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COMMISSION STAFF WORKING DOCUMENT

Analysis of the recovery and resilience plan of Romania

Accompanying the document

Proposal for a COUNCIL IMPLEMENTING DECISION

on the approval of the assessment of the recovery and resilience plan for Romania

{COM(2021) 608 final}

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1. EXECUTIVE SUMMARY

The COVID-19 pandemic had and continues to have a strong economic, social and sanitary impact on Romania, amplifying further some of its structural weaknesses. Private consumption collapsed during the spring lockdown in 2020 and external demand shocks and supply chain disruptions hurt exports. Despite this, real GDP contracted only by 3.9% in 2020, one of the lowest contractions in the EU. The employment support schemes put in place at the onset of the pandemic have mitigated the pandemic's impact on the labour market, with unemployment increasing only moderately from 3.9% in 2019 to 5% in 2020. The government implemented several fiscal consolidation measures in 2021 and the budget deficit increased to 9.2% of GDP in 2020 and is set to decline thereafter. In 2021, the economy has started to recover swiftly. The Commission 2021 Summer Forecast expects real GDP to grow at 7.4% and 4.9% in 2021 and 2022 respectively, while the Commission 2021 Spring Forecast estimates unemployment to peak at 5.2% in 2021 before declining to 4.8% in 2022.

Romania's Recovery and Resilience Plan amounts to EUR 29 181 842 750. Romania has requested EUR 14 239 689 750 of non-repayable financial support and EUR 14 942 153 000 in loans under the Recovery and Resilience Facility. Together, this represents 13.09% of 2019 GDP. The Plan contains 171 measures (64 reforms and 107 investments), structured around six pillars and fifteen components.

The Plan addresses a significant subset of long-standing structural challenges as identified in relevant country-specific recommendations (CSRs) addressed to Romania by the Council in 2019 and in 2020. The full digitalisation of the tax administration and gradual phase out of excessive tax incentives are aimed at improving the quality and sustainability of public finances. The Plan also contributes to ensuring the sustainability and fairness of the public pension system. Healthcare reforms, accompanied by digitalisation investments, are expected to improve access, cost-efficiency and resilience of healthcare. Evidence-based decision making, long-term planning and public consultations and measures aimed at improving the public procurement process will contribute to improving the quality and effectiveness of the public administration leading to better absorption of EU funds. By strengthening the independence and increasing the efficiency of the judiciary, improving access to justice, and stepping up the fight against corruption, the plan aims to address the main issues related to respect of the rule of law in the country in accordance with the relevant case-law of the Court of Justice of the European Union and taking into account recommendations made in the Cooperation and Verification Mechanism (CVM) reports, the GRECO reports and the opinions of the Venice Commission, and the Rule of Law Reports. Key reforms on minimum wages setting, on strengthening corporate governance of state-owned enterprises and on social dialogue also address long-standing CSRs. The Plan also introduces a unitary, inclusive and quality early-childhood education and care system accompanied by investments in childcare. The Plan promotes sustainable and digital investments and supports research and development activities. Key reforms on decarbonisation, on the establishment of a government cloud and the deployment of the electronic identity card contribute to supporting the twin green and digital transition[1].

The Plan represents to a large extent a comprehensive and adequately balanced response to the economic and social situation of Romania, therefore contributing appropriately to the six policy pillars referred to in Article 3 of the Recovery and Resilience Facility Regulation[2]. The Plan and its components are built around the six policy pillars and the financial allocation is evenly distributed. Taking into account the specific challenges and the financial support to Romania, the Plan represents a comprehensive, and adequately balanced response to the economic and social situation.

By tackling long-standing vulnerabilities and structural deficiencies, the Plan is expected to contribute to the economic and social recovery and the long-term development of the country. Measures to support private investments, particularly for SMEs, have the potential to attract investment and foster jobs and a stronger business environment. The Plan's focus to address education challenges and promoting green and digital skills is expected to improve Romania's long term growth potential and foster inclusive growth by reducing disparities, with potential spill-over effects into the labour market. The Plan aims to contribute to the implementation of the European Pillar of Social Rights, through the promotion of policies for children and youth. Reforms and investments are expected to respond to structural problems in areas where the pandemic crisis has taken its toll, with a focus on health, education, and the business environment. In addition, investments in basic transport infrastructure in currently poorly connected regions and digital connectivity in rural areas will be key to bringing the country closer together.

The Plan has a strong focus on the green transition, with flagship reforms on the phasing-out of coal and the decarbonisation of road transport. The reforms and investments are expected to significantly decarbonise the energy sector and unlock the potential for renewables deployment. The strong focus on energy and resource efficiency of private and public buildings, greening of road and rail transport, sustainable urban mobility and the deployment of charging infrastructures for electric vehicles, climate change adaptation and circular economy, will also facilitate the green transition in all sectors of the economy. Measures supporting climate change objectives account for 41% of the Plan's total allocation. With several reforms and investments in the forestry sector, such as the adoption of the National Forest Strategy and the ecological reconstruction of habitats and the conservation of species, the Plan is also expected to contribute to biodiversity conservation and restoration. All measures in the Romanian Plan have passed the ex-ante assessment of the 'do no significant harm' principle. In addition, for some measures, the

[1] Romania submitted its National Reform Programme on 11 June 2021. The information provided in the National Reform Programme is being considered and jointly assessed in this Staff Working Document together with the Recovery and Resilience Plan.
[2] Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility.

‘do no significant harm’ principle has been reflected in the milestones and targets specified in the Annex to the Commission Proposal for a Council Implementing Decision.

As regards the digital transition, the measures contributing to digital objectives account for 20.5% of the financial allocation, which is above the 20% minimum requirement of the RRF Regulation. While component 7 (Digital transformation) is fully dedicated to the digitalisation of the public administration (both horizontally and by sectors), connectivity, cybersecurity and digital skills, including large scale deployment of electronic identity cards, reforms and investments on the digital transition are found throughout the Plan across the different components. In particular, the digitalisation of education is expected to contribute to developing the skills of both students and teachers, doubled by the efforts to modernise school laboratories and to create smart labs. Investments in the digitalisation of road and rail transport are also expected to contribute to the digital transition. Furthermore, the digitalisation of businesses plays a prominent role in the Plan and is expected to increase the competitiveness and innovation potential of both SMEs and large companies. The Plan also has a significant cross-border dimension, as Romania aims to support companies participating in a multi-country project on microelectronics, which is planned to be implemented as an Important Project of Common European Interest (IPCEI).

Reforms and investments in the Plan are expected to have lasting environmental and socio-economic impacts. In particular, they are aimed at introducing structural changes to the functioning of the public administration in Romania. The Plan is also expected to have a lasting impact in terms of policy design, implementation and monitoring, especially for policies that regulate the use of natural resources and the environment. The pension and social reforms should also contribute to reducing disparities and inequality.

The Plan adequately describes the arrangements for its implementation and monitoring. Milestones, targets and indicators of the Romanian Plan are of sufficient quality to enable an effective monitoring of the Plan’s implementation. Overall, milestones and targets are sufficiently specific, clear and comprehensive to ensure that their completion can be traced and verified. The large number of milestones and targets is commensurate to the size of the reform and investment package. However, the implementation of the plan will crucially hinge on the administrative and implementation capacity of the implementing bodies which will need to be closely monitored.

Romania has provided individual cost estimates for the measures in the Plan. The information and evidence submitted by Romania, following additional information requested by the Commission during the assessment phase of the Plan, show that the justification on the amount of the estimated total costs is “to a medium extent” reasonable, plausible, commensurate, and in line with the principle of cost-efficiency. Romania provided sufficient information and evidence that the amount of the estimated total costs of the Plan to be financed under the Facility is not covered by existing or planned Union financing.

The Plan provides sufficiently detailed information on the national set-up for the RRF internal control system. The Plan shows a well-defined structure of the internal control system and the outline of the control system seems appropriate. Mechanisms and tools to address double funding appear adequate. Pending actions shall be completed prior to the first instalment.

The Romanian Recovery and Resilience Plan is structured around six coherent pillars supporting the common objectives of the Plan and the recovery of Romania's economy. Each pillar is built around components including consistent packages of mutually reinforcing and complementary reforms and investments.

Chart: Assessment scheme

(1) Balanced Response	(2) CSRs	(3) Growth, jobs…	(4) DNSH	(5) Green target	(6) Digital target	(7) Lasting impact	(8) M & T	(9) Costing	(10) Control Systems	(11) Coherence
A	A	A	A	A	A	A	A	B	A	A

2. RECOVERY AND RESILIENCE CHALLENGES: SCENE-SETTER

2.1. Macroeconomic outlook and developments since the 2020 country report

Romania's economy grew robustly in recent years and weathered the downturn in 2020 relatively well. Past economic growth relied mostly on private consumption stimulated through repeated tax cuts and increases in the minimum and public wages, resulting in high and growing current account and budgetary deficits already before the onset of the COVID-19 pandemic. In 2020, private consumption collapsed during the spring lockdown and external demand shocks and supply chain disruptions hurt exports. Despite this, real GDP contracted only by 3.9 %, one of the lowest contractions in the EU. As in most countries, the evolution of economic activity throughout the year was very volatile: following an increase of close to 1 % in the first quarter, real GDP sank by 11.8 % in the second quarter before rebounding in the third and fourth quarters by 5.5 % and 4.6 % respectively. The limited number of restrictions in the second half of the year and the relatively robust evolution of wages, supporting consumption, were behind the relatively moderate downturn in economic activity in 2020. The budgetary deficit widened further to above 9 % of GDP, while the current account deficit increased to around 5 % of GDP. Following two years of growing inflationary pressures, inflation declined in 2020 to 2.3 %, mainly as a result of a sharp drop in energy prices.

The macroeconomic scenario contained in Romania's Recovery and Resilience Plan assumes a quick recovery of the economy. According to the Plan, real GDP is set to increase by 4.9 % in 2021 and accelerate further to 5.2 % in 2022 and 5.6 % in 2023, before slightly decelerating to 5.2 % in 2024. Over the lifetime of the Plan, the Romanian RRP envisages an average annual growth of real GDP of 4.8 %, which is comparable to the average growth of the Romanian economy in the five years preceding the COVID-19 crisis. The main growth drivers are a strong increase in investment and, to a lesser extent, a recovery in private consumption. Net exports will reduce growth. Following the decline in 2020, inflation is set to increase to an annual average of 3.1 % in 2021 and decline to 2.4 % in 2024.

The macroeconomic scenario expects unemployment to have peaked in 2020. The employment support schemes put in place at the onset of the pandemic have mitigated the pandemic's impact on the labour market, with unemployment increasing only moderately from 3.9 % in 2019 to 5 % in 2020. In 2021, unemployment is forecast to decline to 4.8 % and continue falling to 4 % in 2022 and to 2.8 % in 2026 (see Table 1, below). After a reduction of 1.8 % in 2020, the number of employees is forecast to pick up in 2021 by 0.2 % and increase further by some 0.7 % in 2022, according to the Commission's Spring Forecast. The share of people at risk of poverty or social exclusion (31.2 % in 2019) is among the highest in the EU and significantly above the EU average (20.9 %). Vulnerable groups are more likely to be at risk of poverty or social exclusion, including children, the rural population, Roma, low-skilled workers and people with disabilities. The crisis is expected to have further accentuated those inequalities.

Regional disparities in Romania are among the highest in the EU. Significant gaps across regions persist in investment, productivity, competitiveness and employment. The socio-economic consequences of the pandemic are likely to have reversed a trend of slightly reducing disparities between the capital and the rest of the regions and between urban and rural areas.

The general government budget deficit was at 9.2% of GDP in 2020 and is set to decline thereafter. The 2021 budget targets a deficit of 7.13% of GDP in cash terms (which should be around 8 % of GDP in European System of Accounts terms). The government implemented several fiscal consolidation measures in 2021, such as postponing an increase in pensions, freezing public-sector wages and cancelling certain public sector bonuses and holiday vouchers. These measures have been the starting point for a much-needed fiscal consolidation to stem growing risks to fiscal sustainability. At the same time, fiscal policy will support the economic recovery. According to the medium-term budget strategy, the government plans to gradually bring the headline deficit to below 3% of GDP by 2024 in line with the Council recommendation to Romania under the Excessive Deficit Procedure[3].

Macroeconomic imbalances have increased in the aftermath of the crisis. In February 2020, the Commission concluded that Romania was experiencing macroeconomic imbalances, in particular involving risks to cost competitiveness, a deteriorating external position and a widening current account deficit, in a context of expansionary fiscal policy and an unpredictable business environment. The current account deficit widened further in 2020 to around 5% of GDP and is set to remain elevated in 2021 and 2022. After years of improvement, the net international investment position (NIIP) worsened to some - 47% of GDP in 2020, and is projected not to improve this year or next on account of the continued elevated current account deficits. The COVID-19 crisis also led to a significant increase in the government debt, which is expected to

[3] COM(2021) 530 final and Council Recommendation of 18 June 2021 delivering a Council opinion on the 2021 Convergence Programme of Romania, OJ C 304, 29.7.2021

continue in spite of the planned fiscal consolidation. On the other hand, cost competitiveness pressures eased to some extent, despite the relatively robust performance of wages in 2020. Turning to the financial sector, most of the risks to financial stability had already abated before the onset of the pandemic due to the amendment of Government Emergency Ordinance 114/2018 adopted in January 2020. Romanian banks, which are largely foreign owned, remained well-capitalised and liquid throughout 2020. However, the roll-back of support measures could result in an increase in the number of bankruptcies and in the level of non-performing loans, with negative implications for banks' balance sheets.

Debt sustainability risks remain elevated. Following the onset of the COVID-19 crisis, government debt ratios increased (47.3% of GDP in 2020 and 49.7% of GDP forecast in 2021), albeit from a relatively low level (35.3% of GDP in 2019). Policy unpredictability remained a concern in 2020, particularly in the light of legislation with significant consequences for fiscal sustainability in the medium and long term, in particular the Law 217/2019 on pensions. The standard fiscal sustainability indicators were showing high risks already prior to the COVID-19 crisis, due to high budget deficits and the projected significant rise in ageing costs, from pensions. Despite the relatively low government debt-to-GDP ratio compared to EU average, Romania faces fiscal sustainability risks in the short term (i.e. the S0 indicator is exceeding its critical threshold). In spring 2020, the yields of the Romanian sovereign debt spiked to around 6%, raising concerns about market access. Yields have, however, decreased since then and were around 3.2% in July 2021. The Romanian sovereign debt is rated at the lowest investment grade and in 2020 all three rating agencies revised the outlook for Romanian sovereign debt from stable to negative. However, in spring 2021 the three rating agencies revised the outlook of the Romanian sovereign back to stable, on account of decreasing fiscal risks, while maintaining the rating. Overall, Romania is deemed to face high fiscal sustainability risks also in the medium term. Under a baseline scenario, the government debt level is expected to increase until 2031 unless there is a change in policies. Moreover, there are risks stemming from the high share of government debt held in foreign currency (52.1% of total, out of which 44.1% in EUR as of June 2021).

Compared with the latest Commission forecast, the macroeconomic scenario underpinning the RRP is less optimistic[4]. The Commission 2021 Summer Interim Forecast expects real GDP in Romania to grow at 7.4% and 4.9% in 2021 and 2022 respectively. Both the Romanian authorities' forecast and the Commission one include the full impact of the Recovery and Resilience Facility (RRF). For net exports, both the Commission and the Romanian authorities expect a negative contribution to growth in 2021 and 2022. Labour market projections differ

[4] In August 2021, the National Commission for Strategy and Prognosis revised real GDP growth to 7% in 2021 and 4.9% in 2022. The Romanian RRP submitted on 31 May 2021 was not updated to take into account this revised forecast.

somewhat as the RRP sees the peak in unemployment in 2020 (4.9%) with a progressive decline thereafter. In contrast, the Commission Spring forecast expects unemployment at 5.2% in 2021 with a decline to 4.8% in 2022. Inflation projections are very similar for 2021[5] while for subsequent years the available data do not allow to make a comparison. In its Spring 2021 forecast, the Commission projected a general government deficit of 8% of GDP in 2021 and 7.1% of GDP in 2022, while public debt was set to reach 49.7% of GDP and 52.7% of GDP respectively. Years beyond 2022 are currently not covered by the Commission forecast. The Romanian RRP does not include estimates for the evolution of the budgetary deficit and the government debt.

The macroeconomic scenario of the RRP was plausible at the time of the submission of the Romanian RRP. The economic scenario contained in the Plan was the basis for the preparation of the 2021 budget, the National Reform Programme, Stability and Convergence Programme and was developed by the National Commission for Strategy and Prognosis. For 2021 and 2022 it was similar to the Commission Spring forecast. Due to the better-than-expected performance of the economy in the first quarter of 2021, these RRP estimates appear now rather cautious. The macroeconomic and fiscal outlook continues to be affected by high uncertainty related to the COVID-19 pandemic and its economic consequences.

Table 1: Comparison of macroeconomic developments and forecasts

	2019	2020	2021		2022		2023	2024	2025	2026
	COM	COM	COM	RRP	COM	RRP	RRP	RRP	RRP	RRP
Real GDP (% change)	4.1	-3.9	5.1	4.9	4.9	5.2	5.6	5.2	4.2	3.8
Employment (% change)	-0.1	-1.8	0.1		0.7					
Unemployment rate (%)	3.9	5	5.2	4.8	4.8	4	3.5	3.2	3	2.8
HICP inflation (% change)	3.9	2.3	2.9	3.2	2.7			2.5		
General government balance (% of GDP)	-4.4	-9.2	-8		-7.1					
Gross debt ratio (% of GDP)	35.3	47.3	49.7		52.7					

Source: Commission Spring Forecast 2021 (COM); Recovery and resilience plan (RRP)

5 In its revised August forecast the National Commission for Strategy and Prognosis estimates CPI inflation to average 4.2% in 2021 and 3.5% in 2020. This is higher that the Commission's Summer interim forecast which estimates HICP inflation at 3.1% and 2.9% in 2021 and 2022, respectively. The difference may arise not only from the different timing of the two forecasts but also from the different compositions of the HICP and CPI consumer baskets.

2.2. Challenges related to sustainable growth, cohesion, resilience and policies for the next generation

The COVID-19 pandemic had and continues to have a strong economic, social and sanitary impact on Romania, amplifying further some of its structural weaknesses.

Smart, sustainable and inclusive growth

Several challenges persist in the Romanian business environment that should be addressed in order to support sustainable growth. Excessive red tape and the insufficient capacity of public authorities to deliver quality services, including digital services, negatively affect citizens and businesses, especially SMEs. Regulatory requirements for service providers, including regulated professions, further impede market development. 89% of Romanian businesses find that the complexity of administrative procedures is a problem when doing business, while 96% consider fast-changing legislation a hurdle. Corruption also remains a major problem for the business environment[6]. Business licencing suffers from multiple and overlapping procedures[7]. Romania has a small share of high-growth enterprises (HGEs), at around 3-4%, well below the 11% EU average. These HGEs are highly concentrated (almost exclusively in services) and face several financing constraints, especially in terms of equity and debt financing[8]. The venture capital market is underdeveloped[9] and only 2.1% of enterprises engage in research and development activities that are far below the EU average (22.6%). It is restrained to a small number of deals and sectors and concentrated in only two regions. Regulatory barriers also hamper academia-business cooperation and contributes to the low R&D innovation capacity of the private sector. Romania should support the creation of an entrepreneurial ecosystem both at local/regional and national level, while simplifying regulatory requirements for businesses through implementing principles such as 'silence is consent', 'only-once', 'one-in, one-out' and online accessibility of licencing procedures.

The delivery of major reforms and public investments is strongly linked to good governance, which still needs to be improved. Decision-making has been in a number of situations unpredictable, often resorting to government emergency ordinances, which circumvent the regular decision-making process. The quality and effective use of regulatory impact assessments and *ex post* evaluations still needs to become common practice, while a stronger

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[6] European Commission, (2020). Flash Eurobarometer *Businesses' attitudes towards corruption in the EU*. Survey number 482. Available at: https://data.europa.eu/euodp/data/dataset/S2248_482_ENG

[7] Based on a recent OECD study of business licences in Romania (SRSP 2018-funded project - Comprehensive redesign of the licensing system in Romania).

[8] Flachenecker, F., Gavigan, J., Goenaga Beldarrain, X., Pasi, G., Preziosi, N., Stamenov, B. and Testa, G. (2020), High Growth Enterprises: demographics, finance and policy measures, EUR 30077 EN, Publications Office of the European Union, Luxembourg. Annex 4.19 to the JRC Technical Report

[9] According to the latest Community Innovation Survey (CIS) (Eurostat).

framework for strategic and budgetary planning and more effective public procurement are necessary. Public consultations and the integration of feedback received from civil society are not systematic. Better prioritisation and developing high-quality projects remain a challenge, constraining the uptake of EU funds. Public procurement efficiency remains a concern. State-owned enterprises (SOEs), some key for carrying out EU investments, often do not follow existing corporate governance rules, and political appointments of interim boards have become a standard practice. Their financial performance has deteriorated over the years, with negative implications for the state budget. Tax compliance and collection remains a challenge, as is the completion of the administrative reforms to improve the performance of the National Agency for Fiscal Administration.

The weak and under-funded research and innovation (R&I) system hampers the country's prospects of economic upgrade and improved competitiveness. The institutional fragmentation of the public science base, the low public R&D funding and poor R&I policy governance have resulted in a lack of critical R&D mass, dwindling human resources, brain drain and poor science and technology performance. With R&D expenditure of just 0.48% of GDP in 2019[10], compared to its Europe 2020 country target of 2%, Romania remains among the worst performers in the EU. Public R&D investment was 0.2% of GDP, while private R&D expenditure was only 0.28% of GDP. Weak academia-business cooperation and low R&D absorption capacity among firms further hinder innovation diffusion and technological catch-up, notably among domestic firms. The quality of the research system could be improved by reforming the public science base and allocating sufficient public R&D funding in a competitive manner, while providing researchers attractive careers and opportunities. Targeted reforms and funding incentives supporting academia-business cooperation, innovative start-ups and technological catch-up among SMEs are essential for increasing competitiveness and supporting the green and digital transition.

The implementation of Research and Innovation Strategies for Smart Specialisation (RIS3) strengthened connections between various levels of governance (national, regional) and policy domains (R&I, industrial policies, regional development, higher education). Definition of investment priorities through the RIS3 Entrepreneurial Discovery Process facilitated institutional capacity-building at both national and regional level. It is important to keep on with the implementation of regional RIS3 by highlighting regional needs, and facilitating the emergence of new structures for innovation governance (e.g. regional consortia).[11]

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[10] According to preliminary data, source: INSSE.

[11] Ranga, M. (2018), Smart specialisation as a strategy to develop early-stage regional innovation systems, *European Planning Studies* 26 (11): 2125-2146.

Social and territorial cohesion

The COVID-19 pandemic outbreak affected the Romanian labour market negatively and deepened existing challenges. The unemployment rate rose in 2020, particularly affecting low-skilled people (8.1% in 2020 compared to 6.3% in 2019) and the young (youth unemployment was at 16.8% in 2020). Services targeted at decreasing inactivity and at easing access to labour market, including for vulnerable groups, remain limited. Reforms are needed to strengthen public employment services offering adequate activation measures and target upskilling and reskilling programmes while gradually phasing out short-time work schemes.

Poverty and income inequality deepened during the pandemic outbreak, and regional disparities persist, with vulnerable groups being more affected. Emergency policy measures to protect incomes during the crisis, together with the pre-existing tax-benefit system, cushioned around 86% of households' income loses, with more than two-thirds due to the temporary wage-subsidy schemes[12]. However, coverage and adequacy of social assistance is low, while the availability, quality and integration of employment, education, health and social services are limited. In addition, people with disabilities do not receive enough support for independent living and access to employment. The situation of the Roma community shows very little progress, with significant problems faced in accessing basic services (healthcare, education and housing), leading to a growing divide in a context of generally growing labour market needs for skilled labour. Housing deprivation is the highest in the EU and is detrimental to social inclusion. The social reference index[13] remained unchanged for many years and depreciated considerably in relation to the minimum wage. One in three atypical workers is at risk of severe material deprivation, while daily and seasonal workers do not have formal access to social security rights covering unemployment, maternity leave, accidents and occupational injuries. Romania would profit from increasing the coverage and adequacy of social assistance by implementing the minimum inclusion income reform initiated in 2016. It should also ensure availability of social and protective housing solutions with matching services for vulnerable groups and ensure access to social security rights for atypical workers.

The socio-economic consequences of the COVID-19 pandemic will differ across the regions of Romania due to significant investment and productivity gaps and different specialisation profiles. This entails a considerable risk of widening regional disparities. The existing challenges are likely to increase due to higher unemployment and inactivity. Large regional disparities and low productivity of some sectors have a negative impact on long-term sustainable growth. The lack of opportunities, access to services and the search for better living conditions are the main

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[12] Findings based on the Euromod model: see Christl, M., De Poli, S., Figari, F., Hufkens, T., Leventi, C., Papini, A. and Tumino, A. (2021) "The cushioning effect of fiscal policy in the EU during the COVID-19 pandemic", JRC Working Papers on Taxation and Structural Reforms, 02/2021, available at https://ec.europa.eu/jrc/en/thematic-research-fiscal-policy/jrc-working-papers-taxation-and-structural-reforms.

[13] Law 225/2021) provides for yearly indexation of the social reference index. This indexation would take effect from March 2022 and will be equal to the annual inflation rate.

cause of rural-urban divide, regional disparities and inequalities and emigration. Specific policy actions should be implemented to improve the business environment, access to basic public services in health, education and social-leisure, access to connectivity and digital skills, innovation and technology, and transport infrastructure. Complementarity with the Cohesion policy and other EU funds will be important to ensure implementation of the reforms and investments in a mutually reinforcing way.

Health, economic and social/institutional resilience

The current pandemic has exacerbated the structural weaknesses of the Romanian healthcare system. The resilience of the health system has been weakened by considerable health workforce shortages, by an acute need for medical infrastructure and equipment, insufficient training for health workers and limited continuity and integration between different levels of care. The pandemic further exposed regional disparities and the limited healthcare coverage for low-income groups, the elderly and the uninsured. Reforms and investments will be needed to strengthen the health system. Health system reform should be enacted in two main directions. Hospital departments (especially COVID-related ones), health workers and equipment need to be maintained and expanded. The coverage and accessibility of health services for all citizens need to be improved, reflecting the demographic trends and the urban-rural divide[14]. This will also require improvements to primary care, outpatient care and long-term care, and to the use of e-health and telemedicine services.

The amendments to the justice laws introduced between 2017 and 2019 raised challenges to the efficiency, quality and independence of the justice system. The current government has committed to amend the relevant legislation rapidly in line with the recommendation of the 2019 report under the CVM and to adopt concrete measures to ensure the independence of the judiciary and reverse the increasing problem of understaffing in the justice system. A first step in the direction of reversing past measures was taken by mid-February 2021 when the government approved draft legislation to dismantle the Section for the Investigation of Offences in the Judiciary. However, this draft legislation is still pending in Parliament.

Independently from Romania's RRP, and in accordance with Court of Justice of the European Union (CJEU) case law, Romania has an obligation to implement its commitments under the CVM. Romania shall take due account, under the principle of sincere cooperation laid down in Article 4(3) TEU, of the reports drawn up by the Commission on the basis of that decision, and in particular the recommendations made in those reports. The timeline of the CVM is independent and the commitments agreed in the CVM process need to be met before the CVM can be closed.

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[14] See for example, OECD/EC-JRC (2021), Access and Cost of Education and Health Services: Preparing Regions for Demographic Change, OECD Rural Studies, OECD Publishing, Paris, https://doi.org/10.1787/4ab69cf3-en.

Policies for the next generation

Improving the quality, equity and labour market relevance of education and training, and advancing basic and digital skills are crucial for economic recovery and building resilience. There is a mismatch between the labour market needs and the skills available, in a context of demographic decline. While the employment rate increased between 2016 and 2020 from 61.6% to 65.6%, over the last five years, the working age population (15-64)[15] and the labour force[16] shrank respectively by 6% and 2%, making it even more important to capitalise on existing human resources. These trends are likely to lower the contribution of labour to GDP growth, with companies being challenged in filling vacancies and finding relevant skills. The skills of graduates from vocational and higher education are not sufficiently aligned with the labour market, which also contributes to the high percentage of young people not in education, employment or training (14.7% in 2019, the second highest in the EU). The rate of early leavers from education and training is still high. The level of basic skills in reading, mathematics and science as measured by PISA, and digital skills of young people is also among the lowest in the EU. Moreover, digital infrastructure in schools needs urgent improvement, while the rural-urban gap in education and the challenges for Roma inclusion in education persist. Despite measures taken by authorities, the closure of schools due to COVID-19 and the ensuing shift to distance learning, as well as the disruption of work-based learning modules for vocational and educational training (VET) students risk worsening educational outcomes and increasing already high inequalities. In this context, the national implementation of a comprehensive skills forecasting mechanism (currently being developed as part of an EU-funded project) is crucial. Significant investment in skills development across all areas is also urgently needed.

2.3. Challenges related to the green and digital transition

Green dimension

The Recovery and Resilience Plan should contribute to the green transition and at least 37% of the financial allocation needs to contribute to climate objectives. The measures in the Plan shall contribute to achieving the 2050 climate neutrality objective, and the 2030 energy and climate targets, taking into account Member States' National Energy and Climate Plans. The measures should also contribute to meeting environmental targets for waste, water, pollution control, sustainable mobility, biodiversity protection and restoration, afforestation/reforestation, marine and water resources, and support the transition to sustainable food systems as well as to a circular economy as appropriate, while ensuring that nobody is left behind as a result of the transition.

[15] Eurostat data code lfsa_pgacws
[16] The active population of the same age group 15-64

Romania has some of the highest rates of carbon intensity and energy poverty in the EU. Based on the Commission's assessment of Romania's final National Energy and Climate Plan, the country is on track to meet its 2020 energy and climate targets, but not the 2030 targets on renewable energy and energy efficiency. Moreover, as of 1 September 2021, Romania has not notified its national long-term strategy to the Commission as required under Article 15 of the Governance Regulation. Implementing the National Energy and Climate Plan will therefore require significant efforts to promote clean production and use of energy, foster building renovation and increase the energy efficiency of district heating networks. In this context, Romania will need to ensure a just and fair transition, given possible negative impacts on the country's coal-mining regions and the existing high level of energy poverty, which makes protecting vulnerable consumers essential.

Romania's renewable energy contribution to the 2030 EU level target falls below the renewable share resulting from the calculation under the Energy Union Governance Regulation. Steps should be taken to increase the share of renewables in Romania's energy mix, including through improved infrastructures, as these could increase Romania's potential for renewable power generation[17].

Investment in energy and resource efficiency is still very low, and Romania's building stock is energy inefficient. Romania has indicated its intention to go beyond a 3-4% renovation rate in its National Energy and Climate Plan[18]. At the same time, the pricing of externalities stemming from fossil fuel use, for example through a greener tax system, would provide additional support to the transition to a carbon neutral economy and contribute to higher resource efficiency in the economy. Consideration of resource efficiency in the production cycle and life cycle of products is not developed in the country.

Given the structure and evolution of the Romanian transport system, making it more sustainable and safer remains a challenge. The GHG emissions from the transport sector increased in Romania by 52% (vs an overall decrease of 65% across all sectors) over 1990-2019. In Romania, the external costs (emissions, pollution, safety, congestion) related to road, rail and inland waterway transport were estimated at EUR 22 billion annually in 2016, 97% of which

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[17] In 2017, the electricity interconnection level was 7%, below the 2020 target of 10%. The planned interconnection level by 2030 is 15.4. (*Commission Assessment of the final National Energy and Climate Plan of Romania*. Available at: https://ec.europa.eu/energy/sites/ener/files/documents/staff_working_document_assessment_necp_romania.pdf)

[18] Generally, across European cities a renovation rate of 3% in the residential sector can lead to reductions in heating and cooling energy use of up to 32.5% by 2030. See, for example, Pohoryles D.A., Maduta C., Bournas D.A. and Kouris L.A., (2020), "Energy performance of existing residential buildings in Europe: a novel approach combining energy with seismic retrofitting", Energy Build., 223, 10.1016/j.enbuild.2020.11002.

were generated by road users[19]. According to the European Transport Scoreboard 2019, the Romanian transport sector scores below the European average in all aspects of investment and infrastructure. The general condition and reliability of the road and rail networks are very poor. The infrastructure is not keeping up with the traffic demand generated by an expanding economy. The road network is among the least developed in the EU and registers one of the poorest road safety records. The reform of the railway sector is stalling. Moreover, heavy underinvestment in maintenance has reduced train speed and affected delivery times of rail freight transport. Urban transport suffers from chronic under-financing, poor sector organisation and the weak administrative capacity of local providers.

The high environmental and social costs and the low efficiency of the country's transport system require significant actions to: (i) promote a modal shift from road to rail and waterborne transport; (ii) expand electrification of the rail network; (iii) reduce emissions from road transport by promoting zero-emission vehicles and infrastructure and introducing measures in line with the "polluter pays principle"; (iv) develop sustainable urban mobility including modernisation and expansion of public transport services; and (v) increase digitalisation of all transport modes. Since Romania ranks low in the EU on road safety performance (with 96 deaths per million inhabitants vs EU average of 51 in 2019), major reforms and investments are required to improve road safety, particularly in urban and inter-urban areas.

Poor air quality in Romania has a significant impact on human health in the country[20] and Romania has so far failed to adopt and submit a national air pollution control programme, which was due by April 2019. Moving towards cleaner energy and more sustainable transport could also be one of the main means to tackle Romania's challenges on air quality. In this context, steps should also be taken to reduce and control air pollution from biomass, while continuing to ensure that energy poverty decreases. Progress on improving the air monitoring network will be important, given its serious structural shortcomings.

Romania's circular economy has potential, but the country is lagging behind in this area, particularly in the area of waste management. Romania has not yet developed a Circular Economy Strategy and Action Plan. The country also has very low rates of municipal waste recycling (14%) and needs to invest heavily in recycling in the next few years to reach the 2020

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[19] European Commission (2019), Sustainable Transport Infrastructure Charging and Internalisation of Transport Externalities, available at: https://op.europa.eu/en/publication-detail/-/publication/e0bf9e5d-a386-11e9-9d01-01aa75ed71a1

[20] The latest assessment of health impacts of PM2.5 stemming from the European Environment Agency's *2020 Report on Air Quality in Europe* attributes over 25 000 premature deaths in 2018 to air pollution in Romania.

municipal waste recycling target of 50%[21]. Overall, Romania continues to rely heavily on mechanical biological treatments and landfills (73.5% landfilling rate), including substandard and illegal landfills, while higher waste hierarchy projects are underdeveloped. A number of investments in the sector had to be phased from one programming period to the other. Romania has adopted its National Waste Management Plan in December 2017, and has recently adopted 41 county waste management plans and the waste management plan for the Bucharest Municipality that are expected to be in line with the circular economy package. These are very important planning/programmatic documents.

Romania has one of the lowest compliance rates with EU water legislation (6%) and faces the highest investment needs to reach and maintain compliance. Efforts need to be stepped up to extend and modernise drinking water and wastewater infrastructure, to ensure a sustainable service at a reasonable price. Although there has been progress in recent years, water leakages in the public network and lack of urban wastewater treatment are ongoing problems.

Romania has a diverse landscape and rich ecosystems, translating into an abundance and diversity of species, but has suffered from biodiversity loss and ecosystem degradation. Only 68.2% of its habitat types and 45.7% of its species of Community interest were in favourable conservation status in 2013-2018[22]. Throughout the last two decades, Romania has been affected by severe inland and coastal floods, droughts and land degradation, in part due to climate change. Protecting nature and reversing the degradation of ecosystems while putting in place a green infrastructure strategy is therefore necessary to preserve Romania's ecosystem and build resilience to threats like adverse effects of climate change. The current lack of integration between nature policy and other policy areas, especially in the farming sector, are obstacles to nature protection and contribute to ongoing biodiversity loss. In addition, intensive illegal logging of Romanian forests is an ongoing problem, leading to a reduction in the natural carbon sink of forests, a significant loss of biodiversity and an increase in disaster risks.

Green taxation is relatively low and Romania has not yet used green budgeting. Revenues from environmental taxes as percent of GDP are low (2.1% of GDP vs. the EU average of 2.4% of GDP in 2018). This relates to transport taxes excluding fuel (0.14% of GDP vs. the EU average of 0.46% of GDP in 2018) and taxes on pollution/resources (0% of GDP vs. the EU average of 0.1% of GDP in 2018). In 2018, Romania had no carbon emission-based vehicle taxation.

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[21] Commission's *Early Warning Report* (2018). Available at: https://ec.europa.eu/environment/waste/pdf/early_warning_report_RO.pdf and the Environmental Implementation Review 2019, Country Report Romania, available at: https://ec.europa.eu/environment/eir/pdf/report_ro_en.pdf

[22] https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trend.

The table below gives an overview of Romania's objectives, targets and contributions under Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

Table 2: Romania's objectives, targets and contributions under the Governance Regulation

	National targets and contributions	**Latest available data**	**2020**	**2030**	**Assessment of 2030 ambition level**
	Binding target for greenhouse gas emissions compared to 2005 under the Effort Sharing Regulation (%)	14% *(2018 preliminary – based on EEA estimates)*	24%	30.7%	Unambitious *(34% is the result of the RES formula)*
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	23.9% *(2018)*	24%	30.7%	Unambitious *(34% is the result of the RES formula)*
	National contribution for energy efficiency:				
	Primary energy consumption (Mtoe)	32.6	43	32.3	Low ambition
	Final energy consumption (Mtoe)	23.6	30.3	25.7	Very low ambition
	Level of electricity interconnectivity (%)	9.3%	10%	15.4%	N.A.

Source: Assessment of the final National Energy and Climate Plan of Romania, SWD (2020) 922 final.

Digital dimension

The Recovery and Resilience Plan should contribute to the digital transition and at least 20% of the financial allocation needs to contribute to digital objectives. The measures in the Plan should, inter alia, contribute to the digital transformation of the economic and social sectors (including public administration, public services, and the justice, health or education systems). The objective of the measures in the Plan should be to improve not only the competitiveness, but also the resilience, agility and security of companies and public actors, all while ensuring inclusiveness.

Romania ranks 26th among the 27 EU Member States in the Digital Economy and Society Index (DESI) 2020[23]. On connectivity, Romania performs better than the EU average, ranking 11th in the EU. However, an urban-rural divide exists in digital infrastructure: while 38% of households in rural areas benefit from very-high-capacity networks (EU average of 20%), broadband take-up stalled at 66% of households and is well below the EU average of 78%. Meanwhile, the 5G pioneer bands should be assigned on a timely basis, under conditions conducive to investment, although key legislation still needs adopting in order to safeguard 5G networks security.

Romania needs to improve the digital skills of its population and labour force, while reducing the urban-rural digital divide. Despite several initiatives to digitalise the education system, the need to improve the acquisition of digital skills remains high. There is a significant digital divide between urban areas (where 5% of schools are not connected) and rural areas (where 24% of schools are not connected). Although the academic education offer of advanced digital skills is well represented in Romania in the domains of artificial intelligence (AI), high performance computing, cybersecurity and data science, at Bachelor and Master levels[24], the education and training system, which includes vocational and educational training as well as higher education, does not facilitate adequate acquisition of digital skills. Due to insufficient availability of digital devices and the digital skills gap among pupils and teachers, the COVID-19 shift to distance learning posed challenges, especially for disadvantaged groups, including from rural areas and Roma. However, Romania is performing well with regard to ICT graduates, ranking 5th among EU Member States, with 5.6% of all graduates receiving a degree in this field. However, due to the low number of tertiary graduates, the availability of tertiary educated professionals, including in ICT, is insufficient. Romania continues to have the lowest rate of adult learning in the EU (1% in 2020), exacerbating the insufficient digital skills among the labour force.

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[23] https://ec.europa.eu/digital-single-market/en/scoreboard/romania.

[24] Righi, R., López-Cobo, M., Alaveras, G., Samoili, S., Cardona, M.., Vázquez-Prada Baillet, M., Ziemba, L.W., and De Prato, G. (2020), Academic offer of advanced digital skills in 2019-20. International comparison. Focus on Artificial Intelligence, High Performance Computing, Cybersecurity and Data Science, JRC Technical Report. Romania ranks 2nd among EU27, UK and Norway in AI and 3rd in data science and high-performance computing courses and is the only country offering specialised bachelors in high-performance computing, leading the specialised offer in this area. See, for example, Gómez Losada, Á., López-Cobo, M., Samoili, S., Alaveras, G., Vázquez-Prada Baillet, M., Cardona, M., Righi, R., Ziemba, L., and De Prato, G. (2020) Estimation of supply and demand of tertiary education places in advanced digital profiles in the EU. Focus on Artificial Intelligence, High Performance Computing, Cybersecurity and Data Science, JRC.

Adoption of digital technologies in Romanian businesses is below the EU average. 31% of them use at least two AI technologies (above the EU average of 25%) and 48 % are using at least one AI technology (above the EU average of 42% as well). While cloud computing, smart devices and high-speed infrastructure show the largest gaps compared to the EU average, the adoption of robotics and blockchain compares to the EU average. In addition, the share of firms expecting higher levels of growth as a result of increased digitalisation is also far below the EU average, i.e. 20% versus 31%[25]. Consequently, Romania should also improve the digitisation of businesses, with a national strategy focusing on the digital transformation of enterprises and promoting digital interactions between the State and private companies as much as possible. Targeted measures are needed to support the digitalisation of SMEs and raise awareness on the relevance and benefits of adopting digital technologies.

On performance of digital public services, Romania has ranked low among EU Member States during the past 3 years, a fact that was particularly highlighted by the pandemic. Against this background, the main barriers to achieving functional digital public services in Romania are: (i) the lack of coordination between public institutions in setting up such services; (ii) the migration of IT specialists from the public sector to the private sector or to other countries; and (iii) the overall lack of digital skills. Moreover, while digital public services should be expanded, special attention should be paid to interoperability, which has been a recurring issue in recent years. In addition, the actions on eIDAS (electronic identification, authentication and trust services) have not yet been finalised.

The low level of digitalisation of Romania's research system constitutes a significant obstacle to the digital transition. Insufficient R&D investments in the digitalisation of research organisations, particularly to develop national data infrastructures compatible with the European Science Cloud, are limiting the country's science and technology performance. Although the ICT sector has a large innovation potential and is one of the few economic sectors with a high number of innovative start-ups and scale-ups, its R&D investment intensity is among the lowest in the EU. Addressing this issue requires funding measures aimed at increasing firms' R&D absorption capacity and their management/organisational capacities to carry out innovation activities.

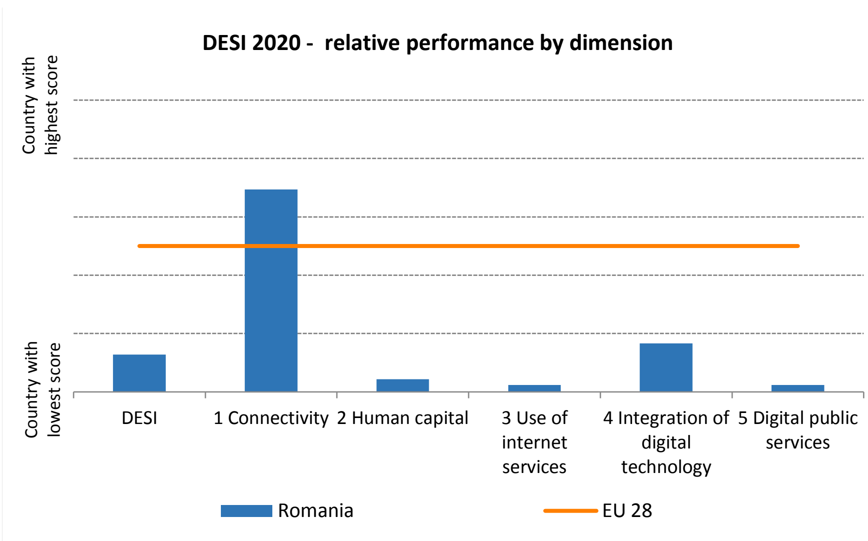
Romania's involvement in multi-country projects could be further enhanced. The country is the co-signatory of several declarations and initiatives at EU level (e.g. on next generation for cloud for business and the public sector, processors and semiconductor technologies, European

[25] Benedetti Fasil, C, Domnick, C, Fako, P, Flachenecker, F., Gavigan, J. P., Janiri, M. L., del Rio, J-C, Stamenov, B. and Testa, G., *High Growth Enterprises in the COVID-19 Crisis Context demographics, environmental innovations, digitalization, finance and policy measures*, Publications Office of the European Union, Luxembourg, 2021

Blockchain Partnership, quantum communication infrastructure and cooperation on artificial intelligence) and a member of the European High Performance Computing Joint Undertaking. Romanian enterprises are adopting artificial intelligence.

Romania still lags behind the EU average in greening the digital sector. The transition to a digitalised administration, economy and society should not hinder the country's environmental objectives. In 2018, Romania was among the worst performers at EU level for CO_2 emissions by information industries, with the figure reaching 24.4 tons/million of GDP. Investing in key digital technologies such as ultra-low-voltage (ULV) processors will enable Romania to achieve large improvements in energy efficiency and will help reduce greenhouse gas emissions. At the same time, data centres account for the largest share of greenhouse gas emissions in the ICT sector (45%). Investing in greener data centres will therefore yield positive results in terms of reducing Romania's carbon footprint.

Graph 1: Relative performance of Romania compared to EU average for the five DESI 2020 dimensions



Romania's ranking in the Digital Economy and Society Index 2020. https://ec.europa.eu/digital-single-market/en/scoreboard/romania

Note: EU aggregate corresponds to EU28, based on 2020 DESI report.

Box 1: Progress towards the Sustainable Development Goals

Sustainable Development Goals and the four dimensions underpinning the Annual Sustainable Growth Strategy.

The objectives of the Sustainable Development Goals are integrated in the European Semester since the 2020 cycle. This provides a strong commitment towards sustainability in coordination of economic and employment policies in the EU. In that respect, this section outlines Romania's performance with respect to SDGs with particular relevance for the four dimensions underpinning the 2021 Annual Sustainable Growth Strategy and of relevance to the Recovery and Resilience Plans (green transition, fairness, digital transition and productivity, and macroeconomic stability), indicating possible areas where investments and reforms in line with the objectives of the Facility could further accelerate the progress on the SDGs.

Green Transition

The performance on SDGs related to the green transition is mixed. For instance, Romania is well below the EU average on greenhouse gas emissions in 2018, with an index of 46.8 vs 79.3 for the EU. On sustainable cities and communities, Romania displays an overcrowding rate of 46.3%, well above the EU average of 17.1%. The country's primary energy consumption is close to the EU average with an index of 90.3.

Fairness

Romania displays a critical, although improving, situation regarding the fairness of society and economy. The performance on SDG 1 'No poverty' improved until 2018, when the rate of people at risk of poverty or social inclusion dropped to 32.5%, still considerably above the EU average of 21.6%. Romania is performing well below the EU average in terms of good health and well-being, with a life expectancy for men and women of 71.7 and 79.9 years respectively in 2018. The rate of early leavers from education and training dropped from 19.1% in 2015 to 15.6% in 2020. The gender pay gap is improving, having reached 2.2% in 2018, down from 5.6% in 2015 and well below the EU average (14.1% in 2018).

Digital transition and productivity

As regards SDG 9 'Industry, innovation, and infrastructure', Romania scores very low on the gross domestic expenditures on R&D ranking, with 0.6% in 2018 compared to the EU average of 2.2%. The country is also lagging behind in patent applications, with only 100 sent to the European Patent Office in 2017. The performance on SDG 8 'Decent work and economic growth' is weak regarding 'real GDP per capita' and 'resource productivity' in 2018. Romania is slightly over the EU average for the 'investment share of GDP' (21% in 2018), but faced a notable drop compared to 2013 levels. The share of 'young people neither in employment nor in education and training' remained high in 2018 (17%) vs the EU average (12.9%), although it has improved since 2013. The employment rate increased in recent years, approaching the EU average (69.9% vs 73.2% at EU level) in 2018, while the long-term unemployment rate remains lower than the EU average.

Macroeconomic stability

Romania achieves worse-than-EU-average scores on SDG 16 'Peace, justice, and strong institutions'. Particularly, for access to justice, the general government expenditure on law courts has progressively improved in the last 15 years, whereas the perceived independence of the justice system among the general public has varied considerably in the past five years: the share of Romanians grading the justice system as very/fairly good was 51% in 2016, decreased to 40% in 2019 and increased back to 51% in 2020, still below the 54% EU average for this last year.

3. OBJECTIVES, STRUCTURE AND GOVERNANCE OF THE PLAN

3.1. Overall strategy of the Plan

The Romanian Recovery and Resilience Plan aims to support Romania's socio-economic recovery and long-term development after the COVID-19 pandemic. It also aims to increase the growth potential while addressing long-standing challenges. The reforms and investments are structured around six pillars: i) Green Transition, ii) Digital Transformation, iii) Smart, sustainable, and inclusive growth, iv) Social and territorial cohesion, v) Health and economic and social resilience, and vi) Next Generation.

The Green Transition pillar includes key measures to decarbonise the energy and transport sectors. It includes reforms to phase-out coal power production by 2032, unlock renewable energy and energy renovation potential, sustainable mobility, water and waste management and biodiversity, which are essential steps for decarbonisation and to strengthen the circular economy. Investments in RES, energy and resource efficiency of public and private buildings, environment, and dedicated measures on the circular economy will also enable the green transition in key sectors of the economy. The significant amount of investments in sustainable transport is accompanied by reforms to promote road decarbonisation, zero-emission transport, road safety and modal shift towards railways and waterways. A large share of the proposed measures for sustainable transport aim to contribute to the reduction of GHG emissions and pollution through investment in rail infrastructure and rolling stock, in sustainable urban transport, as well as in electric vehicle (EV) recharging infrastructure and flanking measures proposed to reduce the impact of new motorways.

The Digital Transformation pillar focuses on digital public services for citizens and companies, connectivity, cybersecurity and digital skills. Reforms and investments target governmental cloud, large scale electronic identity card deployment, digitalisation of crucial activities and sectors such as public procurement, environmental policy, the justice system, healthcare provision and labour market integration. The investments, going well beyond the mere acquisition of equipment, aim for the development and implementation of advanced technologies, which are expected to lead to process optimisations and increased accessibility and availability of interoperable public services that are compliant with the once-only principle. Beyond the Digital Transformation pillar, each of the Plan's 15 components includes digital-related measures, notably component 9 (Business support and R&D&I) which focusses on the digitalisation of companies and component 15 (Education).

The pillar on 'Smart, sustainable, and inclusive growth' aims at addressing key challenges in the tax administration, tax system, government budgetary framework, and pension system, at strengthening the business environment in Romania, including the research, development and innovation sector. It includes key measures aimed at a more efficient and fair tax system, increasing the revenue collection capacity of the State budget, digitalising the National Agency of Fiscal Administration, improving the budgetary programming mechanism, as well as correcting inequities in the pension system and ensuring the sustainability and predictability of the pension system. For the private sector, it focuses on the simplification and digitalisation of regulatory requirements. Significant financial support is foreseen for the digitalisation and the increase of energy efficiency of SMEs, and for a multi-country project in microelectronics, contributing to the objectives of the new Industrial Strategy[26] for fostering the

[26] See European Commission, Updating the 2020 New Industrial Strategy, COM(2021) 350 final, 05.05.2021

twin transition, and to increased open strategic autonomy. On R&D&I, Romania aims to address the unclear governance, the fragmentation and effectiveness of the R&D&I system and to promote its cooperation with the private sector.

The pillar on 'Social and territorial cohesion' aims to implement urban policies, including urban mobility, focusing on green and digital investments and on reducing regional disparities. It also aims at developing the tourism sector and supporting the digital transition of the cultural and creative sectors.

The pillar on 'Health and economic and social resilience' covers a broad array of measures including health, social and public administration. More concretely, it focuses on measures directed at increasing access to health services for the vulnerable, developing the outpatient care dimension and improving the quality of care, while also upgrading health infrastructure. On social aspects, the aim is for a new regulatory framework to cover families living in poverty with dependent children, elderly and adults with disabilities. It also includes the operationalisation of the minimum inclusion income and a voucher system for the formalisation of domestic work. As regards public administration, the pillar includes a broad set of reforms and investments aimed at improving governance through a predictable, informed and participatory decision-making system with quality civil servants and more efficient justice and anti-corruption systems. Finally, the pillar also addresses the governance and efficiency of state-owned enterprises.

The 'Next Generation' pillar aims at facilitating large scale investments, backed by tailored reforms, in the education and training system in view of improving quality, equity and labour market relevance. Investments will be backed by reforms setting the appropriate legal frameworks for the investments to be properly implemented. Key reforms focus on improving early childhood education and care, reducing early school leaving, setting-up a full professional route for dual education and the digitalisation of education and training. It also aims at improving environmentally-friendly safety and quality standards at all education levels.

Table 3: Components and associated costs

Component	**Costs (EUR million)**		**Total Costs (EUR million)**
	Non-repayable support	**Loans**	
Pillar "Green Transition"			
1. Water management		1 462.00	1 462.00
2. Forests and Biodiversity protection	781.00	392.00	1 173.00
3. Waste management		1 239.00	1 239.00
4. Sustainable transport	3 906.00	3 714.00	7 620.00
5. Renovation Wave		2 200.00	2 200.00
6. Energy	460.00	1 160.00	1 620.00
Pillar "Digital Transformation"			

Component	Costs (EUR million)		Total Costs (EUR million)
	Non-repayable support	Loans	
7. Digital transformation	1 827.06	57.90	1 884.96
Pillar "Smart, sustainable, and inclusive growth"			
8. Fiscal and pension reforms	456.93		456.93
9. Business support and R&D&I		2 558.63	2 558.63
Pillar "Social and territorial cohesion"			
10. Local fund	1 200.00	900.00	2 100.00
11. Tourism and culture		449.00	449.00
Pillar "Health and economic and social resilience"			
12. Healthcare	2 450.01		2 450.01
13. Social reforms	107.69	89.05	196.74
14. Good governance	165.60		165.60
Pillar "Next Generation"			
15. Education	2 885.39	720.57	3 605.97
Total	**14 239.69**	**14 942.15**	**29 181.84**

3.2. Implementation aspects of the Plan

Romania's Recovery and Resilience Plan provides justifications for its consistency with the objectives and priorities of other European and national programmes. The Plan aims to provide detailed justification for its consistency and alignment with the objectives and priorities of the Just Transition Fund and other funds and initiatives under the Common Provision Regulation[27], as well as other initiatives such as the National Reform Programme of Romania, the European Digital Strategy[28] and the National Energy and Climate Plan. The reform linked to the coal phase-out constitutes a key element to define the transition process towards a climate-neutral economy, a step necessary to program further resources under the Just Transition Mechanism.

The Multiannual Financial Framework 2021-2027, the Partnership Agreement with Romania and the Programmes to be developed for the implementation of the Structural Funds are still at very preliminary stages of preparation. The Plan acknowledges significant complementarities with cohesion policy funds of which Romania is among the main

[27] Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy, OJ L 231, 30.6.2021, p. 159–706.
[28] Shaping Europe's Digital Future (February 2020)

beneficiaries in the 2021-2027 financing period both in absolute terms and as in percentage of GDP. In particular, the Romanian Recovery and Resilience Plan stipulates that its structure shall complement the projects supported by the Cohesion policy in order to optimise the use of EU funds allocated to Romania. Given that the 2021- 2027 Partnership Agreement and programmes are still pending finalisation and adoption, all potential areas of support under the Cohesion policy funds indicated in the plan are still subject to negotiations with the Commission and as such cannot be prejudged. Complementarities are particularly relevant for areas where reforms or investments that will be kick-started with the Recovery and Resilience Facility support could at a later stage benefit from support under ERDF, the Cohesion Fund and ESF+ in order to ensure their impact in the long-term, such as the circular economy, energy, sustainable transport, digitalisation, health, education, social inclusion and protection and employment policies, and health sector. Romania will use the Technical Support Instrument for the development of the Circular Economy Strategy and the improvement of the efficiency of the public procurement system.

The Social Reforms and Investments (component 13) are complementary to investments financed by the Structural Funds, in particular in the provision of services for Integrated Community Centers for those at risk (including children and persons with disabilities). While the Partnership Agreement for the 2021-2027 period has not yet been finalised, synergies are also expected to be created between investments from the Cohesion funds and the Plan measures taken in education, healthcare and employment. This is particularly the case in component 15 (Education), which focuses on reducing early school leaving or improving the participation rate in early childhood education and care. The Plan explains, for example, how investments in expanding the capacity of Early Childhood Education and Care facilities will be matched with building the methodological norms for training the necessary staff (financed from other EU-funding sources). Complementary measures to the Early School Leaving investments in the Plan are also intended to be included in the Programmes, tackling the broad array of causes leading to school abandonment. Measures aiming to increase the digital competence of the population will be complementary to interventions planned under the 2021-2027 Programmes. The Plan indicates complementarities with those measures, targeting quality of primary, community-based and outpatient care services, including trainings of healthcare staff (See Annex 3.2.10.).

A multi-level governance is envisaged for the implementation and monitoring of the Recovery and Resilience Plan. This includes in particular: at central level, the coordination is ensured by the Inter-ministerial Committee for the Coordination of the Plan, responsible for examining progress in the implementation of the Plan, in close cooperation with the Ministry of Investment and European Projects ('MIEP'). MIEP is appointed as national coordinator for the preparation, negotiation and approval of the Plan, assisted by the Ministry of Public Finances. Throughout the implementation, it will be important to ensure appropriate coordination between the Recovery and Resilience Plan and the programmes co-financed by the Cohesion and Regional funds as well as other funds, such as the Innovation Fund and Modernisation Fund under the EU Emissions Trading System.

As regards gender equality and equal opportunities for all, the Plan describes existing national challenges and outlines which reforms and investments are expected to contribute to furthering these aims across the different pillars of the Recovery and Resilience Facility, such as the introduction of a mandatory minimum threshold for women's participation in training, education or digital literacy programmes of 50% in the Digital transformation pillar, and investments in social housing for disadvantaged or vulnerable people in the Social and territorial cohesion pillar. Romania foresees that, for the purpose of monitoring and reporting, data on participants benefiting from interventions or institutional or policy implementation developments will be disaggregated by variables such as sex, age, disability and, where possible, membership of a minority group.

Romania carried out stakeholder consultations with local and regional authorities, social partners, civil society organisations, the business community and other relevant stakeholders before the submission of the Recovery and Resilience Plan. The Ministry of Investments and European Projects organised 12 public consultation events in February 2021, as well as 20 inter-ministerial meetings to prioritise the investments and reforms to be included in the national Recovery and Resilience Plan. The Romanian authorities indicate they received 1,939 proposals as a result of consultations, which have been filed and used in the preparation of the Plan, with a special emphasis on environment, public administration reform, and social components. Following the stakeholder and inter-ministerial consultation meetings, the draft Plan was published for public consultation and briefly presented to the Parliament before being adopted by the Government and subsequently officially submitted to the Commission on 31 May.

For the Plan implementation, consultations with relevant stakeholders and social partners are foreseen for key reforms (e.g. for the minimum wage setting and the pension reforms, the Social Dialogue law, for the phase-out of coal power production, for the reforms in the field of water and waste management, and for the development of the National Hydrogen Strategy).

Romania has included in its Recovery and Resilience Plan the estimated cost for additional technical support, under the Technical Support Instrument, in accordance with Article 7(2) of the RRF Regulation, for the implementation of two reforms. In particular, the additional support for reform 4, component 6 (Energy) shall aim to develop a legislative and regulatory framework conducive to future technologies, in particular hydrogen and storage solutions. The support will thus contribute to the development of the National Hydrogen Strategy and Action Plan. It will do so by carrying out a strategic environmental assessment and a public consultation for the strategy; assessing the hydrogen production potential from renewable energy sources; analysing and developing proposals for improving the legislative framework for hydrogen and developing effective governance structures for implementing the hydrogen strategy. Moreover, the additional technical support for reform 9, component 14 (Good governance) shall aim to improve the procedural framework for the implementation of corporate governance principles in state-owned enterprises (SOEs). Recommendations should be provided to support the work of the SOE governance structure which will be created. Specific areas of advice include legislative review, analysis of SOEs by functional area, review of the state ownership policy, operationalisation of the structure/task force, and selection of key performance indicators to monitor activities of SOEs.

In addition, the Technical Support Instrument provides expertise in building capacities to monitor the implementation of the entire Plan and coordination with other EU and non EU support instruments, as well as in a number of areas it covers, such as policy coordination and coherence, digitalisation, public procurement, circular economy, energy market, establishment of the National Development Bank and implementation of a mechanism preventing early school leaving. Support for the design and implementation of R&I policy reforms under component 9 is currently provided through a project of the Horizon Policy Support Facility launched in June 2021.

In accordance with Article 18(4), point (g) of the RRF Regulation, the Plan includes a security-self assessment for investments related to the government cloud and 5G networks. For cloud, Romania identifies the risks related to governance, service delivery strategy, architecture implementation, infrastructure security, access control and identity management, information (data) management, IT operations, management of technology providers, sustainability, including possible mitigation risks. As regards connectivity measures, in particular for the use of 5G networks, risk scenarios are related to insufficient security measures, 5G supply chain, risk scenarios related to modus operandi of key threat actors, risks in relation to interdependencies between 5G networks and other critical systems, end-user risk scenarios of devices. Mitigation measures include the development of a national cybersecurity regulatory framework and a defence and cybersecurity act, among others. Under the reforms in component 7 (Digital transformation), Romania is expected to implement 12 out of the 39 recommendations of the Common Union Toolbox for Connectivity. Moreover, a flagship reform includes the entry into force of the 5G network security law which shall foresee special authorisation requirements for manufacturers of 5G equipment and software. Strategic measures mentioned in the security self-assessment would need to be closely monitored during the implementation of the Plan.

Romania's Plan includes participation in a multi-country project in the digital sector on Low Power Processors and Semiconductor Chips, expected to be implemented mainly through participation or association to a planned Important Project of Common European Interest (IPCEI). Romania is expected to be involved at European level through the participation or association of at least ten members of the national ecosystem to this project. Moreover, under this project, the Plan includes measures for skills development for the design, manufacture and application of microelectronic components and systems and for securing intellectual property. The Plan also includes investments along the Trans-European Transport (TEN-T) corridors, such as the development of at least 315 km of the European Rail Transport Management System, which should allow the interoperability with the rail systems of other Member States.

The Recovery and Resilience Plan sets out Romania´s communication plans. The objectives of the communication strategy are in line with the RRF Regulation and aim to raise awareness about the Plan's contribution to the Romanian and European recovery and to the twin transition. The described communication strategy objective is to raise awareness of the financial contributions from the Recovery and Resilience Facility for fostering reforms and investments that are instrumental for the economic and social recovery and resilience. Communication activities will be targeted to the general public, potential and final beneficiaries, media and other stakeholders and will be closely correlated to the six pillars of the Recovery and Resilience

Mechanism, which are also the six pillars of Romania's Recovery and Resilience Plan. Specific key messages will be included in the communication campaign, around the central idea of a reformed and modernised Romania with the help of the Plan.

The strategy indicates that communication activities will be organised both at central and project/beneficiaries level. Visual Identity Guide with mandatory communication rules for beneficiaries will be developed. Romania plans to use the following communication channels: Websites and social networks, public online and offline events, interviews in print, TV and radio media, and online publications, newsletters, as well as outdoor publicity and stories/reports at project level. Key reforms and investments for communication have been identified, based on the following criteria: green/digital content; essential reforms for the modernisation of Romania; and the maturity of the initiative. A list of minimum communication activities to be carried out will be stipulated and costs will be part of the costs of projects/reforms. The communication strategy will be monitored based on a number of indicators specified in the communication plan periodically evaluated. It is essential that the described communication plan is implemented. Coordination between EU and national authorities is specified in the strategy and should be pursued to maximise the impact and effectiveness of communications.

State aid and competition rules fully apply to the measures funded by the Recovery and Resilience Facility. Union funds channelled through the authorities of Member States, like the RRF funds, become State resources and can constitute State aid if all the other criteria of Article 107(1) TFEU are met. When this is the case and State aid is present, these measures must be notified and approved by the Commission before Member States can grant the aid, unless those measures are covered by an existing aid scheme or comply with the applicable conditions of a block exemption regulation, in particular the General Block Exemption Regulation (GBER) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 TFEU[29]. When State aid is present and it requires notification, it is the duty of the Member State to notify State aid measures to the Commission before granting them, in compliance with Article 108(3) TFEU. In this respect, the State aid analysis carried out by Romania in the Recovery and Resilience Plan cannot be deemed a State aid notification. In as far as Romania considers that a specific measure contained in the Recovery and Resilience Plan entails de minimis aid or aid exempted from the notification requirement, it is the responsibility of Romania to ensure full compliance with the applicable rules.

[29] Commission Regulation 651/2014, OJ L 187, 26.6.2014, p. 1

4. SUMMARY OF THE ASSESSMENT OF THE PLAN

4.1. Comprehensive and adequately balanced response to the economic and social situation

The Plan presents to a large extent a comprehensive and adequately balanced response to the economic and social situation, and appropriately contributes to all six pillars referred to in Article 3 of the RRF Regulation. The Plan follows a holistic approach to achieve recovery and increase potential growth, while enhancing socio-economic and institutional resilience. The Plan explains in detail how it addresses the six pillars, namely: (i) green transition, (ii) digital transformation, (iii) smart, sustainable and inclusive growth, (iv) social and territorial cohesion, (v) health and economic, social and institutional resilience, and (vi) policies for the next generation. The Plan contains 171 measures (64 reforms and 107 investments) that refer to policy areas of European relevance structured in the six pillars, which define the scope of the RRF. The Plan is expected to contribute to tackling key structural challenges and to contribute to the green and digital transitions. The coverage of the six pillars by the Romanian Plan's components is summarized in Table 4. Romania submitted its National Reform Programme on 11 June. The information provided in the National Reform Programme is being considered and taken into account in this Staff Working Document in assessing the Recovery and Resilience Plan.

Table 4 Coverage of the six pillars of the Facility by the Romanian RRP components

	Green transition	**Digital transformation**		**Smart, sustainable & inclusive growth**	**Social and territorial cohesion**	**Health, and economic, social and institutional resilience**	**Policies for the next generation**
Pillar I - Green transition							
1 —Water management	●	○			○		
2 — Forests and Biodiversity protection	●						
3 — Waste management	●	○			○		
4 — Sustainable transport	●	●		●	○		
5 — Renovation Wave Fund	●			○	○		
6 — Energy	●			○			
Pillar II – Digital transformation							
7 — Digital transformation		●					
Pillar III Smart, sustainable and inclusive growth							
8 — Tax pension reforms	○	○		●	●	○	
9 — Business Support, research, development and innovation		●		●			

Pillar IV – Social and territorial cohesion							
10 — Local Fund	●	○			●		
11 — Tourism and culture	○						
Pillar V - Health, and economic, social and institutional resilience							
12 — Healthcare	○	○			○	●	
13 — Social reforms	○				●	●	
14 — Good governance						●	
Pillar VI – Policies for the next generation							
15 — Education	○	●		○	○		●

Key: "●" investments and reforms of the component significantly contribute to the pillar; "o" the component partially contributes to the pillar

Green transition

Green challenges are addressed in the Plan mostly under components 1 to 6 – dealing with water and waste management, forests and biodiversity, sustainable transport, renovation and energy. Investments and reforms in energy and resource efficiency and building renovation, sustainable transport, circular economy and waste management, water and wastewater management, renewable energy, afforestation and reforestation are expected to contribute to Romania's climate and energy objectives. In particular, significant reforms and investments in component 4 (Sustainable Transport) are dedicated to the modernisation and decarbonisation of road transport and to improving road safety, the modernisation of railway transport infrastructure (EUR 3.48 billion), acquisition of zero-emission and renewal of rolling stock (EUR 412 million), and development of underground infrastructure in Bucharest and Cluj-Napoca (EUR 600 million). Similarly, under component 10 (Local Fund), the measures to support sustainable urban mobility, the renewals of public transport fleets (EUR 580 million), the energy renovation of public buildings (EUR 575 million) and infrastructure for more sustainable and more secure urban mobility (EUR 620 million in total), are also expected to contribute to the green transition. Measures fostering the green transition included in component 6 (Energy) entail the phase out of coal and lignite power production and the deployment of renewables (EUR 460 million) and green (hydrogen produced from renewable electricity) hydrogen (EUR 115 million), as well as investments in batteries, photovoltaic cells and electricity storage to support the flexibility of the electricity grid to cater for increased renewables production (EUR 280 million) and measures to promote private investments in energy efficiency of the industry (EUR 64 million). A very important contribution to the green transition is also envisaged in component 5 (Renovation Wave), where a substantial allocation is planned for the acceleration of the energy renovation of both private and public buildings (EUR 2.15 billion). Under component 1 (Water management) reforms and investments (EUR 1.46 billion in total) are expected to improve water and wastewater systems, including drinking water, and also develop flood protection measures, such as the extension of the coverage of water and wastewater collection systems in municipalities of more than 2 000 inhabitants. Component 2 (Forests and Biodiversity protection) includes important reforms and investments on reforestation (EUR 1.17 billion) to increase the forest coverage in the country that has been subject to illegal logging, and to further develop measures in favour of biodiversity, such as restoration measures and designation of strict protection areas. Component 3 (Waste management) includes a reform aimed at improving waste management governance to accelerate the transition to the circular economy, as well as accompanying investments to develop, modernise and complete integrated municipal waste management systems (EUR 956 million), which are expected to promote a circular economy and enhanced waste recycling.

Other components indirectly contribute to the green transition. For instance, to some extent, measures under component 11 (Tourism and culture), such as the development of cycling routes are expected to contribute to the green transition. Similarly, investments under component 12 (Healthcare), for example, entail major healthcare infrastructure projects such as hospitals, networks of outpatient centres, integrated community centres, family planning offices and primary care practices complying with the nearly zero-energy standards (NZEB), ensuring the climate neutrality of the said buildings and, for some buildings, achieving a Primary Energy Demand that is 20% lower than NZEB standards. Component 14 (Good governance) includes support for strengthening coordination at the government level of an integrated and coherent approach to climate change and sustainable development initiatives.

Digital transformation

The Plan's reforms and investments related to digital transformation tackle a large range of challenges faced by Romania in this area. Romania ranks low in the DESI when it comes to human capital, integration of digital technology by businesses and digital public services, as well as on the use of internet services, which is correlated with the level of skills. Thus, the Plan rightfully targets these areas and aims at reducing or closing the gaps compared to the EU average.

Digital measures are included in component 7 (Digital transformation), as well as in all other components of the Plan, reflecting the cross-cutting nature of the envisaged digitalisation efforts. Investments to develop an integrated e-Health and telemedicine system (EUR 470 million), and to improve the digitisation of public employment services and social protection, have the potential to increase access to and the quality of these services. The measures are also expected to further strengthen the resilience of the healthcare system. Important investments are foreseen in the deployment of the electronic identity card for Romanian citizens (EUR 200 million) and for building a governmental cloud infrastructure (EUR 374 million). Significant contributions to the digital objectives are also included in component 4 (Sustainable Transport), with investments in the digitalisation of road (EUR 254 million) and rail transport (EUR 610 million), component 10 (Local Fund) with investments in ITS systems for urban mobility (EUR 275 million), as well as in component 9 (Business support and R&D&I), with investments in the digitalisation of businesses (EUR 550 million) and in a digital multi-country project in the area of 'Low-power processors and semiconductor chips'

(EUR 500 million). Furthermore, component 15 (Education) includes measures such as modernising computer laboratories in schools and the provision of additional IT equipment (EUR 478.5 million), and trainings for teachers; other targeted investments are expected to accelerate the digitalisation of higher education institutions and to facilitate advanced skills development, which can should in turn support the digital transformation. All together, the Education component makes a significant contribution to the digital objectives (a total of EUR 1 129.50 million).

Other components indirectly contribute to the digital transition. Investments to facilitate taxpayer compliance and tax collection through the development of digital services (e.g. digital communication, simplification and digitalisation of forms, redesign of the IT systems, creation of a platform for online auctions), improving tax administration processes (including the revision of the taxation framework), updating the IT systems and applications used by fiscal and customs authorities, and supporting the digitalisation of the pensions system are all part of the tax and pension reform component, with a total digital contribution of EUR 386.7 million. Finally, the investments aimed at increasing digital access to spatial and urban planning documents under component 10 (Local Fund and the digitalisation of cultural routes and film production and distribution), the investments in digitised eco-islands under component 3 (Waste management), and the development of a digital system for cultural funding under component 11 (Tourism and Culture) are also expected to contribute at least to some extent to the digital transition.

Smart, sustainable and inclusive growth

Several components in the Plan have the potential to foster smart and sustainable growth. The Plan contains a series of measures that are expected to directly or indirectly support private investments, including for SMEs, increase the capacity of the country to attract investment and create new businesses and jobs. For instance, under component 9 (Business support and R&D&I), there are a set of reforms and investments to strengthen the Romanian business environment including the research, development and innovation sector. The reforms supporting the investments include regulatory changes to reduce the administrative burden for firms by simplifying legislation/start-up/exit procedures, as well as obtaining licenses, supported by investments in digital platforms on legislative transparency, de-bureaucratisation and procedural simplification for business (EUR 14 million). Reforms also address the fragmentation and effectiveness of the research, development and innovation system and promote its cooperation with the private sector, for instance, through the legislative reform to simplify the cooperation between business and public research. Enhanced synergies with Horizon Europe will foster internationalisation of Romanian R&I system. Investments under this pillar also cover the creation of a digital platform for providing simplified public services for businesses, including for obtaining licences, and access to finance to small and medium size enterprises and companies through financial instruments and grants, as for instance, the establishment and operationalisation of the National Development Bank (EUR 10 million) under component 8 (Tax and Pension reforms), and the portfolio guarantee for resilience (EUR 300 million) and the Recovery venture capital fund (EUR 400 million) under component 9. These measures will promote economic development and competitiveness, especially by providing access to finance for economically viable infrastructure projects, ensure access to finance for SMEs and improve the absorption of EU funds. Complementary investments will relate to funding research competence centres and research projects led by internationally reputed researchers, as for instance, the funding of EUR 500 million to provide support to the scale-up of the national capabilities up to the first industrial development and the participation in or association to a multi-country project (planned as an Important Project of Common European Interest on Microelectronics).

The Plan also aims to reinforce fiscal sustainability through important reforms of the tax administration, fiscal management and the public pension system. The reform of the tax administration included in component 8 (Tax and Pension reforms) is aimed at increasing tax collection and compliance, enhancing the relationship between tax administration and taxpayers also through increased transparency, mainly through the digitalisation of the tax administration (about EUR 291 million spread over different investments in centralisation of databases with taxpayers information, digitalisation and smart and massive use of data), and gradually withdrawing the existing excessive tax incentives. This reform shall support the improvement of the business environment and increase the ability of the government to respond to the high level of income inequality and of poverty rates by redistributing incomes or providing more public goods and services more efficiently, also thanks to the implementation of systematic spending reviews. The reform of the pension system aims to ensure an adequate level for those on low incomes and the sustainability of the public pension system in the medium to long-term, contributing to preserve the stability of public finances.

Several other measures will support at least partially the objective of smart, sustainable and inclusive growth. Those include, inter alia, measures in the field of transport (e.g. roads and railways investments enabling the flow of people and of goods between regions and with neighbouring countries, digitalisation of transport which supports more efficient mobility and safer transport), tourism (e.g., the Mapping/Identification of all the optimum destination areas for regional Destination Management Organisations and the Adoption of the Action Plan for the use of cultural heritage, both promoting sustainable and inclusive growth), education (e.g., to boost the availability of services for children education and to reduce the drop-out rate from compulsory education), renovation wave (e.g., trainings on energy efficiency skills supporting sustainable growth) and energy (e.g., reform to reduce the energy intensity of industry, and investment in new capacity for electricity generation from renewable sources).

Social and territorial cohesion

Several components will contribute to the objective of social and territorial cohesion. In particular, all reforms and investments in component 10 (Local Fund) targeting both urban and rural development, are expected to reduce territorial disparities at regional, intra-regional and intra-county level. The Plan recognises the need to invest in modernising the Romanian social benefits system by implementing the minimum inclusion income, which is covered in component 13 (Social reforms). The implementation of the legislation on introducing the minimum inclusion income is an essential step towards addressing the low adequacy of support payments and incentivising labour market activation. Those measures would be vital in the context of the negative demographic changes in the country. The pension reform included in component 8 (Tax and Pension reforms) would also contribute to a fairer and more sustainable social support and intergenerational cohesion.

The Plan envisages to further strengthen social cohesion through structural measures on the labour market. Already indicated in the “Digital transformation” section, the Plan puts forward measures to improve the employment and social protection digital systems. The interventions have the potential to enhance the service provision to the unemployed and the beneficiaries of benefits, the communication processes within the institutions, and the level of digital skills of the staff.

Other components indirectly contribute to the social and territorial cohesion pillar. For instance, investment under component 11 (Tourism and Culture) are expected to increase access to culture in culturally deprived areas (EUR 7.8 million). Many of the measures taken under component 12 (Healthcare) are directed towards providing medical (especially pre-hospital) care for the underserved communities, including Roma community, by providing medical units and building or rehabilitating the networks of family care practices, outpatient units or integrated community centres, in the marginalized areas. At least 20% of the sizeable allocation dedicated to the energy renovation of residential buildings will be dedicated to communities at risk of poverty and social exclusion and the support will be made available to all local administrations, based on the number of buildings and the total population (EUR 177.5 million). Integrated seismic and energy renovation projects will also prioritise communities at risk of poverty and social exclusion. The broadband investment included in component 7 (Digital transformation) will provide coverage of very high-speed internet access (at least 100 Mbps upgradeable) to rural areas (EUR 94 million). Finally, investments in the expansion of water and wastewater infrastructure under component 1 (Water management) is also expected to contribute to social cohesion through investments in less developed areas in this respect, while investments in road, rail and urban mobility infrastructure are likely to improve connectivity and cohesion at local and regional level.

Health, and economic, social and institutional resilience

The key measures contributing to the health, social and institutional system’s resilience are included in component 12 (Healthcare) and component 7 (Digital transformation), component 13 (Social reform) and component 14 (Good governance) of Romania's Recovery and Resilience Plan. The proposed reforms and investments in component 12 (Healthcare) have the potential to strengthen the overall resilience of the health system, by improving access to healthcare, ensuring the availability of health workers and achieving a shift to outpatient care. In particular, the reforms aim to improve the performance of healthcare providers, to achieve more effective management of health infrastructure projects by establishing a dedicated government agency, and to professionalise healthcare management as well as human resource management in healthcare. The reform concerning human resources also aims to strengthen anti-corruption measures in the health system. The objective of component 13 (Social reform) is to contribute to social resilience by increasing access to social services for the most vulnerable, including workers, children, persons with disabilities, the inactive and the elderly. By ensuring the delivery of quality public services by a pool of professional and well-trained civil servants that adequately respond to the challenges, needs and expectations of citizens and businesses, reforms included in component 14 (Good governance) are also expected to strengthen institutional resilience.

The most important investments contributing to this pillar are included in component 12 (Healthcare). The investment in pre-hospital medical infrastructure will help upgrade and update existing medical infrastructure, including buildings and equipment, in primary care, community care and outpatient settings (EUR 314.8 million). Public hospital infrastructure investments aim to ensure patient safety in new or upgraded hospitals and reduce the risk of healthcare associated infections in hospital settings (EUR 1 954 million). It includes upgrading medical equipment as well as investing in neonatal critical patient infrastructure (EUR 865 million).

E-Health also features in the Romanian Plan. Included both in the Digital component and the Health component, the proposed investments cover the standardisation and optimisation of the Health Insurance Information Platform, the digitalisation of health institutions at central and regional level, the acquisition of IT systems and digital infrastructure for health services, and the development of telemedicine and mobile patient monitoring systems (EUR 470 million).

Policies for the next generation

The Romanian Plan includes reforms and investments to tackle some of the main challenges found in the education system. Each of these reforms will be accompanied by complementary investments, and several targets will be set to track and ensure their appropriate implementation. Upgrading school and university infrastructure in urban and rural areas, by amending and streamlining the regulatory framework to ensure environmentally-friendly safety and quality standards (EUR 1 315 million) will be one of the objectives of component 15 (Education). Particularly important within this objective shall be the provision of facilities for pre-university classrooms and school laboratories/workshops (EUR 600 million). Secondly, the digitalisation of education (EUR 1 129.50 million), is to be promoted through changes in the legal framework, to enable integrated approaches and improve the digital skills of students and teachers, and a scheme to finance digital technology equipment and resources for schools (EUR 478.5 million). In terms of early school leaving, an uncompetitive grant scheme for educational establishments at high risk of drop-out (EUR 400 million) will allow for higher independence of schools in tackling this issue.

Taking into consideration all reforms and investments envisaged by Romania, its Recovery and Resilience Plan represents, to a large extent, a comprehensive and adequately balanced response to the economic and social situation, thereby contributing appropriately to all six pillars referred to in Article 3 of the RRF Regulation, taking the specific challenges and the financial allocation of Romania into account. This would warrant a rating of A under the assessment criterion 2.1 in Annex V of the RRF Regulation.

4.2. Link with country-specific recommendations and the European Semester

Overall, the Plan provides an adequate response to a large set of economic, social and environmental challenges faced by Romania. The Recovery and Resilience Plan of Romania is expected to contribute to addressing a significant subset of challenges identified in the relevant country-specific recommendations (CSRs), including fiscal aspects thereof, addressed to Romania in the context of the European Semester. Table 5 at the end of the section presents the mapping of the selected challenges, the associated CSRs and the fifteen components of the Romanian Plan.

Romania has taken a number of measures to mitigate the social and employment impact of the COVID-19 crisis by developing flexible working arrangements and activation measures (CSR 2.4, 2020). These include short-term work schemes, granting parents paid days off in the context of establishing remote learning activities, support to companies for setting teleworking arrangements, targeted support to young people and older workers. Romania mobilised EU resources from SURE financial assistance and the European Social Fund.

Public finances and taxation

The sustainability of public finances is a challenge subject both to CSRs (2019 and 2020 CSR 1) and the Macroeconomic Imbalance Procedure (MIP). The Council issued CSRs to Romania to correct the significant deviation from the adjustment path towards the medium-term budgetary objective, to correct excessive deficits, to ensure the full application of the fiscal framework, and to strengthen tax compliance and collection**.** Romania's pre-existing high general government deficit has risen further due to the COVID-19 crisis, which has exacerbated medium and long-term fiscal sustainability risks. In this context, it will be important to support the medium-term fiscal targets with comprehensive reforms. Component 8 (Tax and Pension reforms) of Romania's Plan aims to address the recommendations related to fiscal policy. Strengthening tax compliance and collection shall happen through a full digitalisation of the tax administration, which will allow to develop services for taxpayers, foster digital inclusion, and implement an integrated risk management system to increase the number and the efficiency of tax controls and support the identification of tax risks. The component also includes a gradual phase out of excessive tax incentives, which would broaden the tax base and help having a fairer, more efficient, simpler and more transparent tax system. Further measures in the fiscal component aimed at addressing the fiscal policy recommendations are the improvement of the management of public spending to make it more efficient and prioritised (including through regular spending reviews), and the reform of the public pension system which among others aims at stabilising the public pension expenditure (See below).

Pension system and long-term fiscal sustainability

The reform of the public pension system included in the Plan aims at ensuring its sustainability and improving its transparency and fairness. In 2019, the Council issued CSR 2.2, asking Romania to ensure the sustainability of the public pension system to reduce the overall risks to the sustainability of public finances in the medium and long term. The reform of the pension system included in the fiscal component aims at keeping the total gross public expenditure as a share of GDP stable in the long-term (2022-2070). The new legislation will introduce a new calculation formula for new pensions and pensions in payment, chosen in line with the contributory principle and with the pension expenditure target as a share of GDP, which will not allow for ad hoc increases. A new pension indexation rule in line with the pension expenditure target is also part of this reform, together with the reduced scope for early retirement, the incentive to voluntarily increase the retirement age and to equalise the statutory retirement age for men and women at 65 years by 2035. Further measures in the pension reform are the streamlining and full revision of the special pensions to bring them in line with the contributory principle and the increase in the adequacy of minimum and lower pensions.

Health

Goals related to the health system include improving access to and cost-efficiency, including through the shift to outpatient care (2019 CSR 3.7) and strengthening resilience, including in the areas of health workers and medical products (2020 CSR 1.3). Reforms in the management of the public health funds aim at improving the provision of primary care. On the one side, the quality and cost-efficiency of the services are expected to improve as a result of the implementation of a grant scheme based on objective and quality orientated indicators for public healthcare establishments. Interventions targeting the management and human resources, including through integrity trainings, can help secure properly qualified health workers. Access to health services should also increase as a result of the large-scale investments in primary care and pre-hospital establishments, especially targeted towards the disadvantaged and marginalized communities. Such investments should also help decrease the demand for hospital-provided services, implying a shift towards outpatient care. The planned investments in e-Health and telemedicine can further enhance coverage and access to health services to all citizens.

Public administration, business environment and labour market reforms

Romania received country specific recommendations on the need to improve the quality and effectiveness of public administration and to ensure that legislative initiatives do not undermine legal certainty (2019 CSR 5, 2020 CSR 4). These areas are also covered by specific benchmarks under the CVM, which Romania has to implement in light of specific recommendations and in accordance with CJEU case law (the timing for the implementation of the CVM benchmarks is independent from the one set in the annexes of the current plan). To address these issues, quality and predictability of decision-making shall be improved and rely on appropriate stakeholder consultations, effective impact assessments and streamlined administrative procedures.

Component 14 (Good governance) aims to address the recommendations through a number of reforms and investments. These measures aim at improving decision making, including evidence based decision making, long-term planning and public consultations; new national recruitment and promotion system for civil servants; new multiannual recruitment planning system; civil servants remuneration reform; and a new competency framework and competition methodology. The measures aimed at improving the public procurement process, including digitalization and capacity building, should contribute to addressing the country-specific recommendation linked to public procurement. Key reforms in component 14 (Good governance) are also expected to: i) ensure the independence of the judiciary and enhance its quality and efficiency; ii) to step up the fight against corruption, by adopting the national strategic framework for its prevention, by strengthening the capacity of the institution competent to combat it, by recovering the damage and proceeds of crime; and iii) to strengthen integrity in the civil service and ensure an efficient system for declaring assets and interests, while developing and implementing the new anti-corruption strategy.

Romania also had a recommendation to improve the functioning of social dialogue (2019 CSR 3, 2020 CSR 4). The Recovery and Resilience Plan includes a reform, the adoption of a new social dialogue law that should address the previously flagged deficiencies and hence contribute to addressing this CSR. The ambition to put forward legislative changes in the social dialogue law, in line with the International Labour Organisation recommendations, is an important step to improve collective bargaining and the overall functioning of social dialogue in the country.

Component 13 (Social reforms) includes a reform to address the recommendation on ensuring minimum wage setting based on objective criteria (2019 CSR 3), also consistent with job creation and competitiveness of the country. A legislative act shall establish a new mechanism and formula to objectively set the minimum wage level in a systematic manner, in consultation with social partners and consistent with the Commission proposal[30].

Component 14 (Good governance) also aims to strengthen the corporate governance of state-owned enterprises (2019 CSR 5) by enforcing OECD standards. In particular, the reform shall remove all exceptions to compliance with the corporate governance standards, including for state-owned enterprises at local level. The reform is complemented by specific reform actions aimed at improving the corporate governance of state-owned enterprises in the energy and the transport sectors. These reforms are expected to contribute to the efficiency of state-owned enterprises and to the improvement of the quality of the services that they provide.

The Plan also develops flexible working arrangements and activation measures (2020 CSR 2). The introduction of a voucher system for domestic work and digitalisation of the public employment services can increase the access to labour market for vulnerable groups and improve the provision of activation measures to the inactive people. In 2021-2027 further efforts towards reforms in the Public Employment Service and increasing activation can be supported under the ESF+.

Poverty reduction & social inclusion

The introduction of the minimum inclusion income, included as a reform in component 13 (Social Reforms), directly addresses a long-standing country-specific recommendation

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[30] This reform shall be implemented by Q1 2024

(2019 CSR 3, 2020 CSR 2). This measures should increase the effectiveness and adequacy of the social benefits system and increase coverage of services, while at the same time providing incentives for labour-market activation. The reform is expected to improve social assistance and reduce poverty for the most vulnerable, while reducing the administrative burden for the National Paying and Social Inspection Agency, local public administrations, and the beneficiaries.

Education

Strengthening skills and digital learning and improving the overall quality and inclusiveness of education (2019 CSR 3, 2020 CSR 2) are objectives at the heart of Romania's Plan. In 2020, the Council issued a CSR to Romania to strengthen skills and digital learning and ensure equal access to education (2020 CSR 2). In the year before these recommendations were more specific, asking for a focus on the labour market relevance of vocational education and training and higher education for skills, including digital (2019 CSR 3), and for the access to education particularly of the Roma children and children from other disadvantaged backgrounds. Measures in component 15 (Education) of the Plan are expected to significantly contribute to addressing these CSRs, in particular for Roma and other disadvantaged groups, firstly through the provision of a unitary, inclusive and quality early-childhood education and care system that shall be accompanied by investments in the construction and operationalisation of 110 crèches and 412 of complementary services, servicing up to 4 500 children from 0 to 6 years-old and 20 000 children from disadvantaged backgrounds respectively. Furthermore, a framework programme for the continuous training of professionals in this field of education will be created and operationalised. Secondly, the Ministry of Education will also take measures to prevent and reduce early school leaving by means of teacher trainings and grants to 2 500 schools at high risk of drop-out. For vocational and educational training (VET) and dual education, a full professional route will be created for students to reach university education, aligned with labour market needs. This will be complemented by the creation of 10 education consortia, 10 vocational campuses and the transformation of 57 agricultural schools into professionalisation centres. Furthermore, 909 VET schools will benefit from the equipment of IT laboratories and workshops.

The digitalisation of education (2019 CSR 3 and 2020 CSR 2) will also have a strong focus through the adoption of a legislative framework for the development of digital competences for all school levels. The reform will focus on the digitalisation of educational processes and content and for conducting online assessments. Moreover, minimum and optimal standards for ensuring the quality of digital education shall be set. The reform is expected to align the educational system to DigComp, the European framework for digital competences for students, including by updating the curriculum, and developing digital teaching materials. Lastly, the reform shall operationalise the links between the teacher's competences profile and the curriculum for initial vocational training, continuing vocational training and skills training. This reform will be complemented by investments directed at training 100 000 teaching staff and financing digital equipment and resources for schools and universities.

Research, Development and Innovation

Component 9 (Business support and R&D&I) includes measures supporting research and development activities and the integration of local providers into EU strategic value chains (2020 CSR 3). In particular, the reforms in that component are expected to: i) ensure the harmonised design and implementation, monitor and evaluation of R&D&I policy across ministries and agencies, ii) attract researchers, iii) encourage the creation of partnerships between public and private investment in R&D&I, and iv) increase the proportion of research organisations that share research facilities in Romania.

Green and digital transition

Romania's Plan puts forward a number of measures to contribute to the green transition, in particular on sustainable transport, low carbon energy and energy and resource efficiency, environmental infrastructure, including in the coal regions (2019 CSR 4, 2020 CSR 3). As explained in more detail in section 4.5, component 4 (Sustainable Transport) includes key reforms to decarbonise the transport sector, such as regulatory changes to incentivise zero-emission road transport, improving the governance of state-owned enterprises in the transport sector, improving road safety, promoting clean public transport and modal shift to rail. The Plan also includes investments in clean energy production in component 6 (Energy) by committing to phasing-out coal-fired power production while increasing the deployment of renewables generation, in line with the 2030 targets. Gas investments will be future-proof and contribute to the decarbonisation objectives for 2030 and 2050. The Plan also includes considerable investments in energy and resource efficiency of both public and private buildings in component 5 (Renovation Wave) and 10 (Local Fund) and measures to facilitate private investments in the industrial sectors in component 6 (Energy). With regard to environmental infrastructure, component 1 (Water management) includes measures aimed at ensuring sustainable water for the residents as well as sustainable water management solutions in light of climate change adaptation. Component 2 (Forests and Biodiversity protection) includes a number of afforestation/reforestation, forest management and biodiversity management measures.

The digital transition (2020 CSR 3) is addressed through a dedicated component. As described in more detail in section 4.6, component 7 (Digital transformation) includes reforms necessary to set up the governmental cloud and to ensure interoperability, improving connectivity, increasing the protection and the cybersecurity of public and private entities and increasing the digital competences for the public sector. The investments underpinning the reforms range from the development of the governmental cloud to the digitalisation of health, judiciary, environment, employment and social protection, public procurement, non-governmental organisations, connectivity for white areas, ensuring cybersecurity for different structures and increasing the skills both in cybersecurity and for civil servants and the population at large. One key investment refers to the deployment of the electronic identity card for the Romanian citizens.

Response to the economic and social situation

The Plan includes substantial reforms and investments to support convergence with the EU and supporting the green and digital transition. Some long-standing structural weaknesses are expected to be addressed through reforms and investments in the improvement of the business environment, measures supporting skills, particularly digital, for the public and education sectors, the digitalisation of businesses, notably SMEs, schools, universities and hospitals. The plan should also bring a substantial contribution to a more effective public administration, including the national justice system. Innovation capacity will be fostered by stronger private and public partnerships in research and innovation.

The Plan focuses on measures to enhance social and territorial cohesion, which could worsen due to the crisis. As described in Section 4.1, the Plan contains measures such as the modernisation of the social benefits system by implementing the minimum inclusion income, and the improvement of the employment and social-protection digital systems. The pension reform would also contribute to a fairer and more sustainable social support and intergenerational cohesion. Several measures aim to contribute to reduce regional disparities.

Social cohesion should also be supported by measures in the education sector. Students from disadvantaged groups and/or rural areas will benefit from measures to increase the participation rate in early-childhood education, reduce early-school leaving and benefit students from these backgrounds with guaranteed access to certain services in university campuses, all foreseen under component 15 (Education). Measures aim at ensuring that digital devices and skills are provided to them. Attention will also be drawn to agricultural schools, which will also benefit from investments to become true professionalisation centres.

Contribution to an enhanced and sustainable growth potential

The long-term growth potential of the economy should be raised notably by measures to raise the quality of public administration and decision-making, improve the business environment and address skills shortages, particularly in digitalisation. Measures aiming at ensuring better regulation and facilitating access to finance for SMEs and innovative start-ups will also contribute to longer-term growth. The Plan also fosters investment in research and innovation, sustainable transport infrastructure and reforms to enhance cooperation between public research and business. The Romanian Government estimates the Plan will increase potential growth by 0.7% on average annually in the medium-term. By addressing important structural challenges, the Plan helps enhancing the growth potential of the economy in a sustainable manner.

Taking into consideration the reforms and investments envisaged by Romania, its Recovery and Resilience Plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the country-specific recommendations, or challenges in other relevant documents officially adopted by the Commission under the European Semester, and the Recovery and Resilience Plan represents an adequate response to the economic and social situation of Romania. This would warrant an A under the assessment criterion 2.2 in Annex V to the RRF Regulation.

Table 5 Mapping of country challenges identified in 2019-20 country-specific recommendations and the Romanian RRP components

Country challenges (as identified in Section 2)	Associated CSR (2019-2020) and European Semester recommendations	Component 1- Water Management	Component 2- Forests and Biodiversity protection	Component 3- Waste management	Component 4- Sustainable transport	Component 5- Renovation Wave	Component 6- Energy	Component 7- Digital transformation	Component 8- Tax and pension reforms	Component 9- Business Support , research, development and innovation	Component 10- Local Fund	Component 11- Tourism and Culture	Component 12- Health	Component 13- Social reform	Component 14- Good Governance	Component 15- Education
Public finances and taxation	2019.1.2, 2019.1.3, 2019.4.2, 2020.1.2, 2020.3.2						○		●			○				
Pension system and long-term fiscal sustainability	2019.2.2, 2019.2.3 2020.1.2							○	●							
Health	2019.3.7, 2020.1.3												●			
Public administration, business environment and labour market	2019.3.5, 2019.3.6, 2019.4.2, 2019.4.3, 2019.5.1, 2019.5.2, 2020.3.1, 2020.3.3, 2020.4.1, 2020.4.2						○	●	●	●		●		●	●	
Poverty reduction & social inclusion	2019.3.3, 2019.3.4, 2020.2.1, 2020.2.2, 2020.2.3, 2020.3.3, 2020.3.4					○			○		●	○		●		○
Education	2019.3.1 2019.3.2, 2020.2.5, 2020.2.6															●
R&D&I	2019.4.4									●						
Green Transition	2019.4.1, 2020.3.4, 2020.3.6	●	●	●	●	●	●				○					○
Digital Transition	2020.3.5							●	○	○	○					○

Key: "●" investments and reforms of the component significantly address the challenge; "○" the component partially addresses the challenge

4.3. Growth potential, job creation, economic, institutional and social resilience, European Pillar of Social Rights, mitigating the impact of the crisis, and social territorial cohesion and convergence

Fostering economic growth and jobs

The Plan focuses on reforms and investments that tackle long-standing vulnerabilities and structural deficiencies, stimulating growth. The main objectives of the Plan are to achieve the green and digital transition, while strengthening healthcare, education, social cohesion and inclusion. Measures will focus on improving public administration, including SOEs, public procurement, justice and the predictability of decision making. The Plan also aims to contribute to the implementation of the European Pillar of Social Rights, through the promotion of policies for children and the youth, enhancing the economic, social and territorial cohesion and convergence within the Union. The Plan aims to strengthen the economic recovery in Romania and to improve long-term growth prospects through such investments and reforms, ultimately reducing the country's vulnerability to shocks.

The Plan proposes concerted actions in strategic areas aimed at modernising and increasing the potential of the Romanian economy, following the guidelines set by the national strategic objectives. The undertaken measures consider a sustainable approach towards nominal and real convergence, through increasing investment in priority areas, namely the environment, energy and resource efficiency, education, health, transport infrastructure and fleets, access to finance for businesses, making labour market more flexible by increasing skills, including digital, and developing sectoral policies that lead to improved competitiveness.

According to the simulations run by the Commission services, the long-lasting impact of the Romanian Plan could lead to a 1% higher GDP in 20 years (See Box 2). These simulations do not include the possible positive impact of structural reforms, which can be substantial and could raise Romania's GDP by 17% in 20 years' time. In the short-run, increased spending via major public investments, especially during the implementation of the Plan (2021-2026), are expected to lead to strong output growth, which will diminish slowly after 2026. However, the structural reforms undertaken should have a medium to long-term economic impact, while positive cross-border spill-overs will materialise in 0.2% GDP growth in 2026, owing to the synchronized Recovery and Resilience Facility spending across all Member States. The estimations provided by the Romanian authorities indicate that the real GDP cumulated impact for 2021-2026 is of 5.2 percentage points, under full use of the loan component of the Plan.

The Plan contains a series of measures that are expected to enhance productivity and foster growth. This would be achieved through measures to support private investments, particularly for SMEs, while attracting investment and fostering jobs and a stronger business environment. Component 9 (Business support and R&D&I) includes measures to strengthen the business environment, including through reducing the administrative burden for firms. Also, for the R&D&I sector, measures aim at addressing fragmentation and promoting links with the private sector. Investments under this pillar also cover the creation of a digital platform for providing simplified public services for business including for obtaining licences, and access to finance to SMEs and companies through financial instruments and grants, as for instance, the establishment and operationalisation of the National Development Bank (EUR 10 million) under component 8 (Tax and Pension reforms), and the portfolio guarantee for resilience (EUR 300 million) and the Recovery Venture Capital Fund (EUR 400 million) under component 9. Measures under components 8 (Fiscal and pension reforms) and 9 (Support for the private sector) will promote economic development and competitiveness and improve EU-funds absorption.

Ensuring fiscal sustainability will allow Romania to maintain a sustainable growth path. Component 8 (Tax and Pension reforms) foresees tax-administration reforms and improved fiscal management and pension system. These reforms should support the improvement of the business environment by facilitating relations with the tax administration, and allow for more room to respond to income inequalities and poverty rates. The reform of the pension system aims as one of its objectives to the sustainability of the pension system, contributing to preserve the stability of public finances.

The Plan's reforms in the areas of education and the labour market are expected to support a stronger labour market, favouring growth. In education, addressing learning inequalities which threaten Romania's long-term economic potential is a pursued priority. Investments in preventing early school leaving and improving access to early childhood education and care should help Romanian pupils to improve their performance. Focus on digital education should lead to a larger stock of digital skills on the labour market in the future, contributing to economic growth and increased productivity. Measures aiming at supporting disadvantaged groups in the education system should increase equal opportunities and therefore also help provide a better match between labour market demand and supply for skills. These measures can improve Romania's long-term growth potential and foster inclusive growth by reducing disparities, fostering potential spill-over effects into the labour market and the business sector, particularly in terms of digitalisation skills. Furthermore, the introduction of a voucher scheme for formalisation of work and the digitisation of the public employment services should contribute to boosting jobs by facilitating access to the labour market for some vulnerable groups and by enhanced provision of activation services. Growth and jobs will be further supported by the digital component of the Plan that provides for digital skills for all.

Construction activities are also expected to contribute to growth and job creation. The implementation of several measures of the Plan, and in particular the road, rail and metro investments in component 4 (Sustainable transport) and the energy renovation investments in component 5 (Renovation Wave), will trigger construction activity. With the construction sector being one of the main economic drivers, such measures should contribute to growth and job creation.

Box 2: Stylised NGEU impact simulations with QUEST – Romania

Model simulations conducted by the European Commission using the QUEST model show that the economic impact of the NGEU in Romania could lead to an increase of GDP between 1.8% and 2.9% by 2024.[1] After 20 years, GDP could be 1% higher. Spillovers account for an important part of such impact.

According to these simulations, this would translate into up to 90 000 additional jobs. Cross border (GDP) spillovers account for 0.2 pps in 2026, showing the value added of synchronised expenditure across Member States (line 2). Even in a scenario with a lower productivity of NGEU funds, it would still lead to a significant impact (line 3).[2]

QUEST simulation results (%-deviation of real GDP level from non-NGEU case, linear disbursement assumption over 6 years)

Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040
Baseline	1.2	2.2	2.3	2.5	2.7	2.9	2.2	1.5	1.6	1.6	1
of which spillover	-0.6	-0.3	0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Low productivity	0.7	1.5	1.5	1.6	1.7	1.8	1.1	0.4	0.5	0.5	0.4

This scenario does not include the possible positive impact of structural reforms, which can be substantial. A model-based benchmarking exercise shows that undertaking structural reforms that would result in halving the gap vis-à-vis best performers in terms of indicators of structural reforms could raise Romania's GDP by 17% in 20 years' time, more than the 11% found for the EU average, the difference reflecting the relatively larger gaps towards best performers for Romania.[3]

Due to the differences in the assumptions and methodology, **the results of this assessment cannot be directly compared to the numbers reported in chapter 4 of Romania's Recovery and Resilience Plan.**

[1] RRF amounts to roughly 90% of NGEU, which also includes ReactEU, Horizon, InvestEU, JTF, Rural Development and RescEU.

[2] Technically, the low productivity scenario considers a significantly reduced output elasticity of public capital.

[3] Varga, J, in 't Veld J. (2014), "The potential growth impact of structural reforms in the EU: a benchmarking exercise ", European Economy Economic Papers no. 541.

Strengthening social cohesion

The Romanian Plan introduces a series of measures which are expected to contribute to social cohesion and to the European Pillar of Social Rights. The expansion of the availability of good quality early childhood education and care should improve access for the most disadvantaged to this form of education. This in turn should help pupils achieve better learning outcomes and parents to join, more easily, the labour market. Similarly, measures targeted at reducing early school leaving will have an impact on marginalised communities whose children are most at risk of abandonment. Reforming vocational education and training (VET), coupled with measures such as the introduction of a skills forecasting mechanism, will provide better career prospects and skills for VET graduates (many of which are also part of disadvantaged communities). The delivery of the minimum inclusion income reform is expected to bring a positive impact on employment, due to the accompanying activation measures, and education outcomes. The introduction of a voucher system has the potential to increase female labour force participation and access to social services for the newly engaged workers. Health reforms aim to strengthen primary care and foster access to services in rural and small urban areas, including vulnerable communities. Reforms envisage to further develop e-Health services, improve the efficiency of public spending in the healthcare system, and increase the shift to outpatient care.

Romania's Recovery and Resilience Plan contains some measures expected to contribute to addressing the country's challenges in the area of gender equality and equal opportunities for all. These include measures addressing the needs of people with disabilities, including in relation to accessibility to transport, buildings and digital public services. On gender equality, the Plan includes measures aimed at equalising the retirement age over time. As regards gender equality in the digital transformation, beneficiaries of funding for digital skills development programmes run through the library network will be obliged to commit to ensuring a minimum threshold of 50% for women's participation in training programmes. Reforms under component 14 (Good governance), also aim to promote equal treatment and opportunities between men and women, and to improve the representation of women in decision-making positions of State-owned enterprises. Several measures of the Plan also take into account the needs of persons in situations of vulnerability, including for persons with disabilities, older persons, as well as Roma or other ethnic minorities. For example, investments in mobile medical units and in pre-hospital medical infrastructure in component 12 (Healthcare) and investments in the creation of a network of day centres for children at risk of separation in component 13 (Social reform) should target disadvantaged areas and Roma communities. Component 13 (Social reform) also includes key reforms to address the de-institutionalisation process for persons with disabilities, to start the implementation of the Minimum Inclusion Income, to improve the quality of the long-term care services for the elderly as well as to establish an objective minimum wage setting mechanism.

Reducing vulnerability and increasing resilience

The Plan is expected to increase economic and institutional resilience. There is significant effort in the Plan on modernising the public administration, raising the quality of decision-making and strengthening the budgetary framework. Together with the actions directed at the twin transition and to boost skills and innovation, these measures are expected to make Romania less prone to domestic economic or financial shocks and more resilient to external shocks.

Social resilience is expected to improve as a result of the educational reforms and investments included in the Plan. Having a well-skilled labour force and reducing early school leaving will mean that the economy will be better placed to withstand future shocks (and the population more adaptable to changing economic patterns). Furthermore, there is an inverse relationship between the vulnerability of those from disadvantaged groups and their educational attainment. Reducing early school leaving can therefore increase the resilience of the population.

Also, a better preparation of the future labour force, particularly in the area of digitalisation, will reduce vulnerabilities of this sector to future shocks.

In the area of the environment, the Romanian Plan is also expected to reduce vulnerability to climate change. In particular, the reform included in component 1 (Water management) is expected to increase administrative and response capacity of National Water Administration (ANAR) in emergency situations; and significant investments in the water network will contribute to limit the magnitude, duration and damage of floods. The extension of the national meteorological observation network to forecast severe weather phenomena and the forestry-related investments to be carried out in areas exposed and vulnerable to climatic hazards, in particular to drought and floods, also aim at climate adaptation and resilience.

Cohesion and convergence

The Recovery and Resilience Plan is expected to contribute to enhancing economic, social and territorial cohesion and convergence. There are currently considerable economic, social and territorial disparities in Romania which are likely to increase as the COVID-19 pandemic will have uneven socio-economic consequences on different regions of Romania. The Romanian Plan mainly responds to structural problems in areas where the pandemic crisis has taken its toll: health, education and the business environment, but does not neglect the adjacent areas that ensure recovery from such periods of economic contraction and can ensure economic and institutional resilience in such situations: transport, R&D&I, fiscal sustainability, public services, environment and energy. The Plan aims to boost growth through measures linked to the objectives of economic, social and territorial cohesion, addressing the domains where Romania is lagging behind both at European and national level, including identifying a potential for growth, development and reform towards the transition to a digital and sustainable economy.

The Romanian Plan aims to achieve a balanced allocation of resources so as to capitalise on local or regional specificities and to reduce the polarisation of territorial development. Decentralization played an important role in the design of the Plan, which is based on the empowerment of central and local authorities to undertake reforms to facilitate the green and digital transition leading to high resilience. The implementation of the Plan should be based on the involvement of local authorities both in the definition of calls, where appropriate, and in the monitoring and evaluation of the Plan.

In particular, component 10 (Local Fund), targeting both urban and rural development, aims to provide the necessary framework for the development of the regional level through investments in local infrastructure that are expected to support the resilience and green transition of urban and rural areas, as well as to reduce territorial disparities at regional, intra-regional and intra-county level. Future investments aim to support vulnerable people, build a sustainable economy and address potential threats at local level. Urban and rural development can contribute to making urban and rural municipalities more resilient to the challenges posed by global economic and social crises. The objective of investments in local infrastructure and social services is to ensure that essential services provided locally remain operational during an economic, social or health crisis. For rural areas, integrated measures are expected to improve the quality of life and to increase territorial cohesion.

Reforms and investments in sustainable transport will contribute to territorial cohesion objectives. By providing the basic transport infrastructure in currently poorly connected regions of the country, investments in road infrastructure included in component 4 (Sustainable Transport) can be expected to support the economic development of the economy in general and those specific regions in particular. For remote areas not fully benefitting from public transport, investments to promote transition to clean vehicles in road transport are also expected to have a positive effect. The Plan will address this through the appropriate geographical coverage of electric recharging points.

Investments in digitalisation are also expected to have a positive effect on territorial cohesion. The broadband investment included in component 7 (Digital transformation) will provide coverage of very high-speed internet access (at least 100 Mbps upgradeable) to areas where market cannot deliver these services on its own. These are in particular villages, including disadvantaged areas. The investment will give absolute priority to rural municipalities not served with fixed networks.

Several additional reforms and investments across the Plan also have the potential to bring the country closer together. For example, trainings foreseen in component 5 (Renovation Wave) will be delivered in different regions uniformly spread across the Romanian territory. Investment on e-Health in component 7 (Digital transformation) equally aims to increase the access of rural areas and small urban areas and vulnerable groups to specialised consultations, while reducing the waiting time by using telemedicine. Component 15 (Education) focuses on regional and economic disparities in several investment projects in areas such as early-childhood education and care, early school leaving or infrastructure and equipment improvements throughout the education system.

Taking into consideration all reforms and investments envisaged by Romania, its Recovery and Resilience Plan is expected to have a high impact on strengthening the growth potential, job creation, and economic, social and institutional resilience of the Member State, on contributing to the implementation of the European Pillar of Social Rights, including through the promotion of policies for children and youth, and on mitigating the economic and social impact of the COVID-19 crisis, thereby enhancing the economic, social and territorial cohesion and convergence within the Union. This would warrant a rating of A under the assessment criterion 2.3 of Annex V to the RRF Regulation.

Box 3: Employment and social challenges in light of the Social Scoreboard accompanying the European Pillar of Social Rights

The Social Scoreboard supporting the European Pillar of Social Rights points to a number of employment and social challenges in Romania. Due to the COVID-19 pandemic outbreak the Romanian labour market outcomes deteriorated, generating risks of increasing poverty levels. The unemployment rate is on the rise, having reached 5% in 2020, one of the highest levels in the past years, though still below the EU average (7.1%). The employment rate (70.8%) declined by 0.1 pp and the gender employment gap remains one of the highest in the EU (19.3 pp). Despite a slight improvement relative to 2019, the share of young people aged 15-29 not in education, employment or training (NEET) remains among the highest in the EU (16.6% in 2020). Early school leaving remains a large concern, the rate being among the highest in the EU (15.6%). The labour market policies adopted in the context of the COVID-19 outbreak have focused on employment subsidies and flexible working arrangements.

Social Scoreboard for ROMANIA	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24) (2020)
	Individuals' level of digital skills (2019)
	Youth NEET (% of total population aged 15-24) (2020)
	Gender employment gap (2020)
	Income quintile ratio (S80/S20) (2019)
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64) (2020)
	Unemployment rate (% population aged 15-74) (2020)
	Long term unemployment (% population aged 15-74) (2020)
	GDHI per capita growth (2019)
Social protection and inclusion	At risk of poverty or social exclusion (in %) (2019)
	At risk of poverty or social exclusion for children (in %) (2019)
	Impact of social transfers (other than pensions) on poverty reduction (2019)
	Disability employment gap (2019)
	Housing cost overburden (2019)
	Children aged less than 3 years in formal childcare (2019)
	Self-reported unmet need for medical care (2019)

Critical situation	To watch	Weak but improving	Good but to monitor	On average	Better than average	Best performers

Update of 16 September 2021. Members States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the proposal for a Joint Employment Report 2021, COM(2020) 744 final; NEET: neither in employment nor in education and training; GDHI: gross disposable household income.

Persisting high poverty and inequalities are expected to worsen due to the economic downturn. The share of people at risk of poverty or social exclusion (36.3% in 2019) and income inequality are among the highest in the EU. Child poverty remains the highest and the impact of social transfers on poverty reduction is critically low. Coverage and quality of social services, including childcare and healthcare services, are limited. High regional disparities and rural-urban divides persist, and access to essential services is critical, a challenge made even more acute during the pandemic.

The Recovery and Resilience Plan addresses some challenges relevant for the implementation of the Pillar. The Plan introduces measures to fight undeclared work by developing a voucher system for domestic workers. This scheme has the potential to tackle inactivity, increase employment and social protection, in particular for the low-skilled, older workers and people in rural areas. Digitalisation of the public employment services will contribute to better targeted services. Significant investments are included on tackling the still high rate of early school leaving. Similarly, the Plan aims to increase the low participation in early childhood education and care and to improve the labour market relevance of vocational education and training (VET).

Due to the COVID-19 crisis and the deteriorated economic context, the importance of reforms and investments in social inclusion has significantly increased. The Plan proposes a minimum inclusion income reform and a reform of the pension system. Investments in social infrastructure for long-term care, child protection as well as support for persons with disabilities are also included in the Plan. The proposed health reforms aim to improve primary care and efficiency of funding, and to support human resources in the system.

4.4. The principle of ‘do no significant harm’

Romania’s Recovery and Resilience Plan assesses compliance with the ‘do no significant harm’ (DNSH) principle. The assessment follows the methodology set out in the Commission’s technical guidance on the application of ‘do no significant harm’ under the Recovery and Resilience Facility Regulation (2021/C 58/01). It covers the six environmental objectives within the meaning of Article 17 of Regulation (EU) No 2020/852, namely climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems. The environmental impact is assessed per reform or investment. Hence, the 171 measures (reforms and investments) in Romania’s Recovery and Resilience Plan translate into 171 ‘do no significant harm’ assessments, based on the six objectives.

Each ‘do no significant harm’ assessment follows a two-step approach. The first step assesses whether there is a risk that a measure could do significant harm to one or more of the environmental objectives. In some cases, the assessment concludes that there is no risk of significant harm, in which case the measure is assessed as compliant with this objective of the Regulation. In cases where the analysis identifies a risk, as a second step, a more detailed assessment is performed in which Romania demonstrates the absence of significant harm.

Where needed, the requirements of the DNSH assessment are enshrined in the design of a measure and specified in a milestone or target of this measure. This ensures that any disbursement for the respective measures can only be made once compliance with the DNSH principle is ensured. For instance, the Plan contains a number of support schemes for the industry and the private sector, either via tenders or via financial instruments. In these cases, the milestones specify that certain types of activities cannot be supported (for example fossil fuel activities and landfills) and require that the selected projects are checked for compliance with the applicable national and European environmental legislation in order to be eligible. The respective milestones ensure that these criteria are integrated in the call for projects or call for tender before it is awarded. Similarly, support that is provided through financial instruments has to go through sustainability proofing, in addition to the above requirements, which is also specified in a milestone and will need to be integrated in the investment policy of the financial instrument before any investments are made.

The potential harm of certain mobility investments is offset by flanking measures. The Plan entails large support for road investments on the TEN-T core network. These kinds of investments generally have the potential to do harm to several environmental objectives, namely climate change mitigation, air pollution and biodiversity. In particular, Romania provided analyses for each motorway section showing that the investments are expected to generate additional GHG emissions. However, flanking measures are expected to prevent this when mitigating GHG emissions, such as through green taxation measures in line with “polluter pays principle”, incentives for zero-emission vehicles both for private and public use, scrapping of polluting vehicles, increases in the number of electric vehicle charging stations from 1 800 to 30 000 over the Recovery and Resilience Facility implementation period, planting of forest curtains and new forests (45 000 Ha), as well as digitalisation of transport (e.g. Intelligent Transport Systems) to improve traffic efficiency.

The Plan includes measures related to power and heat generation and related distribution infrastructure using natural gas. As Romania faces significant challenges in the transition away from carbon-intensive energy sources, these measures can exceptionally be approved, in accordance with Annex III of the DNSH Technical guidance. The Plan demonstrates that this support contributes to the EU's decarbonisation objectives for 2030 and 2050 for the following reasons.

The Plan demonstrates that the construction of a gas distribution network in the Oltenia region is future-proof, enabling the transportation of green hydrogen. The Plan shows that the distribution network shall carry at least 20% of renewable hydrogen (by volume) when commissioned by 30 June 2026 and 100% renewable hydrogen in 2030. Moreover, the Plan provides evidence that air pollution will be significantly reduced when using gaseous fuels from a smart grid rather than using biomass and coal in old stoves without emission treatment technologies. In this context, the measure is not expected to contribute to a significant increase in pollutants in the air, as natural gas, especially when blended with green hydrogen is much less polluting than solid fuels and biomass, which are currently used for domestic heating, domestic hot water and cooking. Gaseous fuels also do not produce emissions of pollutants such as sulphur dioxide (SO_2) and fine particulate matter (PM10, PM 2,5), as in the case of biomass and solid fuels. These conditions are verified by intermediate milestones at the time of the award of the contract. To ensure the safe use of the network with the blending of at least 20% hydrogen, legislative changes will ensure that only hydrogen-ready appliances and equipment shall be connected to this network.

The Plan also covers the installation of future-proof, flexible and highly efficient gas-fired Combined Heat and Power enabled for the use of renewable and low-carbon gases. DNSH compliance is ensured through the following accompanying measures: i) credible plans to increase usage of renewable and low-carbon gases through the adoption and implementation of a National Hydrogen Strategy and Action Plan and the installation of renewable hydrogen production capacities; ii) the closure of coal and lignite power and heat generation facilities, which is significantly more carbon-intensive than the high-efficient gas-fired Combined Heat and Power under this investment; iii) at least 3 000 MW of additional renewables capacity being installed by 2026, as well as a second round of auction for the award of Contracts for Difference (CfD) for renewables, which shows that Romania has a credible trajectory for increasing the share of renewables towards their 2030 renewables target set out in the National Energy and Climate Plan; iv) concrete reforms and investments to increase the share of renewables, such as the implementation of the Contracts for Difference, the establishment of renewables Power Purchase Agreements (PPAs), the simplification of the licensing and permitting procedures for renewables investments, short and binding administrative response times and accountability procedures for unnecessary delays, reduction of the necessary documentation and procedures, and introduction of a new dedicated framework for offshore renewables plants.

While investments in water management may contribute to the climate and environmental objectives, they should not lead to the deterioration of the ecological status of the affected water bodies. In particular, DNSH compliance must be ensured for investments in component 1 (Water management), to repair and refurbish damaged dams and flood prevention polders on existing flood defence lines in order to restore and maintain their capacity to prevent flooding, for which revised feasibility studies concluded that there are no feasible alternatives to reduce flood risks. The Plan rehabilitation will be done in accordance with the requirements set out in the feasibility studies and project designs, and fully respect the results and conditions set by the comprehensive and cumulative Environmental Impact Assessment that should have been completed in accordance with Directive 2011/92/EU (EIA Directive), as well as relevant assessments in the context of Directive 2000/60/EC (Water Framework Directive) and the Appropriate Assessment under Directive 92/43/EEC (Habitats Directive), including the implementation of required mitigation measures. The investments for the modernisation of flood protections included in Component 2 (Forests and Biodiversity protection) will integrate and strictly comply with any measure identified in the framework of the assessment under Directive 2000/60/EC (Water Framework Directive) as necessary to ensure compliance with the DNSH principle.

The Plan also places a strong focus on the renovation of buildings. While this has a positive impact on the energy system as well as on emissions reductions, it can also create significant amounts of construction waste and hence cause harm to the circular economy objective. Romania ensures that there will be no significant harm to the circular economy objective by detailing in the Plan for each of the measures that at least 70% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites will be prepared for reuse, recycling and other material recovery. Where a construction of new buildings is envisaged, it will be ensured that they meet all the EU legislation requirements to ensure that no harm to climate change mitigation is done, and notably that they will be Near Zero Energy Buildings (NZEB).

Taking into consideration the assessment of all the measures envisaged, no measure for the implementation of reforms and investments projects included in Romania's Recovery and Resilience Plan is expected to do a significant harm to environmental objectives within the meaning of Article 17 of Regulation (EU) No 2020/852 (the principle of 'do no significant harm'). This would warrant a rating of A under the assessment criterion 2.4 of Annex V to the RRF Regulation.

4.5. Green transition

Climate target

Romania's Recovery and Resilience Plan correctly follows the methodology for climate tracking set out in Annex VI to the RRF Regulation. It identifies intervention fields and corresponding coefficients for the calculation of support to the climate objectives, for most measures. The choice of intervention fields for the climate transition is well justified and reflects the nature, focus, objective or expected outcome of the investments.

It should be noted that:

- the measures of the Plan often consist of several sub-measures – for these measures, the Plan indicates an intervention field for each sub-measure and computes the climate contribution at sub-measure level;
- where relevant, milestones and targets include specifications that ensure that the requirements of an intervention field are met (for instance, where intervention field 025bis – "Energy efficiency renovation of existing housing stock, demonstration projects and supporting measures compliant with energy efficiency criteria" is used, a target specifies that the measure must achieve the conditions of the intervention field i.e. on average, at least a medium-depth level renovation as defined in the Commission Recommendation on Building Renovation (EU) 2019/786;

Measures supporting climate change objectives in Romania's Recovery and Resilience Plan account for EUR 11 969.62 million, which represent 41% of the Plan's total allocation of EUR 29 182 million. Of the 15 components in the Plan, 14 components (Water Management, Forests and Biodiversity Protection, Waste Management, Sustainable Transport, Renovation Wave, Energy, Digital Transformation, Business Support and RDI, Local Fund, Tourism and Culture, Healthcare, Social Reform, Good governance, and Education) include expenditure that contributes to climate objectives.

With a total of EUR 4 134.6 million, the largest climate contribution of the Recovery and Resilience Plan results from component 4 (Sustainable Transport). This component notably includes investments worth EUR 2 832 million in the construction or modernization of electrified or zero-emission railways, which benefit from a 100% climate coefficient under various different intervention fields listed in annex VI of the RRF Regulation (064, 065, 067, 068, and 069bis).

Table 6. Contribution to climate objectives per component

Component	Total cost (EUR million)	Contribution to climate objectives (EUR million)	Share of contribution to climate objectives
1. Water management	1 462.00	238.82	0.8%
2. Forests and Biodiversity protection	1 173.00	926.80	3.2%
3. Waste management	1 239.00	448.55	1.5%
4. Sustainable transport	7 620.00	4 134.60	14.2%
5. Renovation Wave	2 200.00	2 185.72	7.5%
6. Energy	1 620.00	1 039.00	3.6%
7. Digital transformation	1 884.96	163.89	0.6%
8. Tax and pension reforms	456.93	0.00	0%
9. Business support, research, development and innovation	2 558.63	100.00	0.3%
10. Local fund	2 100.00	1 613	5.5%
11. Tourism and culture	449.00	253.68	0.9%
12. Healthcare	2 450.01	239.68	0.8%
13. Social reforms	196.74	1.87	0.01%
14. Good governance	165.60	22.09	0.1%
15. Education	3 605.97	601.92	2.1%
Total	**29 181.84**	**11 969.62**	**41%**

Green transition

The measures in Romania's Recovery and Resilience Plan are expected to effectively contribute to the green transition, and to addressing the challenges resulting therefrom. The Plan supports Romania's decarbonisation and energy transition objectives, as set out in the National Energy and Climate Plan (NECP). Energy and climate investments and reforms envisaged in the Recovery and Resilience Plan are consistent with the NECP. Romania has systematically ensured through its do-no-significant-harm assessment that none of the proposed measures cause harm to the protection and restoration of biodiversity and ecosystems and has demonstrated how certain measures in the Plan contribute to biodiversity, notably through component 2 (Forests and Biodiversity Protection), which amounts to EUR 1 173 million, and of which at least EUR 1 147 million are tracked with a 100% environment coefficient under relevant intervention fields listed in annex VI of the RRF Regulation (035, 050, and 040).

In particular, the Recovery and Resilience Plan broadly addresses the key policy challenges identified in the Commission's recommendations on the Romanian NECP. These concern: i) boosting renewable energy generation; ii) fostering the renovation of buildings and the energy efficiency of district heating networks; iii) improving transport infrastructure and sustainable mobility, including reforming the transport agencies and supporting the deployment of recharging and refuelling infrastructure; iv) supporting the phase-in of green taxation and green budgeting. Various components of the Recovery and Resilience Plan contribute to the achievement of the energy and climate targets set out in the NECP and are expected to have a lasting impact.

The Plan includes a key reform on the phase out of coal and lignite power production by 2032 in component 6 (Energy). The reform is crucial for the decarbonisation of the energy sector and for greenhouse gas (GHG) emissions reductions in Romania, considering that the energy sector is the largest source (66%) of GHG emissions in Romania. The reform will be implemented gradually with concrete targets for the decommissioning of coal and lignite power production capacity, starting already in 2021. The reform will deliver the closure of a large proportion (i.e. 3 780 MW) of the total coal/lignite fired electricity production capacity installed (i.e., 4 590 MW) by 2025. The reform is realistic and takes into account the main challenges in the transition away from coal and lignite energy sources by proposing the replacement of the coal and lignite power production capacity with high-efficient gas-fired power production or gas-fired Combined Heat and Power, in line with the do no significant harm principle. The amount of new gas-fired capacity is significantly lower than the corresponding amount of decommissioned capacity and is required to be future-proof in terms of use of renewable and low-carbon gases. The reform is expected to have a significant positive long-term impact on environmental objectives.

The coal phase-out is also accompanied by key measures in component 6 (Energy) to increase and speed-up the deployment of renewables power production and alternative energy sources, such as green hydrogen. The Plan's implementation is expected to lead to at least 3 000 MW of additional electricity generation capacity from renewables by 2026, with a focus on solar and wind technologies. The new Energy Law will in particular introduce Contracts for Difference (CfD) as the main support mechanism for investments in renewables power production and allow direct negotiation of renewables Power Purchase Agreements (PPAs). The reform is expected to remove bottlenecks and help unlock the existing potential of private investment in renewables by simplifying the licensing and authorisation procedures for renewables investments. During the preparation of the new CfD support scheme for renewables, additional investments in wind and solar technologies are also proposed to be financed under the Recovery and Resilience Facility, and a specific support framework for offshore renewables investments in currently under-exploited regions is planned. In addition, the Plan addresses the need to facilitate the integration of renewables with investments in batteries and storage aiming to increase the flexibility of the electricity grid. Those investments are expected to complement the necessary investments in the transmission and distribution network that are planned to be financed under the Modernisation Fund. The Plan also intends to use the potential for green hydrogen production by developing a National Hydrogen Strategy and Action Plan, accompanied by investments in electrolyser capacity, which is expected to provide a reliable investment framework for investors. The goal is for 100MW of electrolyser capacity, which will produce at least 10 000 tons of green hydrogen.

The Plan has a very strong focus on investments in energy and resource efficiency. The investments in component 5 (Renovation Wave) are expected to achieve total CO_2 savings of at least 0.15 million tons for private buildings and at least 0.075 million tons for public buildings. Tracking of the impact of the investment will be ensured by the establishment of a national building stock database to collect information on the energy consumption and seismic risk of buildings. The energy-efficiency reforms and investments, in particular the large investments in energy renovation of residential buildings, are expected to contribute to the lowering of energy bills, thus partly mitigating the economic effects of the crisis. The combination of energy renovation with seismic renovation will also ensure a lasting impact of the energy-renovation investments and add resilience to the building stock, as Romania is one of the EU countries with the highest seismic risk. Moreover, the reforms and investments in component 5 (Renovation Wave) are expected to tackle the challenges of the energy renovation of historic buildings such as historic monuments and buildings located in protected areas. Aside from buildings, component 6 (Energy) also aims at increasing energy efficiency of the industry, notably by reducing energy consumption, developing systems to digitalise energy consumption metering, and increasing energy and heat self-consumption. This is expected to lead to a 30% reduction in direct and indirect GHG emissions compared to ex-ante emissions for at least 50 projects, to be monitored through an IT platform for centralising and analysing national energy consumption.

A large share of the proposed measures aim to contribute to the reduction of GHG emissions and air pollution in the transport sector. The Plan includes reforms and investments to promote urban mobility through zero-emission public transport, green taxation in line with the "polluter pays principle", incentives for zero-emission vehicles for public and private use, modal shift to rail and water transport, and measures to improve road safety with the objective to reduce deaths/serious injuries by 25% between 2019 and 2025. In particular, component 4 (Sustainable Transport) and component 10 (Local Fund) include significant investments in rail infrastructure and rolling stock, in sustainable urban transport, as well as in electric vehicle (EV) recharging infrastructure, which are expected to also reduce the impact of new motorways. These investments will likely contribute to improving Romania's connectivity and the attractiveness and sustainability of its transport system as well as increasing the use of public transport by citizens. Proposed reforms and investments related to the greening of road transport operations, in particular vehicle taxation and EV charging stations will likely contribute to a more sustainable transport sector in Romania. Investments and reforms to improve road safety are also welcome and will have a positive impact on people's lives, as long as they complement the new Road Safety Strategy and related targets. In addition, the development of the Shipping Strategy is a necessary and important step in shifting freight to waterborne modes as well as improving the environmental performance of shipping and ports. Investments in segregated cycling infrastructure will increase safety and encourage more people to cycle as long as they are complemented by the appropriate strategic and normative reforms.

The introduction of green budgetary planning will also contribute to better support the implementation of green policy objectives. By developing and applying a methodology for assessing the impact of individual budget lines on environmental objectives, in line with the EU Taxonomy for sustainable activities and the DNSH Principle, the reform included in component 6 (Energy) will allow the monitoring of green budgetary expenditure and the assessment of the environmental and climate impact of fiscal policy.

The measures in the Plan are expected to not only contribute to decarbonisation and energy and resource efficiency, but also to increasing climate adaptation and resilience, biodiversity and environmental protection. The reform of forest management and governance systems, based on a new National Forest Strategy, is expected to put in place a robust strategic and regulatory framework for sustainable forestry that will not only substantially contribute to biodiversity protection but also increase Romania's resilience to the adverse effects of climate change. In addition to improving sustainable forest management, the reform aims at combatting illegal logging and the strategy will set out sustainability criteria for forest biomass for energy use. Associated investments aim at afforesting or reforesting a total area of 56 700 ha and creating 3 150 000 m^2 of urban forests, thus contributing to both climate resilience and biodiversity. This will be supported by 90 new and renovated tree nurseries, with tree species and ecotypes that are adapted for the future climatic conditions of Romania and while avoiding short rotation or monoculture production. Other reforms and investments related to biodiversity include the reform of the management system of protected natural areas, in order to effectively implement the EU Biodiversity Strategy, coupled with investments to update management plans for protected natural areas, as well as the ecological restoration of 2 800 ha of grasslands. Moreover, a number of investments aim specifically at the protection of habitats and species directly dependent on water, notably through the restoration of 1 700 ha of riparian habitats, and investments in wild sturgeon monitoring along the Lower Danube, in order to fight poaching. In this context, a number of investments contribute directly to increasing resilience to climate change, specifically by reducing flood risks, such as through the rehabilitation of existing defence lines in accordance with the National Strategy for Flood Risk Management and the Floods Directive.

Regarding resource efficiency, material reuse and reducing waste generation, as a result of the implementation of component 3 (Waste management), a Circular Economy Strategy and Action Plan is expected to be adopted by 2023 to ensure Romania's transition to a circular economy by 2030. These actions will be accompanied by a number of investments in separated waste collection and recycling facilities, agricultural waste recycling and waste management enforcement. The Recovery and Resilience Plan therefore supports Romania in meeting the national energy and climate targets set out in the NECP 2030 and RNC 2050 and thus in achieving carbon neutrality in 2050.

Taking into consideration the assessment of all the measures envisaged, the Recovery and Resilience Plan is expected, to a large extent, to make a significant contribution to the green transition or to address the challenges resulting from it and ensures that at least 37% of its total allocation contribute to the climate target. This would warrant a rating of A under criterion 2.5 of Annex V to the RRF Regulation.

4.6. Digital transition

Digital tagging

The Recovery and Resilience Plan correctly follows the methodology for digital tagging in Annex VII by identifying intervention fields and corresponding coefficients to calculate support to the digital objectives for each investment measure. Romania has split the measures into sub-measures based on their costs whenever possible in order to ensure an accurate selection of the intervention fields and to avoid any overestimations of the contributions of certain measures to the digital objectives. In a limited number of cases, Romania has indicated for the same measure two different intervention fields for the purpose of climate and digital tagging respectively. This has been done when the measure could not be split into different sub-parts, when no single intervention field that reflects the contribution to both climate and digital objectives could be applied or when the measure was considered as fully or partly contributing to both climate and digital objectives. The Plan does not propose any increased digital coefficients for any measure.

Overall, based on the methodology, the Plan contributes to digital objectives for 20.5% of Romania's allocation (this amounts to EUR 5.97 billion) and the digital target of 20% is therefore considered to have been met. The most significant contributions to the digital target are included in pillar 2, but pillars 1, 3 and 6 have a substantial contribution as well and all components include at least some digital-related measures. In particular, in component 4 (Sustainable transport), the Plan allocates EUR 864 million as digital contribution, while component 7 (Digital transformation), focused on the digital transformation of the public sector, cybersecurity and connectivity, allocates EUR 1 817 million (the largest contribution for a component). Equally significant contributions are made by component 9 (Business support, research, development and innovation), earmarking EUR 1 064 million for the support of businesses' digitalisation and a multi-country project planned to be implemented as an Important Project of Common European Interest (IPCEI) on 'Low-power processors and semiconductor chips' and by component 15 (Education), tackling reforms and investments for the digitalisation of the education process, amounting EUR 1 129.5 million.

Table 7. Contribution to digital objectives per relevant component

Component	**Total cost (EUR million)**	**Contribution to digital objectives (EUR million)**	**Share of contribution to digital objectives**
1. Water management	1 462.00	114.11	0.4%
2. Forests and Biodiversity protection	1 173.00	7.16	0.02%
3. Waste management	1 239.00	118.74	0.4%
4. Sustainable transport	7 620.00	864.00	3%
5. Renovation Wave	2 200.00	5.00	0.02%
6. Energy	1 620.00	32.00	0.1%
7. Digital transformation	1 884.96	1 817.08	6.2%
8. Fiscal and pension reforms	456.93	386.76	1.3%
9. Business support, research, development and innovation	2 558.63	1 064.00	3.7%
10. Local fund	2 100.00	317.50	1.1%
11. Tourism and culture	449.00	19.26	0.07%
12. Healthcare	2 450.01	70.00	0.2%
13. Social reforms	196.74	4.03	0.01%
14. Good governance	165.60	27.33	0.09%
15. Education	3 605.97	1 129.50	3.9%
Total	**29 181.84**	**5 976.46**	**20.5%**

Digital transition

Romania's Plan puts a strong emphasis on the digital transition and addresses challenges resulting from it across all sectors. The measures of the Plan cover five of the seven priority areas identified in the Annex VII of the Recovery and Resilience Facility Regulation: connectivity, human capital, digital public services, digitalisation of businesses, investment in digital capacities and deployment of advanced technologies. The reforms and investments also cover four digital flagship initiatives presented in the Annual Sustainable Growth Strategy 2021[31]: Connect, Modernise, Scale-up, Reskill and upskill.

The Plan is expected to address digitalisation challenges related to the public administration such as fragmentation, lack of interoperability as a major obstacle in the development of user-centred digital services, and elimination of bureaucratic barriers. Romania ranks low in the last DESI report as regards the digital public services dimension. Therefore, the Plan has a strong focus on this sector. A key reform on the development of the Government Cloud in component 7 (Digital transformation) aims to modernise the public administration by establishing the necessary framework for achieving interoperability of the various public institutions' IT&C systems, ensuring coherence with the eIDAS Regulation and implementing the "once only" principle embedded in the Single Digital Gateway Regulation (EU) 2018/1724. Furthermore, a second reform shall establish a general framework for the development and management of a cloud infrastructure which shall be underpinned by significant investment aimed at connecting 30 public institutions in a newly created Government Cloud; these measures are expected to fundamentally transform the public administration's processes that are currently fragmented, dated, vulnerable to cyberattacks and non-interoperable. In the long term, the measures are expected to save time for citizens and businesses, optimise the services provided by the public sector, and ensure business continuity for critical IT services, thereby contributing to the economic resilience of the country.

A broad range of complementary investments in the digitalisation of the public administration included in component 7 (Digital transformation) is equally expected to contribute to the modernisation of key areas of the public sector. The component covers the digitalisation of health, the justice system, environmental public services, the employment and social protection and public procurement systems. The efficiency gains resulting from the digitalisation of the public administration are expected to have a lasting impact beyond the lifetime of the Recovery and Resilience Facility.

The Plan has a particular focus on e-health and telemedicine systems. The e-Health investment included in component 7 aims to foster the integration of health institutions through digital infrastructure, facilitating the access to data for the Ministry of Health and other

[31] COM(2020) 575 - Annual Sustainable Growth Strategy 2021, 17 September 2020

stakeholders (such as public health directorates), reducing fragmentation and increasing the quality of health data. A new Health Insurance IT platform shall strengthen the capacity of central, regional and local health institutions to digitally manage health data, connecting over 25 000 healthcare providers to the platform. Telemedicine is expected to increase the access of rural areas and small urban areas and vulnerable groups to specialised consultations, while reducing the waiting time. Increasing the access to information on family planning and related education aimed at preventing unplanned pregnancies are also targeted by the telemedicine investment.

The digitalisation of the justice system forms part of the efforts to digitalise the public sector. The key measure in this regard is expected to support the finalisation of ECRIS V system (new case management system), which is the central element of the digital transformation of the judiciary in Romania. This tool is expected to provide key functionalities supporting the flow of cases in courts and prosecution offices, the collection of statistical data and the generation of certain pre-defined statistical reports, as well as the electronic transfer of data between different actors (courts, prosecution offices and the public prosecutor's office). The development of the system is financed by the Operational Programme Administrative Capacity and the Plan shall complement these funds. Furthermore, the digitalisation of the judiciary shall also entail technical infrastructure for teleworking and the digitalisation of documents with the aim of increasing the resilience of the judicial system, the improvement of cybersecurity capabilities and the implementation of a new system allowing secure videoconferencing.

An integrated IT system is expected to support the digitalisation of environmental public service. Moreover, the Plan focuses on the development of the infrastructure for the supervision, control and assurance of forest integrity and the transport of wood, with the aim of combatting illegal logging.

The Plan also supports the digitalisation of employment and social protection. The Plan includes measures to digitalise the services offered by the Public Employment Service in order to respond effectively to the evolving needs of the labour market by optimising operations for the benefit of citizens and by providing digital skills trainings for managing specific activities (such as online submission of documents for registration of beneficiaries and award of benefits, possibility to register and attend online trainings and the assessment of professional competences, online advisory sessions) and upgrade of the IT infrastructure. Moreover, the control activity of the Territorial Labour Inspectorates and the social assistance benefits managed by the National Agency for Payments and Social Inspection will also be digitalised. As a result, many related processes will be optimised and simplified, leading to easier access to data information in this sector. The measure also includes creating a functional IT System for serving Minimum Inclusion Income beneficiaries (underpinning a reform in component 13).

The investment on qualified electronic identity cards and digital signature is essential in facilitating the digital interaction between public/private entities and citizens. It is expected to deliver 8.5 million electronic identity cards during the implementation of the Plan. The electronic identity card is a key enabler of the adoption of government digital services and will facilitate citizens' access to various electronic services (banking, tax, social, financial); this is expected to lead to a much-improved quality and accessibility of public services, with major effects on simplifying the relationship between citizens, businesses and public authorities.

The digital measures included in the Plan are expected to increase the country's competitiveness. In particular, Romania is expected to be able to improve the efficiency of the economy and to take much better advantage of its digitalisation potential by: (i) accelerating the digitalisation of both SMEs and large companies with significant investments included in component 9 (Support for the private sector, research, development and innovation); (ii) adjusting digital skills to labour market needs and (iii) implementing electronic forms in public procurement procedures. As regards the digitalisation of SMEs, several financing schemes shall be established to enhance the innovation potential of businesses by focusing not only on the adoption of existing digital technologies but also on the development of advanced digital technologies such as blockchain, quantum and cloud computing and artificial intelligence. Furthermore, a key reform will streamline, simplify and fully digitalise business-related regulatory requirements, in particular those related to setting up a company, exiting from the market/closure of a business and the reporting of labour market obligations. In addition, 2 000 SMEs are expected to be supported for the development of digital skills through dedicated trainings.

The implementation of eForms (electronic forms) in the field of public procurement is expected to contribute to streamlining the public procurement practices at national and European level. This measure will enhance transparency in public procurement procedures by providing digital tools aimed at preventing irregularities, (thereby contributing to preventing corruption and fraud), harmonising interfaces and processes and by improving access to public procurement procedures for businesses through a transparent and predictable use of the national electronic procurement system. It will also improve the efficiency of the public administration, simplify the procedures and cut unnecessary red tape for both contracting authorities and economic operators, thereby achieving evidence-based public procurement governance.

On connectivity, the reforms in component 7 (Digital transformation) are expected to accelerate the national roll-out of 5G networks and to improve broadband coverage. In particular, the reform is accompanied by an investment to provide coverage with very high-speed internet access (at least 100 Mbps upgradeable) for areas where there is currently no broadband infrastructure and where this infrastructure is unlikely to be developed soon ('white areas'). These measures will tackle the rural – urban digital divide, reduce the administrative burden and streamline procedures and fees associated with 5G deployment, thereby creating the prerequisites for equal access to digital services and very high-speed Internet for all citizens.

Another key area where the Plan is expected to contribute to the digital transformation is cybersecurity. By establishing the legal and institutional framework for the organisation and conduct of activities in the areas of cybersecurity and cyber defence and by clarifying cooperation mechanisms and the responsibilities of various institutions, the reform on cybersecurity will continue the process of strengthening the resilience to cyber risks of the public and private entities owning critical infrastructures. Measures include, among others, securing the infrastructure of 101 public and private entities which have IT&C infrastructures with critical value for national security, training of cybersecurity trainers, a “government toolkit and services” to increase the level of cybersecurity maturity of 1 000 “key players” (such as economic and public administration actors, including companies, SMEs, schools, hospitals, central and local government bodies), as well as upgrading and expanding the Gigabit Internet access network for the public administration and public services provided in order to mitigate cyber security risks.

Improving digital skills is also a priority in the Plan, with significant measures in component 7 (Digital transformation) and component 15 (Education). By including the definition of new digital occupations in the Classifications of Occupations Code, the labour market is expected to better align to the latest developments in the digital sector. A broad range of trainings and investments in digital skills also accompany the reform, including funding for civil servants and libraries in component 7 (Digital transformation). Component 15 (Education) has a very significant focus on the digitalisation of educational processes. A reform is expected to set minimum and optimal standards for ensuring the quality of digital education and to align the educational system to DigComp European framework for digital competences for students, including by updating the curriculum and developing digital teaching materials and linking teacher’s competences profile and the curriculum for initial vocational training, continuing vocational training and the one for skills training. The corresponding investments include the development of thematic training courses, for digital literacy and digital pedagogy competences, in particular for teachers in rural and disadvantaged areas, grants for computer science laboratories and smart hubs, development of open educational resources and schemes for digitalisation of universities.

Romania intends to be part of a digital multi-country project that is planned to be implemented mainly through participation or association to an Important Project of Common European Interest (IPCEIs) in the area of ‘Low-power processors and semiconductor chips’. Through this project, the Plan aims to support Romania’s involvement in the microelectronics field by coordinating with capabilities and needs at European level, including through the participation of at least ten members of the national ecosystem to this multi-country project.

Taking into consideration the assessment of all the measures envisaged, the Recovery and Resilience Plan is expected, to a large extent, to make a significant contribution to the digital transition or to address the challenges resulting from it and ensures that at least 20% of its total allocation contribute to support digital objectives. This would warrant a rating of A under criterion 2.6 of Annex V to the RRF Regulation.

4.7. Lasting impact of the Plan

Structural change in administration and institutions

Reforms and investments in the Recovery and Resilience Plan are expected to have a lasting impact on the functioning of the public administration in Romania (component 14)**.** For instance, reforms of recruitment, wages and career progression in the public sector should help attract and retain skilled and professional human resources. Performance-based evaluation and the conversion of temporary and precarious contracts into more stable work arrangements will increase the effectiveness of civil servants, and their independence from undue external pressures. Moreover, with the establishment of the task-force to implement and monitor Digital Transformation reforms and investments (component 7), civil servants will develop specific digital skills, thus enabling continuous improvements in the delivery of quality public services.

Better and more integrated planning will favour a more coherent and efficient use of EU funds. Component 14 (Good governance) establishes mechanisms and coordination bodies directly under the Prime Minister's office to align skills in the public administration to technological developments and guide the sector through the digital transition. A more integrated planning process will ensure a coherent approach to policy-making across ministries, and better linkages with the budgetary process.

Investments in the area of tax administration will strengthen Romania's fiscal capacity. A thorough and independent review of the tax administration will point at all numerous tax credits and loopholes for tax avoidance. Subsequent reforms that take on the review's recommendations will make the tax system fairer and more efficient. A broader use of green taxation will moreover nudge citizens and companies into adopting a more environmentally sustainable behaviour, while making the taxation system fairer towards non-pollutants. Enhanced fiscal capacity will create room to offer higher quality services, which swiftly adapt to the needs of taxpayers and reduce the administrative burden they may face.

The Plan creates the conditions for a more integrated delivery of public services at the local level, but overarching decentralisation reforms will be needed to make these conditions permanent. In particular, the Plan provides neighbouring territorial administrative units that have social and economic interlinkages with new tools and incentives to coordinate. Within metropolitan areas and rural consortia, municipalities will be able to pool resources, jointly provide public services, and target issues that go beyond traditional administrative borders – such as traffic congestion, air pollution, water management and housing policy.

Structural change in policies

Romania's Recovery and Resilience Plan is expected to have lasting change in the way policies are designed, implemented and monitored – especially when they regulate the use of natural resources and the environment. For example, the strengthening of the regulatory framework for water management (component 1) will encourage more sustainable demand and supply of water and accelerate people's access to quality services. The simplification and upgrade of the legal framework regulating the planning and use of space (component 5) will support investment for the construction of clean buildings and the retrofitting of existing ones, thus creating momentum for the green transition as well as resilience to natural hazards. The energy mix will become more diversified, thanks to new laws that phase out energy production based on coal and lignite and that create incentives for private investments in the production of renewable energy – notably, the Energy Law (component 6).

The implementation of measures that aim at making transport more sustainable will bring about a structural change in the relevant policies (component 4)**.** The Directorate-General for Strategy within the Ministry of Transport and Infrastructure (MTI) will introduce and update quality standards to regulate the construction and renewal of road infrastructure, in order to ensure their environmental sustainability. For instance, roads will have a minimum number of charging stations for electric vehicles and will be constructed with recycled materials. MTI will implement measures aimed at increasing the quality of the services provided through public service contracts. The service provided will be monitored on the basis of a set of quality indicators, thereby establishing bonus or penalty mechanisms for granting compensation depending on the achievement of indicators.

Structural changes in public policies will improve the provision of public services to citizens and enhance the competitiveness of Romania and its capacity to innovate. The establishment of metropolitan areas and rural consortia under component 10 (Local Fund) will broaden the policy tools that neighbouring municipalities have at their disposal to face issues that usually cross administrative boundaries - such as pollution, housing and traffic congestion. Similarly, legal provisions will encourage the voluntary merging of research institutions, thus enhancing the research and innovation capacity of the country.

The planned health reforms are expected to bring medium to long-term effects at all levels of the healthcare system (component 12). The access, quality and coverage of primary care are expected to increase due to the introduction of performance-based funding, and revised payment mechanisms and incentives for primary health providers. Cost-efficiency and effectiveness of the health system funding should improve and lead to sustainability. The skills development framework coupled with the revision of the payment mechanisms, should secure healthcare staff.

The implementation of the minimum inclusion income reform is expected to lead to a structural change in the delivery of social benefits. This will help improve the adequacy of the social payments system while at the same time, and especially if coupled with activation measures, promote the re-integration into the labour market of those currently inactive. Positive labour market outcomes are expected to occur also as a result of complementarities between the introduction of the voucher scheme, the improvement of the digital services provided by the employment services, and the development of digital skills of the population.

Some of the reforms proposed in education (component 15) are also expected to contribute to structural changes in this policy. Having a better-defined and more attractive professional education route for example (with a strong dual VET component) should help have a lasting impact on the provision of skills needed by the economy. The planned development of a unitary, inclusive and quality early-childhood education system for children from birth to 6 years-old would also have a lasting impact on policies on the provision of this form of education. The corresponding increase in enrolment rates is expected to benefit those from the most disadvantaged communities.

Lasting impact

Reforms and investments in Romania's Recovery and Resilience Plan address some root causes of inequalities and poverty. A reform of the pension system (Component 8) will redefine contributions to the pension system, thus correcting current long-lasting inequities of the public pension system. The Plan envisages social reforms (Component 13) to improve access to labour market for disadvantaged groups, especially through active policies, and create incentives for the formalisation of jobs. Moreover, better integration of labour market policies and social policies is expected to reduce poverty.

Investments into the education system will boost the competitiveness of the Romanian economy, while preparing its pupils to the new technological challenges and opportunities and fostering social inclusion. Component 15 (Education) strikes a good balance between investments in educational infrastructure and investments in human capital and proper staffing of the educational institutions. The creation of 10 consortia for dual education further aims to improve labour market relevance. The strong emphasis placed on equipping educational establishments from all levels with IT labs and equipment will provide the circumstances for improving the digital skills of the future labour force. The extension of the crèches network will create the conditions for further integrating women in the labour market.

The Plan will give a strong impetus to the digital transformation of Romania, thus preparing it for the digital transition and ultimately improving its citizens' well-being. Investments proposed in digital technologies, such as the realisation of the government cloud and the development and migration of existing digital public services applications, will lead to interoperability of all digital public services in Romania. At the same time, investments in cybersecurity will ensure better protection of personal data to the benefit of the all country's security (component 7).

Reforms in the health sector should have a durable positive impact on the supply of quality and modern public healthcare services. In particular, investments in both pre-hospital (such as outpatient centres or integrated community centres) and in hospital infrastructure, could alleviate structural issues such as regional and rural-urban disparities in terms of healthcare service provision or outdated hospital infrastructure and equipment. They also have the potential of easing the mounting pressure on the public hospital system, by increasing the stock of available hospital beds, as well as reducing the rate of preventable diseases.

Taking into consideration all reforms and investments envisaged by Romania in its Recovery and Resilience Plan, their implementation is expected, to a large extent to bring about a structural change in the administration, in relevant institutions and in relevant policies, and to have a lasting impact. This would warrant a rating of A under criterion 2.7 of Annex V to the RRF Regulation.

4.8. Milestones, targets, monitoring and implementation

Adequacy of the structure tasked with the implementation of the Plan, monitoring of progress and reporting

The Recovery and Resilience Plan adequately describes the arrangements to ensure that a clearly identified body is responsible for the implementation of the Plan. The Ministry of Investment and European Projects is the national coordinator for the implementation of the Plan, with the establishment of a specialised structure. It will be responsible for monitoring, verifying and validating the achievement of milestones and targets. The Ministry of Investment and

European Projects is also responsible for ensuring the implementation, development and operation of the computer system which meets the requirements laid down in Article 22 (2) (d) of the RRF Regulation, with the contribution of user bodies. The coordination will be ensured by the Inter-ministerial Committee for the Coordination of the Plan, in close cooperation with the Ministry of Investment and European Projects.

The monitoring and reporting mechanism is thorough. The Ministry of Investment and European Projects is responsible to ensure continuous monitoring of the progress achieved for each milestone and target, as well as reporting on the achievement of milestones and targets based on information provided by the reform coordinators. It will also be responsible for preparing payment requests and submitting them to the European Commission. The Ministry is also responsible for the verification of the legality and regularity of expenditure and shall ensure the prevention, detection and correction of conflict of interest, fraud, corruption and double funding at the level of projects financed under the Plan. Section 4.10 lays out further information on the designation of entities and the description of their respective tasks.

Milestones, targets and indicators

Milestones, targets and indicators of the Romanian Plan are of sufficient quality to enable an effective monitoring of the Plan's implementation. Each reform and investment in the Plan is accompanied by milestones and targets. The implementation of the 171 measures in the Plan is tracked through an adequate number of milestones and targets that ensures that progress in implementing the Plan can be robustly monitored, while remaining manageable. The request for loan is accompanied by additional milestones and targets to measure progress in the additional reforms and investments supported.

Overall, milestones and targets are sufficiently specific, clear and comprehensive to ensure that their completion can be traced and verified. Milestones and targets for reforms include an appropriate level of qualitative information to ensure that the key policy intentions can be measured at specific moments of the implementation process. Milestones and targets related to investments are precise and clear on the expected output. Their sequencing is sufficiently regular. Larger investments and key reforms generally follow a lifecycle approach that ensures that their progress through key stages on the way to full implementation is appropriately monitored.

In terms of content, the proposed milestones and targets strike an acceptable balance between realism and ambition. For key reforms addressing country-specific recommendations milestones and targets ensure that the most important deliverables are reflected while taking into account quality and appropriate stakeholder consultations. For investments, expected outputs reflect the ambition of the measures while factoring in possible challenges in terms of complexity and the completion of contracts awarding processes.

The proposed data and verification mechanisms are generally robust. Data indicators are in principle under the control of the Romanian State and can be properly measured through data-collection mechanisms.

Overall organisational arrangements

While the arrangements set up to devise, negotiate and ensure an efficient and regular implementation of the Romanian Plan are credible, the implementation of the Plan will hinge on the administrative and implementation capacity of the implementing bodies and will need to be closely monitored. The specialised structure under the Ministry of Investment and European Projects was designated for the implementation of the Plan with a legal mandate established in the national legal framework with the Government Ordinance 155/2020, as subsequently amended and supplemented. The professional experience of the staff of the specialised structure focuses on European funds management, which is relevant for the performance of implementation functions, namely verifying the achievement of the milestones and targets of investments and reforms (monitoring, authorisation, control — irregularities and anti-fraud). Procedures are in place to ensure that adequate staff with complementary work experience, are available at all levels.

The arrangements proposed by Romania in its Recovery and Resilience Plan are expected to be adequate to ensure effective monitoring and implementation of the Recovery and Resilience Plan, including the envisaged timetable, milestones and targets, and the related indicators. This would warrant a rating of A under the assessment criterion 2.8 of Annex V to the RRF Regulation."

4.9. Costing

Romania submitted information about estimated total costs for the measures of the Plan involving costs. For the measures across the 15 components of the Plan, a cost estimate has been provided, accompanied by relevant information on the methodology and its calculation. Romania provided evidence and justification for the cost estimates. The estimated total costs are for the most part based on unit costs derived from comparisons with previous procurement contracts for similar services or past investments of similar nature or based on actual offers.

All measures financed by the Recovery and Resilience Plan for Romania refer to costs incurred and actions that commenced after 1 February 2020 and do not cover recurrent costs, except for duly justified exceptions. All measures included in the Plan started after 1 February 2020, and all the estimated costs incur after that date. In addition, some costs, for instance staff costs within the digital / public administration components and subsidized public places under the education component, are included in the Plan, given their strict temporary nature, their close link with the implementation of a specific investment or reform of the Plan and their sustainability. All costs are therefore fully in line with Article 5(1) of the RRF Regulation. Romania has not provided an independent validation for any of the measures of the Plan, which was optional.

Reasonable costs

The methodology and assumptions used to estimate the costs of the Plan are overall clear even though they vary across measures. In some cases, the total costs are estimated using feasibility studies or tender documents. In other cases they are estimated by aggregating the estimated cost of the various inputs required for the implementation of the measure at stake. Some measures refer to market prices to define the estimated cost.

The assessment of the cost estimates and supporting documents shows that, for the vast majority of the projects, the estimated total costs appear to be reasonable. For the most part, there is sufficiently detailed information and evidence that the estimated total cost of Recovery and Resilience Plan is reasonable as the calculations were clearly spelt out, and it is possible to clearly identify the methodology and underlying assumptions used. Previous projects or procurement contracts linked to the proposed investments are often presented to serve as a benchmark and to justify the unit cost estimates.

Plausible costs

The volume and quality of information about the cost estimates is sufficient even though it varies across measures. The details as regards the methodology and the assumptions made to estimate the total costs are thorough in many cases, while more limited for other measures. The quality of the description of the methodologies and calculations made to estimate the total costs and comparative cost data is relatively heterogeneous. The sources taken as a reference to justify the plausibility of the cost estimates are clear for most measures. Many of them refer to past projects financed by the European Structural Investment Funds (ESIF). The other references mention various studies and evaluations both from public and private sectors. For a limited number of measures, clear explanations were missing on how the costs references were used as the basis for the estimates, or adjusted to derive the estimated total costs. In addition, for few measures (such as in energy and digital), the cost estimates, though not implausible, are in the higher range compared to costs for similar projects.

For a limited number of measures (such as energy, transport, financial instruments and education) the information provided does not allow to conclude that the justification on the amounts of the estimated total costs is reasonable and plausible to a full extent, for example due to uncertainty about the future demand for support to SMEs. For this reason, the justification on the amounts of the estimated total cost of the Plan can be considered reasonable and plausible to a medium extent.

No double Union funding

The cost estimates of the Plan provide a relatively high level of assurance about the risk of double financing from the Recovery and Resilience Facility and other Union funds. While the individual costing fiches for each component do not consistently provide clear information about the possibility of financing the same investments using other EU funds, the risk of covering the same costs is addressed by governance and control systems, as described in the following section. On this basis, Romania is considered to have provided sufficient information and evidence that the amount of the estimated total cost of the Recovery and Resilience Plan to be financed under the Facility is not covered by existing or planned Union financing.

Commensurate and cost-efficient costs

The estimated total cost of the Plan is commensurate to the expected economic and social impact. The Recovery and Resilience Plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the relevant country-specific recommendations and contains measures that are expected to foster economic growth and economic cohesion in an inclusive manner, to boost the growth potential of the Romanian economy, to stimulate job creation, and mitigate the adverse effects of the crisis.

Conclusion

The justification provided by Romania on the amount of the estimated total costs of the Recovery and Resilience Plan is to a medium extent reasonable, plausible, in line with the principle of cost-efficiency and is commensurate to the expected national economic and social impact. Romania provided sufficient information and evidence that the amount of the estimated cost of the reforms and investments of the Recovery and Resilience Plan to be financed under the Facility is not covered by existing or planned Union financing.

This would warrant a rating of B under the assessment criterion 2.9 of Annex V to the RRF Regulation.

4.10. Controls and audit

Robustness of internal control system and distribution of roles and responsibilities

The internal control system described in the Recovery and Resilience Plan is based on robust processes and structures and clearly identifies actors and their roles and responsibilities for the performance of the internal control tasks. Based on the experience acquired over time in managing European cohesion funds, the Romanian set-up for the Recovery and Resilience Facility internal control system is structured in a similar way, i.e. a centralized management and decentralized implementation. At central level, the coordination is ensured by the Inter-ministerial Committee for the Coordination of the Plan, responsible for examining progress in the implementation of the Plan, in close cooperation with the Ministry of Investment and European Projects (MIEP). MIEP was appointed the national coordinator for the preparation, negotiation and approval of the Plan, assisted by the Ministry of Public Finances (for tasks related to signing the loan agreement and the financing agreement), with the establishment of a specialized structure. MIEP is also in charge of the control and monitoring of the Plan, including the monitoring of the achievement of the milestones and targets, as well as ensuring the prevention, detection and correction of serious irregularities. Finally, the same Ministry is also in charge of drawing-up and signing the payment claims and management declarations. The implementation of the Plan will be ensured by line ministries and their subordinated structures, through the conclusion of financing agreements with MIEP. The contracts will comprise provisions related to the monitoring of the investments and reforms, financial planning execution as well as reporting obligations.

The Audit Authority within the Court of Auditors will be in charge of audits. This body is the same audit authority as the one used for the ESI Funds. Its independence from the coordination body and institutions responsible for the implementation of the reforms and investments is confirmed. The Plan includes the main elements on the audit works of the audit body and a commitment to prepare an audit strategy within 3 months of the adoption of the Plan, which will be afterwards updated annually. The overall audit approach will encompass two major elements. First, system audits to provide reasonable assurance that the system functions effectively, including for the prevention, detection and correction of serious irregularities. Secondly, the substantive audits will aim at obtaining reasonable assurance on the correctness of declared milestones and targets at investment and reform level.

Adequacy of control systems and other relevant arrangements

The outline of the control system put in place seems appropriate and control actors are identified across all levels. For the management verifications at component level, the information is not sufficient to draw conclusions on adequacy of management verifications carried out by the institutions responsible for the implementation of the reforms and investments. However, the verifications at Plan level, detailed described, will apply equally for all components. The second level of the control system is entrusted to an independent audit body which acts with complete autonomy and independence from the bodies responsible for managing the actions and operations covered by each component. Furthermore, the Plan indicates that the IT system that will be implemented (which is the system used also for the ESI Funds, adapted for the Recovery and Resilience Facility) will facilitate the monitoring and reporting and it will store all information related to the Plan, therefore ensuring an appropriate audit trail. This way, MIEP will be able to collect and report the required data. The IT system will provide data required by Article 22(2)(d) of the RRF Regulation. Collection of data and continuous monitoring of the achievement status of the milestones and targets are described in the Plan and are deemed to be sound. In relation to this IT system, the audit body committed that the first audit performed before the first payment request will also include it. However, as the IT system is not yet operational, a milestone was inserted to this end.

Adequacy of arrangements to avoid double EU funding

The Romanian authorities will use the following mechanisms and tools to avoid double funding. Prior to the conclusion of the financing contract between the reform coordinators and the beneficiaries, the specialized structure in MIEP will carry out a preliminary check in ARACHNE, but also in the IT system used for structural funds (SMIS2014), to ensure that the project in question is not already included in the ESIF evaluation, contracting or implementation. Furthermore, the Romanian authorities will also implement other measures during the implementation phase, i.e. invoices checking, as well as ex-post checks carried out by the authorizing structure, prior to the submission of payment claims. Lastly, in the process of monitoring the implementation of the Plan, possible overlaps identified as well as necessary measures will be raised within the Inter-ministerial Coordination Committee. The use of ARACHNE is also envisaged for the verification of double funding. The fact that the implementing bodies for the Recovery and Resilience Facility are also involved in implementing ESI Funds gives additional assurance for cross-checking the data with traditional ESI Funds management systems and avoid double funding. Mechanisms to avoid double funding with the Technical Support Instrument should also be ensured by MIEP and the TSI Coordinating Authority, in close coordination with the European Commission services.

Legal empowerment and administrative capacity of control function

Within 30 days of the approval of the Plan, MIEP together with the Ministry of Finance will submit to the Government for approval the Government Emergency Ordinance on the financial, implementation, control and audit mechanism. This legislative act will regulate in detail the institutional framework and the activities carried out by the institutions involved. This

Ordinance will set the legal mandate for MIEP to exercise all the tasks related to monitoring, verification, control and recovery, drawing up and signing payment declarations, management declaration and the audit summary. The effective implementation of this act is a milestone in the Plan. In relation to the administrative capacity, the specialized structure in MIEP with exclusive tasks related to the Recovery and Resilience Facility will have a total staff of 75 with experience in structural funds. Romania has assessed this to be the necessary number of staff by comparing with an OP in terms of size, complexity and diversity of investments. The preventive department will have eight persons. In addition, the tasks per person have been clary identified.

Romania has stated that the Audit Authority has, in accordance with the current law, competencies, therefore mandate, to perform audit on all EU funds. However, the Government ordinance that will be submitted for approval within 30 days after the approval of the Plan will specify the activities that the audit body will perform as part of its mandate. The audit authority will have 17 persons with adequate expertise allocated to the Recovery and Resilience Facility, with the possibility to increase or hire external expertise if necessary.

The arrangements proposed by Romania in the Recovery and Resilience Plan to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the Facility, including the arrangements aimed to avoid double funding from the Facility and other Union programmes, are assessed to be adequate. This would warrant a rating of A under the assessment criterion 2.10 of Annex V to the RRF Regulation.

4.11. Coherence

The Romanian Recovery and Resilience Plan is structured around six coherent pillars supporting the common objectives of the Plan and the recovery of Romania's economy. Each pillar is built around components including consistent packages of mutually reinforcing and complementary reforms and investments.

Mutually-reinforcing measures

The first pillar includes several measures that mutually reinforce the effects on the green transition. In particular, measures on energy and resource efficiency, sustainable mobility, clean energy transition and circular economy are interlinked and will contribute to shift Romania's economy towards carbon neutrality. Digital solutions included across the Plan, in particular, those in the transport and energy sectors, are also expected to contribute decarbonising the economy, and to promote smart, sustainable and inclusive growth.

The second pillar includes complementary and mutually-reinforcing reforms and investments contributing to the digital transition. Reform measures necessary to set up the governmental cloud and to ensure interoperability, improving connectivity and security of 5G networks, increasing the protection and the cybersecurity of public and private entities, including by adopting a National Cybersecurity Strategy 2021-2026 and increasing the digital competences for the public sector are underpinned by a broad range of key investments, such as the development of the governmental cloud, the digitalisation of health, the judiciary, the environment, employment and social protection, public procurement, non-governmental organisations, connectivity for white areas, ensuring cybersecurity for different structures and increasing the skills both in cybersecurity and for civil servants and the population at large. Digital measures are also mainstreamed across the Plan.

The third pillar includes complementary and mutually-reinforcing measures contributing to smart, sustainable and inclusive growth. Measures to strengthen the Romanian business environment under component 9 (Business support and R&D&I) focus on implementing regulatory changes to reduce the administrative burden for firms, simplifying legislation/start-up/exit procedures, as well as obtaining licenses, supported by investments in digital platforms on legislative transparency, de-bureaucratisation and procedural simplification for businesses. These are complemented by measures under component 8 (Tax and Pension reforms) to enhance the relationship between the tax administration and taxpayers through increased transparency, mainly by increasing the digitalisation of the tax administration, thus contributing to improve the business environment and foster smart, sustainable and inclusive growth. Reforms and investments to improve SMEs' access to finance, like the operationalisation of the National Development Bank under component 8 and the portfolio guarantee for resilience and the Recovery Venture Capital Fund under component 9 complement each other and are mutually-reinforcing with the measures to prioritise large and mature public investment projects towards more sustainable and inclusive growth.

The fourth pillar, focusing on social and territorial cohesion includes mutually-reinforcing measures with green and digital transitions in municipalities, tourism and culture. Measures in component 13 (Social reforms) include regulatory changes to prevent the separation of children from their families, to address the des-institutionalisation process for persons with disabilities, to start the implementation of the Minimum Inclusion Income, to decrease undeclared work and allow inactive persons to find a job. Measures shall equally support the reform of the long-term care services for the elderly as well as the establishment of an objective minimum wage setting mechanism. The complementary investments relate to the creation of a network of day centres for children of risk of separation, rehabilitation and renovation of social services of persons with disabilities, the creation of a digital platform to implement the voucher system for domestic workers, and the creation of day care and rehabilitation centres for the elderly. Other measures under component 10 (Local Fund) include regulatory changes to support the functional urban and rural areas approach, through the implementation of metropolitan areas and of administrative consortia to increase access to local public social services, education, healthcare, housing and improved territorial planning. Investments supported by these reforms relate to the construction of housing facilities for vulnerable youngsters, health and education professionals, renewals of public transport fleets, infrastructure for green and more secure transport, modernisation of local public buildings, and preparation/updating in a digital format of spatial planning and urban planning documents.

The fifth pillar includes reforms and investments which intertwine and give rise to synergies for achieving health and economic, social and institutional resilience. Reforms undertaken within component 12 (Healthcare) are guided towards the adoption of a quality-based system for public healthcare expenditure, the setup of an agency capable of providing expertise for major public healthcare infrastructure projects, and towards the increase in the quality of the human resources staffing the system, while investments address long-standing structural issues through a shift to outpatient care and the modernization of the pre-hospital and hospital infrastructure. The pre-hospital investments pay a particularly strong attention to achieving social and spatial cohesion by trying to focus on the marginalized and disadvantaged communities, reinforcing the measures taken in component 13 (Social reforms): reforms and infrastructure projects (either by constructing new buildings or renovating and rehabilitating the existing ones) for the protection of the children at risk, of adults with disabilities, and of the elderly.

The sixth pillar is focused on education and provides a set of reforms an investments aimed at reinforcing each other. For instance, in early-childhood education and care, the development of a unitary, inclusive and quality system, improving access to standard and complementary services, to increase the participation rates, will be complement by investments in crèches and complementary services at national level, as well as for the training of staff. Then regarding pre-university education governance, the reform of school governance and the professionalisation of its management, with increased school autonomy, will ensure stability, consistency and competence. This will be followed by a training and coaching programme for school managers and inspectors.

Complementarity of measures

All pillars pursue complementary and coherent objectives. In particular, measures in all pillars are expected to contribute to the green transition. This is the case, for example, for i) the purchase of electric minibuses to develop a network of green schools in component 15 (Education), ii) for the construction of new nearly-zero energy buildings (NZEB) in several components, such as in components 12 (Healthcare), 14 (Good governance), 15 (Education), iii) investments in cycling infrastructures in component 11 (Tourism and Culture), iv) investments in clean urban mobility in component 10 (Local Fund). In addition, the digital dimension is mainstreamed across all pillars. For instance, component 4 (Sustainable transport) includes measures for the digitalisation of road and rail transport. Component 15 (Education) covers measures on the digitalisation of education through changes in the legal framework, enabling integrated approaches and improving the digital skills of students and teachers, as well as measures to finance digital technology equipment and resources for schools. Component 9 (Business support and R&D&I) also includes financial instruments to be dedicated to the green and digital transition, as well as targeted measures for the digitalisation of SMEs that will be complementary to the measures included in the first and second pillars. This is also expected to boost employment and lead to the creation of new jobs in the medium and long-term. The social dimension is also coherently addressed in the Plan and will contribute to the implementation of the European Pillar of Social Rights. For example, complementarities between the introduction of the voucher scheme, the improvement of the digital services provided by the employment services, and the development of digital skills of the population are expected to result in positive labour market outcomes.

The Plan does not present inconsistencies or contradictions between pillars or components. The large investments in road infrastructures are accompanied by flanking measures to decarbonise road transport and are therefore coherent with the objectives of the Green transition pillar. Similarly, investments in gas infrastructures and power production accompany the transition towards a decarbonised energy sector, in the context of the reform on the coal phase-out. In order to promote wider coherence across instruments, notably with the European cohesion policy funds, a balanced territorial allocation of resources is encouraged.

Taking into consideration the qualitative assessment of all components of Romania's Recovery and Resilience Plan, their individual weight (importance, relevance, financial allocation) and their interactions, the Plan contains measures for the implementation of reforms and public investments which, to a high extent, represent coherent actions. This would warrant a rating of A under the assessment criterion 2.11 of Annex V to the RRF Regulation."

ANNEX: Climate tracking and digital tagging

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
			Int. field	Coeff. %	Int. field	Coeff. %
C1.I.4	Rehabilitation of existing defence lines in accordance with the Floods Directive and the National Strategy for Flood Risk Management	96.97	035	100%		
C1.I.4	Rehabilitation of existing defence lines in accordance with the Floods Directive and the National Strategy for Flood Risk Management - Other types of ICT infrastructure	8.03			055	100%
C1. I.4	Rehabilitation of existing accumulations that require emergency response for safe operation	250.63	040	40%		
C1. I.4	Rehabilitation of existing accumulations that require emergency response for safe operation_Other types of ICT infrastructure	30.87			055	100%
C1.1.5	Appropriate endowment of river basin administrations for flood monitoring, prevention and emergency response	1.60	035	100%		
C1.1.5	Appropriate endowment of river basin administrations for flood monitoring, prevention and emergency response _Other types of ICT infrastructure	5.20			055	100%
C1.1.6	Implementation of the water cadastre	30.00			055	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C1.1.7	Extension of the national observation network of the National Integrated Meteorological System (SIMIN)	40.00	035	100%	055	100%
C2.I.1	Afforestation and reforestation national campaign, including urban forests	730.00	035	100%		
C2.I.2	Development of modern production capacities of forest reproduction material	50.00	035	100%		
C2.I.3	Update of approved management plans and identification of potential areas for strict protection in natural terrestrial and marine habitats in order to implement the EU Biodiversity Strategy for 2030_Update of approved management plans	120.00	050	40%		
C2.I.3	Update of approved management plans and identification of potential areas for strict protection in natural terrestrial and marine habitats in order to implement the EU Biodiversity Strategy for 2030	5.00	050	40%		
C2.I.4	Integrated investments for the ecological reconstruction of habitats and the conservation of species related to meadows, aquatic and water-dependent areas_Removing obstacles in watercourses to facilitate the restoration of the connectivity of water-dependent habitats and species	150.00	050	40%		
C2.I.4	Integrated investments for the ecological reconstruction of habitats and the conservation of species related to meadows, aquatic and water-dependent areas_Reconstruction of grassland habitats in protected natural areas	35.00	050	40%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C2.I.4	Integrated investments for the ecological reconstruction of habitats and the conservation of species related to meadows, aquatic and water-dependent areas_Decolourisation of the Danube Delta lakes in the Danube Delta to reduce eutrophication and maintain biological diversity	35.00	050	40%		
C2.I.4	Integrated investments for the ecological reconstruction of habitats and the conservation of species related to meadows, aquatic and water-dependent areas_Implementation of a wild sturgeon monitoring system along the Lower Danube	7.16			055	100%
C2.I.5	Integrated flood risk mitigation systems in forest river basins	22	040	40%		
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level_Establishment of voluntary collection centres	452.20	042	40%		
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level _Household waste management: prevention, minimisation, sorting, reuse, recycling measures	108.33	042	40%		
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level _Other types of ICT infrastructure	91.77			055	100%
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level _Integrated voluntary injection collection	81.09	042	40%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
	centres for agglomerations					
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level _Commercial, industrial waste management: prevention, minimisation, sorting, reuse, recycling measures	2.61	044	40%		
C3.I.1	Development, modernisation and completion of integrated municipal waste management systems at county level or at city/municipality level_Construction of waste recycling facilities to meet the recycling targets of the circular economy package	220.00	042	40%		
C3.I.2	Development of infrastructure for manure and other compostable agricultural waste management	255.00	044	40%		
C3.I.3	Development of public monitoring, control and institutional capacities for waste management and pollution prevention _ Household waste management: prevention, minimisation, sorting, reuse, recycling measures	0.36	042	40%		
C3.I.3	Development of public monitoring, control and institutional capacities for waste management and pollution prevention _Other types of ICT infrastructure	11.97			055	100%
C3.I.3	Development of public monitoring, control and institutional capacities for waste management and pollution prevention_Air quality, radioactivity and noise monitoring equipment for the National	1.80	048	40%	055	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
	Environmental Protection Agency					
C3.I.3	Development of public monitoring, control and institutional capacities for waste management and pollution prevention_Air quality, radioactivity and noise monitoring equipment for the National Environmental Protection Agency	13.20			055	100%
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Core sections — Railway infrastructure construction	994.00	064	100%		
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Core sections — digital infrastructure with the exception of traffic management systems	115.00	070	40%	070	100%
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Core sections — ERTMS	46.00	071	40%	071	100%
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Comprehensive sections — Railway infrastructure construction	927.00	065	100%		
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Comprehensive sections — Digital infrastructure with the exception of traffic management systems	183.00	070	40%	070	100%
C4.I.1	Modernisation and renewal of railways infrastructure - Modernisation of TEN-T Comprehensive sections — ERTMS	38.00	071	40%	071	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C4.I.1.	Modernisation and renewal of railways infrastructure - "Quick wins" sections TEN-T Core	261.00	067	100%		
C4.I.1	Modernisation and renewal of railways infrastructure - "Quick wins" sections TEN-T Comprehensive	191.00	068	100%		
C4.I.1	Modernisation and renewal of railways infrastructure – Renewal of TEN-T Comprehensive sections	223.00	068	100%		
C4.I.1	Modernisation and renewal of railways infrastructure – Renewal of sections non TEN-T	53.00	069	40%		
C4.I.1	Modernisation and renewal of railways infrastructure - Electricity	236.00	069bis	100%		
C4.I.1	Modernisation and renewal of railways infrastructure – Centralisers for railways stations	213.00	070	40%	070	100%
C4.I.2	Railways rolling stock - Electric Locomotives, EMU/HEMU railcars, wagon retraction	382.00	072bis	100%		
C4.I.2	Railways rolling stock - Hydrogen refuelling infrastructure	15.00	077	100%		
C4.I.2	Railways rolling stock - ERTMS on board for electric locomotives, EMU/HEMU railcars	15.00	071	40%	071	100%
C4.I.3	Development of sustainable road infrastructure - TEN-T Core sections (A1, A7, A8) — ITS infrastructure	47.00			063	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C4.I.3	Development of sustainable road infrastructure - TEN-T Comprehensive (A3) sections — ITS infrastructure	11.00			063	100%
C4.I.3	Development of sustainable road infrastructure - Infrastructure for charging and control	101.00	063bis	40%	063bis	100%
C4.I.3	Development of sustainable road infrastructure - ITS infrastructure (other than A1, A3, A7, A8), Road safety infrastructure — digital	95.00			063	100%
C4.I.4	Development of the underground transport network in the municipalities of Bucharest and Cluj-Napoca	600.00	073	100%		
C5.I.1	Establishment of a Renovation Wave fund to finance works to improve the energy efficiency of the existing building stock_residential buildings	987.50	025bis	100%		
C5.I.1	Establishment of a Renovation Wave fund to finance works to improve the energy efficiency of the existing building stock_alternative fuels infrastructure	12.50	077	100%		
C5.I.1	Establishment of a Renovation Wave fund to finance works to improve the energy efficiency of the existing building stock_public buildings	1 157.50	026bis	100%		
C5.I.1	Establishment of a Renovation Wave fund to finance works to improve the energy efficiency of the existing building stock_alternative fuels infrastructure	12.50	077	100%		
C5.I.2	Implementation of the National Building Register	5.00			011	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C5.I.3	Strengthening the professional capacity of professionals and workers in the renovation sector by developing trainings on energy efficiency construction	2.00	01	100%		
C5.I.3	Strengthening the professional capacity of professionals and workers in the renovation sector by developing trainings on energy efficiency construction	8.00	01	100%		
C5.I.4	Circular economy and increased energy efficiency of historic buildings	5.00	023	40%		
C5.I.4	Circular economy and increased energy efficiency of historic buildings	5.05	026	40%		
C5.I.4	Circular economy and increased energy efficiency of historic buildings	1.70	01	100%		
C6.I.1	New capacities for electricity generation from renewable sources	460.00	032	100%		
C6.I.2	Green hydrogen production capacities and/or use for electricity storage	115.00	032	100%		
C6.I.3	Development of flexible and high-efficient gas-fired combined heat and power generation (CHP) in district heating to achieve deep decarbonisation	300.00	034	40%		
C6.I.4	Industrial chain of production and/or assembly and/or recycling of batteries, cells and photovoltaic panels (including ancillary equipment), and new electricity storage capacities	150.00	027	100%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C6.I.4	Industrial chain of production and/or assembly and/or recycling of batteries, cells and photovoltaic panels (including ancillary equipment), and new electricity storage capacities	50.00	027	100%		
C6.I.4	Industrial chain of production and/or assembly and/or recycling of batteries, cells and photovoltaic panels (including ancillary equipment), and new electricity storage capacities	80.00	033	100%	033	40%
C6.I.5	Ensuring energy efficiency in the industrial sector	64.00	024ter	100%		
C7.R.1	Developing and implementing a unitary framework for defining the architecture of a government cloud system	11.89			011	100%
C7.I.1	Deployment of the Government Cloud Infrastructure	374.73	011bis	40%	011bis	100%
C7.I.2	Cloud development and migration	187.05			011	100%
C7.I.3	Development of eHealth and telemedicine system	400.00			095	100%
C7.I.4	Digitalisation of the judiciary_construction of energy efficient buildings	35.00	025ter	40%		
C7.I.4	Digitalisation of the judiciary	127.31			011quater	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C7.I.5	Digitalisation in the field of the environment	52.00			011	100%
C7.I.6	Digitalisation in employment and social protection	85.00			011	100%
C7.I.7	Implementation of the eForms electronic forms in public procurement	0.85			011	100%
C7.I.8	Qualified electronic identity card and digital signature	200.00			011ter	100%
C7.I.9	Digitalisation of the non-governmental organisations sector	10.30			010	100%
C7.I.10	Digital transformation in civil service management	10.00			011	100%
C7.I.11	Implementation of a scheme to support the use of communication services through different types of instruments for beneficiaries, with a focus on white areas	94.00			054	100%
C7.I.12	Ensuring cybersecurity protection for both public and private IT & C infrastructures, with critical value for national security, using smart technologies	100.00			021 quinquies	100%
C7.I.13	Development of security systems for the protection of the government spectrum	28.86			055	100%
C7.I.14	Increase of the resilience and cybersecurity of Internet Service Provider infrastructure services provided to public authorities in Romania	18.39			021 quinquies	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C7.I.15	Creation of new cybersecurity skills for the society and the economy	25.00			108	100%
C7.I.16	Advanced digital skills training programme for civil servants	20.00			108	100%
C7.I.17	Funding schemes for libraries to become digital skills hubs	21.00			108	100%
C7.I.18	Digital transformation and Robotic Process Automation in public administration	14.70			011	100%
C7.I.19	Schemes to upskill/reskill employees in firms	36.00			108	100%
C8.I.1	Facilitating taxpayers' compliance through the development of digital services	4.20			011	100%
C8.I.2	Improving tax and tax administration processes, including through the implementation of integrated risk management	196.40			011	100%
C8.I.3	Ensuring the capacity to respond to current and future information challenges, including in the context of the pandemic, through the digital transformation of Ministry of Finance / National Agency for Fiscal Administration	78.50			011	100%
C8.I.4	Implementation of electronic customs	28.10			011	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C8.I.5	Improving the budgetary programming mechanism	3.57			011	100%
C8.I.5	Improving the budgetary programming mechanism	0.43			108	100%
C8.I.6	Economic modelling instrument (Pension Reform Options Simulation Toolkit) to improve institutional capacity to forecast pension expenditures	0.40			011	100%
C8.I.7	Technical support for the revision of the taxation framework	3.00			011	100%
C8.I.8	Operationalisation of the National Development Bank	9.00			055	100%
C8.I.9	Supporting the process of assessing pension files	1.27			011	100%
C8.I.10	Operational efficiency and advanced e-services through digitalisation of the pension system	61.88			011	100%
C9.I.1	Digital platforms on legislative transparency, de-bureaucratisation and procedural simplification for business	14.00			011	100%
C9.I.2	Financial instruments for the private sector_digitising SMEs	50.00			010	100%
C9.I.2	Financial instruments for the private sector_low carbon economy	100.00	027	100%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C9.I.3	Private sector aid schemes _digitising SMEs	315.00			010	100%
C9.I.3	Private sector aid schemes_IT services and applications for digital skills and digital inclusion	35.00			012	100%
C9.I.3	Private sector aid schemes _Investments in advanced technologies	130.00			021quater	100%
C9.I.3	Private sector aid schemes _Development and employment of cybersecurity technologies	20.00			021 quinquies	100%
C9.I.4	Cross-border and multi-country projects — Low Power Processors and Semiconductor Chips	500.00			021 quater	100%
C10.I.1	Sustainable urban mobility_clean urban transport rolling stock	580.00	074	100%		
C10.I.1	Sustainable urban mobility_ ITS	100.00			076	100%
C10.I.1	Sustainable urban mobility — other ICT infrastructures	175.00			021ter	100%
C10.I.1	Sustainable urban mobility — recharging points for electric vehicles	165.00	077	100%		
C10.I.1	Sustainable urban mobility — Cycling routes at local/metropolitan level	180.00	075	100%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C10.I.2	Construction of housing for youth and for professionals in health and education_construction of energy efficient buildings	282.50	025ter	40%		
C10.I.2	Construction of housing for youth and for professionals in health and education_Other types of ICT infrastructure	2.50			055	100%
C10.I.3	Moderate rehabilitation of public buildings to improve public service delivery by administrative territorial units	575.00	026bis	100%		
C10.I.4	Development/updating in GIS format of spatial planning and urban planning documents	40.00			011	100%
C11.I.1	Promotion of the 12 touristic/ cultural routes	10.05			011	100%
C11.I.2	Modernisation/ creation of museums and memorials — construction of new energy efficient buildings	15.46	025ter	40%		
C11.I.4	Implementation of 3 000 km of cycling routes	247.50	075	100%		
C11.I.6	Development of a digital system for cultural funding processes	3.75			011	100%
C11.I.7	Accelerating the digitalisation of film production and distribution	5.46			021bis	100%
C12.I.1	Development of pre-hospital medical infrastructure — Integrated community centres construction of new energy efficient buildings	28.14	025ter	40%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C12.I.1	Development of pre-hospital medical infrastructure — construction of new energy efficient buildings	571.05	025ter	40%		
C12.I.2	Development of public hospital infrastructure — equipment and facilities, new-born ATI, reduction of the risk of hospital infections — part of telemedicine	70.00			095	100%
C13.I.1	Creation of a network of day centres for children at risk of separation — construction of new energy efficient buildings	1.31	025ter	40%		
C13.I.2	Rehabilitation, renovation and development of social infrastructure for persons with disabilities — construction of new energy efficient buildings	3.36	025ter	40%		
C13.I.3	Operationalisation of the introduction of work cards for domestic work	4.03			055	100%
C14.R.1	Enhancing the predictability and efficiency of decision-making processes by strengthening the capacity for policy coordination and impact analysis at the level of the government and coordinating ministries, as well as by strengthening the tools to increase the quality of public consultations at all levels of the administration.	2.80			011	100%
C14.R.2	Strengthening coordination at the centre of government through an integrated and coherent approach to climate change and sustainable development initiatives	5.23			011	100%
C14.R.3	Developing performance human resources management in the public sector	5.00			011	100%
C14.R.9	Improve the procedural framework for the implementation of corporate governance principles in state-owned enterprises	1.46			011	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C14.I.1	Optimising judicial infrastructure to guarantee access to justice and quality of services	42.22	025ter	40%		
C14.I.2	Development of the logistical infrastructure (non-IT) needed to fight corruption and recover the proceeds and damage caused by crime, including training in these areas	13.00	025ter	40%		
C14.I.5	Monitoring and implementation of the plan	12.84			011	100%
C15.I.1	Construction, equipping and operationalisation of 110 crèches — construction of new energy efficient buildings	189.00	025ter	40%		
C15.I.2	Setting up, equipping and operationalising 412 complementary services for disadvantaged groups — digitalisation part	4.37			012	100%
C15.I.4	Supporting educational establishments with high risk of drop-outs — part of digitalisation	100.00			012	100%
C15.I.6	Development of 10 regional consortia and development and equipping of 10 vocational campuses — construction of new energy efficient buildings	280.00	025ter	40%		
C15.I.6	Development of 10 regional consortia and development and equipping of 10 vocational campuses — IT services and applications for digital skills	33.80			012	100%
C15.I.7	Transformation of agricultural high schools into professionalisation centres _construction of new energy efficient buildings	6.99	025ter	40%		

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C15.I.7	Transformation of agricultural high schools into professionalisation centres _energy renovation	15	026	40%		
C15.I.7	Transformation of agricultural high schools into professionalisation centres — digitalisation	3.88			012	100%
C15.I.8	In-service training programme for teaching staff	80.00			108	100%
C15.I.9	Ensuring digital technology equipment and resources for schools	478.50			108	100%
C15.I.10	Green-schools network development and purchase of green minibuses — energy renovation	150.00	026	40%		
C15.I.10	Green-schools network development and purchase of green minibuses —construction of new energy efficient buildings	75.00	025ter	40%		
C15.I.10	Green-schools network development and purchase of green minibuses — purchase of electric minibuses	200.00	074	100%		
C15.I.11	Provision of facilities for pre-university classrooms and school laboratories/workshops — part of digital laboratories	60.00			012	100%
C15.I.12	Support for the rural school consortia — construction of new energy efficient buildings	28.82	025ter	40%		
C15.I.13	Equipping of IT laboratories in vocational education and training (VET) schools	16.36			012	100%

Measure ID	Measure/ Sub-Measure Name	Budget (EUR m)	Climate		Digital	
C15.I.14	Equipping of practice workshops in VET schools — digitisation part	30.00			012	100%
C15.I.15	Online School: Assessment platform and content development	78.59			012	100%
C15.I.16	Digitisation of universities and their preparation for the digital professions of the future — National Board of Rectors	10.00			012	100%
C15.I.16	Digitisation of universities and their preparation for the digital professions of the future — universities	234.00			108	100%
C15.I.17	Ensuring university infrastructure (homes, canteens, recreation facilities) —construction of new energy efficient buildings	143.30	025ter	40%		
C15.I.17	Ensuring university infrastructure (homes, canteens, recreation facilities) — energy renovation	116.70	026	40%		