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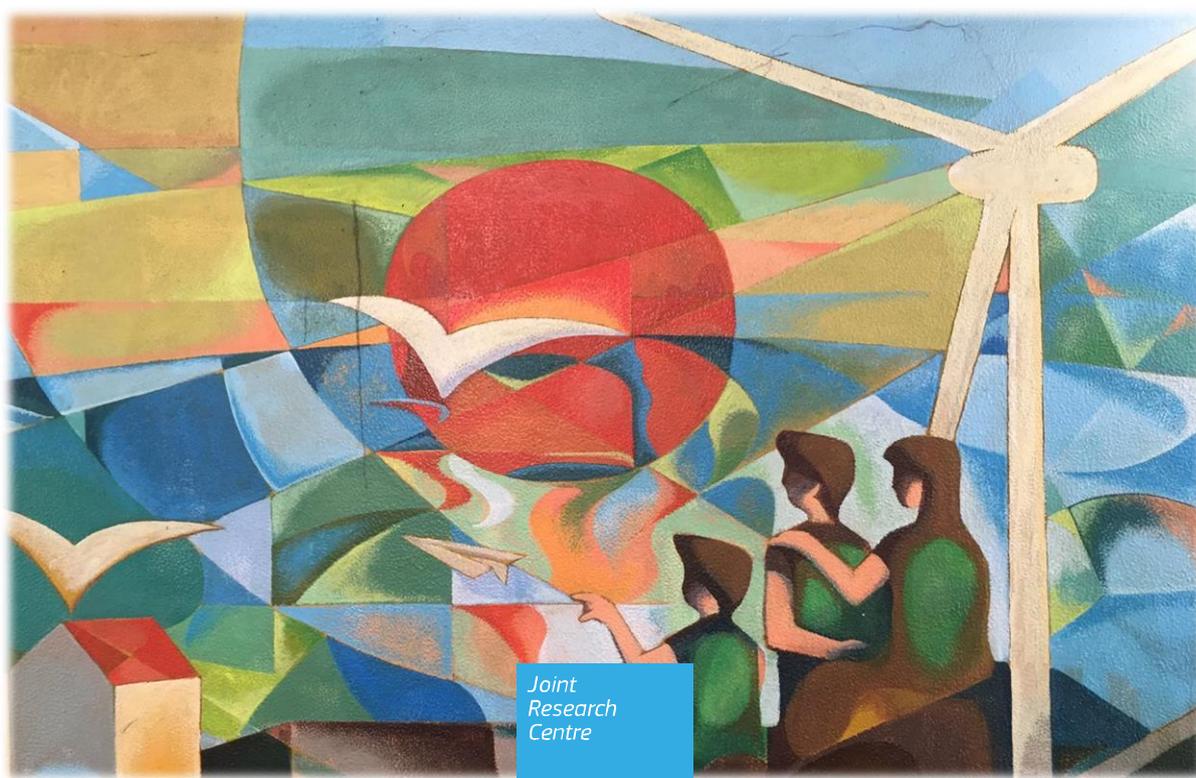
JRC SCIENCE FOR POLICY REPORT

A sustainable recovery for the EU

A text mining approach to
map the EU Recovery Plan
to the Sustainable
Development Goals

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All content © European Union, 2020, except: *Cover page: Murales for the European Week for Sustainable Energy, Comune di Lavagna, 2013; Page 2, Fig 1 from [IMF, 2020]; page 3, Fig 2 from [Stockholm Resilience Institute, 2016]*

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A first exercise to associate EU policy documents to SDGs was developed at the JRC in 2017 by Miola A., Neher F., Buscaglia D. (Miola et al., 2019). Following up on this analysis, the authors designed and applied a new approach by developing an automated computational text mapping that has been used for the assessment of the Recovery Package. The work of (Miola et al., 2019) is acknowledged.

Executive summary

The EU Recovery Plan represents a unique window of opportunity to restart the socioeconomic system addressing the Covid-19 crisis, fostering a shift towards sustainable development. The UN Agenda 2030, with its 17 goals and 169 targets, provides a compass to orientate the recovery in a sustainable way, considering the economic, social and environmental dimensions in a systemic manner. The political guidelines of the President of the European Commission attribute a central role to the Agenda 2030 and its SDGs and frame sustainable development as the cornerstone of the national and EU policies.

Within this context, this report contributes to a better understanding of how the EU Recovery Plan relates to the SDG framework by applying a text mining approach that automatically maps key documents of the plan with the UN goals and targets through specific keywords. This textual analysis has been applied to a collection of documents publicly available from May up until September 2020, and provides a preliminary screening of SDGs and their targets in the Recovery Plan. The Recovery Plan is indeed in continuous evolution, with new legislative and non-legislative acts being drafted and adopted; therefore, these results represent a snapshot that may eventually change over time. However, identifying the link between the proposed Recovery Plan and SDGs upstream in early phase of the negotiations, can help to highlight areas that may boost SDG implementation along with areas that deserve more attention; further, it may also facilitate SDG mainstreaming in the implementation phase or monitoring changes in SDGs coverage during the implementation process (e.g. through a subsequent analysis of the Member States' National Recovery and Resilience Plans, currently under preparation).

Summarizing the results at the goal level, the main goals detected in the Plan are SDG 3 on health and SDG 8 on economic growth and employment, but many others are identified. Overall, the Plan addresses all the 17 Goals, though some goals are only marginally mentioned. At target level, the text analysis detected 94 targets, described in detail in chapter 4.

The distribution of SDGs and targets shows a great variety along the three pillars of the Next Generation EU (NGEU). The first pillar (*"Support Member States in Recovering"*) pays particular attention to SDG 8, addressing many of its targets. This pillar has the largest financial allocation (about 90% of all funds of the Plan), and this is reflected by the broader coverage of all SDGs and their targets, compared to the other pillars. The second pillar of NGEU (*"Kick-start the economy and help private investment"*) has also a relatively broad coverage of SDGs, and is mainly focused on SDG 9, regarding sustainable industrialisation and foster innovation. The textual analysis of the third pillar of NGEU (*"Learning the lessons from the crisis"*) evidenced that it focuses on fewer SDGs compared to the previous two, with a strong emphasis on SDG 3. The main target is 3.d, which increases the resilience against pandemics by strengthening the capacity for early warning, risk reduction and management of national and global health risks.

The SDGs are a roadmap for sustainable development and should remain a guiding framework for recovery in all countries. The mapping of SDGs in the proposed EU Recovery Plan provides a tool for tracking the implementation of the SDGs in the Plan, providing a text mining perspective on how specific initiatives included in the Plan address goals and related targets. A sustainable recovery should embrace the principles of the Agenda 2030 and its SDGs as much as possible, putting the EU in the right track to long-term sustainable growth. Our assessment of the Recovery Plan indicates that the Commission strives to be a frontrunner in pursuing the goals, and the Plan can further accelerate the transition towards a more sustainable, fair, just, and resilient EU.

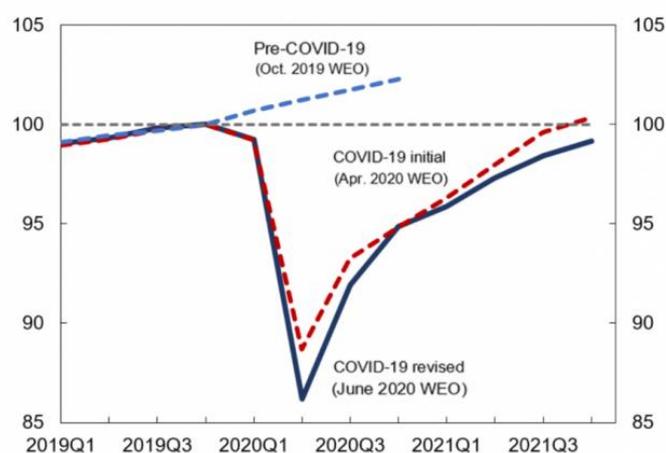
1 Sustainable EU Recovery – a unique window of opportunity

The COVID-19 pandemic massively challenges the world's society and its underlying systems on various levels – impacting health systems, socio-economic activities and our everyday life. While countries are still coping with the impacts of the pandemic, many are already in the process of preparing and implementing effective means for a fast recovery of the socioeconomic systems.

Since Europe is tackling the pandemic while also preparing for the post-crisis period, a comprehensive Recovery Plan is under way to support Member States and their partners in addressing the social and economic damages that arose due to the pandemic and the sanitary measure take to save lives, and to promote cohesion for a resilient Europe. For this purpose, the EU Recovery Plan will tap the entire potential of the EU budget by mobilising targeted financial means towards sectors and regions most affected and through different instruments. Financial mobilization is based on three main pillars: supporting Member States' recovery, kick-starting economy and learning lessons from the crisis. Particular consideration will be put on the protection and creation of jobs while ensuring that this support is reaching out to everybody according to solidarity and fairness principles. However, prospects for economic growth and unemployment rates are gloomy and people desire to get back to a pre-COVID-19 state as soon as possible.

Incoming data and macroeconomic projections show that all European and international institutions agree on the severity of the current situation. According to the International Monetary Fund (IMF) forecasts of June 2020, the European economy is experiencing an exceptional and severe contraction, accompanied by a high degree of uncertainty about the economic outlook. The EU real GDP is expected to contract by 9.3 percent in 2020 and to grow by 5.7 percent in 2021, while returning to its 2019-level only in 2022. More recent estimates confirm how difficult rebirth of economic activity will be until health risks abate¹.

Figure 1: IMF forecast on EU GDP development, Real GDP (Q4 2019 = 100)



Source: IMF, World Economic Outlook.

The challenge that the European Union currently faces is unprecedented. The recovery from the COVID-19 shock requires a vigorous stimulus to Member States' economies together with a calibrated policy mix, as nowadays

*"...the overarching policy goals are not one, but two: to save lives now, and to ensure that Europe emerges with a greener and safer economy for the long run, one where future generations can thrive equitably."
(Thomsen, 2020)*

¹ The World Economic Outlook released in October set at -8.3% the contraction of EU real GDP in 2020, while its growth in 2021 is reset at 5.2 percentage points. See IMF at <https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020>

The recovery strategy will operate in a unique window of opportunity to foster a shift towards sustainable development. According to UNDP², investing in green economies and restoring the balance between people and planet is crucial, and “Like a double helix, the SDGs and the COVID-19 pandemic response are intertwined and cannot be tackled by a piecemeal approach.”

The crisis induced numerous changes in the economy (e.g. reorganising value chains, modernising and further digitalization of the businesses, closure of businesses) as well as in the society (reinforcing teleworking, local consumption etc.) and the environment (e.g. reduced contamination during lockdown). Abrupt changes that were perceived as impossible proved to be feasible. It is time to take advantage of the additional flexibility to make a step towards a more sustainable society. Additionally, large scale EU initiatives like the Green Deal offer a great transformational potential that can be harnessed by the EU Recovery Plan. Designing the EU recovery in line with the principles of sustainable development is essential to ensure an inclusive recovery in which no one is left behind and where our socio-economic systems regrow in a more sustainable way without harming the environmental systems in which they are embedded.

The UN Agenda 2030 and its Sustainable Development Goals (SDGs) provide a blueprint for such a development path. The framework is based on the cornerstone of leaving no one behind and spans over 17 goals and 169 targets (UN, 2015). It strives for global peace and prosperity for the people while simultaneously respecting the Earth’s resources within its planetary boundaries. The achievement of these overarching objectives needs to be guided by respective partnerships. More specifically, the goals address aspects of poverty, food security, health, education, gender equality, issues related to water quality and availability, energy access and clean energy production, decent work and economic growth, resilient infrastructure, sustainable industrialisation and promotion of innovation, inequalities, sustainable cities, sustainable consumption and production, climate change, water-related and land-based ecosystem conservation, peace, justice and effective governance and finally aspects of global partnerships to ensure an effective implementation of the SDGs.

Figure 2 summarises the thematic cornerstones of the framework and illustrates the interconnectedness of the three different sustainable development dimensions: economic, social and environmental. As the wedding cake model indicates, economic growth cannot provide prosperity to the people without a fair society, and both cannot be achieved without respecting the ecological capacities of its underlying ecosystems (Stockholm Resilience Centre, 2016).

Figure 2: SDG Wedding cake model



Source: Stockholm Resilience Centre, 2016.

² <https://feature.undp.org/covid-19-and-the-sdgs/>

As pointed out in the EU Reflection paper 'Towards a Sustainable Europe by 2030' the EU has a convenient starting position to become a frontrunner in the global sustainability transformation by setting global standards and helping to reap social and economic benefits (EU, 2019). However, Covid-19 proves to challenge and hamper this sustainability transformation and reports from various international organisations already indicate that the pandemic will set back the SDG implementation on many levels (UN, 2020; Sachs et al., 2020; Naidoo and Fisher, 2020). As the deck of cards is being reshuffled, Europe is at the crossroads where a sustainable development pathway can be pursued, if impelled appropriately by the EU Recovery Plan. The political guidelines of the President of the European Commission attribute a central role to the Agenda 2030 and its SDGs and frame sustainable development as the cornerstone of the national and European policies. The Recovery Plan shall also be aligned with these high priorities, supporting and boosting SDGs implementation. This report contributes to a better understanding of how the EU Recovery Plan relates to the SDGs framework by applying a text mining approach that automatically links key documents of the Plan with the SDGs, at goals and targets level. This mapping reveals potential strengths and weaknesses of the EU recovery strategy with respect to SDGs, highlighting its focal points (i.e. SDGs that are more addressed in the Plan) and indicating allegedly neglected thematic areas (i.e. SDGs with very limited coverage).

2 The core of the EU Recovery Plan

The EU Recovery Plan strives to harness the full potential of the EU budget in order to counteract economic and social damages caused by the COVID-19 pandemic. It embodies an ambitious plan designed to kick-start the European economy while ensuring that jobs are protected, and the single market is strengthened. Support is made available to everyone – not only across the EU but also to the EU’s global partners. As a successful implementation of the Plan will require large-scale investments on various levels, necessary financial resources shall be mobilised in three following ways: through a reinforced long-term budget of the EU (2021-2027), through the Next Generation EU recovery instrument that is raising capital on the financial market to further boost the EU budget, and with a support package for jobs and workers, business and Member States.

According to the Communication ‘The EU budget powering the Recovery Plan for Europe’ published at the end of May (COM 2020, 442 final, page 4),

“Every programme and every euro in this package will be used to tackle the most crucial recovery needs, as identified in the Commission’s needs assessment. These proposals focus on where the EU budget can make the greatest difference, complementing and amplifying the essential work under way in the Member States.

The package is built on three pillars: tools to support Member State efforts to recover, repair and emerge stronger from the crisis; measures to boost private investment and support ailing companies; and the reinforcement of key EU programmes to draw the lessons of the crisis and make the single market stronger and more resilient.”

In this Communication, the three main pillars were synthesized in Figure 3. A comprehensive description of each action is presented in the next sub-sections.

Figure 3: Main initiatives of the EU Recovery Plan, by pillar



Source: COM(2020) 442 final.

2.1 Support Member States in Recovering

The support to the Member States is embedded within the European Semester and strives for a just transition in which investments shall be fostered and economic reforms facilitated. Technically, the support is implemented through various instruments:

- Recovery and Resilience Facility (RRF), to foster economic and social resilience and reduce divergences among Member States³;
- REACT-EU, to increase cohesion support to Member States;
- Cohesion Policy, to reach a long-term recovery and avoid asymmetries among Member States;
- Reinforced Just Transition Mechanism to promote the so called green transition toward a climate neutral, resource efficient and circular economy.

³ The intrinsic link between RRF and European semester is well addressed in the Annual Sustainable Growth Strategy 2021 (COM(2020)575) which calls for temporarily adapt the European Semester to the launch of the Recovery and Resilience Facility, as well as in the Guidance to Member States - Recovery and Resilience Plans (SWD(2020)205) which highlight that “Member States should look at the full set of country-specific recommendations addressed to them by the Council, in particular under the 2019 and 2020 Semester cycles.”

Furthermore, according to the adjusted Commission Work Programme 2020, where EC policy objectives are grouped following six headline ambitions (A European Green Deal, A Europe fit for the Digital Age, An Economy that works for People, A Stronger Europe in the World, Promoting our European Way of Life, A new push for European Democracy), many initiatives are considered essential or supporting a quick and sustainable recovery; for example the Strategy for Smart Sector Integration, the Renovation Wave Strategy, the Strategy for Sustainable and Smart Mobility, the Digital Services Act, the Reinforcing of the Youth Guarantee or the White Paper on an Instrument on Foreign Subsidies.

2.2 Kick-start the economy and help private investment

By supporting key sectors and technologies through investments into key value chains, including those crucial to the twin green and digital transitions, the EU aims to kick-start the European economy. Instruments proposed in COM (2020) 442 final (pages 7-9) for the kick-start are:

- a strengthened InvestEU programme (and its key feature, the Strategic Investment Facility to provide resources for strategically important businesses);
- a new Solvency Support Instrument to provide solvency support and partial guarantee against losses;
- a reinforced European Investment Fund to increase support to small and medium enterprises.

2.3 Learning the lessons from the crisis

Under this pillar, global partners will receive support along with key programmes that will play a vital role in future crises. Main instruments proposed in COM (2020) 442 final (pages 9-13) are:

- Reinforced RescEU, the Union's Civil Protection Mechanism to respond to future health crises;
- a reinforced Horizon Europe programme for research and innovation;
- a New EU4Health Programme to support health challenges;
- additional instruments of solidarity for global partners like a new External Action Guarantee, the European Fund for Sustainable Development reinforcement and the humanitarian aid instrument increase;
- other programmes to build resilience and deliver on strategic priorities (Digital Europe Programme, Connecting Europe Facility, Single Market Programme, Erasmus Plus, Create Europe, Common Agricultural Policy, European Maritime and Fisheries Fund, Asylum and Migration Fund, Integrated Border Management Fund, Internal Security Fund, European Defence Fund (EDF), pre-accession assistance funds for Western Balkans);
- more flexible emergency tool with special instruments like the EU Solidarity Fund (EUSF), the European Globalisation Adjustment Fund (EGF) and the Solidarity and Emergency Aid Reserve.

2.4 Mobilisation of resources

This sub-section synthesizes conclusions of the special meeting of the European Council held on 17 to 21 July 2020⁴, where many of the initiatives presented in the previous sub-sections were confirmed.

The support to EU recovery is confirmed to be unprecedented. The reinforced Multiannual Financial Framework (2021-27) will provide 1100 billion EUR, the emergency European Recovery Instrument (New Generation EU) will provide 750 billion EUR and the safety nets for workers, business and sovereign endorsed by the European Council will provide 540 billion euro⁵. According to COM(2020) 442 (pages 1-2), *"Applying conservative estimates of the leverage effect of the multiannual financial framework and Next Generation EU, the total investment that could be generated by this package of measures amount to EUR 3.1 trillion."*

2.4.1 EU Funds Redirection

- 1) The new Multiannual Financial Framework 2021-27 and Next Generation EU according to the Council Conclusion of 21 July 2020

The new Multiannual Financial Framework (MFF) represents the traditional long-term EU budget and provides the resources necessary to drive forward the EU agenda and to cope with additional needs resulting from the

⁴ European Council 2020, Special Meeting of the European Council (17, 18, 19, 20 and 21 July 2020) - Conclusions <https://data.consilium.europa.eu/doc/document/ST-10-2020-INIT/en/pdf>

⁵ This voice accounts for three actions: Support to mitigate Unemployment Risk in an Emergency (SURE), Pan-European guarantee fund for loans to companies (European Investment Bank) and Pandemic crisis support for Member States (European Stability Mechanism).

present pandemic. After extensive consultations, the Council Conclusions released on 21 July 2020 an ambitious package expressing a balanced solution for all Member States to mitigate the socio-economic damage of the pandemic. The comprehensive package of €1 824.3 billion combines the MFF (1074.3 billion) and the Next Generation EU (NGEU) (750 billion). The MFF groups expenditures in seven main areas, summarized in the Table 1. According to the Council Conclusion (page 10), *“The grouping of expenditure in Headings and policy clusters is designed to reflect the Union’s political priorities and provide for the necessary flexibility in the interest of efficient allocation of resources. In addition, the reduction in the number of programmes aims to ensure coherence and promote synergies.”*

Table 1: Budget of the MFF 2012-27 (EUR billion, constant 2018 prices)

| Heading | Goal | Programme/Instrument | Committed Budget (July 2020) | Share |
|---|--|---|------------------------------|-------|
| 1.Single Market, Innovation and Digital | strategic actions for research, innovation, digital transformation and competitiveness | Large scale projects, Horizon Europe, InvestEU, Connecting Europe Facility, Digital Europe Programme | 132.8 | 12.4 |
| 2.Cohesion, Resilience and Values | EU convergence, cohesion and resilience supporting investments, job and growth | Economic, social and territorial cohesion (Cohesion policy: European Regional Development Fund (ERDF), European Social Fund Plus (ESF+), Cohesion Fund (CF)); Resilience and values (RescEU, Health Programme, Creative Europe, Eurojust) | 377.8 | 35.2 |
| 3.Natural Resources and Environment | agricultural, maritime and fisheries policies, environment and biodiversity | Common Agricultural Policy based on two main pillars, Market measures and direct payments and rural development | 356.4 | 33.2 |
| 4.Migration and Border Management | management of external borders, migration and internal security | Asylum and Migration Fund, Integrated border management fund, European Border and Coast Guard Agency (EBCGA) | 22.7 | 2.1 |
| 5.Security and Defence | internal security, crisis response, nuclear decommission and defence | Internal Security Fund, Europol, European Defence Fund, Connecting Europe Facility | 13.2 | 1.2 |
| 6.Neighborhood and the World | coordination between external and internal policies | Neighborhood, Development and International Cooperation Instrument, European development Fund, Humanitarian Aid Instrument, Common Foreign and Security Policy, Overseas Countries and Territories, Instrument for Pre-Accession | 98.4 | 9.2 |
| 7.European Public Administration | efficiency and effectiveness of the workers of the European public administration | Administrative expenditure of the institutions | 73.1 | 6.8 |
| TOTAL | | | 1074 | 100 |

Source: European Council Conclusions, 21-07-2020.

The level of commitment for the first three headings, namely Heading 1 ‘Single Markets, Innovation and Digital’, Heading 2 ‘Cohesion, Resilience and Values’ and Heading 3 ‘Natural Resources and Environment’ is 867 billion, representing 80,8% of the total multiannual budget.

Together with MFF reinforcement, the NGEU instrument will provide additional resources for EU activity raising capital on the financial market to foster a sustainable and resilient recovery. It represents indeed a quick and effective effort, namely the core of the proposed recovery measures. It is as well an expression of solidarity principle as provides significant spending potential without increasing national debts.

“The Recovery effort [...] is significant, focused and limited in time. Significant because the effects of the crisis are far-reaching. Focused because it must target the regions and sectors that are most hit by the crisis. Limited in time because the MFF and the rules governing it remain the basic frame for the Union’s budgetary planning and implementation.” (European Council, 2020, Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020) – Conclusions, page 2)

Funds borrowed by the Commission on the capital market amount to 750 billion EUR, basically up to 360 billion EUR of loans and up to 390 billion EUR of expenditure. The main policy areas of EU action are not boosted up with the same strength, in order to drive more resources where the need is greater, as the following table shows.

Table 2: Budget of the Next Generation EU (EUR billion, constant 2018 prices)

| Programmes | Amount | % |
|----------------------------------|---------------|------------|
| Recovery and Resilience Facility | 672.50 | 89.7 |
| ReactEU | 47.50 | 6.3 |
| Horizon Europe | 5.00 | 0.7 |
| InvestEU | 5.60 | 0.7 |
| Rural Development | 7.50 | 1.0 |
| Just Transition Fund | 10.00 | 1.3 |
| RescEU | 1.90 | 0.3 |
| Total | 750 | 100 |

Source: Own elaboration from European Council, 2020, Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020) – Conclusions, page 5

Recovery and Resilience Facility (RRF) is the domain where NGEU funds are principally directed (90%, meaning 673 billion EUR) to support investments and reforms in Member States.

“70% of the grants provided by the RRF shall be committed in the years 2021 and 2022. The remaining 30% shall be fully committed by the end of 2023.” (European Council, 2020, Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020) – Conclusions, page 5)

Payment will be performance-based, meaning that Member States will receive the funds once they have demonstrated that they have been implementing their plans as agreed. The Commission will assess payment requests for recovery and resilience plans presented by Member States where reforms and investment agendas are proposed. Positive assessments will be linked to several criteria (consistency with the country-specific recommendations, growth potential, job creation and economic and social resilience, green and digital transition) currently under negotiation. The Council will then approve these assessments by qualified majority on a Commission proposal. According to the Annual Sustainable Growth Strategy 2021 (COM(2020) 575 final, page 13) “...it will be crucial that Member States engage as soon as possible in a broad policy dialogue including social partners and all other relevant stakeholders to prepare their recovery and resilience plans” and “...putting the Recovery and Resilience Facility into action is a joint endeavour that consists of many parallel steps. The Commission calls on the European Parliament and the Council to agree as quickly as possible on the legislative act so that the Facility becomes operational as from 1 January 2021”.

A relevant share of the total amount of the NGEU, (48 billion EUR, 6,3% of the total flows) is directed to the instrument ReactEU, the main mechanism for fostering EU policy cohesion. Other instruments financed are the Just Transition Fund (10 billion EUR), part of the Just Transition Mechanism held to reach climate targets; the

Rural Development (7,5 billion EUR), namely the second pillar of the Common Agricultural Policy; Horizon Europe (5 billion EUR) to finance research, development and innovation based on excellence; InvestEU (5,6 billion EUR) which support the EU policy goals regarding sustainability, competitiveness and inclusive growth; and finally RescEU (1,9 billion EUR), the Union's Civil Protection Mechanism.

2) Other funds

To redirect EU funds to help Member States, the EU not only provides additional €3.1 billion unlocked from the 2020 budget, but redirects €37 billion from structural funds to support EU countries and their citizens in their fight against the pandemic and up to €800 million through the EU Solidarity Fund, which has been amended to provide support to Member States affected by public health crises like the current one.

In May 2020 with respect to the priority of supporting jobs, businesses and the economy, EU leaders endorsed a €540 billion package of three immediate safety nets for workers, businesses and Member States⁶ and called for the package to be operational by the 1st of June 2020.

- I. **Jobs and workers net:** The “Temporary Support to mitigate Unemployment Risks in an Emergency” (SURE) is a new instrument that will provide loans based on guarantees provided by Member States to hardest-hit countries that urgently need it to ensure that workers receive an income and businesses keep their staff, helping providing much stability to the economy. SURE represents a temporary support to help people keep their job during the crisis. The scheme provides loans to member states of up to €100 billion to cover part of the costs related to the creation or extension of national short-time work schemes.”
- II. **Businesses net:** the Pan-European guarantee fund for loans to companies is a €25 billion European guarantee fund financed by EU Member States pro rata to their shareholding in the European Investment Bank and/or other institutions. It “will provide loans up to €200 billion for companies with a focus on small and medium-sized enterprises (SMEs) throughout the EU.”
- III. **Member States net:** the Pandemic Crisis Support has been established as a relevant safeguard for euro area Member States affected by the COVID-19 shock. It is available to all euro area Member States for amounts of 2% of the respective Member's GDP as of end-2019, to support domestic financing of direct and indirect healthcare, cure and prevention-related costs due to the COVID-19 crisis. It “is based on an existing precautionary credit line, adjusted in light of the COVID-19 crisis. It can provide loans up to a total value of €240 billion.”

2.4.2 Monetary Policy

In March 2020, the European Central Bank promoted the Pandemic Emergency Purchase Programme (PEPP)⁷, “a non-standard monetary policy measure to counter the serious risks to the monetary policy transmission mechanism and the outlook for the euro area posed by the coronavirus (COVID-19) outbreak”. The PEPP is a temporary asset purchase programme of private and public sector securities. Recently, the Governing Council decided to increase the initial €750 billion envelope for the PEPP by €600 billion to a total of €1,350 billion.

2.4.3 Flexibility in EU rules

Member States will also have greater flexibility in terms of state aid measures, relaxed fiscal rules and structural funds.

State aid measures enable Member States to support, in a timely manner, citizens as well as companies facing economic difficulties due to the outbreak of the COVID-19 virus. Member States can design plenty support measures in line with existing EU rules and can grant financial support directly to consumers. Member States can as well compensate companies for the damage directly caused by the present exceptional occurrences and help them cope with liquidity shortages and needing urgent rescue aid.

Furthermore, the Commission propose to apply full EU fiscal flexibility. As the current pandemic is considered an unusual event outside the control of government, exceptional spending rules can be accommodated. Moreover, in the very likely case of negative growth, the Commission recommends adjusting the fiscal efforts

⁶ See European Council page: COVID-19: the EU's response to the economic fallout:
<https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-economy/>

⁷ See ECB PEPP webpage:
[https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html#:~:text=The%20ECB's%20pandemic%20emergency%20purchase,\(COVID%2D19\)%20outbreak](https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html#:~:text=The%20ECB's%20pandemic%20emergency%20purchase,(COVID%2D19)%20outbreak)

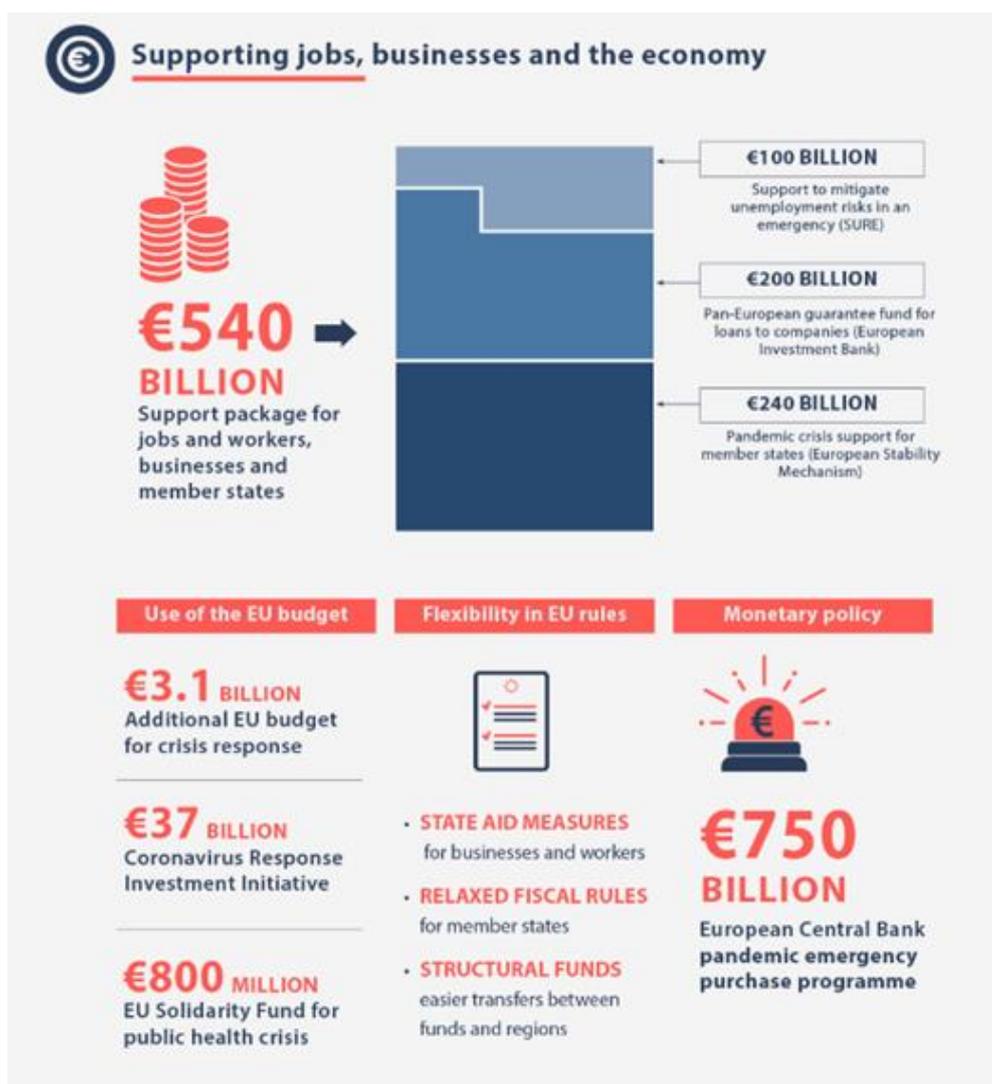
required from Member States and proposes to activate the general escape clause to accommodate a more general fiscal policy support. This would let to suspend the fiscal adjustment recommended by the Council in case of a severe economic downturn.

Finally, in the effort of taking swift action to quickly release funding from the EU budget for tackling the COVID-19 crisis, the rules of the structural and investment funds have been amended allowing Member States to spend unused money to mitigate the impact of the pandemic instead of returning it to the EU budget. Member states will also have larger flexibility to make transfers between cohesion policy programs so that redirect funds where the need is greater. The scope of the EU Solidarity Fund has also been amended to include public health emergencies in addition to natural disasters, to help countries meet people's immediate needs during the current pandemic.

According to the Council Conclusion of 21 July 2020 (page 8), “the February proposal introduced a number of increased flexibility measures in the areas of cohesion and agriculture. In view of the effects of the COVID-19 crisis, a second flexibility package is added concerning the implementation rules under the Cohesion Policy and the Common Agricultural Policy as well as the thematic concentration of European Regional Development Fund support.” Furthermore, as explained before, outside the MFF, the Commission endorse four Flexibility Instruments, thematic special instruments to respond to specific unforeseen events only used in case of need.

The summary of the European Institutions actions is presented in the following sheet, published by the Council of the European Union. It gives a clear idea of the magnitude of the stimulus actually given to the overall European economy.

Figure 3: Overview of EU funding measures in accordance with the Recovery Plan



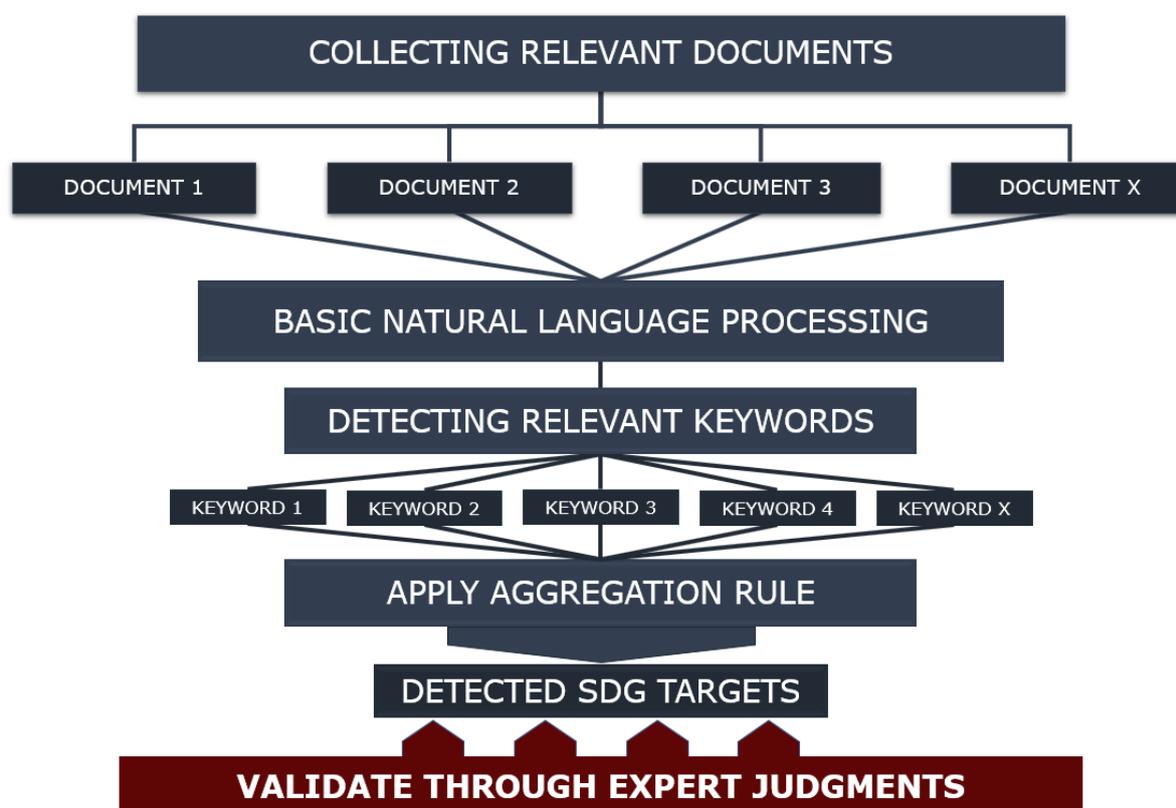
Source: Council of the European Union, General Secretariat, 01-07-2020.

3 Mapping SDGs with the EU Recovery Plan

Mapping the EU Recovery Plan with the SDGs is necessary to evidence strengths and focal points of the Plan in the context of the sustainable development, and also contributes to highlighting allegedly weaker aspects in relation to the Agenda 2030 framework. Understanding these potential strengths and weaknesses is essential for assessing in which way the Recovery Plan can support a paradigm shift towards sustainable development that is boosting the implementation of the Agenda 2030 in a European context.

The first entry-point of the mapping is at goal-level. To provide an appropriate level of details for the analysis, the mapping is then further diving into depth by looking at SDG target-level. However, a mapping on the target-level always poses a greater challenge due to thematic overlapping of specific targets which is ultimately also hampering a clear distinction between certain targets. A systematic process of defining precise keywords is essential for counteracting this conceptual blurriness between targets. The following figure outlines the main steps in the mapping process.

Figure 4: Main steps of the mapping process



Source: Own elaboration.

3.1 Collecting relevant documents

According to the outline of the Recovery Plan endorsed on EU official webpages, different authorised papers have been collected, namely communications, regulations, factsheets and press releases. The current analysis and the results presented in the next chapter refer to a database composed of 59 documents, collected from May to September 2020, mainly comprised of communications which included 16 proposals/amended proposals and the related Council conclusions⁸. The following figure outlines the main documents being at the core of the Plan (an extensive list of analysed documents can be found in Annex 1). It is important to note that the method utilised for the SDG mapping is purely based on textual analysis, and thus it doesn't consider the relative importance of different documents and instruments in relation to their associated funding volumes or their political implications.

⁸ The date of documents download is 17 of September 2020 for the first set of documents and 27 July for the Council conclusions.

Figure 5: Core documents of the EU Recovery Plan

| | |
|--|--|
| COM (2020) 440 final | "Adjusted Commission Work Programme" |
| COM (2020) 442 final | "The EU budget powering the recovery plan for Europe" |
| COM (2020) 456 final | "Europe's moment: Repair and Prepare for the Next Generation" |
| European Council conclusions, 17-21 July 2020 | "Conclusions on the recovery plan and multiannual financial framework for 2021-2027" |
| SWD (2020) 98 final | "Identifying Europe's Recovery needs" |
| COM (2020) 408 final | "Establishing a Recovery and Resilience Facility" |

Source: Own elaboration.

3.2 Defining relevant keywords

Commonly used approaches that make use of machine learning algorithms are not suitable to carry out complex text classification at SDGs target-level (Kowsari et al., 2019), where texts need to be assigned to one of 169 classes (the SDGs targets). Instead, counting identified keywords relevant to each target offers a simple approach to map given texts with the SDG framework. However, the definition of keywords is crucial and not straightforward, as targets may address complex multidimensional concepts that can be difficult to grasp with a specific set of keywords. Furthermore, targets may also thematically overlap, especially targets capped under one goal – making a clear distinction between them a challenging task.

The keywords were assigned to each target through a textual analysis of the target descriptions and a set of selected documents from Eur-Lex portal⁹. In fact, prior to the present mapping, a larger exercise has been carried out by the JRC, where EU policies were mapped with the SDGs (Miola et al., 2019). In the first stage, this mapping was done manually by scanning relevant policy documents for links with the SDG framework. In a second stage, this mapping exercise was updated and carried out in an automated way by counting relevant keywords in a selection of documents related to a specific policy¹⁰. As the second stage updated the older version of the mapping, the results from the first stage served as validation set for the newly defined keywords. The keywords were defined by experts in an iterative process. After defining an initial set of keywords for each target, these keywords were counted in the given documents to detect the corresponding SDG targets and the results were compared with the results of the old mapping. As the old results were approved by the DGs responsible for the specific policy initiatives, the data set served as validation set for the new mapping and its keywords. In case targets were not detected through the newly defined keywords or targets were overstated due to the generic nature of some keywords, adjustments were made accordingly to finetune the keywords describing each target. This process was repeated over several iterations in order to ensure an accurate detection of keywords that eventually leads to meaningful results regarding the mapping of SDG targets.

Finally, the set of keywords used for the analysis of the Recovery Plan was further checked and improved by JRC experts through the textual analysis of the documents of the three pillars. Due to the diverse nature of SDG targets, the number of keywords per target varies across the framework. While some targets may be represented by a higher number of keywords than other targets, the specificity or simplicity of individual keywords can largely impact the detection of targets and thus, counterbalance alleged biases introduced by the different number of keywords per target. Furthermore, a duplication of keywords across different targets was avoided, even though keywords of different targets can be similar when targets thematically overlap with each other.

⁹ <https://eur-lex.europa.eu/homepage.html>

¹⁰ Detailed results of the two mapping exercises are available at <http://knowsdgs.jrc.ec.europa.eu/>

3.3 Basic text mining steps and natural language processing

As many of the defined keywords were fairly complex in nature and usually consisted of a collection of words, a detection of these keywords in the document text can be constrained by different aspects: plural or singular form of the words, order of the words, different prepositions in between the relevant words, varying conjugations or synonyms. On the one hand, some of these issues can be solved in the process of defining the right keywords, by capturing synonyms and considering different possible orders of keyword combinations. On the other hand, natural language processing and its text mining techniques are applied to both – the list of keywords and the selected documents – in order to process the text in a way that keywords can be better detected in the text. Besides basic processing steps like lowercasing of words, removal of special characters and numbers, a customised set of defined stop-words can be removed from the text corpus and words can be stemmed to increase the likelihood of keywords being detected. For instance, when looking at target 2.4 on sustainable food production systems, the keyword “sustainable food system” has been defined (see table 3). After stemming, this keyword becomes “sustain food system”. When applying the basic text mining steps (stemming, stop words, lowercasing, special character removal, etc.) to the text of a given document different forms can potentially be detected: sustainable food system, sustainable food systems, sustainability of food systems, sustainability within food systems, etc.. In this way, different forms of these keywords addressing the same topic can be detected without having to consider all different potential varieties of these words. However, this example also illustrates the importance of an accurate definition of keywords where these aspects are considered appropriately. Additionally, the order of keywords is relevant and thus, keywords in different order need to be defined as well (e.g. “food systems and their sustainability” should be covered by “food systems sustainability”). For better understanding, the table below provides an example of keywords defined for SDG target 2.4.

Table 3: Keywords defined for Target 2.4.

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

Keywords: sustainable food, resilient agricultural practices, sustainable agriculture, soil quality, organic farming, Sustainability of food systems, food system sustainability, food production system sustainability

Source: Own elaboration.

Special cases like hyphenated words or abbreviations (e.g. RD, R&D, HIV) need to be considered respectively. By applying these text processing steps, the complexity of the original text from the documents as well as of the text from the keywords is being simplified to an extent that keywords can be more easily detected in the text and with greater frequencies.

3.4 Validation of results

Once the counting of keywords is done, the keyword frequencies need to be aggregated to the target-level. While the aggregation of different keywords and their frequencies to the target-level is straightforward, the interpretation of the data is more challenging. There can be a difference in the relevance of a potentially detected target in the text when there is only one detected keyword that was counted multiple times or when there are several keywords relating to a target that were individually detected less frequently.

Furthermore, the process of text generalisation outlined in section 3.3 may lead to false positives being detected. There are different approaches available to address these potential flaws. In case of large amounts of text data, more automated methods can be applied that consider the length of different documents and put it in relation to the average text length of documents in order to retain or discard detected targets whose number of detected keywords and their corresponding frequencies are above or below a specific threshold. These thresholds can be changed according to the distribution of text lengths across the entire data set by taking different percentiles into account. This method has been applied in the context of a EU Policy Mapping exercise and proved to be effective when processing larger amounts of text data. In the case of the EU Recovery Plan the amount of text data allowed for a qualitative expert assessment of the findings to ensure consistency and reliability of the results. Consequently, targets detected through a small number of keywords had to be checked manually in order to ensure that the text was referring to the particular target to avoid false positives.

mainstream climate action in the Union's policies and to the achievement of an overall target of 25 % of the EU budget expenditures supporting climate objectives.” [Extracted from the COM 2020, 405 final, page 18]

The economic sustainability, as the capacity to use resources efficiently and responsibly in order to operate in a sustainable manner, is also mentioned in the Plan, concerning the implementation of reforms and investments by Member States to support recovery and enhance resilience (COM 2020, 409 final).

Lastly, the social dimension is one of the priorities of the Plan, notably by implementing the European Pillar of Social Rights. In the scope of the Technical Support Instrument, for example, there are specific objectives which are related to the fight against poverty and for income equality, the promotion of social inclusion, gender equality, adequate social security and social welfare systems. Moreover, the principle of ‘leave no one behind’ of the Agenda 2030 is mentioned in the Plan several times. This means that the specific needs of vulnerable countries and people need to be addressed.

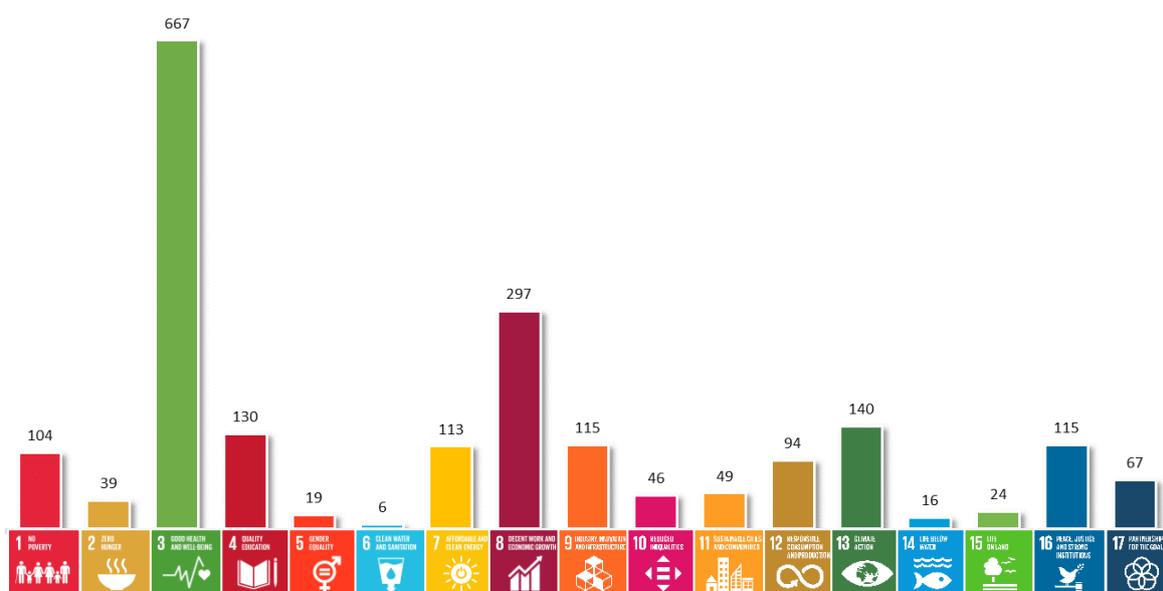
4.1 Results from the mapping analysis

The results of the text mining analysis confirmed strong connection between the Recovery Plan and the specific targets set in the 'UN 2030 Agenda for Sustainable Development'. Overall, the mapping identified more than 280 keywords, detected almost 2000 times in the documents, associated with 94 targets out of 169. As already described in chapter 3 concerning the methodology, the keywords used to detect the targets are specific words that are strictly linked to the target, usually an expression of multiple words describing a specific concept (see table 3 as example).

The results refer to the detection of keywords throughout a set of documents which are part of the Recovery Plan (overall **59 documents analysed**, collected from May to September 2020), as listed in Annex 1. As described in the previous chapter on methodology, this preliminary screening of SDGs in the Plan considers all the texts as equally relevant, not taking into account the different financial resources allocated to each action. However, as RRF represents 90% of NGEU funding, we also provide a separate analysis to it.

As illustrated in figure 8, the semantic analysis of the Plan highlighted that all goals are addressed, with a strong predominance of keywords related to SDG 3 on health and SDG 8 on economic growth and employment. At target level, the text analysis detected 94 targets, from 1 to 12 for each goal, as shown in figure 9 where the size of the bubbles is proportional to the number of keywords detected for each target. The overall list of identified targets is provided in table 3.

Figure 7: Results of the SDGs mapping at goal level (*aggregated count of keywords by goal*)



Source: Own elaboration.

Figure 8: Results of the SDGs mapping at target level (aggregated count of keywords by target)



Source: Own elaboration.

In particular, many keywords relate to **SDG 3** ‘Ensure healthy lives and promote well-being for all at all ages’ (detected 667 times, equal to 32% of the total) and SDG 8 on ‘Sustainable economic growth, employment and decent work for all’ (keywords detected 297 times, 14% of the total). As illustrated in figure 8, these are the two predominant goals that the text mining analysis identified, perfectly in agreement with the context and the scope of the plan itself.

The most important target, detected 340 times along the documents, is 3.d “Strengthen the capacity of all countries for early warning, risk reduction and management of national and global health risks”. This is exactly what the Recovery Plan aims at, tackling the challenges of the Covid-19 crisis, developing a global management of the safety risk to human health and foster resilience.

Other two important targets are addressed, as part of the SDG 3 concerning health. Target 3.8 referring to the universal health coverage (“including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all”) was detected 180 times over the text, while target 3.4 (“Reduce pre-mature mortality from non-communicable diseases through prevention and treatment, promote mental health and wellbeing”) was detected 110 times. The programme will address non-communicable diseases, since they have shown to be strong determinant of mortality from COVID-19 (COM 2020, 442 final). In addition, wellbeing promotion is one of the objectives of the plan, and particularly of the EU4Health Programme.

In the frame of **SDG 8** on economic growth and employment, the target more frequently detected in the text is 8.5 regarding the achievement of “full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”. In the plan specific attention is directed to youth unemployment and the need to invest resources to support youth employment and skills, including through the implementation of Youth Guarantee schemes, with “*measures aimed at facilitating school-to-work transition as well as adequate capacities of employment services*”. Member States should allocate resources also to decrease the rate of young people aged 15 to 29 not in employment, education or training (NEET), in line with target 8.6 (COM 2020, 447 final, pages 8-9).

Other two important targets related to SDG 8 are 8.1 and 8.3. The first is “Sustain per capita economic growth”, which is the objective of basically all measures planned in the proposal, as the injection of resources into the system to support investments and reforms as well as to improve long-term recovery represents per se a strong flywheel to economic growth. Similarly, the target 8.3 is exactly the focus of the Recovery Plan: “Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage formalization and growth of micro-, small- and medium-sized enterprises including through access to financial services”.

Besides these two main goals, 3 and 8, the mapping identified also targets pertaining to other SDGs, for example to **SDG 13** on climate action. In particular, target 13.2 “Integrate climate change measures into national policies, strategies and planning”, is in line with the objective to achieve EU climate-neutrality by 2050

and the European Green Deal, which announced a Just Transition Mechanism to provide means for facing the climate challenge while leaving no one behind (COM 2020, 453 final). As outlined in the Communication “Europe’s moment: Repair and Prepare for the Next Generation”, public investments in the recovery should respect the green oath to “do no harm”, and “the investment guidelines for the new Solvency Support Instrument will also reflect the need to prioritise green investments” (COM 2020, 456 final, pages 6-8). The European Green Deal and the digital transition remain the indispensable reference points for Europe’s longer-term competitiveness. The proposal for the InvestEU Programme strongly endorses the Paris Agreement on Climate Change as well as the Sendai Framework for Disaster Risk Reduction, taking into account their principles to feature the design of the InvestEU Fund (COM 2020, 403 final, page 24). Moreover, in the Guidance to Recovery and Resilience Plans, Member States are invited to explain to what extent they will contribute to achieving the 2030 climate targets, as well as climate neutrality by 2050 and other environmental goals (SWD 2020, 205 final, page 5).

Another important goal found in the Plan is **SDG 4** on quality education and lifelong learning opportunities, especially with reference to target 4.4 “substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”. In particular, the focus of the Plan is to strengthen the digital skills, since the crisis has shown their importance for children, students, teachers, trainers and all the workers. The Commission is coming forward with a Skills Agenda for Europe and an updated Digital Education Action Plan. In the Guidance to Member States Recovery and Resilience Plans there is specific reference to “reskill and upskill” the working age population, and to strengthen digital skills, reducing the digital divide (SWD 2020, 205 final, pages 7-10). Moreover, the European Social Fund Plus (ESF+) should help progression within education and training and transition to work, support lifelong learning and employability, adapted to different target groups such as persons with disabilities. As outlined in the proposal “*the ESF+ should be used to promote equal access for all, in particular for disadvantaged groups, to quality, non-segregated and inclusive education and training, from early childhood education and care through general and vocational education and training, notably apprenticeships, and to tertiary level, as well as adult education and learning*” (COM 2020, 447final, page 7).

SDG 9 on industry, innovation and infrastructure, is mentioned as well in the plan, and in particular target 9.5 “Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, including encouraging innovation”. In the Plan there is a specific reference to foster innovation, investing in digital infrastructure. Furthermore, target 9.1, regarding “Develop quality, reliable, sustainable and resilient infrastructure, to support economic development and human well-being” is addressed. Specifically, the Member States are allowed to use additional resources in operations contributing to the transition towards a digital and green economy, infrastructure providing basic services to citizens (COM 2020, 451 final, page 10).

SDG 16 on “Peace, justice and strong institutions” is addressed in the Plan, as an important area of intervention in order to develop a global system of rules to tackle the crisis. In line with this target, the Recovery and Resilience Facility can promote EU values and support Union fundamental rights like dignity, equality and justice. The main target detected under the goal is 16.3 “Promote the rule of law at the national and international levels and ensure equal access to justice for all”, also thanks to digital recovery which improve access of citizens to justice. Another Other two important targets are 16.a “Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels” and 16.5 “Substantially reduce corruption and bribery in all their forms”. In the Annual Sustainable Growth Strategy, the “respect for the rule of law and good governance, effective institutions, independent and efficient justice systems, quality public administrations, robust anti-corruption, anti-money laundering and anti-fraud frameworks” are all listed as important determinants of a Member State’s business environment (COM 2020, 575 final, page 11). In the Guidance to Member States Recovery and Resilience Plans the importance of anti-corruption and anti-fraud strategies is stressed, to provide a supportive business and administrative environment and to prevent the misuse of EU funding (SWD 2020, 205 final, page 11).

As regards **SDG 7** on energy, the Plan relates to both targets 7.2, that aims to increase the share of renewable energy, and 7.3 for the improvement in energy efficiency. The first is one of the ambitions of the Green Deal, fully embodied in the Recovery Plan, whose support will preserve investments in renewable energy projects. In particular, the new Strategic Investment Facility will invest in technologies key for the clean energy transition, such as renewable and energy storage technologies, clean hydrogen, batteries, carbon capture and storage and sustainable energy infrastructure. In the Annual Sustainable Growth Strategy, the green transition is explicitly mentioned, and Member States should accelerate the reduction of emission through fast deployment of renewable energy and hydrogen (COM 2020, 575 final, page 5). In the Guidance to Member States Recovery and Resilience Plans, there are many examples of typical reforms and investments linked to the green transitions, such as investment in renewable hydrogen technology (SWD 2020, 205 final, pages 18-19).

SDG 1 on poverty is mainly addressed in the text through targets 1.3 and 1.5. The first aims to implement appropriate social protection systems and measures for all, especially the poor and the vulnerable. While target 1.5 stresses the needs to “build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to extreme events and disasters”. As outlined in the Plan, investments are necessary to fill the gaps in coverage that have become apparent in the crisis, for instance for those self-employed. In the amended proposal for the European Social Fund Plus we read that *“The Fund shall support, complement and add value to the policies of the Member States to ensure equal opportunities, access to the labour market, fair working conditions, social protection and inclusion”* (COM 2020, 447 final, page 10).

Concerning SDG 1 on poverty, also other targets were detected. For example, for target 1.b regarding the needs of “sound policy frameworks, and accelerated investments in poverty eradication actions”, the fight against poverty and excessive income inequality is mentioned among the scope of the Technical Support Instrument (COM 2020, 409 final, page 15). Whereas for target 1.2 (“reduce at least by half the proportion of men, women and children of all ages living in poverty”) in the European Social Fund Plus (ESF+) there is a specific reference to child poverty, in line with the European Pillar of Social Rights which states that children have the right to protection from poverty, and to equal opportunities (COM 2020, 447 final, pages 1-8).

SDG 12 on sustainable production and consumption is detected in the plan through target 12.5 regarding the “reduction of waste generation through prevention, reduction, recycling and reuse”. Towards the transition to a green Europe, investing in a smart circular economy has enormous potential to get Europe’s economy growing, as highlighted in the proposal. In their Recovery and Resilience Plans, Member States should explain how the measures will help to meet the targets for the transition to a circular economy and towards sustainable food systems, for waste prevention and recycling (SWD 2020, 205 final, pages 5-16).

The global partnership for sustainable development (**SDG 17**) is embodied in the Plan through target 17.13 that aims to “Enhance global macroeconomic stability, including through policy coordination and policy coherence”. The economic policy coordination of the recovery from the crisis is discussed in the context of the European Semester. To foster the global partnership the Commission proposes the European Fund for Sustainable Development “to support partners – in particular in the Western Balkans, the Neighbourhood and the rest of Africa – in their efforts to fight and recover from the impact of the pandemic, in cooperation with international partners such as international financial institutions, the United Nations and the World Health Organisation” (COM 2020, 442final, page 11). The proposal embodies also target 17.14 on policy coherence, underling that Member States “shall optimise mechanisms for coordination to avoid duplication of effort and ensure close cooperation” (COM 2020, 447 final, page 11), and the principle of subsidiarity, as set out in Article 5 of the Treaty on European Union.

SDG 11, on sustainable cities and communities, is mentioned in the Plan especially with regards to target 11.2 on clean transport and clean urban mobility. For the green transition key enabling, transformative technologies and game-changing innovations where the investment is strategically important for the Union’s industrial future, include also sustainable transport technologies, including renewal and retrofitting of mobile assets using these technologies (COM 2020, 403 final, pages 3-4). Investments in sustainable mobility are also part of the Annual Sustainable Growth Strategy, where Member States are encouraged to invest in public transport and in infrastructure that supports the shift towards more sustainable and smart mobility. In relation to target 11.6, it is also written that “measures addressing transport can bring significant greenhouse gas emission reductions and improvements to air quality” (COM 2020, 575 final, page 6). Moreover, in the proposal there is reference to target 11.3, with the European Regional Development Fund (ERDF) for sustainable urban development (COM 2020, 451 final, page 3).

SDG 10 on inequalities is also tackled by the Plan, with specific reference to targets 10.2 and 10.3. The first one focuses on the empowerment of “the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status”. While the second is “Ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices, promoting appropriate legislation, policies and actions in this regard”. These are the directions for a recovery that must be fair and inclusive, in line with the European Pillar of Social Rights. As expressed in the proposal, equality is at the heart of the recovery (COM 2020, 456 final). All programmes implemented under the ESF+ strand, as well as the operations supported by the Employment and Social Innovation strand, *“shall ensure equality between men and women, promote equal opportunities for all, without discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation throughout their preparation, implementation, monitoring and evaluation”* (COM 2020, 447 final, page 11).

SDG 2 on “food security and sustainable agriculture” is tackled in the Plan with reference to the additional resources of EUR 4 billion for the Common Agricultural Policy, and of EUR 15 billion for the European Agricultural Fund for Rural Development to support rural areas. Regarding the sustainability of food systems (target 2.4), one of the main initiatives is the “Farm to Fork strategy”, a corner stone of the European Green

Deal (COM 2020, 381 final), which strengthens the supply chains and addresses the issues that were exposed during the crisis. The strategy sets out the measures needed to create more efficient, climate-smart systems that provide healthy food, while securing a decent living for EU farmers and fishermen.

As regards the remaining goals, the text mining analysis succeeded to find references also to them, although they are mentioned fewer times in the Plan. This means that they are not the main focus of the proposal, but they are still considered to be part of the overall framework. For instance, the issue of environmental degradation and the need to restore biodiversity loss link the Recovery Plan to **SDG 15** regarding the protection and the sustainable use of terrestrial ecosystems, forests and lands. The Plan underlines the importance to protect and restore biodiversity and natural ecosystems, as a key to boost resilience and prevent the emergence and spread of future outbreaks. This redoubles the importance of the recently adopted EU Biodiversity Strategy for 2030 and the upcoming EU Forest Strategy (COM 2020, 456 final).

SDG 5 on gender equality is also tackled by the Plan, with reference to the general target 5.1 “End all forms of discrimination against all women and girls everywhere”. The Plan stresses the need to support gender equality and non-discrimination, to close the gender pay gap and achieve a gender balanced labour market. In one of the main documents, it is clearly written that “measures to support gender equality and non discrimination are all necessary for a balanced recovery package” (COM 2020, 442 final, page 12).

DG 14 on “sustainable use of the oceans, seas and marine resources” is linked to the additional resources of EUR 500 million for the European Maritime and Fisheries Fund (EMFF). Specifically, the EMFF may contribute to mutual funds which pay financial compensation to fishermen for economic losses caused by the crisis. Moreover, in the Guidance to Member States Recovery and Resilience Plans, there is an explicit reference to the protection of marine and water resources. Member States are asked to explain how the plan will contribute to reaching the environmental goals and targets, including the sustainable use and protection of water and marine resources (SWD 2020, 205 final, pages 5-16).

The same reference is valid also for **SDG 6** regarding the “availability and sustainable management of water and sanitation for all”, since the Staff Working Document, published in September 2020, makes reference to water management as well as the support of blue economy (SWD 2020, 205 final, pages 5-16). The Plan does not make explicit reference to target 6.2 on access to adequate and equitable sanitation and hygiene, as comprehensive measures related to this target were widely implemented across all Member States (for instance the provision of disinfectants in public areas). A similar result was also highlighted by ASviS, the Italian Alliance for Sustainable Development, that recently provided an analysis of the SDGs and European policies, from Green Deal to Next Generation EU (ASviS, 2020). Even though there are no specific planned actions related to SDG 6, other initiatives are strictly linked to this goal like the “From Farm to Fork” strategy or the Biodiversity Strategy. Furthermore, it should be noted that existing legislation is already addressing this goal considerably (e.g. the Water Framework Directive, the European Union’s commitment to strengthen the sustainable and integrated management of water resources, or within the New Consensus on Development in which the importance of universal and equitable access to safe drinking water, sanitation, and hygiene is being reaffirmed).

Summarizing the results at the goal level, the analysis revealed that the EU Recovery Plan touches upon various aspects of the Agenda 2030 and addresses all of the 17 SDGs, obviously in a different manner and efforts. Table 4 provides the list of all the UN targets detected in the Plan through the textual analysis. These results present a snapshot of SDGs mapped to the current documents underlying the Recovery Plan and publicly available until September 2020. It is worth to remember that the analysis does not take into account the varying importance of different instruments in relation to their funding volumes or political implications. Furthermore, the mapping of SDGs in policy document is in continuous evolution, as new and future steps are being taken towards a European Recovery. For example, the implementation of the proposed Plan by Member States could be monitored through the analyses of the national Recovery and Resilience Plans (RRP) that are currently under preparation and about to be adopted in 2021.

Table 4: List of UN targets detected in the EU Recovery Plan

| | |
|--|--|
|  | GOAL 1: NO POVERTY |
|  | End poverty in all its forms everywhere |
| 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day | |
| 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions | |

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.4 By 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance

1.5 By 2030 build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

1.b Create sound policy frameworks, at national, regional and international levels, based on pro-poor and gender-sensitive development strategies to support accelerated investments in poverty eradication actions

2 ZERO HUNGER



GOAL 2: ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

3 GOOD HEALTH AND WELL-BEING



GOAL 3: GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all at all ages

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

4 QUALITY EDUCATION



GOAL 4: QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

5 GENDER EQUALITY



GOAL 5: GENDER EQUALITY

Achieve gender equality and empower all women and girls

5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

7 AFFORDABLE AND CLEAN ENERGY



GOAL 7: AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

7.3 By 2030, double the global rate of improvement in energy efficiency

7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support

8 DECENT WORK AND ECONOMIC GROWTH



GOAL 8: DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



GOAL 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

10 REDUCED INEQUALITIES



GOAL 10: REDUCED INEQUALITIES

Reduce inequality within and among countries

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

11 SUSTAINABLE CITIES AND COMMUNITIES



GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns

12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries

12.2 By 2030, achieve the sustainable management and efficient use of natural resources

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

13 CLIMATE ACTION



GOAL 13: CLIMATE ACTION

Take urgent action to combat climate change and its impacts

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

13.2 Integrate climate change measures into national policies, strategies and planning

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

14 LIFE BELOW WATER



GOAL 14: LIFE BELOW WATER

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.b Provide access for small-scale artisanal fishers to marine resources and markets

15
LIFE
ON LAND



GOAL 15: LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

16
PEACE, JUSTICE
AND STRONG
INSTITUTIONS



GOAL 16: PEACE, JUSTICE AND STRONG INSTITUTIONS

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children

16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all

16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime

16.5 Substantially reduce corruption and bribery in all their forms

16.6 Develop effective, accountable and transparent institutions at all levels

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels

16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime

16.b Promote and enforce non-discriminatory laws and policies for sustainable development

17
PARTNERSHIPS
FOR THE GOALS



GOAL 17: PARTNERSHIP FOR THE GOALS

Strengthen the means of implementation and revitalize the global partnership for sustainable development

17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

17.5 Adopt and implement investment promotion regimes for least developed countries

17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed

17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation

17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence

17.17 Encourage and promote effective public, public private and civil society partnerships, building on the experience and resourcing strategies of partnerships

17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts

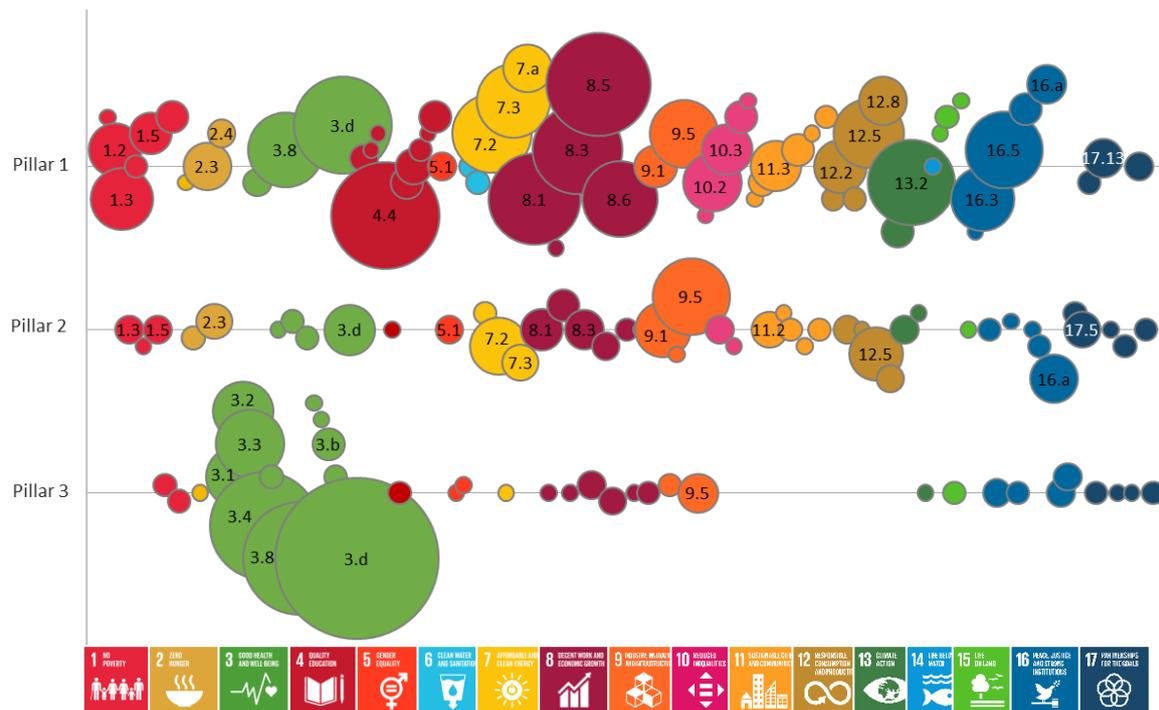
4.2 Detailed mapping of the Recovery Plan's three pillars

A text analysis was also carried out to assess how SDGs are addressed in the 3 main pillars of the Plan:

- Pillar 1: Support Member States in Recovering
- Pillar 2: Kick-start the economy and help private investment
- Pillar 3: Learning the lessons from the crisis.

As visualized in figure 10, the distribution of SDGs and targets in the Plan shows a great deal of variety in every pillar.

Figure 9: Results of the SDGs mapping at target level, by pillar



Source: Own elaboration.

The **first pillar** (Support Member States in Recovering) represents 90% of the funding, and it is the one showing a broader coverage of SDGs. It pays particular attention to SDG 8, addressing many of its targets: 8.5 on employment and decent work for all, 8.1 on economic growth, 8.6 on young NEET (not in employment, education or training), 8.3 on job creation, entrepreneurship, creativity and innovation. Moreover, many other SDGs are detected predominantly in the first pillar: SDG 4 on education, and in particular target 4.4 to increase relevant skills for employment, SDG 10 on inequalities, with reference mainly to promote inclusion (target 10.2) and to reduce the inequalities of outcome (target 10.3), SDG 13 on climate change measures (target 13.2), SDG 1 on poverty, with reference to social protection systems (target 1.3) and resilience of poor people (target 1.5), SDG 7 on renewable and efficient energy, SDG 16 on peace, justice and strong institutions, SDG 11 on sustainable urbanization, and lastly SDG 2 on food security, in particular with reference to agricultural productivity and incomes of small-scale food producers (target 2.3).

Looking in detail at one of the main instruments of the first pillar, the **Recovery and Resilience Facility** (RFF), the mapping analysis highlights references to at least 9 SDGs and 15 targets (figure 11). The RFF is focused to support investments and reforms to improve the economic and social resilience of Member States, and to support the digital and green transition; the mapping of SDGs linked to the document evidenced that the main transformations needed to enable the transitions are addressed in the plan.

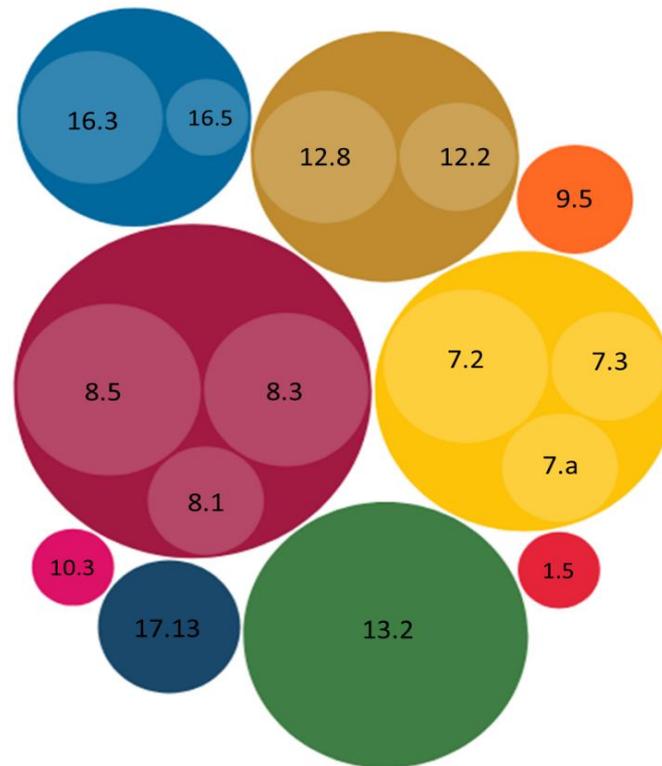
The majority of keywords detected refers to SDG 8 on economic growth (mainly targets 8.1. to sustain economic growth, 8.3 on fostering job creations and entrepreneurship and 8.6 to reduce youth unemployment).

Goal 7 on Clean Energy is the second most prominently addressed, and in particular target 7.2 on increasing the share of renewable energy. The RFF considers clean energy as one of the main enablers of the green transition, also supporting new jobs creation and economic grow: *"Investing in green and digital technologies,*

capacities and processes aimed at assisting clean energy transition, boosting energy efficiency in housing and other key sectors of the economic are important to achieve sustainable growth and help create jobs. It will also help make the Union more resilient and less dependent by diversifying key supply chains” (COM 2020, 408 final, page 1).

SDG 13 on climate and SDG 12 on sustainable consumption and production are also frequently detected goals in the RFF. At target level, many keywords are linked to targets 13.2, for the integration of climate change measures into policies, and also to target 12.5 on “substantially reduce waste generation through prevention, reduction, recycling and reuse”, the fundamental enabler for circular economy and for the green transition.

Figure 11. SDGs mapping of the Recovery and Resilience Facility, at goal and target level



Source: Own elaboration.

The **second pillar** of the Plan, Kick-starting the economy, is mainly focused on SDG 9, regarding sustainable industrialization and foster innovation. In particular, the two leading targets identified are 9.5 on scientific research and technological capabilities of industrial sectors, and 9.1 on reliable infrastructure to support economic development and human well-being. Other important goals detected are SDG 8 on economic growth and job creation, SDG 7 especially as regards renewable energy, SDG 12 for the reduction of waste generation, recycling and reuse (target 12.5), and SDG 17 to strengthen international cooperation.

One of the central actions of the second pillar is to strengthen the programme **InvestEU**, to mobilise private investment in strategic projects across the Union. Focusing the analysis on this specific measure, described in the proposal for a regulation COM(2020) 403 final, 13 SDGs out of 17 were detected, with more than 40 related targets. The predominant one is SDG 9, and particularly targets 9.5 and 9.1, on scientific research and reliable infrastructure respectively. Other important goals addressed are SDG 12 and SDG 7, with reference to the green transition, renewable energy technologies, and circular economy technologies (COM 2020, 403 final).

The **third pillar**, as outlined in the communication COM(2020) 456 final, includes a new **Health Programme** to support health challenges, and is mainly focused to address SDG 3, with the main target 3.d, to strengthen the capacity for early warning, risk reduction and management of national and global health risks. Other important targets are addressed, as part of the SDG 3, such as target 3.8 concerning the “universal health coverage, including financial risk protection, access to quality essential health-care services for all”, and target 3.4 on the reduction of mortality through prevention and treatment, and the promotion of wellbeing (COM 2020, 405 final).

Besides goal 3, in the pillar there are references also to employment (SDG 8), justice and strong institutions (SDG 16), research and innovation (SDG 9), international cooperation (SDG 17). The latter is well represented in the proposal to set specific instruments (the Neighbourhood, Development and International Cooperation Instrument and the European Fund for Sustainable Development) to support Western Balkans and Africa in their efforts to fight and recover from the impact of the pandemic (COM 2020, 442 final).

The third pillar plans also reinforced programmes for research and innovation, that are linked to target 9.5, yet the expected Communication on Horizon Europe research and innovation missions is scheduled on Q4 2020 (according to COM2020, 440 final). For this reason and the consequent absence of specific documents on research and innovation programmes, SDG 3 on health is currently the predominant one for the pillar.

5 Conclusions and way forward: EU Recovery – A sustainable restart

The mapping of the policy documents in the Recovery Package performed with text mining techniques provides a fast tool for monitoring the implementation of the SDGs in the EU Recovery Plan, compiling a list of goals and targets that are addressed in the proposed Plan. The benefit of this monitoring tool is to offer policy makers and stakeholders a first overview of the links of specific pillars and actions of the Plan proposed by the EC with the sustainable development goals and targets; it also helps to highlight if specific goals or targets are under-represented, thus indicating potential areas where more intervention is needed.

The analysis is performed on the set of documents composing the EU Recovery Plan publicly available from May to September 2020 (see full list in Annex 1). The outcomes of this mapping highlight that the **implementation of all the SDGs is supported**, with tangible references to several actions. The Recovery Plan acknowledges the strategic importance of building a resilient and sustainable society by supporting all the stakeholders in recovering from the pandemic shock, and by aligning its pillar initiatives with the needs of an adaptive and transformative capacity. With such an innovative and ambitious Plan, the EC demonstrates its strong commitment and political priority to pursue sustainable development, even under difficult economic conditions consequences of the pandemic crisis.

The three pillars act in an integrated way on all the elements of the socioeconomic system that have been transversally impacted by the pandemic shock, and cover the implementation of measures to prevent, prepare, protect and promote adaptation from future shocks by building resilient capacity (Giovannini et al., 2020). On this front, the Commission is certainly a frontrunner to support the transition towards a more sustainable, fair, just, and resilient EU.

The pillars of the Recovery Plan strive to achieve full recovery with short-, medium-, and long-term actions. The results of this study show that, while virtually all the goals are covered in the plan, the major emphasis is reasonably projected towards the systemic elements (healthcare and economic productivity) that suffered the most during the early phase of the pandemic.

The mapping of SDGs presented here is based on textual analyses of the Recovery Plan's underlying documents, and therefore doesn't take into account the different funding volumes of the different pillars. However, it must be considered that the first pillar (*"Support Member States in Recovering"*) comprises about 90% of the allocated funds, and therefore deserves some additional consideration. This pillar has the broader coverage in terms of Goals and targets, with a predominance of detected keywords related to Goal 8. Its main instrument is the Resilience and Recovery Facility (RRF), which is strongly focused on the green and digital transitions; the analysis of the text evidenced links with 9 SDGs and 15 targets, with goals 7, 8, 12 and 13 dominating in terms of detected keywords. All these goals, and the related identified targets, are pointing to key enablers to achieve the main objectives of the RRF, that is digital and green transition: economic and employment rate growth, clean and renewable energy, climate change mitigation and adaptation, and circular and green economy.

Continuous monitoring and evaluation of SDGs implementation is fundamental throughout the execution of the Plan, in order to achieve an effective recovery and to synchronise the short- and long-term objectives of the recovery with the European Commission strategic agenda and the UN 2030 agenda for sustainable development. This aspect is of particular importance as the complex nature of both the shock and the recovery phase requires an integrated systemic solution. An accurate mapping of the Recovery Plan with the SDGs is useful to identify leverage points that can boost SDG implementation and ultimately lead to the desired shift in paradigms towards sustainable development.

Such leverage points can also be found when looking at the interlinkages between different SDGs. The fact that the Plan addresses a particular subset of SDGs does not mean that the implementation of the European Recovery is not impacting additional SDGs. Due to the holistic and systemic nature of the Agenda 2030, the SDGs are highly interconnected in different ways and on different levels, ultimately increasing the complexity of their implementation. Identifying the nature of this interconnectedness between different goals and targets can help to identify synergetic SDGs whose implementation may positively impact other SDGs as well as areas of caution where the focus on one SDG might compromise or hamper the implementation of other SDGs (ICSU, 2017). Understanding and considering these interlinkages within decision making processes is essential for the achievement of the SDGs. However, as Covid-19 drastically changed the underlying realities of our socio-economic systems, the general progress toward the achievement of the SDGs has been massively impacted. Indeed, the annual UN's Sustainable Development Goals Report 2020 indicates that Covid-19 may have potentially reversed decades of progress already made in various fields of the Agenda 2030, like healthcare, education or poverty, making the SDGs achievement within the next decade even more challenging. Though these setbacks and this alleged elusiveness of the SDG achievement partially began to raise concerns and doubts about the current conceptualisation of the SDG framework (Nature, 2020) and new approaches to rethink the Agenda 2030 are being introduced (Naidoo and Fisher, 2020), this is not the moment for deconstructing and redesigning the existing framework but rather for strengthening the support of the Agenda

2030 and upholding commitment to its SDGs as they continue to remain achievable and affordable (UN SDSN, 2020b). Pathways to success have already been witnessed in many areas and the SDGs should remain a guiding framework for the recovery from Covid-19 in all countries. Furthermore the 2030 agenda is designed in a way that already its pursuit provides beneficial knowledge and infrastructure for the global community even in case of partial success. Maintaining and improving the national and international monitoring capacity of SDGs performance indicators enables countries to precisely assess the areas impacted by the pandemic and the effectiveness of policies adopted for the recovery (UN Sustainable Development Goals report 2020).

However, efficient policymaking, global cooperation and financing, and clear political commitment in support of UN 2030 agenda are the critical steps for SDG achievement and implementation. The goals are a roadmap for decoupling economic development from negative environmental impacts with a strong emphasis on social inclusion in line with the principle of “leaving no one behind”.

Both the results of the mapping and the examination performed on the Recovery Plan initiatives reveal that there is a coupling between the pillars of the recovery strategy and the SDGs. Pursuing a stronger coupling between the recovery pillars and the transformation towards sustainability could also provide a valuable baseline for shaping the strategy in the subsequent phases of the recovery.

After all, also the recent High-Level Political Forum on Sustainable Development focused the attention on “Accelerated action and transformative pathways”, highlighting the potential of the Agenda 2030 for becoming the road map for a sustainable recovery on the global level. “We were not on track to deliver when COVID-19 hit, and the road ahead is even steeper,” UN Deputy Secretary-General Amina J. Mohammed said in her closing intervention. “We can turn this around if we stay true to the 2030 Agenda.”

The Covid-19 pandemic is undoubtedly posing a threat to the implementation of the Agenda 2030 and massively hampers the achievement of the SDGs. However, a sustainable recovery should fully embrace the principles of the Agenda 2030 and its SDGs, indicating the right track to long-term sustainable growth. This post-crisis period provides a unique window of opportunity to progress on really sustainable pathways which are also resilient to global disruptions. Our assessment indicates that the current conceptualisation of the Recovery Plan puts the European Union in a good position to seize this opportunity and become a frontrunner in the global challenge of achieving sustainable development through a sustainable recovery in which no one is left behind.

An interesting development of this first mapping of the Plan proposed by the EC is to verify if Commission’s ambitions are maintained at European level in the final text adopted by the legislators and at national level, by **monitoring the Plan’s implementation process through the Member States’ Recovery and Resilience Plans (RRP), once these will be finalised in the course of 2021.**

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List of abbreviations and definitions

| | |
|------|---|
| COM | Communication |
| DGs | Directorate Generals of the European Commission |
| EC | European Commission |
| EU | European Union |
| IMF | International Monetary Fund |
| JRC | Joint Research Centre of the European Commission |
| MMF | Multiannual Financial Framework |
| NGEU | Next Generation EU |
| PEPP | Pandemic Emergency Purchase Programme |
| SDGs | Sustainable Development Goals |
| SURE | Support to mitigate Unemployment Risk in an Emergency |
| UN | United Nations |

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Annexes

Annex 1. List of documents analyzed in the mapping

| Communications | |
|---|--|
| COM(2020) 111 final | Proposal for a Regulation amending Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports |
| COM(2020) 112 final | Communication - Coordinated economic response to the COVID-19 Outbreak |
| COM(2020) 112 final ANNEX | Annex to Communication - Coordinated economic response to the COVID-19 Outbreak |
| COM(2020) 113 final | Proposal for a Regulation amending Regulation (EU) No 1303/2013, Regulation (EU) No 1301/2013 and Regulation (EU) No 508/2014 as regards specific measures to mobilise investments in the health care systems of the Member States and in other sectors of their economies in response to the COVID-19 outbreak [Coronavirus Response Investment Initiative] |
| COM(2020) 114 final | Proposal for a Regulation amending Council Regulation (EC) No 2012/2002 in order to provide financial assistance to Member States and countries negotiating their accession to the Union seriously affected by a major public health emergency |
| COM(2020)223 final | Proposal for a Regulation amending Regulation (EU) No 223/2014 as regards the introduction of specific measures for addressing the COVID-19 crisis |
| COM(2020) 403 final | Proposal for a Regulation establishing the InvestEU Programme |
| COM(2020) 405 final | Proposal for a Regulation on the establishment of a Programme for the Union's action in the field of health –for the period 2021-2027 and repealing Regulation (EU) No 282/2014 (“EU4Health Programme”) |
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| COM(2020) 446 final ANNEX | Annex to the Proposal for a Council Regulation establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 pandemic amending Council Regulation (EU, EURATOM) No 1311/2013 laying down the multiannual financial framework for the years 2014-2020 |
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| COM(2020) 451 final | Proposal for a Regulation amending Regulation (EU) No 1303/2013 as regards exceptional additional resources and implementing arrangements under the Investment for growth and jobs goal to provide assistance for fostering crisis repair in the context of the COVID-19 pandemic and preparing a green, digital and resilient recovery of the economy (REACT-EU) |
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| SWD(2020) 205 final Part 1 & Part 2 | Commission SWD Guidance to Member States Recovery and Resilience Plans |
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| REGULATION (EU) 2020/460 | REGULATION of 30 March 2020 amending Regulations (EU) No 1301/2013, (EU) No 1303/2013 and (EU) No 508/2014 as regards specific measures to mobilise investments in the healthcare systems of Member States and in other sectors of their economies in response to the COVID-19 outbreak (Coronavirus Response Investment Initiative) |
| REGULATION (EU) 2020/558 | REGULATION of 23 April 2020 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 |

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| PE-CONS 5/20 | Regulation amending Regulations (EU) No 1301/2013, (EU) No 1303/2013 and (EU) No 508/2014 as regards specific measures to mobilise investments in the healthcare systems of Member States and in other sectors of their economies in response to the COVID-19 outbreak (Coronavirus Response Investment Initiative) |
| PE-CONS 6/20 | Regulation amending Council Regulation (EC) No 2012/2002 in order to provide financial assistance to Member States and to countries negotiating their accession to the Union that are seriously affected by a major public health emergency |

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