does not describe whether LRAs will be involved in M&E.
		1	It illustrates the M&E system without clarifying the LRA role.
		2	LRAs are included in M&E system as a source of information.
		3	LRAs are included in the M&E system not only as sources but also as partners with general accountability.

This section analyses the involvement of LRAs in the NRRPs, as presented in the NRRP themselves, by reviewing:

1. Whether and how LRAs (and/or their representations/associations) were involved in preparing the NRRPs and how any involvement took place.
2. Whether and how LRAs (and/or their representations/associations) will be involved in implementing the NRRPs and how this will take place.
3. Whether and how LRAs (and/or their representations/associations) will be involved in M&E of the NRRPs and how this will take place.

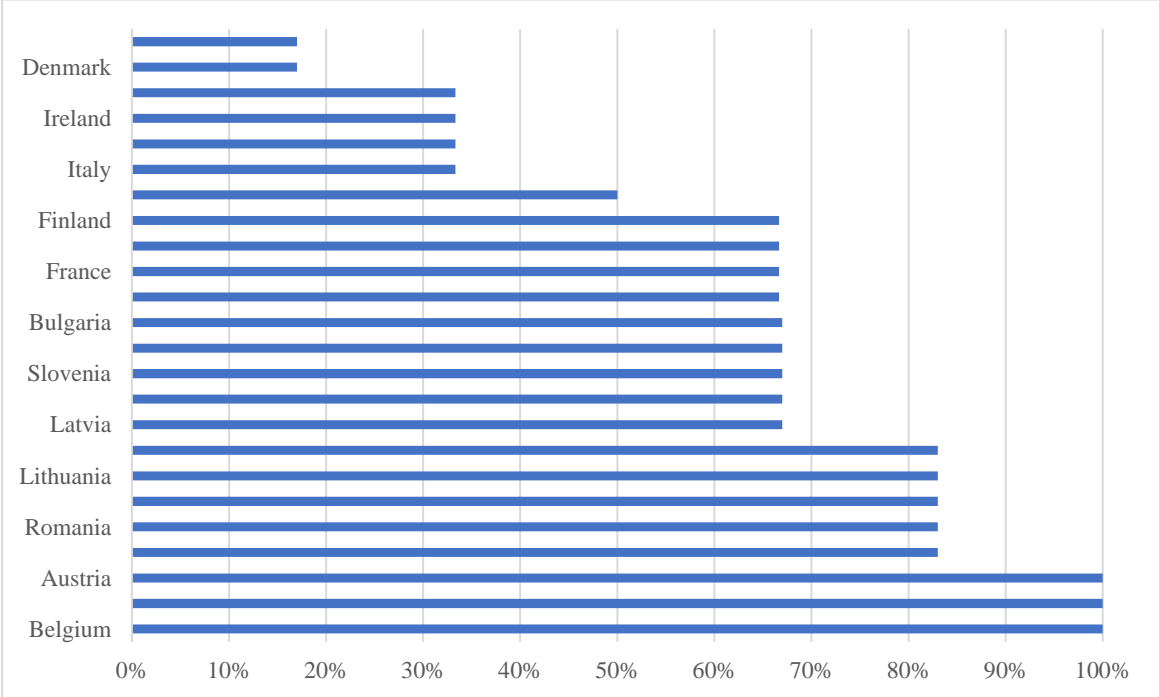
As this assessment is made predominantly on the basis of the information available in the NRRP themselves, which were drafted by the national

governments, this does not necessarily match the perception of LRAs, as highlighted in the last subsection.

2.2.1 LRA involvement in consultations according to NRRPs

The involvement of LRAs in NRRP elaboration considers whether the document includes a section dedicated to illustrating the consultation process. If this is the case, the analysis will then investigate how public consultations were conducted, which stakeholders were involved and the role of LRAs, detailing when and how they were consulted, and if their contributions were considered in the NRRP design. The section is based on analysis of the plan documents.

Figure 2.5 LRA involvement in NRRP preparation according to the NRRP



Source: Consortium elaboration

Figure 2.5 provides an overview of LRA involvement in consultations. Austria, Germany, and Belgium score the highest, because they include all the information detailed in article 18(4)(q): when and how LRAs were consulted, the scope of the consultations and their contributions to the plan elaboration.

The constitutional and institutional role of regions in **Belgium** led to a co-design process for setting-up and elaborating the NRRP. Proposals of reforms and investments came from regional governments, that firstly elaborated these as regional strategies/plans, as stand-alone investments and reforms, then proposed they be included in the NRRP.

The set-up in **Germany** also required the federal states (*Länder*) to establish the NRRP structure and finalise the measures and reforms. The consultation section notes that many measures were included because of positions expressed by regions and municipalities.

The **Austrian** plan scores the maximum as the national document details how LRAs were involved, the number of meetings, as well as the themes discussed. The plan also provides a summary to illustrate how many stakeholders, including LRAs, supported each measure of the NRRP.

The **Romanian** plan reported that the NRRP elaboration saw an ‘extensive participatory process’ where LRAs played an important role¹². Moreover, the plan details how the consultation process took place, the actors involved and the ministries coordinating the process. The plan mentioned the calendar and thematic coverage of the meetings, the number of comments received and their integration in the NRRP. However, the plan does not sufficiently illustrate LRA inputs, only mentioning ‘representatives of civil society, social and economic partners as well as public institutions and authorities at national and local level’¹³.

The **Portuguese** NRRP dedicates a specific section to the consultation process, including the timing of consultations, but without detailing the days of sessions or stakeholders participating in them. Figures 37 and 38 of the plan¹⁴ illustrate the entities contributing to the consultation process and the number of inputs received for each component of the plan. Eleven sessions were held on: forests; combating poverty and new social responses; closer and more resilient national health service; housing; qualifications; digital transition; water resources; climate, energy and mobility; bioeconomy; infrastructure; industry and innovation. The document further explains how the government decided to change and adapt the plan according to the contributions received, but it does not detail whether and how LRA comments were taken into account.

The **Czechia** NRRP score is high, as section 5 details LRA involvement in elaborating the document, with references and details of participants, meetings dates and topics of discussion. In particular, there is a subparagraph on ‘Comments on NPO adjustments’, where the document illustrates the modifications made thanks to comments and suggestions made by public and private actors involved in the consultation, including LRAs. That section presents specific examples of modifications.

¹² See the Romanian plan, section I, p. 74, in <https://mfe.gov.ro/pnrr/>.

¹³ See the Romanian plan, section III, p. 1319.

¹⁴ See the Portuguese plan, part 3, p. 240.

Most of the plans do not fully and comprehensively illustrate how the central government involved LRAs in the consultation process and whether or how their suggestions and contributions have been fully integrated in the final document.

The **Lithuanian** plan describes the consultation process, mentioning the platforms used to exchange information with private and public stakeholders. The document reports also that the draft was made public in April 2021 and citizens had the opportunity to provide written suggestions. Social media, such as YouTube and Facebook, were used to make the discussion more open and accessible to the general public. The NRRP also indicates the number of comments received per policy pillar, and adjustments made for some interventions. LRAs are indicated as consulted actors, but the plan did not specify what LRAs were involved, i.e. specific municipalities or regions.

The **Slovakian** NRRP presents a well-defined section dedicated to the consultation process. Firstly, it provides information on the mechanism and ministries involved to present and consult stakeholders. It then illustrates the round tables and thematic meetings held to debate the NRRP structure and interventions. LRAs are indicated as consulted actors, but without providing further details. The plan summarises the type of comments received and how the central government addressed them. In this context, the plan mentioned that a comment from the Association of Slovak Towns and Municipalities was taken into account and feed component 16 of the NRRP. No further detail is provided.

Even though the third part of the **French** plan, in the consultation section, explains how LRAs were consulted, no detail of their contributions and comments is presented. Moreover, there is no reference to how, and if, their contributions were integrated in NRRP investments and reforms.

The role of **Spanish** regions in the constitutional set-up of the country depends on their degree of autonomy. The plan does not include a comprehensive summary of the consultation process, only the number of meetings organised with LRAs. Two meetings were dedicated to present the plan to regions, cities and the Spanish Federation of Municipalities and Provinces (FEMP), and to discuss cooperation to implement the plan. Seven thematic conferences (November 2020 – February 2021) were organised by the Ministries involved in elaborating and implementing the plan to create a more direct channel of exchange with regions. They discussed demographic challenges, social services, transport and mobility, energy, environment, digital transition, education and vocational training. In addition, FEMP participated in a meeting with the Mobility Advisory Council chaired by the Ministry of Transport, Mobility and Urban Agenda in February 2021. The document does not include information on the contributions of LRAs to the plan.

The **Croatian** plan provides few details on LRA involvement. The NRRP was presented to representatives of cities and municipalities, the Croatian Chamber of Commerce and the County Chambers of the Croatian Chamber of Commerce in March 2021 to discuss how they would be involved in implementation. They were invited to assist the plan presentation, along with Ministries and prefects, on 23 April 2021. More than 15 meetings were held on various topics to discuss the NRRP architecture, but the dedicated section in the plan does not make specific references to LRA contributions.

The **Latvian** NRRP describes how the Ministries involved LRAs as well as social and economic partners in the document elaboration. ‘The NDP 2027 was developed in cooperation with representatives of public administration institutions, planning regions and local governments, as well as with the active participation of civil society - industry professionals, social and cooperation partners and society.’¹⁵ Six working groups were organised to discuss the thematic policy areas of the plan which indicates dates and clusters of participants. Section 5 in part III of the plan notes the actors invited by Ministries in charge of specific pillars. Municipalities, local authorities and regions have been consulted however it is not clear whether and what LRA contributions and ideas have been taken into consideration in drafting the final NRRP.

The **Estonian** NRRP presents the process of consultation to elaborate the plan. Meeting dates and topics of discussion have been illustrated, nonetheless the NRRP does not describe the contributions received and whether they have been integrated in the plan. The LRAs were nominated only in the list of ‘key partners’ involved, i.e. Association of Estonian Cities and Municipalities. No more details are provided.

The **Slovenian** NRRP presents the consultation process mentioning when Ministries and central government consulted LRAs. The document mentioned that both the Prime Minister and other Ministries met the Associations of Municipalities of Slovenia and Community of Municipalities of Slovenia. Moreover, in March and April 2021 meetings continued with representatives of regional, local, economic, social partners, civil society and NGOs. The NRRP does not describe whether the stakeholders’ contribution and comments were taken into account.

Similar to Slovenia, the **Cyprus** NRRP does not provide specific and detailed information on what LRAs have been involved and their contribution to elaborating the plan. Furthermore, the document does not explain how comments and suggestions have been taken into consideration. Nonetheless, the NRRP

¹⁵ See the Latvian plan, section III, p. 360, in https://www.esfondi.lv/upload/anm/01_anm_plans_04062021.pdf.

provides information on meeting dates and topics, as well as the main comments on each policy pillar.

The **Finnish** NRRP illustrates in general terms LRA involvement in the NRRP elaboration. The dedicated section mentions only ‘cities, regional administrations’ among the stakeholders consulted. The document does not mention the contributions received and from which institution, nor the meetings held, topics discussed or whether the actors in charge of elaborating the NRRP took into account inputs provided by LRAs. On the other hand, section 6.2 of the plan explains in more detail how stakeholders, including ‘representatives from municipalities, the Association of Local Authorities, large areas, the municipal employers and the regional health service’, set up a regional round table to discuss and propose ideas and potential reforms for social reform and climate law. Particular attention was dedicated to climate law reform with two vulnerable groups of social stakeholders primarily consulted, namely young people and Sámi. Moreover, the government conducted an extensive public survey that collected about 2,500 responses. A tour covering Helsinki, Tampere, Seinäjoki, Rovaniemi and Inari was organised, and large stakeholder events were held on specific thematic areas of reform (business; carbon sinks and land use; municipalities and regions; law).

The **Bulgarian** NRRP devotes a section to describe the process used to consult stakeholders and to collect suggestions and comments. LRAs were mentioned among other actors, such as non-governmental organisations (NGOs), environmental agencies, trade unions, etc. The document specifies that the central government met the National Association of Municipalities before establishing thematic working groups with all the other stakeholders, to present the stages of NRRP preparation. There are no further details on LRA comments or whether they were integrated into the document.

The **Swedish** NRRP presents a brief section on the consultation process, where no information or details on the consultation or involvement of stakeholders are provided. Nevertheless, the document illustrates the stakeholders involved for each measure of the plan in section 2. LRAs are among those involved but there is no specific information on whether their comments were taken into consideration.

Italy does not dedicate a specific section to the consultation process. In the introduction, it just mentions that the NRRP was discussed with LRAs, civil society actors and national political parties.

The **Maltese** NRRP does not dedicate a specific section to consultation process, indeed it does not mention any consultation process. More details on the

consultation process can be found in the EC Staff Working Document¹⁶: 145 bodies were consulted to ‘determine the main policy objectives for EU funding, including the RRF’. Government bodies, urban and other public authorities are mentioned.

The **Greek** NRRP illustrated the steps in the consultation process, mentioning in general terms the LRA involvement. It does not specify which LRAs were involved – just the Central Union of Municipalities of Greece with their role and contributions to developing the plan.

Similar to the Greek experience, the **Irish** plan refers to 110 ‘written submissions received from stakeholders, including regional representatives, political parties, representatives of employers, trade unions, the farming community, voluntary organisations, women’s network, youth organisations, environmental organisations, academia, businesses, legal and other professional organisations including civil society stakeholders, and members of the public.’ The document does not provide details on the number of consultations, their timing or how they have been taken into account in the plan.

The **Luxembourg** and **Danish** plans did not mention LRAs at all in the section on the consultation process. The Luxembourg plan made reference to social partners, while the Danish document just to stakeholders.

2.2.1 LRAs involvement in implementation according to NRRPs

This section considers how and to what extent LRAs play a role in implementing the measures and reforms in the NRRP.

As illustrated in figure 2.6, Belgium, Romania, Croatia and Estonia have the highest scores.

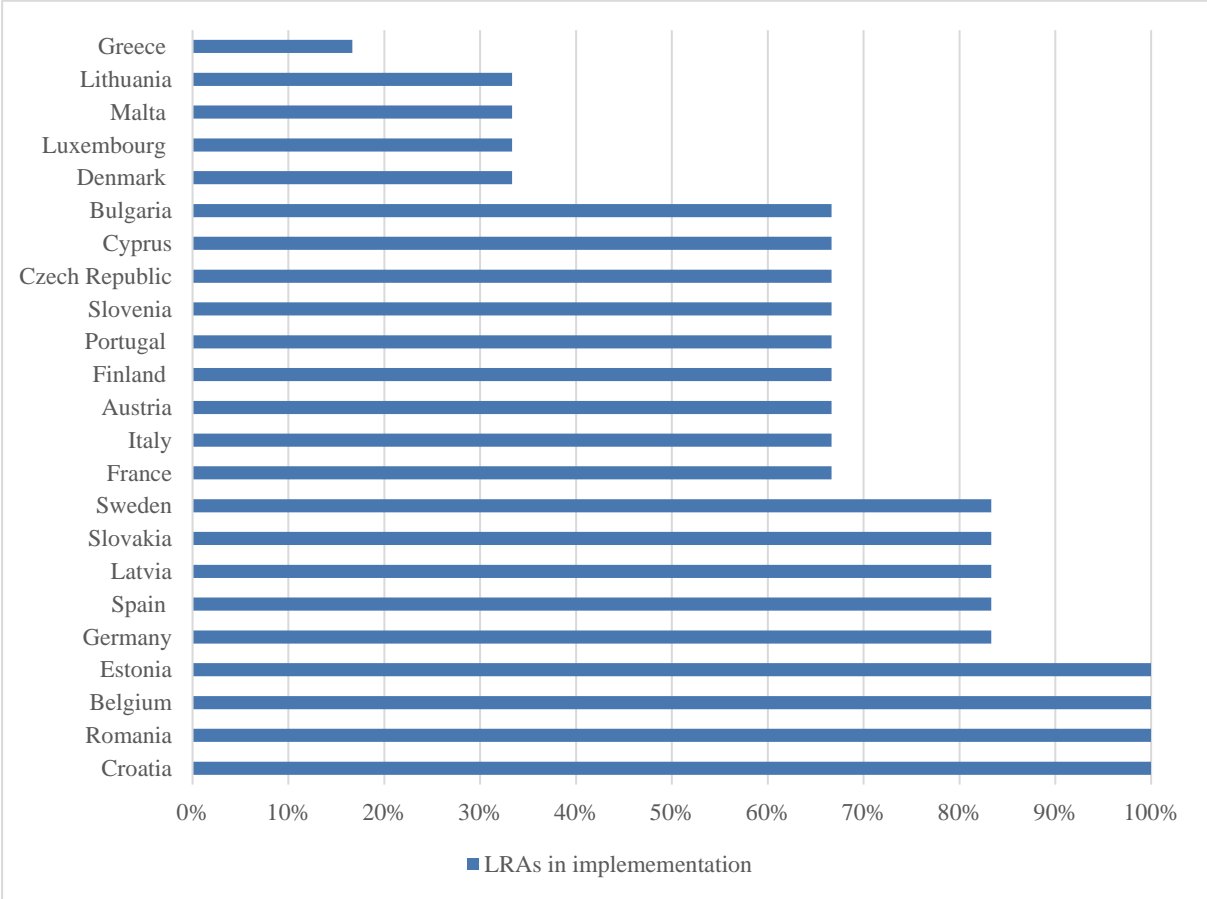
The **Belgian** plan details the implementation process at central and regional levels. Reforms and investments will be implemented by each region and the federal government, so the role of LRAs is widely discussed and detailed across the whole plan.

Croatia scored the maximum for implementation, as the LRA role is detailed in almost all policy fields, with a significant role in ensuring project activation and coordination among stakeholders.

¹⁶ SWD(2021) 269 final, 16 September 2021.

The **Romanian** plan scores the highest for the implementation phase. The document highlights that NRRP implementation will be similar to the mechanism in place OPs supported by Cohesion Policy funds, namely ‘centralised management, and decentralised execution’¹⁷. There are examples of LRA roles in implementing reforms and investments across all pillars.

Figure 2.6 Role of LRAs in implementation according to the NRRP



Source: Consortium elaboration

The **Estonian** NRRP describes the role of LRAs and how they should implement investments and reforms for each policy field. For each reform and investment, the plan details what partners will be involved and the target group. Examples can be found in measures dedicated to the production and storage of green energy, energy efficiency and building renovation, as well as in implementing investment for sustainable transport infrastructure. Component 3 dedicated to digital transformation sees local government and municipalities as implementing bodies as well as final beneficiaries. LRAs play a key role also in measures dedicated to health and social inclusion.

German Länder play a key role in implementing and monitoring NRRP investments and reforms. The plan does not always mention their role since this

¹⁷ See the Romanian NRRP, part III, section 3.3, p. 1284.

is inherent in the constitution. This is also a result of the very late engagement of the Länder in designing the NRRP.

A similar approach is used for LRAs implementing reforms and projects in the **Spanish** plan. The regions are explicitly mentioned as implementing actors, also given their constitutional role. However, their role and contribution to implementing reforms and investments is not always explained in detail across all policy fields.

The **Latvian** NRRP mentions LRA involvement in implementation, specifying also that the way to deliver investments and reforms will be borrowed from the efficient administration of EU funds. The NRRP illustrates also that regions are planning actors, in charge of developing and implementing sustainable urban strategy, as well as coordinating and monitoring implementation. Thanks to this legal basis, they will be in charge of supporting central government in NRRP interventions too. LRAs are not mentioned in every component of the document. The main areas where they are implementing bodies are digital innovation and ICT, administrative territorial reform, reduction of emissions, sustainable transport infrastructure and education.

Slovakia specifies in many components of the NRRP the role of the LRAs in implementing NRRP investments and reforms. Section 5.4 indicates that local authorities are also part of the Government Council for the Recovery and Resilience Plan of the Slovak Republic. This governmental body was created to ensure the active participation of stakeholders in implementation and to ensure effective and efficient exchanges of information. LRAs appear as implementing actors in projects to improve railway infrastructure as well as national transport services, investments to decarbonise industry, digitalise public administration, measures related to climate change investments, with particular attention to water retention, nature protection and biodiversity, in particular for the Poloniny National Park and the Muránska Planina National Park. Another example of LRA involvement in NRRP implementation relates to some healthcare sector reforms, where LRAs were also consulted to elaborate the reform.

Section 3 of the **Swedish** NRRP describes the role of LRAs in implementing investment and reforms. It highlights that ‘the regions and municipalities enjoy a high degree of autonomy, especially in terms of regional and local spending, which makes it possible to incorporate local perspectives in the implementation of the recovery plan.’¹⁸ For each measure, the plan explains how implementation will work. Detailed examples of LRA involvement are illustrated in the technical appendix of the NRRP. Counties play a key role in ‘local and regional climate

¹⁸ See the Swedish NRRP, section 3.1, p. 167.

investments’ as they support applicants to access aid and provide material and documentation for the measure. Energy efficiency for private and public building, housing renovation, investments dedicated to strengthening the industrial sector, and broadband network are the main pillars where LRA are implementing bodies.

The **Austrian** plan mentioned LRAs as implementing bodies for several reforms and investments. In the introductory part and throughout the plan, LRAs are described as strategic urban planning actors that play a crucial role with Ministries to design projects and follow up on them. The constitutional distribution of power within the country assigns federal states general spatial planning responsibility, while municipalities have local spatial planning responsibility¹⁹. An example of the implementation arrangement is presented in the introduction of ‘123 climate tickets’. Regions and the state will coordinate to implement the measure, especially in setting the price and coordinating transport associations. Another example is PIA2030 - Internet infrastructure. The Ministries, regions, regulatory authority and Research Promotion Agency will set up a work programme and coordinate the platform. All these actors are responsible to report the implementation status.

Slovenia, Czechia, Bulgaria and Cyprus show that LRAs will be involved in some implementation. Their role is not described for all measures. Part III of the Slovenian NRRP does not detail the role of LRAs as implementing bodies, they are not even specifically mentioned as implementing actors. Measures related to green investments, climate change and risk adaptation, green infrastructure, circular economy, education and social inclusion mention LRAs as in charge of implementing the measures.

Czechia details how the plan envisages LRA involvement in implementation in components 1.4, 1.6, 2.1, 2.5, 2.8 and 3.2. **Bulgaria** is similar to Czechia as LRA involvement in specific measures is described, as in investment 4 in component 2.A ‘Innovative Bulgaria’, component 2.C.2 ‘Transport connectivity’. Although section 4 of part III of the **Cypriot** NRRP does not illustrate the role of LRAs in implementing measures, some components of the plan detail where they will act as implementing body. These include reform of green taxation, energy efficiency in SMEs, municipalities and communities, energy efficiency and renovation of buildings, upgrading and embellishing flood channels in Livadia, strengthening administrative capacity building for LRAs, as well as a new public and community kindergarten and nursery School in Ayia Napa Municipality.

Similarly, the **Finnish** NRRP does not mention the role of LRAs in all the investments and reforms planned. An example where regional actors play a role

¹⁹ See the Austrian NRRP, 4.B.1 Soil protection strategy, p. 490.

is the Continuing learning reform (P3C2R1). The Ministry of Education and Culture and the Ministry of Employment and the Economy are responsible for promoting and steering the reform, directing the Service Centre for Continuing Learning and Employment, while training and service centre work will be implemented in close coordination with regional actors. Regional authorities act as implementing bodies also for reforms and investments to improve access to healthcare services. The regional services for ‘inclusion, well-being and health’ will implement cultural, sports and nature services.

The **Portuguese** plan details the role of LRAs as implementing actors in specific reforms and investments. Examples include the autonomous region of Madeira will offer social housing to families in need, to reduce a housing shortage by 29% by 2026. In doing so, the region will reallocate 1,122 families in new social housing and support the rehabilitation of 300 dwellings. Local actors, including municipalities, organisations of forest and agricultural producers, cooperatives and local associations promote reform of Integrated Landscape Management Areas. This should improve management and common exploitation of agriculture and forestry in small-holding areas, subject to natural and human vulnerabilities. Finally, the autonomous region of Azores is identified as implementing body to promote and support energy transition, by increasing the share of renewable energy resources to produce electricity, reducing gas emissions and improving security of supply.

Italy and **France** do not specify LRA roles in each component of their plans for implementation, monitoring or evaluation, just stating that LRAs will be part of those processes. The French document foresees LRAs implementing the plan in general terms, but the governance is not well defined. The Italian plan mentions that central administration will implement the measures and reforms together with LRAs, according to their specific competences.

The **Danish** plan does not describe the role of LRAs in all reforms and investments, they are mentioned in just a few. An example is investment in telemedicine, where the Ministry of Health will ensure the involvement of Danish Regions, Local Government Denmark and the Danish organisation of general practitioners to guarantee the implementation and dissemination of digital initiatives. Another example is the ‘Rehabilitation of industrial sites and contaminated land’ investment where Danish regions are not only beneficiaries, but also implementing actors.

The NRRP of **Luxembourg** mentions the role of municipalities only for the reform ‘*Pacte Logement 2.0*’. The government and Ministry of Interior and Housing have developed a new ‘housing’ concept to support housing policy at

local level in coordination with municipalities. Municipalities are involved in designing the reform and will be beneficiaries.

Lithuania does not provide details on how LRAs will be involved in implementation. Some cases mention them as actively involved in implementation, such as the reform ‘Modern general education - the basis for acquiring basic competencies’ and building renovation packages.

The **Maltese** NRRP does not specifically mention any LRAs as implementing actors however in the EC SWD²⁰, the ‘recovery and resilience plan beneficiaries’ are envisaged as responsible for implementing interventions required by the plan.

The **Greek** NRRP does not present LRAs as fully involved in implementation. An example is in the reform to regulate public service obligation (Electromobility (ID: 16924), where regions and local departments shall detail region-specific criteria for their transportation needs and shall fine-tune procurement. In general, as detailed in the ‘Actions taken for the plan’s implementation’ section, there are four national bodies authorised to implement, monitor and report the plan progress. These will be responsible for achieving the milestones and targets as well as reporting all data and documentation.

According to the published **Irish** plan and the EC SWD²¹, the plan does not mention LRA involvement in implementing reforms and investments.

2.2.2 LRA involvement in M&E according to the NRRPs

The assessment considers how LRAs will be involved in M&E for the plans.

In figure 2.7, **Belgium, Sweden and Spain** have the highest scores. On the other hand, four of the NRRPs, i.e., **Malta, Ireland, Greece and Slovenia** have an M&E system which does not mention LRAs.

The **Belgian** plan details monitoring at central and regional levels. The regions/communities have a central monitoring system and one at component/reform level. Belgian federal authorities are involved in M&E as accountable to citizens and local administrations.

The **Spanish** plan established M&E at the central level, with regions playing an important role in the new institutional bodies to ensure smooth coordination and

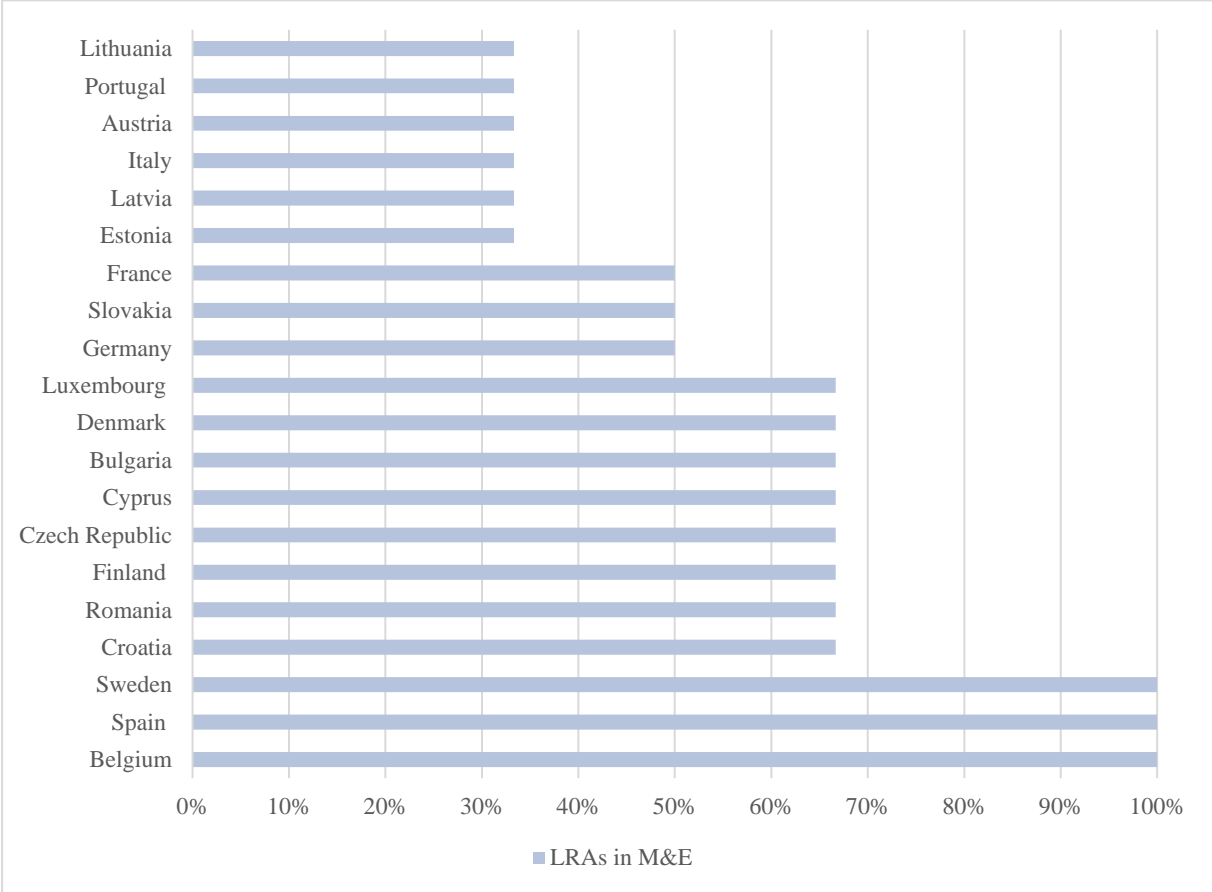
²⁰ SWD(2021) 269 final, 16 September 2021.

²¹ SWD(2021) 205 final, 16 July 2021.

collaboration between administrative tiers. No further details are provided on their involvement.

Swedish LRAs are actively involved in M&E. The chapter on implementation and governance highlights the high degree of autonomy of regions and municipalities to facilitate the integration of local perspectives in the plan. Furthermore, the authorities in charge of implementing the investments must also carry out monitoring and reporting on the achievement of goals. Also, the technical appendix of the plan specifically mentions the LRA role in reporting spending, as they receive state subsidies investments under the Elderly Care Promotion initiative, for regional vocational adult education, and polytechnic education.

Figure 2.7 Role of LRAs in M&E according to the NRRP



Source: Consortium elaboration

For **Finland**, the involvement of LRAs in monitoring is mentioned for some investments and measures: examples are in Pillar IV *Strengthening access to social and health services and increasing cost-effectiveness*, which details the role of LRAs in monitoring.

As part of the governance model, **Portugal's** plan envisages the National Monitoring Commission whose main goal is to monitor implementation and disseminate results of the NRRP to stakeholders, identify issues and formulate recommendations. The LRAs are not mentioned as members of the Commission, but the plan clearly states they will be involved if considered necessary, without providing any details on their role.

Luxembourg scores lower: the role of the LRAs in M&E is inferred in the *Role of Beneficiaries* section, which mentions that beneficiaries of the investments will evaluate implementation and performance of the plan by uploading data in the tracking system. For one reform, 'Housing Pact 2.0', the plan specifically mentions that the municipalities will be involved in implementing and evaluating projects by drafting an annual report summarising the state of these projects.

A similar approach was followed by **Denmark**, where beneficiaries will provide data for monitoring to the Office of Audit and Supervision.

The **Romanian** plan scores are the same as Luxembourg and Denmark for M&E. The institution responsible for coordinating implementation, monitoring and evaluation will be the Ministry of European Investments and Projects which will act as a Managing Authority. A platform will be created for beneficiaries to upload information on the investments' progress.

The main responsible bodies for M&E in the **Czech** plan are the Ministry of Industry and Trade and other central authorities, i.e. line ministries. Even though LRAs were not mentioned as implementing bodies, some investments will be implemented by, or in collaboration with, LRAs. As implementors they must provide data for the control and audit process.

Similarly, the governance system of the **Cyprus** plan foresees centralised monitoring. This does not specifically mention LRAs as part of the M&E process, but reveals that monitoring will be carried out on the basis of information submitted by the *project promoters* (the implementing entities, which for some investments are LRAs).

The governance mechanism of the **Bulgarian** plan is complex and highly centralised, with several institutions in charge of implementation and control. One is the National Fund Directorate which has been designated as the Coordinating Unit for implementation and control of the plan. It has several responsibilities, among which are the preparation of rules and procedures for implementation of the plan, carrying out inspections, and controlling implementation of the investments. Among others, the Central Coordination Unit Directorate is responsible for developing the plan and for monitoring implementation of reforms

and investments as well as progress on indicators. The Economic and Financial Policy Directorate at the Ministry of Finance oversees reporting to the EC within the European Semester cycle. An executive agency ‘Audit of EU Funds’ in the Ministry of Finance is in charge of audits. The Monitoring and Reporting Structure is responsible for selecting beneficiaries, negotiating funding, summarising information, and controlling implementation. Final recipients are responsible for implementation, which for some investments means LRAs, as well as reporting on financial and technical implementation.

Italy and **France** do not provide a clear description of the role LRAs will have in M&E but LRAs are mentioned as part of these processes. In Italy, LRAs will send monitoring data to the Ministry of Economy and Finance. In France, a new unit within the Ministry of Economy, Finance, and Recovery will ensure coordination between central and regional levels.

The **German plan** does not fully clarify the role of Länder in the monitoring process, except for component 4.1. However, the Länder will have a role in monitoring even if this is not always mentioned given the German constitution.

Similar to most other plans, **Slovakia** envisages a central entity for M&E, the National Implementation and Coordination Authority. This will be the responsible entity for M&E, but monitoring will be carried out also at lower levels, by the investment implementing bodies (*the executors*).

Croatia’s M&E process is mainly centralised. Even if the role of LRAs is not specifically mentioned in the chapter dedicated to implementation and monitoring, they will be part of the *Implementation Committee*, which will be in charge of operational monitoring and implementation of the plan. Moreover, their involvement in the implementation of investments includes monitoring. Moreover, the chapter on controlling and auditing, mentions that all bodies involved in implementation of the plan must carry out control activities.

Austria’s governance system does not mention the involvement of LRAs in the M&E process, perhaps due to the federal nature of the state. Only investment 4.B.4 mentions that community nurses will collect data at the regional level.

The involvement of LRAs in M&E in the Baltic NRRPs is more inferred and implicit. The **Estonian** plan nominates the Ministry of Finance as the body in charge of M&E, while LRAs are mentioned for data exchange in a reform for healthcare. In the **Latvian** case, LRA involvement can be inferred for monitoring, controlling and verifying the results as, alongside line ministries and the Central Finance and Contracts Agency, ‘relevant competent authorities’ will be involved. The **Lithuanian** plan foresees a capacity-building reform for planning and

monitoring the interventions to foster stakeholder involvement in these processes, while the main entities responsible for M&E remain the Ministry of Finance and the Central Project Management Agency. Governance of the Lithuanian NRRP was planned at central level including M&E, which was delegated to the Managing Authority. The involvement of LRAs is not explicitly mentioned, only that *project promoters* will report on project activities to Managing Authorities.

The other four analysed plans, i.e., **Malta, Ireland, Greece and Slovenia** do not mention, nor infer, the role of LRAs in M&E.

Malta does not describe the M&E system of the plan, and considering the shortness of the document, the consortium relied also on the EC SWD²². This describes monitoring and control activities which will be ensured at central level by the Ministry responsible for managing EU funds, through the Planning and Priorities Coordination Division.

Similarly, the **Irish** plan does not offer details about an LRA role in M&E, which will be carried out at central level. An Implementing Body will be created within the Department of Public Expenditure & Reform which will be responsible for implementing and monitoring the plan. The coordinating body responsible for implementation of the **Slovenian** plan is the Ministry of Finance, which is responsible for implementation of the plan. It is also responsible for monitoring and evaluating the results of implementation and reporting to the EC. Furthermore, the plan highlights that ministries are responsible for implementing the investments and reforms as well as achieving and monitoring the objectives and milestones. The plan does not mention the involvement of LRAs in M&E.

2.2.4 Perception of LRA involvement in NRRPs

Previous sections are based on a textual analysis of the NRRPs, but several other studies have attempted to assess the involvement of LRAs in the NRRPs based on the perception of LRA representatives. This section presents conclusions from the work carried out by the CoR, the Council of European Municipalities and Regions (CEMR), the Conference of Peripheral Maritime Regions (CPMR), and the Eurocities association, among others. Most of these studies do not rely exclusively on textual analysis of the NRRPs but include consultations with LRAs to assess their perception of the level of involvement in NRRP preparation and implementation.

22

<https://t33.sharepoint.com/sites/CORBarometerII/Documenti%20condivisi/General/INFO/NRRPs/MALTA/SWD%20ec%20su%20Malta.pdf?CT=1648651945814&OR=ItemsView>

The CoR-CEMR²³ consultation on implementation of the RRF was published in April 2022. The study presents an update since the first consultation conducted in 2021 on the involvement of LRAs in the preparation of NRRPs. It involved 26 organisations representing subnational government levels across 19 member states.²⁴ As during the previous consultation, LRA representatives reiterated their lack of participation in preparation of the plans, especially in identifying priorities of the plans, as well as in the governance process. Indeed, most respondents reported they were not involved at all in the coordination process or validation of the NRRPs. Very few respondents considered they had an impact on identifying investments and reforms to be included in the NRRPs. The low involvement of LRAs was confirmed by interviews out with LRA representatives in several member states.²⁵ This lack of active involvement resulted in a general top-down approach to identify projects and reforms for the NRRPs.

During the summer of 2021, Eurocities consulted 28 cities across 16 member states to assess their involvement in preparing and designing NRRPs as well as their role in implementation of the NRRPs.²⁶ This was the second consultation conducted by the association and confirmed what had emerged the year before. Cities perceived they were insufficiently involved in designing the NRRPs, mainly due to a lack of structural dialogue and feedback mechanisms. The few cities that reported sufficient involvement in preparing the NRRPs attributed it to a long-established process of dialogue with national representatives. This was the case in Ghent, that actively contributed to identifying projects for the municipality to be included in the NRRP.

According to the CoR-CEMR consultation, LRAs are still optimistic about the impact of NRRPs for the digital and green transitions. Nonetheless, this is not reflected in their role in implementation, where most respondents do not feel their participation in implementation is meaningful. This includes a perceived low ownership of the projects and limited involvement in monitoring the results. The Eurocities consultation reported that most cities perceived a lack of involvement in governance of the NRRPs as the vast majority received no information or formal role in the governance structure.

If member states ignore the territorial dimension of the digital and green transformations, they incur the risk of exacerbating existing gaps and disparities

²³ Implementation of the Recovery and Resilience Facility: The Perspective of Local and Regional Authorities. Results of the CoR-CEMR targeted consultation, April 2022

²⁴ These are: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Portugal, Slovakia, and Slovenia

²⁵ Regional and local authorities and the National Recovery and Resilience Plans, European Committee of the Regions, 2021

²⁶ Briefing note on the involvement of cities in the governance of National Recovery and Resilience Plans, Eurocities, September 2021

between regions. This risk was reiterated by the CPMR analysis²⁷ that provided an additional assessment regarding differences among member states in the consideration of LRAs when elaborating NRRPs.

All in all, LRAs are key for monitoring and implementation of the NRRPs, as most investments and reforms deeply affect their administration. This is why a lack of LRA involvement might hinder the NRRP results. The CoR-CEMR consultation highlighted the risk of failure of the plan itself as most LRAs indicated a high risk of ‘failure to reach targets and milestones’ or a misallocation and displacement of funds. Projects regarding the energy transition, sustainable transport, smart cities and digital transformation, among others, have a direct impact on LRAs, but their role in governance of the NRRPs is still not clear in most member states. Critically, none of the cities consulted believe the principle of subsidiarity was fully respected in elaborating the governance structure of NRRPs.

Also underlined by most LRAs are possible overlaps and lack of coordination with other EU funds. This poses several problems for LRAs:

- additional funding, if not well coordinated, increases the risk of lowering the overall financial absorption as LRAs lack the support to manage them.
- the possible displacement of Cohesion Policy intervention poses an additional burden. LRAs highlighted the difference between the NRRP and ESIF for LRA involvement: LRAs have a formal role in a monitoring committee for ESIF, which is not the case for the RRF.

2.3 Measures implemented under Cohesion Policy Programmes

The CRII/CRII+ packages (EU Regulation No 558/2020) have given flexibility to reallocate financial resources within ERDF, ESF and Cohesion Fund OPs to tackle the economic and social damages caused by the COVID-19 pandemic. This especially concerns the private sector (mostly SMEs), vulnerable citizens and health care. CRII/CRII+ increased liquidity available to member states by:

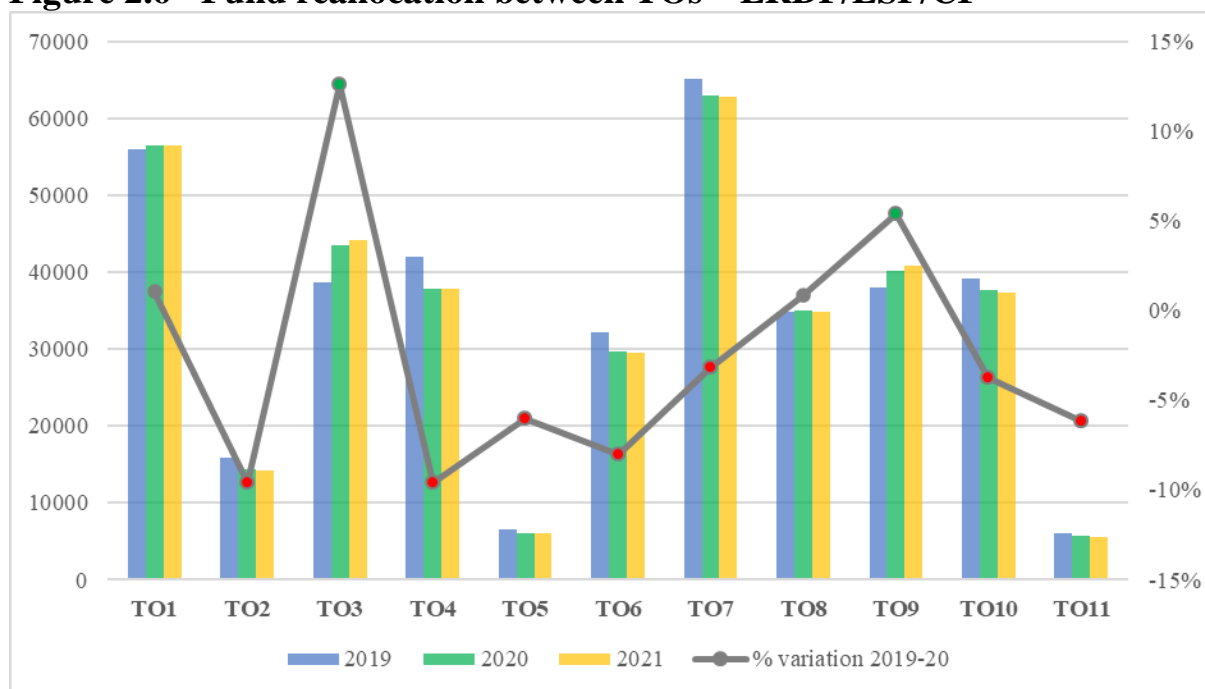
- Increasing the co-financing rate, as with the 2020-21 accounting year, EU resources could finance up to 100% of ESIF OPs;
- Simplifying the re-allocation of financial resources between funds, categories of regions and priorities for the emergency response;

²⁷ CPMR analysis on the National Recovery and Resilience Plans. Technical note, June 2021

- Widening the use of financial instruments to support SMEs (i.e. the possibility to provide working capital).

The packages also provided for greater flexibility by introducing new measures eligible under ERDF, for ‘completed or fully implemented operations that foster crisis response capacities in the context of the COVID-19 outbreak’.²⁸ Moreover, REACT-EU extended expenditure eligibility to 31 December 2023.

Figure 2.6 Fund reallocation between TOs – ERDF/ESF/CF



Source: Consortium elaboration based on Cohesion data

The figure above presents the redistribution of resources among Thematic Objectives (TO).

Enhancing access, use and quality of information and communication technologies (TO2), and supporting the shift towards a low-carbon economy (TO4) lost the largest share of allocation in the redistribution of resources. Nonetheless, all TOs lost some allocation in 2020, except for measures to enhance the competitiveness of SMEs (TO3) and promote social inclusion (TO9).

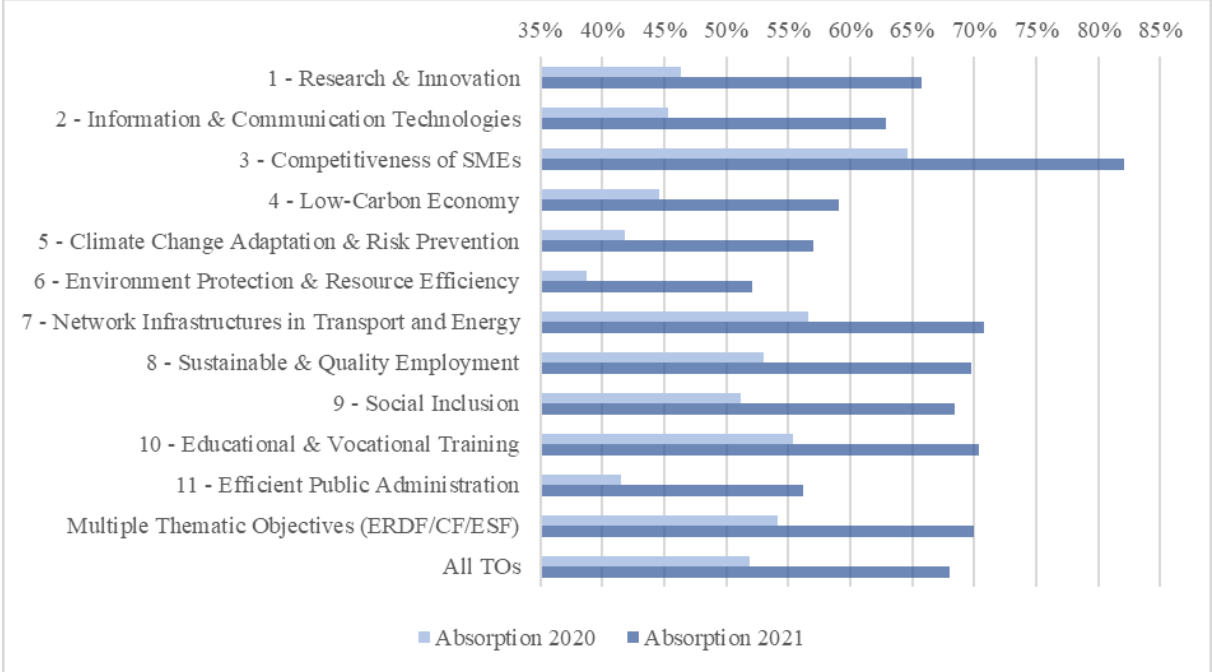
Enhancing the competitiveness of SMEs (TO3) had an increased allocation of EUR 4.9 billion from 2019 to 2020, while promoting social inclusion increased by EUR 2 billion. The healthcare sector received an additional EUR 7.6 billion at EU level.

²⁸ Regulation (EU) 2020/558 amending Regulations (EU) No 1301/2013 and (EU) No 1303/2013 as regards specific measures to provide exceptional flexibility for the use of the European Structural and Investments Funds in response to the COVID-19 outbreak.

Moreover, part of the new measures focused on support to vulnerable categories and workers affected by the pandemic, with an increase of EUR 5 billion of direct support to people.²⁹ These redistributed resources towards sectors more immediately affected by the COVID-19 emergency, to the detriment of long-term objectives, such as climate change adaptation. The shift is particularly relevant since by 2020 a great portion of OP budgets were already committed, and member states were prevented from reallocating these.

The financial performance of TOs shows some differences but, in general, there was a substantial increase in absorption between 2020 and 2021. The dramatic increase in absorption for TO2 and TO5 is also due to the reallocation of these objectives.

Figure 2.7 Absorption by TOs in 2020/21 - ERDF/ESF/CF



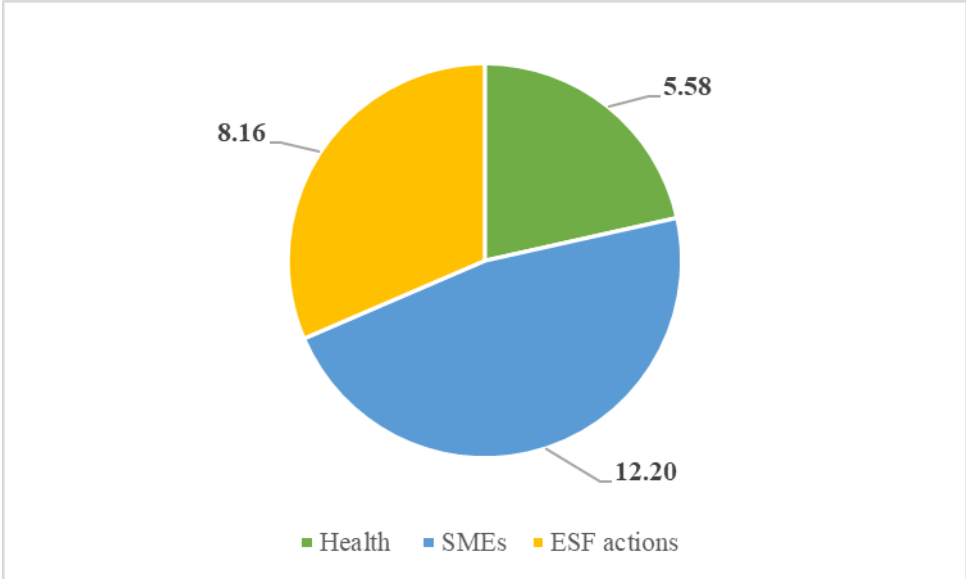
Source: Consortium elaboration based on Cohesion data

On May 2020, the Commission proposed new indicators specifically related to the COVID emergency measures, to monitor implementation progress. In February 2021, the Commission added indicators related to vaccination programmes. These indicators, and their implementation in 2020/2021, can inform understanding of measures introduced in the OPs to face the negative consequences of the pandemic. Nonetheless, the indicators’ use is voluntary and while they were broadly adopted³⁰, not all COVID related measures at member state level can be captured through them.

²⁹ From the *Coronavirus Dashboard*, the sum partially overlaps with the ESF health and SMEs reprogramming.
³⁰ These indicators were adopted by over 219 programmes in nearly all member states according to the 2021 Summary of programme annual implementation reports covering implementation in 2014-2020 - COM(2021) 797 final.

As seen for the re-allocation of resources among TOs, the indicators relate to three macro-areas of intervention: enterprises, health and social protection.

Figure 2.8 Targets for COVID specific indicators 2022, EUR billion

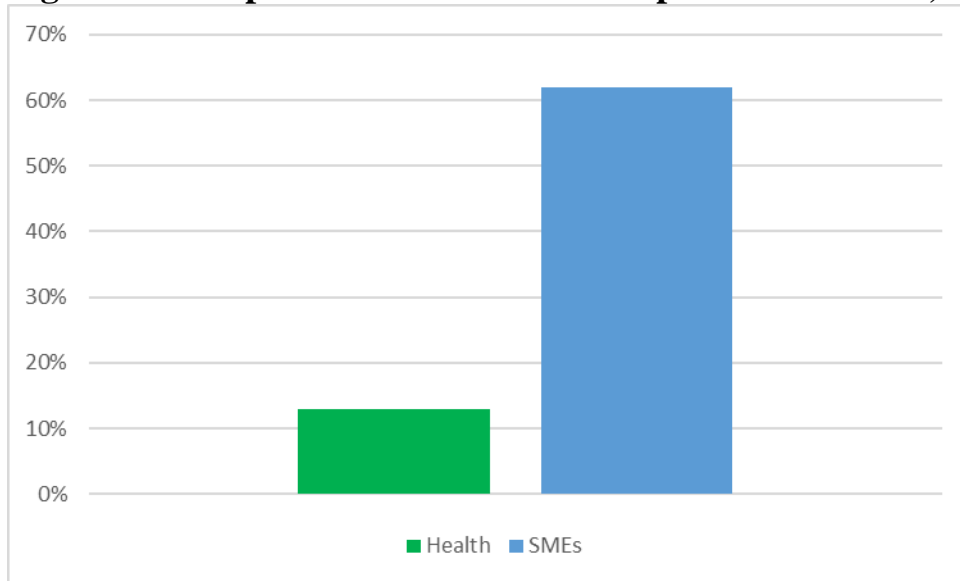


Source: Consortium elaboration, only financial targets of non-paper indicators are considered

The figure above presents the financial targets for health-related indicators (CV1-2-3-4-5-60), SME related (CV20-21) and the ESF+ specific indicator (CV30) that includes all actions to fight the pandemic under the ESF. The data is updated to include the target for 2022. Most of the interventions aim at supporting SMEs directed impacted by extended closures, providing them with liquidity and facilitating access to credit. In fact, Members States sought to reduce the impact of the pandemic on the private sector from the beginning of the crisis, before the COVID-specific measures were formally monitored. This included shifting resources towards more flexible support for SMEs, such as for working capital and business development.³¹ The COVID-19 indicator targets related to SMEs show that, at EU level, EUR 12.2 billion were committed to support working capital for SMEs (either grants or loans). Moreover, member states collectively identified around 980,000 enterprises to receive such support. Apart from the health and private sectors, a major component of COVID responses was support for people: member states retained social services and combatted unemployment through the ESF. OPs dedicated more than EUR 8 billion to all COVID related ESF measures. The amounts of all these measures are likely to be higher as OPs may rely on their own COVID indicators that cannot be captured at the EU level.

³¹ Data are taken from the Coronavirus Dashboard: <https://cohesiondata.ec.europa.eu/stories/s/CORONAVIRUS-DASHBOARD-COHESION-POLICY-RESPONSE/4e2z-pw8r/>.

Figure 2.9 Implementation of COVID-specific indicators, 2020



Source: Consortium elaboration from Cohesion data.

Health-related indicators: C1-5 / SMEs-related indicators: C20-21

The 2020 implementation reports present a first assessment of the targets and physical performance of COVID-19 specific indicators.³² Figure 2.12 presents implementation in 2020 of ERDF COVID indicators covering health and SME support. This includes only the implementation of financial support, more details on the implementation of other indicators are presented in the annex. At the end of 2020, about 13% of planned health related spending was confirmed as spent by all member states. Other health specific indicators show a higher rate of implementation. Around 27% of planned PPE were delivered and more than 2,000 ventilators were made available (54% implementation). In 2020, around 572,000 enterprises were involved in support schemes, as captured by the ERDF COVID-19 specific indicators, almost 90% of the target for that year.

COVID-specific indicators present only a partial view of the measures approved by member states in the framework of packages CRII/CRII+ and data on their implementation is still limited. Nonetheless, it is evident that member states have redistributed a large amount of resources from long-term objectives to more short-term aims to mitigate the pandemic crisis.

³² COM(2021) 797 final - 2021 Summary report of the programme annual implementation reports covering implementation in 2014-2020.

2.4 Conclusion

Analysis of the implementation status of COVID crisis policy measures endorsed by the European institutions offers key elements for reflection:

- The weight of NRRP allocations and, consequently, their impact on member state economies differs across the EU. Five member states - Bulgaria, Croatia, Italy, Greece, and Romania - will receive an NRRP allocation of more than 10% of their GDP. Italy, Greece and Romania are very exposed to possible delays in procedural and financial implementation, having requested both grants and loans.
- One year after the RRF instrument was launched, only five member states have reported meeting milestones and targets, thus receiving the first payments. Among member states seeking both loans and grants, Greece and Italy have received their first payments in 2022, while Romania still needs to proceed with the request.
- Overall, member states have prioritised investments and reforms with primary objectives in two major policy areas: the green and digital transitions. The green transition is the most supported area in all member states, accounting for no less than 30% in all the plans. Digital transformation is the second most supported policy area in the vast majority of NRRPs. All but two plans allocate less than 10% to ‘social and territorial cohesion’ as a primary objective of investments, although the share is much higher (30% on average) if investments' secondary objectives are included. NRRP documents show that these priorities mostly envisage territorial investments, which require a strong involvement of local and regional authorities for their success. Indeed, reforms and investments envisaged by the NRRPs will inevitably affect LRAs. Nonetheless, the involvement of LRAs in the preparation, implementation, monitoring and evaluation of NRRPs is not uniform among member states. Document analysis and direct input from LRAs indicate that their involvement in the consultation process has generally been low. It was seen as more of a ‘ticking box’ exercise, rather than a consultation and preparatory framework to develop investments and reforms. Few plans define the role of LRAs in implementation well, while their role in M&E is generally not explained at all. This issue is confirmed by LRA representatives who consulted their members to assess the perceived level of involvement in the design and implementation of NRRPs.

The scenario raises even more concerns in countries for which the RRF allocation is bigger, such as Italy and Greece

- The amount and content of investments in NRRPs largely coincide with Cohesion Policy strategic objectives, so this could displace ESI Funds. There will be an additional burden on LRAs as they lack a formal role in the governance of NRRPs, unlike Cohesion Policy interventions. Moreover, increasing funding without additional support for LRAs could lower financial absorption or lead to ‘LRA disempowerment’. These potential effects raise even more concern in member states which heavily rely on the RRF, but which lack a clear governance structure for implementation and the LRA role is not well defined.
- Measures approved under CRII/CRII+ redistribute resources from long-term objectives, such as fighting climate change, to more short-term aims linked to the pandemic. This redistribution, coupled with possible displacement of resources due to the RRF, could negatively impact the efficacy and relevance of Cohesion Policy, as well as objectives for the 2021-2027 programming period.

3 Case studies on impacts and policy responses

Deepening the understanding of impacts and policy responses at local and regional level, included analysing nine regions and cities. This was a follow-up to the previous study (Böhme et al 2021) which analysed the same nine cities and regions. In that study, the focus of analysis was wider, also considering social and environmental impacts.

3.1 Synthesis of case study findings

The case studies help to identify persistent economic impacts of COVID-19 and potential changes in the structure of the economy. In addition, the case studies look at the (planned) implementation of NRRPs in these regions. The different thematic scope means one-to-one replication or reidentification of those impacts and developments is outside of the bounds of this assignment.

3.1.1 Adjustments in the regional economies

Since the previous case studies, significant events (primarily the war in Ukraine) have occurred. The resulting social and economic turbulence has affected regions and cities across the EU-27 and, in some cases, reinforced trends and impacts tied to COVID-19. As such, these findings have to be interpreted with care.

Economic impacts of COVID-19 identified in the previous case studies have persisted across the analysed regions and cities. However, there were no definite signs of structural shifts or adjustments in those regions and cities as a response to the latest impacts.

A primary economic impact was reduced retail and gastronomical consumer expenditure due to COVID-19 restrictions. While this has normalised across the EU-27, closely associated tourism has not yet recovered. In the case studies, several regions (e.g. the Azores in Portugal, Andalusia in Spain and Prague in Czechia) are strongly reliant on tourism for employment and income. Despite seeing strong recoveries, particularly in 2021, the number of tourists remains significantly lower than pre-COVID-19. Regions have begun efforts to reduce their reliance on tourism with strategic new developments. In Andalusia, a new industrial policy is to diversify from agricultural production and tourism, and in the Azores, the Azores Space Strategy, seeks to promote the islands as an aeronautics hub.

Another key development identified in the case studies was supply chain disruptions leading to economic turbulences, particularly in the more globalised regions deeply embedded into manufacturing chains (such as Bavaria in Germany or Vorarlberg in Austria). These impacts seem to have persisted due to the war in Ukraine, with supply chain disruptions continuing to affect the Bavarian economy. There are similar impacts in Vorarlberg. Both regions intend to promote innovation to improve regional resilience. Tied to global supply chain disruptions are inflationary pressures. These were highlighted in East-Flanders (Belgium), where there is also strong wage pressure. In Belgium, incomes are indexed twice a year to the inflation rate, which ensures adequate cost of living adjustments for employed people, but this also increases employment costs.

Unemployment persists as a pronounced impact of COVID-19 in the regions and cities. While unemployment appears to have decreased since 2020 across all the case study regions due to the stabilisation measures, some unemployment persists among especially more disadvantaged groups (Gothenburg in Sweden). This mirrors findings of the previous analyses.

3.1.2 Implementation of the NRRPs

The case studies also investigated LRA involvement in the design and implementation of NRRPs. There was generally minor involvement of the LRAs, with the exception of more independent cities or regions such as Bavaria (Germany) or Andalusia (Spain).

Most LRAs were informed along with other stakeholders, giving them a possibility to comment on a first draft of the document (e.g., Bratislava in Slovakia, Paris in France, East-Flanders in Belgium). This approach does not reflect the need for transparent communication channels expressed in the previous study. However, there are exceptions such as in Andalusia where the NRRP is co-governed with the Autonomous Regions.

The NRRPs address significant needs of most of the case study regions (in particular Azores Bavaria and Andalusia) even if some regions looked for more dedicated support (Vorarlberg). Some regions or cities with particular situations such as the Azores, tend to benefit more from dedicated measures in the NRRP. The needs of Prague were not met by the Czech NRRP as their requests for funding to develop tourism were rejected.

Some needs expressed in the previous study could be covered by the NRRP such as digitalisation in the Bratislava region. However, measures to compensate structural difficulties in the health care sector were not included in the NRRP. The Azores had already anticipated the help of the RRF and is now implementing the

measures planned last year (digitalisation of the health sector and education for example). For Paris, none of the needs identified in the previous study (such as more resilient housing, security of food provision, etc.) are directly tackled by the NRRP in and around Paris.

The case studies also show that LRAs with more independence such as Bavaria, tend to have a stronger role in implementation of NRRP funded projects. The region of Bratislava is also expected to take part in the implementation of some measures. Otherwise, the projects are more national and managed by the state or national agencies (e.g., in Paris). However, a more devolved system does not necessarily coincide with a stronger role in NRRP planning and implementation, as Vorarlberg illustrates.

3.2 Bavaria, Germany

The federal state of Bavaria had a population of approximately 13.2 million at the end of 2021. It is one of the wealthiest federal states with a GDP per capita of around EUR 46,500 in 2020, above the German average of EUR 40,100. The annual average unemployment rate between March 2021 and February 2022 was 3.3%. Bavaria had the lowest unemployment rate of all German federal states with an average of 3.5% in 2021, far below the national average (5.7%).

Bavaria is an important location for manufacturing and is particularly exposed to fluctuations in global demand for industrial goods. Bavaria is also a major domestic tourism destination which is expected to increase. In 2020, the primary sector contributed to less than 1% of regional value added. The manufacturing sector remains important, contributing 31%. The most important sector is services, providing 48% of value added from private services and 19% from public services³³.

By 2021 Bavaria's GDP per capita was at approximately its pre-COVID-19 levels of EUR 48,000, having recovered in terms of productivity levels. The unemployment rate, while the lowest among the German federal states, remains above 2019 levels. Tourism as an important economic sector has also not recovered, with overnight stays some 60% of pre-COVID-19 levels.

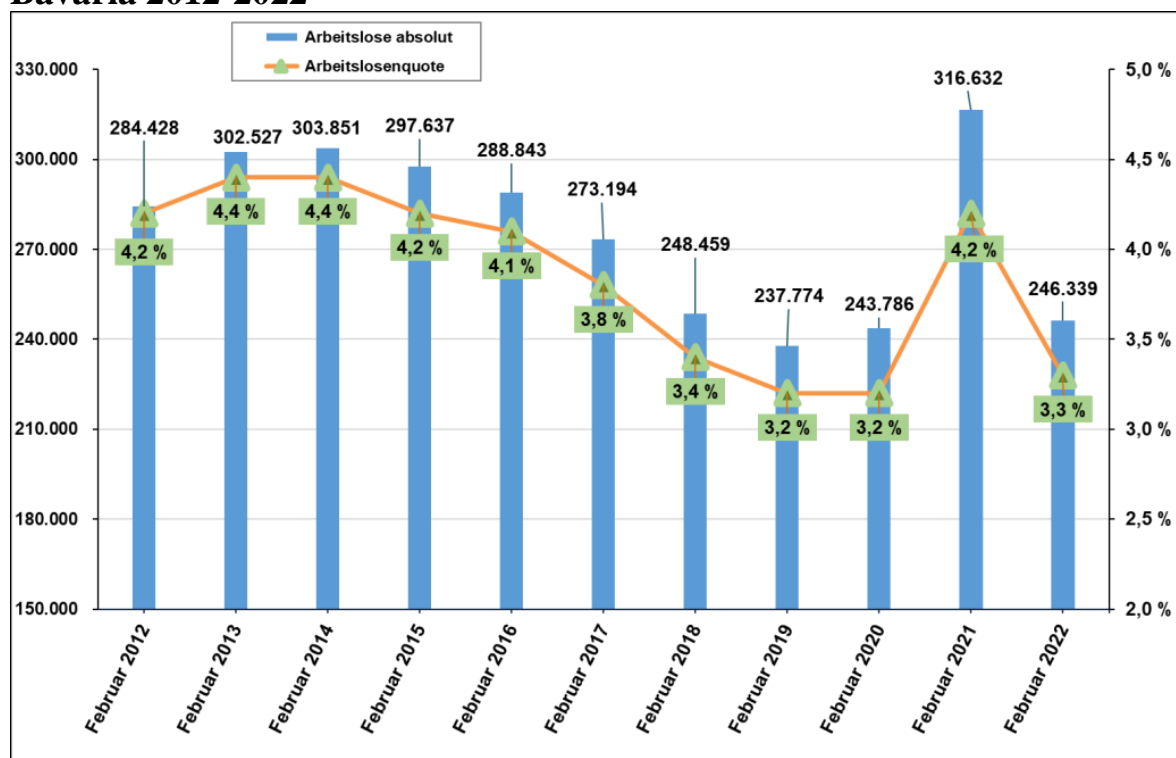
³³ https://www.statistik.bayern.de/statistik/gesamtrechnungen/vgr/index.html#link_1

3.2.1 Adjustments in the regional economy

At the end of 2021 the Bavarian economy had not yet overcome the economic downturn caused by the pandemic. In 2021, more and more sectors were affected by supply bottlenecks. As a result, transport costs and purchasing prices rose significantly. Supply-chain vulnerability was also highlighted in the previous study (Böhme et al 2021) and remains a significant issue. The other identified economic impact, the standstill of export-oriented manufacturing, was alleviated with exports recovering relatively quickly, as per the interviewed representative. However, due to internationalisation, the sector remains at risk due to global supply chain issues.

The severe fourth COVID-19 wave in autumn 2021 was another factor of uncertainty, causing economic output to stagnate at the end of the year. GDP grew by 2.8% in 2021 compared to 2020. In the fourth quarter of 2021, Germany's economic output was still 1.5% below the pre-crisis level in 2019. The new Omicron variant in spring 2022 and the War in Ukraine led to low quarterly growth rates of 0.2% compared to the fourth quarter of 2021 (Destatis, 2022). In addition, supply and material bottlenecks will continue. The Bavarian Industry Association expects the gross domestic product in Bavaria to increase by 3.4% in 2022. The reduction in unemployment will continue and the pre-crisis level may be reached again in spring 2022.

Figure 3.1 Number of unemployed persons and unemployment rates in Bavaria 2012-2022



Source: Bayerisches Staatsministerium für Familie, Arbeit und Soziales, 2022

The unemployment rate, which is traditionally very low in Bavaria, rose from 2.8% in 2019 to 3.6% in 2020 as a result of the pandemic. The predecessor study (Böhme et al 2021) identified sharp increases in the unemployment rate. The labour market has recovered well from the COVID-19 crisis. More than 80% of the pandemic increase in unemployment has been reduced. By February 2022, unemployment in Bavaria fell to 3.3%.

Bavaria had the most short-time workers in German federal states in 2020. Manufacturing, commerce and hospitality (hotels and restaurants) had the highest use of short-time work in Bavaria. The economic recovery in 2021 was strongly supported by a continued broad use of short-time work. This stabilised the labour market and secured jobs, especially in sectors that were still affected by the COVID-19 crisis.

As a result of the pandemic and restrictions in the hotel and accommodation sector, tourism in Bavaria declined sharply after eight years of growth. In 2020, around 60 million overnight stays (- 40.6%) were recorded by almost 20 million overnight guests. The number of tourist arrivals fell by 50% compared to 2019. The number of visitors from abroad fell particularly sharply with over 71% fewer guests from abroad than in 2019. The share of international overnight stays was only 11.8% in 2020, compared to 21% in 2019. This is in line with findings of the previous study (Böhme et al 2021) which identified hospitality as a vulnerable sector in Bavaria. However, now there seems to be a trend of increasing numbers of international tourists, with tourists from the Switzerland and the USA being the most frequent extra-EU-27 visitors (Statistik Bayern 2022 & der Spiegel 2022). The interview also underlined that these sectors have not yet recovered, with turnover substantially below 2019 levels.

The interview also highlights the war in Ukraine and inflows of refugees as factors affecting the Bavarian economy and the labour market. Due to the war, rising energy costs and economic sanctions, the expected further economic recovery will be noticeably dampened. Overall, due to its globalised nature, the German economy is highly vulnerable to the price shocks introduced by increasing costs of raw materials and reliance on imported natural gas (DIW 2022a). Further, lockdowns in China in the beginning of 2022 disrupted supply chains and led to significant production delays (DIW 2022b). As such, the economic outlook for Germany, including the Bavarian economy, is largely negative.

According to the interviewed representative, the COVID-19 crisis has not led to significant structural changes in the economy. However, in the long-term, there may be positive effects due to digitalisation triggered by the pandemic. In addition, companies and politicians are working to strengthen the resilience of the Bavarian economy to withstand future crises.

According to the interview, the COVID-19 crisis and the effects of the war in Ukraine have clearly shown the importance of reducing dependencies and increasing economic resilience. Bavaria accelerated and expanded its technology and innovation support during the pandemic. The goal is to increase added value by making better use of digitalisation and increasing resource efficiency. As a region highly embedded into global supply chains, improving resource efficiency can increase regional resilience in light of disruptions. As part of the ‘High-Tech Agenda (plus)’ for Bavaria, investments are being made to expand the bioeconomy, infection research and in digitalisation for small and medium-sized enterprises in Bavaria.

3.2.2 Implementation of the NRRP in the region

According to the interview, the federal states were important actors and multipliers in preparing Germany’s NRRP. They were involved within the scope of their responsibilities. The Federal Government is in charge of planning, developing and implementing Germany’s NRRP.

Since the end of 2020, the federal states have been informed several times about the current status of the NRRP. They also had the opportunity to submit comments, which were incorporated into the final version of the NRRP. Bavaria submitted its comments in April 2021.

A considerable number of the measures in the plan benefit the federal states and municipalities directly or indirectly. For projects where responsibility lies within the competences of the federal states, the ministries coordinate closely in project development and implementation. As such, the specific regional structure is adequately taken into account.

In its coordinating function, the federal government ensures a structured channel of communication between the federal ministries and the federal states. The coordination unit, in consultation with federal ministries, conducts regular coordination meetings to implement and further coordinate the NRRP. The federal states are closely involved at an early stage in reporting on the progress of implementation. The federal states and the municipalities are also involved in implementing parts of the NRRP. Where they are directly affected, they are also involved in designing the measure. The NRRP emphasises that transparent integration of federal state expertise in sectoral policies is important for implementation of the measures.

3.3 Gothenburg, Sweden

Gothenburg had a population of 587,549 at the end of 2021. 28.3% of the inhabitants of Gothenburg were not born in Sweden, 11.6% were foreign citizens and 38.1% had a foreign background. These shares are (slightly) higher than in the country as a whole. Gothenburg's population has an average age of 39.2 years, while Sweden's is 41.6 years (Statistics Sweden 2022e).

The GDP per capita in Västra Götaland county, where Gothenburg is located, was SEK 495,000 (EUR 48,000) in 2019 and SEK 476,000 (EUR 46,000) in 2020 (Statistics Sweden 2022c). The disposable net income per capita in Gothenburg decreased from SEK 235,000 (EUR 23,000) in 2019 to 229,000 SEK (EUR 22,000) in 2020 (Statistics Sweden 2021). In the last three years, the average contractual working hours per week increased from 37.0 in 2019 to 37.2 in 2020 and 38.4 in 2021 (Statistics Sweden 2022a & 2022f).

3.3.1 Adjustments in the regional economy

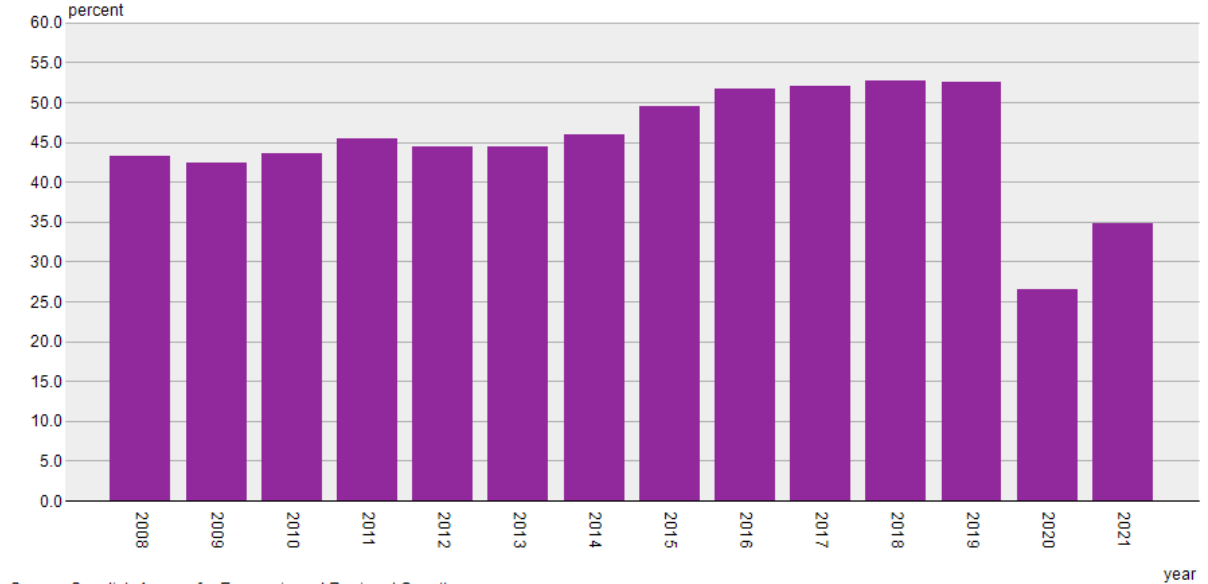
The previous case study identified increased unemployment since March 2020. By May 2021, the unemployment rate in Gothenburg was at 7.3% rising across all age groups by approximately 30%. At the same time, the unemployment rate rose by 21% across Sweden (Böhme et al. 2021, 73). In 2021, employment in Gothenburg still had not reached pre-crisis levels. By 31. December 2021, 302 per thousand inhabitants were employed (Statistics Sweden 2022b), while in 2020, 303.9 and in 2019, 310.6 per thousand inhabitants were employed. It must be noted, that since 1 January 2021, the labour force survey is carried out in accordance with the new EU framework regulation. This results in a time series break between 2020 and 2021 (Statistics Sweden 2022g).

Due to Sweden's focus on recommendations as opposed to restrictions, Gothenburg applied a different approach to containment measures than other EU-27 regions. The government focused on providing recommendations combined with light restrictions instead of mandatory strict restrictions (e.g., social distancing, work place closures). Remote work and remote teaching were only recommended by the central government. The interviewee for the previous case study highlighted improved digitalisation in public administration. Digital solutions found during the pandemic are expected to be used more after the pandemic (Böhme et al. 2021, 74).

The figure shows the effects of the pandemic on occupancy rates in the region of Greater Gothenburg. Due to travel restrictions in 2020, the occupancy rate was about half the pre-crisis level. The occupancy of hotel beds in Gothenburg in 2019 was 52.6%, which fell due to travel restrictions in 2020 to 26.6% and rose to

34.8% in 2021, but didn't reach the pre-crisis level (Statistics Sweden 2021 & 2022 and Statistics Sweden 2022d).

Figure 3.2 Occupancy rates in Greater Gothenburg (beds in hotels, holiday villages and hostels) (Statistics Sweden 2022d)



The regional representative interview partner also associates unemployment as the main socio-economic impact of COVID-19. This especially concerns young and foreign-born people. One of the main crisis management strategies and also one of the main socio-economic impacts of the pandemic was distance learning. This is now seen as an advantage in the event of future similar shocks and will remain as an option for regular adult education. During the pandemic, there was a decline in the service and tourism sector, however E-trade and digital services expanded. According to the interview, it is too early to draw any firm conclusions but the service and tourism sector is recovering and at the same time e-trade and digital services will probably keep a large part of their market shares.

Already in the previous case study, the interviewee stated that unemployment rose especially among young and foreign-born people. It is still unclear, whether this is a long- or a short-term impact. The interviewee also addressed these topics in the previous case study (Böhme et al. 2021, 73).

3.3.2 Implementation of the NRRP in the region

The NRRP includes EUR 3.3 billion in grants. The key measures are:

- Securing Sweden’s green transition (44.4% of allocations): emission reduction, decarbonisation of transport and industry, biodiversity protection and green transportation.

- Supporting Sweden’s digital transition: digital connectivity, public administration and skills
- Reinforcing Sweden’s economic and social resilience: demographic challenge, boosting employment, digital security, research and higher education, social and health care, housing (EU 2021).

In the NRRP, Gothenburg appears twice, in the construction of rental housing and student dormitories. The highest support for municipalities close to the Gothenburg region is SEK 5,800 (EUR 560) per square meter for the construction of rental housing (Finansdepartementet 2021, 135).

The stakeholders included in the consultation process are not further defined in the NRRP. The government can decide whether proposals will be included (Finansdepartementet 2021, 148). The NRRP is in the final implementation phase. So far, no NRRP projects in the region were found. According to the regional representative, the city of Gothenburg did not directly participate in the design of the NRRP. No further details about the consultation process or NRRP implementation in Gothenburg could be found.

3.4 Bratislava, Slovakia

Bratislava is the capital of Slovakia. Located in the southwest of Slovakia, the city is situated at the foot of the Little Carpathians, occupying both banks of the river Danube. The city borders two sovereign states, Austria and Hungary, so it is very important for cross-border links (Bratislava Tourist Board 2018, 1).

More than a decade ago, the Vienna-Bratislava Metropolitan Area was set up and consists of three Austrian states (Vienna, Lower Austria and Burgenland) and two Slovak regions (Bratislava and Trnava) (Brzica 2009, 1).

According to the Statistical Office of the Slovak republic (ŠÚ SR), Bratislava has a population of about 441,000 inhabitants (ŠÚ SR 2021e)³⁴, a density of about 1,200 inhabitants per km² (ŠÚ SR 2021b)³⁵.

The hours worked per employee decreased from 144.6 in 2019 to 140.8 in 2020. This could also be an effect of short time working during the first phases of the pandemic (ŠÚ SR 2021a). The unemployment rate increased from 3.1% in 2019 to 4.3% in 2020 and 5.0% in 2021 (Páleník s.a.). In the city of Bratislava, nights spent in tourist accommodation per inhabitant was 6.58 in 2019, it was only 2.09

³⁴ 440,948 inhabitants on 31.12.2020

³⁵ 1,195.06 inhabitants per km² in 2020

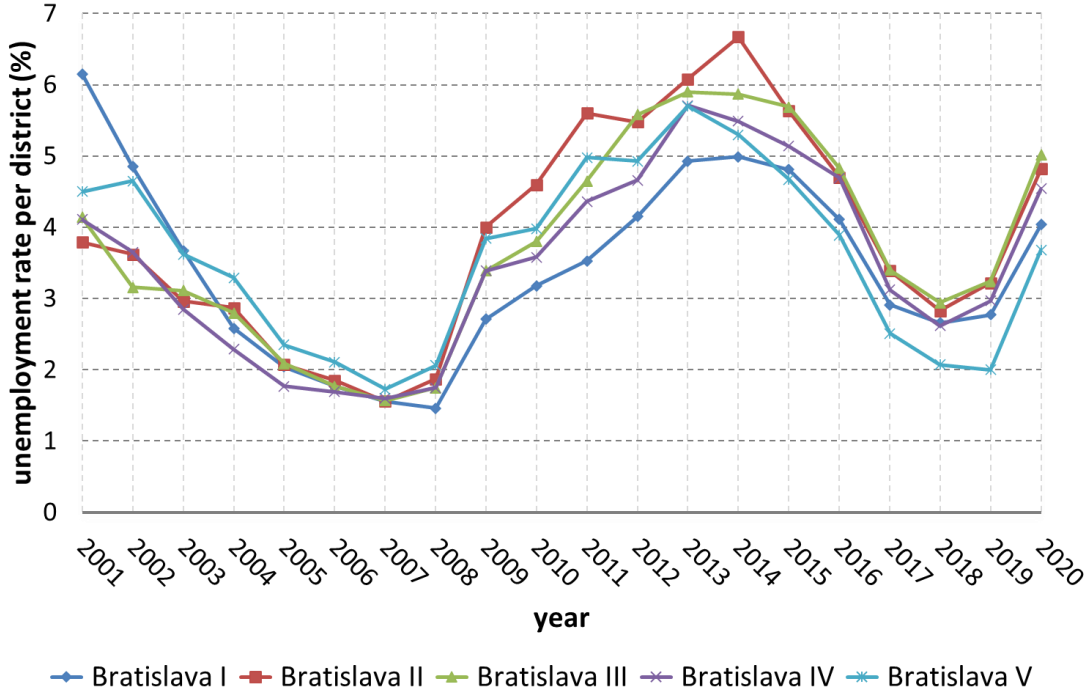
in 2020 (ŠÚ SR 2021c). According to the interviewees in the previous case study, the lockdown between December 2020 and May 2021 affected many businesses, especially tourism, culture and gastronomy as well as transport and other services as they had to be closed (Böhme et al. 2021, 75-76).

3.4.1 Adjustments in the regional economy

In 2020, the Slovak economy declined by 5.2%. The pandemic caused the fastest short-term increase in unemployment since 2009. Due to measures like short-time working, sickness benefits and pandemic sick pay, the labour market was more resilient and unemployment increased less compared to the global financial crisis (EK & SK s.a., 3). The unemployment rate in Bratislava region and surroundings rose from 3.1% in 2019, to 4.3% in 2020 and 5.0% in 2021, see Figure 3.3 In 2019, the unemployment rate was the lowest since the financial crisis (Páleník s.a.).

Figure 3.3 shows unemployment from 2001 to 2020 in the five districts of the city of Bratislava. In 2018 (Bratislava II – V) and in 2019 (Bratislava I), employment recovered since the financial crisis. The unemployment rate increased by about 2% from 2019 to 2020 in all five districts of Bratislava (ŠÚ SR 2021d). The trend of increasing unemployment continues.

Figure 3.3 Unemployment rate from 2001 to 2020 in the districts of the city of Bratislava

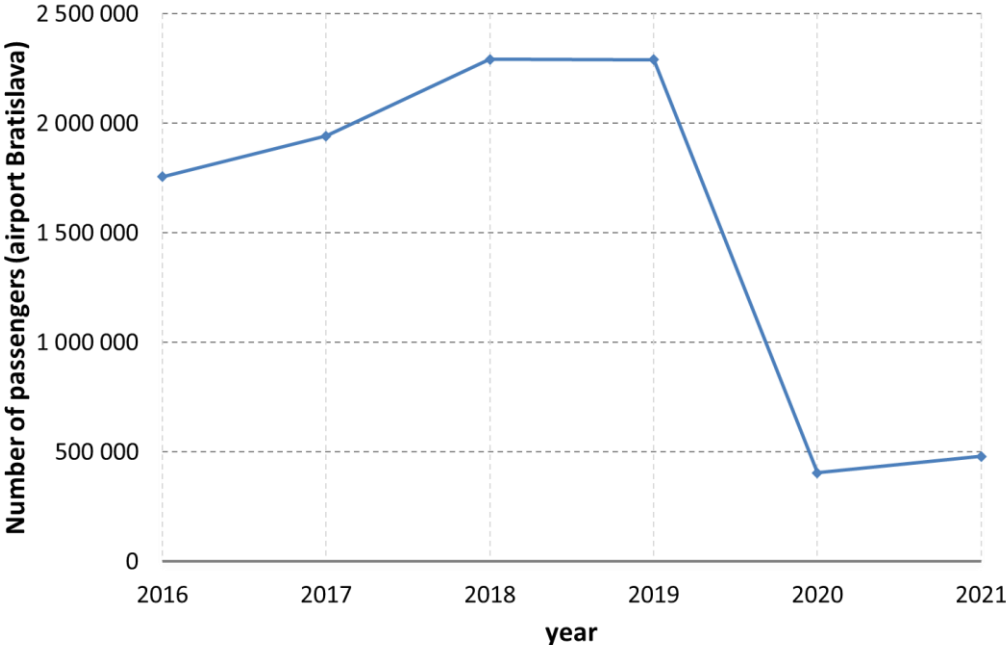


Source: Case study authors, based on ŠÚ SR (2021d)

The number of passengers at Bratislava airport decreased from 2,290,242 in 2019 to 405,097 in 2020. Compared to 2020, there were almost 75,000 passengers more in 2021 (480,152), but the number of passengers has still not reached the pre-crisis level, see Figure 3.4 (Airport Bratislava 2022). Tourism inflows, another key impact identified in the previous case studies, could not reach pre-crisis levels until May 2022, but is increasing slightly since the drop in 2020.

Another sector identified in the previous study as heavily impacted by the pandemic was public transport. At the time of the study there were several rationalisation measures including less administrative staff and fewer operators) (Böhme et al, 2021). Recent operating data testify to these changes. Particularly striking is the reduction in investments by over 80% since 2020 (from EUR 9.1 million in 2020 to EUR 1.5 million in 2021)³⁶. Even though total revenue dropped in 2020 (- 30% compared to 2019), the economic result was better than the previous year (- EUR 55,000 in 2020 compared to - EUR 646,000 in 2019 or even - EUR 2.076 million in 2018)³⁷. Any reduction of technical and commercial employees between 2019 and 2020, was less than 20%. Furthermore, the total number of employees increased between 2019 and 2020.³⁸

Figure 3.4 Number of passengers of the airport Bratislava



Source: Case study authors, based on Airport Bratislava (2022)

³⁶ See: <https://imhd.sk/ba/doc/sk/10201/PrevadzkoVe-udaje-MHD-v-Bratislave.html#pr9> (last retrieved 18 May 2022)
³⁷ Ibid.
³⁸ Ibid.

3.4.2 Implementation of the NRRP in the region

With 196 qualitative milestones and quantitative targets, the NRRP will support Slovakia to become more sustainable, resilient and prepared for challenges and opportunities with the upcoming digital and green transitions. The NRRP foresees 43% of support for climate objectives and 21% for the digital transition (EC 2021b) of the total EUR 6.6 billion allocation (EC 2021a, 2).

The NRRP foresees investments in school infrastructure in the Bratislava region of about EUR 237,000 (EK & SK s.a., 297). At least two innovation centres should be established, primarily in Bratislava and Košice (EK & SK s.a., 335). Innovation and digital vouchers to stimulate innovation and digitalisation also will be given to companies in the Bratislava region. Thematic calls will be launched to support the decarbonisation of industry, including in the region of Bratislava. Two new and modern justice courts will be built in Bratislava and Košice.

The Ministry of Finance invited regional and local public authorities, social partner organisations, sectoral organisations, national chambers of commerce and business associations and bodies representing civil society for consultation. Geographical and thematic coverage, management skills, expertise and innovative approaches were taken into account (ÚV SR 2021). Roundtable discussions brought together representatives of more than 100 stakeholders, including entrepreneurs, municipalities, NGOs and, social partners as well as national and regional associations. Most of the 2,500 comments received in the consultation process addressed biodiversity, climate change, environmental protection and cycling infrastructure (Lehofer et al. 2022, 25). There is no information about the role of Bratislava in the consultation process.

In Bratislava, NRRP projects are expected to be implemented, but no details could be found (EK & SK s.a.).

3.5 Andalusia, Spain

Andalusia is one of the biggest (87.599 km²) regions and the most populated with 8,472,407 inhabitants in 2020, 18% of Spain's population. The density is 97 inhabitants per km², which is similar to the whole country. 86% of the region's population lives in municipalities with more than 1,000 inhabitants. Rural municipalities occupy 64.7% of the territory and are home to 17.4% of the population (Urban Agenda Platform 2021). The region also has many intermediate cities, from regional centres or metropolitan areas to mid-coastal and inland cities (ibid.).

In the wake of the pandemic, GDP per capita decreased substantially from 19,530 in 2019 to 17,747 in 2020 (Datosmarco 2022). Likewise, the unemployment rate increased up to the third quarter of 2020 (23.8%) before decreasing (19.4% at the beginning 2022)³⁹. Hours worked also decreased between 2019 and 2020 (by 7%) but almost returned to the pre-COVID level in 2021.

3.5.1 Adjustments in the regional economy

The annual GDP of the region was EUR 150 billion in 2020, a drop of over 10% compared to 2019 (Datosmacro 2022). While economic recovery may have started (GDP increased by about 5% in 2021) and should follow similar trends in 2022, economic analysts remain cautious. Indeed, the Omicron variant, paired with the unexpected rise in electricity prices, already hindered the boost to production and commercial activities the region experienced in 2021 (Vida Economica 2022). Moreover, the delayed allocation of Next Generation EU funds to the region has also negatively affected the economic recovery (el Economista 2022 & El Independiente 2021). This delay is reportedly linked to administrative slowness in the Spanish central government (particularly the sectoral commissions that set the implementation timeframe and allocate funds) in delivering funds to the regions. This setback may have prevented tenders and calls for tender, with any subsequent selection of projects.

The signs of recovery are however very encouraging. The number of employees benefitting from the temporary employment regulation programme (ERTE), which mitigates the impact of the pandemic on the labour market, decreased from 102,000 workers in January 2021 to 21,700 by year end (ABC de Sevilla 2022). Even more noticeable is that the region ended 2021 with an unprecedented commercial surplus, which increased by 24.2% (the highest rate ever recorded since 1995). As such, the region is the country's third largest exporter (after Madrid and Cataluña). Chemical products and minerals exports plummeted in 2020, but have regained momentum. The growth of agri-food, a dominant sector in the region, is also very positive. Olive oil, most sold product in Andalusia, registered a record increase of 18% for exports in the first 10 months of 2021 (Junta de Andalucía 17.02.2022).

The important tourism industry is certainly recovering from the impacts of the pandemic (e.g. border closures). The number of tourists in Andalusia increased by 275% in the first quarter of 2022 compared to the same period in 2021 (Instituto de Estadística y Cartografía de Andalucía 2022a). Despite this very positive recovery, the number of tourists visiting Andalusia has not yet reached the pre- COVID figures (33 million in 2019 compared to 20 million in 2021).

³⁹ <https://www.ine.es/jaxiT3/Datos.htm?t=4247>

Tourist expenditure in the region also increased by almost 12.3% between Q1 2021 and Q2 2022 (Instituto de Estadística y Cartografía de Andalucía 2022b).

From a short-term perspective, it seems that the Andalusian economy is recovering from the pandemic, although several factors may have slowed the pace of recovery. Getting back to a pre- COVID situation is however not part of the region's plans. Breaking from a dependency on tourism and agriculture is difficult given the need to transform the region's entire productive system. Such a shift has been undertaken through a new industrial policy which is anchored in an action plan for 2021-2022. The plan explicitly addresses actions which can be immediately implemented. These can focus on the region's existing resources and on strengthening current and future industrial value chains in Andalusia, as well as their circularity potential, opportunities for digitisation and integration in global chains, as well as on the greatest impact for social cohesion Junta de (Andalucía 2021). This plan is in line with the Spanish NRRP.

3.5.2 Implementation of the NRRP in the region

In Spain, the NRRP is co-governed with the Autonomous Regions. As such, a sectorial conference has been set up to bring together regional and national actors and establish cooperation and coordination, leading to implementation of the plan. Civil society actors (social agents and business representatives) are also involved via various mechanisms, e.g. dialogue tables, forums, etc. (Agencia Estatal Boletín Oficial del Estado 2022). In Andalusia, after a few months of implementation, a conference was organised from 15-16 February 2022, to assess the role and involvement of sub-national administrations as well as the strengths and weaknesses of the implementation model to identify room for improvement. Such conferences are designed to exchange technical and constructive practices, opinions and approaches.

In line with the NRRP, Andalusia will receive EUR 150 million to decarbonise and digitalise urban mobility. The support will complement national as well as regional initiatives related to the creation or operation of low emission zones in city areas, the digital and sustainable transformation of public transport (road or rail, goods and passenger transport) as well as the digitalisation of public services (La Moncloa 25.02.2022).

Moreover, EUR 51 million will support the digitalisation and transformation of the public justice service, making it more accessible and efficient with greater cohesion and sustainability of the system. The budget enables structural reforms following a co-governance approach between the National Ministry of Justice and the Andalusian Ministry of Tourism, Regeneration, Justice and Local Administration (Junta de Andalucía 05.04.2022).

In line with the modernisation of the region's public administration, social services will also receive almost EUR 62 million to improve management. The funding will be allocated by the Social Services and Dependency Agency of Andalusia which is attached to the region's Ministry of Equality, Social Policies and Conciliation. The support will fund technologically-advanced equipment (e.g. for the Andalusian Teleassistance Service), studies on old-age dependency to provide a basis for a regional strategy addressing this and a predictive model of care, as well as the modernisation of social services with technological transformation, innovation, training and reinforcement of child care (Junta de Andalucía 08.03.2022).

In addition to these focus areas, several other sectors will also benefit from support under the NRRP. For example, the development of Connected Industry 4.0 will offer vocational integration for people with intellectual disabilities, to stimulate entrepreneurship, support marine science, etc.

Funding within the framework of the NRRP and focus areas are aligned with and embedded in regional schemes and strategies, as well as national ones with shared competencies and governance. Examples include the Justice Plan 2030, Metropolitan Transport Plans and the Tourism Sector Modernisation and Competitiveness Plan.

3.6 East Flanders, Belgium

East-Flanders is a province of Flanders, in the North-West of Belgium. It borders the Netherlands and covers approximately 3,000 km². Around 1.5 million people live there, making it a very densely populated region with more than 500 inhabitants per km². The region contains one major urban centre, the capital Ghent, and is close to Antwerp and Brussels. The province hosts Ghent University and the Port of Ghent which links the city to the North Sea. The more-developed region of East Flanders was strongly impacted by COVID-19, with hospitalisations peaking at 700 in late March 2020 and 900 in early November 2020. Particularly strongly affected was Ghent, as it hosts industries most impacted by the pandemic, such as tourism.

Across Flanders, the COVID-19 pandemic is associated with the largest recession since 2004 with an 11.1% drop in GDP in 2020. In April 2021, the Flemish Institute of Statistics expected growth of 8.6% in 2021, if no new major containment measures were taken. In the end GDP grew by 5.8% in 2021. This confirmed the strong link between labour productivity and economic growth in the Flemish region. In 2019, the Flemish GDP per capita was EUR 37,478 which dropped to EUR 35,511 in 2020 but rose to EUR 38,182 in 2021. The 2021 GDP

per capita of East-Flanders was not available for this study, however, as 2019 and 2020 figures were similar to the Flemish ones (2019: EUR 37,880; 2020: EUR 35,872), there should be a similar development for East-Flanders in 2021.

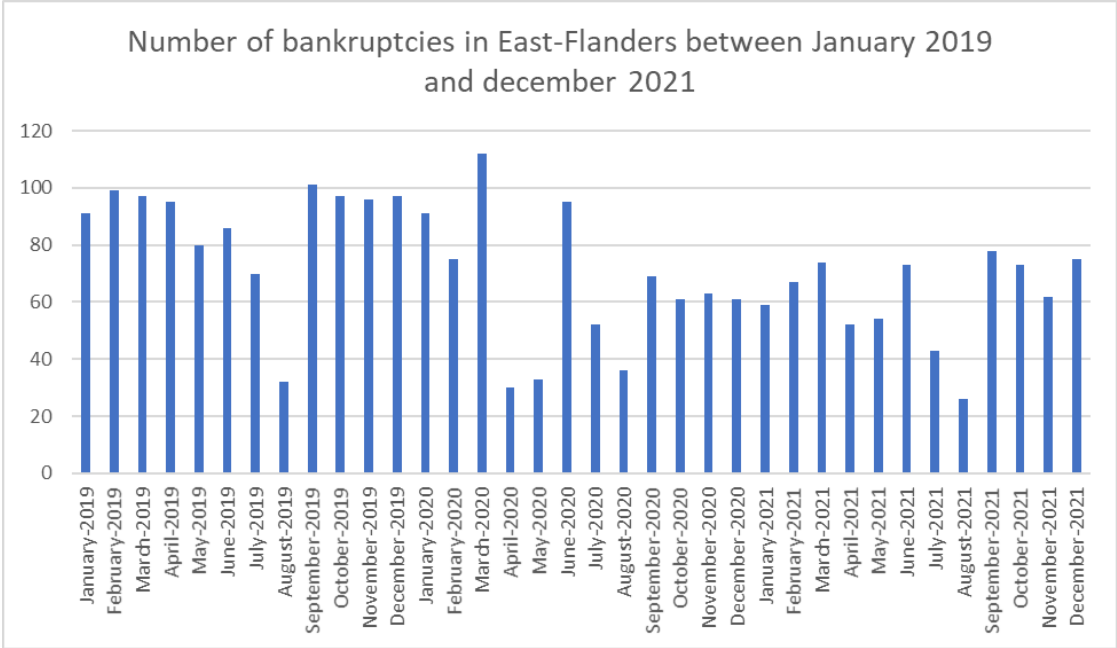
3.6.1 Adjustments in the regional economy

The East-Flanders economy was supported by strong subsidies and other government measures during the lockdowns. This support led to fewer bankruptcies in East Flanders during this period (see figure below). The recovery in Flanders and East-Flanders is going well with labour productivity in 2021 exceeding 2019 levels (Flanders: EUR 86,069 in 2019, EUR 81,843 in 2020 and EUR 87,518 in 2021).

No major structural changes are visible for the moment. Though the hotels and restaurants sector is recovering slowly it benefits from subsidies. The trade sector also has difficulties competing with e-commerce which boomed during the pandemic. As in other regions, the COVID-19 crisis accelerated an on-going trend, altering consumer habits.

However, consumers are more aware of the environment. This increased awareness issues can also be seen in business with big players such as Arcelor Mittal investing significant amounts in emission reduction and recycling.

Figure 3.5 Bankruptcies in East-Flanders



Source: Provincies in cijfers

According to the interviewee, the Belgian labour market is facing great difficulties in hiring adequate, well-trained people. Unlike former expectations, the pandemic did not lead to a more dynamic labour market. Several social protection measures as well as the way of calculating wages when changing jobs, impedes changes to careers and employers. This is a Belgian problem, though East-Flanders is more affected as it traditionally has a higher employment rate, with a lower inactive population to draw from.

Another observation following the pandemic is the normalisation of using the triple helix approach. Cooperation between stakeholders has improved and including governing institutions, the knowledge sector and enterprises is now mainstream. This is especially true for the North Sea Port where the interviewee stated that cooperation has improved since the pandemic.

3.6.2 Implementation of the NRRPs in the region

The Belgian NRRP is built around six axes:

- Climate, sustainability, and innovation
- Digital transformation
- Mobility
- Social structure and community living
- Future of economy and productivity
- Public finances

For each axis, each Belgian Region (Wallonia, Flanders, and Brussels-Capital) proposed investments and/or reforms under the NRRP. Totalling EUR 5,924 million, 49.6% of the NRRP will be allocated to the green transition and 26.6% to the digitalisation transition.

There was no direct mention of East-Flanders in the Belgian NRRP, which only distinguishes between Flanders, Wallonia and Brussels-Capital. NRRP investments in the Flemish Region will however directly concern East-Flanders.

The federal structure of Belgium means that the NRRP budget is divided between the three regions and shared between regional ministries in a bargaining process.

The consultation process described in the NRRP mentions neither the Flemish region nor East-Flanders. A webinar presenting the foreseen implementation of the NRRP investment plan on 11 December 2020 allowed pre-submitted questions.

At this stage, two major projects will be financed by the Belgian NRRP in East-Flanders. The educational sector will receive EUR 22 million for research

facilities and a further EUR 9 million for a University of Ghent project. Most of the topics in the table above are regional competencies, meaning the province of East-Flanders is not directly involved in planning or implementation.

Table 3.1 NRRP priorities in Flanders

Priorities	EUR million
Axis 1 Climate, sustainability and innovation	
Renovation of social housing	35
Renovation of public housing	20
Industrial value chain for hydrogen transition	125
Renewable heat networks	44
Ecological defragmentation	25
Blue deal	291
Improved subsidy scheme in building and energy politic (reform)	243
Axis 2 Digital transformation	
Digitalisation of the Flemish government	121
Axis 3 Mobility	
Cycling infrastructure	345
Greening the bus fleet (De Lijn)	93
Recharging infrastructure	29
Axe 4 Social and community-living	
Digisprong	318
Higher Education Advancement Fund	54
Digibanks	50
Axis 5 Economy of the future and productivity	
Learning and career offensive	75
Digital skills	43
Strengthening R&D	280
Recycling hub	30
Circular economy in the building and manufacturing industries	25
Axis 6 Public finances	
Spending reviews (Reform)	8

3.7 Prague, Czechia

Prague is the capital city of the Czech Republic and the national centre for politics, international relations, education, culture and the economy. The 496 km² large city is on the river Vltava and has about 1.3 million inhabitants and a population density of about 2,700 inhabitants per km² (ČSÚ 2022b).

The unemployment rate, although low, almost doubled from 1.3 in 2019 to 2.3 in 2020 (ČSÚ 2022c). A total of 3,597 people died in Prague due to COVID-19 until late June 2022 (Ministerstvo Zdravotnictví 2022). Prague has, accordingly, also seen increasing mortality rates between 2019 and 2021, with a rate of 11.4 per 1,000 in 2021, up from 9.3 in 2019.

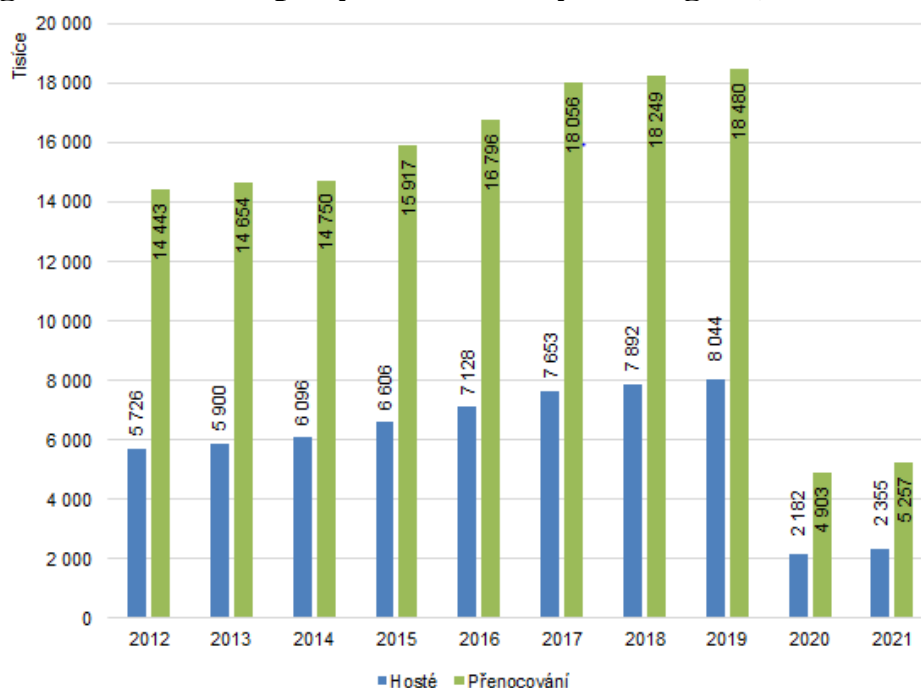
3.7.1 Adjustments in the regional economy

Tourism is a major source of income for Prague (MHMP 2021), though the city has been facing negative consequences of tourism, especially with a strong

concentration of tourists in a relatively small area of the historical centre. This negatively affected the functioning of the city and the quality of life for the local population including increasing prices for services, goods and real estate in the historical centre, congestion in public spaces including pedestrian routes and tourist vehicles, growing litter and noise pollution, and increased nightlife in residential areas (PCT 2020, 20-21). The city has suffered from overtourism. To spread encourage visitors to areas outside the historic centre and the main tourism season, the city continues to make efforts to motivate tourists to stay longer or visit the city more often (Tourism Unit s.a.). Furthermore, the concepts of slow tourism and sustainable tourism are being supported. This includes motivating tourism entrepreneurs to be environmentally friendly and cooperation with neighbouring regions (PCT 2020, 25). In the previous case study, the interviewees also highlighted a long-term need for cooperation with neighbouring regions (Böhme et al. 2021, 84).

Due to the pandemic and travel restrictions, the number of tourists in the city of Prague declined by almost 75% from more than 8 million in 2019 to about 2.2 million in 2020. This rose slightly to almost 2.4 million guests in 2021 but was still far from the pre-crisis level (ČSÚ 2022a). Figure 3.6 shows the evolution of tourists in Prague between 2012 and 2021. Both 2020 and 2021 saw significantly lower incoming tourist and overnights than the pre-COVID-19 years. While more than 18 million overnight stays were recorded in 2019, there were only 4.9 million in 2020 and almost 5.3 million in 2021. As such, the number of overnight stays has not yet returned to pre-crisis levels (ČSÚ 2022a).

Figure 3.6 Guests per year in the city of Prague (2012-2021)



Source: ČSÚ (2022d), [in thousands; hosté v mil. = guests, přenocování = overnight stays]

As Prague relies on the tertiary sector (tourism, hospitality, cultural events, etc.), that decrease had a major impact on the economy, which was also highlighted by the interviewees in the previous case study (Böhme et al. 2021, 84).

Figure 3.7 shows rising rents between 2014 and 2019, with the largest increase occurring between 2016 and 2017 (12.1%). During the pandemic, however, prices fell significantly (-5.6% in 2020 and -4.3% in 2021). This may ease pressure on residents.

Figure 3.7 Rental prices in Prague (2010-2021)



Source: Toplak (s.a.)

According to the interviewees in the previous case study, the city of Prague developed open data platforms and digital participation tools (Böhme et al. 2021, 85). A conference on the digitisation of Prague will be held in Prague on 15 June 2022 so the topic is still relevant (Wagner 2022).

3.7.2 Implementation of the NRRP in the region

There is no dedicated support for spa, tourism or restaurants within the NRRP for Prague (MPO 2021b, 115). The pillar for increasing the resilience of healthcare services foresees a new Czech Oncology Institute in Prague to offer cancer prevention, diagnosis and all treatments in one point-of-care (EC s.a.).

Preparation of the NRRP involved representatives of Parliament, local government, economic and social partners and non-profit organisations. Due to the pandemic, participation was mostly in the form of video conferences or written comments (MPO 2021b, 115). In April 2021, the NRRP was subject to a formal consultation, where stakeholders comment and make suggestions. The comments mostly addressed digitalisation, support for the cultural sector, climate protection measures, cycling infrastructure and revitalising brownfields. Public debates were

also organised. As a result of the consultation process, allocations for digital transformation measures were increased. (Lehofer et al. 2022, 13). In a radio interview in early March 2021, the Prague Councillor for Culture and Tourism explained, that the Prague Council Commission for Tourism had sent comments to the NRRP on behalf of the city but had not received a response on funds that should go to tourism and to the capital city (MHMP 2021). As already mentioned above, support for spa, tourism or restaurants within the NRRP was rejected (MPO 2021b, 115).

The following calls already support Prague within the NRRP:

- Call no. 12/2021 of the National Environment Programme: energy savings in public buildings
- Call no 10/2021 of the National Environment Programme: Water management in municipalities

The following calls are to be announced also supporting Prague:

- Call of the National Environment Programme - Support for the purchase of vehicles (BEV, H2) and non-public charging infrastructure in the public sector
- Call for applications from the Ministry of Education for funding under the National Recovery Plan, Component 3.2 Adaptation of the capacity and focus of school programmes - 3.2.4 Investment in the development of selected key academic departments.
- Mapping and development of regional strategies for the cultural and creative sectors
- Development of regional cultural and creative centres (MPO s.a.)

No detailed information about the role of the city in the NRRP consultation process was found.

3.8 Vorarlberg, Austria

Vorarlberg is the most western state of Austria, bordering Germany to the north, Liechtenstein to the west and Switzerland to the west and south. The state covers around 2,600 km², making it the second smallest Austrian federal state after Vienna (Statistik Austria 2022). At the end of 2021 Vorarlberg had 402,303 inhabitants (Vorarlberg State Office for Statistics, 2022, 23), resulting in a population density of 154.6 people per square kilometre. Most of the population is concentrated alongside the flat Rhine-Valley in the west of Vorarlberg. The

biggest cities of Dornbirn (50,403), Feldkirch (35,134), the state-capital Bregenz (29,376) and Lustenau (23,604) (Vorarlberg State Office for Statistics, 2022, 32-33) are all in the Rhine-Valley close to each other. The rest of Vorarlberg is mountainous and sparsely populated.

The rural economy focuses on mountain related tourism (especially skiing in the winter months) while the Rhine-Valley produces, for Austrian standards, an unusually high proportion of GDP through industry. Most of the highly-specialised and technologically advanced industry-products are exported (Austrian Business Agency 2021).

Unemployment rates were stable before the pandemic, ranging between 5.0% and 5.5%, or some 9,000 to 10,000 people. In February 2021 there was a spike, with 8.5% or 15,150 people without work. One year later, in February 2022 the numbers are back down at 5.0% (Vorarlberg.at, 2022A).

An important indicator for Vorarlberg's economy is overnight stays during the winter season, from November until April. During the 2018/19 season 5,031,200 overnight stays were recorded. The 2019/20 season only saw small decreases in numbers, with the first travel and commerce restrictions coming into effect in mid-March. The 2020/21 season however, was catastrophic, with only 50,856 arrivals and 151,833 overnight stays, a 96.3% decrease compared to the 2019/2020 winter season (Vorarlberg.at, 2022B). By winter season 2021/2022 this had recovered moderately: Vorarlberg saw 963,428 arrivals and 4,071,052 overnight stays between November 2021 and April 2022 (Vorarlberg.at, 2022C).

Export volume per capita, similar to overnight stays, saw a collapse from EUR 27,400 in 2019 to EUR 15,249 during the 2021 half-year mark (Vorarlberg.at, 2021A).

3.8.1 Adjustments in the regional economy

In 2020 businesses in Vorarlberg saw disruptions to their supply chains and lower sales. A steep increase in unemployment and short-work schemes was also visible. A positive development during the pandemic was the reduction of surface sealing (from 2.7 km² in 2019 to 0.6 km² in 2020) Vorarlberg only has a marginally lower artificial surface coverage than the urbanised state of Vienna: 41% of all surfaces are covered in Vorarlberg compared to 44% in Vienna (Umweltbundesamt, 2021). Next to residential areas, transport infrastructure was an important driver of land consumption (ibid.). However, the analysis of the predecessor study identified all of these trends to be short-term and the numbers would return more or less to pre-pandemic levels. A trend discussed last year that was expected to prevail long-term was the heightened awareness of regionality. This includes private

consumers as well as businesses, tending to prefer regional procurement (Böhme et al. 2021, 86-87).

As seen above, unemployment has already returned to pre-pandemic levels. The same is true for overnight stays and export volume. As expected, the steep declines turned out to be short-term. In some cases, the most recent numbers even exceed pre-pandemic levels.

In line with the statistics, 56% of companies in Vorarlberg feel they have already recovered to pre-crisis levels or will do so within the next three months. In contrast only 5% believe they will never fully recover or recovery will take more than three years (39% say recovery will likely take three months to three years) (Chamber of Commerce - Vorarlberg 2021, 8).

In general, small- and medium-sized companies in Vorarlberg are more likely to feel longer lasting impacts of COVID-19 than larger ones, because SMEs (small and medium-sized enterprises) have lower resilience during supply chain disruptions (WISTO 2021, 47).

Vorarlberg generates not only an above-average portion of its GDP through exports, but is also more dependent on imports than other Austrian federal states. The pandemic is just the latest in a series of events that exposed the vulnerability of global value chains (McKinsey Global Institute 2020). This vulnerability is relevant in Vorarlberg, too, leading to considerations of more regional supply chains. However, strong participation in global trade is important to Vorarlberg's economic success. Furthermore, stronger regional production does not always guarantee better protection from crisis: A global economic network can often absorb shocks better than a more sealed off economy (WISTO 2021, 22). Some advantages of regional value chains mentioned by employers in Vorarlberg include better communication, more flexibility and a closer partnership between regional stakeholders (ibid, 54).

The internal perception of Vorarlberg's administration is that the local economy has been comparatively resilient during the pandemic. Together with the belief that neither a strongly globalised nor strongly regional economy is clearly superior, no far-reaching structural changes are deemed necessary. Rather Vorarlberg plans to continue its strategy of a diversified economy with highly specialised production as well as tourism. Vorarlberg also aims to protect and strengthen its current mix of regional and global supply and value chains (Vorarlberg.at 2021B).

There is a desire from local stakeholders to relocate branches back to Vorarlberg, to be less affected by global supply chain crises. However, this may only be

manageable in a broader European effort. A concrete demand is to include local companies in Important Projects of Common European Interest initiatives (WISTO 2021, 83).

Vorarlberg plans investments in innovation and digitalisation to remain as a competitive business location (Vorarlberg.at 2021B). However, the strategy of preservation and soft changes is threatened by the lack of skilled people and suitable areas for new industrial zones. Therefore, changes will mostly be in those areas including investments in higher education or a stricter and more sustainable land-policy (WISTO 2021, 81).

3.8.2 Implementation of the NRRP in the region

The Austrian Recovery and Resilience Plan contains four main objectives:

1. Sustainable Recovery
2. Digital recovery
3. Knowledge-based recovery
4. Fair recovery (Austrian Ministry for Finance, 2021, 5)

The Austrian NRRP of around EUR 4.5 billion will advance digitalisation and combat climate change as well as boost the national economy to pre-pandemic levels (ibid. 7).

The plan was developed under the leadership of the Austrian Ministry of Finance but employer and employee interest groups, NGOs as well as state and local government bodies could submit suggestions via e-mail (ibid. 67).

Vorarlberg was not directly involved in developing the Austrian RRP nor were any of its representatives invited to any meetings. The only communication was through e-mail. The nine federal states sent some of their overlapping ideas together, with the hope of the federal government recognising more of their demands. Even though the interviewee claims the consultation-process was a facade they also said some of their suggestions were implemented.

Nine projects were submitted from Vorarlberg totalling EUR 226 million. Two projects target energy efficiency in housing. Four aim to reduce carbon emissions in transport by offering alternative individual-motorised-traffic or by electrifying public and goods transport. The final three investments are concerned with digitalisation in youth and adult education programmes.

The Austrian RRP largely overlaps with Vorarlberg's development-goals. Many of the projects were planned beforehand, but rather than state-programmes it is

hoped they are now financed through the Austrian RRP. However, the interviewee criticises that certain goals only target federal institutions, even if they are also relevant for Vorarlberg's development.

3.9 Paris, France

Paris is the largest city in France (2.175.601 inhabitants in 2018) with over 20,640 inhabitants per km²⁴⁰. The city of Paris is the richest NUTS 3 region of France, accounting for 10% of French GDP in 2018. As the capital of France, the city has specialised in services and knowledge-intensive sectors. It also benefits from good national and international transport connections (a hub for motorways, two international airports, direct trains to Brussels, London and other major national cities and river transport via the Seine). Productivity and growth in Paris is traditionally driven by tourism and trade. However, youth unemployment is higher than the French average.

Particularly relying on civil and business tourism, culture, gastronomy and small retail businesses, the local economy was severely hit by the COVID-19 crisis. Activity fell by 10% in Q4 2020 against an average drop of 8% for all France. During the pandemic, around 15,200 establishments closed temporarily, including 25% of Parisian bars, restaurants and cafes. The occupation rate in Parisian hotels also dropped to 8% in November 2020 (compared to 83% in 2019). In addition, 38,600 jobs were lost between January and September 2020 resulting in 15.7% unemployment in Paris⁴¹. GDP per capita dropped between 2019 and 2020 going from EUR 116,235 to EUR 109,033 per capita⁴². Government measures allowing broad use of short-work schemes helped maintain jobs during the crisis (see Figure 3.9).

3.9.1 Adjustments in the regional economy

Many Parisians lost their jobs, as shown in Figure 3.8. Having steadily decreased through the last half of 2019, registrations in Parisian employment agencies (pôle emploi) rose quickly in March 2020 to reach a peak in November 2020. The pre-crisis level was however already reached one year later and seems to be stable (see Figure 3.8).

The re-opening of the French economy since 19 May 2021 did not benefit Paris as much as the rest of France. Indeed, the lack of international and business

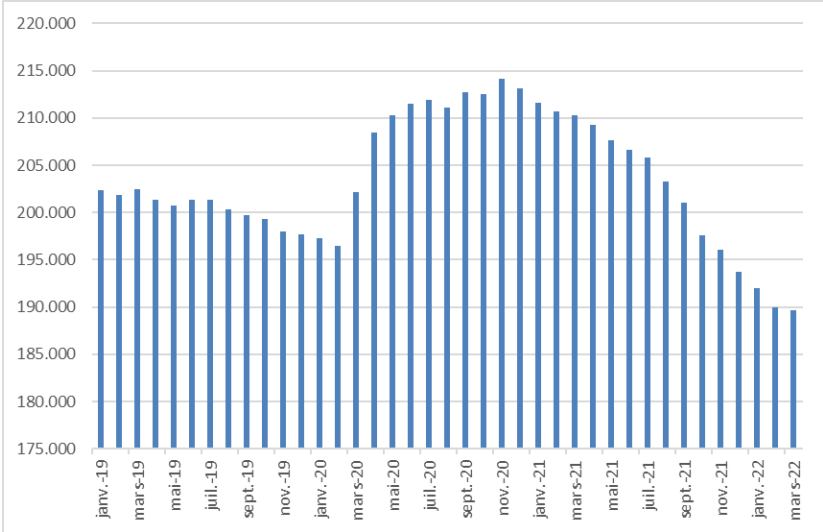
⁴⁰ <https://www.insee.fr/fr/statistiques/1405599?geo=DEP-75>

⁴¹ Committee of Regions, 2021, 88-92.

⁴² Eurostat, NAMA_10R_3GDP and DEMO_R_PJANGRP3

tourism cannot be compensated by national consumption and is still constraining the hotels and restaurant sector.

Figure 3.8 Registered job-seekers in Paris January 2019 to March 2022

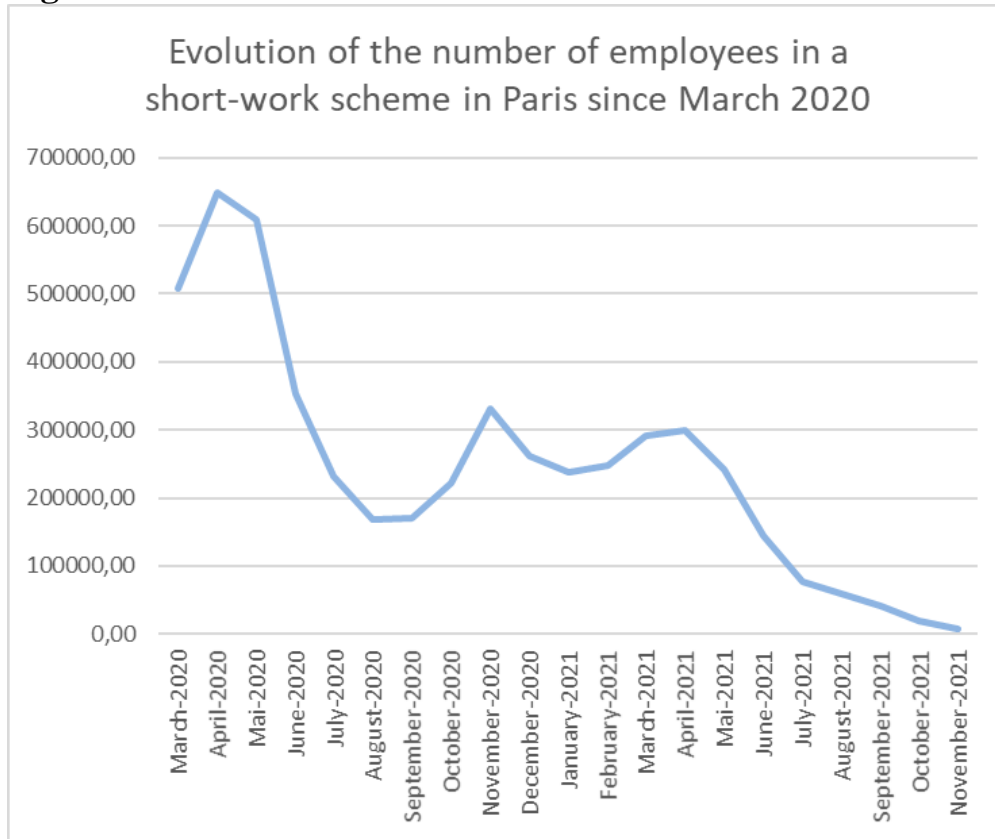


Source: Ministère du Travaile 2022

The Parisian economy has been recovering since the beginning of the pandemic. Employment found its pre-crisis level again in all sectors, unemployment continues to decrease, as well as participation in short-time work schemes. However, tourism, trade and transport are still impacted (APUR 2022). The Observatory of the Parisian Economy steered by the APUR (Atelier parisien d'urbanisme) expects Parisian activity to exceed its pre-crisis rate by 3.1% in spring 2022. Pre-crisis levels are however not expected for all sectors as the accommodation, catering and transport services have not yet recovered.

Short-work schemes were implemented during the crisis and are now stopping (see figure below) as employment is recovering. Indeed, employment increased faster in Paris than at regional or national level during the last trimester of 2021: by 1.2% (above the increases in the Ile-de-France region of 0.7% and the national level of 0.4%). This applies also to categories especially affected by the crisis, such as people under 25. After an important increase during the second quarter of 2021 (+10,990 compared to Q1 2020), the level of long-term unemployment among young people under 25 decreased to pre-crisis levels (Q4 2021: 8,310; Q4 2019: 8,340). This happened quicker in Paris than at regional or national level. To continue to support young people, the city has implemented a one-stop-shop to provide guidance towards employment, training, mental health care, etc. Another group with difficulties to re-enter the labour market post-crisis are people in the second part of their career (over 45 years old) who often need for reorientation. For the first time in 2022, the city is implementing a dedicated career forum (“Paris pour l'emploi des nouveaux défis 2022”) to mitigate this issue by providing career, job mobility, and training advice.

Figure 3.9 Short work scheme in Paris



Source: Case study author based the observatory of the Parisian economy

The city of Paris, the Greater Paris Metropole, Region Ile-de-France and the national government reinforced and improved their cooperation as a consequence of the pandemic. The creation of the Parisian economy observatory is a direct and now permanent consequence of government and economic actors responding to the crisis. Indeed, one goal of this partnership-based observatory is to evaluate the impact of the sanitary and economic crisis linked to the pandemic⁴³. The observatory emerged from the need for a common understanding of the economic context of Paris, which encouraged economic actors to share data⁴⁴. As stated above, the tourism and hotel sectors have not fully recovered yet. Particularly suffering from containment measures from March 2020 to May 2021, the sector began recovering in the last two trimesters of 2021. However, the fifth COVID-wave in January 2022 and new measures limiting events, movement, etc, are expected to have slowed the recovery (APUR). Business tourism is particularly sensitive to these measures and the COVID-waves, recovering particularly slowly. Digital meetings are common, which affects the Parisian economy.

⁴³ Retrieved from: <https://www.apur.org/fr/nos-travaux/observatoire-economie-parisienne#:~:text=Mis%20en%20place%20en%202021,effets%20des%20mesures%20de%20soutien.>

⁴⁴ Committee of Regions, 2021, 88-92.

The trade sector is also restructuring, selling less than before the crisis due to changes in consumer habits. Important structural changes are also expected in the nighttime economy (bars, clubs) and restaurants however, this is not yet clear.

Contrary to expectations and as of today, the Parisian market for office real estate has not weakened with the pandemic and the increase in home working.

3.9.2 Implementation of the NRRP in the region

As a consequence of the pandemic, France developed ‘France Relance’ (France recovery plan) investing EUR 100 billion in greening the economy, production competitiveness, social and territorial cohesion and upskilling. The European RRF grants will contribute to financing this plan with EUR 39.4 billion. The NRRP encompasses investments and reforms of EUR 100 billion.

The French NRRP does not contain regional funds or objectives directly tailored to Parisian needs, however Paris is named in some example projects. These projects are mostly national such as:

- Work on the canals and lock stations of the Seine, upstream and downstream of Paris;
- Paris-Airport customs vehicles will be changed for electric ones (ongoing);
- Electrical terminals for cruise-ships to be installed in Parisian ports;
- Notre-Dame Cathedral to benefit from ‘Plan Cathédrales’ (EUR 80 million)
- The repair of a building for tertiary education (Bâtiments des Muriers ENSA Paris-Malaquai) is also planned;
- EUR 3.5 million are also targeted for the Parisian Prefecture video protection plan, in mind of the rugby world cup in 2023 and the Olympics in 2024.

According to the NRRP, LRAs have been consulted through the various State-Region Interfund Committees, involving ministries and regional authorities. These committees were mostly dedicated to improving the articulation of European funds, especially the upcoming RRF and Cohesion Funds. The French delegation of the European Committee of the Regions was also consulted during elaboration of the NRRP, however the city of Paris itself was not directly involved in these discussions. The interview confirmed this lack of involvement.

3.10 Azores, Portugal

The Azores are an archipelago of nine islands some 1,500 km off the coast of Portugal. The Azores is an autonomous region of Portugal, with its own regional government. The islands are relatively sparsely populated with 242,796 inhabitants in 2020 and a density of about 105 people per km² in 2019 (Eurostat, 2022)⁴⁵. The most populated island is Sao Miguel.

The Azores economy is reliant on tourism. Due to travel restrictions in 2020, the islands experienced significant economic turmoil. Stabilisation measures, tying economic support for companies with maintaining employment reduced regional unemployment in 2020, compared to the mainland. By the beginning of 2021, unemployment had stabilised at pre-pandemic levels, at 6.8% compared to 8.5% in 2019 (INE 2022). However, tourism inflows remain significantly below pre-pandemic levels, with 1.88 million overnight stays in 2021 compared to 3.01 million in 2019 (SREA 2022).

3.10.1 Adjustments in the regional economy

As identified in the previous case study, the Azores implemented economic support tied to job maintenance in response to the economic shocks of the pandemic. This may have stabilised unemployment in 2020, pushing the unemployment rate below the national average. However, by end of 2021 as tourism remains below pre-crisis levels, unemployment was increasing again, surpassing the national rate (see Figure 3.11).

In general, economic activity has rebounded since 2020, with signs of recovery starting in May 2021 (see Figure 3.12). By the end of 2021, economic activity was picking up rapidly. Economic impacts were highest in the transport and tourism sectors, with moderate impacts in agriculture and fisheries, and the least affected being construction (Ecorys 2021). Based on data by SREA⁴⁶, cement sales have increased by 20% over the last 12 months since March 2022, signalling robust growth in the construction sector. Conversely, fishing catches are also up by 68% over the last 12 months⁴⁷, and tourism inflows have started to recover (see Figure 3.3).

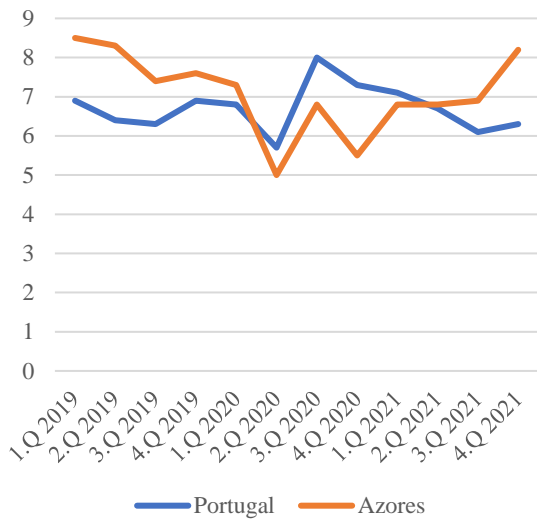
The previous study (Böhme et al 2021) identified economic impacts primarily tied to the downturn in tourism in the Azores. The tourism sector had developed at a rapid pace, rising from 900,000 overnight stays in 2015 to three million in 2019. By 2020, overnight stays declined drastically, dropping to 866,000. Tourism has recovered somewhat, with overnight stays increasing to 1.88 million in 2021.

⁴⁵ DEMO_R_PJANGROUP and DEMO_R_D3DENS

⁴⁶ Retrieved via: <https://srea.azores.gov.pt/Conteudos/Media/file.aspx?ida=809>

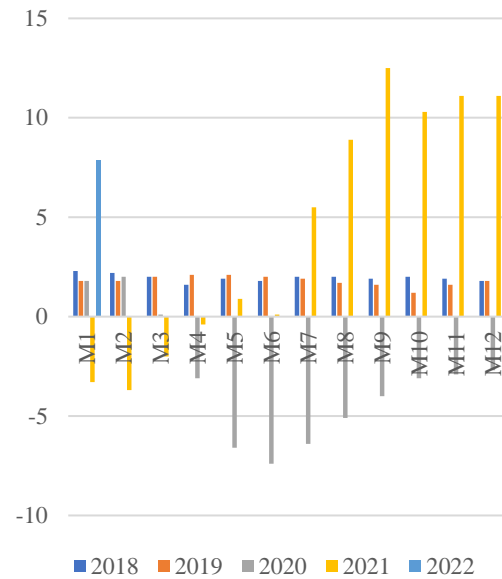
⁴⁷ Retrieved via: <https://srea.azores.gov.pt/Conteudos/Media/file.aspx?ida=791>

Figure 3.10 Unemployment rate Portugal and Azores (%)



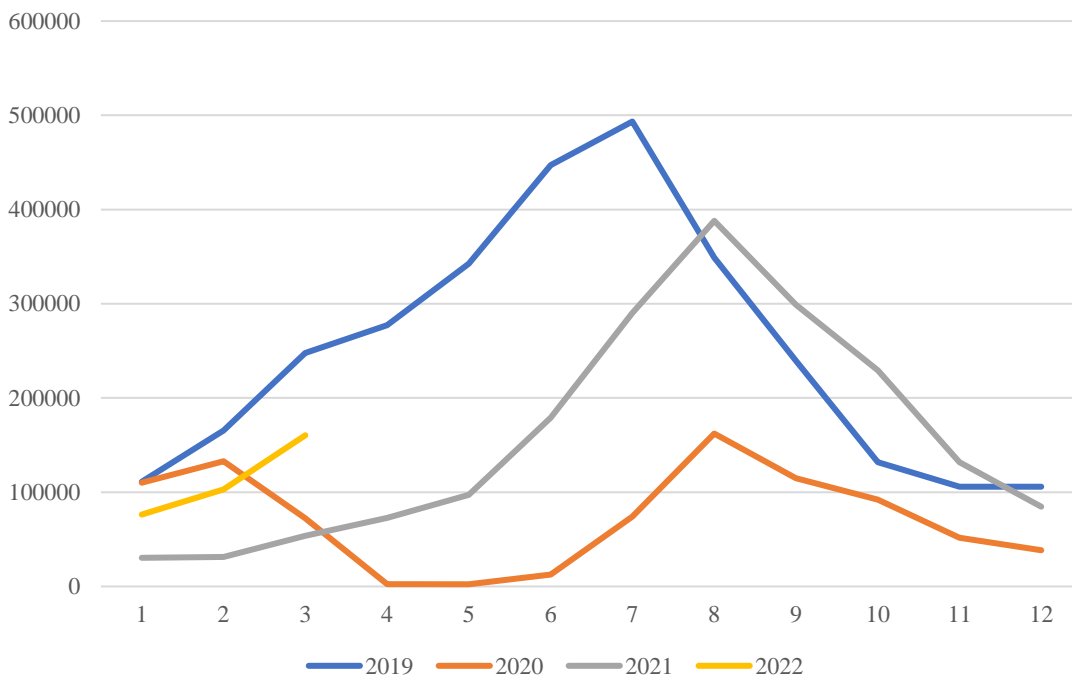
Source: Case study authors, based on INE (2022)

Figure 3.11 Indicator of economic activity



Source: SREA (2022b)

Figure 3.12 Monthly overnight stays



Source: Case study authors, based on SREA

The economic recovery of the Azores coincides with slow return of tourists (see Figure 3.12). By 2021 overnight stays recovered, albeit shifting into late summer. However, overnight stays were well-below pre-crisis levels (1.88 million in 2021 compared to 3.01 million in 2019). Visitors stay for similar lengths of time as pre-COVID-19, approximately three days, as also highlighted in the previous study.

However, the recovery of the tourist sector is unevenly distributed between the nine islands (see Table). The situation normalised more quickly in smaller islands (in particular Flores and Corvo, with overnight stays approaching pre-pandemic levels). Overnight stays on São Miguel were still 42% below 2019 levels at the end of 2021. This spreading of visitors is in line with the Tourism Action Plan 2019-2030, which foresees less seasonality and active redistribution of tourists to smaller islands. The previous study highlighted the use of regional tourism vouchers for Azoreans, which may have contributed to the increasing popularity of smaller islands.

Table 3.2 Overnight stays per island (2019-2021)

Island	2019	2020	2021	Change (2019-2021)
Santa Maria	47,894	20,502	33,224	-31%
São Miguel	2,073,282	533,706	1,210,331	-42%
Terceira	391,980	140,296	261,248	-33%
Graciosa	19,673	8,596	15,091	-23%
São Jorge	58,747	24,224	48,321	-18%
Pico	170,301	57,769	122,430	-28%
Faial	193,250	54,161	142,231	-26%
Flores	51,617	25,101	52,002	1%
Corvo	3,101	1,866	3,014	-3%

Source: Case study authors, based on SREA (2022a)

To improve regional resilience and economic diversification, the Azores is implementing the following strategies and initiatives:

- The Tourism Action Plan 2019-2030 was updated in 2021 to account for the impact of COVID-19 on tourism, one of the main economic activities in the Azores. It foresees a strong emphasis on environmental sustainability and encouraging visitor streams away from Sao Miguel to the smaller islands.
- Allocation of EUR 96 million in EU funding via ReactEU, of which EUR 14 million is for healthcare infrastructure, EUR 32.9 million for business support, EUR 16.3 million in environmental investments, EUR 9.5 million support for public services, EUR 22.6 million for labour market interventions, and EUR 0.5 million to support social inclusion.
- The Azores Space Strategy⁴⁸ (Regional Government of the Azores 2021) looks to transform the Azores into a transatlantic hub for aerospace activities. The island of Santa Maria now hosts the Portuguese Space Agency as part of this strategy.
- The city of Ponta Delgada aims at becoming the European Capital of Culture in 2027, as part of the Ponta Delgada 2030 Cultural Strategy.

⁴⁸ See: <https://spaceazores.pt/>

3.10.2 Implementation of the NRRP in the region

The Portuguese NRRP⁴⁹ includes EUR 13.9 billion in grants and EUR 2.7 billion in loans to support the economic recovery, reforms, enhance capacities, digitalisation and the transition to climate neutrality. EUR 11.125 billion are dedicated to resilience, EUR 3.059 billion to climate transition, and EUR 2.46 billion to digitalisation. According to the stakeholder process outlined in the NRRP, it featured extensive public consultation with LRAs and other stakeholders.

The NRRP features targeted support to the Azores with territorial specificities. In particular, there is support accounts to improve regional energy autonomy and further adult education (the region has relatively fewer adults with tertiary education (Ecorys 2021)). In addition, the support targets issues identified in the previous case study. In particular, this concerns digitalisation of public health, education and public administration. The support intends to address specific issues encountered in the islands, such as health infrastructure, sharing digital patient information and options for virtual consultations with specialists. Furthermore, significant investment targets energy autonomy of the islands.

The following NRRP measures are targeted directly at the Azores:

- Digitalisation of the health sector (EUR 30 million), to support sharing patient information and access to health specialists between the islands
- Affordable housing in the Azores (EUR 60 million)
- Capitalisation of businesses via financial instruments (EUR 125 million)
- Innovation in the agricultural sector (EUR 30 million)
- Lifelong learning and adult requalification (EUR 29 million)
- Improved road accessibility (EUR 60 million)
- Development of an ‘Azores Sea Cluster’ (EUR 32 million) to support research biotechnology
- Energy transition (EUR 116 million) with targeted support for geothermal production, energy storage, and more renewable sources
- Modernise and digitalise Regional Public Administration (EUR 25 million)
- Digitalise education services via equipment, licenses and connectivity tools, adaptation of training plan (EUR 38 million)

⁴⁹ See: <https://recuperarportugal.gov.pt/>

4 Conclusions and policy pointers

This study focuses on the impacts of COVID-19 and the subsequent policy measures. It includes an analysis of how EU emergency, recovery and resilience measures (especially the Recovery and Resilience Facility) affect regions and cities in the EU. The analysis of impacts due to recovery and resilience measures are accompanied by a follow-up of the regional case studies conducted for the summer 2021 study.

In light of the war in Ukraine, the study also offers first reflections on its possible impacts on local and regional development in the EU.

The analysis confirms the key findings of the study on potential impacts from 2021. The pandemic has demonstrated that European regions and cities are interwoven in tight networks of mutual interdependence. What happens in one place affects developments in other places.

4.1 Policy challenges

Both the COVID-19 pandemic and the war in Ukraine affect regions in the EU differently and both risk further increasing regional disparities and challenging cohesion in the EU:

- **The COVID-19 pandemic** shows a rough North-South pattern which increases the disparities left by the 2008 financial crisis. For the economic impact in 2020, Italy, large parts of Spain, many French regions, as well as regions in Greece, Portugal, and Austria faced the highest levels of restrictions and greatest decline in regional GVA.
- **The war in Ukraine** on the other hand shows a rough East-West pattern. From Finland in the North to Greece in the South, almost all regions along the eastern border of the EU and in Czechia show high sensitivity. Only a few metropolitan areas mainly in Germany do, e.g. Berlin, Frankfurt and Munich.

Going beyond these rough geographical patterns, people and households with low income or at risk of poverty are more affected than higher income groups. Furthermore, it also appears that tourism and tourist destinations in particular are also taking a hit.

Both crises highlight the importance of resilience and the capacity to face unexpected shocks. Different territorial capacities to absorb (mitigate), adapt and transform are essential.

While the pandemic has showcased the importance of nuanced territorial policy making, policies underpinning the recovery have largely weakened place-based decision making and involved local and regional players less.

The EU policy responses to the pandemic have been largely welcomed and appreciated for addressing immediate needs during the first phase of the pandemic and the recovery process.

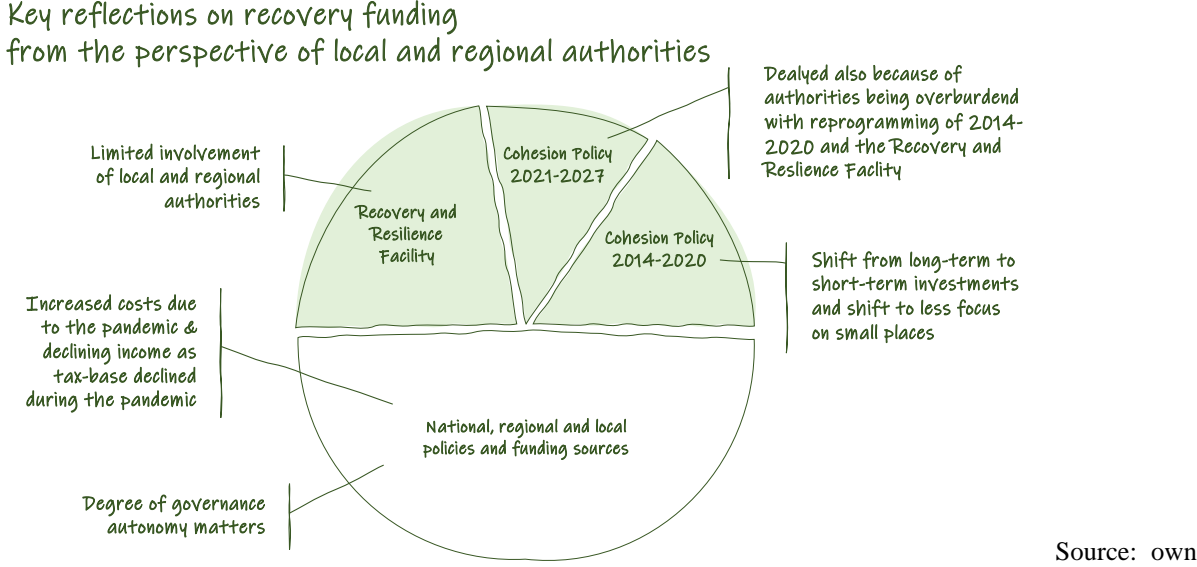
The analysis of policy responses and case studies point, however, to some caveats (see figure):

- **Shift to short-term focus.** Measures approved under CRII/CRII+ have redistributed resources from long-term objectives, such as fighting climate change, to more short-term aims linked to the pandemic. This redistribution, coupled with the possible displacement of resources due to the RRF, could negatively impact the efficacy and relevance of Cohesion Policy, as well as objectives for the 2021-2027 programming period.
- **Lack of local and regional involvement.** The involvement of local and regional authorities in the NRRP consultation processes has generally been low. It was often more a ‘box ticking’ exercise than a consultative and preparatory framework to develop investments and reforms. The role of local and regional authorities in implementing NRRPs is not well defined in all the plans; while their role in monitoring and evaluating NRRPs is generally not envisaged and/or explained at all.
- **NRRP – ESIF competition.** NRRP investments, in terms of financial value and content, that coincide with Cohesion Policy strategic objectives could displace ESI Funds. At the same time, these areas of intervention require the collaboration of local and regional authorities for implementation which has not been sought by most member states. More importantly, member states that heavily rely on the RRF should include local and regional authorities in implementation.

Generally, it seems, the active involvement of local and regional authorities in the design and implementation of EU, including Cohesion Policy is declining. This makes it more difficult to ensure that policies address Europe’s territorial diversity in a meaningful way, make use of place specific potential and address place specific development challenges.

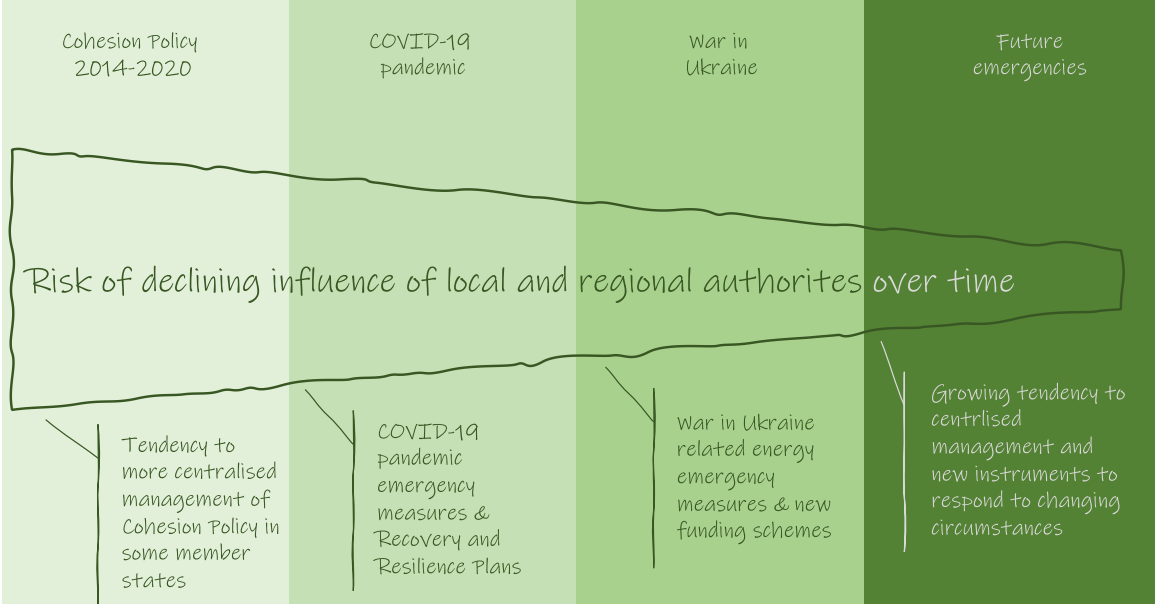
Cohesion Policy is the most important EU policy to support local and regional development, and help local and regional authorities to respond to crises and actively shape recovery processes as well as major transitions.

Figure 4.1 Recovery funding seen from a local and regional perspective



Within Cohesion Policy the role of local and regional authorities in policy design and management is declining (see Figure 4.2). In some countries this started some years ago. The need for swift and speedy reactions during the pandemic has accelerated this process. Current discussions about policy responses to the war in Ukraine and the energy crises point to continued side-lining local and regional authorities to ensure faster decision making.

Figure 4.2 Risk of declining involvement of local and regional authorities



Source: own elaboration

This may reflect on the place-based perspective in the design and management of policy responses. Insights on local and regional diversities, needs, vulnerabilities and potential, as well as capacities to mobilise relevant players risk being sidelined to benefit faster decision making.

4.2 Policy pointers

At a more general level the analysis points at three particular policy needs. Firstly, recovery (and also transition) process and their related policies need to be underpinned by a clear vision to ensure the future orientation even of emergency actions. Secondly, increased resilience of policy making is needed, with an appropriate understanding of resilience and the necessary governance capacities at local and regional level. Thirdly, at large multilevel governance and the involvement of local and regional authorities in policy design and implementation needs to be strengthened. Only then policies can be place-based. Governance capacities and multilevel governances must also comprise the ability to better address regional interdependencies.

4.2.1 Strategic vision

Often the future is perceived as a ‘tempus nullius’, ‘nobody’s time’, resulting in a rather political myopia where short sighted political decisions may jeopardise the future of the next generations. This is especially the case in times of crises and emergency actions.

To ensure that the flexibility and fast responses needed in a time of crises do not lead to random decision making, it needs to be guided by a shared perspective or vision for the future. Good governance and government can react promptly to new situations given a clear vision which is shared by large parts of our society and provides indications on the desired general direction of travel. This concerns Europe overall, but individual cities and regions also need to have visions for their territories and how they see themselves in a wider European context. ESPON (2019) already proposed the development of a European framework of bottom-up visions.

Indeed, to recover from the effects of the pandemic and the war in Ukraine, and to prepare for better resilience, Europe needs a commonly shared vision (cf. ESPON, 2019). This needs to offer a future for all places and people in Europe (Territorial Agenda, 2020) and guide a wide range of policies and investments – following the idea of a ‘mission economy’ (Mazzucato, 2021).

Recovery funding and processes need to be steered by strategic visions of new development models, reflecting Europe's territorial diversity, taking into account local and regional knowledge, while supporting cooperation between players. This also applies to the transition to a just, green and digital society.

However, currently there is no shared vision, and the current crises accelerate societal divides and fragmentations. However, to avoid that the crises hamper needed transitions and drive Europe apart, Europe needs clear strategic orientations and ambitious long-term perspectives, i.e. a shared vision. Policies at all levels from the local to the European should engage with a long-term vision for their area to ensure that emergency, recovery and transition actions are guided by shared ideas about a desired future.

This implies overcoming societal inertia to use a shock as an opportunity for long-term strategic change. As there is no blue print of the future, action needs to balance experimentation and self-organisation with a fullhearted effort to change. In other words it needs to balance diverse semi-independent networks and players to test different ways to the vision (Duit et al., 2010) and a full out 'mission economy' where all efforts are aligned (Mazzucato, 2021). This combination is possible as described by Mazzucato (2021) in her work on the 'moonshot guide to change' drawing lessons from the Apollo programme.

4.2.2 Increased resilience

All policies at all levels need to become more resilient. This requires strengthening short-term emergency instruments, as well as reviewing and overhauling the architecture of EU policy making to strengthen subsidiarity and place-based approaches.

Resilience is often understood as the ability of a system to 'bounce-back' or return to its pre-shock state. For regional development this implies that resilience is determined by the adaptive capacity of an economy, which affects its ability to maintain a long-term growth path. Accordingly, key ingredients in the resilience debate are economic diversity and openness, innovation, social capital, quality of governance and access to funding and resources.

However, the way the pandemic and the war in Ukraine are shaping new realities does not match the idea of bouncing back to a pre-shock state. Indeed, resilience should rather be understood as the ability to reorganise after a shock to the system. Thinking about increasing resilience along those lines leads to completely different conclusions (Böhme, Lüer, et al., 2021; Duit, Galaz, Eckerberg, & Ebbesson, 2010):

- Resilience requires decision-making when costs and benefits can be separated by long time-lags.
- Resilience implies handling complex intertwined social–economic-ecological systems.
- Resilience is about added value which goes beyond the unilateral ‘single-best efforts’ of any player.

Resilience also implies the capacity to react to changes with the flexibility to adapt. This is about the capacity to navigate under uncertainty. For local and regional authorities, this implies that resilience relies heavily on territorial governance capacities. These include knowledge management, self-organisation, the capability to learn and the willingness to adapt. Indeed, ‘navigating under uncertainty’ goes one step further in addressing adaptation capacities which are very important for resilience and transformation. This involves capacities related to knowledge and the willingness to change which includes understanding emerging topics, as well as empirical and tacit knowledge of the local context. Shared knowledge provides common ground for discussions and can assist decision making in times of uncertainty.

4.2.3 Increased governance capacities

Governance capacity needs to be strengthened both for the recovery and to increase resilience in Europe, this involves strengthening multi-level governance in European policy processes.

In many cases vertical coordination – between levels of government – within countries seems to function in accordance with established routines. Still, the RRF shows that in the crisis, the role and influence of local and regional authorities tend to decline. When it comes to the NRRPs, there is room to strengthen multilevel governance in implementation in most countries. Quick and pragmatic decisions have often been centralised with little room for local and regional authorities to contribute to policy development.

There are mixed experiences with horizontal coordination between sectors or between regions and cities within a country. An EU-wide reflection and analysis of lessons learnt on multi-level governance within countries may help experience sharing and mutual learning. This may help to increase resilience.

Governance capacities and multilevel governances must also comprise the ability to better address regional interdependencies.

Regional interdependencies became visible in the territorial spread of the pandemic as well as the impacts of lockdowns and recovery. Furthermore, the

pandemic has also illustrated the mismatch of local, regional and national administrative borders to the functional geographies of people's everyday lives. This could be seen in functional interactions and geographies having more influence than administrative delineations. The mismatch was also evident in the disruptions to integrated labour markets and the provision of services of general interest, especially healthcare. The war in Ukraine has been a reminder of the need to manage regional vulnerabilities to disruptions in global value chains. The pandemic has shown the risks of global (or even intra-EU) value chains, especially those linked to health care equipment and global transport chains to and from China. The war in Ukraine is a reminder that value chains involving trading partners in Ukraine, Russia and Belarus got disrupted. The question is how to manage regional interdependencies both within the EU and globally to minimise the risk of major setbacks next time a shock affects international value chains.

4.3 Possible next steps

The conclusions of this study largely confirm the recommendations on specific actions by the European Commission and member states provided in the 2021 study (Böhme, Lüer, et al., 2021). Therefore, many are echoed here. However, the emphasis on individual recommendations may vary depending on what future developments one considers the most likely or desirable:

⇒ **Launch a public debate on more resilient EU policy making.** To become resilient to external shocks, EU policy making needs to be overhauled. This is a long-term mission needing a wider public debate, to ensure improvements can be introduced in the Multiannual Financial Framework post 2028. The Conference on the Future of Europe has laid a valuable ground to further explore public debates on EU policies, albeit with more specific focus so that results become more concrete and targeted. This includes broader public debates among EU, national, regional and local authorities concerning:

- **An architecture for more resilient EU policy making**, including active subsidiarity, empowering weaker players, shifting to purpose driven policy making, as well as balancing agile and flexible policy implementation with accountability and long-term thinking.
- **Increased EU short-term response capacity** to crises, including through an enlarged EU Solidarity Fund offering initial aid during unexpected events and buying time to develop appropriate responses.
- **A framework for diverse visions of the future**, reflecting Europe's diversity. Given its diversity, Europe needs different and multifaceted bottom-up spatial visions for places and functional regions. These visions

need to be based on broad participatory processes, be realistic, place-based and address how the place links to a wider European perspective. The objectives of such spatial visions may be multifaceted and even contradictory.

⇒ **Strengthen the involvement of local and regional authorities.** This especially concerns the European semester, the implementation of NRRPs as well as a broader debate on the need for active subsidiarity in EU policy making. The European Commission could develop:

- **Concrete recommendations on involving local and regional authorities** in the European semester and in implementing NRRPs – this may include examples showing the added value of their involvement, or a best practice handbook.
- **Code of conduct on active subsidiarity** advocating a dynamic system on when to join forces, when to go it alone and at what level of government – this may promote more flexibility to move competences upwards and downwards in the system, reacting to changing circumstances.
- **Empowerment of players** to engage in developing a vision for a place, including links to European perspectives, differs between places and players. Many players and places might need capacity building and empowerment for such a task.

⇒ **Set up a platform for administrative capacity building.** Quality of government and administrative capacity are key ingredients for effective recovery policies and increased resilience. Efforts at local and regional level could be supported through:

- **A central hub for EU funded capacity building schemes**, providing an overview for local and regional authorities of support schemes and helping to identify the most suitable.
- **Governing with regional interdependencies and functional geographies**, strengthening the understanding that policies need to address regional interdependencies, functional areas and soft spaces rather than focusing on administrative areas. This requires also the development capacities of policy makers from local to European level on how to do so.

⇒ **Stimulate and encourage local and regional authorities to experiment**, learn from each other and collaborate. In particular, small municipalities and regions might benefit from additional support. Empowering local and regional authorities also depends on them becoming active and exploring their possibilities. While some larger and stronger local and regional authorities

already do so, others might benefit from extra encouragement or stimulation to:

- **Unpick the complexity of EU policy making** by reviewing ways to simplify EU policies and programmes e.g. by coordinating policies or merging programmes – working towards a less complex system which is easier to understand and subsequently easier to participate in.
- **Unpick economic interdependencies and value chains** by studying the web of global and cross-border value chains and understanding vulnerabilities to disruptions for specific sectors and types of regions.
- **Moving administrative staff between public sector bodies** and agencies in times of crisis to increase response capacity and resilience, including lessons learnt and possible bottlenecks – this can happen within a city, region or country, as well as across Europe.
- **Think out of the box**, including local and regional testing, experimenting and learning e.g. by sharing experiences of successes and failures.
- **Strengthen collaboration among local and regional authorities** and establish links and cooperation outside specific EU policies or funds – this concerns both cooperation with neighbouring municipalities and regions as well as those further away.
- **Strengthen cooperation with partners in other countries** to ensure established and trusted contacts to lean on in times of crisis. This can also include staff exchanges under TAIEX, the Technical Assistance and Information Exchange instrument of the European Commission.

If the European Commission, European Parliament, the European Investment Bank, as well as national, regional and local authorities strive to boost the resilience of EU policy making then active subsidiarity, empowered players, a review of the EU policy system and out of the box thinking (daring to experiment and fail) is possible.

References

- Agencia Estatal Boletín Oficial del Estado (2022). BOE-A-2020-17340. “BOE” no. 341, December 31, 2020, pp. 126733 to 126793 (61 p.). Retrieved via: <https://www.boe.es/eli/es/rdl/2020/12/30/36>
- Airport Bratislava (2022). Štatistické údaje: Počet odbavených cestujúcich 2016 – 2021. <https://www.bts.aero/o-letisku/o-spolocnosti/profil-spolocnosti/statisticke-udaje/> [Accessed: 25.03.2022]
- APUR (2022). Observatory of the Parisian economy: cyclical data. Retrieved from <https://www.apur.org/fr/geo-data/observatoire-economie-parisienne-donnees-conjoncturelles#3e>
- Austrian Business Agency (2021). Wirtschaftsstandort Vorarlberg [online], available at: <https://investinaustria.at/de/standort-oesterreich/bundeslaender/vorarlberg.php> [accessed 24th of March 2022]
- Austrian Ministry for Finance (2021). Österreichischer Aufbau- und Resilienzplan 2020-2026 [online], available at: <https://www.oesterreich.gv.at/dam/jcr:ecf30896-0861-4107-8ed9-b589a79bd623/%C3%96sterreichischer%20Aufbau-%20und%20Resilienzplan%202020-2026.pdf> [accessed 7th of April 2022]
- Bayerisches Staatsministerium für Familie, Arbeit und Soziales. (2022). Bayerns Arbeitsmarkt im Februar 2022. München. https://www.stmas.bayern.de/imperia/md/content/stmas/stmas_inet/arbeit/arbeitsmarktzahlen_februar_2022.pdf (accessed on: 9 March 2022).
- Bayerisches Staatsministerium für Familie, Arbeit und Soziales. (2021). Jahresbilanz des Arbeitsmarktes in Bayern 2021. München. https://www.stmas.bayern.de/imperia/md/content/stmas/stmas_inet/arbeit/jd_2021-faktenblatt_maq.pdf (accessed on: 9 March 2022).
- Bayerisches Staatsministerium für Familie, Arbeit und Soziales. (2022). Bayerns Arbeitsmarkt im Februar 2022. München. https://www.stmas.bayern.de/imperia/md/content/stmas/stmas_inet/arbeit/arbeitsmarktzahlen_februar_2022.pdf (accessed on: 9 March 2022).
- Bayerisches Staatsministerium für Familie, Arbeit und Soziales. (2021). Jahresbilanz des Arbeitsmarktes in Bayern 2021. München. https://www.stmas.bayern.de/imperia/md/content/stmas/stmas_inet/arbeit/jd_2021-faktenblatt_maq.pdf (accessed on: 9 March 2022).
- Bayerisches Staatsministerium für Wirtschaft, Landesentwicklung und Energie. (2022). Konjunkturbericht Bayern Februar 2022. München. <https://www.stmwi.bayern.de/publikationen/detail/konjunkturbericht-bayern/> (accessed on: 9 March 2022).
- Bayerisches Staatsministerium für Wirtschaft, Landesentwicklung und Energie. (2022). Konjunkturbericht Bayern Februar 2022. München. <https://www.stmwi.bayern.de/publikationen/detail/konjunkturbericht-bayern/> (accessed on: 9 March 2022).
- Blavatnik School of Government. (2020). Variation in Government Responses to COVID-19 Version 9.0. Oxford, UK: Oxford University.
- Böhme, K. & Besana, F. (2020). Understanding the territorially diverse implications of COVID-19 policy responses (Spatial Foresight Brief No. 2020:13). Luxembourg: Spatial Foresight.
- Böhme, K., Besana, F., Lüer, C., Holstein, F., Hans, S., Valenza, A., Caillaud, B. & Derszniak-Noirjean, M. (2020). Potential impacts of COVID-19 on regions and cities of the EU. Brussels: European Committee of the Regions - ECON Commission. <https://cor.europa.eu/en/engage/studies/Documents/IMPACTS-COVID-19.pdf> (accessed on: 13 October 2020).
- Böhme, K., Haarich, S., Toptsidou, M., Besana, F., Corbineau, C. & Hans, S. (2021). Regional impacts of the COVID-19 crisis on the tourist sector (Final Report). Brussels: European Commission, Directorate General for Regional and Urban Policy. <https://data.europa.eu/doi/10.2776/179573> (accessed on: 8 December 2021).
- Böhme, K., Lüer, C. & Holstein, F. (2020). From Territorial Impact Assessment to Territorial Foresight. In E. Medeiros (Ed.), *Territorial Impact Assessment*, pp. 157–176. Cham: Springer International Publishing. http://doi.org/10.1007/978-3-030-54502-4_9
- Böhme, K., Lüer, C., Besana, F., Hans, S., Schuh, B., Münch, A. & Gorny, H. (2021). The state of the regions, cities and villages in the area of socio-economic policies. Contribution to the 2021 EU Annual Regional and Local Barometer. Brussels: Committee of the Regions. <https://op.europa.eu/en/publication-detail/-/publication/d497d413-53ec-11ec-91ac-01aa75ed71a1/language-en/format-PDF/source-244809746> (accessed on: 7 December 2021).
- Böhme, K., Zillmer, S., Hans, S., Hrelja, D., Valenza Alessandro & Mori, A. (2022). The impacts of the COVID-19 pandemic on EU cohesion and EU cohesion policy. Brussels: Policy Department for Structural and Cohesion Policies.
- Bratislava Tourist Board (2018). Bratislava. Available at: <https://www.visitbratislava.com/media/brochures-download/> [Accessed: 14.02.2022]

- Brzica, D. (2009). Urban Dynamism within the Vienna-Bratislava Metropolitan Area: Improving Regional Competitiveness and the Constructed Regional Advantage Concept, Managing Global Transitions, Volume 7, issue 3, Published by University of Primorska, Faculty of Management Koper: http://www.fm-kp.si/zalozba/ISSN/1581-6311/7_241-258.pdf [Accessed: 14.02.2022]
- Centrum Architektury a Městského Plánování – CAMP (s.a.). Praha 2030. Available at: <https://camp.dipozitiv.cz/#> [Accessed: 18.05.2022]
- Český statistický úřad – ČSÚ (2022a). Cestovní ruch. Available at: https://www.czso.cz/csu/xa/cestovni_ruch-xa [Accessed: 15.02.2022]
- Český statistický úřad – ČSÚ (2022b). Obyvatelstvo. Available at: https://www.czso.cz/documents/266810/25810364/pha_obyvatelstvo.xlsx [Accessed: 15.02.2022]
- Český statistický úřad – ČSÚ (2022c). Zaměstnanost, nezaměstnanost. Available at: <https://www.czso.cz/csu/xa/zamestnanost-xa> [Accessed: 15.02.2022]
- Český statistický úřad – ČSÚ (2022d). Praha – Přejezdový cestovní ruch 2012-2021. Retrieved via: <https://www.czso.cz/csu/xa/praha-prijezdovy-cestovni-ruch-2012-2021>
- Chamber of Commerce - Vorarlberg (2021). Vorarlberger Wirtschaftsbericht
- City of Paris, Deputation of enterprises, employment and economic development [interview]
- Datosmacro (2022). Andalusian GDP. Retrieved via: <https://datosmacro.expansion.com/pib/espana-comunidades-autonomas/andalucia>
- Dares (2022). Les demandeurs d'emploi inscrits à Pôle emploi. Dares - Direction de l'animation de la recherche, des études et des statistiques du ministère du Travail, de l'Emploi et de l'Insertion. Retrieved from: <https://dares.travail-emploi.gouv.fr/donnees/les-demandeurs-demploi-inscrits-pole-emploi-France-metro>
- Department for European Affairs Vorarlberg (2021). EU- Aufbau- und Resilienzfähigkeit – Einreichprojekte aus Vorarlberg [Letter to the Austrian Ministry of Finance]
- Destatis (2022). Bruttoinlandsprodukt: Ausführliche Ergebnisse zur Wirtschaftsleistung im 1. Quartal 2022. Retrieved via: https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/05/PD22_215_811.html
- Duit, A., Galaz, V., Eckerberg, K. & Ebbesson, J. (2010). Governance, complexity, and resilience. *Global Environmental Change*, 20(3), pp. 363–368. <http://doi.org/10.1016/j.gloenvcha.2010.04.006>
- DIW (2022a). DIW-Konjunkturbarometer Mai: Ukraine-Krieg und Pandemielage in China bremsen deutsche Wirtschaft weiter aus. Retrieved via: https://www.diw.de/de/diw_01.c.841888.de/diw-konjunkturbarometer_mai_ukraine-krieg_und_pandemielage_in_china_bremsen_deutsche_wirtschaft_weiter_aus.html
- DIW (2022b). DIW Konjunkturbarometer April: Krieg, Inflation und chinesische Lockdowns belasten deutsche Wirtschaft. Retrieved via: https://www.diw.de/de/diw_01.c.840125.de/diw_konjunkturbarometer_april_krieg_inflation_und_chinesische_lockdowns_belasten_deutsche_wirtschaft.html
- Ecorys (2021). Outermost Regions Fiche Azores: Study on the impact of COVID-19 in the Outermost Regions
- EK & SK (s.a.). Plan obnovy: cestovná mapa k lepšiemu Slovensku. Available at: https://www.mfsr.sk/files/archiv/1/Plan_obnovy_a_odolnosti.pdf [Accessed: 16.02.2022]
- ESPN. (2019). European Territorial Reference Framework. Final Report. Luxembourg: ESPON EGTC. <https://www.espon.eu/etrf> (accessed on: 11 February 2020).
- Mazzucato, M. (2021). Mission: Economics: A Moonshot Approach to the Economy. London, UK: Allen Lane.
- TA2030. (2020). Territorial Agenda 2030: A future for all places. Berlin: Ministerial meeting of the EU under the German presidency of the Federal Ministry of the Interior, Building and Community. www.territorialagenda.eu (accessed on:)
- ESPN. (2013). Territorial Impact Assessment of Policies and EU Directives. Luxembourg: ESPON.
- ESPN. (2022). Territorial impacts of COVID-19 and policy answers in European regions and cities - Interim Report. Luxembourg: ESPON EGTC.
- Eurostat (2022b). Population density by NUTS 3 region DEMO_R_D3DENS [Dataset]
- Essig, S. & Kaucic, J. (2017). ESPON TIA: balancing between policy orientation, practicability and scientific ambition. In E. Medeiros (Ed.), *Uncovering the territorial dimension of European Union Cohesion Policy*, pp. 184–201. Abingdon, Oxon: Routledge.
- Instituto de Estadística y Cartografía de Andalucía (2022a). Encuesta de Coyuntura Turística de Andalucía (ECTA). Retrieved via: <https://www.juntadeandalucia.es/institutodeestadisticaycartografia/badea/informe/datosaldia?CodOper=b3271&idNode=9801#9803>
- Instituto de Estadística y Cartografía de Andalucía (2022b). Survey of the Tourist Situation of Andalusia First quarter 2022. Retrieved via: <https://www.juntadeandalucia.es/institutodeestadisticaycartografia/turismo/notaprensa.htm>

- European Commission – EC (2021a). Commission staff working document: Analysis of the recovery and resilience plan of Slovakia. Available at: https://ec.europa.eu/info/system/files/com-2021-339_swd_en_0.pdf [Accessed: 16.02.2022]
- European Commission – EC (2021b). NextGenerationEU: European Commission endorses Slovakia's recovery and resilience plan. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3054 [Accessed: 16.02.2022]
- European Commission – EC (s.a.). Czechia's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/czechias-recovery-and-resilience-plan_en [Accessed: 28.03.2022]
- European Commission – EC (s.a.). Slovakia's recovery and resilience plan. Available at: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/slovakias-recovery-and-resilience-plan_en [Accessed: 16.02.2022]
- European Commission. (2021). Factsheet: Germany's recovery and resilience plan. https://ec.europa.eu/info/system/files/germany-recovery-resilience-factsheet_en.pdf (accessed on: 10 March 2022)
- European Commission. (2021). Factsheet: Germany's recovery and resilience plan. https://ec.europa.eu/info/system/files/germany-recovery-resilience-factsheet_en.pdf (accessed on: 10 March 2022)
- European Commission. (2022b). European Economic Forecast. Spring 2022. Institutional Paper 173.
- European Commission. Trade. (n.d.-a). EU trade relations with Belarus. Facts, figures and latest developments. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/belarus_en (accessed on: 13 May 2022).
- European Commission. Trade. (n.d.-b). EU trade relations with Russia. Facts, figures and latest developments. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/russia_en (accessed on: 13 May 2022).
- European Commission. Trade. (n.d.-c). EU trade relations with Ukraine. Facts, figures and latest developments. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/ukraine_en (accessed on: 13 May 2022).
- Eurostat (2021). Purchasing Power Parities in the European Union. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/prc_colc_ppptot/default/table?lang=en
- Eurostat (2022). Gross domestic product (GDP) at current market prices by NUTS 3 regions. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_3gdp/default/table?lang=en
- Eurostat (2022). Gross domestic product (GDP) at current market prices by NUTS 3 regions. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/nama_10r_3gdp/default/table?lang=en
- Gaugitsch, R., Dallhammer, E., Hsiung, C.-H., Holstein, F., Besana, F., Zillmer, S., Kruljac, D. & Uljed, A. (2020). State of the art and challenges ahead for Territorial Impact Assessments (No. QG-04-19-758-EN-N; ISBN: 978-92-895-1031-8; doi:10.2863/797486). Brussels: European Committee of the Region, Commission for Territorial Cohesion Policy and EU Budget.
- Gouvernement France Relance (2021). Plan de Relance et de Résilience National [NRRP]
- INE (2022). Unemployment rates by different age groups, sex and Autonomous Community. Retrieved via: <https://www.ine.es/jaxiT3/Datos.htm?t=4247>
- INSEE (2019) Ménages fiscaux et revenu disponible en 2019 : Comparaisons régionales et départementales. Retrieved from: https://www.insee.fr/fr/statistiques/2012717#tableau-TCRD_022_tab1_departements25
- Jouen, M. (2014). The single market and cohesion policy dyad: battered by the crisis of globalisation (Policy paper No. 108). Paris: Jacques Delors Institute. <https://institutdelors.eu/wp-content/uploads/2020/08/singlemarketandcohesionpolicy-jouen-ne-jdi-apr14-1.pdf> (accessed on: 10 March 2022)
- Lehofer, W., Dias, C. & Cunha, I. (2022). Recovery and Resilience Plans: stakeholders' view. Available at: [https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689453/IPOL_IDA\(2021\)689453_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689453/IPOL_IDA(2021)689453_EN.pdf) [Accessed: 29.03.2022]
- Lehofer, W., Dias, C. & Cunha, I. (2022). Recovery and Resilience Plans: stakeholders' view. Available at: [https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689453/IPOL_IDA\(2021\)689453_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689453/IPOL_IDA(2021)689453_EN.pdf) [Accessed: 29.03.2022]
- Magistrát hlavního města Prahy – MHMP (2021). Cestovní ruch v Praze. Available at: https://www.praha.eu/jnp/cz/o_meste/magistrat/tiskovy_servis/rozhovory_a_clanky_clenu_rhmp/rhmp/radn_i_hana_trestikova/cestovni_ruch_v_praze.html [Accessed: 25.03.2022]
- Magistrát hlavního města Prahy – MHMP (s.a.). Základní informace o Praze. Available at: https://www.praha.eu/jnp/cz/co_delat_v_praze/o_praze/zakladni_informace/index.html [Accessed: 15.02.2022]

- McKinsey Global Institute (2020). Risk, resilience, and rebalancing in global value chains [online], available at: <https://www.mckinsey.com/business-functions/operations/our-insights/risk-resilience-and-rebalancing-in-global-value-chains> [accessed 7th of April 2022]
- McWilliams, B., Sgaravatti, G., Tagliapietra, S. & Zachmann, G. (2022, March 17). Can Europe manage if Russian oil and coal are cut off? <https://www.bruegel.org/2022/03/can-europe-manage-if-russian-oil-and-coal-are-cut-off/#:~:text=While%20stopping%20Russian%20gas%20imports,like%20Europe%27s%20gas%20import%20pipelines.> (accessed on: 13 May 2022).
- Ministerstvo Zdravotnictví (2022). COVID-19: Přehled aktuální situace pro Hlavní mesto Praha. Available at: <https://onemocneni-aktualne.mzcr.cz/covid-19/kraje/PHA> (accessed on 27 June 2022).
- Ministerstvo průmyslu a obchodu České republiky – MPO (2021a). Národní plan obnovy. Available at: <https://www.planobnovy.cz/dokumenty> [Accessed: 28.03.2022]
- Ministerstvo průmyslu a obchodu České republiky – MPO (2021b). Národní plan obnovy: Plán pro oživení a odolnost republiky. Available at: <https://www.planobnovy.cz/dokumenty> [Accessed: 28.03.2022]
- Ministerstvo průmyslu a obchodu České republiky – MPO (s.a.). Harmonogram výzev. Available at: <https://www.planobnovy.cz/dokumenty> [Accessed: 28.03.2022]
- Ministerstvo vnitra České republiky – MV (s.a.). Implementace Národního plánu obnovy na MV. Available at: <https://www.mvcr.cz/soubor/slama-david-digitalni-projekty-v-narodnim-planu-obnovy-pdf.aspx> [Accessed: 28.03.2022]
- Ministry of Economic Affairs and Digital Transformation (2020) Plan de recuperación, transformación y resiliencia, retrieved from https://portal.mineco.gob.es/es-es/ministerio/plan_recuperacion/plan_recuperacion/Paginas/plan.aspx
- Ministry of Planning (2021). Recuperar Portugal, Construindo o Futuro [NRRP]
- National Bank of Belgium Online Statistics (2022). Regional household income accounts in East Flanders. Retrieved from: <https://stat.nbb.be/Index.aspx>
- Office of the Secretary of State for Relance and Strategic Investments, in charge of Science Policy (2021). Nationaal plan voor herstel en veerkracht. [NRRP]
- Páleník, M. (s.a.). Regions of Slovakia – Region Bratislava and surroundings. Inštitút zamestnanosti. Available at: <https://www.iz.sk/en/projects/regions-of-slovakia/bratislava> [Accessed: 14.02.2022]
- Prague City Tourism – PCT (2020). Prague Destination Management: Putting Prague First. Strategy for Sustainable Tourism of Prague. Available at: <https://www.praguecitytourism.cz/en/pct/tourism-strategy> [Accessed: 18.05.2022]
- Province of East Flanders, Department for Economy, Agriculture and Rural Affairs, European and International Cooperation [interview]
- Provincies in Cijfers (2021). Bankruptcies in East-Flanders.
- Regional Government of the Azores (2021). Azores Space Strategy
- Regional Secretary for Transport, Tourism and Energy (2021). Action Plan 2019-2030: Sustainability of the Azores Destination.
- Resilienzplan 2020-2026 [online], available at: <https://www.oesterreich.gv.at/dam/jcr:ecf30896-0861-4107-8ed9-b589a79bd623/%C3%96sterreichischer%20Aufbau-%20und%20Resilienzplan%202020-2026.pdf> [accessed 7th of April 2022]
- Santos, M., Gonzales, M., Haegeman, K. & Rainoldi, A. (2020). Behavioural changes in tourism in times of Covid-19: employment scenarios and policy options. European Commission. Joint Research Centre. <https://data.europa.eu/doi/10.2760/00411> (accessed on: 12 November 2020).
- Sapir, A. (2020). Why has COVID-19 hit different European Union economies so differently? (Policy Contribution No. 2020/18). Brussels: Bruegel. <https://www.bruegel.org/2020/09/why-has-covid-19-hit-different-european-union-economies-so-differently/> (accessed on: 15 October 2020).
- SIPRI Databases. (2020). SIPRI Arms Industry Database. <https://www.sipri.org/databases/armsindustry> (accessed on: 13 May 2022).
- Slovakia travel (s.a.). Bratislava. Available at: <https://slovakia.travel/en/bratislava> [Accessed: 14.02.2022]
- SREA (2022a). Hóspedes, Dormidas e Estada Média por Ilha [Dormidas]. Retrieved via: https://srea.azores.gov.pt/conteudos/Relatorios/lista_relatorios.aspx?idc=29&idsc=1123&lang_id=1
- SREA (2022b). Indicador Atividade Económica. Retrieved via: https://srea.azores.gov.pt/default.aspx?lang_id=1
- SREA (2022c). REMUNERAÇÃO MENSAL MÉDIA POR TRABALHADOR -- março de 2022. Retrieved via: https://srea.azores.gov.pt/Conteudos/Artigos/detalhe_artigo.aspx?idc=26&ida=10858&lang_id=1
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2021a). Hrubá mzda a odpracovaný čas [np3103rr]. Available at: https://data.statistics.sk/api/v2/dataset/np3103rr/SK01/2020,2019/ODPR_MESIAC/3,1,2?lang=sk&type=xlsx [Accessed: 14.02.2022]
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2021b). Hustota obyvateľstva – SR-oblasť-kraj-okres, m-v [om7015rr]. Available at:

- https://data.statistics.sk/api/v2/dataset/om7015rr/SK_CAP/2020/IN010049?lang=en&type=xlsx [Accessed: 11.02.2022]
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2021c). Kultúra a cestovný ruch - mestá [ku3701rr]. Available at: https://data.statistics.sk/api/v2/dataset/ku3701rr/SK001C1/2020,2019/KULT_ubyt_pren_na_obyv?lang=en&type=xlsx [Accessed: 15.02.2022]
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2021d). Miera evidovanej nezamestnanosti (v %) podľa bratislavských okresov. Available at: <https://opendata.bratislava.sk/dataset/show/miera-evidovanej-nezamestnanosti-v> [Accessed: 24.03.2022]
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2021e). Počet obyvateľov podľa pohlavia - SR-oblasť-kraj-okres, m-v (ročne) [om7102rr]. Available at: https://data.statistics.sk/api/v2/dataset/om7102rr/SK_CAP/2019,2020/IN010115/SPOLU?lang=en&type=xlsx [Accessed: 11.02.2022]
- Štatistický úrad Slovenskej republiky – ŠÚ SR (2022). Regionálny hrubý domáci produkt na obyvateľa (v bežných cenách) [nu3002rr]. Available at: https://data.statistics.sk/api/v2/dataset/nu3002rr/SK01/2020,2019/R_HDP_O_PPS?lang=en&type=xlsx [Accessed: 14.02.2022]
- Statistik Bayern (2022). Tourismus und Gastgewerbe – Ausländische Gäste in Bayern 2021 nach ausgewählten Herkunftsländern in Prozent. Retrieved via: https://www.statistik.bayern.de/mam/statistik/wirtschaft_handel/tourismus/0404_auslaendische_gaeste_nach_herkunftslaendern_2021_780px.png
- Statistiek Vlaanderen (2021). Labour productivity <https://www.vlaanderen.be/en/statistics-flanders/macro-economy/labour-productivity>
- Statistiek Vlaanderen (2021). Labour: ILO unemployment rate. Retrieved from: <https://www.vlaanderen.be/en/statistics-flanders/labour/ilo-unemployment-rate#ilo-unemployment-rate-in-the-flemish-region-at-35percent>
- Statistiek Vlaanderen (2021). Macro Economy: Gross domestic product per capita. Retrieved from: <https://www.vlaanderen.be/en/statistics-flanders/macro-economy/gross-domestic-product-per-capita>
- Statistik Austria (2022). Übersicht der Bundesländer [online], available at: https://www.statistik.at/web_de/klassifikationen/regionale_gliederungen/bundeslaender/index.html [accessed 24th of March 2022]
- Toplak, I. (2021). Pokles cen pronájmu bytů v Praze skončil. Pronájmy začínají růst. Available at: <https://www.toplak.cz/pokles-cen-pronajmu-bytu-v-praze-skoncil/> [Accessed: 18.05.2022]
- Toplak, I. (2022). Ceny pronájmů bytů v Praze výrazně rostou. Available at: <https://www.toplak.cz/ceny-pronajmu-bytu-v-praze-vyrazne-rostou/> [Accessed: 19.05.2022]
- Tourism Unit – City of Prague (s.a.). Tourism Portal. Available at: <https://cestovnuruch.praha.eu/jnp/en/index.html> [Accessed: 25.03.2022]
- Umweltbundesamt (2021). Flächeninanspruchnahme in Österreich. Retrieved via: https://www.umweltbundesamt.at/fileadmin/site/themen/boden/flaecheninanspruchnahme_2020.pdf
- Úrad vlády Slovenskej republiky – ÚV SR (2021). Otázky a odpovede. Available at: <https://www.planobnovy.sk/otazky-a-odpovede/> [Accessed: 23.03.2022]
- Urban Agenda Platform (2021). The Urban Agenda of Andalusia promotes urban sustainability through an articulated network of cities and rural areas. Retrieved via: <https://www.urbanagendaplatform.org/news/urban-agenda-andalusia-promotes-urban-sustainability-through-articulated-network-cities-and>
- vbw – Die Bayrische Wirtschaft. (2021). Konjunkturprognose Bayern 2022. München. <https://www.vbw-bayern.de/vbw/Themen-und-Services/Konjunktur/Bayern-Deutschland/BIP-Prognose-Bayern-7.jsp> (accessed on: 9 March 2022).
- vbw – Die Bayrische Wirtschaft. (2021). Konjunkturprognose Bayern 2022. München. <https://www.vbw-bayern.de/vbw/Themen-und-Services/Konjunktur/Bayern-Deutschland/BIP-Prognose-Bayern-7.jsp> (accessed on: 9 March 2022).
- Vorarlberg State Office for Statistics (2022). Bevölkerung Stichtag 31. Dezember 2021 und Jahresergebnisse 2021. Vorarlberg.at (2021A). Außenhandel [online], available at: https://vorarlberg.at/-/126_aussenhandel [accessed 24th of March 2022]
- Vorarlberg.at (2021B). Heimische Wirtschaft hat sich als krisenresistent erwiesen [online], available at: <https://presse.vorarlberg.at/land/dist/vlk-64295.html> [accessed 7th of April 2022]
- Vorarlberg.at (2022A). Vorarlberger Arbeitsmarkt [online], available at: <https://vorarlberg.at/regionaler-arbeitsmarkt> [accessed 24th of March 2022]
- Vorarlberg.at (2022B). Tourismus Saisonauswertungen - Tourismus im Jahresüberblick [online], available at: https://vorarlberg.at/-/122_saison_tourismusjahr_kalenderjahr [accessed 13.06.2022]

- Vorarlberg.at (2022C). Tourismus aktuelle Zahlen – Tourismusergebnisse im April 2022. Retrieved via: https://vorarlberg.at/-/120_tourismus [accessed 13.06.2022]
- Vorarlberg State Office for Statistics (2022). Bevölkerung Stichtag 31. Dezember 2021 und Jahresergebnisse 2021.
- Wagner, E. (2022). Digitalizujeme Prah. Available at: <https://www.digitalizujemeprahu.cz/> [Accessed: 18.05.2022]
- WISTO (2021). Resiliente Wertschöpfung im Lichte von COVID-19 [online], available at: https://www.wisto.at/wp-content/uploads/2021/08/WSK_Studie_digital_130821.pdf [accessed 7th of April 2022]
- Eurostat. (2022, May 15). EU trade since 1988 by HS2,4,6 and CN8 [Eurostat].
- Roth, A. (2017, June 22). The size and location of Europe's defence industry. <https://www.bruegel.org/2017/06/the-size-and-location-of-europes-defence-industry/> (accessed on: 13 May 2022).
- International Labour Organisation. (2021, January 25). ILO Monitor: COVID-19 and the world of work. 7th edition Updated estimates and analysis. International Labour Organization.
- Junta de Andalucía (2021) Plan de acción CRECE Industria 2021 - 2022 para una nueva política industrial en Andalucía, retrieved from https://www.juntadeandalucia.es/export/drupaljda/Plan_de_accion_CRECE_Industria_2021-2022_en_Andalucia_03agosto2021.pdf
- Eurostat. (2021, November). Agricultural production - crops. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Agricultural_production_-_crops#Cereals (accessed on: 13 May 2022).
- Elindependiente (15.11.2021) El retraso de los fondos europeos: España ha recibido hasta la fecha un tercio de lo esperado, retrieved from <https://www.elindependiente.com/economia/2021/11/15/el-retraso-de-los-fondos-europeos-espana-ha-recibido-hasta-la-fecha-un-tercio-de-lo-esperado/>
- El Independiente (2021, November 15). The delay of European funds: Spain has received a third of what was expected to date. Retrieved via: <https://www.elindependiente.com/economia/2021/11/15/el-retraso-de-los-fondos-europeos-espana-ha-recibido-hasta-la-fecha-un-tercio-de-lo-esperado/>
- Mercacei (22.12.2021) Las exportaciones de aceite de oliva andaluz crecen un 18% hasta octubre, retrieved from <https://www.mercacei.com/noticia/55786/actualidad/las-exportaciones-de-aceite-de-oliva-andaluz-crecen-un-18-hasta-octubre.html#:~:text=Las%20exportaciones%20de%20aceite%20de%20oliva%20andaluz%20alcanzaron%20un%20valor,Andaluc%C3%ADa%20Exportaci%C3%B3n%20e%20Inversi%C3%B3n%20Extranjera.>
- ABCdesevilla (01.01.2022) 2021, el año en el que Andalucía inició su recuperación económica tras el azote del Covid, retrieved from https://sevilla.abc.es/economia/sevi-2021-andalucia-inicio-recuperacion-economica-tras-azote-covid-202112302243_noticia.html
- Eurostat (2022a). Population on 1 January by age group, sex and NUTS 2 region DEMO_R_PJANGROUP [Dataset]
- Eurostat (2021). Population on 1 January by age group, sex and NUTS 3 region. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjangrp3/default/table?lang=en
- Eurostat (2021). Population on 1 January by age group, sex and NUTS 3 region. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/demo_r_pjangrp3/default/table?lang=en
- Vida Economica (2022, January 12). Andalusian GDP will grow by 5.5% in 2022, but it will not recover everything lost. Retrieved via: <https://www.vidaeconomica.com/2022/01/pib-andaluz-crisis-coronavirus-malaga/>
- Eleconomista (23.01.2022) La gestión de los fondos europeos de las CCAA lleva tres meses de retraso, retrieved from <https://www.eleconomista.es/economia/noticias/11578566/01/22/La-gestion-de-los-fondos-europeos-de-las-CCAA-lleva-tres-meses-de-retraso.html>
- El Economista (2022, January 23). The management of the European funds of the CCAA is three months behind schedule. Retrieved via: <https://www.eleconomista.es/economia/noticias/11578566/01/22/La-gestion-de-los-fondos-europeos-de-las-CCAA-lleva-tres-meses-de-retraso.html>
- Junta de Andalucía (17.02.2022) Andalucía cierra 2021 con récord de exportaciones: 34.552 millones de euros y un crecimiento del 24,2%, retrieved from <https://www.juntadeandalucia.es/presidencia/portavoz/economiayempleo/169374/consejeriadelapresidenciaadministracionpublicaeinterior/andalucia/exportaciones/recordhistorico/empresas/economia/empleo/internacional/gobiernodeandalucia#:~:text=Econom%C3%ADa%20y%20Empleo,Andaluc%C3%ADa%20cierra%202021%20con%20r%C3%A9cord%20de%20exportaciones%3A%2034.552%20millones%20de,un%20crecimiento%20del%2024%2C2%25>
- La Moncloa (25.02.2022) Raquel Sánchez se compromete a contribuir a la financiación de la nueva línea 3 del Metro de Sevilla, retrieved from <https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/transportes/Paginas/2022/250222-r-sanchez-sevilla.aspx>

- European Commission. (2022a, March 8). Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. REPowerEU: Joint European Action for more affordable, secure and sustainable energy. COM(2022) 108 final.
- Junta de Andalucía (08.03.2022) La Junta moderniza la gestión de los servicios sociales y la teleasistencia con 61,7 millones, retrieved from <https://www.juntadeandalucia.es/presidencia/portavoz/social/169897/ConsejodeGobierno/ServiciosSociales/Teleasistencia/Digitalizacion/Gestion/NextGeneration>
- Statista. (2022, March 8). Number of people living in Europe with Russian citizenship in 2021, by country. <https://www.statista.com/statistics/1294283/russian-citizens-living-in-europe-2021-by-country/> (accessed on: 16 May 2022).
- Müller, M. (2022, March 10). How the war in Ukraine affects tourism in Eastern Europe. <https://www.dw.com/en/how-the-war-in-ukraine-affects-tourism-in-eastern-europe/a-61074491> (accessed on: 16 May 2022).
- Edmond, C. (2022, March 17). How much energy does the EU import from Russia? <https://www.weforum.org/agenda/2022/03/eu-energy-russia-oil-gas-import/> (accessed on: 17 May 2022).
- Frost, R. (2022, March 30). Europe's food security could be threatened by war in Ukraine, farmers warn. <https://www.euronews.com/green/2022/03/21/europe-s-food-security-could-be-threatened-by-war-in-ukraine-farmers-warn> (accessed on: 16 May 2022).
- DW. (2022, April 1). Ukraine war pushes eurozone inflation to record 7.5%. <https://www.dw.com/en/ukraine-war-pushes-eurozone-inflation-to-record-75/a-61332000> (accessed on: 16 May 2022).
- Junta de Andalucía (05.04.2022) Andalucía se beneficiará de 62,5 millones de los Next Generation para digitalización de la Justicia, retrieved from <https://www.juntadeandalucia.es/presidencia/portavoz/gobiernoaldia/170889/ConsejodeGobierno/Justicia/FondosNextGeneration>
- schengenvisainfo news. (2022, April 12). 1.35 million Ukrainians were living in EU as of 2020, Data show. <https://www.schengenvisainfo.com/news/1-35-million-ukrainians-were-living-in-eu-as-of-2020-data-show/> (accessed on: 16 May 2022).
- GlobalData. (2022, May 10). Lack of Russian tourists due to the Russia-Ukraine conflict will leave a void in this summer's European travel market, says GlobalData [GlobalData]. <https://www.globaldata.com/media/travel-tourism/lack-russian-tourists-due-russia-ukraine-conflict-will-leave-void-summer-european-travel-market-says-globaldata/> (accessed on: 16 May 2022).
- BBC. (2022, May 13). How many Ukrainians have fled their homes and where have they gone? <https://www.bbc.com/news/world-60555472> (accessed on: 16 May 2022).
- Der Spiegel (2022, June 7). Plötzlich wollen viele amerikanische Urlauber nach Europa. Retrieved via: <https://www.spiegel.de/wirtschaft/warum-jetzt-so-viele-us-buerger-urlaub-in-europa-machen-wollen-a-01141502-24a6-4d65-87ea-cea9705f5e95>
- Jouen, M. (2017). Solidarity 2.0 (Policy paper No. 196), p. 36. Paris: Javques Delors Institute. <http://www.institutdelors.eu/media/solidarity2.0-marjoriejouen-june2017.pdf?pdf=ok> (accessed on: 16 May 2022).

Annex

Table 0.1 NRRP Allocations, billions of euros (*current prices*)

Member State	Grants	Loans (% of total)	Share of the GDP	Total RRP Allocation
Austria	3.46		0.87%	3.46
Belgium	5.92		1.24%	5.92
Bulgaria	6.27		10.23%	6.27
Croatia	6.30		11.61%	6.30
Cyprus	1.01	0.20 (16%)	5.41%	1.21
Czechia	7.04		3.12%	7.04
Denmark	1.55		0.50%	1.55
Estonia	0.97		3.45%	0.97
Finland	2.09		0.87%	2.09
France	39.37		1.62%	39.37
Germany	25.61		0.74%	25.61
Greece	17.77	12.73 (42%)	16.63%	30.50
Hungary	7.17		4.91%	7.17*
Ireland	0.99		0.28%	0.99
Italy	68.90	122.60 (64%)	10.67%	191.50
Latvia	1.83		6.00%	1.83
Lithuania	2.22		4.56%	2.22
Luxembourg	0.09		0.15%	0.09
Malta	0.32		2.25%	0.32
Netherlands	5.96		0.73%	5.96*
Poland	23.90		6.66%	35.52*
Portugal	13.90	2.70 (16%)	7.75%	16.60
Romania	14.2	14.9 (51%)	13.09%	29.10
Slovakia	6.33		6.74%	6.33
Slovenia	1.80	0.70 (28%)	5.13%	2.50
Spain	69.51		5.59%	69.51
Sweden	3.29		0.69%	3.29
EU-27	320.28	138.93		503.22

*The plan is yet to be approved by the Commission or adopted by the Council; the number refers to the Maximum Financial Contribution

Table 0.2 Primary Pillars, percentages

Member State	Green Transition	Digital Transformation	Inclusive Growth	Social and territorial cohesion	Health	Next Generation policies
Austria	48.60	40.45	2.47	1.41	3.76	3.32
Belgium	50.49	24.52	7.12	11.86	0.73	5.27
Bulgaria	-	-	-	-	-	-
Croatia	38.41	17.39	24.86	1.81	7.35	10.18
Cyprus	33.34	22.04	22.59	7.18	4.89	9.97
Czechia	37.15	20.86	11.03	14.04	6.96	9.96
Denmark	59.44	23.64	15.01	0.00	1.92	0.00
Estonia	40.46	20.83	4.47	0.00	33.21	1.01
Finland	48.61	22.55	7.45	7.40	12.66	1.34
France	40.45	19.93	11.15	4.50	10.57	13.40
Germany	41.57	49.33	3.79	1.00	0.00	4.32
Greece	32.80	22.76	29.74	7.36	4.52	2.82
Hungary	-	-	-	-	-	-
Ireland	46.54	31.56	6.57	11.29	0.00	4.04
Italy	35.38	22.19	12.69	12.99	7.41	9.34
Latvia	37.45	20.39	13.08	13.00	14.40	1.68
Lithuania	37.41	28.50	8.01	3.07	8.87	14.14
Luxembourg	64.81	30.95	0.00	1.61	2.63	0.00
Malta	49.99	23.43	0.00	4.61	9.97	12.00
Netherlands	-	-	-	-	-	-
Poland	-	-	-	-	-	-
Portugal	30.97	21.52	14.51	25.92	6.17	0.91
Romania	41.17	20.37	15.51	6.14	9.01	7.80
Slovakia	38.36	19.89	8.26	0.17	27.46	5.86
Slovenia	41.16	20.22	17.50	3.73	9.62	7.77
Spain	41.70	27.07	14.54	9.50	3.52	3.66
Sweden	47.19	14.74	0.00	25.54	0.00	12.53
EU averages	42.76	24.57	10.88	7.57	8.07	6.14

Table 0.3 Secondary Pillars, percentages

Member State	Green Transition	Digital Transformation	Inclusive Growth	Social and territorial cohesion	Health	Next Generation policies
Austria	3.42	0.44	41.55	43.92	5.45	5.23
Belgium	13.98	5.28	24.51	36.23	9.87	10.13
Bulgaria	-	-	-	-	-	-
Croatia	37.51	8.25	20.46	24.51	7.43	1.83
Cyprus	18.55	3.42	42.74	17.51	14.60	3.17
Czechia	29.00	3.17	28.73	19.32	15.78	4.00
Denmark	0.00	0.00	70.92	18.07	11.01	0.00
Estonia	1.91	0.83	66.21	21.13	9.92	0.00
Finland	5.44	12.18	42.20	31.49	8.56	0.12
France	12.94	1.44	41.83	23.51	10.65	9.64
Germany	5.81	3.73	47.36	10.08	28.72	4.29
Greece	11.55	0.17	56.74	21.60	7.64	2.30
Hungary	-	-	-	-	-	-
Ireland	9.50	0.00	33.46	37.47	10.45	9.12
Italy	10.81	7.37	35.15	36.56	7.73	2.38
Latvia	1.33	1.57	33.10	41.09	11.60	11.30
Lithuania	6.22	7.49	44.66	21.59	16.22	3.82
Luxembourg	0.00	1.61	43.38	44.80	10.21	0.00
Malta	4.61	0.00	27.63	36.42	24.12	7.22
Netherlands	-	-	-	-	-	-
Poland	-	-	-	-	-	-
Portugal	24.00	1.38	33.72	20.72	13.08	7.09
Romania	16.00	0.27	26.83	39.64	12.52	4.72
Slovakia	12.76	0.78	39.76	24.24	10.93	11.51
Slovenia	16.06	3.22	15.45	32.17	25.88	7.22
Spain	8.48	2.96	27.28	46.44	10.87	3.97
Sweden	0.00	14.34	27.38	41.12	14.37	2.79
EU averages	11.47	3.70	38.94	31.56	13.37	5.30

Table 0.4 Pre-financing disbursement by MS

Member State	Grants (millions of euros)	Date of disbursement	Loans (millions of euros)	Date of disbursement	Total disbursement
Austria	450.0	28/09/2021			450.0
Belgium	770.1	03/08/2021			770.1
Croatia	818.4	28/09/2021			818.4
Cyprus	130.8	09/09/2021	26.0	09/09/2021	156.8
Czechia	914.6	28/09/2021			914.6
Denmark	201.7	02/09/2021			201.7
Estonia	126.0	17/12/2021			126.0
Finland	271.1	21/01/2022			271.1
France	5,117.9	19/08/2021			12,517.9
Germany	2,250.0	26/08/2021			2,250.0
Greece	2,310.1	09/08/2021	1,654.6	09/08/2021	3,964.7
Italy	8,954.5	13/08/2021	15,938.2	13/08/2021	24,892.7
Latvia	237.4	10/09/2021			237.4
Lithuania	289.1	17/08/2021			289.1
Luxembourg	12.1	03/08/2021			12.1
Malta	41.1	17/12/2021			41.1
Portugal	1,807.9	03/08/2021	350.9	03/08/2021	2,158.8
Romania	1,851.2	02/12/2021	1,942.5	13/01/2022	3,793.6
Slovakia	822.7	13/10/2021			822.7
Slovenia	231.0	17/09/2021			231.0
Spain	19,036.6	17/08/2021			19,036.6
Total EU	36,644		19,912		24,893

Table 0.5 COVID-19 specific indicators, targets
Health-related

Indicator code and name	Measurement Unit	Target 2022
CV1 Value of personal protective equipment purchased	EUR Thousand	1,795,933 €
CV2 Value of medical equipment purchased	EUR Thousand	2,423,575 €
CV3 Value of medicines purchased linked to COVID-19	EUR Thousand	136,538 €
CV4 Value of IT equipment and software/licences financed	EUR Thousand	729,526 €
CV4a Value of COVID-19 related IT for SMEs	EUR Thousand	15,000 €
CV4b Value of COVID-19 related IT for health	EUR Thousand	82,783 €
CV4c Value of COVID-19 related IT for education	EUR Thousand	806,516 €
CV5 Value of grants for R&D into COVID-19	EUR Thousand	73,471 €
CV6 Items of personal protective equipment (PPE)	Number of items	3,465,287,300
CV7 Ventilators to support treatment of COVID-19	Number of medical devices	13,259
CV8 Additional bed space created for COVID-19 patients	Bed spaces	12,494
CV9 Number of laboratories supported to test for COVID-19	Laboratories	527
CV10 Testing capacity supported for COVID-19	Number of tests possible	24,868,831
CV11 Ambulances and vehicles purchased for emergency response	Vehicles	577

SMEs Related

Indicator code and name	Measurement Unit	Target 2022
CV20 Grant support to SMEs for working capital (grants)	EUR	4,658,528 €
CV21 Financial Instrument support to SMEs for working capital	EUR	7,540,446 €
CV22 Number of SMEs with grants for working capital	Enterprises	712,635
CV23 Number of SMEs with repayable working capital	Enterprises	264,506
CV24 Number of SMEs receiving non-financial support	Enterprises	13,825
CV25 Number of enterprises supplying equipment and PPE	Enterprises	32

ESF+ specific indicators

Indicator code and name	Measurement Unit	Target 2022
CV30 Value of ESF actions to combat effects of the COVID-19	EUR	8,160,896 €
CV31 Participants supported to combat COVID-19 pandemic	persons	9,270,367
CVST Participant benefitted from support in short-time work	persons	2,356,101
CVHC Health care personnel who benefitted from ESF support	persons	38,938
CV33 Entities supported in combating COVID-19 pandemic	entities	152,002
CVR1 Participants maintaining their job 6 months after support	persons	1,146,490
CVR2 Participants gaining qualification upon leaving (COVID-19)	persons	82,401

Vaccinations

Indicator code and name	Measurement Unit	Target 2022
CV60 Value of all vaccinations costs	EUR	423,026 €
CV61 COVID-19 vaccine refrigeration infrastructure	refrigeration units	91
CV62 Vaccination centres supported	centres	46
CV63 Vaccination doses purchased	doses	137,693,547
CV64 People vaccinated with EU support	persons	26,243,672

Table 0.6 COVID-19 specific indicators ERDF, implementation

Indicator code and name	Measurement Unit	Target 2020	Implemented 2020
CV1 Value of personal protective equipment purchased	EUR Thousands	1,118,054 €	248,550 €
CV2 Value of medical equipment purchased	EUR Thousands	847,776 €	25,551 €
CV3 Value of medicines purchased linked to COVID-19	EUR Thousands	94,014 €	605 €
CV4 Value of IT equipment and software/licences financed	EUR Thousands	143,714 €	18,000 €
CV4a Value of COVID-19 related IT for SMEs	EUR Thousands	€	0 €
CV4b Value of COVID-19 related IT for health	EUR Thousands	€	0 €
CV4c Value of COVID-19 related IT for education	EUR Thousands	€	0 €
CV5 Value of grants for R&D into COVID-19	EUR Thousands	42,962 €	0 €
CV6 Items of personal protective equipment (PPE)	Number of items	2,310,164,071	635,291,883
CV7 Ventilators to support treatment of COVID-19	Number of medical devices	4,338	2,328
CV8 Additional bed space created for COVID-19 patients	Bed spaces	4,799	240
CV9 Number of laboratories supported to test for COVID-19	Laboratories	509	3
CV10 Testing capacity supported for COVID-19	Number of tests possible	3,569,384	342,444
CV11 Ambulances and vehicles purchased for emergency response	Vehicles	235	10
CV20 Grant support to SMEs for working capital (grants)	EUR Thousands	2,335,736 €	730,776 €
CV21 Financial Instrument support to SMEs for working capital	EUR Thousands	4,508,200 €	3,504,458 €
CV22 Number of SMEs with grants for working capital	Enterprises	468028	263,859
CV23 Number of SMEs with repayable working capital	Enterprises	172027	307,967
CV24 Number of SMEs receiving non-financial support	Enterprises	1281	0
CV25 Number of enterprises supplying equipment and PPE	Enterprises	32	0
CV33 Entities supported in combating COVID-19 pandemic	entities	2419	6



**European Committee
of the Regions**

Created in 1994, the European Committee of the Regions is the EU's political assembly of 329 regional and local representatives such as regional presidents or city-mayors from all 27 Member States, representing over 446 million Europeans.

Rue Belliard/Belliardstraat 101 | 1040 Bruxelles/Brussel | BELGIQUE/BELGIË | Tel. +32 22822211
www.cor.europa.eu | [@EU_CoR](https://twitter.com/EU_CoR) | [/european.committee.of.the.regions](https://facebook.com/european.committee.of.the.regions)
[/european-committee-of-the-regions](https://linkedin.com/company/european-committee-of-the-regions) | [@EU_regions_cities](https://instagram.com/EU_regions_cities)

EN

ISBN 978-92-895-1239-8
doi:10.2863/00247

QG-07-22-600-EN-N



Publications Office
of the European Union