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COMMISSION STAFF WORKING DOCUMENT

2023 Country Report - Slovenia

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

on the 2023 National Reform Programme of Slovenia and delivering a Council opinion on the 2023 Stability Programme of Slovenia

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European Commission

Slovenia

2023 Country Report

ECONOMIC AND EMPLOYMENT SNAPSHOT

Economy has proved to be resilient despite recent crises

During 2020-2022, Slovenia's economy grew faster than the EU average. The 2020 decline was offset by strong growth in 2021-2022. In 2022, the economy grew by 5.4% despite the difficult external environment. Growth was driven by increases in consumer spending as well as investment. Consumer spending was supported by a fiscal stimulus and available household savings. In line with global and Europe-wide trends, inflation reached 9.3% in 2022, with core inflation averaging 6.8%.

Economic growth is forecast to continue over 2023-2024, but at a significantly lower rate due to a weaker external environment, high uncertainty and still-high inflation. In 2023, growth is expected to reach 1.2%, accelerating to 2.2% in 2024. Inflation is projected to remain elevated over the forecast period.

The large current account surplus from the pre-pandemic period has waned. The trade balance excluding energy deteriorated by over 6 percentage points (pps) of GDP between 2019 and 2022. However, in general, Slovenia remains a dynamic and diversified export-oriented economy and was able to grow its exports market share in 2022 (when taking also re-export into account). The country's current account is projected to return to a small surplus in 2023 and 2024.

The economy proved resilient despite the effects of Russia's war against Ukraine. Somewhat unexpectedly, Slovenia's trade with Russia expanded in 2022, with export growth driven by the pharmaceutical industry (which is not subject to the sanctions) and imports growth driven by the higher value of energy products. Dependence on Russian natural gas has been reduced through diversifying supplies. Higher gas prices are still weighing on gas-intensive manufacturing (such as basic metals, chemicals, paper and paper products), which account for 4.5% of employment, more than almost anywhere else in Europe ([1]). Government support measures shielded households and firms from high energy prices (see Annex 8).

The banking sector continues to provide funding to the economy. Bank profitability is good, as return on equity has systematically exceeded 9% since 2017 (Annex 18). The capital adequacy ratio deteriorated in 2022 to a level slightly below the EU average. The non-performing-loan ratio kept improving and fell to 1.9% in September 2022, very close to the EU average of 1.8%. In 2022, the European Systemic Risk Board identified elevated house price growth and increasing mortgage lending as risks but observed that Slovenia's macroprudential policy mix is appropriate and sufficient ([2]). Recent data also shows moderation in the growth of house prices and mortgage loans.

([1]) OECD Economic Outlook November 2022.

([2]) Vulnerabilities in the residential real estate sectors of the EEA countries, ESRB February 2022.

Capital markets remain less developed and less liquid than the EU average. Slovenian companies rely more on bank funding and less on capital market funding than the EU average. The Ljubljana Stock Exchange continues to face very low and decreasing liquidity, and stock market capitalisation is among the lowest in the EU. A factor behind low capital market investment is the limited role of institutional investors, particularly insurance companies. The insurance market is highly concentrated and largely state-owned, as the two largest insurers, Triglav and Sava, are controlled by the Slovenian state. In 2021, these companies' equity investments were below the levels of comparable private insurance companies in most other OECD countries ([3]).

The various measures to mitigate energy costs and inflation impact public finances

A withdrawal of the temporary measures dealing with the COVID-19 pandemic and the energy crisis, and a gradual pickup of growth are expected to bring the general government deficit below 3%. The general government deficit fell to 3.0% of GDP in 2022 from 4.6% in 2021 thanks to faster phasing-out of COVID-19 pandemic measures and more limited phasing-in of measures providing temporary support to lessen the impact of inflation and of the energy crisis. Measures to address high energy costs and inflation are forecast to remain elevated in 2023 when the general government deficit is forecast to reach 3.7% of GDP. The public debt is forecast to fall from 79.6% in 2020 to 66.6% of GDP in 2024 (see Box below).

Buoyant revenues post COVID-19 were largely offset by increasing expenditure. Strong private consumption and corporate profitability boosted tax revenues which was partially offset by increases in social benefits due to inflation and in public wages. Public investment is expected to peak in 2023 at the end of the absorption period of the 2014-2020 multiannual financial framework. The December 2022 amendments of the Personal Income Tax Act reversed most of the recently-announced tax cuts.

In addition to the support from the Recovery and Resilience Facility (see Section 2), Slovenia benefits from a significant volume of EU cohesion funds (EUR 3.1 billion, representing approximately 5.3% GDP). This also addresses the gap between the development of the capital region and other regions, which is very pronounced. In 2021, the GDP per capita in purchasing power standard. in the Ljubljana region was almost three times higher than in the Zasavska region. The European Regional Development Fund and the Cohesion Fund will boost digitalisation and research and innovation (R&I), including by supporting key research infrastructures (see Annex 4). The funds will also promote energy efficiency and renewable energy sources, as well as sustainable mobility. The European Social Fund plus will invest into adult learning, upskilling and reskilling for the labour market needs, including in digital and green skills and social inclusion measures. The Just Transition Fund will help implement the national coal exit strategy (end date 2033) by promoting sustainable energy, as well as the training and reskilling of workers.

([3]) OECD 2022 Slovenia country report.

Labour supply is becoming a major bottleneck

The Slovenian labour market continued to improve in 2022 with rising employment and historically low unemployment rates. The employment rate stood at 78.2% in Q4-2022, well above the EU average of 74.9%. The unemployment rate is well below the EU average, but the activity rates (the share of the population offering their services on the labour market) of both younger (15 – 24 year olds) and older (60 – 64 year olds) workers in Slovenia were below the EU average. Supply of labour is becoming more and more challenging in certain sectors, although currently Slovenia is still able to attract labour from Western Balkans area. The unfavourable demographic outlook is further aggravating the situation. While an increase is expected in the number of older people and young people working or looking for a job as well as in the number of foreign workers, supply of labour will not keep up with demand.

In 2022, real wages decreased due to high inflation. After rising by 4.3% in 2021, real wages fell by 6.6% in 2022, despite a 4.3% increase in nominal terms. ([4]) Since January 2023, the minimum gross wage in Slovenia has been EUR 1 203, 12% higher than in January 2022. The minimum wage amounts to more than 50% of the average monthly wage, one of the highest minimum wage/average wage ratios in the EU. This is reflected in small differences in wages among employees and a big concentration of employees that earn an income close to the minimum wage. The shortage of workers, in combination with high inflation, is expected to drive quite strong wage increases in 2023.

Older workers, low-skilled workers and young people are still in an unfavourable labour market situation compared to the rest of the population. The proportion of young people in precarious forms of work in Slovenia remains among the highest in the EU and higher than for other age groups. While training in energy-intensive sectors has increased to ensure a fair green transition in key sectors (Annex 8), there is clearly scope for strengthening policies to help people find or stay in work and for further tapping into the labour market and skills potential of certain groups. This would allow Slovenia to make further steps towards reaching the 2030 national targets on employment, adult learning and poverty reduction.

One of the lowest levels income inequality in the EU

Slovenia is among the Member States with the lowest income inequality (see Annex 18) and lowest shares of people at risk of poverty or social exclusion in the EU. All categories of the social scoreboard for Slovenia are at or above the EU average. For 5 of 16 criteria of the European Pillar of Social Rights, Slovenia is one of the best performers (see Annex 14). The situation is assessed as critical only for the category 'self-reported unmet needs for medical care', which the authorities plan to tackle with the announced health reform. Old-age poverty remains a challenge, particularly for older women, pointing to an inadequacy of the social protection system. While only 13.2% of the population were at risk of poverty or social exclusion in 2021 (EU average: 21.7%), the share of women aged 75+ at risk of poverty or social

([4]) Compensation of employees per head – real compensation calculated by deflating with private consumption deflator

exclusion was almost twice as high (25.3% in Slovenia; EU average: 23.8%).

For 60% of the Sustainable Development Goals (SDGs) Slovenia stands above the EU average and is progressing towards reaching the SDGs in 88% of all cases. Slovenia's position is the highest within the EU for SDG 10 (Reduced equalities) and SDG 1 (No poverty). On the other hand, the gap with the EU average is widest for SDG 13 (Climate action) and SDG 2 (Zero hunger), although Slovenia is progressing towards these SDGs.

Boosting sustainable competitiveness is key

With a relatively strong economic performance and a steady outlook, Slovenia can focus on boosting long-term growth and catching up with the EU. Productivity, measured as GDP per person employed (in pps), has been fluctuating between approximately 80-85% of the EU average over the last 20 years. In 2022, it reached 86% of the EU average, improving markedly over 2021, therefore demonstrating again the resilience of the economy and the success of the measures to cope with the COVID-19 crisis. However, it remains broadly the same as in 2008, before the financial crisis. On competitiveness, Slovenia has been able to increase its export market share. Unit labour cost developments have been broadly in line with those of its main peers. With its population ageing rapidly, labour constraints have become more binding, with an impact also on long-term growth. Importantly, these trends affect long-term financial sustainability which remains the primary challenge. In addition to addressing public finance issues such as pensions, healthcare and long-term care, competitiveness and productivity are major drivers determining the success in coping with the challenge.

The investment ratio has increased to around 20% of GDP but remains below the EU average. Investment as a share of GDP fell in 2020, followed by a rebound in 2021 thanks to investments in machinery and equipment. The gap with the EU average is explained by lower private sector investment, as government investments are higher than the EU average. At the same time the economy remains energy- and greenhouse gas emission-intensive and the pace at which emissions are reduced is slow. While investments in the manufacturing sector have recovered to pre-financial crisis levels, those in retail trade, transport and real estate have not fully recovered to historical highs. Investment decisions by firms are primarily demand-driven, whereby growth in sales plays a vital role in these investment decisions ([5]). Given its high share of Natura 2000 sites, environmental preservation and biodiversity are assets for Slovenia but challenges remain.

([5]) Study: Explaining the Low Level of Investment in Slovenia, ECFIN 2022.

Box x:

Energy policy response in Slovenia

Slovenia has adopted several support measures to help households and firms cushion the impact of energy-price inflation. The Commission's 2023 Spring Forecast projects the country's gross budgetary costs to amount to 0.9% of GDP in 2023 ([6]). Many measures preserve the price signal although they are not targeted enough to the most vulnerable households and companies. All energy support measures are expected to expire by the end of 2023.

Fiscal costs of several measures depend on market energy prices. The government temporarily regulated prices for electricity, gas and some other energy products for households, SMEs and a few other groups of consumers. Electricity and gas distributors selling to consumers at regulated prices are eligible to receive compensation, budgeted at 0.2% of GDP in 2023. Business consumers who are not benefiting from regulated prices are eligible for subsidies linked to differentials in energy prices between 2021 and 2023. The total fiscal costs are budgeted at 0.3% of GDP. Furthermore, the government has reduced indirect taxes until May 2023 (VAT, excise duties and CO_2 emission tax) on energy products costing 0.3% of GDP. According to the Slovenian Statistical Office, changes in excise duties and taxes lowered annual inflation by 1.3 percentage points ([7]). Following two rounds of energy vouchers in 2022, eligible households benefited from a temporarily doubled children's allowance in 2022 (November and December) and 2023 (January) and an advanced increase in pensions in late 2022. Social benefits were indexed to inflation in the previous year (10.3%) in March 2023.

Slovenia applies the EU solidarity contribution adopting the Council Regulation (EU) 2022/1854 ([8]) at an 80% rate, which is higher than the one established in the Regulation.

Slovenia implemented different measures aiming to boost its energy security. This included issuing recommendations and rolling out energy efficiency improvements, particularly in the public building sector ([9]). To ensure an uninterrupted supply of electricity and gas, energy companies were ensured access to the short-term liquidity working capital needed to cover potential liquidity stresses ([10]). Furthermore, efforts were made towards incentivising traders, suppliers, aggregators and large consumers to try to reduce electricity consumption ([11]).

percentage points.

([8]) EUR-Lex - 32022R1854 - EN - EUR-Lex (europa.eu)

([9]) https://www.energetika-portal.si/podrocja/energetika/varcevanje-energije-v-stavbah-javnega-sektorja/

([10]) https://www.energetika-portal.si/nc/novica/n/vlada-dolocila-predlog-porostvenega-zakona-za-obveznosti-druzb-gen-energija-hse-in-geoplin/

([11]) https://www.energetika-portal.si/nc/novica/n/drzavni-zbor-potrdil-zakon-o-nujnem-posredovanju-za-obravnavo-visokih-cen-energije/

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

Implementation of the RRP

Slovenia's recovery and resilience plan (RRP) aims to address the key challenges related to the twin transition, healthcare, long-term care and the labour market. It consists of 33 reforms and 50 investments that are supported by EUR 1.49 billion in grants and EUR 705 million in loans, representing 3.7% of GDP (see Annex 3).

The implementation of Slovenia's recovery and resilience plan is underway, however with increasing risk of delays. Slovenia submitted 1 payment request, corresponding to twelve milestones and targets in the plan and resulting in an overall disbursement of EUR 49.6m. To advance faster with the implementation of its RRP in the current challenging environment, it is necessary to strengthen Slovenia's governance structure and administrative capacity, as well as to ensure that the necessary decisions are taken without delays. This concerns in particular the structural reforms of healthcare, long-term care, pensions and taxation. The addendum of the RRP and the additional chapter on REPowerEU should establish a realistic timeline for the remaining payment requests and should be submitted swiftly to avoid any further delay or disruption in the implementation of the plan.

The following, more detailed review of measures being implemented under the RRP in no way implies formal Commission approval or rejection of any payment requests.

The first payment from the Recovery and Resilience Facility (RRF) has been made. The Commission disbursed nearly EUR 50 million on 20 April 2023 based on the satisfactory achievement of the first 12 milestones of the RRP, which formed the first request for the payment of grants. The fulfilled milestones address a broad array of policies. As a precondition for successfully implementing the RRP, a reform was introduced by Slovenia putting in place and formalising the legal and institutional framework for the control and audit systems to work effectively. Digital transformation, health, economic and institutional resilience, as well as smart, sustainable and inclusive growth are pillars that featured prominently under the first payment request.

Slovenian authorities are preparing a request to modify the RRP. This involves adding a REPowerEU chapter. It also revises some existing measures in light of changing circumstances (including in particular reduction of the grants budget available to Slovenia by EUR 286 million). The authorities plan to submit the change in spring 2023.

Slovenia plans to submit the second payment request in autumn 2023. The implementation of the relevant milestones and targets is ongoing. Some of them, like amendments to the Housing Act, an act establishing the Public Passenger Transport Management Company, and amendments to the Construction Act and the Spatial

Planning Act, are already being finalised or are close to finalisation. Box 1 contains a summary of key deliverables in 2023 and 2024.

Implementation should be stepped up to complete the remaining milestones and targets before August 2026 and ensure RRF funds are fully absorbed. In recent months, the coordination of reforms and investments has picked up pace with the government actively involved in the process. Nonetheless, to achieve the important milestones related to key reforms in the areas of long-term care, health and pensions, bold decisions will need to be taken, preferably on a cross-party basis and after consulting all social partners.

Important measures for the digital transition, the business environment and long-term care

Slovenia took steps towards the digital transition of its economy and public sector. As part of the first payment request, a strategy for digital transformation of businesses was adopted, which aims at creating a supportive environment for the digital transition of businesses and industry. Since the State Administration Informatics Development Council was established and put into operation, the governance of the digital transformation including IT standards and other technological developments within the public administration has been strengthened. In addition, implementation of two digital cross-border and multi-country projects on next generation infrastructure and services as well on microelectronics started. These reforms and investments all help address the digital Country Specific Recommendation (CSR). Achieving the milestones and targets for completing the next payment request entails significant action to incentivise the digital transformation.

The business environment reforms adopted as part of the first payment request will stimulate productivity growth in Slovenia. The Act on forms of alternative investment funds, in force since 10 August 2022, sets the basis for strengthening capital markets in Slovenia. Amendments to the Investment Promotion Act ensure that criteria on public investment support for businesses are focused on highly productive, sustainable, and digitally oriented business models and investments. The adoption of the Decree on development incentives for tourism, part of the first payment request, will also help further develop the tourism sector. The decree provides detailed conditions and criteria for the award of incentives in the tourism sector. These reforms help address the CSRs on access to finance and business environment.

Major steps were taken by Slovenia to improve its institutional and health resilience. Under the first payment request, the Debureaucratisation Act came into force, which removes significant administrative barriers for the business sector and the public. The amendments to the Public Procurement Act simplify the procedures to enable bids to be supplemented and clarified when selecting tenders, and abnormally low tenders to be eliminated. Slovenia also aligned its public procurement databases with those of the EU and sent all the data necessary for the public procurement indicators in the Single Market Scoreboard. The implementation of a national monitoring model for quality indicators for long-term care providers will help make the sector more transparent. It is an important step towards achieving a uniform long-term care system in Slovenia.

Furthermore, a reform was put in place that formalised the legal and institutional framework for the control and audit system of the RRF in Slovenia to enable it to work effectively. These reforms help address the public administration CSR and the CSRs on long-term care.

In 2023 and 2024, work on reforms is expected to advance and the implementation of important investments will be accelerated. The act regulating the pay system in the public sector, amendments to the Pension and Disability Insurance Act and a ban on using fossil fuels for heating in new buildings are expected to enter into force. Contracts for projects in many areas are expected to be awarded, including investments in flood safety, the construction of a clinic for infectious diseases in Ljubljana, a national telemedicine system, the upgrading of railway sections and stations, and long-term care facilities.

Box x:

Key deliverables under the RRP in 2023-2024

- Set up a revolving fund for the energy renovation of buildings in the public sector
- Adopt the resolution on the national programme of protection against natural and other disasters
- Establish a comprehensive legal framework for the use of alternative fuels in transport, covering the creation, registration and operation of recharging/supply infrastructure
- Prepare the reform of the pension system, in close consultation with social partners, aiming to ensure adequacy and long-term sustainability
- Adopt a law regulating the pay system in the public sector
- Deploy an additional 100 Gbps backbone optical connections, connecting the data nodes of the public institutes in the Academic and Research Network of Slovenia, covering at least 75% of all connections
- Establish an independent body to monitor and control quality in the healthcare system
- Support the digital transformation programme by awarding contracts for projects for the digital transformation of businesses

FURTHER PRIORITIES AHEAD

Beyond those tackled in the RRP, Slovenia faces additional challenges. Fiscal sustainability remains a critical issue, lacklustre investment has held back growth for years and productivity growth is lagging. Moreover, regional disparities continued to be prominent and difficulties resulting from ageing and labour shortages have intensified further. Challenges also remain regarding the diversification of energy supply and the acceleration of the green transition. Addressing these challenges will help to speed up convergence towards the EU average in terms of GDP per head and make further progress in achieving the SDGs, where Slovenia currently shows room for further improvement, namely regarding SDG 13 (Climate action) and SDG 2 (Zero hunger).

Fiscal sustainability will remain under pressure in the medium and longer term

The sustainability of Slovenia's public finances faces substantial challenges in the medium and long term. Public debt is moderately high and pressure on spending related to ageing will continue in the medium and long term (see Annex 21). Under the baseline scenario ([12]) by 2035, although the old-age dependency ratio (the ratio of people over 65 to people of working age, i.e. 20-64 years old) will be slightly lower than in the rest of the EU (47.3% against EU average of 47.6%), spending related to ageing as a share of GDP is projected to increase by the third highest rate in the EU. By 2045, the old-age dependency ratio is expected to be above the EU average (55.9% against the EU average of 54.6%) and the spending related to ageing is expected to outpace the EU average spending as a share of GDP. The increase in costs related to ageing is largely driven by spending on pensions, followed by healthcare and long-term care.

The planned pension reform will be key in addressing the long-term sustainability of the public finances, along with improving the adequacy of pensions. The healthcare and long-term care systems also weigh on long-term fiscal sustainability and require reforms to address financing but also access and quality of care.

A growth-friendly and green tax reform can support fiscal consolidation in the longer term. Total taxes (including compulsory actual social contributions) declined in 2022 to 36.4% of GDP largely owing to the temporary cuts in personal income tax, before they were reversed, and are slightly below the EU average. The share of labour taxes in Slovenia's total tax revenue is among the highest in the EU (53.4%; EU average: 49.5%). Recurrent taxes on immovable property at 0.5% of GDP are clearly below the EU aggregated value of 1.1% of GDP in 2021 (see Annex 19). Although Slovenia has a high share of environmental tax revenues as share of GDP (2.8% EU average 2.2%), there can be further related measures to promote the

([12]) The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070), European Commission.

green transition. A growth-friendly and green tax reform could enable a shift away from labour taxation and further stimulate labour supply and sustainable growth through a higher share of recurrent property taxes. Lower labour taxes would help create jobs, also for foreign workers, in industries for the Net-Zero Age.

The announced public wage reform has major implications for fiscal sustainability. The growth of average wages across individual public sector salary sub-groups has been uneven, leading to the uniform wage system gradually fragmenting. The changes currently being discussed, such as an increased use of variable remuneration and of remuneration based on work performance, could help address the public sector's labour shortages (e.g. general practitioners or qualified teachers). However, this should be based on a financially sustainable system to avoid a further worsening of the balance in the medium and longer run.

The healthcare and long-term care systems face challenges

Staff shortages in the areas of healthcare and long-term care have intensified. Shortages of health workers, especially general practitioners and, in some areas, nursing staff, lead to ever-longer waiting times for certain medical treatments and severe problems for people trying to find a general practitioner in some regions (see Annex 16). In addition, these bottlenecks and other factors like the disruptions in global supply chains in recent years have resulted in significant cost increases in these sectors. Improvements in higher education and training in healthcare, especially when combined with a revision of the requirements of job profiles, could help address the labour shortage in the medium term.

The fiscal sustainability of healthcare and long-term care is not ensured yet. The ageing of the population, which will intensify in the coming years, is expected to exert huge financial pressure. Public spending on health as a percentage of GDP in Slovenia was the seventh highest among EU Member States and is projected to increase by 1.5 pps of GDP by 2070 (EU average: 0.9 pps). The projected increase in spending over 2019-2070 in Slovenia is among the five highest in the EU. The share of overall private health spending in total health spending is already significant (see Annex 16). The share of out-of-pocket spending is low, since half of private expenditure is covered by voluntary complementary health insurance. The healthcare reforms and investments under the RRP address these challenges, but there is scope for further improvements in areas affecting fiscal sustainability and cost efficiency. Without such improvements, it will be almost impossible to create the fiscal space needed to improve services and coverage.

The healthcare and long-term care systems are insufficiently integrated. There are gaps in the interaction between the various parts of the healthcare (primary, secondary, and tertiary care) and long-term care systems, but also between the various institutional actors in these systems. This leads to significant inefficiency across the systems as they fail to maximise synergies and avoid duplication of work as well as gaps between the systems. Spending reviews or technical assistance would help locate the most severe bottlenecks and cost drivers.

Creating a coherent regulatory framework for long-term care is a long-standing country-specific

recommendation for Slovenia. Action to regulate long-term care as part of a unified system in Slovenia has been ongoing for almost 20 years. This is due in particular to the complexity of the system, which requires activities to be coordinated under the purview of several ministries and the unresolved issue of financing to be addressed. A new law on compulsory long-term care insurance is still pending. The delay in implementing the long-term care act adopted in 2021 but postponed for 2024 and now under revision, and the uncertainty over the financing of the system adversely impact the acceptance of the new system.

Slovenia also faces challenges in ensuring the capital and technologies needed to support these ongoing reforms. The efficient and effective functioning of the healthcare system and proposed long-term care system requires investments in all levels (primary, secondary, tertiary) and types of care offered (institutional, community, daily care), in infrastructure, digitalisation, as well as human resources.

Labour shortages and population ageing remain major challenges

Labour shortages, coupled with skills mismatches, have become acute. In 2022, more than half of employers reported staff shortages in healthcare and long-term care, information and communications technology (ICT), construction, transport, accommodation and hospitality services and in education (see also Annexes 10 and 14). The vacancy rate was almost as high as the unemployment rate. It was particularly high in the construction sector. The most sought-after profiles are mainly those requiring lower levels of education. Upskilling and reskilling have increased in energy-intensive industries, which is key for ensuring a fair green transition (see Annex 8). In the mid to long term, teacher shortages, particularly prevalent in the STEM fields (science, technology, engineering and mathematics), may negatively affect Slovenia's good performance in education in the future.

Meeting the need for a digitally skilled workforce remains a challenge and digital skills are particularly low among older and low-skilled workers. In 2021, the shares of individuals with at least basic digital skills and above basic digital skills were both below the EU average (50% vs 54% for at least basic skills and 20% vs 26% for above basic digital skills). Moreover, while the share of ICT specialists in employment scores just above the EU average, it is far behind that of the innovation leaders (see also Annex 10). While there are only minor differences between women and men in the level of digital skills, the following groups have a low level of skills: older people, people with a low level of education and a low level of income, immigrants, people who are unemployed and people who are inactive. It is important to address this long-standing challenge to achieve the national adult learning target by 2030 (see Annex 14).

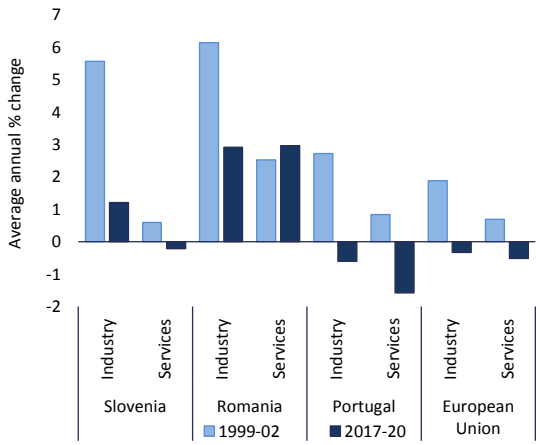
An improved business environment can increase investment and improve productivity

The investment ratio remains below the EU average. At the same time, the economy remains energy- and greenhouse gas emissions-intensive and the pace of emission reduction is slow. While investments in the manufacturing sector have recovered to pre-financial crisis levels, those in retail trade, transport and real

estate have not fully recovered to historical highs.

Slovenia has improved its competitiveness broadly in line with the EU average, but faster economic convergence with the EU would require even better productivity performance. Productivity growth has been steady in manufacturing and market services, but less so in the construction sector and other services. Export-oriented companies perform markedly better as regards productivity (see also Annex 12). In the domestic market, competitive pressures appear weak as both business entry and exit rates remain below those of peer economies.

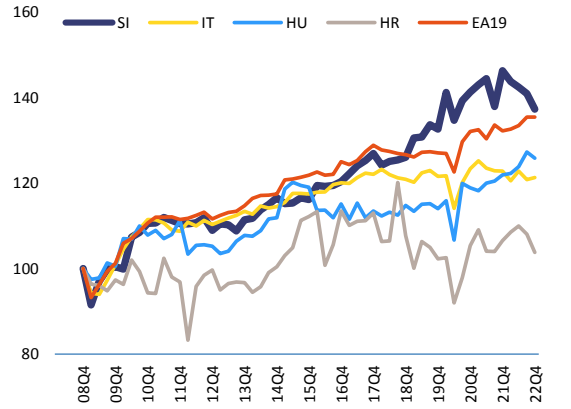
Graph 3.1: **Growth of productivity by sector**



Source: Eurostat

Slovenia is among those Member States where manufacturing plays a particularly important role in the economy. The share for Slovenian industry in terms of value added to GDP was higher than the EU average (29% in 2022 vs 23% in the EU) (see Annex 12). Material usage remains high (see Annex 9). In addition, the high share of energy-intensive industries would require significant investments to achieve the much-needed green and digital transformations. Labour productivity growth in the industrial sectors is above the EU average. For research and innovation related to the green transition, the latest trends in Slovenia are rather negative. The country is below the EU average in terms of both the number of patent families and private research and innovation (R&I) investments in Energy Union R&I priorities.

Graph 3.2: **Growth of labour productivity in manufacturing**



Source: Eurostat

Slovenia is a 'moderate innovation performer' and the gap between its performance and the EU average is widening. Based on the 2022 edition of the European Innovation Scoreboard ([13]), Slovenia's innovation performance stands at 93.5% of the EU average and is improving at a lower rate than most other Member States. The main obstacles hindering Slovenia's performance are low levels of venture capital and R&D expenditure in the public sector, with firm investment in innovation also lagging behind (see Annex 11). R&D intensity is still below its 2013 level and the EU average. Venture capital investments in Slovenia represent 0.003% of GDP, which is the lowest value in the EU ((see Annex 11). This affects in particular high-risk innovative

([13]) 2022 European Innovation Scoreboard, Country profile: Slovenia https://ec.europa.eu/assets/rtd/eis/2022/ec_rtd_eis-country-profile-si.pdf.

SMEs and holds back the commercialisation of research results.

The lack of ICT specialists and infrastructure appears to be hindering the digital transformation of businesses. Some 78% of Slovenian businesses recruiting ICT specialists reported difficulties in finding adequately skilled employees, which is the highest share in the EU (see Annex 10). This problem risks being exacerbated in the future, as over half of schoolteachers in the STEM fields are expected to retire by 2030, and the interest of students in STEM teacher training programmes is low (see Annex 15). Moreover, the R&D intensity of the Slovenian ICT sector is below the EU average. On average, Slovenian firms have adopted digital technologies to a slightly higher degree than in other EU countries, except big data, where it scores considerably below. The challenges in the area of connectivity – only 51% of households have access to fast internet in rural areas and 5G coverage remains below the EU average – can be another drawback in this regard (see Annex 10).

The competitiveness of the clean-energy sector is crucial in the context of decarbonisation. According to the latest available data, the number of Energy Union patent families in Slovenia has decreased, as have private R&I investments in Energy Union R&I priorities, with both now being below the EU average. Moreover, despite some positive figures on sector specific employment, the latest data (first quarter of 2023) on the labour shortage in the manufacturing of electrical equipment indicate that there is a shortage of around 50%, well above the EU average of around 30%. This figure is a clear indicator of the demand for workers in this sector.

In Slovenia, in the context of the green transition, labour shortages in key sectors have increased in recent years, also linked to a lack of relevant skills, creating bottlenecks in the transition to a net-zero economy. In 2022, labour shortages were reported in Slovenia for 66 occupations that required specific skills or knowledge for the green transition, including insulation workers, civil engineering technicians and civil engineers ([14]). The job vacancy rate increased across key sectors, such as construction (from 3.5% in 2015 to 5.9% in 2021) and manufacturing (from 1.2% in 2015 to 2.7% in 2021), with both sectors standing above the EU average of 3.6% and 1.9%, respectively, in 2021 ([15]). In 2022, labour shortages were reported as a factor constraining production in industry (for 41.4% of firms) and construction (for 66.0% of firms) ([16]). Upskilling and reskilling for the green transition, including for people most affected, and promoting inclusive labour markets are essential policy levers for speeding up the transition to a net-zero economy and for ensuring its fairness (see Annex 8).

Despite actions taken to improve the business environment, challenges remain. Slovenia has taken measures to improve the ease of doing business and reduce the administrative burden, but companies are still hindered by a high

([14]) Data on shortages is based on the *EURES Report on labour shortages and surpluses 2022*, European Labour Authority (2023). National authorities report through a questionnaire, based on administrative data and other sources as submitted by the EURES National Coordination Offices (definitions of shortages differ, thus data cannot be compared across countries, and cover a wide variety of sectors). Skills and knowledge requirements are based on the ESCO (European Skills Competences and Occupations) taxonomy on skills for the green transition (for occupations at ISCO 4-digit level of which there are 436 in total). Examples are identified based on their ESCO 'greenness' score and relevant sectors.

([15]) Eurostat (JVS_A_RATE_R2).

([16]) European Business and Consumer Survey.

number of obstacles, related to, for instance, the efficiency of state institutions, excessive red tape, and lengthy procedures ([17]). There are also process-related barriers to deploying renewable energy sources reviewed by the Single Market Enforcement Taskforce ([18]) (see Annex 12), which involve lengthy permitting procedures and understaffed authorities. While Slovenia has implemented measures to address these issues, further streamlining of permitting procedures is needed.

Access to equity finance remains a challenge for companies, particularly SMEs, despite moderately improving since 2020. Slovenia has a very low ratio of venture capital investment to GDP ([19]), which affects companies' innovation capacity. Slovenian capital markets also remain less developed and less liquid than the EU average (see Annex 12). Slovenian corporations have to rely more on bank financing and less on market funding than the EU average, which might limit their ability to carry out more risky projects, including in digitalisation. Green financing also remains underdeveloped ([20]).

Late payments have negative effects on the resilience and growth prospects of businesses, particularly SMEs. The gap between the agreed and actual payment time, both in the private and the public sector widened compared to 2021; from 12 to 13 days in the private sector, and from 11 to 13 in the public sector. Both are significantly higher than before the pandemic (see Annex 12).

Remaining barriers in other areas affect the business environment. In the past, Slovenia reduced the number of regulated professions to some extent, particularly in the crafts sector, but regulatory restrictiveness is higher than the EU average for professions such as real estate agents, lawyers, civil engineers, architects, and tourist guides ([21]).

There is a need to further diversify energy supplies and accelerate the green transition

Slovenia's energy mix is dominated by fossil fuels. In 2021, oil had the highest share of Slovenia's gross inland energy consumption (34%), followed by nuclear (20%), renewables (20%), coal (14%), and natural gas (12%) (see Annex 6). While Slovenia has been almost fully reliant on (direct and indirect) Russian natural gas imports in the past, in 2022 it was able to secure alternative supplies from Algeria, sufficient to cover a third of country's annual consumption (see Annex 7). Although gas has a lower weight in Slovenia than in other EU Member States, the industry sector, being particularly dependent on it, is highly vulnerable to price shocks and potential supply shortages. Further actions to ensure security of supply by continuing efforts to diversify away from Russian fossil fuels and reduce reliance on fossil fuels more generally remain a priority. Furthermore, the high energy and carbon intensity of the industry sector needs to be addressed by means of rolling out energy efficiency policy and investment measures. Finally, while energy prices have decreased, uncertainty remains regarding next winter,

([17]) IMAD Development Report 2022

([18]) SMET report 2021-2022.

([19]) Invest Europe 2021 CEE Private Equity statistics, June 2022.

([20]) OECD 2022 Country report.

([21]) Communication on updating the reform recommendations for regulation in professional services, COM(2021)385.

which requires continued efforts to structurally reduce gas demand.

Slovenia lags behind in terms of deploying renewables, upgrading its distribution grid and improving energy efficiency. Further streamlining of permitting procedures and more investments in the distribution grid and energy storage infrastructure are needed for the uptake of renewables, particularly solar and wind. Slovenia has reached its 2021 renewable energy sources target by using the EU mechanism of cross-border cooperation in line with Directive 2018/2001/EU (statistical transfers). The update of Slovenia's national energy and climate plan (NECP) is expected to include an upward revision of the renewable energy target by 2030, requiring the country to significantly increase efforts in deploying renewable energy installations. Slovenia's proposal for an act on deployment of installations to produce electricity from renewable energy sources, part of a reform under the RRP, is key for unlocking the potential of renewables in previously unexplored areas.

The subsequent identification and selection of priority areas for renewables would enable the reform to be implemented. The existing energy storage in Slovenia is underdeveloped and insufficient to address the needs of local renewables production. Improving the grid capacity availability at low- and medium-voltage levels, including digitalisation of the grid, would help integrate additional renewable energy installations, charging infrastructure, and energy communities. In this regard, simplifying the administrative procedures for energy communities is important for their successful uptake. Advancing energy efficiency measures, particularly in the building sector, remains a priority. The success of these measures relies on the necessary support elements being present, such as technical and administrative assistance.

Greening the transport sector remains a challenge in Slovenia. Transport emissions in Slovenia represent over two fifths of the country's total CO_2 emissions. The high dependence on private cars and still lagging take-up of sustainable modes of transport also have a negative impact on air quality. Therefore, further efforts are needed to encourage the modal shift from private cars to public transport by improving the quality and availability of public transport.

Climate change is putting additional pressure on Slovenia's biodiversity. Due to the negative impacts of climate change, including from urban development and changes in water regime and agriculture, the conservation status of habitats and species has been worsening. The increasing frequency and intensity of extreme weather events (such as floods, draughts, and forest fires) has also negatively affected biodiversity, among other sectors (see Annex 6). The administrative capacity to tackle these issues remains insufficient and the climate adaptation strategy is somewhat outdated. Furthermore, there are challenges linked to promoting nature-based solutions for flood-protection investments.

KEY FINDINGS

Slovenia's RRP intends to address a series of its structural challenges through the following measures.

- Supporting the digitalisation of the economy and the public sector: Slovenia adopted a strategy for the digital transformation of businesses and established the State Administration Informatics Development Council.

- Improving the business environment to stimulate productivity growth: Slovenia adopted the Act on forms of alternative investment funds and amended the Investment Promotion Act.

- Removing administrative barriers and bottlenecks for the business sector and the public: Slovenia introduced the Debureaucratisation Act and amendments to the Public Procurement Act.

- Reforming the national healthcare, long-term care and pension systems: Slovenia adopted the national monitoring model for quality indicators for long-term care providers.

Slovenia should ensure an effective governance structure and strengthen the administrative capacity to allow for a swift and steady implementation of its recovery and resilience plan. Swiftly finalise the REPowerEU chapter with a view to rapidly starting its implementation.

Beyond the reforms and investments in the RRP, Slovenia would benefit from the following measures:

- pursuing policies that support long-term fiscal sustainability and shifting the tax burden from labour towards more growth-friendly and sustainable sources;

- improving the country's digital infrastructure, particularly in rural areas and promoting the digital transformation in all sectors, including via the acceleration of investments;

- taking measures to address skills shortages, in particular green and digital skills, including boosting the productivity and digital transformation of businesses;

- better integration of long-term care and healthcare, and comprehensive investments, which will enable long-term care and healthcare reforms to be fully implemented;

- ensuring cost efficiency and financial sustainability of the long-term care and health systems; spending reviews would help locate the most severe bottlenecks and cost drivers;

- continuing to improve the business environment by removing red tape and carrying out reforms to boost labour supply, therefore alleviating bottlenecks, and productivity;

- increasing investment on the green transition and on diversifying energy supply, in particular by stepping up the use of renewable energy sources, particularly with further streamlining permitting procedures, strengthening electricity distribution networks, improving energy efficiency, as well as

speeding up the modal shift to public transport.

ANNEXES

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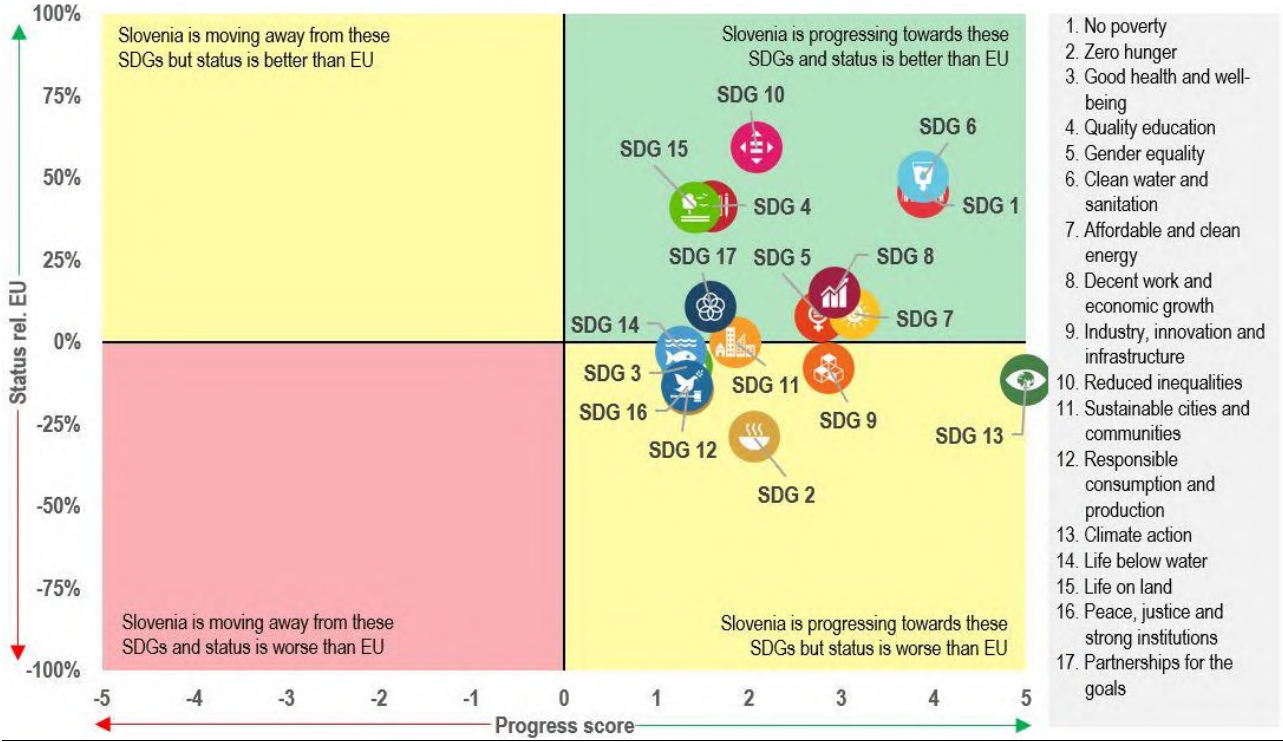
This Annex assesses Slovenia's progress on the Sustainable Development Goals (SDGs) along the four dimensions of competitive sustainability. The 17 SDGs and their related indicators provide a policy framework under the UN's 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in an EU context.

Slovenia is improving on most of the SDG indicators related to *environmental sustainability* (SDGs 2, 6, 7, 9, 11, 12, 13, 15), but it needs to catch up with the EU average on others (SDGs 12, 14). Slovenia has made some slight progress on increasing the share of renewable energy in gross final energy consumption (SDG 7); it rose from 24.1% to 25.0% in 2021. Furthermore, Slovenia has taken some action regarding the energy import dependency, reducing it from 49.3% in 2015 to 45.8% in 2020. The recovery and resilience plan (RRP) is expected to boost Slovenia's capacity in the area of renewable energy by addressing regulatory challenges. In this context, Slovenia made some progress regarding SDG 13 (climate action) even though it needs to catch up with the EU average. In particular, Slovenia has increased the share of

Graph A1.1:**Progress towards the SDGs in Slovenia in the last 5 years**



For detailed datasets on the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for details on extensive country specific-data on the short-term progress of Member States: Key findings - Sustainable development indicators - Eurostat (europa.eu). The status of each SDG in a country is the aggregation of all the indicators for the specific goal compared to the EU average. A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past 5 years. The calculation does not take into account any target values as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.

Source: Eurostat, latest update of early April 2023, except for the EU Labour Force Survey (LFS) indicators released on 27 April 2023. Data mainly refer to 2016-2021 or 2017-2022.

renewable energy in gross final energy consumption from 22.0% in 2015 to 25.0% in 2021. Despite improvements on industry, innovation and infrastructure (SDG 9), Slovenia still needs to catch up with the EU average on certain indicators. In particular, the share of buses and trains in passenger transport is very low (8.7% in 2020, compared to EU average of 12.8%). In terms of life below water (SDG 14), the share of marine protected areas in Slovenia (5% in 2021) is visibly lower than the EU average (12.1% in 2021). The Slovenian RRP contains several measures aimed at increasing the currently low use of public transportation and significantly improving the country's railway infrastructure, which will help the country tackle this challenge.

Slovenia performs well or is improving on some SDG indicators related to *fairness* (SDGs 1, 4, 5, 7, 8, 10) but needs to catch up with EU average on access to healthcare (SDG 3). Slovenia performs well on poverty and basic needs (SDG 1) and compared to EU average (EU: 21.7% in 2021) has a low share of people at risk of poverty or social exclusion with 13.2% in 2021. In addition, Slovenia has improved on the fairness-related indicator gender equality (SDG 5) but it still needs to catch up with EU average. The quality of education (SDG 4) is above the EU average and improving. Despite good progress, Slovenia is only just above the EU average when it comes to affordable and clean energy (SDG 7). On access to healthcare (SDG 3), the self-reported unmet needs for medical care are higher than in the EU (4.8% of population aged 16 or over, in 2021; EU average: 2.0%). The Slovenian RRP contains several measures aimed at addressing this challenge effectively, including key reforms in long-term care and healthcare.

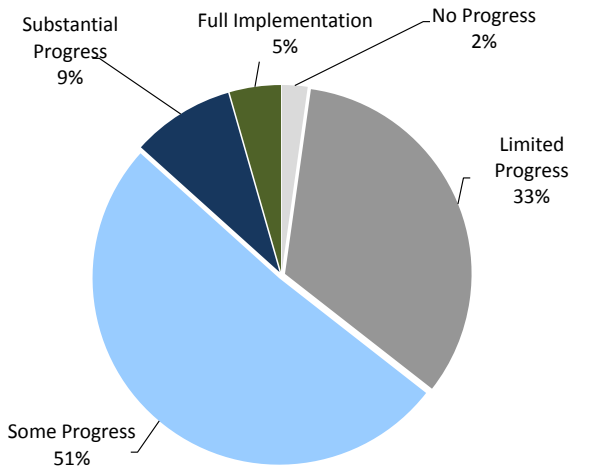
Slovenia performs well on most SDG indicators related to *productivity* (SDGs 4, 8 and 9) but still needs to catch up with the EU average regarding SDG 9. Slovenia has made significant progress on sustainable infrastructure (SDG 9) regarding the share of households with a high-speed internet connection. Since 2015, this share increased from 50.4% to 65.5% in 2020 and even further to 72.4% in 2021. In the area of digital skills (SDG 4), Slovenia is still below the EU average regarding the share of adults with at least basic digital skills (49.7% in 2021; EU average: 53.9%). This means that more than half of the Slovenian population aged 16-74 still lacks basic digital skills. The Slovenian RRP will help digitalise the country's public and private sector and boost digital skills. The measures under the RRP will ensure that further progress is made on these SDGs.

Slovenia performs well on SDG indicators related to *macroeconomic stability (SDGs 8, 16 and 17)*. Slovenia performs well on indicators measuring employment (SDG 8). Notably, the percentage of young people neither in employment nor in education and training is low compared to the EU average (7.3% in 2021; EU average: 13.1%) and the long-term unemployment rate is also below the EU average (1.9% in 2021; EU average: 2.8%). On SDG 16 (Peace, justice and strong institutions), Slovenia needs to catch up with the EU average. In particular, the perceived independence of the justice system in Slovenia is lower than the EU average (in Slovenia, 49% of population in 2022 rated it as very and fairly good; EU average: 53%. Furthermore, Slovenia needs to catch with the EU average regarding real GDP per capita (SDG 8) (EUR 21 310 in 2021; EU average: EUR 27 880). It also had a lower investment share of GDP (SDG 8) than the EU average (20.3% of GDP; EU average 22.4%). Slovenia faces challenges particularly in the sustainability of public finances in the long-term due to its ageing population and the pressure on public spending in the areas of pensions, health care and long-term care. The Slovenian RRP includes measures related to long-term care to tackle the impact on the fiscal sustainability. With regard to 'partnership for goals' (SDG 17), Slovenia is progressing well and lies above the EU average.

As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other Annexes.

The Commission has assessed the 2019-2022 country-specific recommendations (CSRs) ([22]) addressed to Slovenia as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 13 of the 17 Sustainable Development Goals (see Annexes 1 and 3). The assessment considers the policy action taken by Slovenia to date ([23]) and the commitments in its recovery and resilience plan (RRP) ([24]). At this stage of RRP implementation, 51% of the CSRs focusing on structural issues from 2019-2022 have recorded at least 'some progress', while 33% recorded 'limited progress' (see Graph A2.1). As the RRP is implemented further, considerable progress in addressing structural CSRs is expected in the years to come.

Graph A2.1:**Slovenia's progress on the 2019-2022 CSRs (2023 European Semester)**



Source: European Commission.

([22]) 2022 CSRs: EUR-Lex - 32022H0901(24) - EN - EUR-Lex (europa.eu)

2021 CSRs: EUR-Lex - 32021H0729(25) - EN - EUR-Lex (europa.eu)
2020 CSRs: EUR-Lex - 32020H0826(24) - EN - EUR-Lex (europa.eu)
2019 CSRs: EUR-Lex - 32019H0905(24) - EN - EUR-Lex (europa.eu)

([23]) Including policy action reported in the national reform programme and in Recovery and Resilience Facility (RRF) reporting (twice a year reporting on progress in implementing milestones and targets and resulting from the payment requests assessment).

([24]) Member States were asked to effectively address all or a significant subset of the relevant country-specific recommendations issued by the Council in 2019 and 2020 in their RRPs. The CSR assessment presented here considers the degree of implementation of the measures included in the RRP and of those carried out outside of the RRP at the time of assessment. Measures laid down in the Annex of the adopted Council Implementing Decision on approving the assessment of the RRP, which are not yet adopted or implemented but considered credibly announced, in line with the CSR assessment methodology, warrant 'limited progress'. Once implemented, these measures can lead to 'some/substantial progress or full implementation', depending on their relevance.

Table A2.1: **Summary table on 2019-2022 CSRs**

Slovenia	Assessment in May 2023*	RRP coverage of CSRs until 2026	Relevant SDGs
2019 CSR 1	**Limited progress**		
Achieve the medium-term budgetary objective in 2020.	Not relevant anymore	Not applicable	SDG 8, 16
Adopt and implement reforms in healthcare	Limited Progress	Relevant RRP measures planned as of 2024	SDG 3
and long-term care that ensure quality, accessibility and long-term fiscal sustainability.	Some Progress	Relevant RRP measures being implemented as of 2021.	SDG 3
Ensure the long-term sustainability and adequacy of the pension system, including by adjusting the statutory retirement age restricting early retirement and other forms of early exit from the labour market.	Limited Progress	Relevant RRP measures planned as of 2024.	SDG 8
Increase the employability of low-skilled and older workers by improving labour market relevance of education and training, lifelong learning and activation measures, including through better digital literacy.	Limited Progress	Relevant RRP measures planned as of 2024.	SDG 4, 8
2019 CSR 2	**Some progress**		
Support the development of equity markets.	Some Progress	Relevant RRP measures being implemented as of 2022.	SDG 8, 9
Improve the business environment by reducing regulatory restrictions and administrative burden.	Some Progress	Relevant RRP being implemented as of 2021.	SDG 8, 9
Improve competition, professionalisation and independent oversight in public procurement.	Some Progress	Relevant RRP measures being implemented as of 2021.	SDG 9
Carry out privatisations in line with the existing plans.	Some Progress	not applicable	SDG 9
2019 CSR 3	**Some progress**		
Focus investment-related economic policy on research and innovation,	Some Progress	Relevant RRP measures planned as of 2021.	SDG 9, 10, 11
low carbon and energy transition,	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 7, 9, 10, 11, 13
sustainable transport, in particular rail, and	Some Progress	Relevant RRP measures planned as of 2022.	SDG 10, 11
environmental infrastructure, taking into account regional disparities.	Some Progress	Relevant RRP measures planned as of 2022.	SDG 6, 10, 11, 12, 15
2020 CSR 1	**Some progress**		
Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	Not applicable	SDG 8, 16
Ensure the resilience of the health and long-term care system, including by providing the adequate supply of critical medical products and addressing the shortage of health workers.	Some Progress	Relevant RRP measures being implemented as of 2022.	SDG 3
2020 CSR 2	**Substantial progress**		
Mitigate the social and employment impact of the COVID-19 crisis, including by providing adequate income replacement and social protection,	Substantial Progress	Relevant RRP measures planned as of 2021.	SDG 1, 2, 8, 10
enhancing short-time work schemes and through flexible working arrangements.	Substantial Progress	Relevant RRP measures planned as of 2022.	SDG 8
Ensure that these measures provide adequate protection for non-standard workers.	Some Progress	Relevant RRP measures planned as of 2022.	SDG 1, 2, 8, 10
2020 CSR 3	**Some progress**		
Continue to swiftly implement measures to provide liquidity and financing to businesses and households and	Full Implementation	Relevant RRP measures planned as of 2022.	SDG 8, 9
reduce administrative burden.	Some Progress	Relevant RRP measures being implemented as of 2021.	SDG 8, 9
Front-load mature public investment projects and	Substantial Progress	Relevant RRP measures planned as of 2023.	SDG 8, 16
promote private investment to support the economic recovery.	Some Progress	Relevant RRP measures being implemented as of 2023	SDG 8, 9
Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy,	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 7, 9, 13
environmental infrastructure,	Some Progress	Relevant RRP measures planned as of 2022.	SDG 6, 12, 15
sustainable transport,	Some Progress	Relevant RRP measures planned as of 2022.	SDG 11
research and innovation, and	Some Progress	Relevant RRP measures planned as of 2021.	SDG 9
the rollout of the 5G network.	Some Progress	Relevant RRP measures planned as of 2022.	SDG 9
Promote digital capacities of businesses, and	Some Progress	Relevant RRP measures being implemented as of 2021.	SDG 9
strengthen digital skills,	Some Progress	Relevant RRP measures planned as of 2022.	SDG 4
e-commerce and	Limited Progress	Relevant RRP measures planned as of 2021.	SDG 9
e-health.	Limited Progress	Relevant RRP measures planned as of 2023.	SDG 3

(Continued on the next page)

Table (continued)

2021 CSR 1	**Some Progress**		
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.	Full implementation	Not applicable	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Some Progress	Not applicable	SDG 8, 16
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	Some Progress	Not applicable	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy, and sustainability of health and social protection systems for all.	Limited Progress	Not applicable	SDG 8, 16
2022 CSR 1	**Limited Progress**		
In 2023, ensure that the growth of nationally-financed current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	No Progress	Not applicable	SDG 8, 16
Expand public investment for the green and digital transition and for energy security, including by making use of the RRF, RePowerEU and other EU funds.	Substantial Progress	Not applicable	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	Some Progress	Not applicable	SDG 8, 16
Ensure the long-term fiscal sustainability of the healthcare and	Limited Progress	Relevant RRP measures planned as of 2024	SDG 3
long-term care systems.	Limited Progress	Relevant RRP measures planned as of 2021	SDG 3
Introduce compensating measures to finalise the shift from labour taxes, including by rebalancing towards more green and growth-friendly taxes.	Limited Progress		SDG 8, 10, 12
2022 CSR 2			
Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 28 July 2021.	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.		
Submit the 2021-2027 cohesion policy programming documents with a view to finalising their negotiations with the Commission and subsequently starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	**Limited progress**		
Diversify imports of fossil fuels and reduce overall reliance on fossil fuels	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 7, 9, 13
by accelerating the deployment of renewables, in particular by further streamlining permitting procedures,	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 7, 8, 9, 13
and strengthening of the electricity distribution network.	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 7, 9, 13
Increase implementation of energy efficiency measures, notably in the building sector,	Some Progress	Relevant RRP measures planned as of 2022.	SDG 7
electrification of the transport sector,	Limited Progress	Relevant RRP measures planned as of 2022.	SDG 11
and by ensuring that energy infrastructure and interconnections have sufficient capacity.	Some Progress		SDG 7, 9, 13

Note:

* See footnote ([24]).

** RRP measures included in this table contribute to the implementation of CSRs. Nevertheless, additional measures outside the RRP are necessary to fully implement CSRs and address their underlying challenges. Measures indicated as 'being implemented' are only those included in the RRF payment requests submitted and positively assessed by the European Commission.

Source: European Commission.

The Recovery and Resilience Facility (RRF) is the centrepiece of the EU's efforts to help it recover from the COVID-19 pandemic, speed up the twin transition and strengthen resilience against future shocks. The RRF also contributes to implementation of the SDGs and helps to address the Country Specific Recommendations (see Annex 4). Slovenia submitted its current recovery and resilience plan (RRP) on 30 April 2021. The Commission's positive assessment on 1 July 2021 and Council's approval on 28 July 2021 paved the way for disbursing EUR 1.8 billion in grants and EUR 0.7 billion in loans under the RRF over the 2021-2026 period.

Since the entry into force of the RRF Regulation and the assessment of the national recovery and resilience plans, geopolitical and economic developments have caused major disruptions across the EU. In order to effectively address these disruptions, the (adjusted) RRF Regulation allows Member States to amend their recovery and resilience plan for a variety of reasons. In line with article 11(2) of the RRF, the maximum financial contribution for Slovenia was moreover updated on 30 June 2022 to an amount of EUR 1.5 billion in grants. No revision was submitted at the time of publication of this country report yet.

Table A3.1: **Key elements of Slovenia's RRP**

	Current RRP
Scope	Initial plan
CID adoption date	28 July 2021
Total allocation	EUR 1.78 billion in grants and EUR 0.7 billion in loans (4.77% of 2021 GDP)
Investments and reforms	59 investments and 34 reforms
Total number of milestones and targets	209

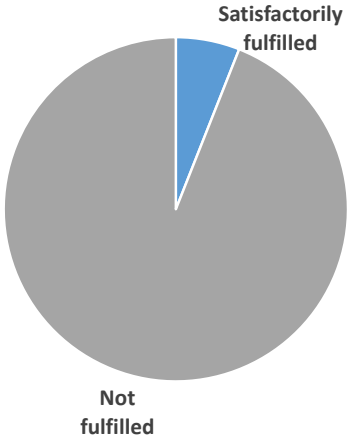
Source: Recovery and Resilience Scoreboard

Slovenia's progress in implementing its plan is published in the Recovery and Resilience Scoreboard ([25]). The Scoreboard also gives an overview of the progress made in implementing the RRF as a whole, in a transparent manner. The graphs in this Annex show the current state of play of the milestones and targets to be reached by Slovenia and subsequently assessed as satisfactorily fulfilled by the Commission.

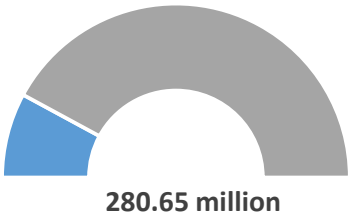
EUR 281 million has so far been disbursed to Slovenia under the RRF. The Commission disbursed EUR 231 million to Slovenia in pre-financing on 17 September 2021, equivalent to 13% of the financial allocation. Slovenia's first payment request was positively assessed by the Commission, taking into account the opinion of the Economic and Financial Committee, leading to EUR 49.6 million being disbursed in financial support (net of pre-financing) on 20 April 2023. The related 12 milestones cover reforms in the areas of the digital transition, business environment, efficient public institutions, and long-term care.

([25]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A3.1:**Fulfilment status of milestones and targets**



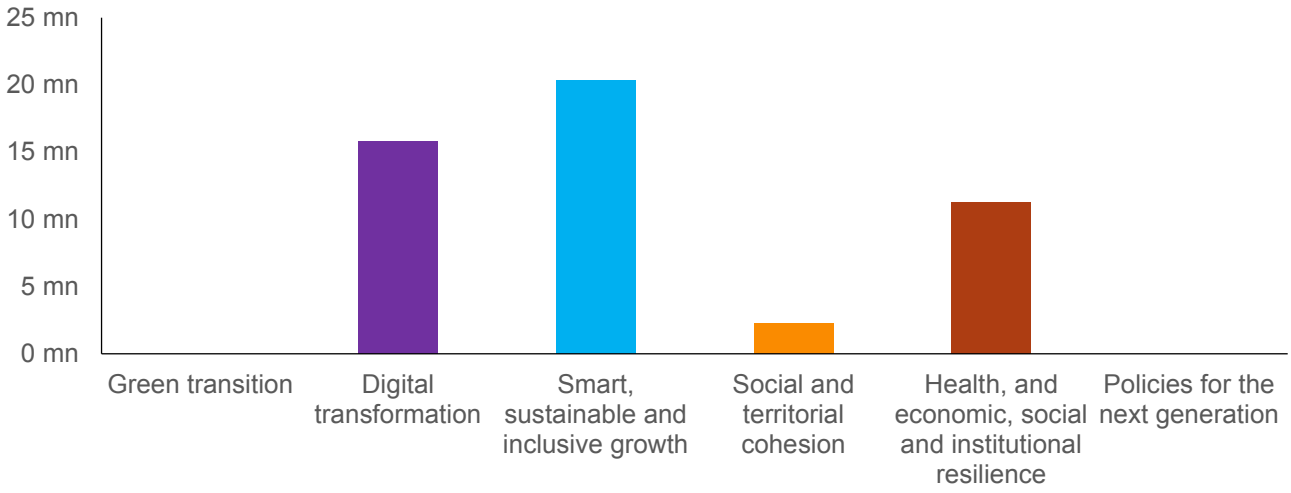
Note: This graph displays the share of satisfactorily fulfilled milestones and targets. A milestone or target is satisfactorily fulfilled once a Member State has provided evidence to the Commission that it has reached the milestone or target and the Commission has assessed it positively in an implementing decision.
Source: Recovery and Resilience Scoreboard



Note: This graph displays the amount of grants disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and the total estimated cost of the respective RRP.
Source: Recovery and Resilience Scoreboard

Graph A3.2:**Total grants disbursed under the RRF**

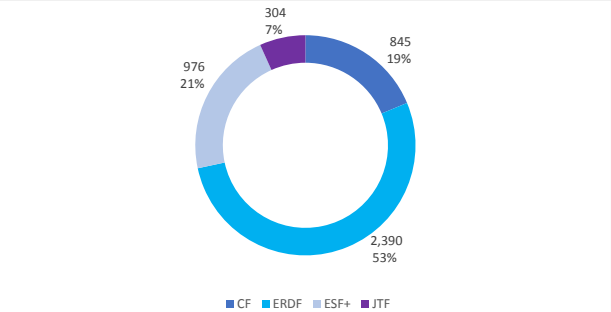
Graph A3.3:**Disbursements per pillar**



Note: Each disbursement reflects progress in the implementation of the RRF, across the six policy pillars. This graph displays how disbursements under the RRF (excluding pre-financing) relate to the pillars. The amounts were calculated by linking the milestones and targets covered by a given disbursement to the pillar tagging (primary and secondary) of their respective measures.
Source: Recovery and Resilience Scoreboard

The EU budget of over EUR 1.2 trillion for 2021-2027 is geared towards implementing the EU's main priorities. Cohesion policy investment amounts to EUR 392 billion across the EU and represents almost a third of the overall EU budget, including around EUR 48 billion invested in line with REPowerEU objectives.

Graph A4.1:**Cohesion policy funds 2021-2027 in Slovenia: budget by fund**



(1) million EUR in current prices, % of total; (total amount including EU and national co-financing)
Source: European Commission, Cohesion Open Data

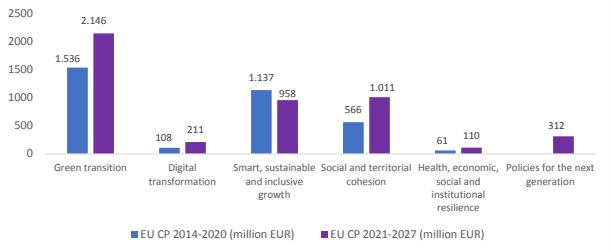
In 2021-2027, in Slovenia, cohesion policy funds ([26]) will invest EUR 2.1 billion in the green transition and EUR 211 million in the digital transformation as part of the country's total allocation of EUR 4.5 billion. In particular, the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) ([27]) will boost digitalisation and R&I including by supporting key research infrastructures. SMEs lie at the heart of ERDF support to businesses in Slovenia, in line with its smart specialisation strategy. The support is expected to trigger EUR 790 million in private investment. The ERDF and the CF will also promote energy efficiency and renewable energy sources, as well as sustainable mobility. Around 300 000 square meters of public space will become more energy efficient and energy poverty will be addressed in hundreds of homes. 170 health- and long-term care facilities and 12 000 businesses will receive support, to improve long-term care and social inclusion. The swift transition to a low-carbon economy is key for the innovation potential of Slovenia. The Just Transition Fund (JTF) will help to ease the national coal exit strategy (end date 2033) by promoting sustainable energy, as well as the training and reskilling of workers, to diversify the local economy in the two coal regions. Under the European Social Fund Plus (ESF+), Slovenia allocates EUR 423 million to increasing the quality of education and training and aligning it with labour market needs, and to improving access to jobs, notably for the long-term unemployed, low-educated and older people. Further actions include developing a long-term skills forecasting platform and lifelong learning measures, including a national campaign to increase awareness and career guidance in vocational education and training (VET).

Of the investments mentioned above, EUR 369 million will be invested in line with REPowerEU objectives. This is on top of the EUR 381 million dedicated to REPowerEU under the 2014-2020 budget**.** EUR 135 million (2021-2027) and EUR 314 million (2014-2020) is for improving energy efficiency; EUR 163 million (2021-2027) and EUR 67 million (2014-2020) is for renewable energy and low-carbon R&I; and EUR 71 million (2021-2027) is for smart energy systems.

([26]) European Regional Development Fund (ERDF), Cohesion Fund (CF), European Social Fund+ (ESF+), Just Transition Fund (JTF), excluding Interreg programmes. Total amount includes national and EU contributions. Data source: Cohesion Open Data.

([27]) ERDF and CF expected achievements from the 2021-2027 programmes.

Graph A4.2:**Synergies between Cohesion policy funds and the RRF six pillars in Slovenia**



(1) million EUR in current prices (total amount, including EU and national co-financing)
Source: European Commission

In 2014-2020, cohesion policy funds made EUR 3.3 billion available to Slovenia ([28]), with an absorption of 86% ([29]). Including national financing, the total investment amounts to EUR 4.1 billion - around 1.4% of GDP for 2014-2020.

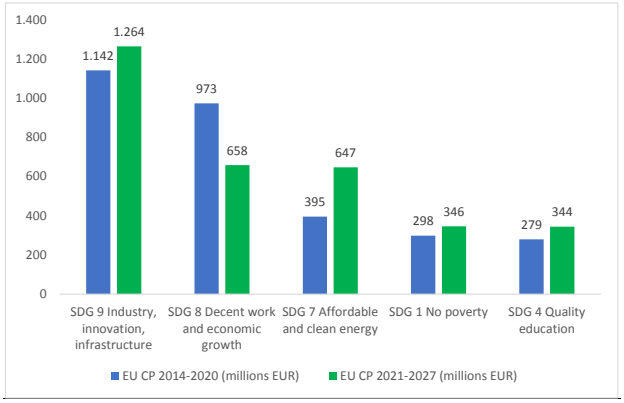
Slovenia continues to benefit from cohesion policy flexibility to support economic recovery, step up convergence and provide vital support to regions following the COVID-19 pandemic. The Recovery Assistance for Cohesion and the Territories of Europe instrument (REACT-EU) ([30]) under NextGenerationEU provides EUR 278 million on top of the 2014-2020 cohesion policy allocation for Slovenia. Of the additional EU funding, EUR 117 million is being used to strengthen the resilience of the healthcare system, for the benefit of people across the entire country, and EUR 110 million is set to boost the green and digital transition in more than 2 500 firms. With SAFE (Supporting Affordable Energy), the 2014-2020 cohesion policy funds may also be mobilised by Slovenia to support vulnerable households, jobs and companies particularly affected by high energy prices.

([28]) Cohesion policy funds include the ERDF, CF, ESF and the Youth Employment Initiative (YEI). ETC programmes are excluded here. According to the 'N+3 rule', the funds committed for 2014-2020 must be spent by 2023. REACT-EU is included in all figures. The total amount includes EU and national co-financing. Data source: Cohesion Open Data.

([29]) 2014-2020 Cohesion policy EU payments by MS is updated daily on Cohesion Open Data.

([30]) REACT-EU allocation on Cohesion Open Data.

Graph A4.3:**Cohesion policy funds contribution to the SDGs in 2014-2020 and 2021-2027 in Slovenia**



5 largest contributions to SDGs in million (EUR) current prices.
Source: European Commission

In both 2014-2020 and 2021-2027, cohesion policy funds have contributed substantially to the Sustainable Development Goals (SDGs). These funds support 11 of the 17 SDGs, notably SDG 9 'Industry, innovation and infrastructure' and SDG 7 'Affordable and clean energy' ([31]).

Other EU funds make significant resources available for Slovenia. The common agricultural policy (CAP) made EUR 2.3 billion available in 2014-2022, and will continue to support Slovenia with EUR 1.2 billion in 2023-2027. The two CAP Funds (European Agricultural Guarantee Fund and European Agricultural Fund for Rural Development), contribute to the European Green Deal while ensuring long-term food security. They promote social, environmental and economic sustainability and innovation in agriculture and rural areas, in coordination with other EU funds. The European Maritime and Fisheries Fund made EUR 29 million available to Slovenia in 2014-2020 and the European Maritime, Fisheries and Aquaculture Fund allocates EUR 24 million in 2021-2027.

([31]) Other EU funds contribute to the implementation of the SDGs. In 2014-2022, this includes both the European Agricultural Fund for Rural Development (EARDF) and the European Maritime and Fisheries Fund (EMFF).

Slovenia also benefits from other EU programmes, notably the Connecting Europe Facility, which under CEF 2 (2021-2027) has so far allocated EU funding of EUR 118.7 million to seven specific projects on strategic transport networks. Similarly, Horizon Europe has so far allocated nearly EUR 91 million to Slovenian R&I on top of the EUR 380 million earmarked under the previous programme (Horizon 2020). The Public Sector Loan Facility set up under the Just Transition Mechanism makes EUR 20 million of grant support from the Commission available for projects located in Slovenia for 2021-2027, which will be combined with loans from the EIB, to support investments by public sector entities in just transition regions.

Slovenia received support under the European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) to finance short-time work schemes and other similar measures to mitigate the impact of COVID-19. The Council granted financial assistance to Slovenia of EUR 1.113 billion in loans, which supported around 68% of workers and 78% of firms in 2020.

The Technical Support Instrument (TSI) supports Slovenia in designing and implementing growth-enhancing reforms, including those set out in its recovery and resilience plan (RRP). Slovenia has received significant support since 2016. Examples ([32]) include support for reforms of the pension system and the public administration, the justice system and taxation of investment funds.

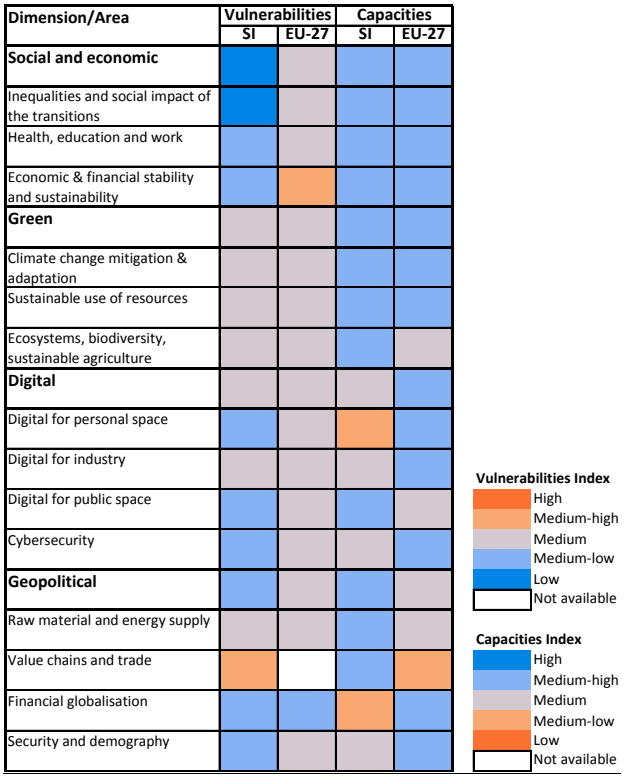
([32]) Country factsheets on reform support are available here.

This Annex illustrates Slovenia's relative resilience capacities and vulnerabilities using the Commission's resilience dashboards (RDB) ([33]). Comprising a set of 124 quantitative indicators, the RDB provide broad indications of Member States' ability to make progress across four interrelated dimensions: social and economic, green, digital, and geopolitical. The indicators show vulnerabilities ([34]) and capacities ([35]) that can become increasingly relevant, both to navigate ongoing transitions and to cope with potential future shocks. To this end, the RDB help to identify areas that need further efforts to build stronger and more resilient economies and societies. They are summarised in Table A5.1 as synthetic resilience indices, which illustrate the overall relative situation for each of the four dimensions and their underlying areas for Slovenia and the EU-27 ([36]).

According to the set of resilience indicators under the RDB, Slovenia generally displays lower vulnerabilities compared to the EU average. Slovenia shows low vulnerabilities in the social and economic dimension of the RDB, medium-low vulnerabilities in the geopolitical dimension, and medium vulnerabilities in the green and digital dimensions. It has similar vulnerabilities to the EU average in all areas of the green dimension and some areas of the geopolitical dimension. Slovenia has relatively low vulnerabilities in relation to 'inequalities and social impact of the transitions', 'digital for personal and public space', and 'security and demography', among others.

Compared to the EU average, Slovenia shows an overall similar level of capacities across all RDB indicators. It has medium resilience capacities in the digital dimension, and medium-high capacities in the social and economic, green and geopolitical dimensions. Slovenia shows stronger capacities than the EU average in the areas 'ecosystems, biodiversity and sustainable agriculture', 'digitalisation for public space', 'raw material and energy supply' and 'value chains and trade'. There is room for improving capacities compared to the EU regarding the digitalisation for personal space and industry, as well as in areas 'cybersecurity', 'financial globalisation' and 'security and demography'.

Table A5.1: **Resilience indices summarising the situation across RDB dimensions and areas**



(1) Data are for 2021, and EU-27 refers to the value for the EU as a whole. Data underlying EU-27 vulnerabilities in the area 'value chains and trade' are not available as they comprise partner concentration measures that are not comparable with Member States' level values.
Source: JRC Resilience Dashboards - European Commission

(33) For details see https://ec.europa.eu/info/strategy/strategic-planning/strategic-foresight/2020-strategic-foresight-report/resilience-dashboards_en; see also 2020 Strategic Foresight Report (COM(2020) 493).

(34) Vulnerabilities describe features that can exacerbate the negative impact of crises and transitions, or obstacles that may hinder the achievement of long-term strategic goals.

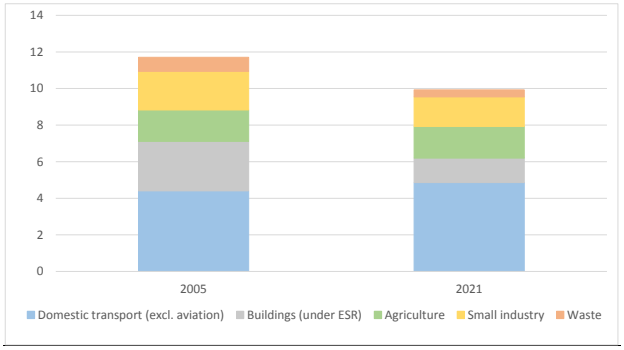
(35) Capacities refer to enablers or abilities to cope with crises and structural changes and to manage the transitions.

(36) This Annex is linked to Annex 1 on SDGs, Annex 6 on the green deal, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource productivity, efficiency and circularity, Annex 10 on the digital transition and Annex 14 on the European pillar of social rights.

Slovenia's green transition requires continued action effort on several aspects, including rolling out deploying renewable energy, developing energy storage, and reducinge road transport emissions. Implementation of the European Green Deal is underway in Slovenia; this Annex provides a snapshot of the key areas involved ([37]).

Slovenia has not yet defined all the climate policy measures it needs to reach its 2030 climate target for the effort sharing sectors ([38]). Data for 2021 on greenhouse gas emissions in these sectors in Slovenia are expected to show the country generated far less than its annual emission allocations ([39]). Current policies in Slovenia are projected to reduce these emissions by 9% relative to 2005 levels in 2030, not sufficient to reach the effort sharing target even before it was raised in line with the EU's 55% objective. The additional measures tabled would bring the emission reductions to 25%, exceeding the current target but not enough to reach the new target to reduce by 27% ([40]). In its recovery and resilience plan, Slovenia has attributed 42.4 % of its Recovery and Resilience Facility allocation to key reforms and investments to attain climate objectives ([41]).

Graph A6.1:**Thematic – greenhouse gas emissions from the effort sharing sectors in Mt CO2eq, 2005-2021**



Source: European Environmental Agency.

Slovenia's land use sector performs strongly on net carbon removals. Slovenia's forests achieve a major share of net carbon removals through land use. For 2030, Slovenia's target for net removals by the land use, land use change and forestry (LULUCF) sector implies removing 146 kt CO_2eq (see Table A6.1) ([42]). The sector has been a carbon sink, except from

([37]) The overview in this Annex is complemented by the information provided in Annex 7 on energy security and affordability, Annex 8 on the fair transition to climate neutrality and environmental sustainability, Annex 9 on resource productivity, efficiency and circularity, Annex 11 on innovation, and Annex 19 on taxation.

([38]) Member States' greenhouse gas emission targets for 2030 ('effort sharing targets') were increased by Regulation (EU) 2023/857 (the Effort Sharing Regulation) amending Regulation (EU) 2018/842, aligning the action in the concerned sectors with the objective to reach EU-level, economy-wide greenhouse gas emission reductions of at least 55% relative to 1990 levels. The Regulation sets national targets for sectors outside the current EU Emissions Trading System, notably: buildings (heating and cooling), road transport, agriculture, waste, and small industry. Emissions covered by the EU ETS and the Effort Sharing Regulation are complemented by net removals in the land use sector, regulated by Regulation (EU) 2018/841 (the Land Use, Land Use Change and Forestry (LULUCF) Regulation) amended by Regulation (EU) 2023/839.

([39]) Slovenia's annual emission allocations for 2021 were some 11.1 Mt CO_2eq, and its approximated 2021 emissions were 9.9 Mt (see European Commission, *Accelerating the transition to climate neutrality for Europe's security and prosperity: EU Climate Action Progress Report 2022*, SWD(2022)343).

([40]) See the information on the distance to the 2030 climate policy target in Table A6.1. Existing and additional measures as of 15 March 2021.

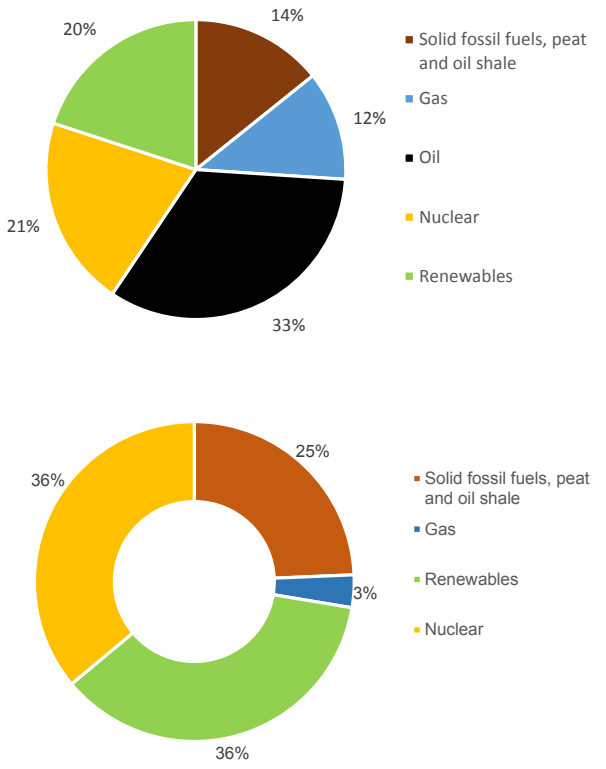
([41]) Slovenia provides support for the green transition through investments of over EUR 230 million in energy efficiency and seismic renovation of buildings, including schools. It will also invest EUR 292 million in decarbonisation, digitalisation and in the safety of railway infrastructure transport (e.g., the Grosuplje railway project, which is already finished). With an investment of EUR 54 million, the plan supports measures to improve drinking water supply and water saving projects. The Centre for Seed, Tree growing and Forest Protection (set up under the recovery and resilience plan) will give direct support to increase the resilience of forest ecosystems and the forest-wood chain in adaptation to climate change by restoring and protecting the health, resilience and biodiversity of forest ecosystems and the sustainable use of forests and timber.

([42]) This value is indicative and will be updated in 2025 (as mandated by Regulation (EU) 2023/839).

2014 to 2018, due to large-scale disturbance events.

Fossil fuels still play a strong role in Slovenia's energy mix. In 2021, oil and oil products accounted for a third (33%) of Slovenia's gross inland energy consumption, while coal accounted for 14% and natural gas for 12%. Renewable sources accounted for only 20% of the energy mix, which was a 0.9 percentage point increase compared to 2020. Slovenia also remains dependent on coal for electricity generation, which in 2021 accounted for 25 % of the electricity mix. While renewable energy sources accounted for 36% of the electricity mix, hydro power alone accounted for 31%. The remaining 36% came from the production of the Krško nuclear power plant.

Graph A6.2:**Energy mix (top) and Electricity mix (bottom), 2021**



The energy mix is based on gross inland consumption, and excludes heat and electricity. The share of renewables includes biofuels and non-renewable waste.
Source: Eurostat.

Renewable energy remains underused in decarbonising Slovenia's economy and its targets towards 2030, lack ambition. Slovenia's target of 27% of share of energy from renewable sources in gross final energy consumption by 2030 included in the NECP was considered unambitious in the 2020 assessment by the Commission. Slovenia will need to increase its renewable energy target in the updated NECP to reflect the more ambitious EU climate and energy targets in the Fit for 55 Package and in the REPowerEU Plan. The share of renewable energy in gross final energy consumption in 2021 was 25%, the same as in 2020, which was achieved thanks to statistical transfers. Slovenia's recovery and resilience plan contains investment measures to improve the electricity distribution network that will facilitate the penetration of renewables in the country's electricity mix. The plan also contains reforms to promote the use of renewable energy and on spatial planning in order to identify priority areas for developing renewable energy installations, as well as defining the applicable authorisation procedures. These reforms should enable the roll-out of new renewable energy generation capacities.

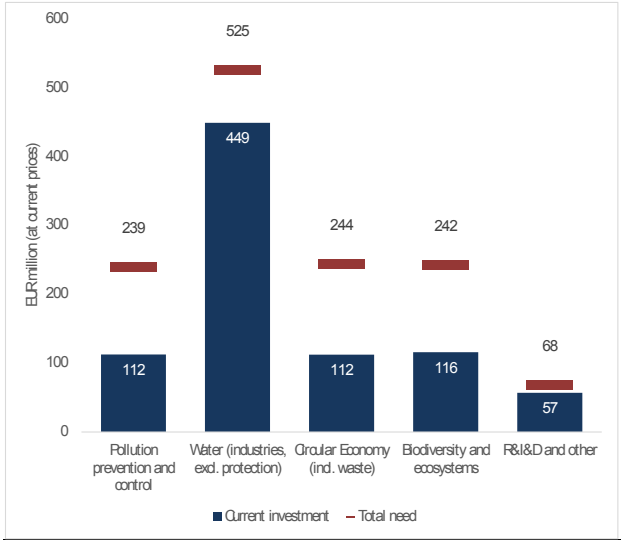
The energy efficiency actions planned merit swift implementation. As set out in the country's NECP, Slovenia aims to reduce its primary and final energy consumption by 35% in 2030. NECP targets for primary and final energy consumption were considered to be of modest and low ambition respectively in the 2020 Commission assessment. Based on the energy consumption trajectory for 2018-2021, Slovenia is expected to be on track to meet its 2030 targets for PEC and FEC, as these were notified in its NECP ([43]). Buildings account for a substantial share of these savings, with an energy efficiency target for the residential sector to reduce energy by 25% and to reduce greenhouse gases by up to 45% from the 2020 baseline. Slovenia's recovery and resilience plan contains action to support this target with

([43]) After the conclusion of the negotiations for a recast EED, the ambition of both the EU and national targets as well as of the national measures for energy efficiency to meet these targets is expected to increase.

reforms and investments in energy renovation of public sector buildings and energy efficiency measures for industry. It also plans investments in restructuring three district heating systems. The success of the measures will depend on the necessary support measures, such as technical and administrative assistance. To this end, setting up and expanding one-stop shops has proved a successful approach, particularly for the private residential sector.

Slovenia needs to take action to promote sustainable mobility. In Slovenia, road transport represented 92% of the transport CO_2 emissions in 2020 (EU-average: 77%). The market for zero- emission vehicles is developing slowly in Slovenia. The authorities are preparing plans to achieve a more ambitious roll-out of recharging points; this may stimulate the take-up of electric vehicles. About half of Slovenia's railway network is electrified. Transport in Slovenia is still heavily dependent on fossil fuels, and sustainable modes of transport have yet to be taken up more broadly. Air quality has improved in recent years. However, transport still has a heavy impact on air quality, particularly through certain pollutants such as PM2.5 and NOx. Slovenia is investing in clean mobility and in upgrading the monitoring network, including through measures set out in its recovery and resilience plan.

Graph A6.3:**Thematic – environmental investment needs and current investment, p.a. 2014-2020**



Source: European Commission

Slovenia would benefit from investing more in environmental protection and in measures protecting biodiversity, promoting circular economy, and tackling pollution ([44]). Between 2014 and 2020, Slovenia invested about EUR 846 million per year to meet its environmental objectives, against investment needs of at least EUR 1.3 billion, leaving a gap of about EUR 474 million per year (see Graph A6.3) ([45]). 40.5% of land in Slovenia is covered by nature areas under protection - Natura 2000 ([46]), protected areas and valuable natural features - but over a half of its species and nearly two thirds of its habitats are in bad or poor conservation status ([47]), calling for greater action and investment in the conservation and

([44]) Environmental objectives include pollution prevention and control, water management and industries, circular economy and waste, biodiversity and ecosystems (European Commission, 2022, Environmental Implementation Review, country report Slovenia)

([45]) When also accounting for needs estimated at EU level only (e.g., water protection, higher circularity, biodiversity strategy).

([46]) In 2021, Slovenia had 40.5% terrestrial protected areas (Natura 2000 and nationally designated areas), against the EU average of 26.4% (European Environment Agency, 2023, Natura 2000 Barometer).

([47]) European Commission, European Environment Agency, 2023, Biodivewrsity information system for Europe - Slovenia.

management of protected areas. Slovenia's area of marine waters designated for protection would warrant expansion as only 5% are protected. Further infrastructure investments are needed in wastewater collection and treatment and for nature-based solutions for flood prevention and river restoration. In addition, the chemical status of water bodies in Slovenia warrants action to improve their quality and reduce the concentration of nitrates in surface waters (see also Annex 9).

Climate change is affecting agriculture, biodiversity, and forestry in Slovenia, among other sectors. Changes to meteorological and hydrological patterns and extreme weather events, especially droughts, forest fires, floods, heavy precipitation, storm and hail, frost, and heat waves, are having significant negative effects on agriculture and forestry. Many plant species are sensitive to higher temperatures and summer droughts. Slovenia's recovery and resilience plan contains measures to mitigate the effects of climate change and climate related disasters on forest biodiversity and to strengthen prevention to increase protection against floods. Flood is the highest risk, but its potential economic impacts are contained thanks to good insurance coverage. Slovenia's adaptation priorities are laid down in its strategic climate adaptation framework. The framework, adopted in late 2016, merits an update, though.

Slovenia still provides fossil fuel and other environmentally harmful subsidies that should be considered for reform, while ensuring food and energy security and mitigating social effects. Environmentally harmful subsidies have been identified, via an initial assessment, in the agriculture, forestry and fishing, electricity, gas, steam and air conditioning, transportation and storage and services sectors. Examples of such subsidies include the reduced VAT rate for fertilisers and pesticides, the energy tax relief for companies in agriculture and forestry for gas oil, the reimbursement of excise duty on diesel used in freight and other categories of passenger transport or the refund scheme for energy-intensive industry under conditions ([48]). A mapping of all environmentally harmful subsidies by Slovenia would help prioritise candidates for reform.

Slovenia has scope to employ tax instruments to contain environmental pollution. Slovenia applies the extended producer responsibility (EPR) schemes for packaging waste (both household and non-household) but without advanced fee modulation, which can incentivise producers to design easily recyclable products, and therefore create favourable conditions for higher recycling rates (see Annex 19).

([48]) Fossil fuel figures in EUR of 2021 from the 2022 State of the Energy Union report. Initial assessment of environmentally harmful subsidies done by the Commission in the 2022 toolbox for reforming environmentally harmful subsidies in Europe, using OECD definitions, and based on the following datasets: OECD Agriculture Policy Monitoring and Evaluations; OECD Policy Instruments for the Environment (PINE) Database; OECD Statistical Database for Fossil Fuels Support; IMF country-level energy subsidy estimates. Annex 4 of the toolbox contains detailed examples of subsidies on the candidates for reform.

Table A6.1: **Indicators tracking progress on the European Green Deal from a macroeconomic perspective**

									'Fit for 55' 2030 target/value	Distance WEM	Distance WAM
			2005	2017	2018	2019	2020	2021			
Progress to policy targets	Greenhouse gas emission reductions in effort sharing sectors [1]	Mt CO2eq; %; pp	11.8	-8%	-7%	-9%	-18%	-	-27.0%	-18	-2
	Net carbon removals from LULUCF [2]	kt CO2eq	-7,224	949	1,046	-3,345	-3,143	-3,106	-146	n/a	n/a
			2005	2017	2018	2019	2020	2021	National contribution to 2030 EU target		
	Share of energy from renewable sources in gross final consumption of energy [3]	%	20%	22%	21%	22%	25%	25%	27%		
	Energy efficiency: primary energy consumption [3]	Mtoe	7.2	6.7	6.7	6.5	6.1	6.3	6.4		
	Energy efficiency: final energy consumption [3]	Mtoe	5.1	4.9	5.0	4.9	4.4	4.7	4.7		
			Slovenia						EU		
			2016	2017	2018	2019	2020	2021	2019	2020	2021
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	3.9	3.7	3.4	3.3	2.9	2.8	2.4	2.2	2.2
	Environmental taxes (% of total taxation) [4]	% of taxation	10.3	9.8	9.1	8.9	7.9	7.3	5.9	5.6	5.5
	Government expenditure on environmental protection	% of total exp.	1.2	1.0	1.2	1.3	1.2	1.3	1.7	1.6	1.6
	Investment in environmental protection [5]	% of GDP	0.7	0.5	0.7	0.6	-	-	0.4	0.4	0.4
	Fossil fuel subsidies [6]	EUR2021bn	0.1	0.1	0.1	0.1	0.1	0.1	53.0	50.0	-
	Climate protection gap [7]	score 1-4					1.5	1.8			1.5
Climate	Net greenhouse gas emissions	1990 = 100	95.0	95.0	95.0	92.0	86.0	84.0	76.0	69.0	72.0
	Greenhouse gas emission intensity of the economy	kg/EUR10	0.49	0.48	0.45	0.43	0.43	-	0.31	0.30	0.26
	Energy intensity of the economy	kgoe/EUR10	0.17	0.17	0.16	0.15	0.15	-	0.11	0.11	-
Energy	Final energy consumption (FEC)	2015=100	103.6	105.0	105.0	103.0	93.6	100.2	102.9	94.6	-
	FEC in residential building sector	2015=100	101.7	99.2	93.0	90.7	93.5	99.5	101.3	101.3	106.8
	FEC in services building sector	2015=100	108.3	105.8	104.4	99.4	92.0	92.6	100.1	94.4	100.7
Pollution	Smog-precursor emission intensity (to GDP) [8]	tonne/EUR10	1.07	0.97	0.96	0.91	0.89	-	0.93	0.86	-
	Years of life lost due to air pollution by PM2.5	per 100.000 inh.	822.3	850.6	825.7	622.9	566.8	-	581.6	544.5	-
	Years of life lost due to air pollution by NO_2	per 100.000 inh.	117.9	133.9	104.6	100.2	69.0	-	309.6	218.8	-
	Nitrates in ground water	mg NO3/litre	14.2	13.3	14.4	12.6	12.5	-	21.0	20.8	-
Biodiversity	Land protected areas	% of total	52.6	53.6	-	40.4	40.4	40.5	26.2	26.4	26.4
	Marine protected areas	% of total	-	-	-	5.2	-	5.0	10.7	-	12.1
	Organic farming	% of total utilised agricultural area	9.1	9.6	10.0	10.4	10.3	10.8	8.5	9.1	-
			2017	2018	2019	2020	2021	2022	2020	2021	2022
Mobility	Share of zero-emission vehicles [9]	% in new registrations	0.5	0.6	0.8	3.1	3.1	4.6	5.4	8.9	10.7
	Number of AC/DC recharging points (AFIR categorisation)		-	-	-	588	1543	1700	188626	330028	432518
	Share of electrified railways	%	50.5	50.5	50.5	50.5	50.5	50.4	56.6	n/a	56.6
	Hours of congestion per commuting driver per year		26.2	26.7	25.8	n/a	n/a	n/a	28.7	n/a	n/a

Sources: (1) Historical and projected emissions, as well as Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Decision (for 2020) are measured in global warming potential (GWP) values from the 4th Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). Member States' climate policy targets and 2005 base year emissions under the Effort Sharing Regulation (for 2030) are in GWP values from the 5th Assessment Report (AR5). The table above shows the base year emissions 2005 under the Effort Sharing Decision, using AR4 GWP values. Emissions for 2017-2021 are expressed in percentage change from 2005 base year emissions, with AR4 GWP values. 2021 data are preliminary. The table shows the 2030 target under Regulation (EU) 2023/857 that aligns it with the EU's 55% objective, in percentage change from 2005 base year emissions (AR5 GWP). Distance to target is the gap between Member States' 2030 target (with AR5 GWP values) and projected emissions with existing measures (WEM) and with additional measures (WAM) (with AR4 GWP values), in percentage change from the 2005 base year emissions. Due to the difference in global warming potential values, the distance to target is only illustrative. The measures included reflect the state of play as of 15 March 2021.

(2) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2023 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 amending Regulation (EU) 2018/841 (LULUCF Regulation) – Annex IIa, kilotons of CO2 equivalent, based on 2020 submissions.

(3) Renewable energy and energy efficiency targets and national contributions are in line with the methodology established under Regulation (EU) 2018/1999 (Governance Regulation).

(4) Percentage of total revenue from taxes and social contributions (excluding imputed social contributions). Revenue from the EU Emissions Trading System is included in environmental tax revenue.

(5) Expenditure on gross fixed capital formation for the production of environmental protection services (abatement and prevention of pollution) covering government, industry, and specialised providers.

(6) European Commission, Study on energy subsidies and other government interventions in the European Union, 2022 edition.

(7) The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters. This indicator is based on modelling of the current risk from floods, wildfires and windstorms as well as earthquakes, and an estimation of the current insurance penetration rate. The indicator does not provide information on the split between the private/public costs of climate-related disasters. A score of 0 means no protection gap, while a score of 4 corresponds to a very high gap (EIOPA, 2022).

(8) Sulphur oxides (SO2 equivalent), ammonia, particulates < 10 µm, nitrogen oxides in total economy (divided by GDP).

(9) Battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV).

Slovenia managed to decrease its dependence on Russian gas by re-establishing gas imports from Algeria in 2023. Limited availability of the domestically produced coal needed primarily in electricity generation, coupled with high reliance on imported fossil fuels, such as oil products and natural gas make Slovenia's economy sensitive to global price developments, requiring it to step up its clean energy transition. This Annex ([49]) sets out actions carried out by Slovenia to achieve the REPowerEU objectives, including through the implementation of its recovery and resilience plan, in order to improve energy security and affordability while accelerating the clean energy transition, and contributing to enhancing the EU's competitiveness in the clean energy sector ([50]).

Prior to Russia´s invasion of Ukraine, Slovenia was effectively reliant on Russia as the single natural gas supplier to the country, directly (14 %), or through Austria (85 %) ([51]). In November 2022, Geoplin, its largest natural gas supplier, concluded a three-year contract with Algerian Sontrach, starting on 1 January 2023. This way, gas imports from Algeria have been re-established in greater volume for the first time since 2012, when they were discontinued in favour of molecules from Russia. Natural gas is now being imported through pipelines in Tunisia, the Mediterranean Sea and Italy up to the entry point in the Slovenian gas pipeline system Gorizia-Šempeter. The contracted amount will amounts to 0.3 billion cubic meters (bcm) or a third of Slovenia's natural gas supply, which in 2021 reached 0.92 bcm. However, the unidirectional Ceršak-Murfeld interconnection point with Austria will continue to serve as the main natural gas entry point. Slovenia does not have a liquefied natural gas (LNG) facility, but it does have access to LNG terminals in Italy, the closest one being in Rovigo. It will gain substantial access to the Croatian Krk LNG terminal once the interconnector between Croatia and Slovenia is realised (on the 5th Projects of Common Interest (PCI) list). Potential enhancement of the Slovenian transmission network will be necessary if the transmission system operators of Slovenia and Austria decide to implement the reverse flow project at the Ceršak-Murfeld interconnection point to enable flows from the Krk terminal through Slovenia to Austria. Slovenia has no underground gas storage facility. According to the Gas Storage Regulation ([52]), Slovenia was required to have arrangements for the storage of at least 0.13 bcm (15% of its annual consumption) in neighbouring countries with gas storage facilities by 1 November 2022.

Fossil fuels, particularly coal, have a strong role in the country's electricity generation mix, and the current energy crisis has given rise to additional challenges. Nuclear energy and renewables (primarily hydropower) play a dominant role in the country's electricity mix, but coal-fired electricity generation facilities accounted for 24% of gross electricity production in 2021 (see Annex 6). Limited availability of domestically produced coal from the Velenje coal mine led to the temporary closure of the Šoštanj thermal power plant in late 2022. This coincided with the maintenance of the Krško nuclear power plant. As a result, there was a significant drop in domestic electricity production, forcing Slovenia to rely on electricity imports. Under the national strategy for phasing out coal and restructuring

([49]) It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition, by Annex 8 on the actions taken to mitigate energy poverty and protect the most vulnerable ones, by Annex 9 as the transition to a circular economy will unlock significant energy and resource savings, further strengthening energy security and affordability, and by Annex 12 on industry and single market complementing ongoing efforts under the European Green Deal and REPowerEU.

([50]) in line with the Green Deal Industrial Plan COM(2023) 62 final, and the proposed Net-Zero Industry Act COM(2023) 161 final.

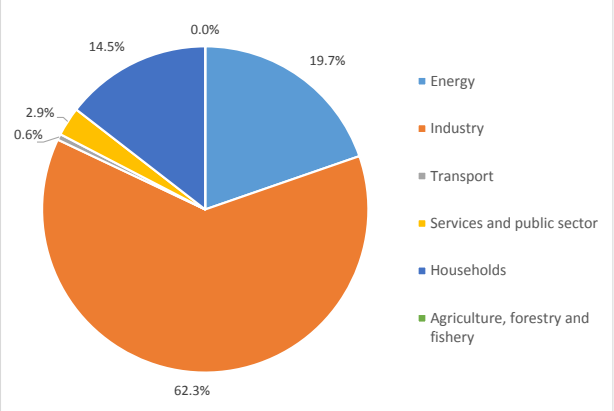
([51]) Eurostat (2021), share of Russian imports over total imports of natural gas and crude oil. For the EU-27 average, the total imports are based on extra-EU-27.

([52]) Implementing Regulation (EU) 2022/2301 of 23 November 2022 setting the filling trajectory with intermediary targets for 2023 for each Member State with underground gas storage facilities on its territory and directly interconnected to its market area

coal regions adopted in January 2022, the coal-fired thermal power plant Šoštanj will be closed by 2033. Although limited in use for electricity generation (see Annex 6), natural gas still has an important role in the country's economy. Over the period August 2022 – March 2023, 13.8% of gas consumption has been saved in Slovenia compared to the previous 5-years average. The measures introduced to enable gas demand-reduction are based on urging consumers to voluntarily limit their consumption and switch to alternative fuels, especially consumers whose consumption exceeds 800 000 KWh/year. Also, energy rationing is being imposed on government buildings. Strengthening of implementation of energy efficiency measures particularly in the building sector (Annex 6), would bring about significant energy savings. Slovenia is carrying out a low number of checks on products covered by ecodesing and energy labelling. This generates concerns with respect to the level playing field among economic operators and uncertainty as to the compliance levels of the concerned products, and therefore possible missed energy and CO2 saving ([53]).

Electricity grids need to be further upgraded for greater penetration of renewable energy. Grid upgrades are particularly necessary on the distribution network to enable further deployment of solar photovoltaics and charging infrastructure, accompanied by energy storage. This measure is supported through the recovery and resilience plan (see Annex 6). Crucial as well is the need for enhancing the smartness of the grid. Slovenia has one of the highest interconnection levels in the EU, with 75.6% in 2022. A significant increase has been observed compared to 2021 (65.8%). Contributing to the increased interconnection levels were EU funded projects in the region, namely Slovenia – Hungary interconnection and the Sinco.GRID project, completed in 2021. Interconnection between Slovenia and Hungary was established for the first time with the completion of the Cirkovce-Pince-Hévíz power transmission line in June 2022. The project, supported through the Connecting Europe Facility for Energy, included construction of the 80.5 km-long double circuit 400 kV overhead line Cirkovce-Pince and the new 400 kV Cirkovce substation, both in Slovenia. It also helped to improve existing connections with Croatia. The new interconnector and substation made it possible to decrease power flows between Hungary and Croatia and Slovenia and Croatia. It also opened alternative paths for transferring energy in the region, making its supply more secure. Furthermore, "Greenswitch" (included in the 5th PCI list), will optimize use of the existing power infrastructure and allow the integration of new technologies and advanced functionalities in the transmission and distribution networks in Austria, Croatia and Slovenia. Another bottleneck for the faster deployment of renewable energy is the underdeveloped and insufficient energy storage. For the rolling out of intelligent metering systems, Slovenia's deployment rate was at 88.1% in October 2022.

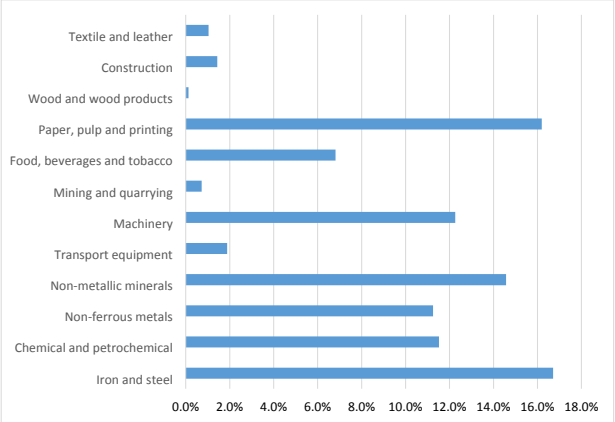
Graph A7.1:**Share of gas consumption per sector, 2021**



Source: Eurostat

([53]) The internet-supported information and communication system for the pan-European market surveillance

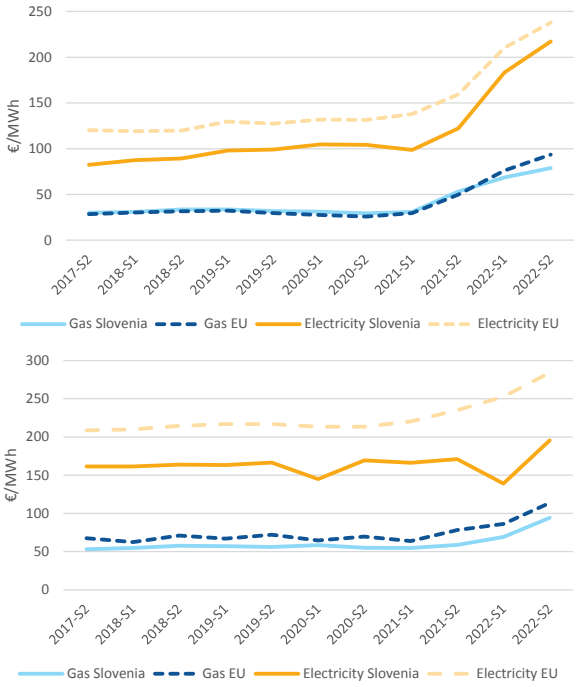
Graph A7.2:**Share of gas consumption per industrial sector (% of total industry gas consumption)**



Source: Eurostat

Slovenia witnessed unprecedented energy price increases liable to have irreversible negative effects on its industrial sector. Industry is the single largest consumer of natural gas, accounting for 62% of all gas consumed in 2021. The largest industrial consumers of natural gas are in the sectors of iron and steel, as well as paper. The distributional impacts of the rise in energy prices and the distorted trade links caused by Russia's invasion of Ukraine are covered in Annex 12. In efforts to alleviate the impact of rising energy prices on households and the private sector, Slovenian government has taken a series of measures, allocating considerable financial resources to support the latter in 2023. To better target measures, in October 2022 the government adopted a regulation on the determination of energy-poor households, setting out the definition and criteria for determining energy poverty ([54]).

Graph A7.3:**Slovenia´s retail energy prices for industry (top) and households (bottom)**



(1) On electricity, the band consumption is DC for households and ID for industry
(2) On gas, the band consumption is D2 for households and I4 for industry
Source: Eurostat

Slovenia has demonstrated a slow uptake of electricity generation from renewable sources. In 2022, Slovenia registered an increase in deployment of 174 MW of renewable energy, driven by the increased uptake of solar PV installations ([55]). There are no offshore wind farms in Slovenia, and the development of onshore wind energy has stagnated for years. Permitting procedures for installing grid-scale renewable energy installations remain a bottleneck, although the country has taken some measures to improve the legal framework, with the adoption of the amendments to the Construction Act and the Spatial Planning Acts, which seek to speed up certain planning and permit-granting procedures. Slovenia has also received technical assistance that identifies the barriers to scaling up the deployment of renewable energy, which are being addressed in the new Draft Act on the Siting of Installations for the

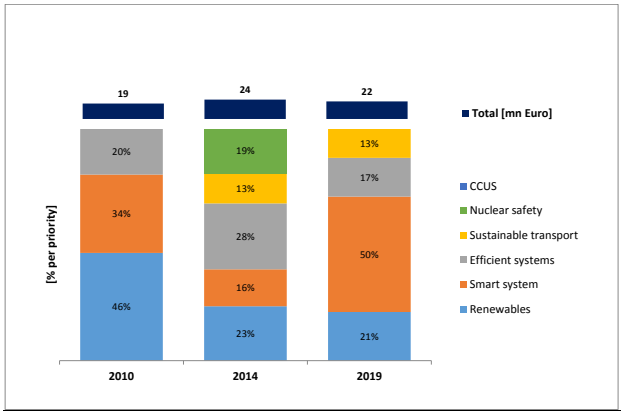
([54]) https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2022-01-3199/uredba-o-merilih-za-opredelitev-in-ocenjevanje-stevila-energetsko-revnih-gospodinjstev

([55]) IRENA, Renewable capacity statistics 2023

Production of Electricity from Renewable Energy Sources (part of the recovery and resilience plan). Slovenian transmission system operator and the distribution system operators, covering all five distribution areas, have produced reports identifying suitable locations for connecting photovoltaic panels to the transmission and distribution networks ([56]) ([57]). In terms of hydrogen, Slovenia lacks a dedicated National Hydrogen Strategy.

According to the latest available data, the number of Energy Union patent families Slovenia has decreased, as have private research and innovation (R&I) investments in Energy Union R&I priorities. The number of patent families in Energy Union R&I priorities has fluctuated, peaking at 7.1 patent families per million inhabitants in 2018, only to decrease to 5.1 in 2019. This last figure is well below the EU average (around 20 patents per million inhabitants). In Slovenia, patent families in 2019 were mainly spread across sustainable transport, efficient systems and smart systems. Private R&I investments in Energy Union R&I priorities have slightly decreased from 0.065% of GDP in 2014 to 0.046% in 2019, which is again below the overall EU average of 0.17%. In 2019, 50% of private R&I investments in Energy Union R&I priorities were aimed at smart systems. In 2021, hydropower and geothermal energy sectors accounted for more than half of the 5.1 thousand jobs in renewable energy. In the clean energy value chain, in 2019, over 40% of jobs were in renewable energy generation (operation, maintenance, etc.). A positive figure worth highlighting is that in 2020, Slovenia was among the top 10 EU countries for direct and indirect jobs in the EU heat pump value chain ([58]). The latest (first quarter of 2023) on labour shortage in manufacturing of electrical equipment ([59]) reports around 50% of labour shortage well above the EU average of around 30%. This figure is a clear indicator of the demand for workers in the sector. The mineral-intensive transition to clean energy will require a considerable supply of many critical minerals (see Annex 5).

Graph A7.4:**Private R&I investment in Energy Union R&I priorities**



Source: JRC SETIS (2022)

([56]) https://www.energetika-portal.si/fileadmin/dokumenti/publikacije/sodo/pr_2_pregled_moznosti_prikljucitve_vecjih_se_na_do.pdf

([57]) https://www.energetika-portal.si/fileadmin/dokumenti/publikacije/sodo/pr_3_julij_moznosti_prikljucitve_vecjih_se_na_po.pdf

([58]) Employment in the heat pump sector covers several stages of the value chain (research and development and innovation, manufacturing, installing and maintenance).

([59]) NACE 27: Manufacture of electrical equipment' used as a proxy for renewable energy manufacturing industry as many renewable energy technologies fall under this category. It is also used partially as a proxy for renewables industrial ecosystem in the EU Industrial Strategy

Table A7.1: **Key energy indicators**

		SLOVENIA				EU			
		2018	2019	2020	2021	2018	2019	2020	2021
ENERGY DEPENDENCE	**Import Dependency [%]**	51%	52%	46%	49%	58%	61%	57%	56%
	of Solid fossil fuels	19%	20%	18%	11%	44%	44%	36%	37%
	of Oil and petroleum products	99%	101%	99%	100%	95%	97%	97%	92%
	of Natural Gas	98%	99%	99%	99%	83%	90%	84%	83%
	Dependency from Russian Fossil Fuels [%]								
	of Hard Coal	0%	4%	22%	0%	40%	44%	49%	47%
	of Crude Oil	0%	0%	0%	0%	30%	27%	26%	25%
	of Natural Gas	31%	12%	9%	14%	40%	40%	38%	41%

		2015	2016	2017	2018	2019	2020	2021	2022
ELECTRICITY	**Gross Electricity Production (GWh)**	15,100	16,500	16,326	16,327	16,100	17,191	15,877	-
	Combustible Fuels	5,081	5,730	5,610	5,397	5,287	5,239	4,715	-
	Nuclear	5,648	5,715	6,285	5,776	5,821	6,353	5,706	-
	Hydro	4,091	4,782	4,141	4,893	4,683	5,225	4,997	-
	Wind	6	6	6	6	6	6	6	-
	Solar	274	267	284	255	303	368	453	-
	Geothermal	0	0	0	0	0	0	0	-
	Other Sources	0	0	0	0	0	0	0	-
	Net Imports of Electricity (GWh)	-48	-1,176	-516	-502	-319	-2,003	-270	-
	As a % of electricity available for final consumption	0%	-9%	-4%	-4%	-2%	-15%	-2%	-
	Electricity Interconnection (%)	-	-	83.60%	73.63%	76.2%	78.9%	65.8%	75.6%

		2015	2016	2017	2018	2019	2020	2021	2022*
DIVERSIFICATION OF GAS SUPPLIES	**Gas Consumption (in bcm)**	0.8	0.9	0.9	0.9	0.9	0.9	1.0	0.8
	Gas Imports - by type (in bcm)	0.8	0.9	0.9	0.9	0.9	0.9	0.9	-
	Gas imports - pipeline	0.8	0.9	0.9	0.9	0.9	0.9	0.9	-
	Gas imports - LNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
	Gas Imports - by main source supplier (in bcm)* (1)								
	Austria	0.5	0.5	0.7	0.6	0.8	0.8	0.8	-
	Russia	0.2	0.3	0.2	0.3	0.1	0.1	0.1	-
	Algeria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
	Italy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
	Not specified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-

		2019	2020	2021	2022
	LNG Terminals				
	Number of LNG Terminals (2)	0	0	0	0
	LNG Storage capacity (m3 LNG)	0	0	0	0
	Underground Storage				
	Number of storage facilities	0	0	0	0
	Operational Storage Capacity (bcm)	0	0	0	0

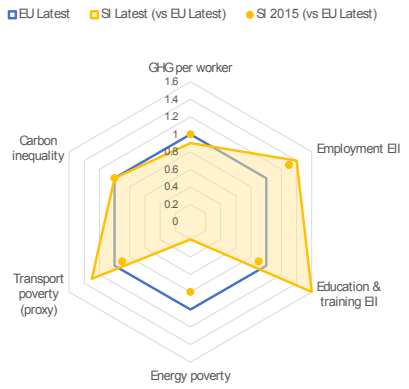
		2019	2020	2021	2022
CLEAN ENERGY	**VC investments in climate tech start-ups and scale-ups (EUR Mln) (3)**				
	as a % of total VC investments in Slovenia	n.a.	n.a.	n.a.	n.a.
	Research & Innovation spending in Energy Union R&i priorites (2)				
	Public R&I (EUR mln)	n.a.	n.a.	n.a.	n.a.
	Public R&I (% GDP)	n.a.	n.a.	n.a.	n.a.
	Private R&I (EUR mln)	22.1	n.a.	n.a.	n.a.
	Private R&I (% GDP)	0.05%	n.a.	n.a.	n.a.

(1) The ranking of the main suppliers is based on the latest available figures (for 2021)
(2) FSRU included
(3) Venture Capital investments include Venture Capital deals (all stages) and Private Equity Growth/Expansion deals (for companies that have previously been part of the portfolio of a VC investment firm).

Source: Eurostat, Gas Infrastructure Europe (Storage and LNG Transparency Platform), JRC SETIS (2022), JRC elaboration based on PitchBook data (06/2022)

This Annex monitors Slovenia's progress in ensuring a fair transition towards climate neutrality and environmental sustainability, notably for workers and households in vulnerable situations. To ensure a fair green transition in line with the Council Recommendation ([60]), up- and reskilling of workers in declining and transforming sectors has increased strongly. Labour shortages persist in construction, notably posing a potential bottleneck in the green transition and for the implementation of REPowerEU. The Strategy for Greening Education and Research Infrastructure under the recovery and resilience plan (RRP) contributes to the green transition ([61]). The European Social Fund Plus (ESF+) contributes to job creation, particularly as regards skills for the green transition and circular economy.

Graph A8.1:**Fair transition challenges in Slovenia**



Source: Eurostat, EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (see Table A8.1).

In Slovenia, employment trends in energy-intensive industries vary by sector, while the green economy expanded and the labour market is relatively tight in construction. The greenhouse gas (GHG) emissions intensity of Slovenia's workforce declined from 13.5 to 12.0 tonnes per worker between 2015 and 2021, below the EU average of 13.7 tonnes in 2021 (see Graph A8.1 and Table A8.1). In 2021, employment in Slovenia's energy-intensive industries (EII) represented an almost stable share of 4.1% of total employment (in 2020: 4.1% vs 3.0% in the EU). Following a long-term trend, employment in mining and quarrying decreased by 6.7% since 2015, whereas jobs in automotive and basic metals manufacturing increased by close to 23.0%. Total jobs in the environmental goods and services sector grew by 20.8% during 2015-19 (EU: +8.3%), reaching 3.0% of total employment, above the EU average of 2.2% (see Annex 9 for circular jobs specifically). In 2022, the job vacancy rate in construction was above the EU average (7% vs 4%) ([62]), indicating a tight labour market that risks creating bottlenecks in the green transition. Moreover, the Slovenian Chamber of Engineers estimates a decrease in the number of certified engineers by 20% in the next 5 years, which might have a significant impact on the realisation of investment projects, also those with a green dimension. In Slovenia, a pilot employment incentive 'Green jobs' aims to get around 200 unemployed people into green jobs, with subsidies paid to employers for two years.

Upskilling and reskilling in declining and transforming sectors has strongly increased, especially since 2020. Skills are key for smooth labour market transitions and preserving jobs in transforming sectors. In energy-intensive industries, workers' participation in education and training increased at the second-fastest pace in the EU, from 9.6% in 2015 to 16.5% in 2022 (EU average: 10.4%). In Slovenia, only 25% of citizens believe they do not have the necessary skills to contribute to the green transition (EU: 38%) ([63]). Slovenia's RRP provides support that strengthens the capacity of regions and local communities to provide green skills and jobs. The ESF+ will support nation-wide up- and reskilling actions for the green transition. The Just Transition Mechanism provides training

([60]) Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality (2022/C 243/04) covers employment, skills, tax-benefit and social protection systems, essential services and housing.

([61]) See also 2022 Country Report (Annex 6).

([62]) Eurostat (JVS_A_RATE_R2)

([63]) Special Eurobarometer 527. Fairness perceptions of the green transition (May – June 2022).

Table A8.1: **Key indicators for a fair transition in Slovenia**

Indicator	Description	SI 2015	SI Latest	EU Latest
GHG per worker	Greenhouse gas emissions per worker - CO2 equivalent tonnes	13.5	12 (2021)	13.7 (2021)
Employment EII	Employment share in energy-intensive industries, including mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24), automotive (C29) - %	4	4.1 (2020)	3 (2020)
Education & training EII	Adult participation in education and training (last 4 weeks) in energy-intensive industries - %	9.6	16.5 (2022)	10.4 (2022)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm - %	5.6	1.7 (2021)	6.9 (2021)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport - %	33.5	47.5 (2023)	37.1 (2023)
Carbon inequality	Average emissions per capita of top 10% of emitters vs bottom 50% of emitters	5	5 (2020)	5 (2020)

Source: Eurostat (env_ac_ainah_r2, nama_10_a64_e, ilc_mdes01), EU Labour Force Survey (break in time series in 2021), EMPL-JRC GD-AMEDI/AMEDI+ projects and World Inequality Database (WID).

specifically in the two coal regions of SAŠA and Zasavje, together with, under the RRP, a broader training offer at national level and flexibility mechanisms to encourage in-company training.

Energy costs were comparatively high for many households already before the price spike since 2021, even though energy poverty was declining in recent years. The share of the total population unable to keep their homes adequately warm declined strongly from 5.6% (in 2015) to 1.7% in 2021 (well below the EU average: 6.9%) ([64]). In particular, 5.5% of the population at risk of poverty were affected EU: 16.4%) and 1.3% of lower middle-income households in deciles 4-5 in 2021 (EU: 8.2% in 2021). Before the energy price hikes, an estimated 41.7% of the total population and 78.4% of the (expenditure-based) at-risk-of-poverty-population (AROP) had residential expenditure on electricity, gas, and other fuels ([65]) above 10% of their household budget, standing above the estimated EU average of 26.9% and 48.2%%. Slovenia tackles energy poverty through short-term (e.g. renovation of 500 low-income households) and long-term interventions (e.g. building legislation) ([66]).

The increased energy prices in 2021-2023 are negatively affecting household budgets across the population. As a result of price changes during the August 2021 to January 2023 period relative to the 18 months prior (see Annex 7), in the absence of policy support and behavioural responses, the share of individuals living in households which spend more than 10% of their budget on energy would have increased by 13.4 percentage points (pps) for the whole population and less (6.4 pps) among the (expenditure-based) AROP population (EU: 16.4 pps and 19.1 pps,) ([67]). For electricity, expenditure shares of low and lower-middle income groups would have increased the most, whereas residential expenditure for gas increased the most for the top income groups in contrast to EU-wide patterns, as shown in Graph A8.2. Among the (expenditure-based) AROP population, individuals living in households with budget shares for private transport fuels ([68]) above 6% would have increased by more than the EU average (14.0 pps vs 5.3 pps), reaching 47.5% in January 2023, above the EU average (37.9%) The RRP includes measures to promote the lower use of fossil fuels and sustainable solutions for housing.

([64]) Energy poverty is a multi-dimensional concept. The indicator used focuses on an outcome of energy poverty. Further indicators are available at the Energy Poverty Advisory Hub.

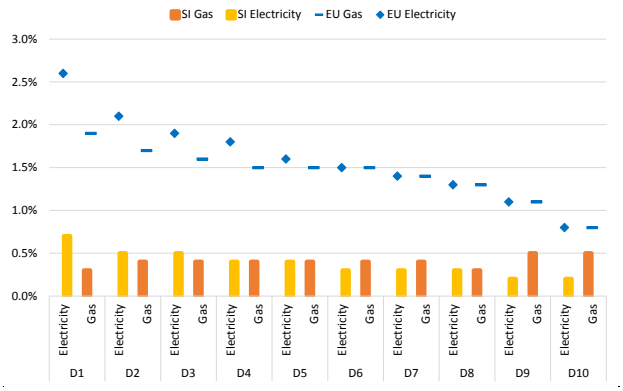
([65]) Products defined according to the European Classification of Individual Consumption according to Purpose (ECOICOP): CP045.

([66]) Reported in the national long-term renovation strategy.

([67]) EMPL-JRC GD-AMEDI/AMEDI+ ; see details in the related technical brief.

([68]) ECOICOP: CP0722.

Graph A8.2:**Distributional impacts of energy prices due to rising energy expenditure (2021-2023) in Slovenia**



Mean change of energy expenditure as a percentage (%) of total expenditure per income decile (D) due to observed price changes (August 2021 – January 2023 relative to the 18 months prior), excl. policy support and behavioural responses.
Source: EMPL-JRC GD-AMEDI/AMEDI+ projects, based on Household Budget Survey 2015 and Eurostat inflation data for CP0451 and CP0452.

Access to public transport in rural areas is perceived to be slightly worse than in the EU as a whole. Compared to the EU averages, slightly fewer citizens perceive public transport to be of good availability (50% vs EU: 55%) and affordability (51% vs EU: 54%), though a similar share agrees that it is of good quality (61% vs EU: 60%). As regards these perceptions, rural areas in Slovenia perform significantly worse than urban areas on all three dimensions and slightly worse than rural areas in the EU on average ([69]). The carbon footprint of the top 10% of emitters among the population in Slovenia is about 5.0 times higher than that of the bottom 50%, same as the EU average. In Slovenia, the average levels of air pollution in 2020 stood above the EU average (12.5 vs 11.2 µg/m PM2.5), with 97% of the population living in regions exposed to critical levels of air pollution ([70]), leading to significant health impacts, in particular on vulnerable groups, and 1 238 premature deaths annually ([71]).

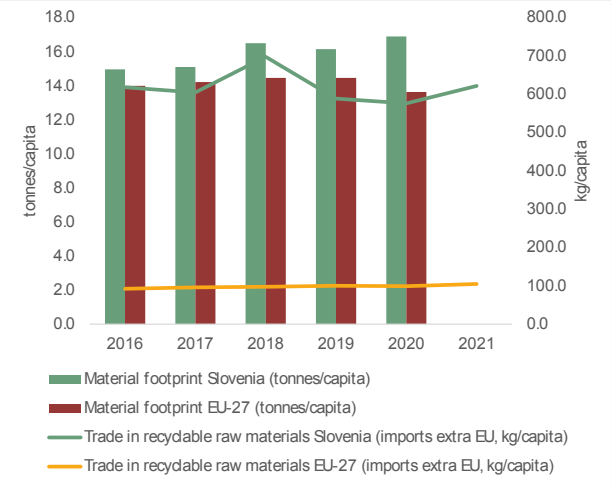
([69]) EU (rural): 46%, 48% and 56% respectively. Special Eurobarometer 527.

([70]) Two times higher than the recommendations in the WHO Air Quality Guidelines (annual exposure of 5µg/m3)

([71]) EEA- Air Quality Health Risk Assessment

The circular economy transition is key to delivering on the EU's climate and environmental goals and provides large socio-economic benefits. It spurs job growth, innovation and competitiveness and fosters resilience and resource security. The circularity transition of industry, the built environment and agri-food can generate significant environmental improvements (see Annex 6), as they rank among the most resource-intensive systems.

Graph A9.1:**Trend in material use**

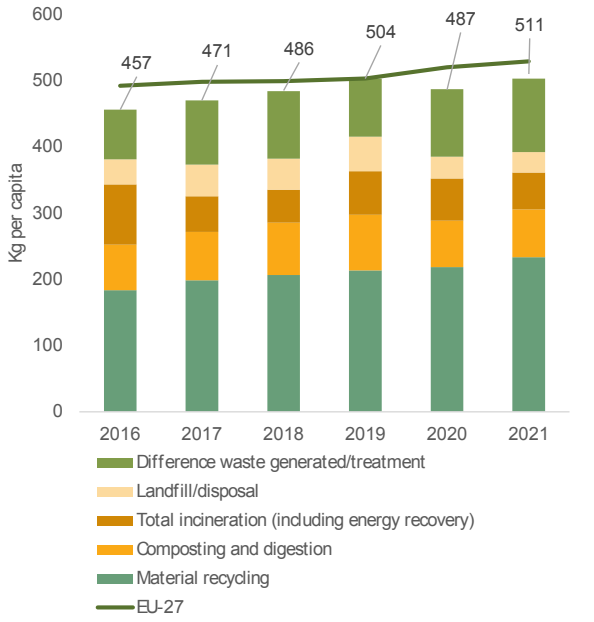


Source: Eurostat

Slovenia is on track towards its circular economy transition and towards meeting the EU's circular economy goals. The EU's 2020 circular economy action plan (CEAP) aims at doubling circular material use between 2020 and 2030. Slovenia's use of circular materials increased from 8.7% in 2016 to 11% in 2021, getting closer to the EU 2020 average of 11.7%. The CEAP aims to significantly decrease the EU's material footprint, which is above the EU average in Slovenia. The labour market benefits of the circular transition remain limited, with a decrease in direct circular jobs since 2016. As regards health and safety in circular jobs, fatal accidents in waste management and materials recovery are above the average of all economic sectors and above the EU average in Slovenia ([72]).

Slovenia recently adopted new policies to address circular economy challenges. Continuing on this path could make its economy even more circular. Under its recovery and resilience plan, Slovenia is working to improve the strategic and legal framework for the circular economy transition, with a focus on extending producer responsibility, integrating recycled material into new products, including circular economy principles in the green public procurement system, and establishing a one-stop-shop to support businesses.

Graph A9.2:**Treatment of municipal waste**



Source: Eurostat

Slovenia manages its waste efficiently, but some challenges remain. Slovenia made progress in increasing its recycling rate and reducing landfilling. This contributed to achieving the EU's 2020 target of 50% for recycling with a wide margin (59.3%) and to being on track to meet the 2025 recycling targets for municipal and packaging waste. In

([72]) Eurostat [HSW_N2_02] for NACE Rev. 2 sector E38; 7.14 fatal accidents p. 100 000 employed in 2018-2020 vs 1.71 for all sectors in SI; 6.33 in the EU-27 for sector E38

2021 Slovenia landfilled only 6% of its waste, below the EU 2035 target (10%). Few illegal landfills have yet to be closed and infringement proceedings are ongoing for two of them.

The industrial system is increasingly circular. The efficiency of the economy at using materials, is in line with the EU-27 average, with a resource productivity of 2.3 purchasing power standard per kg, further increasing Slovenia's resilience (see Annex 5). Resource productivity has been on a rising trajectory since 2016. It is key that Slovenia keeps this pace to boost repair, reuse and the use of secondary raw materials, particularly due to the increasing scarcity of raw materials and rising prices. Slovenia still ranks below the EU average on eco-innovation and its industrial system could benefit from more investments in areas such as eco-design, repair, reuse and remanufacturing, as well as the uptake of new business models. This would help Slovenia catch up with the most advanced EU eco-innovation leaders.

The built environment system exacerbates the depletion of resources despite a very high recovery rate of construction and demolition waste, which reached 97% in 2020, well above the EU average (89%). Soil sealing progressed between 2015 and 2018 at a slower rate than the EU average. Slovenia has included measures to renovate buildings sustainably and improve their use in its RRP, with a focus on public buildings and increasing the share of secondary raw materials used in construction.

Slovenia is adapting its agri-food system to reduce its impact on biodiversity. While the rate of organic farming is slightly higher than the EU average, some Natura 2000 sites still suffer from techniques harmful to biodiversity (e.g. nutrient leakage, mowing systems and timing, drainage, etc.). After a period of encouraging increase, Slovenia's composting and anaerobic digestion per head has decreased to only 72 kg per head vs 100 kg of

Table A9.1: **Overall and systemic indicators on circularity**

AREA	2016	2017	2018	2019	2020	2021	EU-27	Latest year EU-27
Overall state of the circular economy								
Material footprint (tonnes/capita)	15.0	15.1	16.5	16.2	16.9	-	13.7	2020
YoY growth in persons employed in the circular economy (%)[1]	-3.7	-1.4	-1.5	-3.4	-	-	2.9	2019
Water exploitation index plus (WEI+) (%)	0.6	0.7	0.6	0.4	-	-	3.6	2019
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	1.8	1.9	1.8	2.1	2.0	2.3	2.3	2021
Circular material use rate (%)[2]	8.7	9.8	10.0	11.4	9.9	11.0	11.7	2021
Recycling rate (% of municipal waste)	55.5	57.8	58.9	59.2	59.3	60.0	49.6	2021
Built environment								
Recovery rate from construction and demolition waste (%)[3]	98.0	-	98.0	-	97.0	-	89.0	2020
Soil sealing index (base year = 2006)[4]	103.8	-	105.9	-	-	-	108.3	2018
Agri-food								
Food waste (kg per capita)[5]	-	-	-	-	68.0	-	131.0	2020
Composting and digestion (kg per capita)	69.0	73.0	79.0	84.0	70.0	72.0	100.0	2021

(1) Persons employed in the circular economy only tracks direct jobs in selected sub-sectors of NACE codes E, C, G and S; (2) the circular material use rate measures the share of material recovered and fed back into the economy in overall material use; (3) the recovery rate of construction and demolition waste includes waste which is prepared for reuse, recycled or subject to material recovery, including through backfilling operations; (4) soil sealing: 2016 column refers to 2015 data; (5) food waste includes primary production, processing and manufacturing, retail and distribution, restaurants and food services, and households. Since the share of construction materials is among the higher rates in the EU in terms of the structure of resource consumption, the implementation of major construction projects is also expected to slow the growth of resource productivity (IMAD Productivity Report 2022)

Source: Eurostat, European Environment Agency

the EU average. Reversing this trend could enhance Slovenia's circularity and strategic autonomy by means of producing organic fertilizers and/or biomethane.

There remains a financing gap in the circular economy, including waste management. Additional investments will be required to address growing needs. The financing gap was estimated at EUR 132 million per year between 2014 and 2020. Over this period, investment needs were estimated to be at least EUR 244 million per year while investment baselines were EUR 112 million per year (see Annex 6).

ANNEX 10: DIGITAL TRANSFORMATION

Digital transformation is key to ensuring a resilient and competitive economy. In line with the Digital Decade Policy Programme, and in particular with the targets in that Programme for digital transformation by 2030, this Annex describes Slovenia's performance on digital skills, digital infrastructure/connectivity and the digitalisation of businesses and public services. Where relevant, it makes reference to progress on implementing the Recovery and Resilience Plan (RRP). Slovenia allocates 21% of its total RRP budget to digital (EUR 0.5 billion) ([73]).

The Digital Decade Policy Programme sets out a pathway for Europe's successful digital transformation by 2030. The Programme provides a framework for assessing the EU's and Member States' digital transformation, notably via the Digital Economy and Society Index (DESI). It also provides a way for the EU and its Member States to work together, including via multi-country projects, to accelerate progress towards the Digital Decade digital targets and general objectives ([74]). More generally, several aspects of digital transformation are particularly relevant in the current context. In 2023, the European Year of Skills, building the appropriate skillset to make full use of the opportunities that digital transformation offers is a priority. A digitally skilled population increases the development and adoption of digital technologies and leads to productivity gains ([75]). Digital technologies, infrastructure and tools all play a role in the fundamental transformation needed to adapt the energy system to the current structural challenges ([76]).

In digital skills, Slovenia's performance is close to the EU average, but the need for a digitally skilled workforce remains a key challenge. Slovenia scores slightly below the EU average for basic digital skills and female ICT specialists and just above the EU average on the ICT specialists in employment. It however remains far behind innovation leaders in the EU. Moreover, 78% of Slovenian enterprises which recruited ICT specialists reported difficulties in finding sufficiently skilled employees, which is the highest percentage in the EU ([77]).

In digital infrastructure/connectivity, Slovenia shows a mixed performance. The country's very high capacity network (VHCN) coverage is slightly above the EU average, but the country still faces challenges in rural areas, where only 51% of the households are covered. Overall 5G coverage improved considerably recently, but still remains below EU average. However, the 5G coverage on the 3.4-3.8 GHz spectrum band, essential for enabling advanced applications requiring large spectrum bandwidth, is well above the EU average. With its RRP, Slovenia is expected to engage considerably in EU-wide collaboration to develop infrastructure for advanced technologies by participating in multi-country projects on cloud infrastructure and services, semiconductors, blockchain and quantum communication infrastructure.

Slovenia scores well on some areas related to the digitalisation of businesses, but overall there is room for improvement. The country performs slightly below the EU average for SMEs with at least a basic level of digital intensity and above the EU average for the take

([73]) The share of financial allocations that contribute to digital objectives has been calculated using Annex VII of the RRF Regulation.

([74]) The Digital Decade targets as measured by DESI indicators and complementary data sources are integrated to the extent currently available and/or considered particularly relevant in the MS-specific context.

([75]) See for example OECD (2019): OECD Economic Outlook, Digitalisation and productivity: A story of complementarities, OECD Economic Outlook, Volume 2019 Issue 1 | OECD iLibrary (oecd-ilibrary.org).

([76]) The need and possible actions for a digitalisation of the energy system are laid out in the Communication 'Digitalisation the energy system – EU action plan' (COM(2022)552.

([77]) Source: Eurostat – European Union Survey on ICT Usage and eCommerce in Enterprises

up of cloud services and artificial intelligence. However, it is considerably below the EU average in its use of big data analysis. Moreover, the R&D intensity of the Slovenian ICT sector is below the EU average ([78]).

Slovenia performs fairly on the digitalisation of public services. It scores below the EU average for digital public services for citizens and is very close to the EU average for digital public services for businesses. However, the access to electronic health records for citizens is above the EU average (score 80 out of 100 vs 71). A large part of the digital measures in the Slovenian RRP will be focused on public services, including measures to support the digital transformation of healthcare and public services, notably to develop user-centric e-services and update the IT infrastructure of the public administration. Moreover, the notification of an electronic identity card under the eIDAS regulation is currently ongoing.

([78]) JRC (2022): PREDICT Dataset: The EU ICT sector and its R&D performance.

Table A10.1: **Key Digital Decade targets monitored by DESI indicators**

	Slovenia			EU	Digital Decade target by 2030 (EU)
	DESI 2021	DESI 2022	DESI 2023	DESI 2023	
Digital skills					
At least basic digital skills	**NA**	**50%**	**50%**	**54%**	**80%**
% individuals		2021	2021	2021	2030
ICT specialists ([1])	**4.4%**	**4.8%**	**4.8%**	**4.5%**	**20 million**
% individuals in employment aged 15-74	2020	2021	2021	2021	2030
Digital infrastructure/connectivity					
Fixed Very High Capacity Network (VHCN) coverage	**66%**	**72%**	**76%**	**73%**	**100%**
% households	2020	2021	2022	2022	2030
Fibre to the Premises (FTTP) coverage ([2])	**66%**	**72%**	**76%**	**56%**	**-**
% households	2020	2021	2022	2022	2030
Overall 5G coverage	**0%**	**37%**	**64%**	**81%**	**100%**
% populated areas	2020	2021	2022	2022	2030
5G coverage on the 3.4-3.8 GHz spectrum band	**NA**	**NA**	**55%**	**41%**	**-**
% populated areas			2022	2022	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	**NA**	**NA**	**67%**	**69%**	**90%**
% SMEs			2022	2022	2030
Big data ([3])	**7%**	**7%**	**7%**	**14%**	**75%**
% enterprises	2020	2020	2020	2020	2030
Cloud ([3])	**NA**	**38%**	**38%**	**34%**	**75%**
% enterprises		2021	2021	2021	2030
Artificial Intelligence ([3])	**NA**	**12%**	**12%**	**8%**	**75%**
% enterprises		2021	2021	2021	2030
Digitalisation of public services					
Digital public services for citizens	**NA**	**69**	**71**	**77**	**100**
Score (0 to 100)		2021	2022	2022	2030
Digital public services for businesses	**NA**	**84**	**83**	**84**	**100**
Score (0 to 100)		2021	2022	2022	2030
Access to e-health records	**NA**	**NA**	**80**	**71**	**100**
Score (0 to 100)			2023	2023	2030

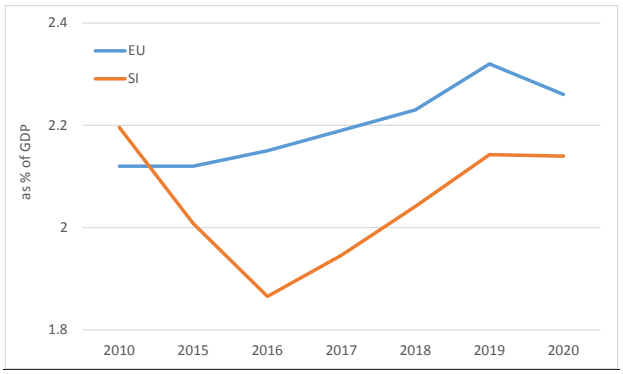
(1) The 20 million target represents about 10% of total employment.
(2) The Fibre to the Premises coverage indicator is included separately as its evaluation will also be monitored separately and taken into consideration when interpreting VHCN coverage data in the Digital Decade.
(3) At least 75 % of Union enterprises have taken up one or more of the following, in line with their business operations: (i) cloud computing services; (ii) big data; (iii) artificial intelligence.

Source: Digital Economy and Society Index

This Annex provides a general overview of the performance of Slovenia's research and innovation system, which is essential for delivering the twin green and digital transition.

Slovenia is a 'moderate innovation performer' and the gap between its performance and the EU average is widening. Between 2012 and 2019, Slovenia witnessed the greatest decline in the EU in terms of innovation performance, in sharp contrast to the EU performance change, which improved over the same period. While Slovenia's performance started to recover in the following years and continues to improve in absolute terms, as shown in the 2022 edition of the European Innovation Scoreboard ([79]), it is still slightly below the EU average (93.5% of the EU performance) and is improving at a lower rate than most Member States'. The main obstacles hindering Slovenia's performance are low levels of venture capital and of R&D expenditure in the public sector.

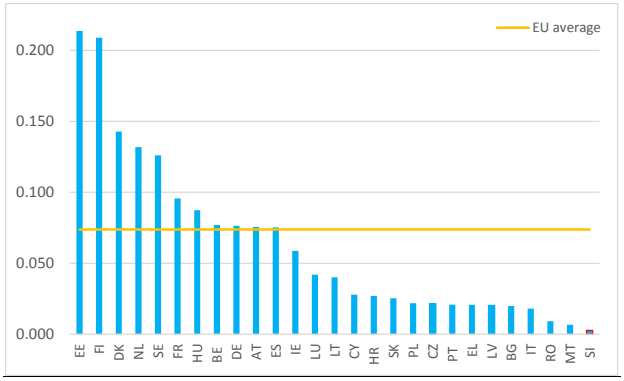
Graph A11.1:**R&D intensity as % of GDP 2010-2021**



Source: Eurostat, 2022

R&D intensity ([80]) reached 2.14% of GDP in 2021 but is still below its 2013 level and the European average (2.26%) ([81]). While both public and private expenditure on R&D, relative to GDP, bounced back in 2017 and since then continue to increase, R&D expenditure is mainly driven by business R&D spending. The Act on Research, Development and Innovation Activities, included in the recovery and resilience plan (RRP), envisages a continuous increase in public spending on research to 1% of GDP with a view to achieving the 1.25% public research and 3.5% total R&D intensity target set for 2030 ([82]). The research and innovation-related investments planned under the RRP, worth EUR 138 million over 2022–2025, will also help enhance public R&D spending, albeit only partially and temporarily. These investments mostly focus on digital innovation and research and innovation (R&I) for the green transition, but support is also envisaged for researcher mobility and demonstration and pilot projects.

Graph A11.2:**Venture capital as % of GDP in 2021**



Source: Eurostat, 2021

With the adoption of a long-awaited structural R&I reform, as part of the RRP, Slovenia is taking steps to address the fragmentation of its R&I governance structure and improve the performance of the public research system. Both the share of top-cited publications (7.7%) and the share of international co-publications (54.1%) among all scientific publications of the country are below

([79]) 2022 European Innovation Scoreboard, Country profile: Slovenia https://ec.europa.eu/assets/rtd/eis/2022/ec_rtd_eis-country-profile-si.pdf.

([80]) Defined as gross domestic expenditure on R&D as a percentage of GDP

([81]) Source: Eurostat.

([82]) Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/ZNANOST/Nacionalni-dokumenti/Resolution-on-the-Slovenian-Scientific-Research-and-Innovation-Strategy-2030.

Table A11.1: **Key innovation indicators**

Slovenia	2010	2015	2019	2020	2021	EU average (1)
Key indicators						
R&D intensity (GERD as % of GDP)	2.05	2.20	2.04	2.14	2.14	2.26
Public expenditure on R&D as % of GDP	0.66	0.52	0.52	0.56	0.55	0.76
Business enterprise expenditure on R&D (BERD) as % of GDP	1.39	1.67	1.51	1.57	1.57	1.49
Quality of the R&I system						
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	6.26	7.06	7.67	:	:	9.8
PCT patent applications per billion GDP (in PPS)	3.12	1.78	1.58	:	:	3.3
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	7.32	8.64	8.28	9.25	9.43	7.1
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.08	0.05	0.04	:	:	0.054
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	13.52	14.65	15.26	15.17	:	16.0
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	0.29	0.23	0.25	:	:	0.194
R&D tax incentives: foregone revenues as % of GDP	0.051	0.120	0.099	:	:	0.1
Green innovation						
Share of environment-related patents in total patent applications filed under PCT (%)	9.95	8.63	12.41	:	:	13.3
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.001	0.009	0.002	0.002	0.003	0.074
Employment in fast-growing enterprises in 50% most innovative sectors	2.85	3.20	5.87	:	:	5.5

(1) EU average for the latest available year with the highest number of country data.
Source: Eurostat, OECD, DG JRC, Science Metrix (Scopus database and EPO's Patent Statistical database), Invest Europe

the EU average ([83]), which suggests that the Slovenian research system is still struggling to produce high-quality scientific output. Additionally, the low number of patents points to weak commercialisation ([84]). To address this challenge, the Act on Research, Development and Innovation Activities introduces performance-based funding for research organisations (ROs), simplifies researcher's mobility and removes barriers that

hinder ROs from hiring researchers from outside Slovenia. The Programme Committee will align measures aimed at fostering academic research, scaling up innovation and streamlining the commercialisation of research results. The Council for Development of Slovenia will bring together policymakers and relevant R&I stakeholders to create an efficient monitoring and evaluation system and to inform the policy-making process. If implemented well, this reform could significantly boost Slovenia's R&I performance.

The lack of venture capital is still hindering innovative start-ups from scaling up in Slovenia ([85]). Venture capital investment in Slovenia amounts to 0.003% of GDP, which is the lowest value in the EU ([86]) (also see Annex 12). This especially affects high-risk innovative small and medium-sized enterprises and can prompt them to relocation to scale up ([87]) The 2021 report on the state of play of the Slovenian innovation ecosystem estimates that Slovenia needs EUR 70 million in venture

([83]) EU averages 9.8% and 55.4% respectively (Source: Science-Metrix).

([84]) 1.58 PCT patent applications per billion GDP

([85]) Study on the effectiveness of public innovation support for SMEs in Europe (2021) demonstrates the positive impact of venture capital for high-risk innovative SMEs https://europa.eu/!Cc6Ypf.

([86]) Source: Invest Europe May 2022.

([87]) Braun et al. (2019), Follow the Money: How Venture Capital Facilitates Emigration of Firms and Entrepreneurs in Europe 2019. https://ssrn.com/abstract=3415370

capital annually ([88]), which is many times the current level, and the current government financing, through the Slovene Enterprise Fund and SID bank, cannot close the gap. The new Act on Forms of Alternative Investment Funds and the capital market development strategy, both part of the RRP, may help tackle the low level of venture capital, although a significant financial commitment will be needed to succeed in revitalising the Slovenian capital market. The Act on Forms of Alternative Investment Funds entered into force at the end of 2021 and was linked to the Slovenian authorities' first RRP payment request.

([88]) https://www.podjetniski-portal.si/uploads/gradiva/krepitev_inovacijskega_ekosistema/srss161_slovenia_ecosystem_d2_state_of_play_report.pdf

Slovenia is a small, open, and diversified economy with one of the highest rates of trade integration for goods in the Single Market. Intra-EU trade represented 67.6% of GDP in 2022, mostly due to this high integration of trade in goods. Germany, Italy, Austria, Croatia, and France are among Slovenia's main trading partners ([89]). This level is an increase beyond the level of 2021 (61.4%), which followed a decrease to 55.5% in 2020. However, when it comes to services, Slovenia scores above the EU average on the restrictiveness of services trade.

The country's economy is highly affected by the Russian invasion of Ukraine. Almost two thirds of gas used in the Slovenian economy is used by industry (see Annex 7), which means that price increases and uncertainties about future supply are putting these businesses at risk and have led to firms cancelling shifts, extending holidays, and postponing non-essential production. Enterprises also report of a decline in profits, a decrease in the competitiveness of their products, putting their long-term existence at risk ([90]). High inflation and energy prices, as well as global supply chain constraints have also particularly impacted industry, such as the automotive and construction ecosystems as well as aluminium and steel and paper companies and the food industry. Furthermore, Slovenian pharmaceutical, chemical, and electrical companies are exposed, due to high export rates to both Russia and Ukraine. In addition, the share of firms facing constraints in terms of materials shortage has increased considerably, which is putting pressure on companies.

Following a decade of slow productivity growth, productivity has returned to a similar level as before the 2008 financial crisis. Overall, labour productivity per person in Slovenia has increased by 2.9% in 2022. This is less than half of the productivity gain of 2021 (6.8%), which followed after a slump in 2020, but above the pre-pandemic level of 2019 ([91]). In 2022, Slovenia's labour productivity stood at 85.2% of the EU aggregate in terms of GDP per hour worked, as well as at 86% in terms of GDP per persons employed, a similar level as before 2008 ([92]). Nevertheless, a rather low level of investment, particularly from the private sector, hampers productivity growth as well as the country's innovation capacity.

Labour productivity in industry, which is more export-oriented, is above the EU average and a key driver of productivity in the country (Graph A12.1), despite a slight decline in 2022. Slovenia is a very industrialised country and the share of Slovenian industry in terms value added to GDP is higher than the EU average (28.5% in 2021 vs 22.8%) ([93]). Over the last few years, the country achieved faster productivity growth in industry compared with the EU average, despite an already slightly lower, though still relatively high, productivity growth in energy-and emission intensive manufacturing activities in 2021, impacted by high raw material prices ([94]). The labour shortage in industry, which is comparatively high, presents a further challenge , which is exacerbated by an ageing population. There is also a particular shortage of ICT specialists, who are needed for the digital transition of the economy (also see Annex 10).

([89]) Statistical Office and Business Slovenia

([90]) Chamber of Commerce and Industry of Slovenia

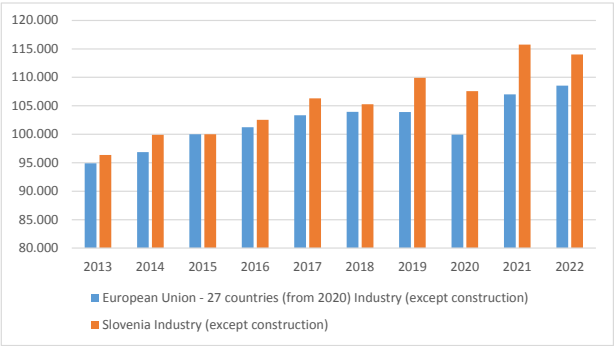
([91]) Eurostat, real labour productivity per person

([92]) AMECO database, European Commission

([93]) World Bank - Industry, value added (% of GDP)

([94]) IMAD Productivity Report 2022

Graph A12.1:**Labour productivity in industry**



Source: Eurostat, NAMA_10_LP_A21

Despite action being taken to improve the business environment, challenges remain. Slovenia has taken several measures in recent years to improve the ease of doing business and reduce the administrative burden, for instance making changes to insolvency legislation as well as establishing a one-stop-shop/ single point of contact system for businesses and to attract investments. While the obstacles to companies remain rather high and are related to, for instance, the efficiency of state institutions, excessive red tape, and lengthy procedures ([95]), the Slovenian recovery and resilience plan (RRP) also aims to address such challenges through, for instance, two Debureaucratisation Acts, with the aim of reducing and digitalising administrative procedures. The first of these acts entered into force in January 2022. Related to this, while access to finance remains a challenge for companies, particularly SMEs, Slovenia is also taking action to improve in this area, for instance through its Alternative Investment Funds Act or its Capital Markets Development Strategy.

With an underdeveloped equity market, financing is heavily skewed towards loans. While access to loans is above the EU average and increased in 2021, in comparison with 2020, Slovenia remains among the eight weakest performers when it comes to access to equity. This is despite a modest improvement from 2020, as measured by the equity composite indicator in the EIF access to finance index ([96]). Furthermore, Slovenia has a very low ratio of venture capital investment to GDP, which affects companies' innovation capacity (also see Annex 11). Policy action in this area will also benefit SMEs during their scale-up stage. The share of SMEs in the economy is higher than the EU average in terms of employment (73.2% compared to 64.4%) and value added (65.6% compared to 51.8%) ([97]). Based on data from previous years, domestically-oriented SMEs generally have lower productivity than export-oriented companies ([98]). When it comes to investment, a lower share of firms than the EU average are reporting investment obstacles. In 2022, this share was on a similar level as in 2021, an increase compared to 2020 but below the 2019 level ([99]).

The share of SMEs reporting late payments has surpassed the EU average, as late payments continue to be an issue, most notably for SMEs. They have negative effects on the resilience and growth prospects of businesses and are significantly above the pre-pandemic levels. In addition, the share of companies identifying supply chain disruptions as one of the main challenges impacting customers' ability to pay on time and in full is considerably higher than the EU average (71% and 57%, respectively) ([100]). While on or slightly below the EU average when it comes to payment gaps (i.e. the gap between the agreed and actual payment time), both the private sector/business-to-business and the public sector payment gap widened in comparison to 2021. The private sector gap widened by one day, from 12 to 13, which is lower than in 2020 but significantly higher than in 2018 and 2019. For payments from the public sector, this gap widened by two days – from 11 to 13 days,

([95]) IMAD Development Report 2022

([96]) EIF SME Access to Finance Index

([97]) SME Performance Review 2021/2022

([98]) OECD Economic Surveys: Slovenia 2022

([99]) EIB Investment Survey 2022

([100]) INTRUM European Payment Report

which is slightly below the EU average but significantly wider than the pre-pandemic gaps.

Another aspect related to the business environment, which may be hampering investment, market entry and competition in some sectors, is the role of state-owned enterprises (SOEs). Despite improvements in the profitability of these companies, a lack of good corporate governance in individual SOEs may negatively impact on competitiveness and increase inefficiency ([17]). The Slovenian state continues to maintain a stake in non-strategic sectors, and has, for instance, recently increased its stake in the tourism sector ([98]).

Particularly important for the energy transition, decarbonisation, and for ensuring energy security in the country is the tackling of process-related barriers related to the deployment of renewables. Slovenia's share of renewable energy sources in its energy mix remains comparatively small (see Annex 6) and its installed renewable electricity capacity was below the EU average in 2020. These process-related barriers, as reviewed by the Single Market Enforcement Taskforce (SMET), concern lengthy permitting procedures and understaffed authorities and Slovenia has implemented measures to address these issues.

Furthermore, barriers also remain in other areas impacting the business environment, for instance in professional services. In the past, Slovenia reduced the number of regulated professions to some extent, particularly in the crafts sector, but regulatory restrictiveness is higher than the EU average for professions such as real estate agents, lawyers, civil engineers, architects, and tourist guides ([101]). Reducing regulatory barriers in the professional services sector will make entry easier and improve quality and prices, an aspect which is not covered in the RRP. The fragmented system regulating civil engineers could hinder the free movement of professionals and the rules spreading responsibility over different categories of professionals in the same area of activity could impact on the proportionality and efficiency of service provision. In addition, the diverging regional regulations governing tourist guides seem to hinder market access and affect both national and cross-border service providers.

Competition in public procurement remains an issue. In 2020, 2021 and 2022, Slovenia had the second highest share of contracts awarded where there was just a single bidder (51% in 2022, also see Graph A12.2). In addition, one fifth of all procedures are unsuccessful due to no offers having been submitted ([102]). Recent data show some improvement on the use of less transparent procedures. The country used to have one of the highest shares of negotiated procedures without prior publication. This share was, however, reduced to 11% in 2022, from 19% in 2021 and 26% in 2020 ([103]).

To address these challenges, Slovenia has started to implement several RRP measures to increase competition, digitalisation and professionalisation among public officials. The implementation of reforms to improve the efficiency of public procurement, including measures to lower the share of negotiated procedures without prior publication, is ongoing. The development of the planning process and thorough preparation of public procurement procedures could further contribute to a more competitive environment and reduce the number of contracts awarded on the basis of the lowest price. Moreover, greater interoperability of e-procurement platforms will decrease administrative burdens and improve accessibility to the public procurement market. In addition, an aggregation of demand techniques can also increase cost effectiveness and professionalisation and lead to a further reduction of the share of negotiated

([101]) Communication on updating the reform recommendations for regulation in professional services, COM(2021)385

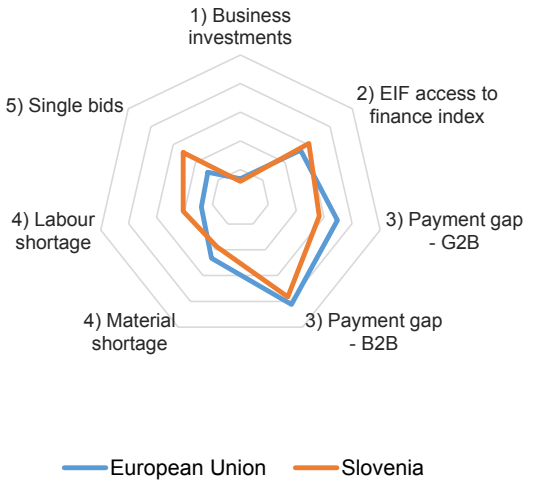
([102]) Commission calculations, based on Tenders Electronic Daily (TED)

([103]) European Commission Single Market Scoreboard

procedures without prior publication.

Slovenia recorded a considerable improvement of its transposition deficit in 2021. With more room for improvement in the timely transposition of directives, the country's transposition deficit has dropped to 1.2%, which is below the EU average, and which puts it back on track to reach the target of 0.5% proposed in the Single Market Act. Regarding infringements, Slovenia remains below the EU average on the number of cases. While Slovenia's SOLVIT resolution rate decreased from 90% in 2020 to 80% in 2021, which is below the EU average, the caseload remains small, the handling time good overall, and the staffing level can be seen as sufficient ([103]).

Graph A12.2:**Business environment and productivity drivers**



Source: 1) % of GDP, 2021 Eurostat;
2) composite indicator, 2021 European Investment Fund access to finance index;
3) average payment delay in number of days, 2022 Intrum;
4) % of firms in manufacturing facing constraints, 2022 European Commission business consumer survey;
5) proportion of contracts awarded with a single bidder, 2022 Single Market Scoreboard.

Table A12.1: **Industry and Single Market**

	POLICY AREA	INDICATOR NAME	2018	2019	2020	2021	2022	EU27 average (*)
HEADLINE INDICATORS	Economic Structure	Net private investment, level of private capital stock, net of depreciation, % GDP [(1)]	-0.5	0	-2	0	0.9	**3.7**
		Net public investment, level of public capital stock, net of depreciation, % GDP [(1)]	1.1	1.3	1.3	2.1	2.6	**0.4**
		Real labour productivity per person in industry (% yoy)[(2)]	-1	4.4	-2.1	7.6	-1.5	**1.4**
	Cost competitive-ness	Nominal unit labour cost in industry (% yoy)[(2)]	4.4	-0.1	4.3	-0.2	7.8	**2.9**
RESILIENCE	Shortages	Material shortage (industry), firms facing constraints, % [(3)]	15	10	11	29	38	**47**
		Labour shortage using survey data (industry), firms facing constraints, % [(3)]	39	37	20	32	41	**28**
		Vacancy rate (business economy)[(4)]	3	2.7	2	3.2	3.6	**3.1**
	Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials [(5)]	0.17	0.17	0.17	0.16	0.15	**0.18**
		Installed renewables electricity capacity, % of total electricity produced [(6)]	36.5	36.5	36.5	36	n.a.	**50.9**
SINGLE MARKET	Single Market integration	EU trade integration, % [(7)]	62.1	61.0	55.6	61.4	67.6	**45.8**
	Restrictions	EEA Services Trade Restrictiveness Index [(8)]	0.06	0.06	0.06	0.06	0.06	**0.05**
	Public procurement	Single bids, % of total contractors [(9)]	n.a.	n.a.	46	44	51	**29**
BUSINESS ENVIRONMENT - SMEs	Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle [(10)]	12.7	21.4	13.9	16.4	16.1	**29.6**
	Business demography	Bankruptcies, Index (2015=100)[(11)]	124.7	116.3	102.7	92.7	85.2	**86.8**
		Business registrations, Index (2015=100) [(11)]	103.5	105.4	95.1	108.2	115.4	**121.2**
	Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment [(12)]	4	8	17	12	13	**13**
		Payment gap - public sector, difference in days between offered and actual payment [(12)]	7	1	19	11	13	**15**
		Share of SMEs experiencing late payments in past 6 months, % [(13)]	n.a.	38.8	49.2	41.2	49.7	**43**
	Access to finance	EIF Access to finance index - Loan, Composite: SME external financing over last 6 months, index values between 0 and 1 [(14)]	0.82	0.79	0.44	0.62	n.a.	**0.46**
		EIF Access to finance index - Equity, Composite: VC/GDP, IPO/GDP, SMEs using equity, index values between 0 and 1 [(14)]	0.18	0.08	0.05	0.1	n.a.	**0.23**

(*) Last available year

Source: (1) AMECO, (2) Eurostat, (3) ECFIN BCS, (4) Eurostat, (5) COMEXT and Commission calculations, (6) Eurostat, (7) Eurostat, (8) OECD, (9) Single Market Scoreboard, (10) EIB survey, (11) Eurostat: (12) Intrum, (13) SAFE Survey, (14) EIF SME Access to Finance Index.

This Annex outlines the performance of Slovenia's public administration, which is essential for providing services and carrying out reforms. The effectiveness of the public administration in Slovenia is above the EU-27 average ([104]). The government has appointed a council ([105]) to make proposals on better regulation, public participation in policy- and law-making, the reorganisation of administrative districts for better quality public services and the digitalisation of administrative procedures and processes.

Slovenia's civil service continues to face challenges due to difficulties in attracting and retaining a young workforce. The salary system is one of the factors that discourage young people from entering the civil service ([106]). The decline in the share of young civil servants is also due to the austerity policy after the financial crisis of not replacing retired staff. There are issues with the recruitment and remuneration of IT specialists. In addition, recruitment to top civil service positions continues to attract few candidates. In 2021, a single application was received in 41.4 % of cases ([107]). The recovery and resilience plan includes a reform of the public wage system aimed at linking remuneration to work performance and ensuring differentiated remunerations across sectors. Further changes are under way to digitalise human resource management for civil servants such as the Civil Service Act.

Slovenia is not fully capitalising on the opportunities of e-government. Based on analysis of life events, Slovenia ranks below the EU-27 average in the overall e-government maturity indicator (Table A13.1). Slovenia ranks well on open data, taking first place in the fast-track group and maintaining 8th place overall. However, a 2021 analysis ([108]) showed that Slovenian municipalities do not perform well in openness and transparency, as most municipalities are not proactive in making information available on their performance. The digital public services strategy ([109]) sets the target that by 2030 all key public services will be provided online and accessible to all users. To strengthen data management in the public sector, Slovenia plans to establish a network of data stewards. A coordinating body for the digital transformation of the public administration was established under the recovery and resilience plan ([110]).

Slovenia is making efforts to improve the quality of its legislation. The use of *ex post* evaluation is well below the EU-27 average (Graph A13.1). Stakeholder consultations are mandatory, and their implementation is supported by guidelines. However, minimum recommendations for consultations are often ignored in practice, e.g. the deadline for public input is not indicated or is too short, or the documents are not made public ([111]). Based on the action plan on improving the quality of law-making, Slovenia began a project on the digitalisation of the legislative process and launched consultations on a methodology for regulatory impact assessments. Slovenia continues to focus on reducing administrative burdens. The Stop Bureaucracy ([112]) portal lets citizens and businesses make suggestions on how to cut red tape and monitor implementation. The law on de-bureaucratisation adopted under the recovery and resilience plan aims to reduce the administrative and regulatory burden on

([104]) Worldwide Governance Indicators, 2021.

([105]) Expert Council on the Sustainable Development of Public Administration.

([106]) Virant, G. and Rakar, I., 'Implementing a government-wide unified and transparent salary system in Slovenia', NISPAcee Journal of Public Administration and Policy, Vol. 11, No 1, 2018, pp. 183-206, DOI: 10.2478/nispa-2018-0008.

([107]) Civil Servants' Council, 2021 Annual Report.

([108]) https://danesjenovdan.si/lestvica-transparentnosti/

([109]) Digital Public Services Strategy 2030.

([110]) The decree on the Council for the Development of Informatics was published in the official gazette on 25 February 2022.

([111]) National NGO information centre (CNVOS) reports

([112]) https://www.stopbirokraciji.gov.si

Table A13.1: **Public administration indicators**

SI	Indicator ([1])	2017	2018	2019	2020	2021	2022	EU-27([2])
E-government and open government data								
1	Share of individuals who used the internet within the last year to interact with public authorities (%)	62.2	66.6	63.2	76.7	76.8	n/a	64.8
2	E-government benchmark overall score ([3])	n/a	n/a	n/a	69.1	66.6	68.7	72.9
3	Open data and portal maturity index	n/a	0.7	0.7	0.8	0.9	0.9	0.8
Educational attainment level, adult learning, gender parity and ageing								
4	Share of public administration employees with tertiary education (levels 5-8, %)	62.7	62.9	68.0	71.8	73.4 (b)	75.4	52.0
5	Participation rate of public administration employees in adult learning (%)	18.9	18.8	17.8	9.9	28.3 (b)	32.7	16.9
6	Gender parity in senior civil service positions ([4])	14.0	12.2	14.8	14.6	14.2	20.2	11.0
7	Ratio of 25-49 to 50-64 year olds in NACE sector O	2.2	1.7	1.8	1.7	1.5 (b)	1.4	1.5
Public financial management								
8	Medium term budgetary framework index	0.7	0.7	0.7	0.8	0.8	n/a	0.7
9	Strength of fiscal rules index	0.4	0.4	0.4	0.4	0.4	n/a	1.5
Evidence-based policy making								
10	Regulatory governance	1.53	n/a	n/a	n/a	1.52	n/a	1.7

([1]) High values denote a good performance, except for indicator # 6. ([2]) 2022 value. If not available, the 2021 value is shown. ([3]) Measures the user centricity and transparency of digital public services as well as the existence of key enablers for the provision of those services. ([4]) Defined as the absolute value of the difference between the percentage of men and women in senior civil service positions. Flags: (b) break in time series; (d) definition differs; (u) low reliability.
Source: ICT use survey, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Labour Force Survey, Eurostat (# 4, 5, 7), European Institute for Gender Equality (# 6); Fiscal Governance Database (# 8, 9); OECD Indicators of Regulatory Policy and Governance (# 10).

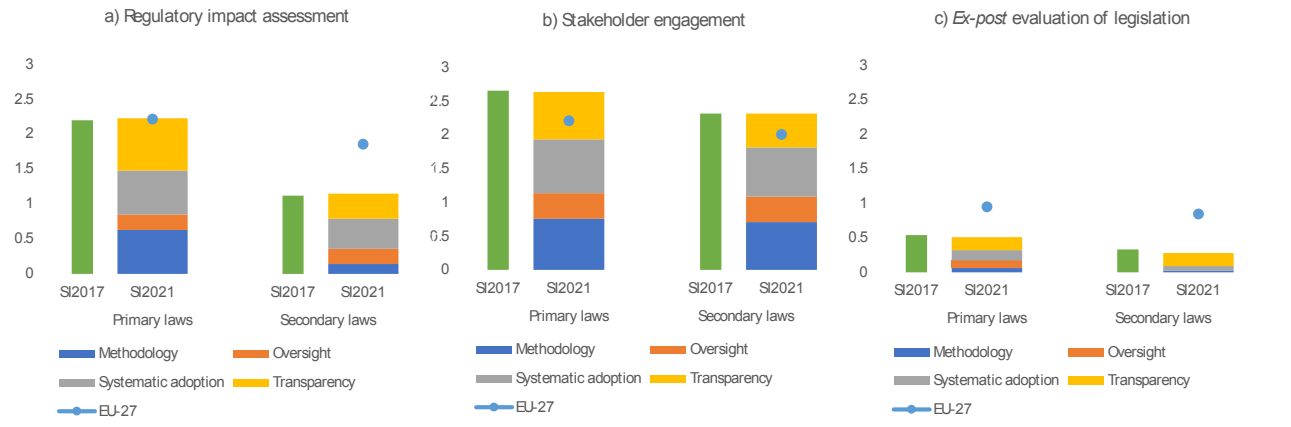
citizens and businesses and improve the efficiency of the public administration.

The justice system performs efficiently overall, ([113]) but challenges remain in court cases for economic and financial crimes. The average length of proceedings at first instance increased from 21 months (in 2020) to around 2 years in large value, and from 15 months (in 2020) to 16 months in small value litigious civil cases. The length of time of litigious commercial cases stagnated at 11 months. Appeal cases were resolved more quickly taking on average around 1.8 months in civil (2.4 in 2020) and 2.7 months in commercial cases (3.4 in 2020). No *systemic* deficiencies have been reported on judicial independence. The quality of the justice system has been continuously improving. The use of information and communication technologies to manage cases is advanced, particularly in courts.

Electronic communication between courts and parties has progressed, including in criminal justice, where there is still room for improvement.

([113]) For a more detailed analysis of the performance of the justice system in Slovenia, see the 2023 EU Justice Scoreboard (forthcoming) and the country chapter for Slovenia in the 2023 Rule of Law Report (forthcoming)

Graph A13.1:**Slovenia. a) Regulatory impact assessment, b) Stakeholder engagement and c) Ex post evaluation of legislation**



Source: Indicators of Regulatory Policy and Governance Surveys 2017 and 2021, (http://oe.cd/ireg).

ANNEX 14: EMPLOYMENT, SKILLS AND SOCIAL POLICY CHALLENGES IN LIGHT OF THE EUROPEAN PILLAR OF SOCIAL RIGHTS

The European Pillar of Social Rights is the compass for upward convergence towards better working and living conditions in the EU. This Annex provides an overview of Slovenia's progress in implementing the Pillar's 20 principles and EU headline and national targets for 2030 on employment, skills and poverty reduction.

Table A14.1: **Social Scoreboard for Slovenia**

Policy area	Headline indicator	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24, 2022)	4.1
	Share of individuals who have basic or above basic overall digital skills (% of population aged 16-74, 2021)	49.67
	Youth NEET rate (% of population aged 15-29, 2022)	8.5
	Gender employment gap (percentage points, 2022)	6.9
	Income quintile ratio (S80/S20, 2021)	3.24
Dynamic labour markets and fair working conditions	Employment rate (% of population aged 20-64, 2022)	77.9
	Unemployment rate (% of active population aged 15-74, 2022)	4
	Long term unemployment (% of active population aged 15-74, 2022)	1.7
	GDHI per capita growth (2008=100, 2021)	119.29
Social protection and inclusion	At risk of poverty or social exclusion rate (% of total population, 2021)	13.2
	At risk of poverty or social exclusion rate for children (% of population aged 0-17, 2021)	11
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2021)	44.81
	Disability employment gap (percentage points, 2021)	21.1
	Housing cost overburden (% of total population, 2021)	4.1
	Children aged less than 3 years in formal childcare (% of population under 3-years-old, 2021)	47.5
	Self-reported unmet need for medical care (% of population 16+, 2021)	4.8

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

Update of 27 April 2023. 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 Joint Employment Report 2023. Due to changes in the definition of the individuals' level of digital skills in 2021, exceptionally only levels are used in the assessment of this indicator; NEET: neither in employment nor in education and training; GDHI: gross disposable household income.

Source: Eurostat.

Despite the current unstable economic environment, the labour market in Slovenia remains robust as shown by growing employment and low unemployment rates. The employment rate recovered to 77.9% in 2022, well above the EU average (74.6%). The unemployment rate further declined to 4.0% in 2022, well below the EU average of 6.2%. Despite the positive trend, Slovenia continues to face some long-term structural challenges in its labour market. One of these challenges is the low employment and activity rates of older workers, in particular those with lower skills levels, and persons with disabilities. These groups also face persisting high long-term unemployment. In 2022, 40.7% of young people were in precarious forms of work (i.e. fixed-term contracts or temporary agency work). This rate was significantly above the EU average (35.9%) and also higher than for other age groups. The overall share of those in precarious forms of work is also relatively high (1.4% in 2022 vs 1.6% in the EU). Slovenia's recovery and resilience plan (RRP) sets out measures to: (i) improve cooperation between the education system and companies; (ii) help young people enter the labour market faster; (iii) adapt the workplace to the needs of persons with disabilities; and (iv) support more flexible forms of work to encourage older people to work longer. Slovenia will also use the European Social Fund Plus (ESF+) to support active labour market measures, in particular for young people and vulnerable groups, such as the long-term unemployed. Addressing these challenges would support progress towards the national employment rate target of 79.5% by 2030.

Labour shortages, worsened by skill mismatches, have become acute. After peaking in the first half of 2022, the vacancy rate in Slovenia was below the EU average of 2.8% at 2.5% in Q4-2022, however, remained significantly elevated. In particular, more than half of employers reported shortages of staff in health and long-term care, ICT, construction, transport, accommodation and hospitality

services, and education in 2022. Unfavourable demographic developments are expected to exacerbate issues as the supply of labour will not keep up with demand despite the estimated future higher participation of older workers and young people. Furthermore, lengthy administrative procedures hinder employing more foreign workers ([114]). The share of individuals who have basic or above basic overall digital skills was 50% in 2021 (EU: 53.9%). To address these challenges, Slovenia has conceived a mix of reforms and measures to be supported under its RRP and the ESF+. Labour market institutions and their services are set to be modernised to better coordinate labour supply and demand, anticipate skill needs, and ease transitions and mobility. Other measures will improve the quality of the working environment and working conditions. The RRP provides for pension and unemployment insurance reforms to promote longer working lives and reduce the gap between the labour market exit age and the statutory retirement age.

Table A14.2: **Situation of Slovenia on 2030 employment, skills and poverty reduction targets**

Indicators	Latest data	Trend (2015-2022)	National target by 2030	EU target by 2030
Employment (%)	77.9 (2022)		79.5	78
Adult learning[1] (%)	40.3 (2016)		60	60
Poverty reduction[2] (thousands)	-4 (2021)		-9	-15 000

(1) Adult Education Survey, adults in learning in the past 12 months
(2) Number of persons at risk of poverty or social exclusion (AROPE), reference year 2019
Source: Eurostat, DG EMPL

The education and training system is performing well, but Slovenia still faces challenges. The share of children participating in early childhood education and care has increased significantly since 2015 (see Annex 15), including the rate of children aged less than 3 years in formal childcare. Slovenia has one of the lowest rates of early school leavers and tertiary education attainment is high, but significant differences between men and women and between native-born and foreign-born people persist for the latter (see Annex 15). Despite a low share of young people not in education, employment or training (NEET) (8.5% vs 11.7% in the EU in 2022), some socio-economic groups such as Roma and immigrants are disproportionately represented. Moreover, the long-standing shortage of teachers in Slovenia is expected to intensify in the future; especially in the science, technology, engineering and mathematics (STEM) subjects and due to the low number of new entrants in the profession (see Annex 15). Adult participation in learning (over the past 4 weeks) stood at 21.6% in 2022, significantly above the EU average of 11.9%. Despite this positive situation, adult participation in learning remained low among older and low-skilled people (4.7%, EU average: 5.9%). The ESF+ promotes lifelong learning and flexible upskilling and reskilling opportunities for all, with an emphasis on digital skills. Other EU funding supports efforts to improve educational outcomes of students with migrant or disadvantaged backgrounds (see Annex 15). Improving the outreach to low-skilled and older workers could help Slovenia contribute to reaching the national target of having at least 60% of all adults participating in education and training every year by 2030.

Slovenia has a relatively low share of people at risk of poverty or social exclusion (AROPE), but there are still challenges for certain groups. The overall share of the AROPE population stood at 13.2% in 2021 (1.1 percentage points lower than in 2020), far below the EU average of 21.7%. However, for people aged 65 and over, this share was closer to the EU average (18.1% vs 19.5%), down from above-average rates in 2020 for men and women. Unemployed, inactive, and self-employed people, retirees and foreign-born people are also at a higher risk of poverty and social exclusion, as well as single-person households. In 2021, Slovenia had the lowest

([114])IMAD Development Report, 17 August 2022.

level of income inequality among all EU countries ([115]), but 11.7% of the population still lived below the poverty threshold. The current period of high inflation may further deteriorate the situation in terms of purchasing power of low- and middle- income households. Overall, housing deprivation is higher than the EU average. Slovenia's RRP aims to improve access to non-profit rental housing for young families, socially deprived individuals and marginalised groups. In combination with the ESF+, further social policy action would allow Slovenia to contribute to reaching the national target of having at least 9 000 fewer people at risk of poverty by 2030.

Since the COVID-19 pandemic, access to quality long-term care has further deteriorated. The main reasons are poorly developed formal home care, a lack of facilities and staff in residential care homes and no proper policy/strategy on community and home-based care.

([115]) The low income inequality in Slovenia is mainly due to progressive taxation and, to some extent, social transfers. (IMAD Development report 2022).

This Annex outlines the main challenges for Slovenia's education and training system in light of the EU-level targets and other contextual indicators under the European Education Area strategic framework, based on the 2022 Education and Training Monitor.

Slovenia faces increasing challenges to maintain the quality of its teaching workforce. Teacher shortages present an acute challenge in several subject areas and specialised domains, such as: kindergarten teachers, classroom and subject teachers in primary and secondary schools, especially in the fields of science, technology, engineering and mathematics (STEM); teachers of professional subjects; professionals working with children with special needs; and in support occupations (pedagogues, psychologists, etc.) ([116]). The age distribution of teachers in primary and secondary education has been stable since 2016: more than one third of teachers are aged 50 and above. By 2030, between 39% ([117]) and 56% ([118]) of STEM teachers in lower secondary education are estimated to retire. Their replacement will require a larger number of new entrants than the current supply of graduates in these disciplines, notwithstanding decreasing demographic cohorts. However, in 2020, the percentage of young teachers (under 25) was well below the EU average (0.5% vs. 1.2%), and the number of graduates in STEM teacher training programmes is plummeting ([119]). The weakened social status of the profession and uncompetitive salaries deter graduates from entering teaching careers. According to the OECD TALIS survey (2018), only 6% of teachers in Slovenia perceive that their work is valued by society, the second lowest rating in the EU. Initiatives such as scholarships for pedagogical students in the fields of science and technology and special needs education, or making available systemic traineeships for teaching staff, seek to support new entrants in the profession. Salary negotiations between the government and trade unions are also ongoing in early 2023.

Participation in early childhood education and care (ECEC) is steadily increasing. In 2021, 92.6% of children between the age of 3 and compulsory school age attended kindergartens, close to the EU average of 93%. Government policies, such as child subsidies; targeted support for vulnerable children in the form of short programmes; and the modernisation of ECEC curricula, contribute to these positive trends.

Young people perform well in basic and digital skills, **although educational outcomes vary by school type, immigrant background and gender**. The selectivity of the school system at age 15 contributes to performance gaps observed between schools in PISA (Programme for International Student Assessment) test results: well-performing students tend to be streamed in general secondary education (gymnasia), while despite its growing popularity, vocational education and training attracts pupils with weaker results. Among 15-year-olds, the gender gap in reading has narrowed over the past decade. While newly arrived migrant children are twice more likely to be underachievers in reading compared to their native-born peers, native-born pupils with immigrant parents fare significantly better. Slovenia has reinforced language support for migrant pupils to facilitate their inclusion. The rate of early leavers from education and training is one of

([116]) Employment Service of Slovenia (2022) Teachers and Professionals in Primary and Secondary Schools; Employment Service of Slovenia (2022): Occupation Barometer.

([117]) Ministry of Education, KPIS evidence (2022), share of lower secondary teachers aged 50 and above, in the fields of biology, physics, chemistry, mathematics, natural science, technics and technology, aggregated.

([118]) Dolenc, K., Šorgo, A., & Virtič, M. P. (2021). Signs of a Catastrophe: Predicted Shortage of Teachers of Lower Secondary Science and Technics and Technology in Slovenia. Journal of Elementary Education, 14(2), 239-256.

([119]) Dolenc, K., Šorgo, A., & Virtič, M. P. (2021). Signs of a Catastrophe: Predicted Shortage of Teachers of Lower Secondary Science and Technics and Technology in Slovenia. Journal of Elementary Education, 14(2), 239-256.

the lowest in the EU, at 4.1%, well below the EU-level target of 9%.

Slovenia is implementing reforms to support the green and digital transformations in education. Slovenian schools are generally well equipped and connected, but there is no centrally available data on the distribution of equipment, hindering targeted support for schools in need. The COVID-19 pandemic revealed deficiencies in teachers' digital skills, and while young Slovenians fare around the EU average in digital skills, there is a shortage of highly trained ICT professionals (see Annex 10). Under its national recovery and resilience plan, Slovenia aims to train 20 000 education professionals and managers – close to half of the teaching population – in digital and green skills, and in skills for environmental sustainability and financial literacy. This could pave the way towards a more comprehensive reform. Currently, in Slovenia, ICT training and environmental sustainability are not systematically incorporated across initial teacher education and specialist programmes.

While vocational education and training (VET) is a popular choice among students, the employment of recent VET upper secondary graduates decreased between 2018 (84.5%) and 2021 (78%) by 6.5 pps. Adult participation in lifelong learning, including reskilling and upskilling, is to be further strengthened, especially for vulnerable groups (see Annex 14).

Tertiary education attainment is high, but there is a significant gender gap. In 2022, tertiary education attainment of young people aged 25-35 reached 47.3%, surpassing the EU target of 45%. However, the attainment rate among women (60.2%) almost doubles the rate among men (36.4%), while female students remain under-represented in ICT programmes. In its national programme of higher education up to 2030, Slovenia has committed to the transformation and internationalisation of its higher education system. With support from the Recovery and Resilience Facility, Slovenia aims to invest in green, resilient, sustainable and digitally connected higher education, by greening infrastructure and by modernising curricula to include digital and sustainability competences. It also aims to introduce more flexible learning pathways, including through micro-credentials.

Table A15.1: **EU-level targets and other contextual indicators under the European Education Area strategic framework**

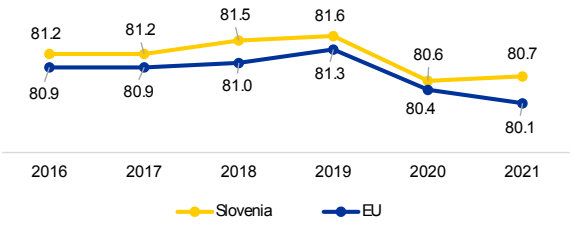
				2015		2022	
Indicator			Target	Slovenia	EU27	Slovenia	EU27
[1]Participation in early childhood education (age 3+)			96%	88.0%	91.9%	92.6% 2020	93.0% 2020
[2]Low achieving 15-year-olds in:		Reading	< 15%	15.1%	20.0%	17.9% 2018	22.5% 2018
		Mathematics	< 15%	16.1%	22.3%	16.4% 2018	22.9% 2018
		Science	< 15%	15.0%	21.1%	14.6% 2018	22.3% 2018
Early leavers from education and training (age 18-24)	[3]Total		< 9 %	5.0%	11.0%	4.1%	9.6%
	[3] By gender	Men		6.4%	12.5%	4.2% u	11.1%
		Women		3.4% u	9.4%	3.9% u	8.0%
	[4] By degree of urbanisation	Cities		4.6% u	9.6%	: u	8.6%
		Rural areas		4.8% u	12.2%	3.8% u	10.0%
	[5] By country of birth	Native		4.3%	10.0%	3.5% u	8.3%
		EU-born		: u	20.7%	: u	20.3%
		Non EU-born		17.7% u	23.4%	: u	22.1%
[6]Equity indicator (percentage points)				:	:	10.5 2018	19.3 2018
[7]Exposure of VET graduates to work based learning	Total		≥ 60% (2025)	:	:	47.0%	60.1%
Tertiary educational attainment (age 25-34)	[8]Total		45%	40.8%	36.5%	47.3%	42.0%
	[8] By gender	Men		30.3%	31.2%	36.4%	36.5%
		Women		52.7%	41.8%	60.2%	47.6%
	[9] By degree of urbanisation	Cities		46.5%	46.2%	55.0%	52.2%
		Rural areas		39.1%	26.9%	43.9%	30.2%
	[10] By country of birth	Native		42.6%	37.7%	51.1%	43.0%
		EU-born		28.6% u	32.7%	55.1% u	39.5%
		Non EU-born		17.9% u	27.0%	17.0% u	35.7%
[11]Share of school teachers (ISCED 1-3) who are 50 years or over				35.5%	38.3%	36.5% 2020	39.2% 2020

Source: (1.3,4.5,7.8,9.10,11) = Eurostat; 2 = OECD (PISA); 6 = European Commission (Joint Research Centre). Notes: Data is not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills and participation of adults in learning. The equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status.

A healthy population and an effective, accessible and resilient health system are prerequisites for a sustainable economy and society. This Annex provides a snapshot of population health and the health system in Slovenia.

Life expectancy is above the EU average, but its upward trend was disrupted in 2020 by the advent of COVID-19. Life expectancy rebounded in 2021 with the number of COVID-19 deaths remaining nearly constant compared to 2020 ([120]). In 2020, the leading causes of death were diseases of the circulatory systems ("cardiovascular diseases") followed by cancer and COVID-19; treatable mortality is below the EU average. Cancer still poses a significant burden: for most cancers, survival rates are worse than the EU average (except for cervical cancer), despite significant efforts and dedicated public health measures.

Graph A16.1:**Life expectancy at birth, years**



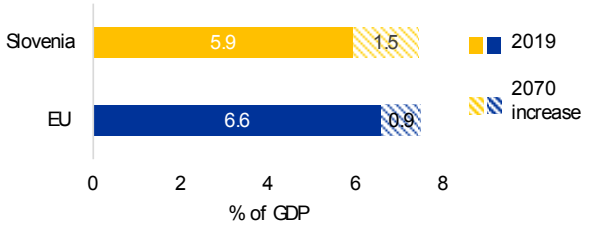
Source: Eurostat

Health expenditure is below the EU average, despite increases in recent years. Resource allocation is based on historical budgeting (with no further allocation by region or need). An overall annual budget cap applies to public expenditure under the statutory health insurance. Public funding accounted for around 73% of health expenditure in 2020, well below the EU average (81.2%). The main spending category by budget share is outpatient care (curative and rehabilitative care), at almost 28.8% (compared to 22.6% for the EU overall).

Spending on inpatient care is around the EU average (at 26.3% vs 26.4%) and spending on pharmaceuticals is above the EU average (17.26% vs 13,98%). This resource distribution reflects recent efforts to reorient healthcare service delivery from inpatient to outpatient care. Slovenia has one of the lowest shares of out-of-pocket healthcare spending (12.5% of total health spending, below the EU average of 14.4%). This is mainly due to the extensive uptake (around 73% of the population) of voluntary health insurance (VHI), providing complementary coverage for co-payments. However, overall private health expenditure is significant, at 26.9% of total health spending in 2020 (EU average: 20.3%). VHI accounts for more than half of private health expenditure.

Public spending on health is projected to increase by 1.5 percentage points (pps) of GDP by 2070. This is much higher than the EU average (0.9 pps) and raises significant concerns about the future financial sustainability of public financing of healthcare (see Annex 11 and Graph A16.2).

Graph A16.2:**Projected increase in public expenditure on healthcare over 2019-2070**



AWG reference scenario
Source: European Commission / EPC (2021)

In 2020, spending on prevention in Slovenia amounted to 3.2% of total spending on healthcare (compared to 3.4% for the EU overall). There was only a small budget increase compared to 2019 (7%, compared to a 26% increase for the EU overall). Across the EU, this increase was primarily driven by spending on disease detection, surveillance, control and response programmes as part of the public health response to COVID-19.

([120]) Based on data provided directly by Member States to ECDC under the European Surveillance System (data current as of 13 April 2023)

Table A16.1: **Key health indicators**

	2017	2018	2019	2020	2021	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	78.2	77.4	72.0	69.8	NA	91.7 (2020)
Cancer mortality per 100 000 population	304.8	309.3	290.1	290.7	NA	242.2 (2020)
Current expenditure on health, % GDP	8.2	8.3	8.5	9.5	NA	10.9 (2020)
Public share of health expenditure, % of current health expenditure	72.2	72.8	72.8	73.2	NA	81.2 (2020)
Spending on prevention, % of current health expenditure	3.0	3.1	3.2	3.2	NA	3.4 (2020)
Acute care beds per 100 000 population	420	413	413	NA	NA	387.4 (2019)
Doctors per 1 000 population *	3.1	3.2	3.3	3.3	NA	3.9 (2020)
Nurses per 1 000 population *	9.9	10.1	10.3	10.5	NA	8.3 (2020)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day (total consumption for CY and CZ) **	11.6	11.7	11.5	8.8	8.7	14.5 (2021)

Note: The EU average is weighted for all indicators, except for (*) and (**), for which the EU simple average is used. The simple average for (*) uses data for 2020 or most recent year if former not available. Doctors' density data refer to practising doctors in all countries except EL, PT (licensed to practice) and SK (professionally active). Nurses' density data refer to practising nurses in all countries except FR, PT, SK (professionally active) and EL (nurses working in hospitals only).
Source: Eurostat; except: ** ECDC

Low availability of resources, resulting in lagging accessibility, and weak care coordination pose a challenge to the health system. Long waiting times are the main driver of reported unmet medical needs (currently at 4.8% and above the EU average – see Annex 14). Some recent short-term measures (extra funding) aimed to address exceedingly long waiting times for first appointments in the publicly funded segment of the outpatient sector. Further efforts to strengthen primary care rely on appropriate numbers of doctors and an expanded role for nurses in specific areas of healthcare. The number of doctors is below the EU average, with only one in five being a general practitioner (and even lower rates in rural and less accessible areas). For nurses, projections suggest that some additional 2 000 new graduates will be needed by 2025. An important challenge is to strengthen access to primary care and promote greater coordination and cooperation between primary care and secondary care providers. This should help ensure care coordination and monitoring of complex chronic patients, and improve integration with social welfare services. Reforms are planned to alleviate shortages of healthcare workers: a more reliable health workforce planning system, improved training, and a new model for remuneration packages for health professionals (to address the lack of attractiveness/incentives of specialising in primary care for young graduates). Slovenia currently also lacks financial resources to strengthen and optimise the health and long-term care systems. Future reform activity will focus on ensuring diversification of health system revenues and introducing efficiency-oriented measures for a more consistent implementation of performance indicators at all levels of care. The implementation of the Long-Term Care Act is expected to help bring about a gradual introduction of rights and the entry into force of a law on compulsory long-term care insurance by the end of 2025.

Mental disorders are the most common reason for disability retirement. Moreover, they are the third most common reason for work incapacity and sick leave (which are, on average, among the longest in the EU). Mental disorders and suicides represent a major public health problem (with a financial burden estimated at 4% of GDP). The suicide mortality rate is one of the highest in EU, with significant regional variability. The death rate related to excessive drinking, closely linked to mental health, is also much higher than the EU average. The share of people seeking mental care (at only 2.1% vs 5.3% on EU average) is influenced by the lack of coordination in planning access to relevant services (with psychiatrists concentrated mainly in hospitals), stigmatisation of mental disorders, and low mental health literacy.

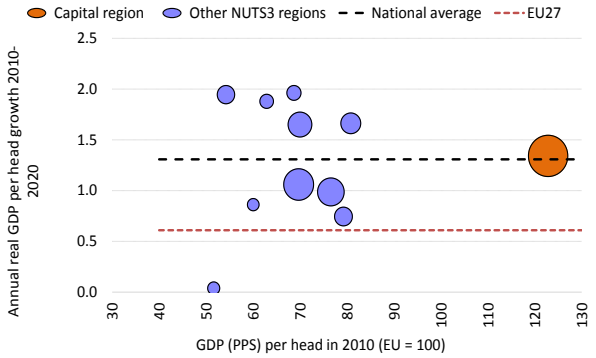
The health component of Slovenia's recovery and resilience plan (RRP) amounts to around 9% of the total RRP budget and is expected to address challenges in resilience, accessibility

and quality of healthcare and integration across care levels. The RRP introduces reforms and investments aiming at improving the accessibility of the healthcare system. Proposed measures aim to strengthen the networks and competence of health personnel in primary care, integrated care and mental care, and to promote community-based services and independent living to ensure quality of care. Major investment projects in the healthcare infrastructure aim to significantly upgrade/improve the capacity to effectively address communicable diseases, to digitalise the National Health Service, and to ensure that public health institutions (including emergency services) have all modern medical equipment they need.

The annex showcases the economic and social regional dynamics in Slovenia, providing an update of the economic, social, and territorial cohesion in and among Slovenia's regions compared with the rest of the EU and the main regional economic recovery challenges.

Regional disparities in Slovenia have remained prominent despite strong recent growth overall. Whilst overall GDP growth in Slovenia in 2021 (8.2%) and in 2022 (5.4%) was strong and well above the EU average, the gap between the capital region and other regions has further increased and is very pronounced. As for 2021, GDP per capita in PPS at NUTS-3 level compared to the national average, the Ljubljana region stands out at 147% - almost three times higher than in the Zasavska region (53%; 2020: 144% and 54%). This is the largest difference since the monitoring of these data began.

Graph A17.1:**GDP per capita (2010) and GDP growth (2011-2020), Slovenia (NUTS 3 regions)**



Source: EUROSTAT, DG REGIO elaboration

There has been some long-term convergence with the rest of the EU, but disparities between regions have remained. GDP per-capita growth in the capital region was slightly higher than the national average of 1.3% per year after 2011, but clearly above the EU average of 0.6%. Half of the other NUTS-3 regions in Slovenia showed stronger growth, with Posavska as the frontrunner at 2% per year. However, Zasavska, which had the lowest GDP per head in 2010, also had the lowest annual growth (0.04%) during 2011-2020 (see Graph A17.1).

Convergence between the NUTS-2 regions has not improved in recent years. In 2021, Eastern Slovenia (82%) continued to lag behind Western Slovenia (120%) in terms of GDP per capita of the national average. This is a slight increase compared to 2020, where figures stood at 83% and 119% respectively.

The regional differences in GDP per employee are more nuanced and reflect the intense level of daily work commuting. At NUTS-3 level in 2021, the capital region accounted for 112% of the national average, whilst the lowest- performing Pomurska region stood at 86%. This lower difference - compared to GDP *per capita* - is also due to the intense daily commuting into the capital region, predominantly by cars. This, alongside the substantial fuel sales in Slovenia as a transit country, has contributed to the 30%-increase of the transport sector's carbon-footprint in Slovenia's between 2005 and 2020.

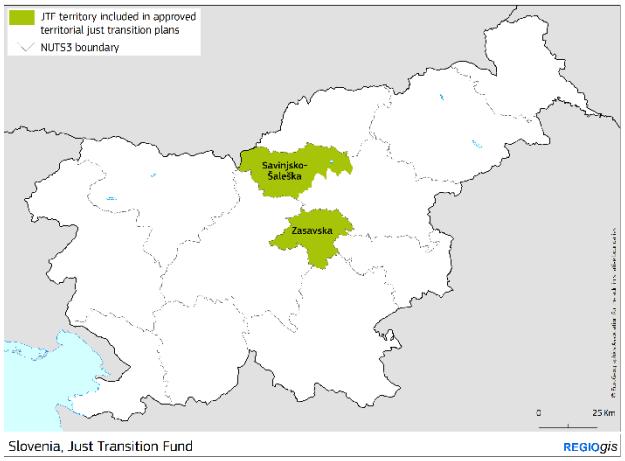
The transition from fossil-fuels energy production is a core challenge for Slovenia. The transition towards the EU's 2030 energy and climate targets and a climate-neutral economy by 2050 require the medium-term phase-out of CO2-intensive coal. In the Savinjsko-Šaleška region, the coal mining in Velenje and the Šoštanj power plant's lignite blocks will be phased out by 2033. The Zasavska region faces an incomplete transition away from coal. The challenges in these two coal regions are different in scale, but centered around decarbonisation and expansion of renewable energies, economic diversification, and creating new job opportunities. These Eastern Slovenian regions are benefitting from support by the Just Transition Fund (JTF; see Map A17.1).

Table A17.1: **Selected indicators at regional level in Slovenia**

NUTS-2 Region	GDP per head (PPS)	Productivity (GVA (PPS) per person employed)	Real productivity growth	GDP per head growth	Population growth	Unemployment rate	Regional Competitiveness Index	CO_2 emissions per head	Innovation performance
	EU27=100, 2021	EU27=100, 2021	Avg % change on preceding year, 2010-2020	Avg % change on preceding year, 2010-2020	Total % change, 2011-2020	% of active population, 2021	Range 0-100, 2022	tCO_2 equivalent, 2021	EU Regional Innovation Scoreboard, 2022
European Union	100	100	1.00	1.00	2.0	7.0	100.0	8.8	
Slovenija	90	82	0.80	1.57	2.8	4.7	104.2		
Vzhodna Slovenija	74	75	0.95	1.34	0.6	5.0	99.4	11.4	Moderate innovator o
Zahodna Slovenija	108	88	0.64	1.75	5.4	4.5	109.6	6.2	Moderate innovator o

Source: EUROSTAT

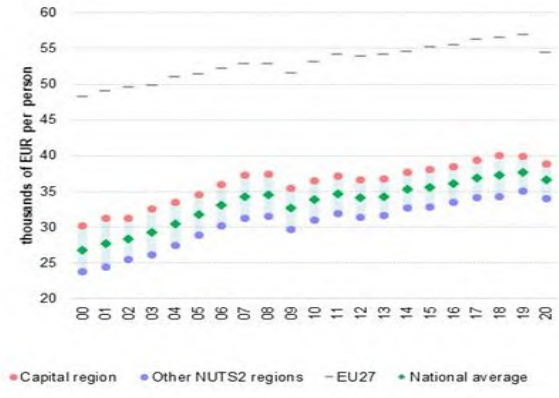
Map A17.1:**Territories most affected by the climate transition in Slovenia (NUTS 3 and below)**



Source: DG REGIO

Overall, the share has strongly decreased in all types of regions since 2013.

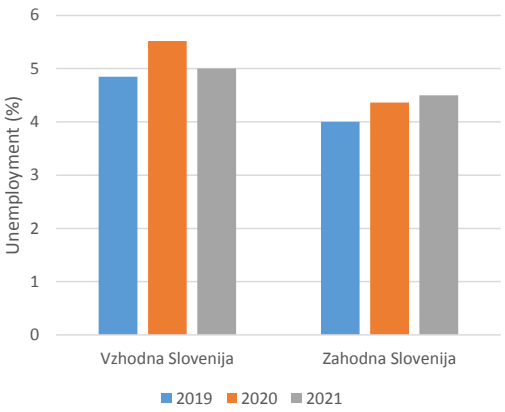
Graph A17.2:**Labour productivity (real GVA per worker), EU-27, Slovenia (NUTS 2), 2000-2020**



Source: EUROSTAT, DG REGIO elaboration

The productivity gap between Eastern and Western Slovenia has narrowed recently. Annual real productivity growth in Eastern Slovenia (1.0% in 2011-2020) was higher than in Western Slovenia (0.6%). In both regions, productivity growth was noticeably higher than the EU average (0.2%). However, overall productivity in Slovenia was still 20% lower than in the EU in 2020 (see Graph A17.2). As for regional competiveness, Western Slovenia stood at 110% and Eastern Slovenia at 99% of EU average in 2022. The unemployment rate in cities is slightly higher than in rural areas.

Graph A17.3:**Unemployment, Slovenia, 2019-2021**



Source: EUROSTAT, DG REGIO elaboration

Many social indicators have shown continuous improvement despite a persisting urban-rural divide. About 40% of the Slovenian population aged 25-64 have a higher education degree - above the EU average of 33%. The share is considerably higher in cities (53%) than in towns (41%) and rural areas (34%). The shares increased in all region types in 2011-2021, but the rate of increase was somewhat higher in rural areas and lower in cities, which suggests some convergence.

Both NUTS-2 regions in Slovenia were affected by the COVID pandemic. However, the social-economic consequences were slightly different. In contrast to the upward trend 2015-2019, the employment rate dropped in both regions in 2020, but recovered in 2021 and 2022. The unemployment rate rose in both regions in 2020 and continued to increase in the capital region in 2021, but fell in Eastern Slovenia in 2021, and is now at a record low nationwide.

Despite the pandemic and the Russian invasion of Ukraine, the profitability of Slovenian banks has remained solid thanks to improving asset quality, but solvency has slightly deteriorated. Return on equity has systematically exceeded 9% since 2017, mainly thanks to the continuous net release of impairments. However, because of the rise in lending activity and a decline in regulatory capital due to securities revaluations, the capital adequacy ratio deteriorated in 2022 and reached 17.0% in September 2022 (vs 18.6% in the EU). Slovenian banks have no significant exposure to Russia or Ukraine. The only exception was the Slovenian subsidiary of Sberbank, which was smoothly resolved and sold to NLB, the largest domestic bank, on 1 March 2022. The non-performing-loan ratio kept improving and fell to 1.9% in September 2022 (vs 1.8% in the EU), down from 3.0% in 2020. Credit to households and to non-financial corporations has strongly recovered from the pandemic lows and grew strongly at year-on-year rate of respectively 7.7% (vs 3.7% in the euro area) and 12.4% (vs 5.5% in the euro area) in December 2022. With a loan-to-deposit ratio of 70.0% (vs 87.9% in the EU) in Q2-2022, banks benefit from a substantial excess of deposits over loans. This ensures a relatively stable funding basis and abundant liquidity. The new law voted on 2 February 2022 capping the exchange rate on Swiss-franc loans could have negatively affected the banking sector, but the Constitutional Court annulled this law on 14 December 2022. However, several lawsuits are still underway and these may lead to significant losses for some banks if the rulings are in favour of the borrowers.

The residential real-estate market is showing medium vulnerabilities that are being mitigated by appropriate and sufficient macroprudential policy measures. In 2022, the European Systemic Risk Board (ESRB) identified several key vulnerabilities in the Slovenian real-estate market: elevated house price growth; elevated growth in mortgage lending; and lending standards that were improving but still relatively loose. The ESRB observed that Slovenia's current policy mix is appropriate and sufficient and that this framework had been instrumental in mitigating risks. The current macroprudential restrictions on consumer lending lay down binding caps on the loan maturity and the debt-service-to-income ratio, and a non-binding cap on the loan-to-value (LTV) ratio. These limits have been effective at improving lending standards on new mortgage loans. However, these restrictions were partially relaxed on 1 July 2022. On 29 April 2022, the Bank of Slovenia, the country's central bank, decided to implement (as of 1 January 2023) a sectoral systemic risk buffer of 1% on retail mortgages and 0.5% for other retail loan exposures. This additional capital buffer was justified by the risks arising from: (i) increased prices for real-estate; (ii) the growth in mortgage loans; (iii) an environment of low interest rates; and (iv) the partial relaxation of macroprudential restrictions on household lending. Finally, on 7 December 2022, the Bank of Slovenia decided to increase its countercyclical risk buffer from 0% to 0.5% (as of 31 December 2023) as a result of the increase in systemic risks.

Despite inflation, Slovenian banks finance the economy on quite reasonable terms. In general, interest rates offered on mortgage loans in Slovenia have always been slightly higher than the euro-area average. After a long period of decline that started in September 2008, mortgage rates reached an all-time low at 1.53% in May 2022 before soaring to 3.43% in November 2022 (vs 2.93% in the euro area). In contrast, corporate loans up to EUR 1 million were significantly more expensive in Slovenia until 2015, when interest rates started to converge towards the euro-area average. They reached an all-time low at 1.86% in March 2022 before jumping to 3.61% in November 2022 (vs 3.32% in the euro area).

Table A18.1: **Financial soundness indicators**

	2017	2018	2019	2020	2021	2022	EU	Median
Total assets of the banking sector (% of GDP)	94.0	88.6	87.9	98.2	94.6	87.8	276.8	207.9
Share (total assets) of the five largest banks (%)	61.5	60.8	60.9	67.3	68.7	-	-	68.7
Share (total assets) of domestic credit institutions (%)[1]	54.2	54.0	51.0	48.3	49.1	51.3	-	60.2
NFC credit growth (year-on-year % change)	1.9	1.5	2.7	0.3	7.2	12.4	-	9.1
HH credit growth (year-on-year % change)	7.2	6.8	6.1	0.7	5.3	7.7	-	5.4
Financial soundness indicators:[1]								
- non-performing loans (% of total loans)	9.2	6.0	3.4	3.0	2.1	1.9	1.8	1.8
- capital adequacy ratio (%)	18.1	17.9	18.5	18.3	18.4	17.0	18.6	19.8
- return on equity (%)[2]	9.1	10.7	10.3	11.3	9.5	13.9	6.1	6.6
Cost-to-income ratio (%)[1]	63.7	59.9	59.4	59.5	59.8	56.9	60.6	51.8
Loan-to-deposit ratio (%)[1]	74.7	73.1	73.3	66.6	65.4	70.6	88.6	78.0
Central bank liquidity as % of liabilities	3.5	3.3	2.8	3.5	5.6	1.7	-	2.9
Private sector debt (% of GDP)	76.1	72.5	68.6	69.5	66.4	-	-	120.7
Long-term interest rate spread versus Bund (basis points)	64.3	53.4	52.8	58.9	44.4	75.0	-	93.3
Market funding ratio (%)	34.0	34.0	32.2	32.2	30.6	-	50.8	40.0
Green bonds issued to all bonds (%)	-	0.3	0.3	0.2	0.2	0.2	3.9	2.3

1-3 | 4-10 | 11-17 | 18-24 | 25-27 — Colours indicate performance ranking among 27 EU Member States.

(1) Last data: Q3-2022.
(2) Data are annualised.
Source: ECB, Eurostat, S&P Global Capital IQ Pro.

Sustainable finance is not yet very developed in Slovenia, but some recent initiatives have shown growing awareness of the sector's potential. In June 2021, Slovenia issued a sovereign sustainability bond of EUR 1 bn. In July 2021, the Bank Association of Slovenia issued guidelines summarising key regulatory requirements in sustainable financing and providing banks with non-binding guidelines for the development of sustainable financing according to the principle of proportionality. In August 2022, the Bank Association of Slovenia also prepared a sample questionnaire to assess the environmental, social and management (ESG) aspects of the companies financed by banks.

The Bank of Slovenia has set up a FinTech innovation hub. This dedicated, single point of contact aims to: (i) facilitate the exchange of information related to innovative business models; and (ii) clarify regulatory requirements for the areas within the competence of the Bank of Slovenia. The innovation hub targets businesses planning to provide solutions based on financial technologies in Slovenia or within the European Economic Area.

The insurance market is highly concentrated and largely state-owned. It is dominated by Zavarovalnica Triglav (27% of market share), followed by Zavarovalnica Sava (19%), Generali (18%) and Vzajemna (14%). Together, these four companies controlled nearly 80% of the insurance market in 2020. Generali significantly increased its market share in 2020 by acquiring Adriatic Slovenica Zavarovalna druzba. The two largest insurers are controlled by the Slovenian state.

Insurers' profitability and solvency have improved, but unexpectedly high inflation is a concern for non-life insurance. Insurers' gross written premiums again increased slightly in 2021 compared with 2020, driven primarily by non-life insurance. The claims ratio improved in both non-life and life insurance, but deteriorated in the health-insurance sector as a result of the COVID-19 pandemic. The profitability of insurance and reinsurance corporations improved strongly in 2021, as did their capital adequacy, with a slight increase in the solvency ratio from 231% in 2020 to 235% in June 2022 (vs 269% in the EU). However, as is the case elsewhere, the unexpectedly high inflation is likely to generate significant losses for the non-life, especially long-tail, businesses in Slovenia.

Slovenian capital markets remain less liquid and developed than the EU average, but reforms are underway. Slovenian

corporations rely more on bank funding and less on market funding relative to the EU average. The Ljubljana Stock Exchange continues to face very low and decreasing liquidity. In 2021, its trading volume dropped by 5.5% to reach only EUR 380 million. However, in terms of value, some specific segments continued to grow. For instance, the value of alternative-investment-fund assets surged by 64% to a total of EUR 374 million in December 2021. Likewise, domestic mutual funds recorded high growth in their assets under management in 2021. Net inflows into mutual funds were above their historical average in 2021, with equity funds recording the largest inflows. Domestic mutual funds hold most of their assets in equity and investment-fund shares/units, which exposes them to market risk. The equity investments of domestic mutual funds mostly focus on the US. Their exposure to public limited companies in Russia and Ukraine is low. The recovery and resilience plan includes plans for two reforms to strengthen capital markets in Slovenia, namely: (i) the adoption of a new act on alternative investment funds; and (ii) the implementation of a new strategy for the Slovenian capital market, setting out specific measures for further development.

This Annex provides an indicator-based overview of Slovenia's tax system. It includes information on the tax structure (the types of tax that Slovenia derives most of its revenue from), the tax burden on workers, and the progressivity and redistributive effect of the tax system. It also provides information on tax collection and compliance.

Slovenia's tax revenues in relation to GDP are slightly lower than the EU aggregate and some relatively growth-friendly taxes are underused. Slovenia's labour tax revenues as a percentage of GDP were slightly below the EU aggregate in 2021 (Table A19.1). Slovenia relied heavily on labour taxation reflected in a share of labour taxes in total tax revenues that was above the EU aggregate (see Graph A19.1). Revenues from consumption and environmental taxes as a share of total taxation were above the EU aggregate, but revenues from capital taxes were below. Environmental tax revenue as a percentage of total tax revenue and of GDP were clearly above the EU aggregate and were (as was the case for other EU Member States) almost entirely composed of energy and transport taxes (see the graph on page 90 of the Annual Report on Taxation 2022). At the same time, revenues from recurrent property taxes, which are considered to be particularly conducive to growth, were clearly below the EU aggregate. A greater use of recurrent property taxes would have the potential to increase tax revenue and boost economic growth. Finally, against a background of high inflation and high living costs, Slovenia temporarily reduced VAT rates for electricity, gas, heating and firewood from 22% to 9.5%.

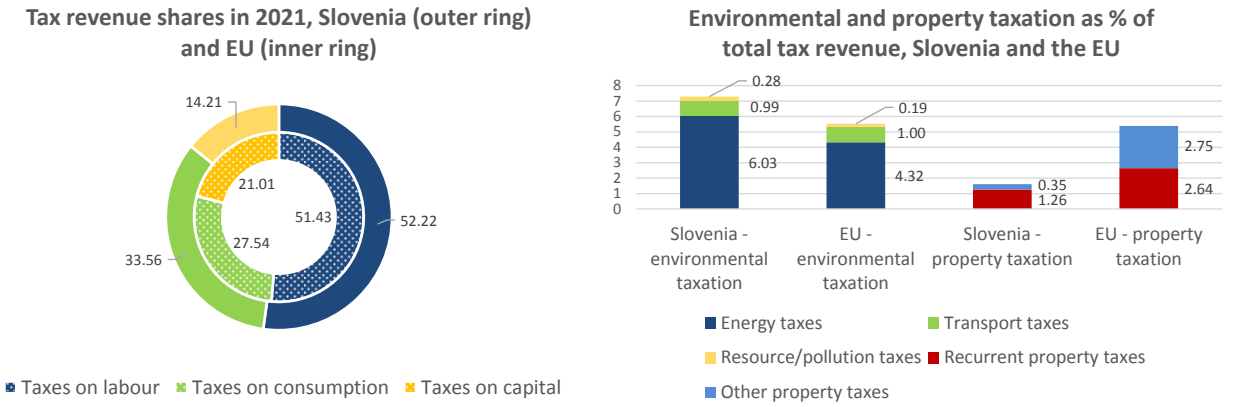
Slovenia's labour tax wedge is high across different wage levels and the labour tax burden is less progressive than the EU average. The labour tax wedge for Slovenia in 2022 was higher than the EU average at various income levels, in particular for single people at 50% of the average wage (see Graph A19.2). Second earners at a wage level of 67% of the average wage, whose spouses earn the average wage, also were subject to a tax wedge that was considerably higher than the EU average. However, the difference between their tax wedge and that of single earners at the same

Table A19.1: **Taxation indicators**

		Slovenia					EU-27				
		2010	2019	2020	2021	2022	2010	2019	2020	2021	2022
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	38.0	37.4	37.5	38.2		37.9	39.9	40.0	40.6	
	Labour taxes (as % of GDP)	19.6	18.9	20.1	19.9		20.0	20.7	21.3	20.9	
	Consumption taxes (as % of GDP)	13.7	13.4	12.3	12.8		10.8	11.1	10.7	11.2	
	Capital taxes (as % of GDP)	4.7	5.1	5.1	5.4		7.1	8.1	8.0	8.5	
	Total property taxes (as % of GDP)	0.6	0.6	0.6	0.6		1.9	2.2	2.2	2.2	
	Recurrent taxes on immovable property (as % of GDP)	0.5	0.5	0.5	0.5		1.1	1.2	1.2	1.1	
	Environmental taxes as % of GDP	3.6	3.3	2.9	2.8		2.4	2.4	2.2	2.2	
Progressivity & fairness	Tax wedge at 50% of average wage (Single person) (*)	33.7	37.2	37.2	39.5	39.2	33.9	32.3	31.9	32.1	31.7
	Tax wedge at 100% of average wage (Single person) (*)	42.5	43.5	43.1	43.5	42.8	41.0	40.1	39.9	39.7	39.7
	Corporate income tax - effective average tax rates (1) (*)		17.5	17.5	17.5			19.5	19.4	19.1	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	10.6	9.3	9.5	8.5		8.6	7.7	8.1	7.8	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		6.7	6.1				31.6	40.7		
	VAT Gap (% of VAT total tax liability, VTTL)		5.5	5.5				11.0	9.1		

(1) Forward-looking effective tax rate (OECD).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average
For more data on tax revenues as well as the methodology applied, see European Commission, Directorate-General for Taxation and Customs Union, *Taxation trends in the European Union: data for the EU Member States, Iceland, Norway and United Kingdom: 2021 edition*, Publications Office of the European Union, 2021, https://data.europa.eu/doi/10.2778/843047 and the *Data on Taxation* webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, *VAT gap in the EU: report 2022*, Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2778/109823.
Source: European Commission, OECD.

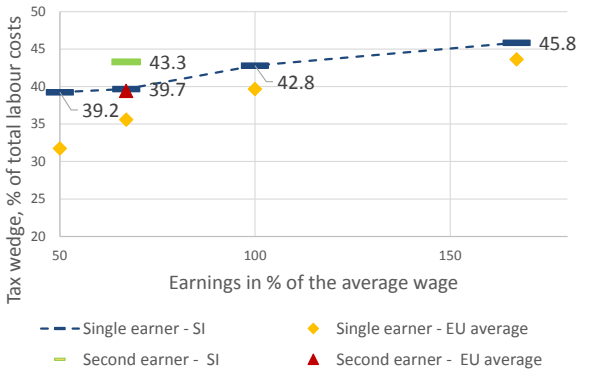
Graph A19.1:**Tax revenues for different tax types as % of total taxation**



Note: Values for EU are GDP-weighted EU averages (EU aggregates)
Source: European Commission

wage level was slightly below the EU average. Slovenia is one of the Member States with the lowest income inequality as measured by the GINI coefficient and the tax benefit system helped reduce income inequality by more than the EU average in 2021. Personal income tax cuts in the spring of 2022 reduced the labour tax burden at the cost of lower labour tax revenues but were mostly reversed by changes to the Personal Income Tax Act entered into force in 2023. The reversals will mostly benefit low-income earners, while high incomes will be subject to higher taxes than in 2022. **Slovenia is doing moderately well in digitalising its tax administration, which can help reduce tax arrears and compliance costs.** Outstanding tax arrears have declined slightly by 0.6 percentage points (pp.) to 6.1% of total net revenue. This is significantly below the EU-27 average of 40.7%, but that average is inflated by very large values in a few Member States. However, compliance costs for companies in Slovenia are much higher than the EU average, both for completing tax returns and for complying with corporate income tax audits. The VAT gap (the gap between revenues actually collected and the theoretical tax liability) remained stable in Slovenia at 5.5% and is below the EU-wide gap of 9.1%. Legislative changes that reintroduced mandatory receipts at cash registers have been adopted.

Graph A19.2:**Tax wedge for single and second earners as a % of total labour costs, 2022**



(1) Second earner tax wedge assumes first earner at 100% of the average wage and no children. For the methodology of the tax wedge for second earners see OECD (2016) "Taxing Wages 2014-2105"
Source: European Commission

Table A20.1: **Key economic and financial indicators**

	2004-07	2008-12	2013-19	2020	2021	2022	forecast 2023	forecast 2024
Real GDP (y-o-y)	5.2	-1.0	2.8	-4.3	8.2	5.4	1.2	2.2
Potential growth (y-o-y)	3.4	1.8	1.4	2.3	2.6	3.1	3.0	3.1
Private consumption (y-o-y)	3.1	0.9	2.1	-6.9	9.5	8.9	1.7	1.9
Public consumption (y-o-y)	2.9	0.9	1.1	4.1	5.8	0.9	0.6	1.8
Gross fixed capital formation (y-o-y)	7.8	-8.9	3.3	-7.9	13.7	7.8	3.9	3.8
Exports of goods and services (y-o-y)	13.1	0.6	5.9	-8.6	14.5	6.5	2.8	4.0
Imports of goods and services (y-o-y)	12.6	-1.6	5.6	-9.6	17.6	9.8	2.8	4.2
Contribution to GDP growth:								
Domestic demand (y-o-y)	4.2	-1.5	1.9	-4.4	8.5	6.3	1.9	2.2
Inventories (y-o-y)	0.8	-0.9	0.2	0.1	0.4	1.1	-0.6	0.0
Net exports (y-o-y)	0.1	1.5	0.7	0.0	-0.8	-2.1	0.0	0.0
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.1	0.1	0.1	0.7	0.5	0.8	0.6	0.7
Capital accumulation (y-o-y)	1.6	0.6	-0.2	-0.1	0.4	0.7	0.8	0.8
Total factor productivity (y-o-y)	1.6	1.2	1.5	1.7	1.7	1.6	1.6	1.6
Output gap	4.3	-1.3	-2.2	-3.2	2.1	4.3	2.6	1.6
Unemployment rate	5.9	6.9	7.6	5.0	4.8	4.0	3.9	3.8
GDP deflator (y-o-y)	2.8	1.7	1.4	1.3	2.6	7.2	7.3	4.3
Harmonised index of consumer prices (HICP, y-o-y)	3.1	2.7	0.9	-0.3	2.0	9.3	7.0	3.8
HICP excluding energy and unprocessed food (y-o-y)	2.5	1.8	1.0	1.0	1.0	6.8	6.8	3.6
Nominal compensation per employee (y-o-y)	6.3	2.7	2.6	3.4	7.9	4.3	7.7	5.3
Labour productivity (real, hours worked, y-o-y)	5.1	-0.1	1.6	0.7	2.7	1.2	0.7	1.8
Unit labour costs (ULC, whole economy, y-o-y)	2.2	2.9	1.3	7.3	1.1	1.4	7.2	3.6
Real unit labour costs (y-o-y)	-0.6	1.2	0.0	6.0	-1.5	-5.5	-0.1	-0.8
Real effective exchange rate (ULC, y-o-y)	0.1	0.8	0.1	3.0	0.8	-2.3	0.8	-0.2
Real effective exchange rate (HICP, y-o-y)	0.1	0.2	0.1	-0.1	-0.4	-0.2	.	.
Net savings rate of households (net saving as percentage of net disposable income)	9.6	5.0	4.5	16.3	12.1	.	.	.
Private credit flow, consolidated (% of GDP)	14.0	3.6	-1.6	-0.9	3.5	.	.	.
Private sector debt, consolidated (% of GDP)	80.8	111.9	84.4	69.5	66.4	.	.	.
of which household debt, consolidated (% of GDP)	20.3	29.0	27.7	27.8	26.4	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	60.5	83.0	56.7	41.8	40.0	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	.	.	10.1	2.4	1.7	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-6.7	0.0	4.0	3.5	0.5	0.2	2.3	0.1
Corporations, gross operating surplus (% of GDP)	18.8	18.9	19.6	20.9	20.4	23.1	24.5	24.4
Households, net lending (+) or net borrowing (-) (% of GDP)	4.8	3.6	4.2	11.4	8.3	2.0	2.0	4.1
Deflated house price index (y-o-y)	12.8	-3.7	1.3	5.2	7.8	2.7	.	.
Residential investment (% of GDP)	3.7	3.4	2.2	2.3	2.4	2.7	.	.
Current account balance (% of GDP), balance of payments	-2.6	-1.3	5.0	7.6	3.8	-0.4	1.1	1.8
Trade balance (% of GDP), balance of payments	-0.7	0.8	7.9	9.3	6.4	2.1	.	.
Terms of trade of goods and services (y-o-y)	-0.7	-0.9	0.5	0.7	-2.1	-3.0	1.8	1.0
Capital account balance (% of GDP)	-0.3	0.0	-0.1	-0.5	0.1	-0.4	.	.
Net international investment position (% of GDP)	-15.2	-41.4	-28.1	-15.6	-6.8	-0.6	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (2)	-8.0	-37.8	-15.0	1.6	9.7	15.3	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	72.5	107.5	99.5	101.6	91.4	79.7	.	.
Export performance vs. advanced countries (% change over 5 years)	33.8	8.6	3.6	20.2	16.7	.	.	.
Export market share, goods and services (y-o-y)	4.0	-4.6	3.1	1.7	-0.5	2.5	0.1	0.2
Net FDI flows (% of GDP)	0.5	-0.3	-1.7	0.6	-0.8	-2.1	.	.
General government balance (% of GDP)	-1.1	-4.7	-3.3	-7.7	-4.6	-3.0	-3.7	-2.9
Structural budget balance (% of GDP)	-3.1	-4.1	-2.1	-6.1	-5.6	-5.0	-4.9	-3.7
General government gross debt (% of GDP)	25.6	38.9	74.5	79.6	74.5	69.9	69.1	66.6

(1) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches. Data before Q4 2014 reflects the national definition of non-performing exposures.
(2) Net international investment position (NIIP) excluding direct investment and portfolio equity shares.
Source: Eurostat and ECB as of 2 May 2023, where available; European Commission for forecast figures (Spring forecast 2023).

This Annex assesses fiscal sustainability risks for Slovenia over the short, medium and long term. It follows the same multi-dimensional approach as the European Commission's 2022 Debt Sustainability Monitor, updated based on the Commission's 2023 spring forecast.

1 - Short-term risks to fiscal sustainability are low overall. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks (Table A21.2). ([121]) Gross financing needs are expected to remain significant at around 13% of GDP in the short term (i.e. over 2023-2024), although declining compared with the recent peak in 2020 (Table A21.1). Financial markets' perceptions of sovereign risk are positive, as confirmed by the ratings of the main agencies.

2 - Medium-term risks to fiscal sustainability are medium overall.

The DSA for Slovenia shows that, under the baseline, government debt ratio, is projected to increase over the medium term to reach a level above 81% of GDP in 2033 (Graph 1). ([122]), ([123]) The assumed structural primary balance (a deficit of 2.3% of GDP) contributes to these developments. It appears plausible compared with past fiscal performance, indicating that the country has room for corrective action. At the same time, the baseline projections up to 2033 benefit from a favourable (although diminishing) snowball effect, notably thanks to the impact of Next Generation EU, with real GDP growth at around 2.1% over 2025-2033. Government gross financing needs are expected to remain significant over the projection period, reaching around 17% of GDP in 2033, above the level forecast for 2024 (Table A21.1).

The baseline projections are stress tested against four alternative scenarios to assess the impact of changes in key assumptions (Graph 1). For Slovenia, reverting to historical fiscal trajectories under the 'historical structural primary balance (SPB)' scenario would lead to a significantly lower government debt ratio. If the SPB gradually converged to a deficit of 1.3% of GDP (its historical 15-year average), the projected debt-to-GDP ratio would be around 7 pps. lower compared to the baseline in 2033. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario (i.e. 1 pp. higher than the baseline) would result in a persistently higher government debt-to-GDP ratio, by around 6 pps. of GDP by 2033, as compared with the baseline. A temporary worsening of financial conditions, as reflected in the 'financial stress 'scenario (i.e. temporarily increase of interest rates by 1 pp.), would lead to a broadly similar debt-to-GDP ratio by 2033 compared with the baseline. The 'lower structural primary balance (SPB)' scenario (i.e. SPB level permanently reduced by half of the cumulative forecast change), would lead to a significantly higher government debt-to-GDP ratio by 2033 (around +7 pps. of GDP) compared with the baseline.

([121]) The So is a composite indicator of short-term risk of fiscal stress. It is based on a wide range of macro-financial and fiscal variables that have proven to perform well in the past in detecting situations of upcoming fiscal stress.

([122]) The assumptions underlying the Commission's 'no-fiscal policy change' baseline notably comprise: (i) a structural primary deficit, before ageing costs, of 2.3% of GDP as of 2024; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years from now); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10 (as for all Member States); (iv) real GDP growth rates from the Commission 2023 spring forecast until 2024, followed by EPC/OGWG 'T+10 methodology projections between T+3 and T+10, i.e. for 2025-2033 (on average 2.1%); (v) ageing costs in line with the 2021 Ageing Report (European Commission, Institutional Paper 148, May 2021). For information on the methodology, see the 2022 Debt Sustainability Monitor (European Commission, Institutional Paper 199, April 2023).

([123]) Table 1 shows the baseline debt projections and its breakdown into the primary balance, the snowball effect (the combined impact of interest payments and nominal GDP growth on the debt dynamics) and the stock-flow adjustment.

Additionally, stochastic debt projections indicate medium risk (Graph 2) ([124]) These stochastic simulations point to a 40% probability of the debt ratio in 2027 being greater than in 2022, entailing medium risk given the initial moderate debt level. In addition, such shocks point to some uncertainty (i.e., the difference between the 10th and 90th debt distribution percentiles) surrounding the government debt baseline projections.

3 - Long-term risks to fiscal sustainability are high overall. ([125])

The S2 sustainability gap indicator (at 10 pps. of GDP) points to high risk, suggesting that Slovenia would need a substantial improvement in its structural primary balance to ensure debt stabilisation over the long term. This result is mostly underpinned by the projected increase in ageing costs, notably pension spending (+5.3 pps. of GDP) as well as health care and long-term care expenditure (combined contribution of 2 pps. of GDP), as well as by an unfavourable initial budgetary position (2.7 pps. of GDP) (Table A21.1). Hence, while a number of investments and reforms in the RRP contribute to supporting the efficiency of the Slovenian health and long-term care systems and the sustainability of the pension system, additional measures may be required to further improve the overall fiscal sustainability.

Combined with debt vulnerabilities, as highlighted by the S1 indicator, overall long-term risks are assessed as high. Indeed, the S1 sustainability gap indicator signals that a substantial consolidation effort of 7.8 pps. of GDP would be needed to reduce debt to 60% of GDP by 2070. This result is mainly driven by the contribution of ageing costs (5.5 pps. of GDP) and, an unfavourable initial budgetary position (2.2 pps. of GDP) (Table A21.1).

Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors are related to the recent increase in interest rates, the share of government debt held by non-residents, and to contingent liability risks stemming from the private sector, including via the possible materialisation of COVID-19 crisis related state guarantees. On the other-hand, risk-mitigating factors include the lengthening of debt maturity in recent years and relatively stable financing sources (with a diversified and large investor base). In addition, the structural reforms under the NGEU/RRF, if fully implemented, could have a further positive impact on GDP growth in the coming years, and therefore help to mitigate debt sustainability risks.

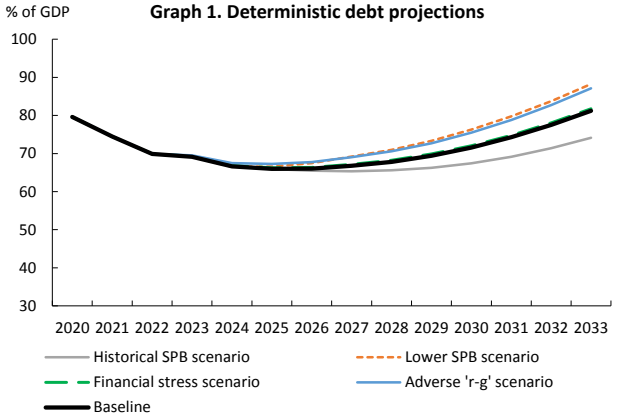
([124]) These projections show the impact on debt of 2000 different shocks affecting the government's primary balance, economic growth, interest rates and exchange rates. The cone covers 80% of all simulated debt paths, therefore excluding tail events.

([125]) The S2 fiscal sustainability gap indicator measures the permanent fiscal effort (SPB adjustment) in 2024 that would be required to stabilise public debt over the long term. It is complemented by the S1 fiscal sustainability gap indicator, which measures the permanent fiscal effort required in 2024 to bring the debt-to-GDP ratio to 60% in the long term (by 2070). For both the S1 and S2 indicators, the risk assessment depends on the amount of fiscal consolidation needed: 'high risk' if the required effort exceeds 6 pps. of GDP, 'medium risk' if it lies between 2 pps. and 6 pps. of GDP, and 'low risk' if the effort is negative or below 2 pps. of GDP. The overall long-term risk classification brings together the risk categories derived from S1 and S2. S1 may notch up the risk category derived from S2 when it signals a higher risk than S2. See the 2022 Debt Sustainability Monitor for further details.

Table A21.1: **Debt sustainability analysis - Slovenia**

Table 1. Baseline debt projections	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	**79.6**	**74.5**	**69.9**	**69.1**	**66.6**	**66.0**	**66.0**	**66.8**	**67.8**	**69.4**	**71.6**	**74.3**	**77.5**	**81.2**
Changes in the ratio	14.2	-5.1	-4.5	-0.8	-2.5	-0.7	0.1	0.8	1.0	1.6	2.2	2.7	3.2	3.7
of which														
Primary deficit	6.1	3.4	1.9	2.5	1.6	1.9	2.3	2.7	3.0	3.2	3.5	3.8	4.1	4.4
Snowball effect	3.7	-6.7	-7.5	-4.4	-3.0	-2.6	-2.2	-1.9	-1.9	-1.6	-1.3	-1.1	-0.8	-0.7
Stock-flow adjustments	4.4	-1.8	1.0	1.1	-1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	20.8	13.5	14.1	14.5	11.4	12.4	12.7	13.1	13.5	13.9	14.4	15.0	15.6	16.6

Graph 1. Deterministic debt projections



Graph 2. Stochastic debt projections 2023-2027

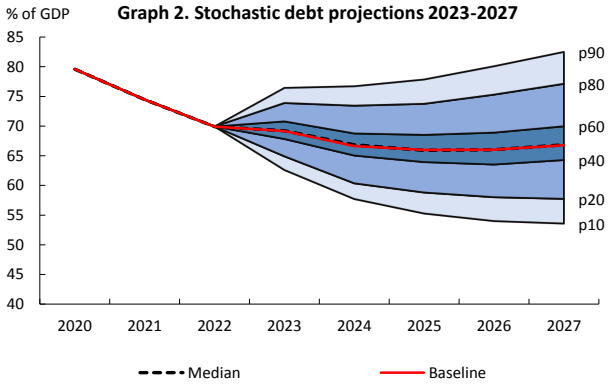


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

		S1	**S2**
Overall index (pps. of GDP)		**7.8**	**10.0**
of which			
Initial budgetary position		2.2	2.7
Debt requirement		0.1	
Ageing costs		5.5	7.4
of which	*Pensions*	4.1	5.3
	Health care	0.8	1.0
	Long-term care	0.6	1.0
	Others	0.0	0.1

Source: Commission services.

Table A21.2: **Heat map of fiscal sustainability risks - Slovenia**

Short term	**Medium term - Debt sustainability analysis (DSA)**								**Long term**		
			Deterministic scenarios								
Overall (S0)	**Overall**		Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress	**Stochastic projections**	**S2**	**S1**	**Overall** (S1 + S2)
LOW	**MEDIUM**	Overall	**MEDIUM**	**MEDIUM**	**MEDIUM**	**MEDIUM**	**MEDIUM**	**MEDIUM**	**HIGH**	**HIGH**	**HIGH**
		Debt level (2033), % GDP	81.2	74.1	88.2	87.1	81.8				
		Debt peak year	2033	2033	2033	2033	2033				
		Fiscal consolidation space	76%	58%	83%	76%	76%				
		Probability of debt ratio exceeding in 2027 its 2022 level						40%			
		Difference between 90th and 10th percentiles (pps. GDP)						28.9			

(1) *Debt level* in 2033. Green: below 60% of GDP. Yellow: between 60% and 90%. Red: above 90%. (2) The *debt peak year* indicates whether debt is projected to increase overall over the next decade. Green: debt peaks early. Yellow: peak towards the middle of the projection period. Red: late peak. (3) *Fiscal consolidtation space* measures the share of past fiscal positions in the country that were more stringent than the one assumed in the baseline. Green: high value, i.e. the assumed fiscal position is plausible by historical standards and leaves room for corrective measures if needed. Yellow: intermediate. Red: low. (4) *Probability of debt ratio exceeding in 2027 its 2022 level*. Green: low probability. Yellow: intermediate. Red: high (also reflecting the initial debt level). (5) the *difference between the 90th and 10th percentiles* measures uncertainty, based on the debt distribution under 2000 different shocks. Green, yellow and red cells indicate increasing uncertainty.

Source: Commission services.